THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Action

- **Board of Directors**
  Finance, Affordability, Asset Management, and Efficiency

9/9/2025 Board Meeting

7-7

Subject

Review and consider the Mitigated Negative Declaration adopted by the Lead Agency for the project, and adopt a resolution approving an Agreement for Water Service with the Barona Band of Mission Indians, San Diego County Water Authority, Ramona Municipal Water District and Metropolitan

Executive Summary

This action authorizes the General Manager to enter into an agreement for water service to currently developed areas and areas planned for development within the Barona Band of Mission Indians (Barona) reservation, located in the county of San Diego, California. Retail water service would be provided by Ramona Municipal Water District (Ramona). The law requires municipal water districts to provide water service to tribes so long as it accepts all the same terms of service for the municipal water district and any other public agencies in the water supply chain, including payments, as if the reservation lands were fully annexed. Ramona, which is a San Diego County Water Authority (SDCWA) member agency, receives water service from SDCWA. SDCWA, which is a Metropolitan member agency, receives water service from Metropolitan. Therefore, Barona must enter into an agreement with all three public agencies for water service on the same terms as if annexed. This request consists of approximately 1,784 acres (**Attachment 1**). SDCWA is in compliance with and meets the water use efficiency requirements in Metropolitan's Administrative Code (**Attachment 2**). The charge for this connection to Metropolitan, if completed in 2025, is a payment of approximately $14,824,008, which includes the $5,000 processing and consultant fees. As allowed in Metropolitan's Administrative Code, Barona requested payment of these charges over time. Barona requested to pay an in-lieu ad valorem tax annually rather than paying a one-time net present value amount. Payment terms will be included in a separate agreement between Barona and Metropolitan that will be incorporated by reference into the agreement for water service.

Proposed Action(s)/Recommendation(s) and Options

Staff Recommendation: Option #1

Option #1

Review and consider the Mitigated Negative Declaration adopted by the Lead Agency for the project, and adopt a resolution approving an Agreement for Water Service with the Barona Band of Mission Indians, San Diego County Water Authority, Ramona Municipal Water District and Metropolitan

Fiscal Impact: Receipt of annexation fees of approximately $14,824,008 paid over time, annual ad valorem taxes, and revenue from annual water sales.
Business Analysis: This agreement provides essential long-term health and safety benefits to the public.

Option #2

Decline the request for the proposed water service agreement.
Fiscal Impact: Unrealized fee and potential water sales revenue.
Business Analysis: Prevents Barona from receiving water service.

Option #3

Direct staff to renegotiate the terms of the water agreement.

Fiscal Impact: Receipt of the in-lieu annexation charges and fees

Business Analysis: This agreement provides essential long-term health and safety benefits to the public.

Applicable Policy

California Water Code Section 71611.5—Municipal Water Districts: Development and Sale

MWD Act Sections 131, 350, 351, 352, 353, 354, 355, and 356

Metropolitan Water District Administrative Code Section 3100: Request for Annexation

Related Board Action

Report of Proposed Agreement for Water Service with the Barona Band of Mission Indians, San Diego County Water Authority, and Ramona Municipal Water District (Finance, Affordability, Asset Management, and Efficiency Committee Item 9-3, dated August 19, 2025)

Summary of Outreach Completed

This request for a water service agreement was made in writing by SDCWA pursuant to MWD Administrative Code Section 3100(a)

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

Acting as the Lead Agency and sub-member agency to San Diego County Water Authority, Ramona adopted the Ramona Municipal Water District/Barona Indian Tribe Potable and Recycled Water Infrastructure Project (also known as Barona Water Service Area Agreement) Mitigated Negative Declaration and a Mitigation Monitoring Reporting Program on June 10, 2025, for the water service area agreement process. The Mitigated Negative Declaration concluded that, with the incorporation of certain mitigation measures, all potential impacts associated with the project were less than significant. The environmental documentation is in **Attachment 4.**

The Board has reviewed and considered the Mitigated Negative Declaration and adopts the findings of the Lead Agency.

CEQA determination for Option #2:

None required

CEQA determination for Option #3:

None required

Details and Background

Background

Barona is a federally recognized tribe with reservation land located in San Diego County (location), and adjacent to the service area of Ramona. Most of the Barona reservation is already served by local groundwater, which is non-potable and used to irrigate the golf course, green areas, and other non-potable uses. The tribe purchased land west of the reservation that was already annexed into Ramona, SDCWA, and Metropolitan service areas, although never served public water. A large portion of land to the east on the original reservation is open desert landscape and difficult to develop. The point of connection for delivery of water by Ramona would be via a connection on the southwestern boundary of the reservation adjacent to the Ramona service area. Barona developed a recreational area with a casino, golf course and hotel; the community area with residential homes and support facilities for its tribal members in the area that is not currently served by Ramona and relies on existing groundwater supplies. Barona is requesting water service from Ramona to the areas that need a potable supply for approximately 1,784.03 acres of existing and future developable areas. To obtain water service from Ramona,

Barona must also enter into an agreement with SDCWA and Metropolitan for water to be served to these areas, along with an agreement for payment of the fees and taxes over time between Metropolitan and Barona.

California Water Code section 71611.5 requires municipal water districts to provide tribes with potable water service under substantially the same terms and conditions applicable to their other customers. The law requires tribes to comply with the requirements for service of any other public agencies that serve the area as if annexed. This includes SDCWA and Metropolitan in this area. Metropolitan's Board approved a similar water agreement to the Sycuan Band of the Kumeyaay Nation on August 21, 2018. As a condition of water service, Barona must accept all terms of service, including any payments, to the water districts as if the tribal lands were to be served. Although this will not be a formal annexation, and the water districts' boundaries will not be formally changed, state law requires the San Diego Local Agency Formation Commission (SDLAFCO) to review and approve the proposed agreement, and Barona will have to comply with the same terms and conditions of annexation as other Ramona, SDCWA, and Metropolitan customers. For SDLAFCO's review and to memorialize the required terms and conditions of this agreement to serve, Metropolitan will provide a resolution confirming this Board's approval of the water service agreement, similar to that provided in a traditional annexation. (**Attachment 3**)

After requesting service from Ramona, Barona entered into negotiations for a potable water service agreement with Metropolitan, SDCWA, and Ramona in late 2023. With this agreement, Barona is agreeing to all the same terms and conditions as other customers within Metropolitan's service area, including compliance with Metropolitan's Administrative Code as amended over time.

Barona will pay the normal annexation fees and charges and has requested payment over time as allowed in Section 3106 of Metropolitan's Administrative Code, and it requested payment of the in-lieu ad valorem tax on an annual basis. As a sovereign nation, Barona is not subject to state taxation and the value of the reservation lands are not assessed by the county. In order to determine the comparable assessed valuation for Metropolitan's ad valorem tax, an independent assessment was done at the tribe's expense, which cost $74,000. The annual tax will be based on this valuation escalated at two percent per year and paid to Metropolitan by December 1st of each year that Barona receives water service. The tax for the first year is estimated at $47,627.54. The lands will be independently reassessed every five years for tax purposes. The total charge for this water service is approximately $14,824,008, which includes the standard $5,000 processing fee and the $74,000 consultant fee. The annexation fee is calculated based on the 2025 per-acre fee of $8,265 or the then-current rate when completed. As allowed by Metropolitan's Administrative Code Section 3106 (b) and (c), the term of the agreement will be for 15 years at a rate of 4.30 percent interest, which is equal to the weighted average yield on Metropolitan's current invested funds. The Code also requires a 10 percent down payment, estimated at $1,474,500.80, that will be paid within 30 days after SDLAFCO approval. In addition, $79,000 of other upfront costs for the processing fee and consultant fee for the independent land value assessment will be paid within 30 days after SDLAFCO approval. Subsequent annual payments of the annexation fees will be made by December 1 of each year for 15 years. SDCWA did not elect to have a standby charge collected, so it will not be collected. These detailed payment terms will be included in a separate agreement for payment for water service between Metropolitan and Barona that will be incorporated by reference into the four-party water service agreement.

On August 28, 2025, SDCWA's board of directors is scheduled to review the water service agreement. Ramona's board of directors approved it on June 10, 2025.

9/4/2025

Elizabeth Crosson *Date*
Chief Sustainability, Resilience and Innovation Officer

9/4/2025

Deven Upadhyay *Date*
General Manager

Attachment 1 – Legal Description and Map

Attachment 2 – Water Use Efficiency Statement of Compliance

Attachment 3 – (Proposed) Resolution

Attachment 4 – Environmental Documentation

Ref# sri12702415

Exhibit A
Legal Description
Barona Reservation
Water Service Agreement

Real property in the County of San Diego, State of California, described as follows:

Those portions of the Rancho Barona, as shown on the map filed as Licensed Survey 191; and those portions of Sections 26, 27, and 28 of Township 14 South, Range 1 East, San Bernardino Base & Meridian, as shown on the map filed as Record of Survey No. 17046, records of said County, more particularly described as follows:

Parcel 1
Commencing at the point designated as number 10021 on Record of Survey No. 17046, being the corner common to Sections 1 and 2, T14S, R1E, SBM and Sections 35 and 36, T13S, R1E, SBM, marked with an iron pipe and brass cap monument as shown on Sheet 2 of said Record of Survey No. 17046, being the northerly terminus of that certain course shown as “N0°15’20”E 5448.01” on said Record of Survey;

Thence along said course, South 00°15'20" West, 265.30 feet a distance of 659.33 feet to the True Point of Beginning;

Thence 1st, returning along said course, North 00°15'20" East, a distance of 265.30 feet;

Thence 2nd, leaving said course, South 88°52'18" East, a distance of 135.08 feet;

Thence 3rd, South 34°06'53" East, a distance of 306.78 feet;

Thence 4th, South 88°23'37" West, a distance of 308.42 feet to the True Point of Beginning.

Containing 1.33 acres, more or less.

Parcel 2
Commencing at the point designated as number 10021 on Record of Survey No. 17046, being the corner common to Sections 1 and 2, T14S, R1E, SBM and Sections 35 and 36, T13S, R1E, SBM, marked with an iron pipe and brass cap monument as shown on Sheet 2 of said Record of Survey No. 17046, being the northerly terminus of that certain course shown as “N0°15’20”E 5448.01” on said Record of Survey, which course has a bearing of North 00°15’20” East for the purposes of this description;

Thence South 47°41'38" East, a distance of 1432.00 feet to the True Point of Beginning;

Thence 1st, South 60°22'54" East, a distance of 83.85 feet;

Thence 2nd, South 10°01'23" East, a distance of 79.21 feet;

Thence 3rd, South 52°33'31" West, a distance of 115.41 feet;

Thence 4th, North 64°57'06" West, a distance of 87.44 feet;

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Thence 5th, North 05°54'04" West, a distance of 87.51 feet;

Thence 6th, North 54°52'43" East, a distance of 113.90 feet to the True Point of Beginning.

Containing 0.53 acres, more or less.

Parcel 3
Commencing at the point designated as number 10021 on Record of Survey No. 17046, being the corner common to Sections 1 and 2, T14S, R1E, SBM and Sections 35 and 36, T13S, R1E, SBM, marked with an iron pipe and brass cap monument as shown on Sheet 2 of said Record of Survey No. 17046, being the northerly terminus of that certain course shown as "N0°15'20"E 5448.01" on said Record of Survey, which course has a bearing of North 00°15'20" East for the purposes of this description;

Thence South 40°42'35" East, a distance 2180.02 feet to the True Point of Beginning;

Thence 1st, North 73°54'58" East, a distance of 366.79 feet;

Thence 2nd, South 56°40'09" East, a distance of 119.98 feet;

Thence 3rd, South 30°43'01" East, a distance of 174.40 feet;

Thence 4th, South 04°46'30" East, a distance of 140.41 feet;

Thence 5th, South 37°30'38" West, a distance of 85.35 feet;

Thence 6th, South 59°58'34" West, a distance of 210.26 feet;

Thence 7th, South 29°04'59" East, a distance of 127.95 feet;

Thence 8th, South 60°48'53" West, a distance of 116.82 feet;

Thence 9th, North 29°34'42" West, a distance of 263.96 feet;

Thence 10th, North 63°20'35" East, a distance of 128.30 feet;

Thence 11th, North 28°35'23" West, a distance of 248.66 feet;

Thence 12th, North 58°03'48" West, a distance of 170.88 feet to the True Point of Beginning.

Containing 4.23 acres, more or less.

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Parcel 4

Commencing at the point designated as number 10021 on Record of Survey No. 17046, being the corner common to Sections 1 and 2, T14S, R1E, SBM and Sections 35 and 36, T13S, R1E, SBM, marked with an iron pipe and brass cap monument as shown on Sheet 2 of said Record of Survey No. 17046, being the northerly terminus of that certain course shown as "N0°15'20"E 5448.01" on said Record of Survey, which course has a bearing of North 00°15'20" East for the purposes of this description;

Thence South 76°20'39" East, a distance of 3679.74 feet to the True Point of Beginning;

Thence 1st, North 82°27'07" East, a distance of 251.84 feet;

Thence 2nd, South 47°18'03" East, a distance of 187.85 feet;

Thence 3rd, North 54°17'52" East, a distance of 161.76 feet;

Thence 4th, North 08°52'03" East, a distance of 208.32 feet;

Thence 5th, North 67°37'04" East, a distance of 452.88 feet;

Thence 6th, North 16°25'43" East, a distance of 118.36 feet;

Thence 7th, North 54°44'16" East, a distance of 153.20 feet;

Thence 8th, South 77°20'03" East, a distance of 142.97 feet;

Thence 9th, South 09°40'25" East, a distance of 286.00 feet;

Thence 10th, South 41°21'32" East, a distance of 190.52 feet;

Thence 11th, South 01°58'40" West, a distance of 102.57 feet;

Thence 12th, South 57°18'53" East, a distance of 87.38 feet;

Thence 13th, North 79°23'43" East, a distance of 212.76 feet;

Thence 14th, North 76°45'12" East, a distance of 196.02 feet;

Thence 15th, South 50°56'14" East, a distance of 151.77 feet;

Thence 16th, South 65°03'08" East, a distance of 156.03 feet;

Thence 17th, South 17°42'28" East, a distance of 141.62 feet;

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Thence 18th, South 28°58'10" West, a distance of 192.09 feet;

Thence 19th, South 78°54'19" West, a distance of 247.37 feet;

Thence 20th, North 71°54'36" West, a distance of 142.77 feet;

Thence 21st, North 36°30'02" West, a distance of 249.12 feet;

Thence 22nd, South 66°35'57" West, a distance of 159.82 feet;

Thence 23rd, South 67°01'22" West, a distance of 147.27 feet;

Thence 24th, South 24°14'29" West, a distance of 109.02 feet;

Thence 25th, South 14°28'37" West, a distance of 96.64 feet;

Thence 26th, South 85°15'23" East, a distance of 182.00 feet;

Thence 27th, South 70°01'30" East, a distance of 186.19 feet;

Thence 28th, South 26°00'33" East, a distance of 145.54 feet;

Thence 29th, South 49°57'58" East, a distance of 157.80 feet;

Thence 30th, South 61°42'07" East, a distance of 139.69 feet;

Thence 31st, South 29°31'09" East, a distance of 208.65 feet;

Thence 32nd, South 53°28'25" West, a distance of 267.01 feet;

Thence 33rd, North 51°38'09" West, a distance of 268.26 feet;

Thence 34th, North 44°50'21" West, a distance of 220.41 feet;

Thence 35th, North 81°37'53" West, a distance of 172.84 feet;

Thence 36th, South 20°09'58" West, a distance of 464.08 feet;

Thence 37th, North 72°37'57" West, a distance of 121.07 feet;

Thence 38th, South 89°03'24" West, a distance of 88.14 feet;

Thence 39th, North 66°15'07" West, a distance of 69.37 feet;

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Thence 40st, North 03°52'20" West, a distance of 106.11 feet;

Thence 41st, North 63°08'52" East, a distance of 106.33 feet;

Thence 42nd, South 73°38'05" East, a distance of 108.35 feet;

Thence 43rd, North 18°35'24" East, a distance of 449.49 feet;

Thence 44th, South 89°19'48" West, a distance of 386.48 feet;

Thence 45th, South 30°08'36" West, a distance of 173.28 feet;

Thence 46th, North 63°22'11" West, a distance of 66.27 feet;

Thence 47th, North 18°42'04" East, a distance of 282.61 feet;

Thence 48th, North 74°50'07" West, a distance of 253.83 feet;

Thence 49th, North 82°56'15" West, a distance of 277.52 feet;

Thence 50th, South 89°25'41" West, a distance of 185.81 feet;

Thence 51st, North 21°52'01" West, a distance of 215.16 feet;

Thence 52nd, North 12°39'30" East, a distance of 281.75 feet to the True Point of Beginning.

Containing 41.37 acres, more or less.

Parcel 5

Commencing at the point designated as number 10021 on Record of Survey No. 17046, being the corner common to Sections 1 and 2, T14S, R1E, SBM and Sections 35 and 36, T13S, R1E, SBM, marked with an iron pipe and brass cap monument as shown on Sheet 2 of said Record of Survey No. 17046, being the northerly terminus of that certain course shown as “N0°15’20”E 5448.01” on said Record of Survey, which course has a bearing of North 00°15’20” East for the purposes of this description;

Thence South 06°08'13" East, a distance of 4129.26 feet to the True Point of Beginning;

Thence 1st, North 68°45'36" East, a distance of 1,322.28 feet;

Thence 2nd, South 76°47'08" East, a distance of 237.73 feet;

Thence 3rd, North 75°46'16" East, a distance of 190.62 feet;

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Thence 4th, North 65°24'01" East, a distance of 434.70 feet;

Thence 5th, South 33°55'45" East, a distance of 163.36 feet;

Thence 6th, North 81°32'40" East, a distance of 220.48 feet;

Thence 7th, South 12°04'18" West, a distance of 477.75 feet;

Thence 8th, South 60°06'12" West, a distance of 162.70 feet;

Thence 9th, South 52°02'55" West, a distance of 238.25 feet;

Thence 10st, North 87°34'19" West, a distance of 130.62 feet;

Thence 11st, South 55°19'26" West, a distance of 258.22 feet;

Thence 12st, North 84°59'22" West, a distance of 257.46 feet;

Thence 13st, South 24°24'41" East, a distance of 222.31 feet;

Thence 14th, South 02°42'17" East, a distance of 110.11 feet;

Thence 15th, South 51°45'33" East, a distance of 264.77 feet;

Thence 16th, South 07°40'41" West, a distance of 77.97 feet;

Thence 17th, South 65°17'19" West, a distance of 371.97 feet;

Thence 18th, South 49°27'50" West, a distance of 350.37 feet;

Thence 19th, North 89°34'00" West, a distance of 313.93 feet;

Thence 20st, South 72°02'12" West, a distance of 327.37 feet;

Thence 21st, North 46°45'29" West, a distance of 256.93 feet;

Thence 22nd, North 23°00'05" East, a distance of 108.38 feet;

Thence 23rd, North 33°22'02" West, a distance of 346.11 feet;

Thence 24th, North 42°12'46" East, a distance of 269.93 feet;

Thence 25th, North 38°50'00" West, a distance of 171.93 feet;

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Thence 26th, South 87°05'50" West, a distance of 512.88 feet;

Thence 27th, North 26°24'15" West, a distance of 82.09 feet;

Thence 28th, North 67°24'42" East, a distance of 512.06 feet;

Thence 29th, North 18°31'33" West, a distance of 165.34 feet to the True Point of Beginning.

Containing 59.03 acres, more or less.

Parcel 6
Commencing at the point designated as number 10031 on Record of Survey No. 17046, being corner number "31" at an angle point in the easterly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 2 of said Record of Survey No. 17046, being the northwesterly terminus of that certain course shown as "N40°31'01"W 2171.03" on said Record of Survey;

Thence along said course, South 40°31'01" East, a distance of 1045.51 feet to the True Point of Beginning;

Thence 1st, South 40°31'01" East, a distance of 949.02 feet;

Thence 2nd, South 04°49'14" West, a distance of 220.46 feet;

Thence 3rd, South 82°33'36" West, a distance of 530.71 feet;

Thence 4th, South 74°41'53" West, a distance of 392.98 feet;

Thence 5th, South 66°45'54" West, a distance of 528.79 feet;

Thence 6th, South 70°18'41" West, a distance of 543.73 feet;

Thence 7th, South 61°03'09" West, a distance of 1,029.24 feet;

Thence 8th, South 78°08'46" West, a distance of 568.09 feet;

Thence 9th, South 42°58'27" West, a distance of 328.98 feet;

Thence 10th, South 74°18'08" West, a distance of 538.25 feet;

Thence 11th, South 24°03'08" West, a distance of 146.05 feet;

Thence 12th, South 40°14'35" West, a distance of 271.32 feet;

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Thence 13th, South 29°42'15" West, a distance of 495.46 feet;

Thence 14th, South 29°17'47" West, a distance of 502.91 feet;

Thence 15th, South 24°32'55" West, a distance of 555.59 feet;

Thence 16th, South 10°15'58" West, a distance of 743.08 feet;

Thence 17th, South 56°24'48" East, a distance of 216.37 feet;

Thence 18th, South 16°03'25" West, a distance of 174.55 feet;

Thence 19th, South 31°22'44" West, a distance of 194.69 feet;

Thence 20th, South 67°47'53" East, a distance of 63.81 feet;

Thence 21st., South 50°17'49" East, a distance of 75.40 feet;

Thence 22nd, South 20°00'39" West, a distance of 101.17 feet;

Thence 23rd, South 54°02'46" West, a distance of 125.70 feet;

Thence 24th, North 67°37'52" West, a distance of 162.82 feet;

Thence 25th, North 84°22'49" West, a distance of 152.70 feet;

Thence 26th, South 26°14'29" West, a distance of 332.47 feet;

Thence 27th, South 12°29'38" East, a distance of 244.31 feet;

Thence 28th, North 81°32'04" East, a distance of 192.59 feet;

Thence 29th, South 61°50'19" East, a distance of 184.67 feet;

Thence 30th, South 05°39'37" West, a distance of 199.64 feet;

Thence 31st, South 25°54'00" West, a distance of 296.69 feet;

Thence 32nd, South 14°00'15" West, a distance of 119.75 feet;

Thence 33rd, South 24°33'45" West, a distance of 299.59 feet;

Thence 34th, South 36°51'24" East, a distance of 93.82 feet;

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Thence 35th, South 06°42'28" West, a distance of 147.94 feet;

Thence 36th, South 36°21'41" West, a distance of 298.21 feet;

Thence 37th, South 68°43'11" West, a distance of 259.70 feet;

Thence 38th, South 20°14'37" West, a distance of 425.44 feet;

Thence 39th, South 31°37'05" West, a distance of 192.55 feet;

Thence 40th, South 49°00'55" East, a distance of 212.63 feet;

Thence 41st, South 02°23'38" East, a distance of 910.75 feet;

Thence 42nd, South 48°57'23" West, a distance of 307.78 feet;

Thence 43rd, South 86°01'14" West, a distance of 448.91 feet;

Thence 44th, South 04°20'35" West, a distance of 505.46 feet;

Thence 45th, South 21°06'15" East, a distance of 263.34 feet;

Thence 46th, South 81°40'03" East, a distance of 283.93 feet;

Thence 47th, South 06°10'54" West, a distance of 216.88 feet;

Thence 48th, South 22°20'45" West, a distance of 206.89 feet;

Thence 49th, South 07°11'40" West, a distance of 158.39 feet;

Thence 50th, South 24°14'19" West, a distance of 659.91 feet;

Thence 51st, South 65°19'19" West, a distance of 85.50 feet;

Thence 52nd, North 68°12'17" West, a distance of 178.99 feet;

Thence 53rd, North 13°28'11" West, a distance of 192.44 feet;

Thence 54th, North 83°43'43" West, a distance of 293.40 feet;

Thence 55th, South 19°27'12" East, a distance of 218.23 feet;

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Thence 56th, South 08°17'19" East, a distance of 240.93 feet;

Thence 57th, South 37°32'58" West, a distance of 121.47 feet;

Thence 58th, South 88°11'17" West, a distance of 171.44 feet;

Thence 59th, North 60°17'54" West, a distance of 118.49 feet;

Thence 60th, North 29°39'10" West, a distance of 215.82 feet;

Thence 61st, North 18°40'55" East, a distance of 343.68 feet;

Thence 62nd, North 23°37'56" West, a distance of 320.11 feet;

Thence 63rd, North 16°07'41" West, a distance of 750.34 feet;

Thence 64th, South 41°44'42" West, a distance of 560.19 feet;

Thence 65th, South 09°29'14" East, a distance of 643.43 feet;

Thence 66th, South 69°08'10" West, a distance of 128.66 feet;

Thence 67th, North 40°30'04" West, a distance of 292.77 feet;

Thence 68th, North 71°42'55" West, a distance of 166.45 feet;

Thence 69th, South 20°17'10" West, a distance of 242.48 feet;

Thence 70th, South 38°52'59" West, a distance of 368.62 feet;

Thence 71st, North 67°46'43" West, a distance of 14.95 feet;

Thence 72nd, North 25°47'42" East, a distance of 973.08 feet to the beginning of a tangent curve, concave southeasterly, having a radius of 2,170.00 feet;

Thence 73rd, northeasterly along said curve through a central angle of 17°41'27", an arc length of 670.02 feet;

Thence 74th, North 43°29'09" East, a distance of 103.00 feet;

Thence 75th, South 55°26'20" East, a distance of 12.27 feet;

Thence 76th, South 86°41'08" East, a distance of 396.44 feet;

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Thence 77th, North 22°12'36" West, a distance of 226.68 feet;

Thence 78th, North 56°03'55" East, a distance of 134.00 feet;

Thence 79th, South 32°15'04" East, a distance of 253.79 feet;

Thence 80th, North 50°25'14" East, a distance of 103.55 feet;

Thence 81st, North 29°46'01" East, a distance of 309.83 feet;

Thence 82nd, North 39°37'53" West, a distance of 301.24 feet;

Thence 83rd, North 22°19'21" West, a distance of 411.22 feet;

Thence 84th, North 11°23'13" East, a distance of 137.41 feet;

Thence 85th, North 86°58'28" East, a distance of 339.84 feet;

Thence 86th, North 33°09'49" East, a distance of 764.54 feet;

Thence 87th, North 12°14'16" East, a distance of 251.38 feet;

Thence 88th, North 44°29'46" West, a distance of 292.58 feet;

Thence 89th, South 26°38'37" West, a distance of 240.27 feet;

Thence 90th, North 73°48'45" West, a distance of 42.62 feet;

Thence 91st, North 23°00'33" East, a distance of 2,126.52 feet to the beginning of a tangent curve, concave westerly, having a radius of 1,880.00 feet;

Thence 92nd, northerly along said curve through a central angle of 14°06'18", an arc length of 462.81 feet;

Thence 93rd, North 08°54'16" East, a distance of 539.69 feet to the beginning of a tangent curve, concave southeasterly, having a radius of 415.00 feet;

Thence 94th, northeasterly along said curve through a central angle of 40°46'38", an arc length of 295.35 feet;

Thence 95th, North 49°40'53" East, a distance of 196.56 feet to the beginning of a tangent curve, concave northwesterly, having a radius of 748.00 feet;

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Thence 96th, northeasterly along said curve through a central angle of 22°50'35", an arc length of 298.22 feet;

Thence 97th, North 26°50'18" East, a distance of 884.43 feet;

Thence 98th, North 26°56'26" East, a distance of 1,192.73 feet to the beginning of a tangent curve, concave southeasterly, having a radius of 395.00 feet;

Thence 99th, northeasterly along said curve through a central angle of 58°46'37", an arc length of 405.21 feet;

Thence 100th, North 85°43'03" East, a distance of 165.36 feet;

Thence 101st, North 80°54'20" East, a distance of 183.58 feet to the beginning of a tangent curve, concave northerly, having a radius of 930.00 feet;

Thence 102nd, easterly along said curve through a central angle of 13°50'49", an arc length of 224.76 feet;

Thence 103rd, North 67°03'32" East, a distance of 166.99 feet;

Thence 104th, North 63°45'15" East, a distance of 164.91 feet to the beginning of a tangent curve, concave northwesterly, having a radius of 380.00 feet;

Thence 105th, northeasterly along said curve through a central angle of 49°27'02", an arc length of 327.97 feet;

Thence 106th, North 14°18'12" East, a distance of 770.82 feet to the beginning of a tangent curve, concave westerly, having a radius of 440.00 feet;

Thence 107th, northerly along said curve through a central angle of 56°35'29", an arc length of 434.59 feet;

Thence 108th, North 42°17'17" West, a distance of 520.26 feet to the beginning of a tangent curve, concave southwesterly, having a radius of 680.00 feet;

Thence 109th, northwesterly along said curve through a central angle of 22°55'08", an arc length of 272.01 feet;

Thence 110th, North 65°12'24" West, a distance of 390.27 feet;

Thence 111th, North 22°58'28" East, a distance of 4.03 feet;

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Thence 112th, North 43°13'19" East, a distance of 168.03 feet;

Thence 113th, North 71°22'07" East, a distance of 219.86 feet;

Thence 114th, North 52°50'44" East, a distance of 372.04 feet;

Thence 115th, South 28°20'27" East, a distance of 193.00 feet;

Thence 116th, South 56°50'14" East, a distance of 577.68 feet;

Thence 117th, North 02°14'37" West, a distance of 240.50 feet;

Thence 118th, North 18°59'59" East, a distance of 71.44 feet;

Thence 119th, North 75°52'56" East, a distance of 413.43 feet;

Thence 120th, South 79°04'41" East, a distance of 272.03 feet;

Thence 121st, South 13°15'50" West, a distance of 148.58 feet;

Thence 122nd, South 73°28'04" East, a distance of 246.76 feet;

Thence 123rd, South 83°57'02" East, a distance of 1,419.91 feet to the True Point of Beginning.

Containing 327.87 acres, more or less.

Parcel 7
Commencing at the point designated as number 10018 on Record of Survey No. 17046, being corner number "17 ½" at an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 3 of said Record of Survey No. 17046, being the westerly terminus of that certain course shown as "N82°25'18"E 2444.73" on said Record of Survey, which course has a bearing of North 82°25'18" East for the purposes of this description;

Thence South 78°12'20" East, a distance of 2217.05 feet to the True Point of Beginning;

Thence 1st, South 88°28'16" East, a distance of 305.16 feet;

Thence 2nd, South 25°49'33" West, a distance of 296.13 feet;

Thence 3rd, North 86°04'56" West, a distance of 180.32 feet;

Thence 4th, North 00°50'23" East, a distance of 262.40 feet to the True Point of Beginning.

Containing 1.49 acres, more or less.

GUIDA GEOSPATIAL SOLUTIONS

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Parcel 8

Beginning at the point designated as number 10006 on Record of Survey No. 17046, being corner number "6" at an angle point in the northerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 8 of said Record of Survey No. 17046, being the southwesterly terminus of that certain course shown as "N59°55'41"E 713.37" on said Record of Survey;

Thence 1st, along said northerly line, North 59°55'41" East, a distance of 713.37 feet to an angle point therein;

Thence 2nd, continuing along said northerly line, North 24°56'38" East, a distance of 728.46 feet to an angle point therein;

Thence 3rd, continuing along said northerly line, North 48°51'29" East, a distance of 609.08 feet to an angle point therein;

Thence 4th, continuing along said northerly line, South 86°32'17" East, a distance of 536.97 feet to an angle point therein;

Thence 5th, continuing along said northerly line, North 77°31'49" East, a distance of 170.80 feet to an angle point therein;

Thence 6th, continuing along said northerly line, South 45°22'25" East, a distance of 382.01 feet to an angle point therein;

Thence 7th, continuing along said northerly line, South 20°50'34" East, a distance of 686.58 feet to an angle point therein;

Thence 8th, leaving said northerly line, South 09°56'27" East, a distance of 692.55 feet;

Thence 9th, North 78°32'33" East, a distance of 548.54 feet;

Thence 10th, North 55°04'36" East, a distance of 375.22 feet to a point on said northerly line;

Thence 11th, along said northerly line, North 79°59'21" East, a distance of 255.06 feet to an angle point therein;

Thence 12th, continuing along said northerly line, South 55°39'05" East, a distance of 1,145.93 feet to an angle point therein;

Thence 13th, continuing along said northerly line, South 44°31'51" East, a distance of 808.63 feet to an angle point therein;

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Thence 14th, leaving said northerly line, North 60°48'17" East, a distance of 157.16 feet;

Thence 15th, South 31°50'33" East, a distance of 165.58 feet;

Thence 16th, South 02°07'52" West, a distance of 161.17 feet;

Thence 17th, South 46°39'17" East, a distance of 1,005.37 feet;

Thence 18th, South 36°45'36" East, a distance of 25.21 feet to the beginning of a non-tangent curve, concave southeasterly, having a radius of 4,029.98 feet, a radial line to said beginning of curve bears North 36°05'08" West;

Thence 19th, southwesterly along said curve through a central angle of 07°57'05", an arc length of 559.27 feet;

Thence 20th, South 45°58'13" West, a distance of 194.85 feet to the beginning of a non-tangent curve, concave southeasterly, having a radius of 997.00 feet, a radial line to said beginning of curve bears North 44°02'13" West;

Thence 21st, southwesterly along said curve through a central angle of 28°00'23", an arc length of 487.34 feet;

Thence 22nd, South 17°07'31" West, a distance of 346.41 feet to the beginning of a tangent curve, concave northwesterly, having a radius of 590.00 feet;

Thence 23rd, southwesterly along said curve through a central angle of 77°40'52", an arc length of 799.92 feet;

Thence 24th, North 85°11'37" West, a distance of 477.91 feet to the beginning of a tangent curve, concave southerly, having a radius of 747.00 feet;

Thence 25th, westerly along said curve through a central angle of 21°35'05", an arc length of 281.41 feet;

Thence 26th, South 73°13'19" West, a distance of 185.38 feet;

Thence 27th, South 69°52'43" West, a distance of 121.94 feet to the beginning of a tangent curve, concave northerly, having a radius of 2,330.00 feet;

Thence 28th, westerly along said curve through a central angle of 07°30'20", an arc length of 305.22 feet;

Thence 29th, South 77°23'03" West, a distance of 852.02 feet to the beginning of a non-tangent curve, concave northerly, having a radius of 148.33 feet, a radial line to said beginning of curve bears South 13°01'25" East;

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Thence 30th, westerly along said curve through a central angle of 31°53'03", an arc length of 82.54 feet to the beginning of a non-tangent curve, concave northeasterly, having a radius of 765.00 feet, a radial line to said beginning of curve bears South 18°48'27" West;

Thence 31st, northwesterly along said curve through a central angle of 17°00'38", an arc length of 227.12 feet;

Thence 32nd, North 58°28'20" West, a distance of 164.58 feet to the beginning of a tangent curve, concave southwesterly, having a radius of 1,065.00 feet;

Thence 33rd, northwesterly along said curve through a central angle of 12°22'30", an arc length of 230.03 feet;

Thence 34th, North 70°50'51" West, a distance of 45.75 feet to the beginning of a tangent curve, concave northeasterly, having a radius of 591.00 feet;

Thence 35th, northwesterly along said curve through a central angle of 10°27'41", an arc length of 107.91 feet;

Thence 36th, North 60°23'10" West, a distance of 187.20 feet to the beginning of a tangent curve, concave southerly, having a radius of 408.00 feet;

Thence 37th, westerly along said curve through a central angle of 19°55'29", an arc length of 141.88 feet;

Thence 38th, North 09°09'47" East, a distance of 183.63 feet;

Thence 39th, North 19°54'22" West, a distance of 545.22 feet;

Thence 40th, North 78°25'22" East, a distance of 483.98 feet;

Thence 41st, South 89°39'22" East, a distance of 927.99 feet;

Thence 42nd, South 86°44'35" East, a distance of 752.76 feet;

Thence 43rd, North 02°07'20" West, a distance of 756.17 feet;

Thence 44th, North 88°21'51" West, a distance of 488.90 feet;

Thence 45th, North 86°52'59" West, a distance of 252.77 feet;

Thence 46th, North 67°57'06" West, a distance of 213.58 feet;

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Thence 47th, North 51°43'15" West, a distance of 310.04 feet;

Thence 48th, North 23°43'52" West, a distance of 250.63 feet;

Thence 49th, North 42°03'19" West, a distance of 159.10 feet;

Thence 50th, North 53°17'35" West, a distance of 153.77 feet;

Thence 51st, North 34°44'26" West, a distance of 195.87 feet;

Thence 52nd, South 65°03'10" West, a distance of 156.49 feet;

Thence 53rd, South 59°51'04" West, a distance of 135.96 feet;

Thence 54th, South 87°16'36" West, a distance of 152.53 feet;

Thence 55th, North 47°14'05" West, a distance of 216.32 feet;

Thence 56th, North 11°44'28" West, a distance of 139.06 feet;

Thence 57th, North 03°24'08" East, a distance of 172.44 feet;

Thence 58th, North 13°01'02" East, a distance of 420.98 feet;

Thence 59th, North 32°11'11" East, a distance of 603.62 feet;

Thence 60th, North 29°11'13" East, a distance of 433.45 feet;

Thence 61st, North 50°06'20" East, a distance of 430.95 feet;

Thence 62nd, North 56°23'36" West, a distance of 331.41 feet;

Thence 63rd, South 77°00'52" West, a distance of 440.52 feet;

Thence 64th, South 69°08'34" West, a distance of 413.23 feet;

Thence 65th, South 34°22'38" West, a distance of 913.17 feet;

Thence 66th, South 64°50'06" West, a distance of 378.77 feet;

Thence 67th, North 60°09'48" West, a distance of 327.62 feet to the Point of Beginning.

Containing 327.55 acres, more or less.

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Parcel 9
Commencing at the point designated as number 10002 on Record of Survey No. 17046, being corner number “43” at an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 8 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as “N39°59’53”W 353.81” on said Record of Survey, which course has a bearing of North 39°59’53” West for the purposes of this description;

Thence North 36°31'56" East, a distance of 2675.75 feet to the True Point of Beginning;

Thence 1st, North 36°58'14" West, a distance of 108.85 feet;

Thence 2nd, North 53°37'27" East, a distance of 157.18 feet;

Thence 3rd, South 37°38'00" East, a distance of 109.72 feet;

Thence 4th, South 53°55'56" West, a distance of 158.46 feet to the True Point of Beginning.

Containing 0.40 acres, more or less.

Parcel 10
Commencing at the point designated as number 10002 on Record of Survey No. 17046, being corner number “43” at an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 8 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as “N39°59’53”W 353.81” on said Record of Survey, which course has a bearing of North 39°59’53” West for the purposes of this description;

Thence South 13°12'27" West, a distance of 1161.80 feet to the True Point of Beginning;

Thence 1st, South 62°58'32" East, a distance of 47.08 feet;

Thence 2nd, South 09°05'29" West, a distance of 27.25 feet;

Thence 3rd, South 09°42'20" West, a distance of 64.19 feet;

Thence 4th, South 29°35'41" West, a distance of 113.31 feet;

Thence 5th, North 55°32'13" West, a distance of 55.81 feet;

Thence 6th, North 05°55'01" West, a distance of 58.96 feet;

Thence 7th, North 01°44'56" East, a distance of 97.42 feet;

Thence 8th, North 60°30'33" East, a distance of 32.61 feet;

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Thence 9th, North 82°38'18" East, a distance of 50.29 feet to the True Point of Beginning.

Containing 0.43 acres, more or less.

Parcel 11
Commencing at the point designated as number 10002 on Record of Survey No. 17046, being corner number “43” at an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 8 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as “N39°59’53”W 353.81” on said Record of Survey, which course has a bearing of North 39°59’53” West for the purposes of this description;

Thence South 00°55'16" East, a distance of 2071.15 feet to the True Point of Beginning;

Thence 1st, South 03°35'51" East, a distance of 115.01 feet;

Thence 2nd, South 89°36'28" West, a distance of 156.18 feet;

Thence 3rd, North 07°20'38" West, a distance of 69.00 feet;

Thence 4th, North 13°58'34" East, a distance of 54.13 feet;

Thence 5th, South 87°58'32" East, a distance of 144.80 feet to the True Point of Beginning.

Containing 0.42 acres, more or less.

Parcel 12
Commencing at the point designated as number 10002 on Record of Survey No. 17046, being corner number “43” at an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 8 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as “N39°59’53”W 353.81” on said Record of Survey, which course has a bearing of North 39°59’53” West for the purposes of this description;

Thence South 02°26'01" East, a distance of 1064.69 feet to the True Point of Beginning;

Thence 1st, South 71°51'48" East, a distance of 261.20 feet;

Thence 2nd, South 35°34'26" East, a distance of 357.53 feet;

Thence 3rd, North 47°43'50" East, a distance of 110.83 feet;

Thence 4th, South 50°54'07" East, a distance of 231.45 feet;

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Thence 5th, South 40°30'33" West, a distance of 88.95 feet;

Thence 6th, South 24°14'49" West, a distance of 65.17 feet;

Thence 7th, South 08°59'49" East, a distance of 48.83 feet;

Thence 8th, South 76°37'48" East, a distance of 153.03 feet;

Thence 9th, South 71°57'32" East, a distance of 121.32 feet;

Thence 10th, South 70°13'51" East, a distance of 113.64 feet;

Thence 11th, South 66°56'46" East, a distance of 177.68 feet;

Thence 12th, South 83°39'16" East, a distance of 102.80 feet;

Thence 13th, South 79°04'42" East, a distance of 103.02 feet;

Thence 14th, South 84°08'53" East, a distance of 65.73 feet;

Thence 15th, North 87°27'19" East, a distance of 50.91 feet;

Thence 16th, North 48°59'20" East, a distance of 103.32 feet;

Thence 17th, North 51°07'00" East, a distance of 101.80 feet;

Thence 18th, North 13°16'19" West, a distance of 45.04 feet;

Thence 19th, North 03°54'30" East, a distance of 29.52 feet;

Thence 20th, North 80°25'11" East, a distance of 74.42 feet;

Thence 21st, South 79°54'02" East, a distance of 67.56 feet;

Thence 22nd, South 41°18'56" East, a distance of 59.75 feet;

Thence 23rd, South 57°00'17" East, a distance of 75.79 feet;

Thence 24th, South 82°54'58" East, a distance of 99.51 feet;

Thence 25th, South 89°05'59" East, a distance of 92.55 feet;

Thence 26th, South 71°13'24" East, a distance of 78.36 feet;

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Thence 27th, South 36°01'52" East, a distance of 118.04 feet;

Thence 28th, South 50°57'25" West, a distance of 173.21 feet;

Thence 29th, North 42°03'03" West, a distance of 111.28 feet;

Thence 30st, North 59°44'14" West, a distance of 110.69 feet;

Thence 31st, North 80°23'45" West, a distance of 129.15 feet;

Thence 32nd, South 19°12'53" West, a distance of 115.45 feet;

Thence 33rd, South 31°12'21" West, a distance of 103.88 feet;

Thence 34th, South 43°19'49" West, a distance of 110.20 feet;

Thence 35th, South 48°40'53" West, a distance of 86.31 feet;

Thence 36th, South 57°57'21" West, a distance of 119.17 feet;

Thence 37th, South 60°34'22" West, a distance of 95.15 feet;

Thence 38th, South 45°22'33" West, a distance of 84.18 feet;

Thence 39th, South 37°21'11" West, a distance of 89.69 feet;

Thence 40th, North 83°24'32" West, a distance of 212.22 feet;

Thence 41st, North 81°14'03" West, a distance of 185.41 feet;

Thence 42nd, North 41°54'05" West, a distance of 147.69 feet;

Thence 43rd, North 58°25'47" West, a distance of 230.08 feet;

Thence 44th, South 43°05'48" West, a distance of 45.33 feet;

Thence 45th, North 52°50'48" West, a distance of 79.63 feet;

Thence 46th, North 05°00'17" East, a distance of 111.90 feet;

Thence 47th, North 78°25'31" West, a distance of 325.91 feet;

Thence 48th, North 47°09'27" West, a distance of 114.31 feet;

Thence 49th, North 71°30'17" West, a distance of 249.71 feet;

Thence 50st, North 06°22'33" East, a distance of 190.68 feet;

Thence 51st, North 13°50'28" East, a distance of 211.86 feet;

Thence 52nd, North 13°17'03" East, a distance of 208.27 feet;

Thence 53rd, North 13°16'12" East, a distance of 148.96 feet to the True Point of Beginning.

Containing 27.24 acres, more or less.

Parcel 13
Commencing at the point designated as number 10002 on Record of Survey No. 17046, being corner number "43" at an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 8 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as "N39°59'53"W 353.81" on said Record of Survey, which course has a bearing of North 39°59'53" West for the purposes of this description;

Thence South 08°10'53" East, a distance of 3006.16 feet to the True Point of Beginning;

Thence 1st, South 12°13'45" West, a distance of 242.53 feet;

Thence 2nd, North 78°03'46" West, a distance of 374.45 feet;

Thence 3rd, North 09°52'14" East, a distance of 240.78 feet;

Thence 4th, South 78°20'46" E , a distance of 384.37 feet to the True Point of Beginning.

Containing 2.10 acres, more or less.

Parcel 14
Commencing at the point designated as number 10079 on Record of Survey No. 17046, being an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 11 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as "N25°34'03"W 1989.15" on said Record of Survey, which course has a bearing of North 25°34'03" West for the purposes of this description;

Thence North 31°32'42" East, a distance of 2087.31 feet to the True Point of Beginning;

Thence 1st, North 09°25'41" East, a distance of 81.27 feet;

Thence 2nd, South 80°21'55" East, a distance of 46.50 feet;

Thence 3rd, North 12°41'58" East, a distance of 76.73 feet;

Thence 4th, South 79°33'44" East, a distance of 104.22 feet;

Thence 5th, South 55°33'16" East, a distance of 35.48 feet;

Thence 6th, South 10°28'41" W , a distance of 166.88 feet;

Thence 7th, South 73°43'23" West, a distance of 38.23 feet;

Thence 8th, North 78°23'16" West, a distance of 102. 82 feet;

Thence 9th, North 06°15'54" East, a distance of 36.55 feet;

Thence 10th, North 77°50'17" West, a distance of 45.02 feet to the True Point of Beginning.

Containing 0.70 acres, more or less.

Parcel 15
Commencing at the point designated as number 10079 on Record of Survey No. 17046, being an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 11 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as “N25°34’03”W 1989.15” on said Record of Survey, which course has a bearing of North 25°34’03” West for the purposes of this description;

Thence North 03°47'17" West, a distance of 1480.53 feet to the True Point of Beginning;

Thence 1st, North 11°38'59" East, a distance of 116.42 feet;

Thence 2nd, South 81°37'23" East, a distance of 108.77 feet;

Thence 3rd, South 02°01'21" West, a distance of 87.28 feet;

Thence 4th, South 72°49'48" West, a distance of 29.03 feet;

Thence 5th, South 39°18'01" West, a distance of 29.44 feet;

Thence 6th, North 75°58'05" West, a distance of 84.16 feet to the True Point of Beginning.

Containing 0.31 acres, more or less.

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Parcel 16
Commencing at the point designated as number 10079 on Record of Survey No. 17046, being an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 11 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as “N25°34’03”W 1989.15” on said Record of Survey, which course has a bearing of North 25°34’03” West for the purposes of this description;

Thence North 42°48'57" East, a distance of 1910.95 feet to the True Point of Beginning;

Thence 1st, North 78°37'26" West, a distance of 153.15 feet;

Thence 2nd, North 11°36'00" East, a distance of 215.71 feet;

Thence 3rd, South 79°39'04" East, a distance of 147.22 feet;

Thence 4th, South 10°02'09" West, a distance of 218.41 feet to the True Point of Beginning.

Containing 0.75 acres, more or less.

Parcel 17
Commencing at the point designated as number 10079 on Record of Survey No. 17046, being an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 11 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as “N25°34’03”W 1989.15” on said Record of Survey, which course has a bearing of North 25°34’03” West for the purposes of this description;

Thence North 05°21'24" East, a distance of 820.32 feet to the True Point of Beginning;

Thence 1st, North 66°42'12" West, a distance of 118.38 feet;

Thence 2nd, North 29°00'50" East, a distance of 312.55 feet;

Thence 3rd, South 56°47'13" East, a distance of 133.94 feet;

Thence 4th, South 32°07'12" West, a distance of 291.38 feet to the True Point of Beginning.

Contains 0.87 acres, more or less.

Parcel 18
Commencing at the point designated as number 10079 on Record of Survey No. 17046, being an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 11 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as “N25°34’03”W 1989.15” on said Record of Survey, which course has a bearing of

North 25°34’03” West for the purposes of this description;

Thence South 08°46'24" West, a distance of 1403.74 feet to the True Point of Beginning;

Thence 1st North 86°57'41" East, a distance of 461.18 feet;

Thence 2nd South 06°15'43" West, a distance of 305.15 feet;

Thence 3rd South 09°24'58" West, a distance of 181.34 feet;

Thence 4th South 51°42'45" West, a distance of 109.18 feet;

Thence 5th North 73°38'11" West, a distance of 150.32 feet;

Thence 6th North 50°24'02" West, a distance of 157.93 feet;

Thence 7th North 06°51'20" West, a distance of 385.16 feet to the True Point of Beginning.

Containing 4.53 acres, more or less.

Parcel 19
Commencing at the point designated as number 10021 on Record of Survey No. 17046, being the corner common to Sections 1 and 2, T14S, R1E, SBM and Sections 35 and 36, T13S, R1E, SBM, marked with an iron pipe and brass cap monument as shown on Sheet 2 of said Record of Survey No. 17046, being the northerly terminus of that certain course shown as “N0°15’20”E 5448.01” on said Record of Survey, which course has a bearing of North 00°15’20” East for the purposes of this description;

Thence South 42°53'45" East, a distance of 6278.69 feet to the True Point of Beginning;

Thence 1st, South 65°12'24" East, a distance of 388.36 feet to the beginning of a tangent curve, concave southwesterly, having a radius of 620.00 feet;

Thence 2nd, southeasterly along said curve through a central angle of 22°55'08", an arc length of 248.00 feet;

Thence 3rd, South 42°17'17" East, a distance of 520.26 feet to the beginning of a tangent curve, concave westerly, having a radius of 380.00 feet;

Thence 4th, southerly along said curve through a central angle of 56°35'29", an arc length of 375.33 feet;

Thence 5th, South 14°18'12" West, a distance of 770.82 feet to the beginning of a tangent curve, concave northwesterly, having a radius of 320.00 feet;

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Thence 6th, southwesterly along said curve through a central angle of 49°27'02", an arc length of 276.18 feet;

Thence 7th, South 63°45'15" West, a distance of 163.18 feet;

Thence 8th, South 67°03'32" West, a distance of 165.26 feet to the beginning of a tangent curve, concave northerly, having a radius of 870.00 feet;

Thence 9th, westerly along said curve through a central angle of 13°50'49", an arc length of 210.26 feet;

Thence 10th, South 80°54'20" West, a distance of 181.05 feet;

Thence 11th, South 85°43'03" West, a distance of 162.83 feet to the beginning of a tangent curve, concave southeasterly, having a radius of 455.00 feet;

Thence 12th, southwesterly along said curve through a central angle of 58°46'37", an arc length of 466.76 feet;

Thence 13th, South 26°56'26" West, a distance of 1,192.78 feet;

Thence 14th, South 26°50'18" West, a distance of 884.48 feet to the beginning of a tangent curve, concave northwesterly, having a radius of 688.00 feet;

Thence 15th, southwesterly along said curve through a central angle of 22°50'35", an arc length of 274.30 feet;

Thence 16th, South 49°40'53" West, a distance of 196.56 feet to the beginning of a tangent curve, concave southeasterly, having a radius of 475.00 feet;

Thence 17th, southwesterly along said curve through a central angle of 40°46'38", an arc length of 338.06 feet;

Thence 18th, South 08°54'16" West, a distance of 539.69 feet to the beginning of a tangent curve, concave westerly, having a radius of 1,820.00 feet;

Thence 19th, southerly along said curve through a central angle of 14°06'18", an arc length of 448.04 feet;

Thence 20th, South 23°00'33" West, a distance of 2,133.70 feet;

Thence 21st, North 73°48'45" West, a distance of 50.33 feet;

Thence 22nd, North 28°06'19" West, a distance of 427.84 feet;

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Thence 23rd, North 55°11'40" West, a distance of 269.51 feet;

Thence 24th, North 07°42'46" West, a distance of 755.57 feet;

Thence 25th, North 27°08'54" East, a distance of 911.96 feet;

Thence 26th, North 03°48'47" East, a distance of 595.58 feet;

Thence 27th, North 07°43'37" West, a distance of 388.80 feet;

Thence 28th, North 34°14'40" East, a distance of 696.60 feet;

Thence 29th, North 01°06'25" East, a distance of 701.60 feet;

Thence 30th, North 18°31'59" East, a distance of 1,041.82 feet;

Thence 31st, North 00°36'15" East, a distance of 1,293.10 feet;

Thence 32nd, North 51°38'40" East, a distance of 578.65 feet;

Thence 33rd, North 66°30'37" East, a distance of 2,182.69 feet;

Thence 34th, North 22°58'28" East, a distance of 19.12 feet to the True Point of Beginning.

Containing 293.26 acres, more or less.

Parcel 20
Commencing at the point designated as number 10018 on Record of Survey No. 17046, being corner number “17 ½” at an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 3 of said Record of Survey No. 17046, being the westerly terminus of that certain course shown as “N82°25’18”E 2444.73” on said Record of Survey, which course has a bearing of North 82°25’18” East for the purposes of this description;

Thence South 35°01'35" East, a distance of 4363.16 feet to the True Point of Beginning;

Thence 1st, South 43°29'09" West, a distance of 93.57 feet to the beginning of a tangent curve, concave southeasterly, having a radius of 2,230.00 feet;

Thence 2nd, southwesterly along said curve through a central angle of 17°41'27", an arc length of 688.54 feet;

Thence 3rd, South 25°47'42" West, a distance of 976.83 feet;

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Thence 4th, North 67°46'43" West, a distance of 18.53 feet;

Thence 5th, North 43°45'04" West, a distance of 466.93 feet;

Thence 6th, North 13°26'23" West, a distance of 219.66 feet;

Thence 7th, North 45°40'36" East, a distance of 613.64 feet;

Thence 8th, North 52°26'39" East, a distance of 385.55 feet;

Thence 9th, North 65°53'48" East, a distance of 460.86 feet;

Thence 10th, North 37°14'34" East, a distance of 143.53 feet;

Thence 11th, South 55°26'20" East, a distance of 22.11 feet to the point of Beginning.

Containing 12.82 acres, more or less.

Parcel 21
Commencing at the point designated as number 10002 on Record of Survey No. 17046, being corner number “43” at an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 8 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as “N39°59’53”W 353.81” on said Record of Survey, which course has a bearing of North 39°59’53” West for the purposes of this description;

Thence South 74°40'49" East, a distance of 4749.95 feet to the True Point of Beginning;

Thence 1st, North 72°57'15" East, a distance of 394.70 feet;

Thence 2nd, North 09°09'47" East, a distance of 62.61 feet to the beginning of a non-tangent curve, concave southerly, having a radius of 348.00 feet, a radial line to said beginning of curve bears North 09°46'48" East;

Thence 3rd, easterly along said curve through a central angle of 19°50'02", an arc length of 120.47 feet;

Thence 4th, South 60°23'10" East, a distance of 187.20 feet to the beginning of a tangent curve, concave northeasterly, having a radius of 651.00 feet;

Thence 5th, southeasterly along said curve through a central angle of 10°27'41", an arc length of 118.86 feet;

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Thence 6th, South 70°50'51" East, a distance of 45.75 feet to the beginning of a tangent curve, concave southwesterly, having a radius of 1,005.00 feet;

Thence 7th, southeasterly along said curve through a central angle of 12°22'30", an arc length of 217.07 feet;

Thence 8th, South 58°28'20" East, a distance of 162.37 feet to the beginning of a non-tangent curve, concave northeasterly, having a radius of 825.00 feet, a radial line to said beginning of curve bears South 35°39'32" West;

Thence 9th, southeasterly along said curve through a central angle of 16°51'05", an arc length of 242.64 feet to the beginning of a non-tangent curve, concave northerly, having a radius of 208.24 feet, a radial line to said beginning of curve bears South 18°51'08" West;

Thence 10th, easterly along said curve through a central angle of 31°49'11", an arc length of 115.65 feet;

Thence 11th, North 77°23'03" East, a distance of 851.82 feet to the beginning of a non-tangent curve, concave northerly, having a radius of 2,390.00 feet, a radial line to said beginning of curve bears South 12°36'58" East;

Thence 12th, easterly along said curve through a central angle of 07°30'20", an arc length of 313.08 feet;

Thence 13th, North 69°52'43" East, a distance of 120.19 feet;

Thence 14th, North 73°13'19" East, a distance of 183.63 feet to the beginning of a tangent curve, concave southerly, having a radius of 687.00 feet;

Thence 15th, easterly along said curve through a central angle of 21°35'05", an arc length of 258.81 feet;

Thence 16th, South 85°11'37" East, a distance of 477.91 feet to the beginning of a tangent curve, concave northwesterly, having a radius of 650.00 feet;

Thence 17th, northeasterly along said curve through a central angle of 77°40'52", an arc length of 881.27 feet;

Thence 18th, North 17°07'31" East, a distance of 345.96 feet to the beginning of a non-tangent curve, concave southeasterly, having a radius of 937.00 feet, a radial line to said beginning of curve bears North 72°01'02" West;

Thence 19th, northeasterly along said curve through a central angle of 27°58'49", an arc length of 457.58 feet;

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Thence 20th, North 45°58'13" East, a distance of 194.84 feet to the beginning of a non-tangent curve, concave southeasterly, having a radius of 3,970.02 feet, a radial line to said beginning of curve bears North 44°02'13" West;

Thence 21st, northeasterly along said curve through a central angle of 07°57'41", an arc length of 551.65 feet;

Thence 22nd, South 36°45'36" East, a distance of 30.73 feet;

Thence 23rd, South 18°49'49" East, a distance of 400.11 feet;

Thence 24th, South 06°01'12" West, a distance of 117.48 feet;

Thence 25th, South 14°29'28" West, a distance of 304.53 feet;

Thence 26th, South 29°06'10" West, a distance of 344.76 feet;

Thence 27th, South 18°29'37" West, a distance of 304.94 feet;

Thence 28th, South 31°46'00" West, a distance of 287.14 feet;

Thence 29th, South 44°57'22" West, a distance of 411.73 feet;

Thence 30th, South 56°50'25" West, a distance of 325.07 feet;

Thence 31st, South 51°29'40" West, a distance of 865.20 feet;

Thence 32nd, South 28°52'49" West, a distance of 783.94 feet;

Thence 33rd, South 17°23'57" West, a distance of 543.53 feet;

Thence 34th, South 09°43'47" West, a distance of 350.89 feet;

Thence 35th, South 37°54'19" West, a distance of 370.61 feet;

Thence 36th, South 89°55'39" West, a distance of 710.02 feet;

Thence 37th, South 15°13'13" East, a distance of 549.33 feet;

Thence 38th, North 68°43'57" East, a distance of 461.36 feet;

Thence 39th, South 66°57'04" East, a distance of 292.85 feet;

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Thence 40th, South 17°32'06" East, a distance of 836.05 feet;

Thence 41st, South 35°54'10" West, a distance of 663.21 feet;

Thence 42nd, North 88°36'16" West, a distance of 319.39 feet;

Thence 43rd, South 12°19'10" West, a distance of 370.64 feet;

Thence 44th, South 41°25'29" West, a distance of 479.74 feet;

Thence 45th, South 33°30'49" West, a distance of 394.79 feet;

Thence 46th, South 58°03'51" East, a distance of 326.68 feet;

Thence 47th, North 30°09'28" East, a distance of 441.04 feet;

Thence 48th, North 28°22'00" East, a distance of 603.26 feet;

Thence 49th, South 34°10'46" East, a distance of 292.40 feet;

Thence 50th, South 50°29'08" East, a distance of 281.51 feet;

Thence 51st, South 26°21'24" West, a distance of 671.15 feet;

Thence 52nd, South 67°31'27" East, a distance of 685.71 feet;

Thence 53rd, South 18°21'09" West, a distance of 277.94 feet;

Thence 54th, South 62°36'57" East, a distance of 258.10 feet;

Thence 55th, South 26°40'33" West, a distance of 224.23 feet;

Thence 56th, North 70°27'12" West, a distance of 751.05 feet;

Thence 57th, North 59°59'05" West, a distance of 455.52 feet;

Thence 58th, North 43°14'48" West, a distance of 348.77 feet;

Thence 59th, North 58°37'58" West, a distance of 526.20 feet;

Thence 60th, South 67°30'35" West, a distance of 264.98 feet;

Thence 61st, North 80°41'14" West, a distance of 943.67 feet;

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Thence 62nd, North 65°33'41" West, a distance of 528.45 feet;

Thence 63rd, North 28°27'57" West, a distance of 640.28 feet;

Thence 64th, North 09°14'26" West, a distance of 837.44 feet;

Thence 65th, North 50°44'55" West, a distance of 508.24 feet;

Thence 66th, South 81°53'32" West, a distance of 549.58 feet;

Thence 67th, South 24°42'31" West, a distance of 557.21 feet;

Thence 68th, South 13°53'55" West, a distance of 551.90 feet;

Thence 69th, South 24°18'15" West, a distance of 707.92 feet;

Thence 70th, North 75°49'30" West, a distance of 787.93 feet;

Thence 71st, North 50°34'39" West, a distance of 608.02 feet;

Thence 72nd, North 63°39'52" West, a distance of 24.46 feet to the beginning of a non-tangent curve, concave northwesterly, having a radius of 2,285.00 feet, a radial line to said beginning of curve bears South 53°31'48" East;

Thence 73rd, northeasterly along said curve through a central angle of 03°58'02", an arc length of 158.22 feet;

Thence 74th, North 32°30'10" East, a distance of 225.11 feet;

Thence 75th, North 32°48'10" East, a distance of 281.27 feet;

Thence 76th, South 57°01'07" East, a distance of 15.91 feet;

Thence 77th, North 60°26'18" East, a distance of 678.02 feet;

Thence 78th, North 14°20'39" East, a distance of 896.12 feet;

Thence 79th, North 27°57'19" East, a distance of 605.29 feet;

Thence 80th, North 14°38'47" East, a distance of 525.24 feet;

Thence 81st, North 02°52'05" East, a distance of 384.72 feet;

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Thence 82nd, North 04°49'07" East, a distance of 495.68 feet;

Thence 83rd, North 34°39'11" East, a distance of 264.12 feet;

Thence 84th, North 41°27'57" East, a distance of 484.79 feet;

Thence 85th, North 53°58'01" East, a distance of 514.55 feet;

Thence 86th, North 62°30'32" East, a distance of 895.08 feet to the True Point of Beginning.

Containing 652.69 acres, more or less.

Parcel 22
Beginning at the point designated as number 10079 on Record of Survey No. 17046, being an angle point in the westerly line of Rancho Barona, marked with an iron pipe and brass cap monument as shown on Sheet 11 of said Record of Survey No. 17046, being the southeasterly terminus of that certain course shown as “N25°34’03”W 1989.15” on said Record of Survey, which course has a bearing of North 25°34’03” West for the purposes of this description;

Thence 1st, along the line between the points designated as numbers 10079 and 10001 as shown on Sheet 11 of said Record of Survey No. 17046, North 25°34'03" West, a distance of 158.11 feet;

Thence 2nd, North 40°59'54" East, a distance of 187.27 feet;

Thence 3rd, North 64°56'22" East, a distance of 188.01 feet;

Thence 4th, South 79°46'44" East, a distance of 188.33 feet;

Thence 5th, South 48°58'28" East, a distance of 230.92 feet;

Thence 6th, North 74°18'38" East, a distance of 116.55 feet;

Thence 7th, South 68°00'59" East, a distance of 116.66 feet;

Thence 8th, South 30°21'33" East, a distance of 443.04 feet;

Thence 9th, North 74°16'44" East, a distance of 502.95 feet;

Thence 10th, South 68°12'37" East, a distance of 278.99 feet;

Thence 11th, South 57°01'07" East, a distance of 271.88 feet;

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Thence 12th, South 32°48'10" West, a distance of 281.62 feet;

Thence 13th, South 32°30'10" West, a distance of 225.27 feet to the beginning of a tangent curve, concave northwesterly, having a radius of 2,225.00 feet;

Thence 14th, southwesterly along said curve through a central angle of 04°14'37", an arc length of 164.79 feet;

Thence 15th, North 63°39'52" West, a distance of 50.63 feet;

Thence 16th, North 80°00'22" West, a distance of 443.68 feet;

Thence 17th, North 60°03'35" West, a distance of 198.56 feet;

Thence 18th, North 33°01'14" West, a distance of 364.61 feet;

Thence 19th, North 63°24'42" West, a distance of 381.43 feet;

Thence 20th, North 33°47'24" West, a distance of 274.00 feet;

Thence 21st, North 76°11'25" West, a distance of 229.58 feet;

Thence 22nd, South 44°10'59" West, a distance of 221.92 feet;

Thence 23rd, North 83°01'39" West, a distance of 137.49 feet;

Thence 24th, North 25°22'57" West, a distance of 87.85 feet to a point on the line between the points designated as numbers 10080 and 10079 as shown on Sheet 11 of said Record of Survey No 17046;

Thence 25th, along said line, South 89°46'22" East, a distance of 265.48 feet to said point number 10079, being the Point of Beginning.

Containing 24.12 acres, more or less.

Notes:

1) *Total area of Parcels 1 through 24 = 1,784.03 acres, more or less, on CCS83 Zone 6 grid.*

2) *Parcels were calculated using grid bearings and distances based on the map filed as Record of Survey 17046, San Diego County Records, which has a scale factor of 0.999976511 listed on sheet 1 of the map.*

3) *Divide grid areas by 0.9999530226 (the scale factor twice, i.e. 0.999976511 X 0.999976511) to obtain ground level areas.*

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This description has been prepared by me, or under my direction, in conformance with the Professional Land Surveyors' Act.

_____ 08-21-2024
Justin P. Height, PLS 6167 Date



The Metropolitan Water District
of Southern California
Geodetics & Mapping Team 1
REVIEWED
Reviewer: B.G. Date: 10/18/24

GUIDA GEOSPATIAL SOLUTIONS

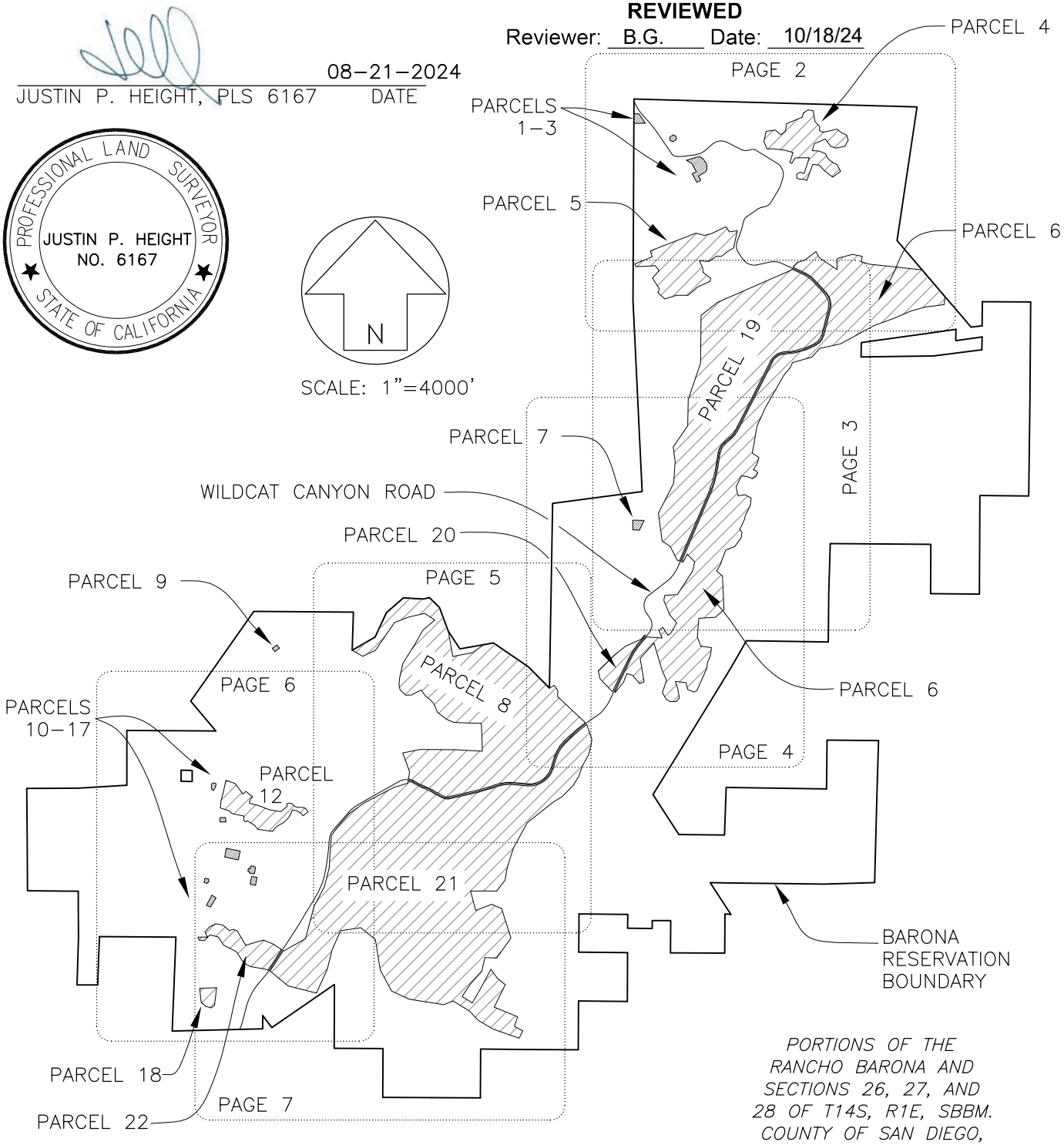
THIS PLAT HAS BEEN PREPARED BY ME, OR UNDER MY DIRECTION, IN CONFORMANCE WITH THE PROFESSIONAL LAND SURVEYORS ACT.

08-21-2024

JUSTIN P. HEIGHT, PLS 6167 DATE

PROFESSIONAL LAND SURVEYOR
JUSTIN P. HEIGHT
NO. 6167
STATE OF CALIFORNIA

The Metropolitan Water District
of Southern California
Geodetics & Mapping Team 1
REVIEWED
Reviewer: B.G. Date: 10/18/24



PORTIONS OF THE RANCHO BARONA AND SECTIONS 26, 27, AND 28 OF T14S, R1E, SBBM. COUNTY OF SAN DIEGO, STATE OF CALIFORNIA

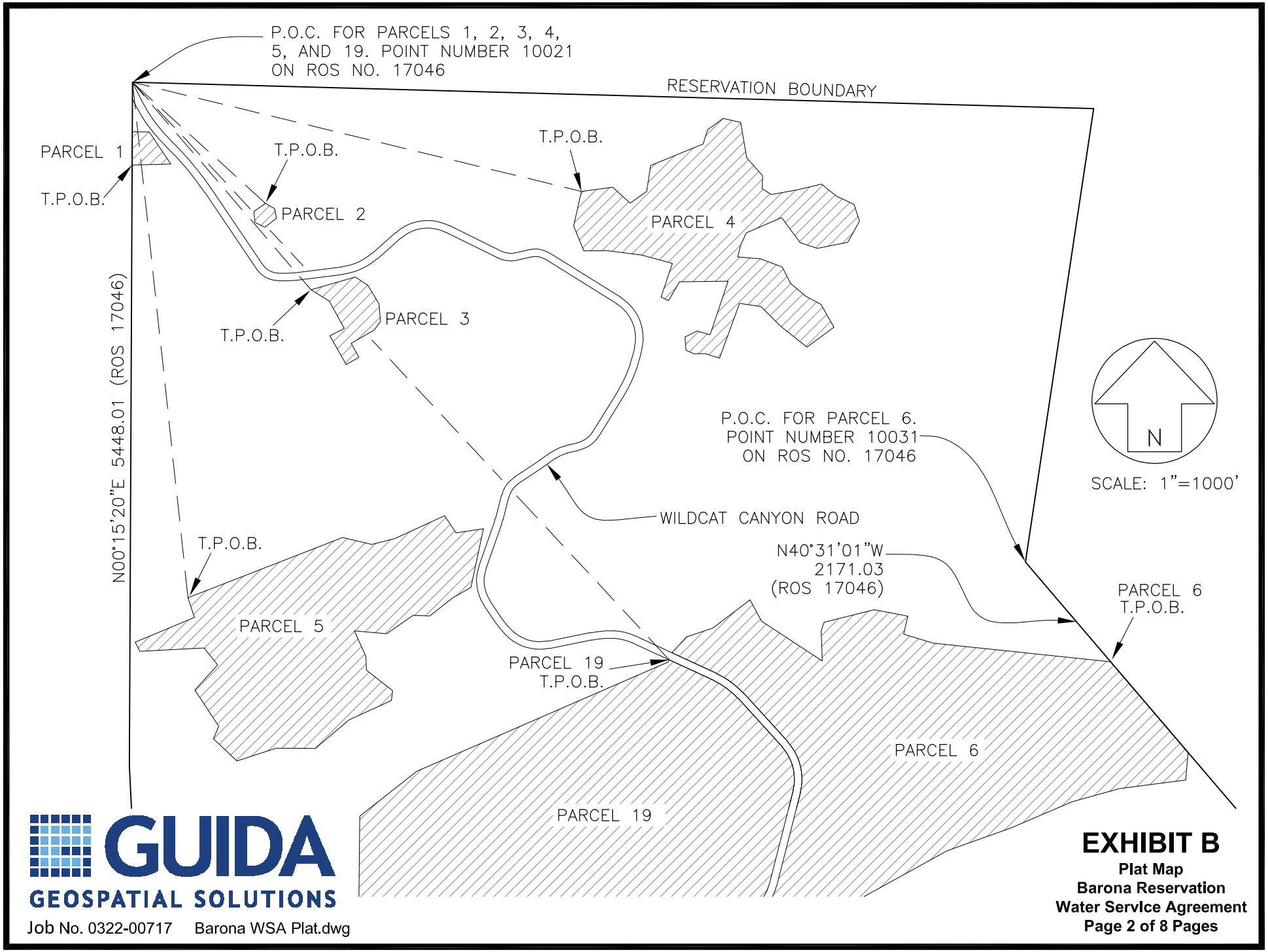
LEGEND

P.O.C.	POINT OF COMMENCEMENT
P.O.B.	POINT OF BEGINNING
T.P.O.B.	TRUE POINT OF BEGINNING
— —	TIE LINE
	WATER SERVICE AREA (WSA) PARCEL
	WSA TOTAL = 1,784.026 ACRES

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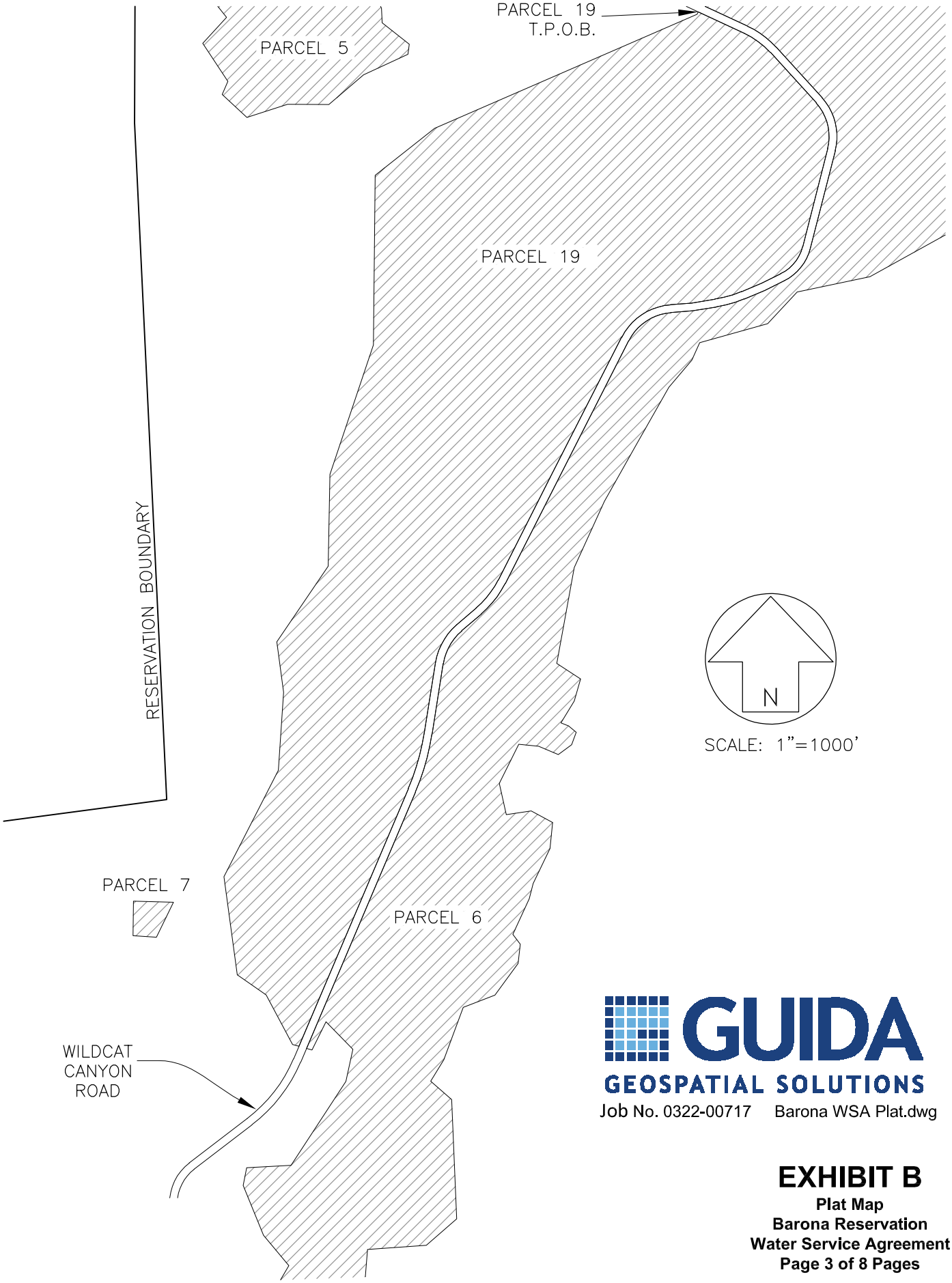


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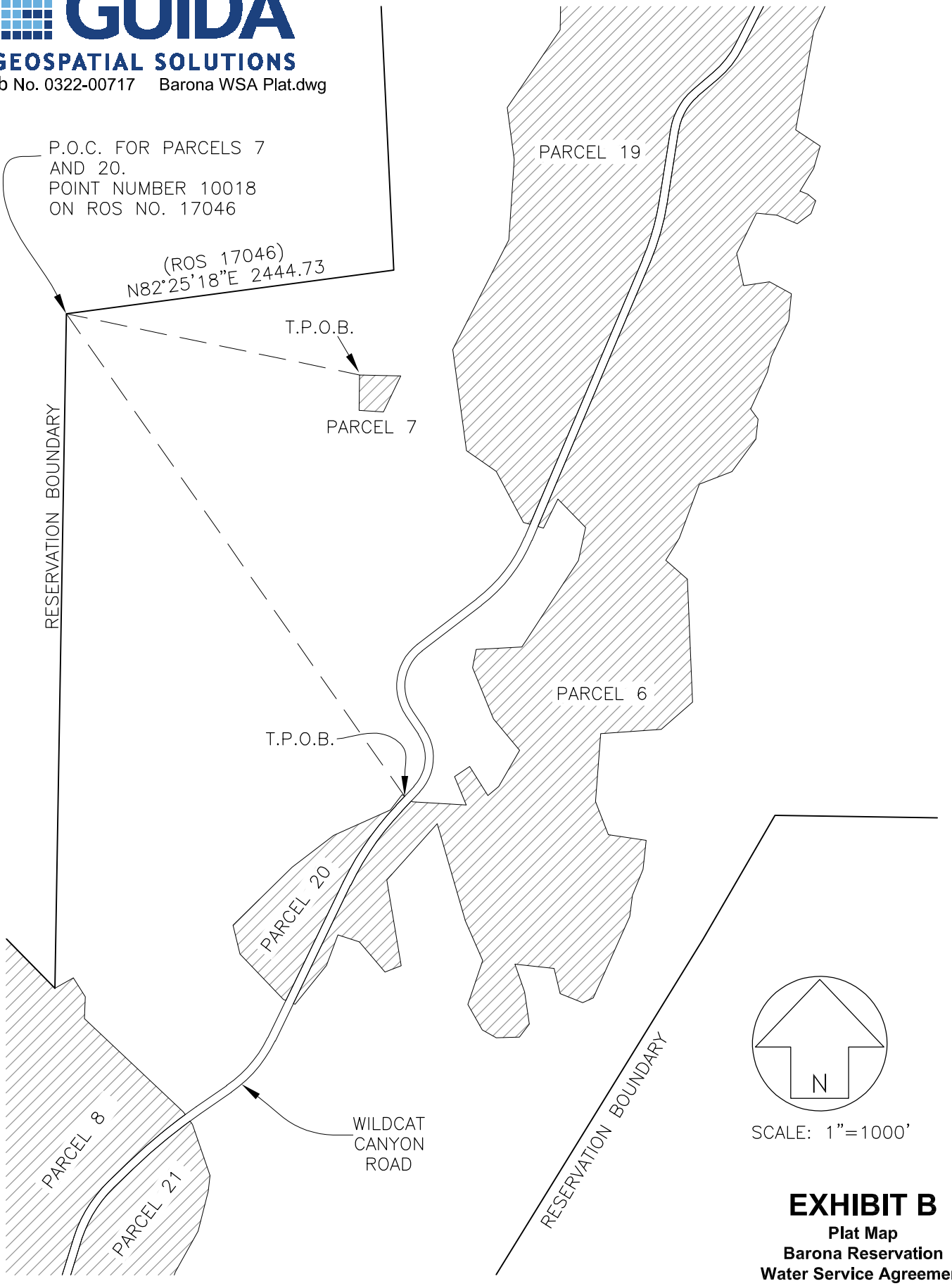


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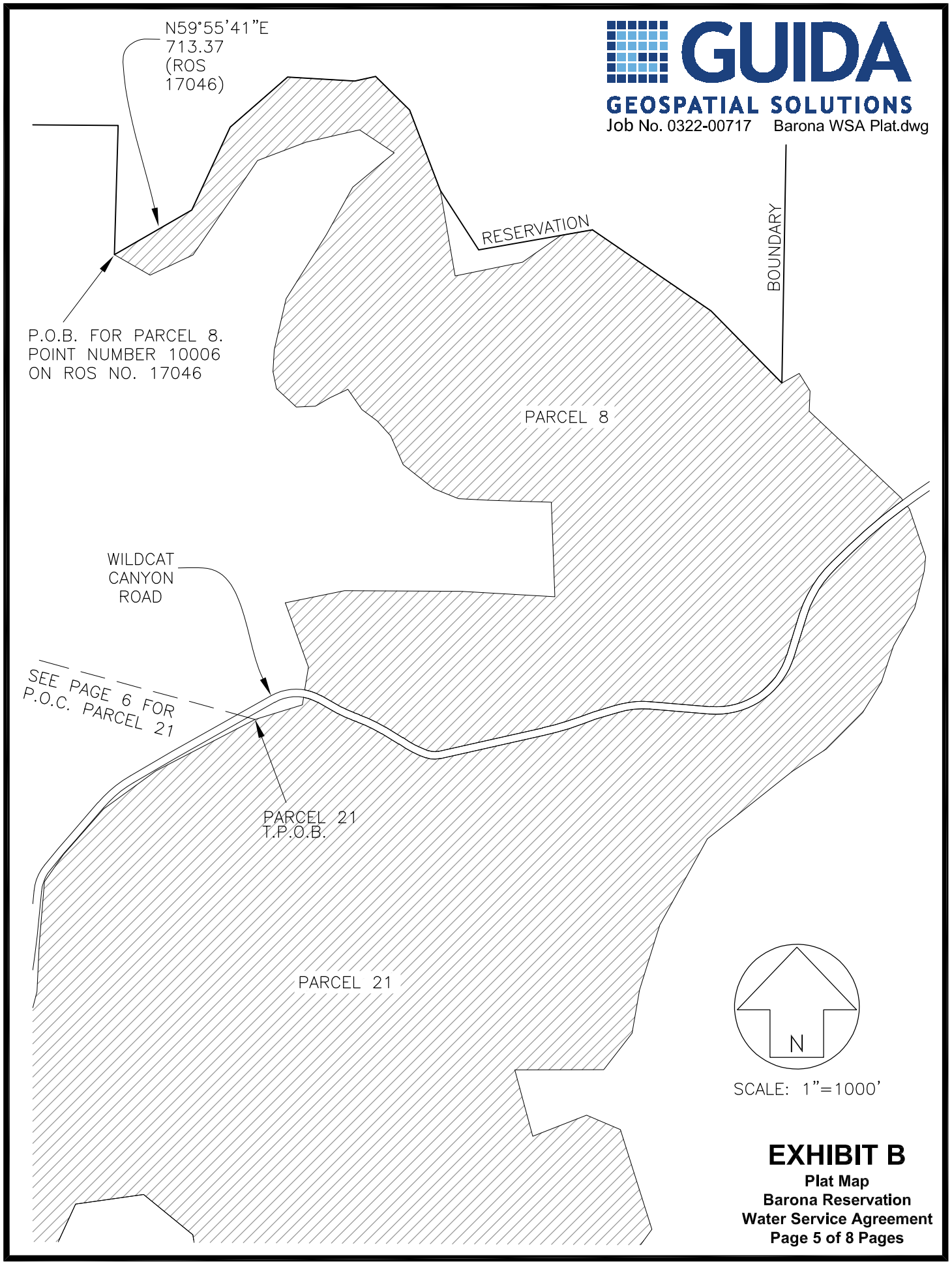


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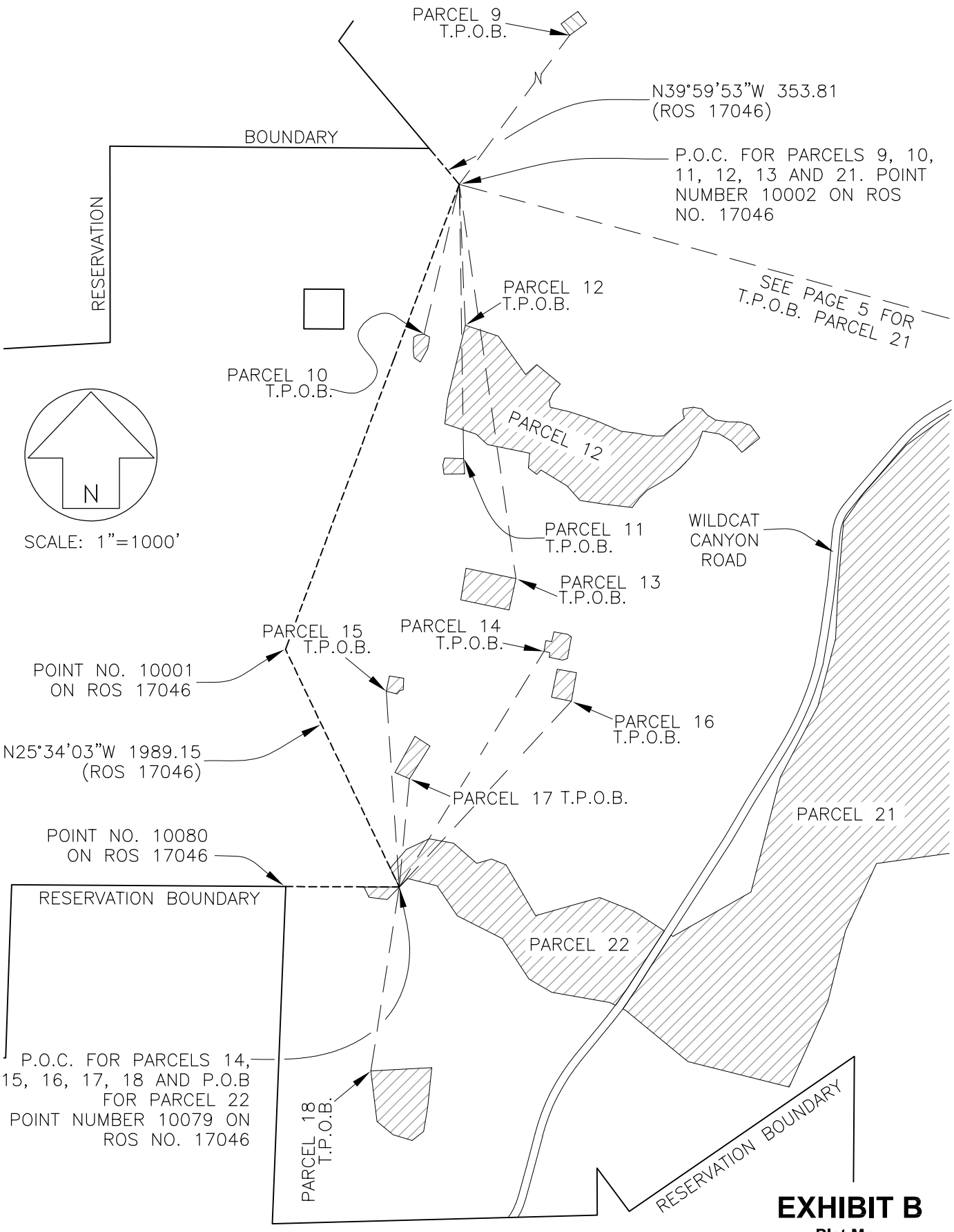
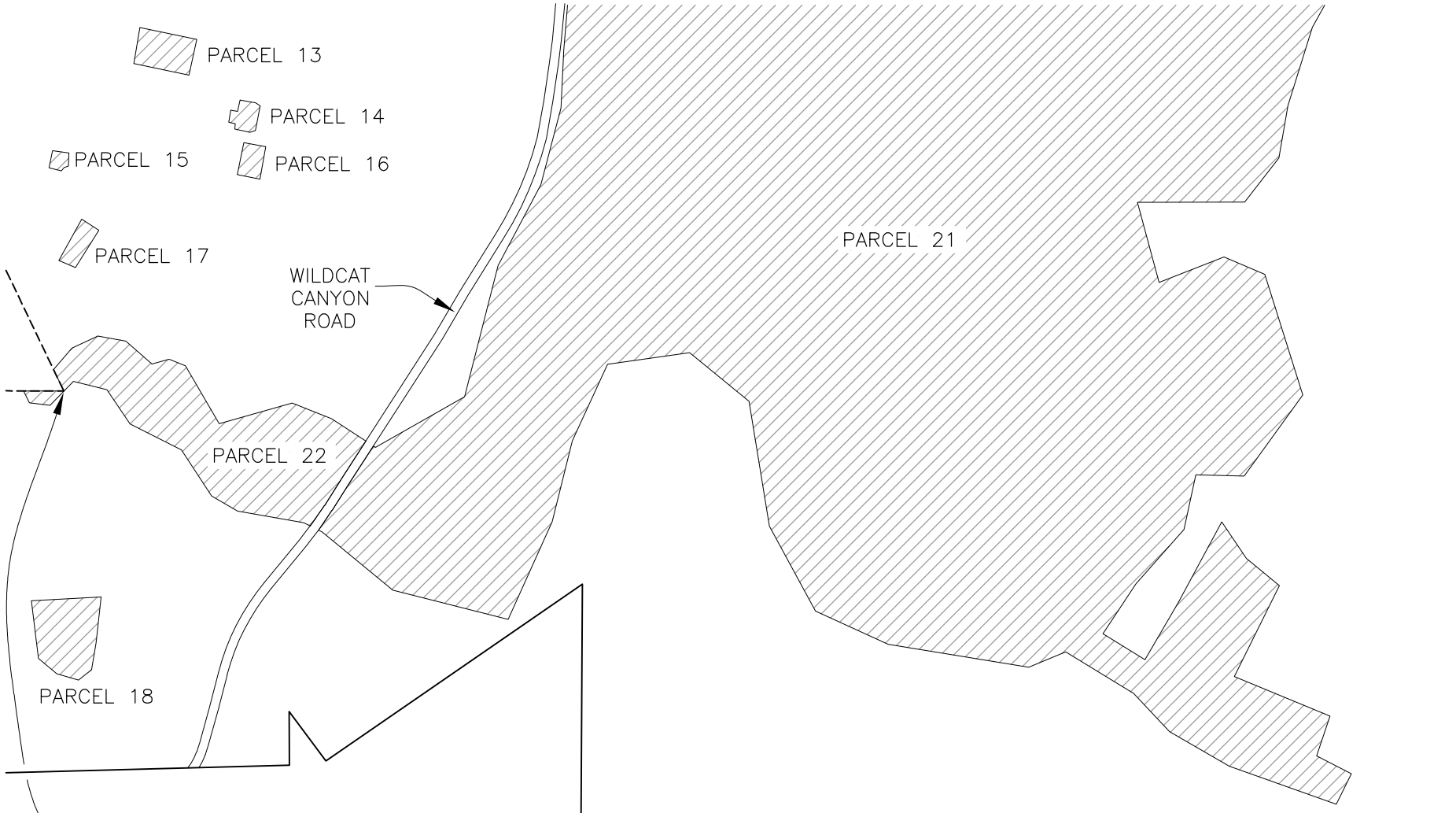


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WILDCAT CANYON ROAD NOTES

EXTENSIVE RESEARCH WAS PERFORMED TO LOCATE RECORDS SHOWING OR DESCRIBING THE ALIGNMENT AND RIGHT-OF-WAY OF WILDCAT CANYON ROAD. RESEARCH INCLUDED THE SAN DIEGO COUNTY PUBLIC WORKS OFFICE, THE SAN DIEGO COUNTY RECORDERS OFFICE, THE SAN DIEGO COUNTY SURVEYOR'S SURVEY RECORDS SYSTEM ("SRS") WEB SITE, AND THE RECORDS ON FILE AT THE BARONA INDIAN RESERVATION.

THE ROAD ALIGNMENT AND RIGHT-OF-WAY WAS CREATED IN ABOUT 1938 BY THE DEPARTMENT OF THE INTERIOR, OFFICE OF INDIAN AFFAIRS UTILIZING A 1901 FEDERAL STATUTE (ACT OF MARCH 3, 1901, 25 U.S.C. SECTION 311) ALLOWING THE OFFICE TO GRANT PUBLIC USE ROADS THROUGH INDIAN LANDS. A MAP SHOWING THE SURVEY OF THE ALIGNMENT WAS LOCATED IN THE TRIBAL FILES AND USED AS THE BASIS OF CALCULATIONS. THE CALCULATED ALIGNMENT WAS OVERLAID ON CURRENT GOOGLE EARTH IMAGERY TO CONFIRM. HOWEVER, THIS PROCESS IDENTIFIED SEVERAL PROBLEMS WITH THE 1938 MAP THAT MAKE IT UNUSABLE:

- NUMEROUS DIMENSION ERRORS
- A FEW UNREADABLE DIMENSIONS
- IN SEVERAL PLACES THE 1938 ALIGNMENT DOES NOT FOLLOW THE CURRENT ROAD
- THERE APPEARS TO BE A GAP IN THE MAP DATA. (IF PORTIONS OF THE MAP ARE MOVED AROUND, THOSE PORTIONS CAN BE ALIGNED ON THE IMAGERY OF CURRENT ROAD "BY EYE". HOWEVER BY BREAKING UP THE ALIGNMENT TO FIT THE EXISTING ROAD, GAPS ARE CREATED IN THE ALIGNMENT, AS IF THE MAP DRAFTER SKIPPED OVER SURVEY DATA.)

SEVERAL ROAD SURVEYS WERE FOUND ON THE SRS WEB SITE, DESIGNATED AS SA 00340-01 AND SA 00340-2, BOTH DATED 1974. THE ROAD SURVEY MAP IMAGES WERE OVERLAID ON CURRENT GOOGLE EARTH IMAGERY TO DETERMINE USABILITY. HOWEVER, THIS PROCESS IDENTIFIED SEVERAL PROBLEMS WITH THE 1974 MAPS THAT MAKES THEM UNUSABLE:

- THERE IS NO INDICATION ON THE MAPS THAT THEY WERE EVER INTENDED TO CREATE RIGHT OF WAY.
- SCALED AND ROTATED IMAGES WERE BEST FIT TO IMAGERY AND IT IS CLEAR THAT THE PHYSICAL ROAD HAS CHANGED OVER TIME IN MANY LOCATIONS, POSSIBLY DUE TO SLIDES, WIDENING, ETC.
- ONE OF THE MAPS SPECIFICALLY STATES THAT PI COORDINATES (SHOWN TO THE NEAREST FOOT) HAVE BEEN SCALED FORM 200 SCALE MAPPING, MAKING THOSE UNRELIABLE.
- IN ADDITION, THERE IS NO COURSE DATA ON THESE MAPS.

THE REMAINING ALTERNATIVE WAS TO CALCULATE AN ALIGNMENT BASED ON GOOGLE EARTH AERIAL IMAGERY, WHICH WAS THEN OFFSET TO 30 FEET ON BOTH SIDES TO CREATE A 60 FOOT WIDE STRIP CENTERED ON THE ROAD. THE PURPOSE OF DETERMINING THE ALIGNMENT AND WIDTH WAS TO EXCLUDE THE ROAD FROM WSA PARCELS.

WSA LAND AREAS

1) TOTAL AREA OF PARCELS 1 THROUGH 24 = 1,784.03 ACRES, MORE OR LESS, ON CCS83 ZONE 6 GRID.

2) PARCELS WERE CALCULATED USING GRID BEARINGS AND DISTANCES BASED ON THE MAP FILED AS RECORD OF SURVEY 17046, SAN DIEGO COUNTY RECORDS, WHICH HAS A SCALE FACTOR OF 0.999976511 LISTED ON SHEET 1 OF THE MAP.

3) DIVIDE GRID AREAS BY 0.9999530226 (THE SCALE FACTOR TWICE, I.E. 0.999976511 x 0.999976511) TO OBTAIN GROUND LEVEL AREAS.

Parcel	Acres
1	1.33
2	0.53
3	4.23
4	41.37
5	59.03
6	327.87
7	1.49
8	327.55
9	0.40
10	0.43
11	0.42
12	27.24
13	2.10
14	0.70
15	0.31
16	0.75
17	0.87
18	4.53
19	293.26
20	12.82
21	652.69
22	24.12

GUIDA GEOSPATIAL SOLUTIONS

Job No. 0322-00717 Barona WSA Plat.dwg

EXHIBIT B
Plat Map
Barona Reservation
Water Service Agreement
Page 8 of 8 Pages

Documentation for Annexation of Territory to
The Metropolitan Water District of Southern California (MWD)
Member Agency Annexation

Water Use Efficiency Compliance Statement
"Barona Band of Mission Indians Water Service"

April 2025

A. General Information

Description of Annexing Area	**Member Agency:** San Diego County Water Authority **Agreement Name:** Barona Band of Mission Indians Water Service Annexing Water Demand: Up to 860 afy (initial), up to 1,500 afy (ultimate) Imported Water Demand: Up to 860 afy (initial), up to 1,500 afy (ultimate) Percent MWD Supplied: Up to 100% of demand Address: Located in the mountain foothills of San Diego County, approximately 30 miles east of San Diego, the Barona Reservation spans 5,900 acres of flat and rocky terrain. The Barona Reservation Governmental Office is located at 1095 Barona Road, off of Wildcat Canyon Road. The service area to which water will be delivered and used is approximately 1,809 acres (approximately 30.7 percent of the Reservation area). The water will be used to serve residential and CII accounts. These will include supply for residential housing, the tribal school, the Barona Cultural Center and Museum, Barona Resort and Casino, and civic facilities. Near term and long-range water projections are included in Attachment 1. APN: 328-050-01, 328-080-01, 328-100-02, 328-120-03, 329-070-02, 329-070-01, 330-020-01, 330-030-05, 330-070-18, 330-070-20, 330-070-21, 331-010-01,and 331-130-15 (water served to only the defined Water Service Areas within these APNs) Additional Water Agencies Involved in Annexation: 1. Sub-agency: Ramona Municipal Water District 2. Local Agency Formation Commission

B. Member Agency Water Use and Efficiency Plans

(1) Annual Water Use.

1. Does your agency minimize annual water demand and peak demands by incorporating water conservation measures throughout the service area? Please describe such conservation measures in-- ,-- the service area.	**Member Agency Response:** San Diego County Water Authority Yes **Description:** The following documents were adopted by the Water Authority's Board of Directors: • Annexation Policies (adopted February 2006; updated May 2019) • Model Drought Ordinance (May 2021) – included as Appendix B to the Water Shortage Contingency Plan (May 2021) **Supporting documentation:** • SDCWA Annexation Policies, May 2019 **(Attachment 2)** • Water Shortage Contingency Plan (with Model Drought Ordinance) **Description:** Yes. In 2006, the Water Authority Board of Directors adopted the Water Shortage and

MWD Administrative Code § 3107 (a)(1)(i)	Drought Response Plan (WSDRP) to serve as a comprehensive plan in the event that the region faced supply shortages due to drought or other water shortage conditions (Water Authority 2006). On May 12, 2009, the District's Board of Directors adopted the District's Drought Response Conservation Program, establishing regulations to be implemented during times of declared water shortages or declared water shortage emergencies. The plan establishes four levels of drought response actions ("Drought Response Levels") to be implemented in times of shortage, with increasing restrictions on water use in response to drought conditions and decreasing available supplies. Drought Response Level 1: drought condition response measures are voluntary and will be reinforced through local and regional public education and awareness measures that may be funded in part by the District. Drought Response Levels 2 through 4: all conservation measures and water-use restrictions are mandatory and become increasingly restrictive to attain escalating conservation goals. Violations are subject to criminal, civil, and administrative penalties and remedies specified in this District's legislative code and as provided by law. Interruption and/or damage to the water supply system and/or the sewage system will require immediate emergency response by District staff to direct repairs of the system and restore essential services to the community. The District's Emergency Response Plan (ERP) Manual provides a response plan to conduct and manage emergency response operations in the event of such interruption and/or damage. The guidelines set forth in the ERP address the immediate phase of emergency operations and are based on the assumed impacts of a worst-case scenario. The ERP is considered a multi-hazard plan, as most of the emergency response functions and responsibilities are standard regardless of the nature or the intensity of the emergency. The ERP is integrated with the Water Authority's Integrated Contingency Plan, the County ERP, the Unified San Diego County Emergency Services Organization, and the procedures for emergency response and recovery for the State of California and the Federal Emergency Management Agency. For additional information on water conservation measures and outreach, see the answers to Question No. 13. **Sub-agency:** Ramona Municipal Water District YES **Description:** The following documents were adopted by the Ramona MWD's Board of Directors: • 2020 Urban Water Management Plan • Legislative Code ○ Section 7.28.020 Applying for Water Service ○ Chapter 7.40 Water Conservation Ramona MWD is fully metered. Between 2017-2023, Ramona MWD converted its manual read meters, that were read bimonthly, to radio read meters, which are now read monthly. This allows Ramona MWD to increase the frequency that customer accounts are flagged for excessive water use and allows customers to fix leaks up to 30 days sooner than previously. Ramona MWD does not have a tiered water rate structure and does not intend to adopt a tiered structure, especially given the Proposition 218 challenges that agencies that use tiered rates have been experiencing. However, as Ramona MWD uses 100% imported water and 100% of that water is pumped approximately 1,000 feet into Ramona MWD's service area, the cost of water is approximately $3,800 per acre foot (AF) in 2024. This high price results in the majority of customers using low water use landscaping or no landscaping and when leaks are found, they are fixed quickly. New connections with landscaping over 5,000 square feet are required to have a dedicated irrigation meter, and multi-family, commercial and institutional accounts are required to have a landscape architect prepare and sign the plans (Ref. Section 7.20.40 of Ramona MWD's Legislative Code).

	Ramona MWD has approximately two pop up booths per earth, such as at the community Earth Day event, where water conservation information materials and products (e.g. hose nozzles, native plant seeds, etc) are provided to customers. The materials include information about the Water Authority's programs. This information is also available in Ramona MWD's lobby and on website (https://www.rmwd.org/about-us/conservation) **Supporting documentation:** • Ramona MWD 2020 Urban Water Management Plan ○ Ramona MWD Legislative Code, available online[1] The District's Water Conservation policies are documented in Chapter 7.40 of the Ramona MWD Legislative Code.
2. Does your service area maximize use of groundwater, local surface water, and recycled waste water supplies to minimize annual water demand on MWD? Please describe such maximizing uses in the service area. **MWD Administrative Code § 3107 (a)(1)(ii)**	**Member Agency Response:** San Diego County Water Authority YES **Description:** GROUNDWATER Within the past five years, water supply agencies within the Water Authority's service area have produced an annual average of approximately 22,300 AF of potable water supplies from groundwater. This total represents production from both brackish groundwater desalination facilities and municipal wells producing groundwater not requiring desalination. In addition to providing a local supply to water agencies, groundwater is also a source of supply for numerous private well owners who draw on groundwater to help meet their domestic and agricultural water needs. These domestic supplies help to offset demand for imported water provided by the Water Authority and its member agencies. Although the amount of groundwater pumped by private wells is significant, it cannot be accurately quantified nor estimated within the Water Authority's entire service area. Groundwater production in the Water Authority's service area is limited by a number of factors including the limited geographic extent of the more productive sand and gravel (alluvial) aquifers and the relatively shallow nature of most of the alluvial aquifers. **Supporting Documentation:** San Diego County Water Authority's "2020 Urban Water Management Plan." Pages 5-6 to 5-12. https://www.sdcwa.org/urban-water-management-plan SURFACE WATER The regional surface water yield is supported by 24 surface reservoirs with a combined capacity of 722,793 AF. The reservoirs are located in seven of the San Diego County's nine coastal watersheds. The Water Authority's Emergency Storage Project (ESP) added 90,100 AF of water storage capacity for emergency use and the Carryover Storage Project (CSP) more than 105,000 AF of carryover storage capacity as a hedge against dry years. Olivenhain Reservoir is part of the ESP and CSP and has a storage capacity of 24,774 AF. **Supporting documentation:** San Diego County Water Authority's "2020 Urban Water Management Plan." Pages 5-2 to 5-5. https://www.sdcwa.org/urban-water-management-plan WATER RECYCLING Water Authority member agencies use recycled water to fill lakes, ponds, and ornamental fountains; to irrigate parks, campgrounds, golf courses, freeway medians, community greenbelts, school athletic fields, food crops, and nursery stock; and to control dust at construction sites. Recycled water can also be used in certain industrial processes, in cooling towers and for flushing toilets and urinals in non-residential

[1] RMWD Legislative Code: https://www.rmwd.org/home/showpublisheddocument/4074/638445392927800000

buildings. Recycled water is also being considered for street sweeping purposes.

Several Water Authority member agencies are completing studies pertaining to potable reuse in San Diego County through groundwater recharge or reservoir augmentation.

PROJECTED RECYCLED WATER USE (AF/YR)

2020	2025	2030	2035	2040
35,753	41,963	45,513	45,628	45,749

Supporting documentation: San Diego County Water Authority's "2020 Urban Water Management Plan." Pages 5-15 to 5-30. https://www.sdcwa.org/urban-water-management-plan

Sub-Agency Response: Ramona Municipal Water District YES

Description: The Ramona MWD water system is 100% dependent on imported water supplies through the San Diego County Water Authority (SDCWA). During regional shutdowns of the SDCWA system, the District is contracted with SDCWA to receive treated water from the City of Poway Water Treatment Plant. These are the District's sole sources of treated water.

Local residents and businesses make beneficial use of local groundwater supplies through private wells. The District has local wells to provide non-potable irrigation water to its Wellfield Park, a local park owned and operated by the District. Recycled water is produced at both of the District's water reclamation plants (WRPs). Recycled water from the San Vicente WRP is conveyed to the San Vicente Golf Course for beneficial reuse, with excess recycled water disposed of at the San Vicente Spray Field facility. Once the Barona Reservation is connected, it is projected that 100% of the San Vicente WRP recycled water will be beneficially reused to supplement local water supplies.

The Santa Maria WRP can currently treated approximately 1/3 of its treatment capacity to recycled water for use at the Mount Woodson Golf Course. It is currently projected that additional recycled water could be used by local agricultural water users once the additional recycled water treatment is made available. Excess effluent from the Santa Maria WRP is disposed of at the Santa Maria Spray Field, thereby augmenting the local groundwater supply.

Supporting Documentation: The details of the District's water supply augmentation efforts is included in the District's 2020 Urban Water Management Plan (UWMP): Ramona MWD Urban Water Management Plan (2020)

3. Does your service area -construct and -, operate local storage and groundwater production facilities as required by California Water Code Sections 10700-10710 (Groundwater Resources)?

Please describe such construction and operations in the service area.

Member Agency Response: San Diego County Water Authority Yes

Description: As discussed above under B.2:

- The regional surface water yield is supported by 23 surface reservoirs with a combined capacity of 721,458 AF
- Groundwater opportunities within the Water Authority's service area are limited; however, maximizing groundwater development is critical to diversifying the region's water supply portfolio. The management of groundwater resources, including the construction and operation of groundwater production facilities by the Water Authority's member agencies, is done is compliance with California Water Code Sections 10700-10710.

Supporting Documentation: : San Diego County Water Authority's "2020 Urban Water Management Plan." Pages 5-2 to 5-15. https://www.sdcwa.org/urban-water-management-plan

Sub-Agency Response: Ramona Municipal Water District Yes

MWD Administrative Code § 3107 (a)(1)(iii)	**Description:** No, the District does not operate groundwater replenishment facilities and the District's service area does not overly a groundwater basin that is adjudicated or subject to the Sustainable Groundwater Management Act. The District does not operate any groundwater supplies for potable water. The District does operate a few groundwater wells that produce non-potable water and uses these wells to irrigate Wellfield Park (434 Aqua Lane, Ramona, CA 92065). Private residents and businesses within the District's service area also utilize groundwater for supply. The Barona reservation is currently served exclusively by groundwater wells. **Supporting Documentation:** Information related to the District's non-potable groundwater production is available in the District's 2020 Urban Water Management Plan. Ramona MWD 2020 Urban Water Management Plan,
4. Does your agency condition all new territory to be consistent with all applicable city, county, and state laws? **MWD Administrative Code § 3107 (a)(1)(iv)**	**Member Agency Response:** San Diego County Water Authority Yes **Description:** On February 15, 2006, the Water Authority's Board of Directors adopted Annexation Policies. Annexation Policy #3, *Conservation and Local Supply Use Requirements*, includes the statement that the Water Authority Board may condition an annexation to require developments and development projects in the annexed territory to: • Utilize recycled water in accordance with California Water Code; • Incorporate water conserving design and improvements within subdivisions, both residential and commercial; • Incorporate water conserving design and improvements in building, grading, landscaping, and other similar development and construction plans; and • Require maintenance of water conserving landscape through CC&Rs. In addition, the Water Authority sub-agency with jurisdiction over annexing parcels must submit evidence of the following prior to Water Authority Board approval of the annexation: • A regulatory plan to require all new developments within proposed annexing territories and member agency's service area to incorporate water conserving design and improvements based on current Water Authority water-use-efficiency policies and reasonable conservation practices and measures; • A regulatory plan to require all new developments within proposed annexing territories to use recycled water in accordance with California Water Code, or explain why such use is infeasible; • The member agency has accounted for groundwater and surface water supplies available to the annexing territory in the member agency's water management plan and where appropriate and feasible, intends to use for consumptive purposes; and • The member agency is maximizing use of recycled water and groundwater throughout its service area or has conducted feasibility studies that have determined that development of recycled water is not practical or feasible. Annexation Policy #9, *Land-Use Approvals*, states that the Water Authority sub-agency with jurisdiction over the annexing territory shall provide certification that the annexation is consistent with the applicable city or county general plan and/or specific plan(s). **Supporting documentation**: SDCWA Annexation Policies, February 2006 **(Attachment 2)** **Sub-Agency Response**: Ramona Municipal Water District **Description: Yes. Chapter 7.60 of the District's Legislative Code requires new service areas to be consistent with applicable** county and State laws. The Barona Reservation is an independent nation, under federal oversight. As such, the Reservation observes the same water requirements as other local or regional water

	agencies. Furthermore, the service agreement between the District and the Reservation outlines the requirements for service, which treats the Reservation the same as all other District customers. **Supporting documentation**: Ramona MWD Legislative Code

(2) Recycled Water.

5. Does your service area use recycled water in accordance with California Water Code Sections 13550-13557 (Water Reuse)? Please describe such recycled water use in the service area. **MWD Administrative Code § 3107 (a)(2)**	**Member Agency Response:** San Diego County Water Authority Yes **Description:** The Water Authority uses recycled water in accordance with the California Water Code Sections 13550-13557. Local Water Supply Development Program The Water Authority administers the Local Water Supply Development (LWSD) Program, which is designed to ensure the financial feasibility of local water recycling projects during their initial years of operation. To date, the Water Authority has entered into LWSD agreements with 12 water and wastewater agencies for a combined project yield of over 46,000 AF/YR. Over $55 million in Water Authority incentive funding has been awarded to program participants. **Supporting documentation**: San Diego County Water Authority's "2020 Urban Water Management Plan." Page 5-20. https://www.sdcwa.org/urban-water-management-plan **Sub-Agency Response:** Ramona Municipal Water District Yes **Description:** The District produces recycled water from its two wastewater reclamation plants: San Vicente Water Reclamation Plant (WRP) and Santa Maria WRP. San Vicente WRP is 0.8 million gallons per day (mgd), collects wastewater from the San Diego Country Estates area of the District and provides recycled water to the San Vicente Golf Course. The Santa Maria WRP is 1.0 mgd, collects wastewater from downtown Ramona and provides recycled water to the Mount Woodson Golf Course. After the recycled water pipeline to connect Barona and Ramona is completed, recycled water production from San Vicente WRP will be fully allocated and the need to spray recycled water for disposal is anticipated to be near zero. Santa Maria WRP is currently only able to treat 0.3 mgd of its secondary wastewater to tertiary quality. The remaining effluent is sprayed at the sprayfields near the Ramona Grasslands. The District is completing a wastewater master plan in FY2024-2025 and one of the goals will be to look at expanding the tertiary treatment plant and finding additional customers to reduce sprayfield disposal. Recycled water use within the District is governed by the District's Rules and Regulations for Recycled water Use, which conforms to the requirements of California Water Code Sections 13550-13557. **Supporting documentation** Ramona MWD Rules and Regulations for Recycled Water Use

(3) Local Resources.

6. Has your agency established measures to sustain a seven-to 21-day interruption in service, as required by MWD Administrative Code Section 4503(b)?	**Member Agency Response:** San Diego County Water Authority Yes **Description:** San Diego County Water Authority's Emergency Storage Program (ESP) and Carryover Storage Project (CSP)

MWD Administrative Code § 3107 (a)(3)	• The Water Authority's ESP and CSP is a system of reservoirs, interconnected pipelines, and pumping stations designed to make water available to the San Diego region if imported water deliveries are interrupted. The ESP and CSP facilities can be used to help deliver emergency water supply to member agencies during two- and six-month emergency events in which San Diego County is unable to receive regular imported water deliveries. The Water Authority Board may also authorize that water stored under the ESP and CSP be used in a prolonged drought or other water shortage situation. The Water Authority's ESP added 90,100 AF of water storage capacity for emergency use and the CSP more than 105,000 AF of carryover storage capacity as a hedge against dry years. Olivenhain Reservoir is part of the ESP and CSP and has a storage capacity of 24,774 AF. **Supporting Documentation:** San Diego County Water Authority's "2020 Urban Water Management Plan," Pages 11-1 to 11-5 https://www.sdcwa.org/urban-water-management-plan **Sub-Agency Response**: Ramona Municipal Water District Yes **Description:** The District has access to water from two surface storage reservoirs, Lake Ramona and Lake Sutherland. Lake Ramona is owned by the District and is filled with untreated water purchased from the SDCWA. Minimal amounts of surface water runoff enter the lake. Lake Ramona is used to supply untreated irrigation water to customers in the agricultural areas in the northwest portion of the District. Lake Sutherland is owned by the City of San Diego; local runoff provides the lake's primary source of untreated water. In 1998, the SDCWA authorized implementation of the Emergency Storage Project (ESP) to reduce the risk of potential for prolonged interruption of imported water due to earthquake, drought, or other disasters. The ESP is a system of reservoirs, pipelines, and other facilities that work together to store and move water in the event of a natural disaster. The ESP provides 90,100 AF of stored water for emergency purposes to meet the County's needs through at least 2030. The SDCWA also authorized supplies from the ESP to be used in a prolonged drought or other water shortage situation where imported and local supplies do not meet 75% of SDCWA's member agencies' municipal and industrial demands. In sizing the ESP, the Water Authority assumed a 75% level of service to all member agencies during an outage and full implementation of the water conservation best management practices (BMPs). The District's water system has 13 water storage tanks or reservoirs that provide storage for the distribution system. The District has approximately 26 MG of total storage capacity. As the majority of the supply flows through the Woodson-Bargar zone, the largest storage reservoir is the Woodson Reservoir with 10.0 MG of storage (39 percent of total), while the remaining storage is located throughout the system in each pressure zone. The District also has the ability to receive water from the City of Poway Water Treatment Plant during such supply interruptions. **Supporting Documentation:** Ramona MWD 2022 Water Master Plan, Ramona MWD 2020 Urban Water Management Plan

Reporting to the District

7. Has your agency incorporated conservation measures	**Member Agency Response**: San Diego County Water Authority Yes **Description:** On February 15, 2006, the Water Authority Board of Directors' adopted Annexation Policies.

in the new territory? Please describe such measures. **MWD Administrative Code § 3107(b)(1)**	**Supporting documentation:** SDCWA Annexation Policies, February 2006 (***Attachment 2)***. **Sub-Agency Response:** Ramona Municipal Water District Yes **Description:** Yes. Once an additional territory is incorporated into the District's service area, it is subject to the requirements of the District's Legislative Code. The District mandates water conservation measures through Chapter 7.40 – *Water Conservation,* contained within its Legislative Code. All District customers are required to observe the promulgated conservation practices. Of particular note, the Barona Reservation will not be permitted to use any treated water provided for non-potable uses as a part of the service agreement between the two agencies. The Tribe is seeking water service as a result of having a small local groundwater basin, which has limited recharge capacity. As a result, the Tribal community has long implemented significant water conservation measures and will remain compliant to the District's conservation policies. Barona will also be purchasing recycled water from the District to reduce its potable water needs. **Supporting documentation:** Ramona MWD Legislative Code
8. What is your agency's total annual production of local water supplies including, but not limited to, recycled water, groundwater, and local surface water use? **MWD Administrative Code § 3107(b)(2)**	**Member Agency Response:** San Diego County Water Authority **Description:** The following includes production of local supplies for the Water Authority's service area, including Water Authority and member agency supplies. **Groundwater** ▪ Within the past five years, water supply agencies within the Water Authority's service area have produced an annual average of approximately 22,300 AF of potable water supplies from groundwater. This total represents production from both brackish groundwater desalination facilities and municipal wells producing groundwater not requiring desalination. Groundwater production in the Water Authority's service area is limited by several factors, including the limited geographic extent of the more productive alluvial aquifers. The projected annual yield from verifiable groundwater projects (AF/YR) in five-year increments is shown in the table below. **Surface Water** • The regional surface water yield is supported by 23 reservoirs with a combined capacity of 721,458 AF. The table below shows the projected normal surface water supply within the Water Authority's service area (AF/YR) in five-year increments. • The Water Authority's Emergency & Carryover Storage Project (E&CSP) added 90,100 AF of water storage capacity for emergency use, and more than 105,000 AF of carryover storage capacity as a hedge against dry years. Olivenhain Reservoir is part of the E&CSP and has a storage capacity of 24,774 AF. In addition, the E&CSP and carryover storage component of the San Vicente Dam Raise provides an additional 157,663 AF of water storage capacity at San Vicente Reservoir. **Water Recycling**

2025	**2030**	**2035**	**2040**	**2045**
30,300	31,500	315,500	28,000	28,000

2025	**2030**	**2035**	**2040**	**2045**
43,957	43,957	44,659	44,659	44,659

- The Water Authority works closely with its member agencies to determine the projected yield from existing and planned recycled water projects; the estimated annual yield (AF/YR) in five-year increments for verifiable, non-potable recycled water is shown in the table below.

2025	**2030**	**2035**	**2040**	**2045**
41,963	45,513	45,628	45,749	45,854

Potable Reuse

- The Water Authority has been a staunch supporter and an active participant in advancing the goal of implementing potable reuse in San Diego County for over 20 years. The estimated verifiable annual yield (AF/YR) for potable reuse supplies in five-year increments, based on the implementation schedules provided by Water Authority member agencies and the likelihood of development, is shown in the table below.

2025	**2030**	**2035**	**2040**	**2045**
33,042	53,202	112,562	112,562	112,562

Desalination

- The estimated annual yield (AF/YR) in five-year increments for verifiable, desalinated water from the Carlsbad Desalination Plant is shown in the table below.

2025	**2030**	**2035**	**2040**	**2045**
56,000	56,000	56,000	56,000	56,000

Supporting Documentation: San Diego County Water Authority's "2020 Urban Water Management Plan." Pages 4-8 to 4-9, 5-2 to 5-42, and 9-3. https://www.sdcwa.org/urban-water-management-plan

Sub-Agency Response: Ramona Municipal Water District Yes

Description: The District owns and operates three non-potable groundwater wells, which are currently not in use for water consumption due to high nitrate concentrations. The total capacity of the three wells is 330 gallons per minute (gpm) and have potential annual yield of 200 acre-feet per year (afy). For the wells to be placed back in service, treatment would be required. The District also owns four non-potable wells in the Wellfield Park property that are used for irrigation purposes only. The total capacity of the non-potable wells is approximately 205 gpm. Additional groundwater development is not planned due to the expense needed to remove uranium, nitrate and total dissolved solids (TDS) contamination prior to potable delivery.

Total water system projections are shown in the table below. The projections include projections for current and planned uses of recycled water).

	2020	2025	2030	2035	2040	2045 (Opt)
Potable water, raw, other non-potable	4,747	4,838	4,977	5,120	5,268	
Recycled water demand	611	520	520	520	520	
Optional deduction of recycled water put into long-term storage[1]	—	—	—	—	—	
Total water use	**5,358**	**5,358**	**5,497**	**5,640**	**5,788**	

Source: DWR 2021a, Submittal Table 4-2.
Notes: opt = optional.

Supporting Documentation: Ramona MWD 2020 Urban Water Management Plan, Ramona MWD 2022 Water Master Plan

9. Has your agency established resources to sustain a seven-to 21-day interruption in service, as required by MWD Administrative Code Section 4503(b)? Please describe such resources, as applicable to your agency's facilities, as specified in MWD Administrative Code §§ 3107(b)(3). **MWD Administrative Code § 3107(b)(3)**	**Member Agency Response:** San Diego County Water Authority- Yes **Description:** San Diego County Water Authority's Emergency Storage Project (ESP) • The Water Authority's ESP is a system of reservoirs, interconnected pipelines, and pumping stations designed to make water available to the San Diego region if imported water deliveries are interrupted. The ESP facilities can be used to help deliver emergency water supply to member agencies during two- and six-month emergency events in which San Diego County is unable to receive regular imported water deliveries. The Water Authority Board may also authorize that water stored under the ESP be used in a prolonged drought or other water shortage situation. The ESP added 90,100 AF of water storage capacity for emergency use, and more than 105,000 AF of carryover storage capacity. **Supporting Documentation:** San Diego County Water Authority's "2020 Urban Water Management Plan," Pages 11-2 to 11-5 https://www.sdcwa.org/urban-water-management-plan **Sub-Agency Response**: Ramona Municipal Water District Yes **Description**: The District's water supply is primarily served by the San Diego County Water Authority (SDCWA), which purchases water from MWD. The District receives treated water from two connections including Connection 2, which delivers water from the Poway Treatment Plant in the neighboring City of Poway, and Connection 3, which delivers treated water from the SDCWA directly. Connection 3 serves as the District's primary source of water supply. Connection 2 was placed in service to provide treated water from the Poway Water Treatment Plan through the Poway Forebay and Pump station in the event of SDCWA shutdowns, emergency conditions, or an as-needed basis. The District's reservoir storage capacity is based on operations, fire, and emergency criteria to sustain a seven-to 21-day service interruption. The District also has Connection 2 which provides untreated water to Lake Ramona, which is then used to supply agricultural customers. **Supporting Documentation:** **Ramona MWD 20222 Water Master Plan**
10. Has your agency submitted a current Urban Water Management Plan (UWMP) to the reporting agency? **MWD Administrative Code § 3107(b)(4)(i)**	**Member Agency Response:** San Diego County Water Authority Yes **Description:** The Water Authority submitted its 2020 Urban Water Management Plan to the California Department of Water Resources (DWR) in June 2021. **Supporting Documentation:** San Diego County Water Authority's "2020 Urban Water Management Plan" https://www.sdcwa.org/urban-water-management-plan **Sub-Agency Response**: Ramona Municipal Water District Yes **Description:** The Ramona MWD has an approved 2020 Urban Water Management Plan and provided copies of that plan to all pertinent agencies. **Supporting Documentation:** **Ramona MWD 2020 Urban Water Management Plan**
11. Does your agency's most current UWMP include a narrative description addressing the nature and extent	**Member Agency Response:** San Diego County Water Authority Yes **Description:** Demand management is an important ongoing component of the Water Authority's long-term strategy to increase the reliability of the San Diego Region's water supply through diversifying its water supply portfolio. The law requires the Water Authority, as the wholesale supplier, to support its retail

of each water demand management measure implemented over the past 5 years, as required by California Water Code Section 10631(f)? **MWD Administrative Code § 3107(b)(4)(ii)**	member agencies' efforts to comply with SBX7-7 through a combination of regionally and locally administered active and passive water conservation measures, programs, and polices, as well as the use of recycled water. This is discussed in Section 3 – Demand Management, in the Water Authority's Urban Water Management Plan. **Supporting Documentation:** San Diego County Water Authority's "2020 Urban Water Management Plan," Section 3 – Demand Management, Pages 3-1 to 3-15. https://www.sdcwa.org/urban-water-management-plan **Sub-Agency Response:** Ramona Municipal Water District Yes **Description:** The Water Demand Management Measures are provided in Chapter 9 of the District's 2020 Urban Water Management Plan. **Supporting Documentation:** Ramona MWD 2020 Urban Water Management Plan
12. Does your agency's most current UWMP adequately address California Water Code requirements? **MWD Administrative Code § 3107(b)(4)(iii)**	**Member Agency Response:** San Diego County Water Authority Yes **Description:** The Water Authority's 2020 Urban Water Management Plan was prepared in accordance and compliance with the Urban Water Management Planning Act (Water Code Sections 10610 through 10656) and includes the conservation measures, programs and policies required by Water Code Section 10608.36. **Supporting Documentation:** San Diego County Water Authority's "2020 Urban Water Management Plan." https://www.sdcwa.org/urban-water-management-plan **Sub-Agency Response:** Ramona Municipal Water District Yes **Description:** The District's 2020 UWMP was approved by the Department of Water Resources, acknowledging that the 2020 UWMP addresses the California Water Code requirements. **Supporting Documentation:** Ramona MWD 2020 Urban Water Management Plan
13. What is the status of implementing the water plans, projects, and programs described in the UWMP to implement California Water Code Section 10620 et seq.? **MWD Administrative Code § 3107(b)(5)**	**Member Agency Response**: San Diego County Water Authority **Description**: In accordance with its Administrative Code, the Water Authority prepares annual water supply reports to provide updated information on development of local and imported water supplies. **Supporting Documentation**: San Diego County Water Authority's "2020 Urban Water Management Plan." https://www.sdcwa.org/urban-water-management-plan San Diego County Water Authority's 2021 Annual Report https://www.sdcwa.org/annualreport/2021 **Sub-Agency Response**: Ramona Municipal Water District **Description:** The District has continued to encourage conservation and educate their customers on its importance. They have continued to take part in conservation programs with the Water Authority and individually. The District has maintained its water waste prevention ordinance that was previously put in place and continues to educate customers on proper landscape irrigation. The District has replaced 6,152 of their meters with radio-read meters. The new meters have increased the accuracy of customer meters and are able to provide alerts of potential leaks based on abnormal water usage. Recycled water continues to be a primary means of offsetting potable water uses, particularly with respect

	to golf courses and agricultural uses. Incorporation of the Barona Reservation will allow 100% beneficial reuse of recycled water from the District's San Vicente WRP. Ongoing CIP projects will increase recycled water production and reuse from the Santa Maria WRP. Water conservation program coordination is managed by a single staff member of the District. This staff member coordinates the outreach efforts described in Section 9.1.3 and is also responsible for reporting required information to the State Water Resources Control Board on behalf of the District. Future water conservation savings are based on historical activity for Residential Surveys, Residential Retrofits, High-Efficiency Clothes Washer Incentives, and Toilet Incentives. Efficiency Standards include water-saving devices installed in new residential construction as part of state-required codes, as well as toilets replaced through natural replacement outside of the toilet incentive. Updated SANDAG demographic information helps determine savings for new construction through BMP implementation, and these data have been incorporated into the District's revised demand forecast, as discussed in Chapter 4, Customer Water Use. Water savings in the commercial, industrial, and institutional sectors are based on both historical activity and anticipated new water-efficient products that will experience expanded use. These products include multi-load commercial high-efficiency washers, food steamers, commercial dishwashers, and waterless urinals. Agriculture water use is generally on the decline in the District's boundary, primarily due to the reduction of avocado groves. However, some avocado and citrus groves remain and the District has seen an increase in vineyard plantings. The District sent notices to all agricultural customers within its boundary in April 2024 notifying them of the Resource Conservation District of Greater San Diego's Water Efficiency Technical Assistance (WETA) program. A number of financial assistance programs are available to San Diego County agencies: the Water Authority's Financial Assistance Program and Reclaimed Water Development Fund; Metropolitan's Local Resources Program; the U.S. Bureau of Reclamation Title XVI Grant Program; and the State Water Resources Control Board's low-interest loan programs. Together, these programs offer funding assistance for all project phases, from initial planning and design to construction and operation. The District staff periodically reviews the available financial assistance programs to determine whether any of them are appropriate for District activities. Supporting Documentation: Ramona MWD 2020 Urban Water Management Plan

MWD

MWD Employee Name: Ethel Young File Date: 6/9/2025

MWD Employee Name:  Review Date: _4/10/2025___

MWD Member Agency

The following member agency assures compliance with the provisions of Metropolitan's Water Use Efficiency Guidelines for the next five years as indicated in Metropolitan's Administrative Code § 3107 and shall report to Metropolitan regarding such compliance.

Agency Name: San Diego County Water Authority Date: 4/17/2025

Member Agency Representative Name: Fran Lopez

San Diego County Water Authority Member Agency

Agency Name: Ramona Municipal Water District Date: 5/28/2025

Member Agency Representative Name:

Notes:

(PROPOSED) RESOLUTION

RESOLUTION OF THE BOARD OF DIRECTORS OF THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA CONSENTING TO SAN DIEGO COUNTY WATER AUTHORITY'S BARONA WATER AGREEMENT AND FIXING THE TERMS AND CONDITIONS OF THE AGREEMENT WITH THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

WHEREAS, the Board of Directors of the San Diego County Water Authority ("SDCWA"), a municipal water district, situated in the county of San Diego, state of California, pursuant to Resolution No. XXXX, in accordance with the provisions of the Metropolitan Water District Act (MWD Act), has applied to the Board of Directors of The Metropolitan Water District of Southern California (Metropolitan) for consent to a water service agreement for certain territory situated adjacent to the county of San Diego, referred to as the Barona Band of Mission Indians (Barona) Water Agreement, more particularly described in an application to the San Diego County Local Agency Formation Commission (LAFCO), concurrently with an agreement thereof to SDCWA, such water agreement to Metropolitan to be upon such terms and conditions as may be fixed by the Board of Directors of Metropolitan.

WHEREAS, the beneficial owner of the territory, Barona, applied for water service for a portion of the reservation lands described in Exhibit A to the Agreement for Water Service Agreement (Property).

WHEREAS, completion of this Agreement for Water Service Agreement (Water Service Agreement) shall be contingent upon approval by the LAFCO.

WHEREAS, in recognition of the inherent sovereignty of Barona as a tribal government, no ad valorem property taxes or property-related assessments shall be imposed on the Property, and instead, Barona will pay Metropolitan an in-lieu annual charge equivalent to taxes or assessments that otherwise would be levied, escalated at two percent per year, based on independent assessed valuations done every five years, and applying Metropolitan then-current tax rate.

WHEREAS, completion of the Water Service Agreement shall be further contingent upon LAFCO's requirement that Barona pay an equivalent charge for Metropolitan's existing and established taxes, benefit assessments, or property-related fees or charges in place in the service area, as identified below, are paid on the territory

within the water agreement to the agency; the first annual payment, estimated at $47,627.54, shall be due by December 1 in the year following completion of the Water Service Agreement.

WHEREAS Metropolitan has levied and collected ad valorem taxes on parcels within the territory of SDCWA. Such charges for calendar year 2025 are described in Resolution 9380, adopted by Metropolitan's Board on August 19, 2024.

WHEREAS, upon completion, Metropolitan's water will be available to the Property and such area will receive the benefit of the projects provided in part with proceeds of Metropolitan ad valorem taxes.

WHEREAS, as a requirement of the MWD Administrative Code and pursuant to the Water Service Agreement, Barona will pay Metropolitan approximately $14,824,008, which includes Metropolitan's per-acre annexation fee, a $5,000 processing fee, and a $74,000 consultant fee for assessment of the reservation lands to receive water services. As allowed in the MWD Administrative Code, Barona elected to pay Metropolitan the annexation fee over a 15-year term at 4.30 percent interest with a 10 percent down payment of the annexation fees plus payment of the processing and consultant fees, totaling approximately $1,553,500.80, due after LAFCO approval and execution of the Water Service Agreement. The remaining payments are due annually by December 1 of each year. All of these payment terms are set forth in a separate payment agreement between Metropolitan and Barona.

WHEREAS, pursuant to the provisions of the California Environmental Quality Act (CEQA), Ramona, acting as Lead Agency and sub-member agency to San Diego County Water Authority, adopted the Ramona Municipal Water District/Barona Indian Tribe Potable and Recycled Water Infrastructure Project (also known as Barona Water Service Area Agreement) Mitigated Negative Declaration (MND), and Mitigation Monitoring Reporting Program on June 10, 2025, and approved the Project for the development of the proposed water service agreement parcels. Metropolitan, as Responsible Agency under CEQA, reviewed and considered the information contained in the MND prior to approval of the formal terms and conditions for the Barona Water Service Agreement.

WHEREAS, it appears to this Board of Directors that such application should be granted, subject to the terms and conditions hereinafter set forth.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Metropolitan, acting as Responsible Agency, reviewed and considered

the information in the 2025 MND prior to approval of the final terms and conditions for the Barona Water Service Agreement; and subject to the following terms and conditions, does hereby grant the application of the governing body of San Diego County Water Authority for consent to serve water to Barona's water service area, to Metropolitan and does hereby fix the terms and conditions of such water service area agreement.

BE IT FURTHER RESOLVED that the Board of Directors of Metropolitan, subject to the following terms and conditions, does hereby grant the application of the governing body of SDCWA for consent to serve the Barona Water Agreement to Metropolitan and does hereby fix the terms and conditions:

Section 1. Water service to the Property via SDCWA shall be provided concurrently with water service from Metropolitan, and all necessary certificates, statements, maps, and other documents required to be filed by or on behalf of SDCWA to effectuate the action shall be filed on or before December 31, 2027.

Section 2. Prior to completing the water agreement, SDCWA shall provide documentation of its Board's approval of the Water Service Agreement with Metropolitan. If this process is completed by December 31, 2025, Barona shall pay to Metropolitan:

a. $14,824,008 for its in-lieu annexation fee, a portion of which is financed over a 15-year term as described above and set forth in a separate payment agreement between Metropolitan and Barona;

b. $1,553,500.80 as a down payment for its in-lieu annexation fee within 30 days of LAFCO's approval; and

c. An annual payment equivalent to Metropolitan's ad valorem tax, so long as the lands receive water services, and independent value reassessments occur every five years.

If LAFCO approval of the Water Service Agreement is completed during the 2026 or 2027 calendar year, the foregoing charges will be calculated based on the then-current annexation rate, in accordance with Metropolitan's Administrative Code Section 3300.

Section 3. a. Metropolitan shall be under no obligation to provide, construct, operate, or maintain feeder pipelines, structures, connections, and other facilities required for the delivery of water to said area from works owned and operated by Metropolitan.

b. SDCWA shall not be entitled to demand that Metropolitan deliver water to SDCWA for use, directly or indirectly, within said area, except for domestic or municipal use therein.

c. The delivery of all water by Metropolitan, regardless of the nature and time of use of such water shall be subject to the water service regulations, including rates and charges promulgated from time to time by Metropolitan.

e. Except upon the terms and conditions specifically approved by the Board of Directors of Metropolitan and in the Water Service Agreement, water sold and delivered by Metropolitan shall not be used in any manner which intentionally or avoidably results in the direct or indirect benefit of outside of the Property, including use of such water outside the Property or use thereof within Metropolitan in substitution for other water outside the Property.

Section 4. Metropolitan has conditioned approval of the Water Service Agreement upon a requirement that Barona pay an equivalent charge equal to all previously established and collected taxes, benefit assessments, or property-related fees or charges on parcels eligible for water service by the agency.

Section 5. That the Board of Directors of Metropolitan, acting as Responsible Agency, reviewed and considered the information in the 2025 MND prior to approval of the final terms and conditions for the Barona Water Service Area Agreement; and subject to the following terms and conditions, does hereby grant the application of the governing body of San Diego County Water Authority for consent to serve water to the Barona water service area to Metropolitan and does hereby fix the terms and conditions of such water service area agreement.

Section 6. That the General Manager and General Counsel are hereby authorized to do all things necessary and desirable to accomplish the purposes of this resolution, including, without limitation, the commencement of defense of litigation.

Section 7. That if any provision of this resolution or the application to any SDCWA, property or person whatsoever is held invalid, that invalidity shall not affect the other provisions or applications of this resolution which can be given effect without the invalid portion or application, and to that end the provisions of this resolution are severable.

BE IT FURTHER RESOLVED that the Board Executive Secretary is directed to transmit forthwith to the governing body of SDCWA a certified copy of this resolution.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California, at its meeting held on September 9, 2025.

_____

Board Executive Secretary
The Metropolitan Water District
of Southern California

Notice of Determination

FILED
Jun 11, 2025 02:45 PM
JORDAN Z. MARKS
SAN DIEGO COUNTY CLERK
File # 2025-000483
State Receipt # 37061120250438
Document # 252-NOD-59

SAN DIEGO COUNTY CLERK
CEQA FILING COVER SHEET

THIS SPACE FOR CLERK'S USE ONLY

Complete and attach this form to each CEQA Notice filed with the County Clerk

TYPE OR PRINT CLEARLY

Project Title

RAMONA MUNICIPAL WATER DISTRICT / BARONA INDIAN TRIBE POTABLE AND RECYCLED WATER INFRASTRUCTURE PROJECT

Check Document being Filed:

- ○ Environmental Impact Report (EIR)
- ◉ Mitigated Negative Declaration (MND) or Negative Declaration (ND)
- ○ Notice of Exemption (NOE)
- ○ Other (Please fill in type):

FILED IN THE OFFICE OF THE SAN DIEGO COUNTY CLERK ON June 11, 2025
Posted June 11, 2025 **Removed** _____
Returned to agency on _____
DEPUTY _____

Filing fees are due at the time a Notice of Determination/Exemption is filed with our office. For more information on filing fees and No Effect Determinations, please refer to California Code of Regulations, Title 14, section 753.5.

NOTICE OF DETERMINATION

TO:	☐ Clerk of the Board of Supervisors or ☒ County Clerk Address: County of San Diego 1600 Pacific Highway, Room 402 San Diego, CA 92101	FROM:	Public Agency/Lead Agency Name: **Ramona Municipal Water District** Address: 105 Earlham Street Ramona, CA 92065 Contact: Erica Wolski Phone: 760-789-1330
			Email: ewolski@rmwd.org
TO:	☒ Office of Land Use and Climate Innovation State Clearinghouse 1400 Tenth Street, Rm. 113 Sacramento, CA 95814	Lead Agency (if different from above)	
		Address:	
		Contact:	
		Phone:	

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (If submitted to SCH): 2025050138

Project Title: **Ramona Municipal Water District / Barona Indian Tribe Potable and Recycled Water Infrastructure Project**

Project Applicant (include address, telephone number and email address):

Ramona Municipal Water District, 105 Earlham Street, Ramona, CA 92065; ewolski@rmwd.org; 760-789-1330

Specific Project Location – Identify street address and cross street or attach a map showing project site (preferably a USGS 15' or 7 ½' topographical map identified by quadrangle name):

The Project in San Diego County/Community of Ramona and Barona Indian Reservation: San Diego County. Beginning at the San Vicente Wastewater Reclamation Plant to San Vicente Road and Wildcat Canyon Road, then southward onto the Barona Reservation.

All elements of the Proposed Project lie within Section 35, T13S, R1E, SBB&M (off-Reservation), and T14S, R1 and 2E, SBB&M (unsectioned because formerly Mexican land grant – Rancho Barona). The Project Site includes all or a portion of the following APNs:

328-050-01	330-070-21	330-070-18
331-010-01	328-080-01	329-070-01
328-120-03	328-100-02	329-070-02
330-020-01	330-070-20	330-030-05

General Project Location (City and/or County): Ramona, Unincorporated Area, Barona Indian Reservation, San Diego County

Project Description: The Project proposes an 8-inch recycled water pipeline commences at the San Vicente Wastewater Reclamation Plant, at an existing District pump station located just northeast of the intersection of Vicente

Meadows Road and San Vicente Road. Once the proposed 8-inch recycled water pipeline leaving the San Vicente Wastewater Treatment Plant reaches the intersection of San Vicente Road and Wildcat Canyon Road, it will share the alignment and run parallel with the proposed 12-inch potable water pipeline in Wildcat Canyon Road. A horizontal separation of 4 feet must be maintained between the recycled and potable water pipelines throughout the alignment. This portion of Wildcat Canyon Road is maintained by the San Diego County Department of Public Works (DPW) and thus subject to the County's design standards and permitting requirements. Approximately 3000 LF of recycled water pipeline and 2100 LF of potable water pipeline will be constructed off-Reservation. After crossing the Barona Tribal Reservation boundary, the proposed recycled and potable water pipelines will run within the Wildcat Canyon Road right-of-way for approximately 0.35 miles before shifting eastward and moving off the road outside of the County right-of-way. The pipes continue to share an alignment until the recycled water line connects to the existing Golf Course Line approximately 1200 feet southeast of the Giant San Diego Paintball Park while the potable line continues overland approximately 20,200 feet until it joins the existing domestic water distribution system.
Identify the person or entity undertaking the project, including any private applicant, any other person undertaking an activity that receives financial assistance from the Public Agency as part of the project, and any person receiving a lease, permit, license, certificate, or other entitlement of use from the Public Agency as part of the project. Ramona Municipal Water District is responsible for the off-reservation portion of the project being constructed between the northern Barona Reservation boundary and the San Vicente Water Reclamation Plant on San Vicente Road. Barona Band of Mission Indians is responsible for the on-reservation portion of the project that is being constructed from the northern boundary of the Reservation down to the Barona Tribal Office on Barona Road.

This is to advise that the (☒ Lead Agency or ☐ Responsible Agency), **the Board of Directors of Ramona Municipal Water District,** has approved the above described project on **June 10, 2025** and has made the following determinations regarding the above described project:

1.	The project [☐ will ☒ will not] have a significant effect on the environment.	
2. ☐	An Environmental Impact Report was prepared and certified for this project pursuant to the provisions of CEQA and reflects the independent judgment of the Lead Agency.	
☐	A Negative Declaration was prepared for this project pursuant to the provisions of CEQA and reflects the independent judgment of the Lead Agency.	
☒	A Mitigated Negative Declaration was prepared for this project pursuant to the provisions of CEQA and reflects the independent judgment of the Lead Agency.	
3. ☒	Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.	
4. ☒	A Mitigation Monitoring or Reporting Plan [☒ was ☐ was not] adopted for this project.	
5. ☐	A Statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.	
6. ☒	Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.	
	This is to certify that the Final EIR with comments and responses and record of project approval, or the Negative Declaration, is available to General Public at:	
	Custodian: Ramona Municipal Water District and Barona Band of Mission Indians	Location: 105 Earlham Street, Ramona, CA 92065 1095 Barona Road, Lakeside, CA 92040

Date: 6/11/2025	Erica Wolski **Name** Erica Wolski **Title** General Manager

Clerk's File Stamp:

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

CDFW Filing Fee Receipt

San Diego County

Transaction #: 8423452
Receipt #: 2025221039

JORDAN Z. MARKS
Assessor/Recorder/County Clerk
1600 Pacific Highway Suite 260
P. O. Box 121750, San Diego, CA 92112-1750
Tel. (619) 237-0502 Fax (619) 557-4155
www.sdarcc.gov

Cashier Date: 06/11/2025
Cashier Location: SD

Print Date: 06/11/2025 2:46 pm

Payment Summary

Total Fees:	$3,018.75
Total Payments:	$3,018.75
Balance:	$0.00

Payments

CHECK PAYMENT #022361	$50.00
CHECK PAYMENT #022623	$2,968.75
Total Payments	$3,018.75

Filing

CEQA - NOD FILE #: 2025-000483 Date: 06/11/2025 2:45PM Pages: 4

State Receipt # 37-06/11/2025-0438

Fees:	Fish & Wildlife County Administrative Fee	$50.00
Fees:	Fish & Wildlife Mitigated/Negative Declaration	$2,968.75
Total Fees Due:		$3,018.75

Grand Total - All Documents: $3,018.75

State of California - Department of Fish and Wildlife

2025 ENVIRONMENTAL DOCUMENT FILING FEE CASH RECEIPT

DFW 753.5a (Rev. 01/01/25) Previously DFG 753.5a

RECEIPT NUMBER: 37-06/11/2025-0438

STATE CLEARING HOUSE NUMBER (*If applicable*): 2025050138

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY	LEAD AGENCY EMAIL	DATE
RAMONA MUNICIPAL WATER DISTRICT		06/11/2025

COUNTY/STATE AGENCY OF FILING	DOCUMENT NUMBER
SAN DIEGO	252-NOD-0059

PROJECT TITLE
RAMONA MUNICIPAL WATER DISTRICT / BARONA INDIAN TRIBE POTABLE AND RECYCLED WATER INFRASTRUCTURE PROJECT

PROJECT APPLICANT NAME	PROJECT APPLICANT EMAIL		PHONE NUMBER
RAMONA MUNICIPAL WATER DISTRICT			760-789-1330
PROJECT APPLICANT ADDRESS	**CITY**	**STATE**	**ZIP CODE**
105 EARLHAM STREET	RAMONA	CA	92065

PROJECT APPLICANT (*Check appropriate box*)

☐ Local Public Agency ☐ School District ☒ Other Special District ☐ State Agency ☐ Private Entity

CHECK APPLICABLE FEES:

☐ Environmental Impact Report (EIR)	$4,123.50	$	0.00
☒ Mitigated/Negative Declaration (MND)/(ND)	$2,968.75	$	2,968.75
☐ Certified Regulatory Program (CRP) document - payment due directly to CDFW	$1,401.75	$	0.00

☐ Exempt from fee
- ☐ Notice of Exemption (attach)
- ☐ CDFW No Effect Determination (attach)

☐ Fee previously paid (attach previously issued cash receipt copy)

☐ Water Right Application or Petition Fee (State Water Resources Control Board only)	$850.00	$	0.00
☒ County documentary handling fee		$	50.00
☐ Other		$	0.00

PAYMENT METHOD:

☐ Cash ☐ Credit ☒ Check ☐ Other **TOTAL RECEIVED** $ 3,018.75

SIGNATURE	AGENCY OF FILING PRINTED NAME AND TITLE
X	San Diego County Clerk, JESSADITH EDORA, Deputy

Payment Reference #: Check # 022361 and Check # 022623

ORIGINAL - PROJECT APPLICANT COPY - CDFW/ASB COPY - LEAD AGENCY COPY - COUNTY CLERK DFW 753.5A (Rev. 01012025)

VENDOR: CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE 01648 06/05/2025 22623

DATE	INVOICE #	DESCRIPTION	AMOUNT
6/5/2025	06052025	CDFW FEE/NOTICE OF DETERMINATION/IS/MND BARONA WTR	2,968.75

CHECK TOTAL 2,968.75

VENDOR: CO SD/RECORDER/CO CLERK'S OFFICE 107 04/30/2025 22361

DATE	INVOICE #	DESCRIPTION	AMOUNT
4/30/2025	04302025	PROJ: #22119-3 CLERK FEE/FILING	50.00

CHECK TOTAL 50.00

INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION/ ENVIRONMENTAL ASSESSMENT

Ramona Municipal Water District/Barona Indian Tribe Potable and Recycled Water Infrastructure Project

Prepared for:

Barona Band of Mission Indians
and
Ramona Municipal Water District

Prepared by:

BFSA Environmental Services
14010 Poway Road, Suite A
Poway, CA 92064

and

LILBURN CORPORATION
1905 Business Center Drive
San Bernardino, CA 92408

April 2025

Volume 1

SUMMARY

The Barona Band of Mission Indians (Tribe) and the Ramona Municipal Water District (District) have prepared this Environmental Assessment/Initial Study for a proposed water pipeline project in San Diego County, California. The project will bring both potable and recycled water provided by the District in separate pipes across less than 1 mile of County land, then onto the Barona Indian Reservation (the "Reservation") a distance of about 6 miles, (approximately 41,900 LF) to join the Tribe's existing distribution systems. The potable water supply will serve primarily residential uses on the Barona Indian Reservation. The Tribe performs the functions of the lead agency for the portions of the project on the Reservation. The U.S. Department of Housing and Urban Development is the formal Lead Agency under the National Environmental Policy Act (NEPA) but has delegated most NEPA functions to the Tribe, which performs those functions under the supervision, control, and approval of HUD. The District is a cooperating agency under NEPA. The District is also the Lead Agency under the California Environmental Quality Act (CEQA) for the portion of the project from the District's existing facilities to the boundary of the Reservation.

This combined NEPA/CEQA document is called a Draft Initial Study/Environmental Assessment (IS/EA). It explains what this Project is, why it is being proposed, what alternatives have been considered for the Project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures. It is being circulated to the public for review and comment for 30 days between May 1 and June 2, 2025.

Additional copies of this document and the related technical studies are available for review at the Ramona Municipal Water District, 105 Earlham St, Ramona, CA 92065. This document may also be downloaded at the following websites:

- RMWD: https://www.rmwd.org/about-us/engineering/district-projects
- Barona Tribe: http://www.Barona-nsn.gov.

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1.0 INTRODUCTION

The Ramona Municipal Water District ("District") was formed on August 15, 1956, as a municipal water district. Organized under the Municipal Water District Law of 1911, Water Code Section 71000, the District provides water, sewer, recycled water, and park services. The District boundaries encompass approximately 45,800 acres (75 square miles) in the unincorporated area of San Diego County (see Figure 1 *Vicinity Map).* The District provides services to approximately 7,000 urban parcels and 3,000 rural parcels with an approximate population of 40,000 people. The District's service area encompasses the Santa Maria Valley and surrounding hills with elevations ranging from 1,300 feet to 2,100 feet mean sea level (MSL).[1]

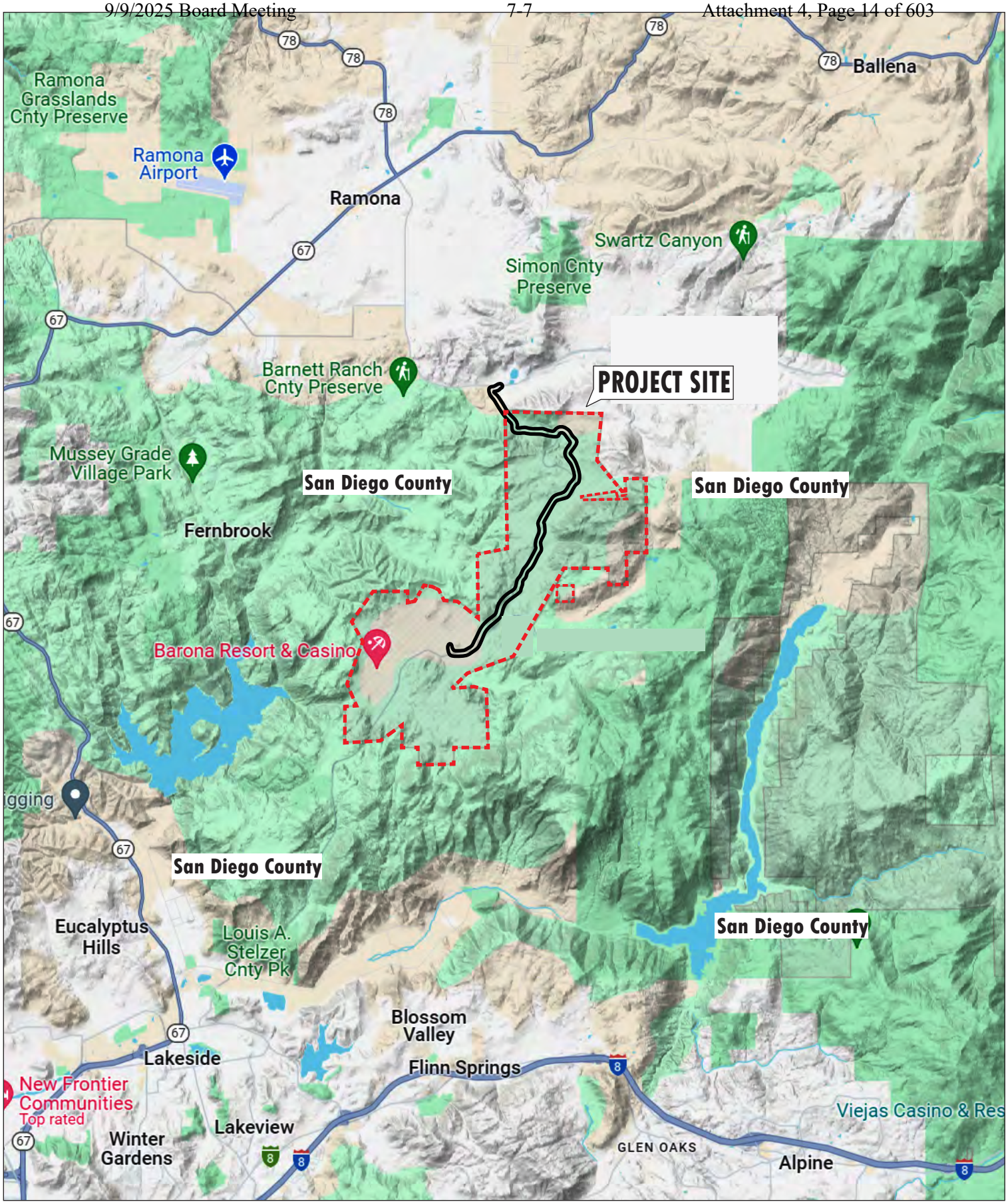
The Barona Band of Mission Indians ("Tribe") is a federally recognized tribe of Kumeyaay Indians. The Reservation is located near Lakeside, about 30 miles northeast of San Diego, and near the Cleveland National Forest (see Figure 2 *Regional Vicinity Map*). Founded in 1932, the Reservation covers more than 5,181 acres (8.10 square miles). Much of the highland valley has good farmland, and the Reservation hosts several ranches, a chapel, Tribal offices, community center, and a ballpark, created by the Tribe. The nearest community is San Diego Country Estates, which adjoins the reservation's northeast side[2]. The Tribe's current population is currently just over 600 members (adults and children); most but not all live on the Reservation.

The District and Tribe have entered into a Memorandum of Understanding ("MOU") for the purpose of establishing requirements and procedures for the preparation of a joint Environmental Assessment as required by the National Environmental Policy Act ("NEPA"), and an Initial Study/Mitigated Negative Declaration pursuant to the California Environmental Quality Act ("CEQA") for the District's and the Tribe's proposed Ramona/Barona Tribe Potable and Recycled Water Infrastructure Project ("Project"). This "Finding of No Significant Impact" (FONSI)/MND has been prepared to satisfy the requirements of NEPA for the entirety of the Project for both on-Reservation and off-Reservation sections of the pipeline, and the California Environmental Quality Act ("CEQA") for the on-Reservation and off-Reservation portions of the pipeline as well as any applicable implementing regulations and guidelines. It should be noted that while CEQA analysis is not a requirement for projects on Tribal lands, this document analyzes the whole of the project, including on-reservation portion for full public disclosure.

The primary other agreements needed for the Project are (1) a 4-party agreement for the provision of potable water service to the Barona Indian Reservation between the Metropolitan Water District of Southern California (Metropolitan), the San Diego County Water Authority (SDCWA), the District, and the Tribe, and (2) a related agreement between the District and the Tribe regarding recycled water service and related matters, both agreements to be approved by the parties and by the San Diego County Local Agency Formation Commission under California Water Code §71611.5.

The District has received a grant that is a sub-grant under a primary grant of $16,084,697 made to the San Diego County Water Authority from the California Department of Water Resources from a Proposition 1 Round 2 Integrated Regional Water Management Implementation Grant. That sub-grant supports only the recycled water pipeline part of the overall project. The District is the Lead Agency under CEQA and a cooperating agency under NEPA.

[1] About Us | Ramona Municipal Water District (rmwd.org)
[2] Barona Band of Mission Indians (barona-nsn.gov)



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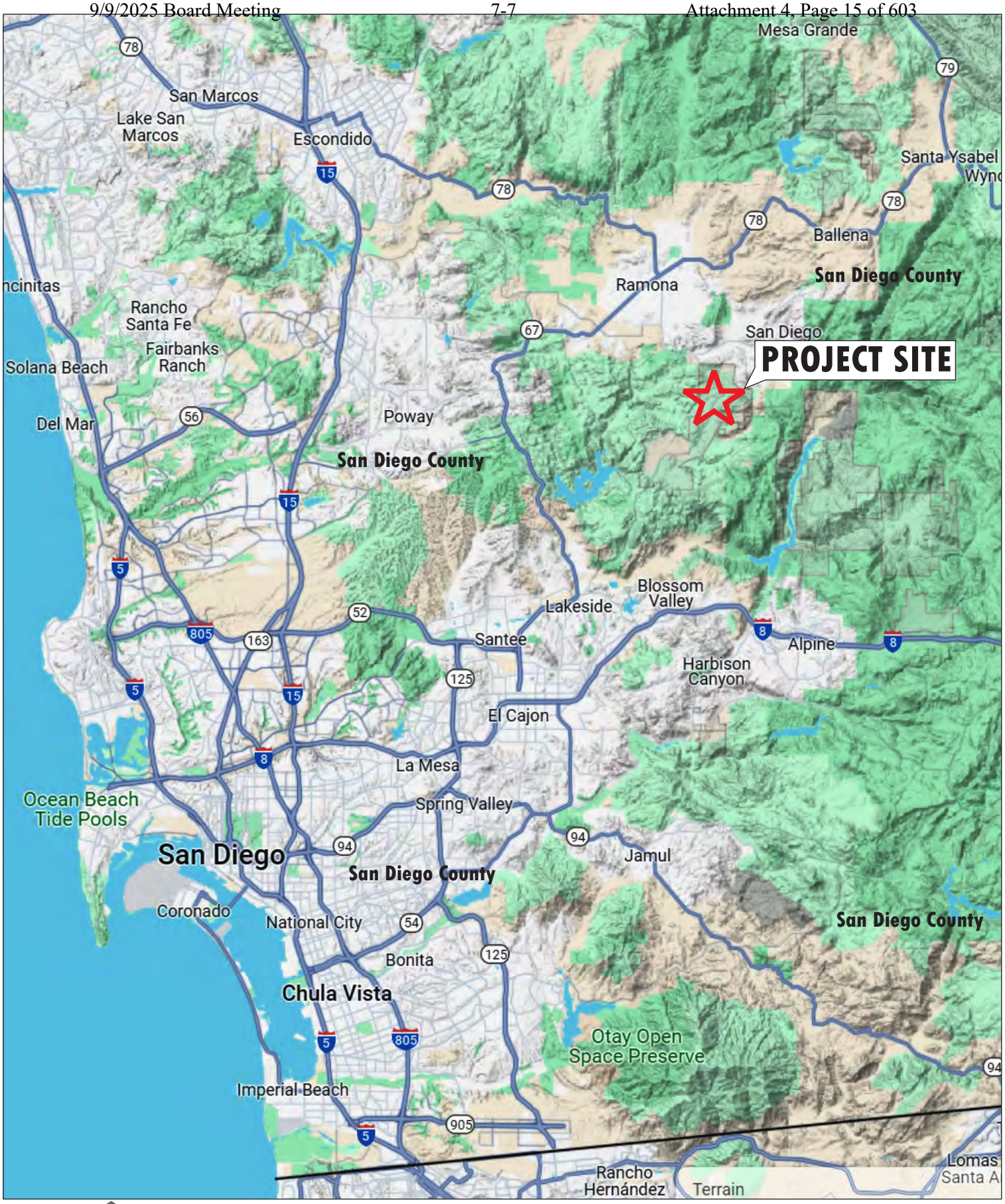
Pipeline Study Area

Reservation Boundary

VICINITY MAP

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

FIGURE 1



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REGIONAL VICINITY MAP

RAMONA-BARONA WATER PIPELINE PROJECT

BARONA INDIAN RESERVATION

County of San Diego, California

FIGURE 2

1.1 TRIBAL BACKGROUND

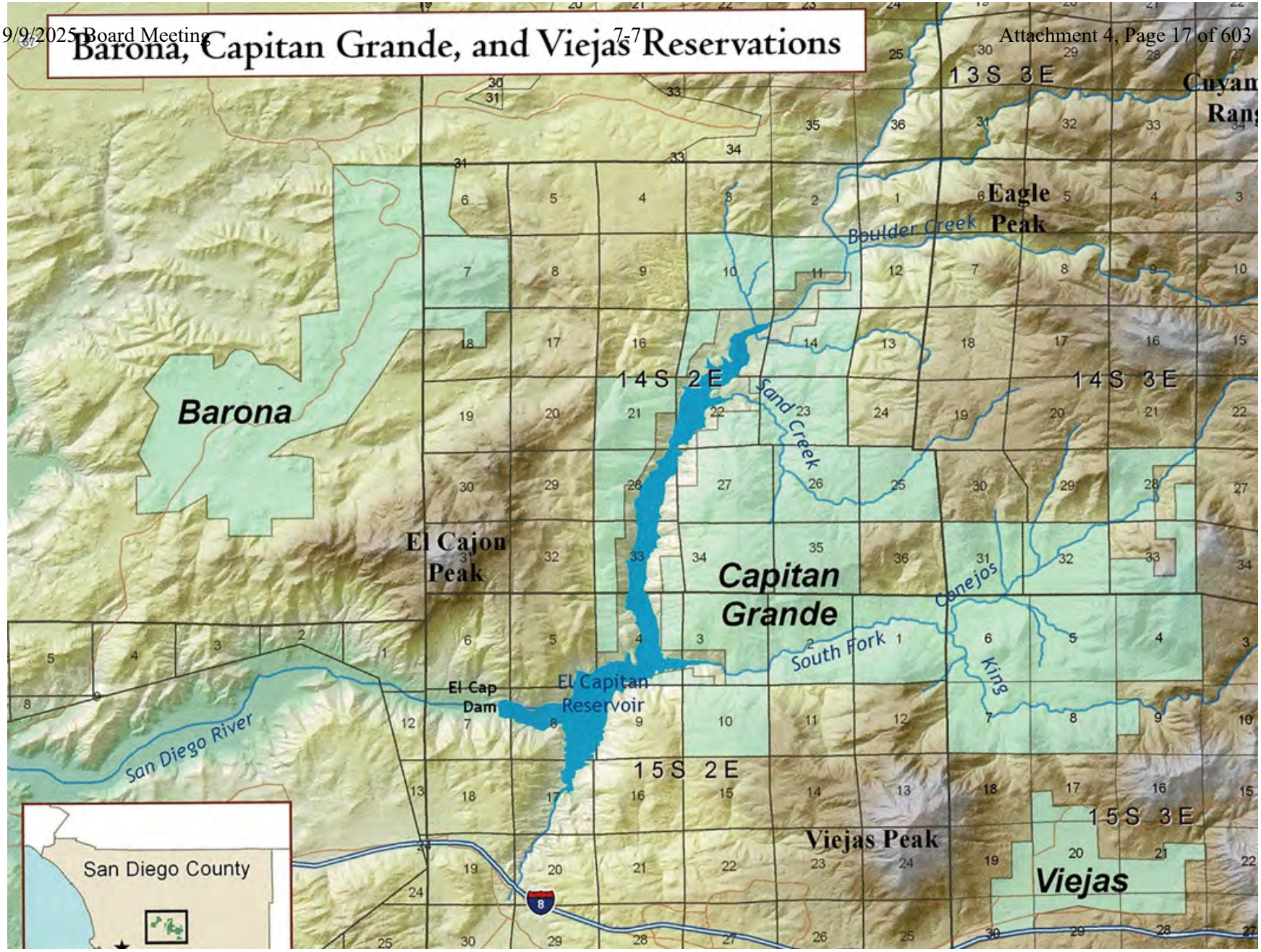
The Capitan Grande Band of Mission Indians is an aboriginal tribe, living for centuries in two villages in what is now San Diego County. The villages were on the banks of the San Diego River, the largest free-flowing river in San Diego County. The Capitan Grande people were People of the River. They used water from the river for domestic purposes and some irrigated agriculture and made use of other natural resources along the length of the river, from the mountains to the Pacific Ocean. To protect the Indian lands from encroachment by non-Indian settlers, the United States created the 15,753.4-acre Capitan Grande Indian Reservation for them in 1875, but the encroachment continued. Congress tried to protect what was left of the 1875 reservation by having the Secretary of the Interior issue a federal patent in 1896, solemnly declaring that the United States would hold the remaining parts of that reservation in trust for the Capitan Grande Band indefinitely. That lasted until 1919, when the City of San Diego announced that it needed better flood control and water storage for its benefit, and that the way to promote those ends was by building a dam on the San Diego River.

The city chose as the location for its dam a site immediately downstream of the Capitan Grande Indian Reservation. The San Diego River would back up behind the dam and flood the bottomland of the Capitan Grande Indian Reservation, and the villages, fields, cemeteries, and all usable land of the Reservation. Because the Reservation was protected by the federal patent of 1896, the city asked Congress to authorize it to override the patent and condemn the bottomland of the Capitan Grande Indian Reservation, without consulting the Capitan Grande people. Congress generously obliged in 1919 by enacting a federal statute that authorized the city not only to condemn all the land that would be flooded, but also to condemn all aliquot parts of any parcels in the Reservation that would be flooded. This meant that, if the high-water mark of what would become El Capitan Reservoir would inundate even a few square yards of a quarter quarter section of land, then the city could condemn all of the quarter quarter section. The result was that at no point would the remaining uncondemned Indian lands touch or give any access to the water behind the dam. The city refused to allow the Indians to trespass on the newly condemned land to reach the water of the new reservoir.

Actual construction of the dam was delayed because the city decided it wanted more Indian land so that it could build an even higher dam. Again, Congress obliged in 1932 and authorized the city to condemn the desired additional land, again in such a way that the Indians could gaze at the water of the new reservoir from their remaining land, but not use or cross the surrounding ring of city-owned land to get to it.

With the proceeds of the condemnation, the Secretary of the Interior purchased a substitute reservation, a smaller parcel originally of 5,120 acres, but with later additions, which became the present Barona Indian Reservation. See Figure 3 *Associated Reservations* map[3] showing the relative locations of the Captain Grande and Barona Reservations, the San Diego River, El Capitan Dam. The maximum pool elevation of water backed up behind El Capitan Dam, produced a ring of condemned, dry land owned by the city, on which the city did not permit the Indians to trespass to reach the water of their former River. The new substitute Barona Indian Reservation had scenic vistas, but no free-flowing river or water source except whatever groundwater happened to be present.

[3] Tanis C. Thorne, *El Capitan*, Malki-Ballena Press, 2012, plate 6.



LOCAL RESERVATIONS

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

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FIGURE 3

Because the land of the substitute Barona Indian Reservation was in a fractured granite rock system, it had very little capacity to hold or store groundwater, a water storage capacity of about 0.10%.

The Barona people managed to survive for decades since 1932 with no water source other than their own scant groundwater. They did so by managing their meager groundwater sustainably, decades before sustainable groundwater management became required in California. In 1977 the U. S. Geological Survey published a report on the hydrology of the Barona, Capitan Grande, and Sycuan Indian Reservations[4]. Early development consisted solely of residences, facilities for raising about 300 head of cattle, and "an automobile-dismantling yard and Indian jewelry sales." The report noted that most of the Reservation land was a fractured granite system, with a scenic pasture atop a small alluvial depression, around which most of the residences were clustered to take advantage of shallow wells. "The thickness of the alluvial deposits in Barona Valley ranges from almost nothing to about 50 ft".[5]

Until around 2002 this limited local groundwater was barely adequate when there were only 186 homes on the Barona Indian Reservation. But in 2002 a sustained and severe drought struck all of San Diego County and the wells failed. The Tribe had to haul in water for domestic and other purposes. One hydrological study from 2000[6] estimated that the safe sustainable yield of the entire Barona Indian Reservation was in the range of 425–800-acre feet per year (afy), depending on certain assumptions and the operation of a modern wastewater treatment plant. It also noted that, outside of the small alluvial pasture, the water storage capacity of the fractured granite was only 0.10%.

Even that yield of groundwater was unreliable in the long term because of the severe drought that struck in 2002 and the population growth that had increased the number of homes on the Reservation from 186 to 262 by 2022. Young families having children caused this growth of about 5 new homes per year. Starting in 2002, the Tribe sank dozens of new wells throughout the Reservation, some to great depth, at all locations on the Reservation where it made hydrological sense to drill new wells. Only a few were productive and did not increase the total yield significantly. By 2022 all likely geological formations had been tried as new groundwater sources and had failed.

Lack of water for domestic purposes was not the only constraint for the Barona people in their quest for a water source starting in 2002. In the fires that engulfed much of eastern San Diego County in 2003, and again in 2007, the homes of over 30 families on the Barona Indian Reservation were destroyed. The limited amount of water in storage tanks on the Reservation did not begin to provide the fire flows of water needed for fire protection.

At the same time, relentless global climate change battered all of San Diego County with droughts of increasing frequency and severity, with no prospect of long-term relief. The extremely low yield of groundwater from the fractured granite geologic strata underlying the Barona Indian Reservation is confirmed by the fact that none of the Barona Indian Reservation is within any of the 500+ groundwater basins identified by the California Department of Water Resources' Bulletin 118.

[4] U.S. Geological Survey, *Water Resources of Indian Reservations, San Diego County, California*, Open File Report 77-289, October 1977
[5] Id., P.6
[6] Ninyo & Moore, 2000

It had become clear that the Tribe needed a new source of imported water, not only for normal population growth, but for basic survival in a time of increasing fire danger, decreasing groundwater supplies, and droughts of increasing frequency, duration, and severity.

1.2 PURPOSE AND NEED

To address the lack of sufficient supply, the Tribe is actively seeking to supplement its groundwater resources by utilizing a streamlined process to obtain and pay for imported potable water service as a customer of a local water district. The District also produces recycled water in excess of what can be consumed locally and must therefore pay for disposing of excess supply. The Tribe needs recycled water to reduce the quantity of potable water used, thereby reducing reliance on groundwater.

In 2021 a feasibility study was conducted to evaluate potential potable and recycled water sources from neighboring water districts (see Appendix A: *Preliminary Design Report, Long-Term Potable and Recycled Water Service to Barona Indian Reservation, Dudek, June 2022)*. The study was initiated in response to recent projections showing the Tribe's long-term water demand exceeding the sustainable yield of the underlying groundwater basin as droughts lengthen and become more frequent.

California Water Code Section 71611.5 details guidelines for municipal water districts to provide service to Indian tribal lands. Section 71611.5(a)(2) provides that upon request by an Indian tribe and satisfaction of conditions established by the California Water Code, a district may provide water service to the requesting tribe at substantially the same terms as its existing customers without annexation. Section 71611.5(b)(3) requires that the requesting tribe "accept[], by agreement, all terms of, and payments, including service payments, to, the district and any public agency providing water to said district, as if the Indian tribe's lands were fully annexed into the district and into the service area of any other public agency, which terms and payments are also a condition of continued service by a district and by any public agency providing water to said district." Accordingly, Metropolitan, SDCWA, the District, and the Tribe must enter into a 4-party agreement for provision of potable water service, and the District and the Tribe must enter into a 2-party agreement for the provision of recycled water service. Both agreements are subject to the approval of the San Diego County Local Agency Formation Commission (LAFCO) under this statute.

The report concluded that the District would be the best possible source of potable and recycled water for the Tribe. The study found that sourcing both potable and recycled water from the District would allow the majority of required new infrastructure to be constructed on Reservation land with minimal off-Reservation construction, expense, and delay. Because the District receives imported water supplies from SDCWA and Metropolitan), a four-party agreement for water supply with the tribe, District, SDCWA, and Metropolitan is required to facilitate the requested water service. The parties have negotiated a four-party water supply agreement and intend to execute it subject to completion of the planning process and approval of the respective public agency boards and Tribal Council.

Potable Water. Available 2021 daily supply data (Table 1 *Existing Potable Water demands Average Daily, Maximum Daily, and Peaking Factors*) was used to calculate water needs for Reservation and Casino. The average daily demand (ADD) and maximum daily demand (MDD) of the Reservation and Casino were calculated based on supply data. The MDD is the highest one-day demand over the entire year. Typically, water demands peak in the summer and reach a

minimum during winter. A peaking factor, defined as the ratio of MDD to ADD, was also determined for both the Reservation and Casino. Table 1.2-1 summarizes the ADD, MDD, and peaking factors for the Reservation and Casino.

The Tribe expects average annual potable water demand to increase by 25% because of steady residential development. The number of homes on the Reservation in 2002 was 186, the number in 2022 was 282, an increase of 96 homes over a 20-year period. Meanwhile, the Tribe's ultimate potable water demand is estimated at approximately 1500 acre-feet per year (afy) when the Reservation is fully developed.

Table 1.2-1

Existing Potable Water demands Average Daily, Maximum Daily, and Peaking Factors

	ADD (afy)	MDD (afy)	Peaking Factor
Reservation	263.1	492.3	1.87
Casino	91.3	149.5	1.64
Total	354.4	641.8	N/A

Source: Preliminary Design Report Long-Term Potable and Recycled Water Service to Barona Indian Reservation

Type text here

Recycled Water. San Vicente Wastewater Reclamation Plant (SVWWRP), located near the Tribe's northern Reservation boundary, currently produces 450 afy of recycled water. Approximately 250 to 300 afy is being delivered to the San Diego Country Estates Golf Course. The remaining 150 to 200 afy of recycled water is available to be supplied to the Tribe. Ultimately, the Tribe is expected to receive a recycled water supply of 150 to 200 afy from the District.

1.3 SCOPE OF THIS DOCUMENT

1.3.1 California Environmental Quality Act (CEQA)

This IS/MND has been prepared in accordance with CEQA (as amended) (Public Resources Code sections 21000 et. seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, sections 15000 et. seq.), as updated on December 28, 2018. CEQA Guidelines section 15063 describes the requirements for an IS and sections 15070-15075 describe the process for the preparation of an Mitigated Negative Declaration (MND). This IS/EA contains all of the contents required by CEQA, which includes a Project Description, a description of the environmental setting, potential environmental impacts, mitigation measures for any significant effects, consistency with plans and policies, and names of preparers.

This IS/EA evaluates the potential for environmental impacts to resource areas identified in Appendix G of the State CEQA Guidelines (as amended in December 2018). The environmental resource areas analyzed in this document are shown in Table 1.3-1.

This IS/EA has been prepared to determine the appropriate level of environmental documentation required for the proposed project pursuant to CEQA. This document will also serve as a basis for soliciting comments and input from members of the public and public agencies regarding the proposed project.

The Draft IS/EA will be circulated for a minimum of 30 days, during which comments concerning the analysis should be sent to:

Ramona Municipal Water District
Attention: Erica Wolski, General Manager, P.E.
105 Earlham Street
Ramona, CA 92065

The District's Board of Directors will consider adopting the Final IS/EA and MMRP in compliance with CEQA at a publicly noticed meeting, planned for a date to be determined.

The scope of the environmental resource areas is listed below in *Table 1.3-1* The level of significance for each resource area uses the following CEQA terminology:

- **No Impact.** No adverse environmental consequences have been identified for the resource or the consequences are negligible or undetectable.
- **Less than Significant Impact.** Potential adverse environmental consequences have been identified. However, they are not adverse enough to meet the significance threshold criteria for that resource. No mitigation measures are required.
- **Less than Significant with Mitigation Incorporated.** Adverse environmental consequences that have the potential to be significant but can be reduced to less than significant levels through the application of identified mitigation strategies that have not already been incorporated into the Proposed Project.
- **Potentially Significant.** Adverse environmental consequences that have the potential to be significant according to the threshold criteria identified for the resource, even after mitigation strategies are applied and/or an adverse effect that could be significant and for which no mitigation has been identified. If any potentially significant impacts are identified, an Environmental Impact Report (EIR) must be prepared to meet the requirements of CEQA.

1.3.2 National Environmental Policy Act (NEPA)

The federal nexus triggering the application of NEPA in this case is the award by Congress of Grant no. B-23-CP-CA-0319. Congress made this grant of $2,000,000, and many others, under the Community Development Fund of the Act of December 29, 2022, P.L. 117-328, 136 Stat. 5154, 5155, for "Barona Band of Mission Indians Water Infrastructure Project." This statute names the U.S. Department of Housing & Urban Development as the federal agency to administer this Fund and its grants. In addition, the United States Bureau of Reclamation has announced the award of additional grant funding.

As with most such HUD-funded projects, HUD delegates responsibility for compliance with NEPA to Responsible Entities, subject to review, oversight, and final approval by HUD for compliance with NEPA. "Responsible entities shall assume the responsibility for environmental review, decision-making, and action that would otherwise apply to HUD under NEPA. Responsible entities that receive assistance directly from HUD assume these responsibilities by execution of a grant agreement with HUD. 24 CFR section 58.4(a). Grantees that are Indian tribes are Responsible Entities". The "Responsible Entity" is, "[w]ith respect to environmental responsibilities under the programs listed in 58.1(b)(3)(ii) and (6) through (12) [in this case, (7)], an Indian tribe when it is the recipient under the program." 24 CFR section 58.2(a)(7)(ii).

The Barona Band has executed such a grant agreement with HUD for this grant and is thus the Responsible Entity regarding this grant. HUD has delegated to the Barona Band "the responsibility for environmental review, decision-making, and action that would otherwise apply to HUD under NEPA." Thus, in this case the Barona Band performs the functions of a lead agency under NEPA, although under the supervision, control, and approval authority of HUD, which remains at least the nominal lead agency.

Resources analyzed per the CEQA Guidelines, and the federal cross-cutters analyzed under NEPA are shown in Table 1.3-1 below.

Table 1.3-1

CEQA Environmental Resources Analyzed and NEPA Cross-Cutting Environmental Regulations Evaluated

California Environmental Quality Act (CEQA)[7]	Federal Cross-Cutter Analysis per the National Environmental Policy Act (NEPA)
• Aesthetics • Agricultural / Forest Resources • Air Quality • Biological Resources • Cultural Resources • Energy • Geology / Soils • Greenhouse Gas Emissions • Hazards / Hazardous Materials • Hydrology / Water Quality • Land Use / Planning • Mineral Resources • Noise • Population / Housing • Public Services • Recreation • Transportation • Tribal Cultural Resources • Utilities / Service Systems • Wildfire • Mandatory Findings of Significance	• Environmental Alternative Analysis • Archaeological and Historic Preservation Act (AHPA) • Clean Air Act • Clean Water Act • Coastal Zone Management Act • Farmland Protection Policy Act • Endangered Species Act (ESA) • Environmental Justice • Farmland Protection Policy Act • Fish and Wildlife Coordination Act (FWCA) • Floodplain Management Executive Orders 11988, 12148, 13690 • Magnuson Stevens Fishery Conservation and Management Act • Migratory Bird Treaty Act • National Historic Preservation Act (NHPA) • Protection of Wetlands • Rivers and Harbors Act, Section 10 • Safe Drinking Water Act, Sole Source Aquifer Protection • Wild and Scenic Rivers Act

[7] NEPA evaluation of these resources can be found in Section 5.3, table 5.3-1 of this document.

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

2.1.1 Existing Project Facilities

The Tribe currently operates a 6-inch non-potable pipeline to irrigate the Barona Creek Golf Club, an eighteen-hole golf course surrounding Barona Resort and Casino. This pipeline, commonly referred to as the "Golf Course Line", originates southeast of the Giant San Diego Paintball Park at Well 29 and continues along Ketuull Uunyaa Way before terminating at the irrigation ponds serving the golf course.

The Tribe also operates a potable water distribution system that is supplied by well water and serves tribal residences, the Resort and Casino, school, cultural center and other facilities on the Reservation. Figure 4 represents the Reservation boundary and Proposed Project Alignment.

All elements of the Proposed Project lie within Section 35, T13S, R1E, SBB&M (off-Reservation), and T14S, R1 and 2E, SBB&M (unsectioned because formerly Mexican land grant – Rancho Barona). The Project Site includes all or a portion of the following APNs:

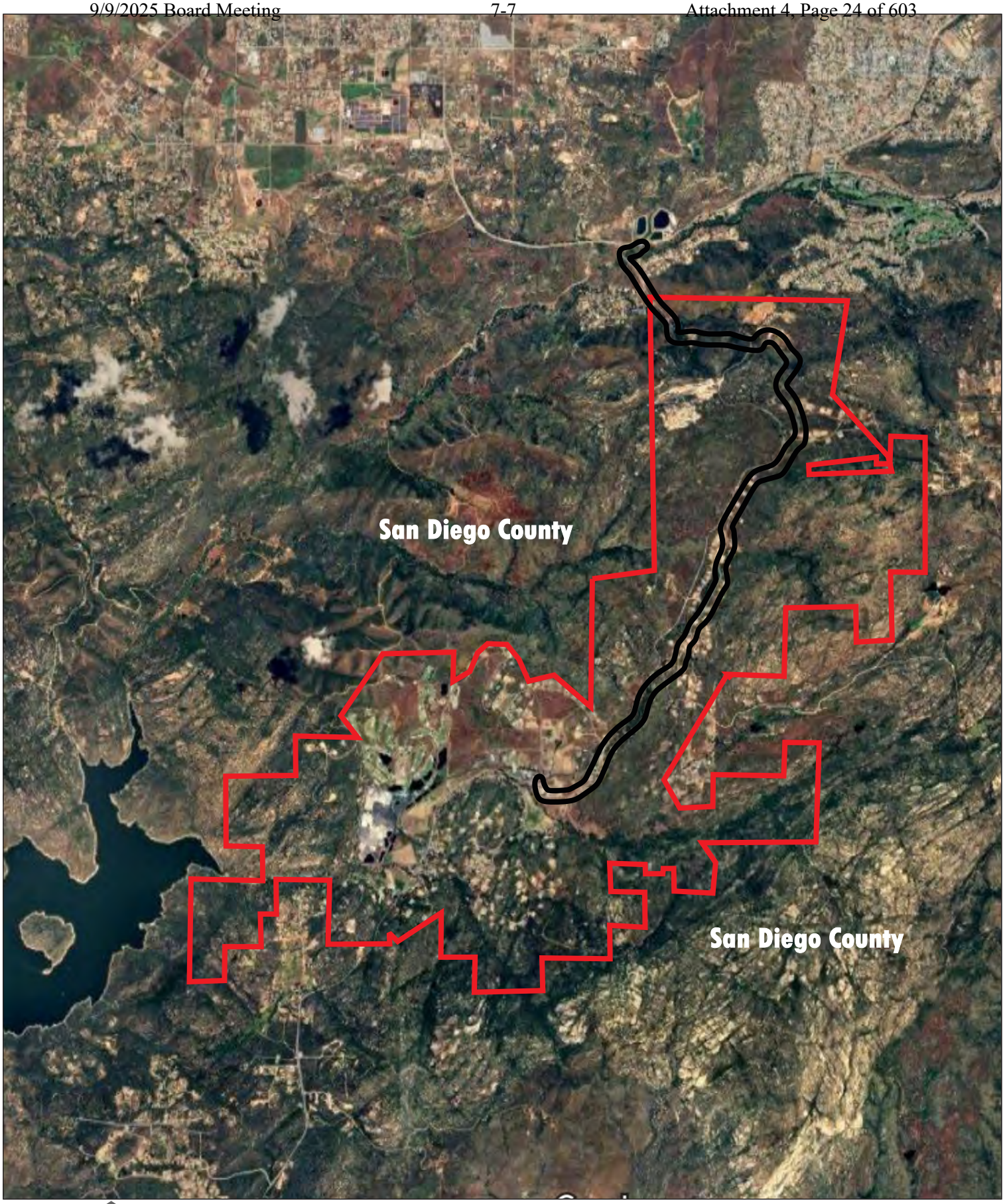
328-050-01	330-070-21	330-070-18
331-010-01	328-080-01	329-070-01
328-120-03	328-100-02	329-070-02
330-020-01	330-070-20	330-030-05

2.1.2 Proposed Off-Reservation Alignment

The 8-inch recycled water pipeline commences at the San Vicente Wastewater Reclamation Plant, at an existing District pump station located just northeast of the intersection of Vicente Meadows Road and San Vicente Road. Once the proposed 8-inch recycled water pipeline leaving the San Vicente Wastewater Treatment Plant reaches the intersection of San Vicente Road and Wildcat Canyon Road, it will share the alignment and run parallel with the proposed 12-inch potable water pipeline in Wildcat Canyon Road. A horizontal separation of 4 feet must be maintained between the recycled and potable water pipelines throughout the alignment, both off-and on-Reservation. Figure 5 depicts the portion of the Project pipelines that are off-Reservation on County lands. This portion of Wildcat Canyon Road is maintained by the San Diego County Department of Public Works (DPW) and thus subject to the County's design standards and permitting requirements. It will be necessary to obtain an Encroachment permit from the County. Approximately 3000 LF of recycled water pipeline and 2100 LF of potable water pipeline will be constructed off-Reservation.

2.1.3 Proposed On-Reservation Alignment

After crossing the Reservation boundary, the proposed recycled and potable water pipelines will run within the Wildcat Canyon Road right-of-way for approximately 0.35 miles before shifting eastward and moving off the road outside of the County right-of-way. The pipes continue to share an alignment until the recycled water line connects to the existing Golf Course Line approximately 1200 feet southeast of the Giant San Diego Paintball Park while the potable line continues overland approximately 20,200 feet until it joins the existing domestic water distribution system. See Figures 6 through 9 for on-Reservation alignment and components through the Reservation.



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Pipeline Study Area

Reservation Boundary

RESERVATION BOUNDARY

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

FIGURE 4

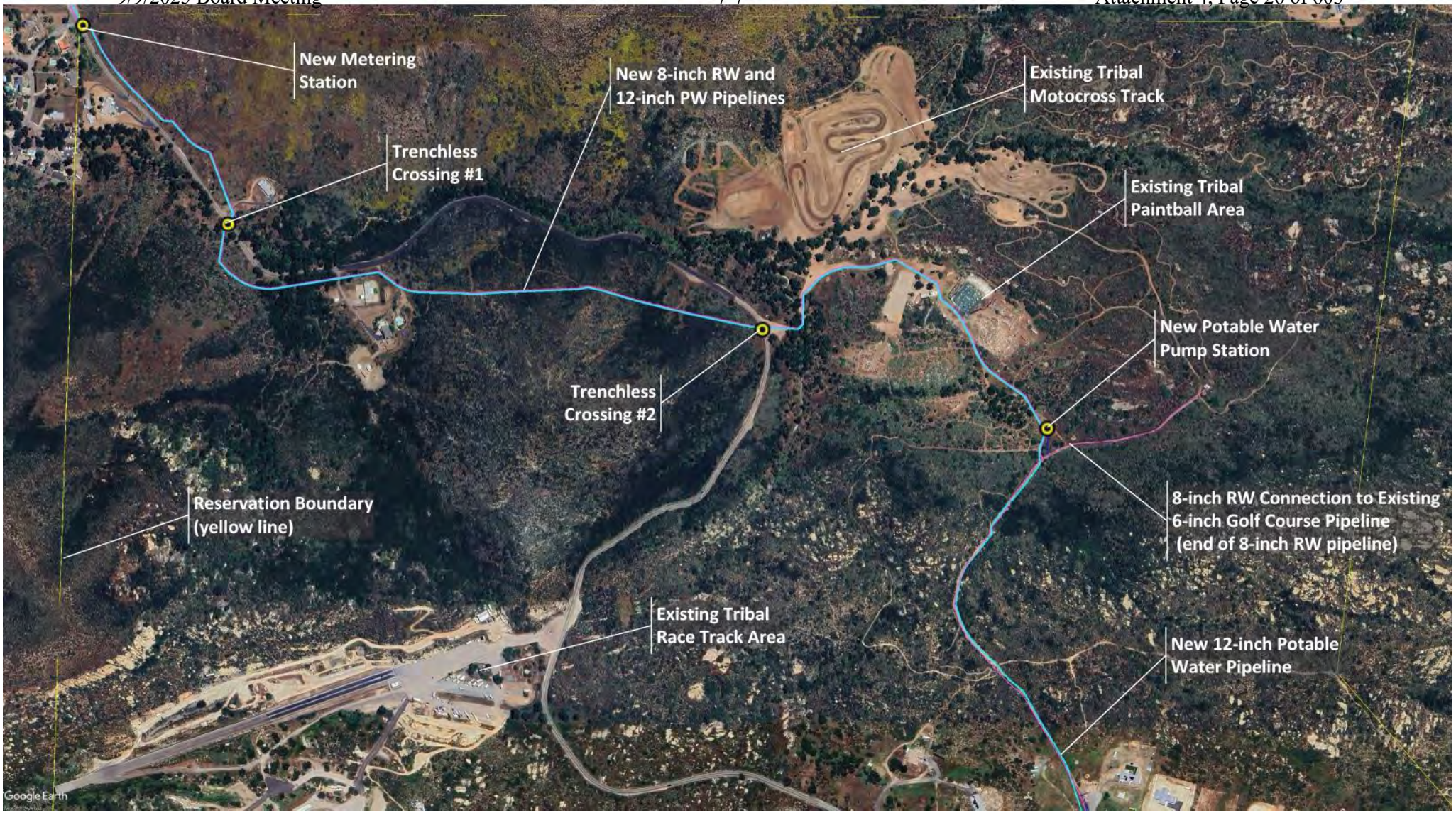


OFF-RESERVATION SEGMENT

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

FIGURE 5

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ON-RESERVATION SEGMENT, FIRST OF 4 SECTIONS

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

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FIGURE 6



ON-RESERVATION SEGMENT, SECOND OF 4 SECTIONS

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

FIGURE 7

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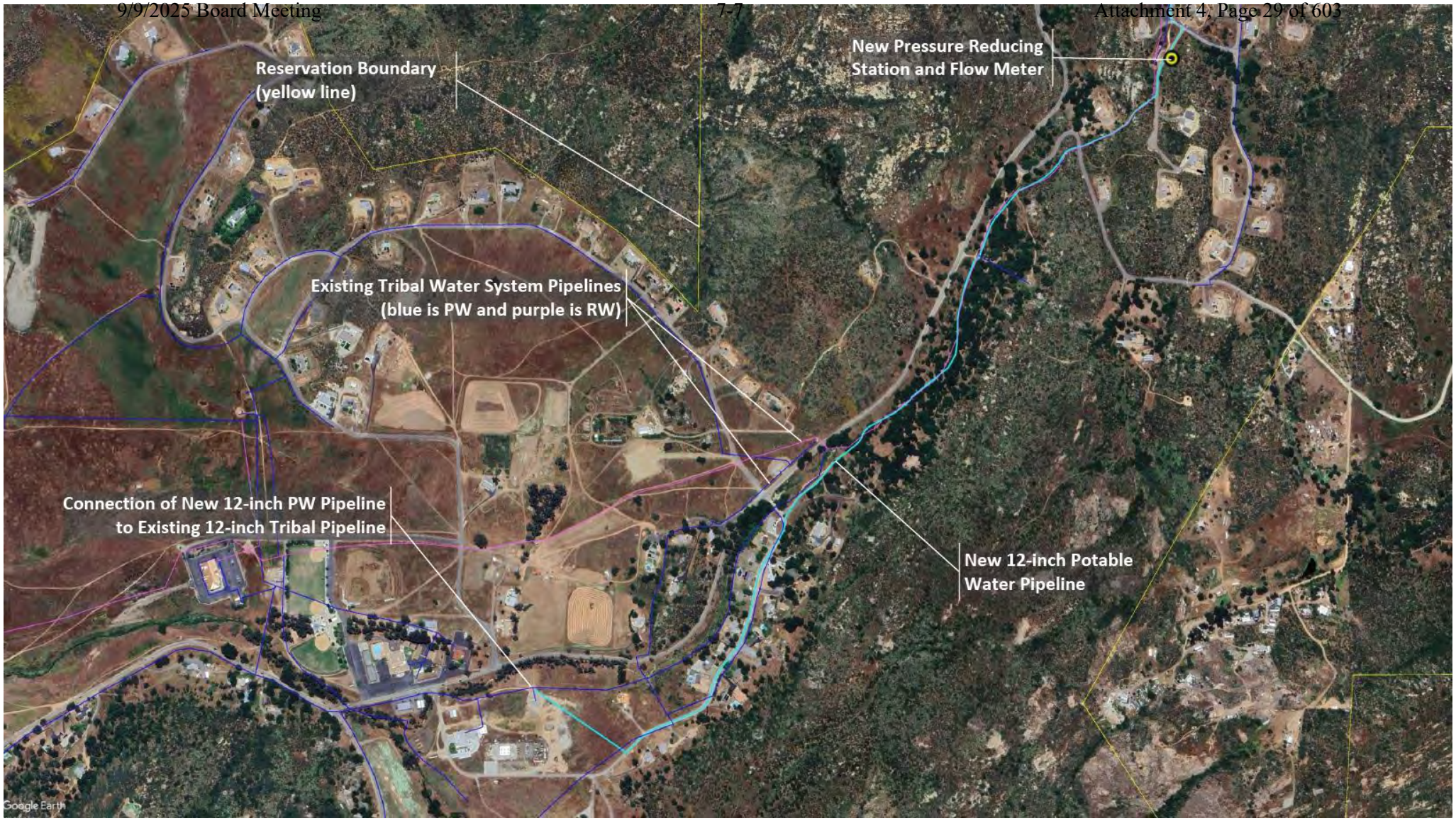


ON-RESERVATION SEGMENT, THIRD OF 4 SECTIONS

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

FIGURE 8

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ON-RESERVATION SEGMENT, FOURTH OF 4 SECTIONS

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

FIGURE 9

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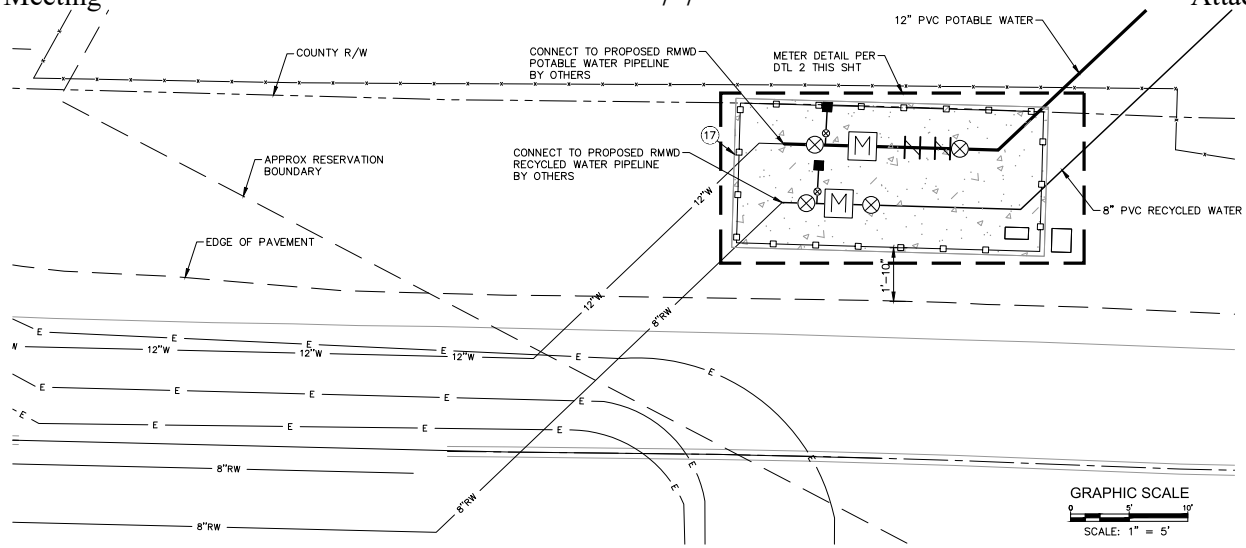
2.2 PROPOSED PROJECT/PREFERRED ACTION

The Proposed Project/Preferred Action (Project) includes a new 12”-diameter pipeline to convey potable water, and a new 8”-diameter pipeline to convey recycled water from the District’s facilities to the Reservation. The Project consists of two segments: an off-Reservation segment and an on-Reservation segment (see Table 2.2-1 for pipeline lengths by location). The off-Reservation segment consists of two (2) largely parallel new pipelines to convey water, each of which is less than one (1) mile from existing water distribution facilities within the Ramona Municipal Water District service area, by connection within a county road easement to an existing bridge over San Vicente Creek, along the county road easement to the boundary of the Barona Indian Reservation, all to be performed by the District. The on-reservation portion of the water line construction will be the responsibility of the tribe.

The Potable Water Line. The 12-inch potable water pipeline originates at the intersection of San Vicente Road and Wildcat Canyon Road, within the District’s service area. The District currently operates a 16-inch diameter water line within the San Vicente Road right-of-way, to which the new 12-inch pipeline will connect. The 12-inch pipeline will be constructed within the Wildcat Canyon Road right-of-way from the connection point south, crossing an existing bridge over San Vicente Creek, continuing south to the Reservation boundary just south of Little Klondike Road. A new water metering facility will be constructed just inside the Reservation boundary, within the road right-of-way to meter water deliveries from the District to the Reservation. The meter facility will consist of a magnetic flow meter and related equipment mounted on a 12’ x 25’ concrete pad enclosed by chain link fence (see Figure 10).

After the metering station, the 12-inch pipeline leaves the Wildcat Canyon Road right-of-way, continuing south across Reservation land. The 12-inch pipeline crosses Wildcat Canyon Road twice, using trenchless construction techniques, traversing existing Reservation roads to a point just south of the Giant San Diego Paintball Park. At this location the Tribe will construct a small booster pump station, located adjacent to an existing Reservation well site (Well 30). The pump station will be comprised of a concrete block building, approximately 35 feet by 35 feet (see Figure 11 and 11a). This building will house the existing well, the booster pumps, and the electrical equipment. There will also be an emergency diesel generator on the exterior of the building, enclosed in a 12-foot by 18-foot concrete block wall.

Leaving the small pump station, the 12-inch pipeline continues back to Reservation roads specifically Ketuull Uunyaa Way and continues south in Ketuull Uunyaa Way and other unnamed local roadways to Featherstone Canyon Way. At Featherstone Canyon Way, the 12-inch pipeline traverses open land to Barona Road and continues south to connect with an existing 12-inch pipeline within the Reservation water system, adjacent to an existing Reservation well site (Well 21). At this existing location and prior to connection with the existing Reservation distribution system, a Pressure Reducing Station (PRS) will be constructed above ground, with piping, pressure reducing valve, and other miscellaneous equipment and electrical gear connected to the nearby existing well building (see Figure 12 and 12a). The Tribe will construct all on-Reservation pipeline and related facilities.



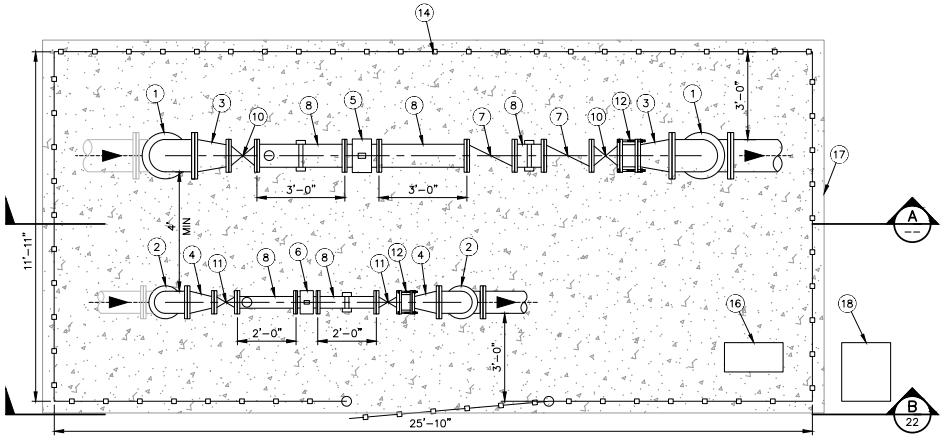
GRAPHIC SCALE
0 5' 10'
SCALE: 1" = 5'

FLOW METER STATION 1
SCALE: 1" = 5'

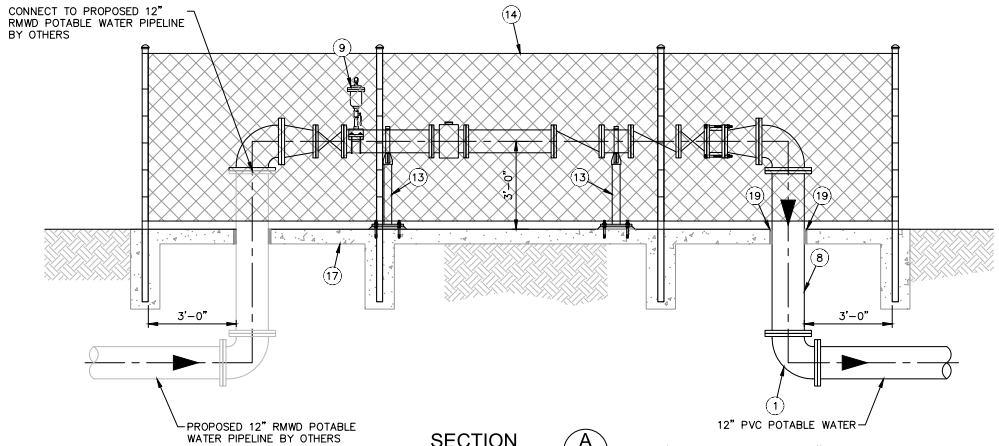
1. 12" DI 90 DEGREE BEND
2. 8" DI 90 DEGREE BEND
3. 12" x 8" DI REDUCER
4. 8" X 4" DI REDUCER
5. 8" MAG METER
6. 4" MAG METER
7. 8" CHECK VALVE
8. DI SPOOL PIECE
9. 2" AIR RELEASE VALVE
10. 8" GATE VALVE
11. 4" GATE VALVE
12. DISMANTLING JOINT
13. PIPE SUPPORT
14. CHAIN LINK FENCE
15. CHAIN LINK GATE
16. SCADA PANEL
17. CONCRETE PAD
18. SDGE METER PEDESTAL
19. GROUT

NOTES:

1. ALL WORK FOR METER SHALL REMAIN INSIDE THE COUNTY R/W.
2. CONTRACTOR TO NOT DISTURB ROAD DURING CONSTRUCTION OF METER SITE.



METER DETAIL 2
SCALE: 1/2" = 1'-0"



SECTION A
SCALE: 1/2" = 1'-0"

60% PROGRESS SET
NOT FOR CONSTRUCTION

GRAPHIC SCALE
0 1' 2' 4'
SCALE: 1/2"=1'-0"

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NO.	REVISIONS	DATE	BY

SEAL

SEAL

SCALE: AS SHOWN
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CHECKED BY: GR
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RAMONA BARONA PIPELINE
PREPARED FOR
BARONA BAND OF MISSION INDIANS

DUDEK
605 Third Street Encinitas, CA 92024
760.942.5147 Fax 760.632.0164

FLOW METER

SHEET No. 21 OF 37 SHTS.

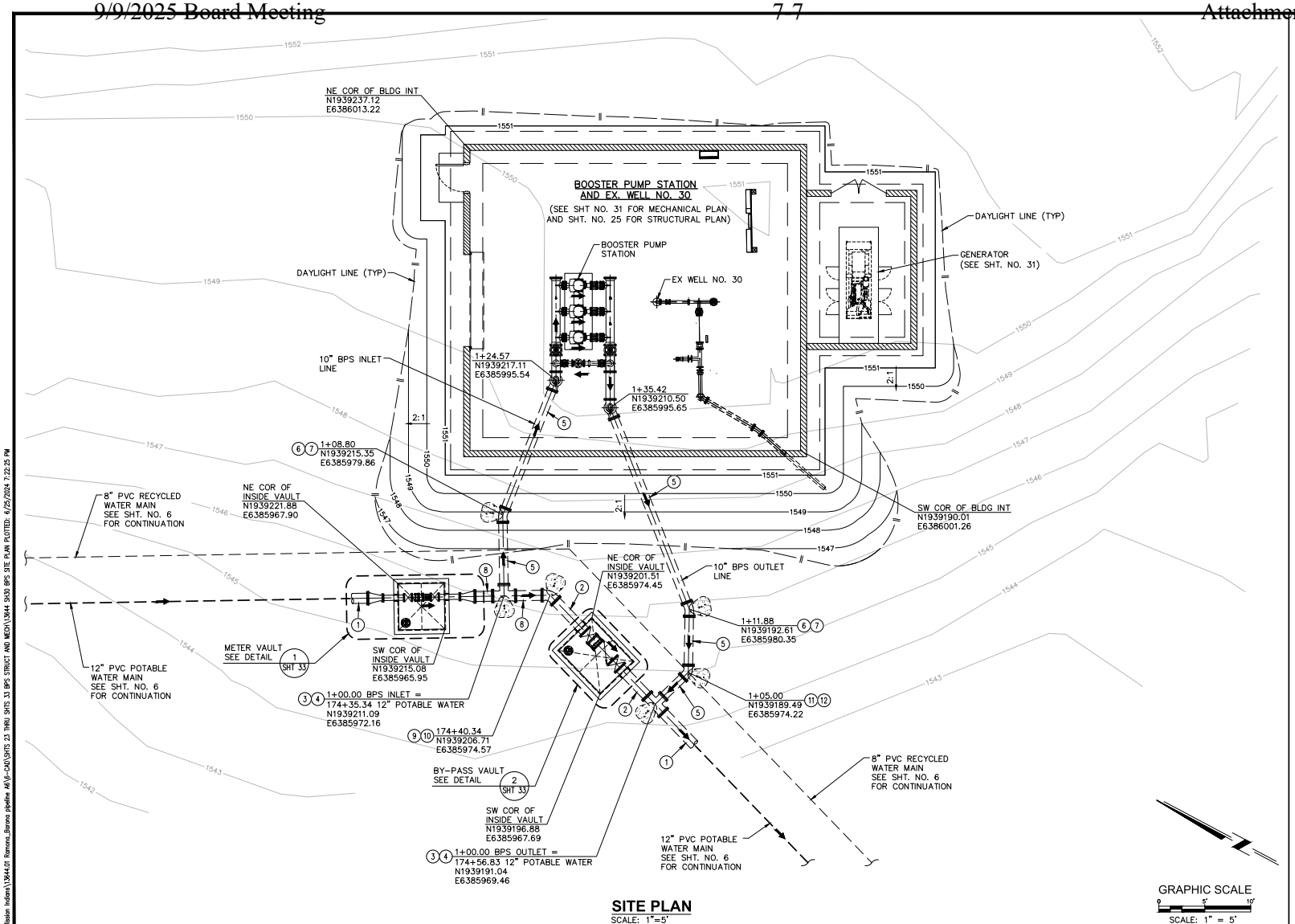
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FLOW METER STATION

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

FIGURE 10

LILBURN CORPORATION



SITE PLAN
SCALE: 1"=5'

GRAPHIC SCALE
0 5' 10'
SCALE: 1" = 5'

CONSTRUCTION NOTES

1. 12-INCH C900 CLASS 305 DR14 PVC PIPE PER SDWAS DWGS WP-01 AND WP-02
2. 12-INCH DUCTILE IRON CL 54 PIPE SPOOL (FLG X PE)
3. 12-INCH X 10-INCH DUCTILE IRON TEE (FLG X FLG)
4. CONCRETE THRUST BLOCK (34.2 SF) PER SDWAS DWGS WT-01A, WT-01B AND WT-01C
5. 10-INCH CL 54 DUCTILE IRON PIPE
6. 10-INCH DUCTILE IRON 22.5-DEGREE BEND (MJ X MJ)
7. CONCRETE THRUST BLOCK (9.45 SF) PER SDWAS DWGS WT-01A, WT-01B AND WT-01C
8. 12-INCH CL 54 DUCTILE IRON PIPE SPOOL (PE X PE)
9. 12-INCH DUCTILE IRON 45-DEGREE BEND (MJ X MJ)
10. CONCRETE THRUST BLOCK (26.2 SF) PER SDWAS DWGS WT-01A, WT-01B AND WT-01C
11. 10-INCH DUCTILE IRON 45-DEGREE BEND (MJ X MJ)
12. CONCRETE THRUST BLOCK (18.5 SF) PER SDWAS DWGS WT-01A, WT-01B AND WT-01C

NOTES:

1. POTHOLE PRV INLET AND OUTLET PIPELINE ALIGNMENTS. REPORT ANY UTILITY CONFLICTS TO DESIGN ENGINEER PROMPTLY.
2. ALL UTILITIES TO BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE.
3. PRV INLET AND OUTLET PIPELINES SHALL BE INSTALLED WITH A MINIMUM 42-INCH DEPTH OF COVER.
4. ALL DUCTILE IRON PIPE, FITTINGS, SPECIALS, ETC. SHALL BE CERAMIC EPOXY LINED (PROTECTO 401 BY U.S. PIPE OR EQUAL) AND BELOW GRADE DUCTILE IRON FACILITIES SHALL BE ZINC COATED AND ENCASED IN V-BIO POLYETHELENE.

90% PROGRESS SET
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NO.	REVISIONS	DATE	BY

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SCALE: AS SHOWN
DATE: JUNE, 2023
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DRAWN BY: CS
CHECKED BY:
PREPARED UNDER THE DIRECT SUPERVISION OF: GREG RIPPERGER 6/25/24 DATE

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PREPARED FOR
BARONA BAND OF MISSION INDIANS

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BPS SITE AND GRADING PLAN

SHEET No. OF 39 SHTS.

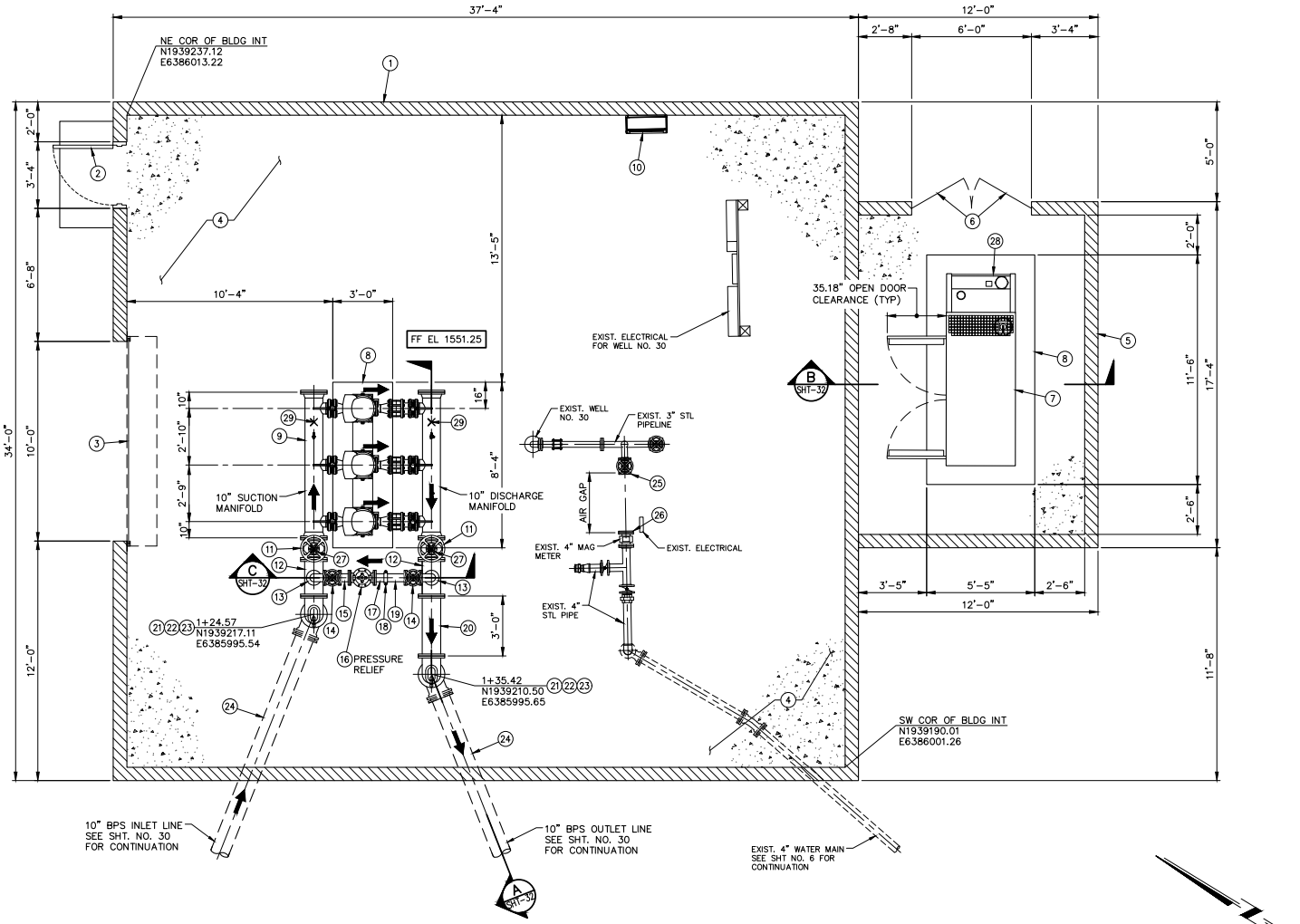
P:\101\Engineering\Barona Tribe of Mission Indians\13644.01 Ramona_Barona pipeline #6\(e-CAD)\SHTS 23 THRU SHTS 33 BPS STRUCT AND MECH\13644 SHSD BPS SITE PLAN PLOTTED: 6/25/2024 7:22:25 PM

BOOSTER PUMP STATION SITE

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

LILBURN CORPORATION

FIGURE 11



PLAN
SCALE: 3/8"=1'-0"

90% PROGRESS SET
NOT FOR CONSTRUCTION

GRAPHIC SCALE
0 1' 2' 4' 6'
SCALE: 3/8"=1'-0"

CONSTRUCTION NOTES

1. BOOSTER PUMP STATION BUILDING PER STRUCTURAL DWGS
2. HOLLOW METAL ACCESS DOOR PER STRUCTURAL DWGS
3. POWER OPERATED OVERHEAD COILING DOOR PER STRUCTURAL DWGS
4. NEW CONCRETE SLAB PER SHT STRUCTURAL DWGS
5. GENERATOR BLOCK WALL ENCLOSURE PER SHT STRUCTURAL DWGS
6. 6'-0" WIDE DOUBLE CHAIN LINK FENCE GATE
7. 40 KW DIESEL GENERATOR (KOHLER MODEL 40REOZK) WITH SOUND ATTENUATED ENCLOSURE (KOHLER MODEL ADV-8740)
8. CONCRETE EQUIPMENT PAD PER DTL 2 ON SHT 27
9. SKID MOUNTED PACKAGED PUMP STATION (GRUNDFOS PACKAGED TRIPLEX MODEL HYDRO MPC-E 3CRE-95-2-2, 3 X 460V 60 HZ. EACH PUMP: 25 HP RATED 450 GPM AT 170 FEET TDH AT 3600 RPM WITH A VFD FOR EACH PUMP)
10. GRUNDFOS ELECTRICAL PANEL FOR SKID MOUNTED PUMP STATION
11. 10-INCH RESILENT WEDGE GATE VALVE WITH HANDWHEEL (FLG X FLG)
12. 10-INCH X 4-INCH DUCTILE IRON TEE (FLG X FLG)
13. 4-INCH DUCTILE IRON 90-DEGREE BEND (FLG X FLG)
14. 4-INCH RESILENT WEDGE GATE VALVE WITH HANDWHEEL (FLG X FLG)
15. 4-INCH X 6-INCH LONG CL 54 DUCTILE IRON PIPE SPOOL (FLG X FLG)
16. 4-INCH PRESSURE RELIEF VALVE (CLA-VAL MODEL NO. 50-01)
17. 4-INCH CL 54 DUCTILE IRON PIPE SPOOL (FLG X GROOVE) LENGTH TO BE DETERMINED IN FIELD
18. 4-INCH STYLE 31 VICTAULIC COUPLING (OR EQUAL)
19. 4-INCH X 12-INCH LONG CL 54 DUCTILE IRON PIPE SPOOL (FLG X GROOVE)
20. 10-INCH X 3-FT LONG CL 54 DUCTILE IRON PIPE SPOOL (FLG X FLG)
21. 10-INCH DUCTILE IRON 90-DEGREE BEND WITH 2" HEAVY DUTY BOSS AT LOCATION "Y" (FLG X FLG)
22. 10-INCH DUCTILE IRON 90-DEGREE BEND (FLG X MJ)
23. 2-INCH COMBINATION AIR/VAC VALVE ASSEMBLY PER DTL 1 ON SHT 39
24. 10-INCH CL 54 DUCTILE IRON PIPE
25. 3-INCH DUCTILE IRON BLIND FLANGE
26. 4-INCH DUCTILE IRON BLIND FLANGE
27. TYPE I PIPE SUPPORT PER DTL 4 ON SHT NO. 39
28. 142 GALLON FUEL TANK (KOHLER MODEL 40/50/60 kW)
29. TYPE II PIPE SUPPORT PER DTL 4 ON SHT NO. 39

NOTES:

1. ALL UTILITIES TO BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE.
2. BPS INLET AND OUTLET PIPELINES SHALL BE INSTALLED WITH A MINIMUM 42-INCH DEPTH OF COVER.
3. ALL DUCTILE IRON PIPE, FITTINGS, SPECIALS, ETC. SHALL BE CERAMIC EPOXY LINED (PROTECTO 401 BY U.S. PIPE OR EQUAL) AND BELOW GRADE DUCTILE IRON FACILITIES SHALL BE ZINC COATED AND ENCASED IN V-BIO POLYETHELENE.

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NO.	REVISIONS	DATE	BY

SEAL

SEAL

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DATE: JUNE, 2023
DESIGNED BY: DG/CS
DRAWN BY: CS
CHECKED BY: GR
PREPARED UNDER THE DIRECT SUPERVISION OF:
GREG RIPPERGER
6/30/24
DATE

RAMONA BARONA PIPELINE

PREPARED FOR

BARONA BAND OF MISSION INDIANS

DUDEK
605 Third Street Encinitas, CA 92024
760.942.5147 Fax 760.632.0164

BPS MECHANICAL FLOOR PLAN

SHEET No. OF 39 SHTS.

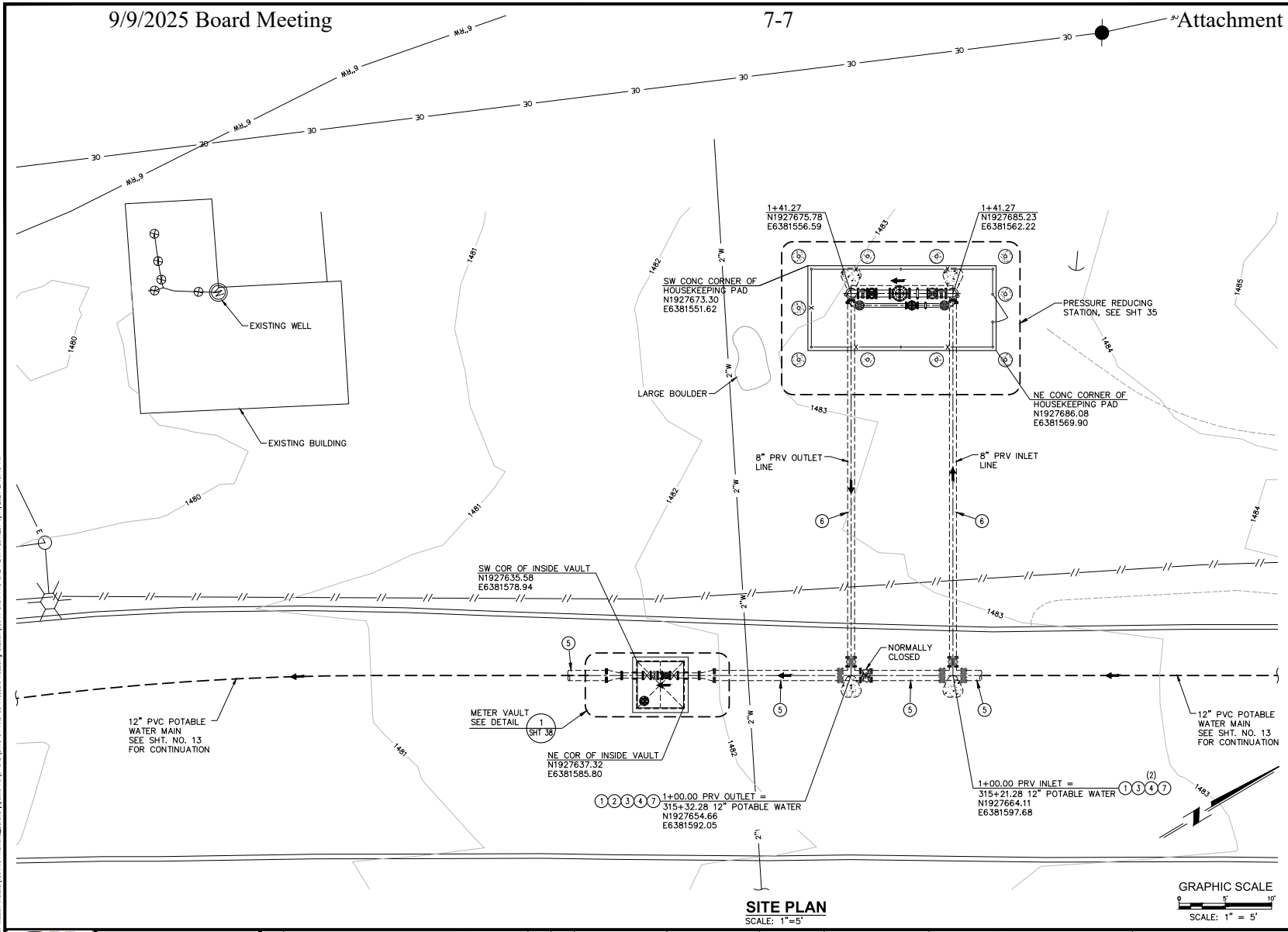
P:\101.Engineering\Barona Tribe of Mission Indians\13644.01 Ramona_Barona pipeline AE\E-CAD\SHTS 23 THRU SHTS 33 BPS STRUCT AND MECH\13644 SH31 BPS MECH FLR PLAN PLOTTED: 6/30/2024 1:47:29 PM

BOOSTER PUMP STATION EQUIPMENT

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

LILBURN CORPORATION

FIGURE 11A



SITE PLAN
SCALE: 1"=5'

GRAPHIC SCALE
0 5' 10'
SCALE: 1" = 5'

CONSTRUCTION NOTES

1. 12-INCH X 8-INCH DUCTILE IRON TEE (FLG X FLG)
2. 12-INCH RW GATE VALVE (FE X MJ) PER SDWAS DWGS WV-01, WV-03 AND WT-01C
3. 8-INCH RW GATE VALVE (FE X MJ) PER SDWAS DWGS WV-01, WV-03 AND WT-01
4. 12-INCH EBAA IRON SERIES 2100 RESTRAINED FLANGE ADAPTER OR EQUAL
5. 12-INCH C900 CLASS 305 DR14 PVC PIPE PER SDWAS DWGS WP-01 AND WP-02
6. 8-INCH C900 CLASS 305 DR14 PVC PIPE PER SDWAS DWGS WP-01 AND WP-02
7. CONCRETE THRUST BLOCK (34.2 SF) PER SDWAS DWGS WT-01A, WT-01B AND WT-01C

NOTES:

1. POTHOLE PRV INLET AND OUTLET PIPELINE ALIGNMENTS. REPORT ANY UTILITY CONFLICTS TO DESIGN ENGINEER PROMPTLY.
2. ALL UTILITIES TO BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE.
3. PRV INLET AND OUTLET PIPELINES SHALL BE INSTALLED WITH A MINIMUM 42-INCH DEPTH OF COVER.
4. ALL DUCTILE IRON PIPE, FITTINGS, SPECIALS, ETC. SHALL BE CERAMIC EPOXY LINED (PROTECTO 401 BY U.S. PIPE OR EQUAL) AND BELOW GRADE DUCTILE IRON FACILITIES SHALL BE ZINC COATED AND ENCASED IN V-BIO POLYETHELENE.

90% PROGRESS SET
NOT FOR CONSTRUCTION

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NO.	REVISIONS	DATE	BY

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DATE: JUNE, 2023
DESIGNED BY: DG/CS
DRAWN BY: CS
CHECKED BY:
PREPARED UNDER THE DIRECT SUPERVISION OF: GREG RIPPERGER 6/14/24 DATE

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PREPARED FOR
BARONA BAND OF MISSION INDIANS

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PRS SITE PLAN

SHEET No. OF 39 SHTS.

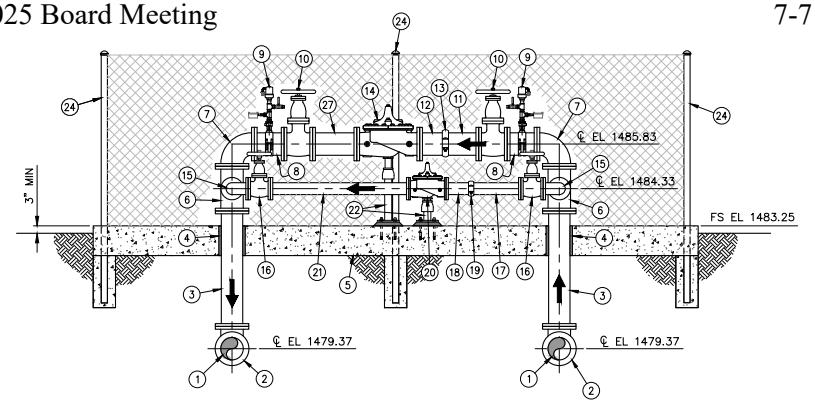
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PRESSURE REDUCTION SITE PLAN

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

LILBURN CORPORATION

FIGURE 12



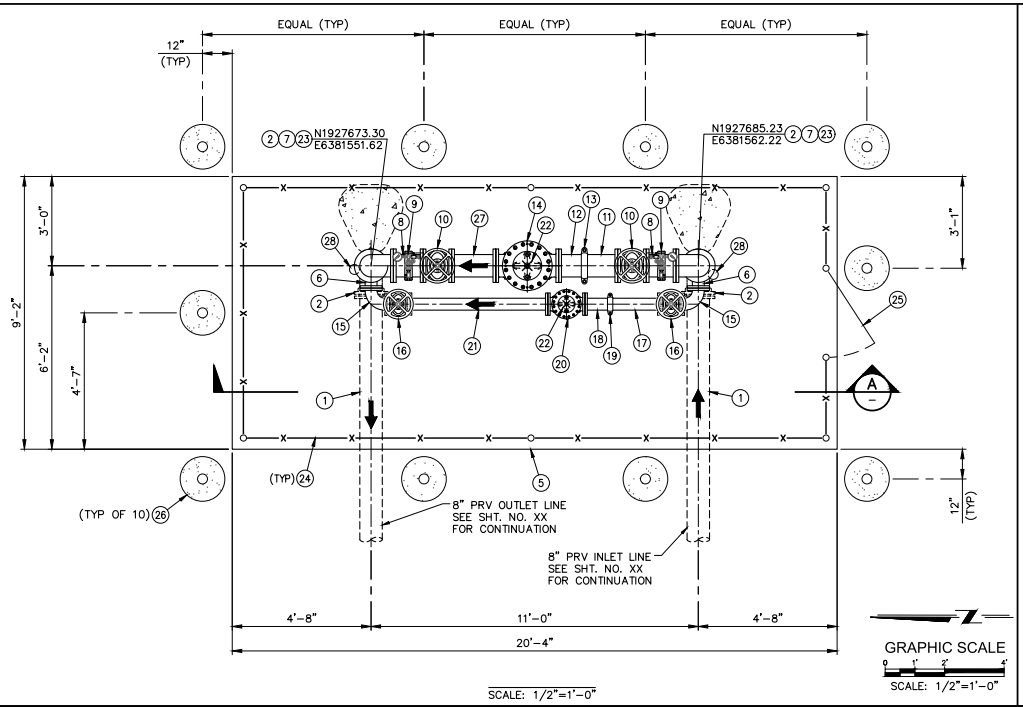
SECTION A
SCALE: 1/2"=1'-0"

NOTES:

1. ALL UTILITIES TO BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE.
2. PRV INLET AND OUTLET PIPELINES SHALL BE INSTALLED WITH A MINIMUM 42-INCH DEPTH OF COVER.
3. ALL DUCTILE IRON PIPE, FITTINGS, SPECIALS, ETC. SHALL BE CERAMIC EPOXY LINED (PROTECTO 401 BY U.S. PIPE OR EQUAL) AND BELOW GRADE DUCTILE IRON FACILITIES SHALL BE ZINC COATED AND ENCASED IN V-BIO POLYETHELENE.

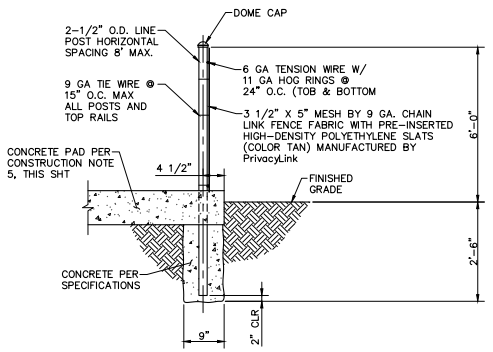
CONSTRUCTION NOTES:

1. 8-INCH C900 CLASS 305 DR14 PVC PIPE PER SDWAS DWGS WP-01 AND WP-02
2. 8-INCH DUCTILE IRON 90-DEGREE BEND (FLG X MJ)
3. 8-INCH CL 54 DUCTILE IRON PIPE SPOOL (FLG X FLG),
4. PRE-MOLDED EXPANSION JOINT MATERIAL
5. 12-INCH THICK REINFORCED 560-C-3250 CONCRETE HOUSEKEEPING PAD WITH #5 @ 12-INCH ON CENTER BOTH WAYS
6. 8-INCH X 4-INCH DUCTILE IRON TEE (FLG X FLG)
7. 8-INCH DUCTILE IRON 90-DEGREE BEND (FLG X FLG)
8. 8-INCH X 12-INCH LONG CL 54 DUCTILE IRON PIPE SPOOL (FLG X FLG)
9. COMBINATION AIR VALVE AND PRESSURE GAUGE ASSEMBLY PER DTL 1 ON SHT 39
10. 8-INCH RESILENT WEDGE GATE VALVE WITH HANDWHEEL (FLG X FLG)
11. 8-INCH X 13 5/8-INCH CL 54 DUCTILE IRON PIPE SPOOL (FLG X GROOVE),
12. 8-INCH X 10 3/8-INCH LONG CL 54 DUCTILE IRON PIPE SPOOL (FLG X GROOVE)
13. 8-INCH STYLE 31 VICTAULIC COUPLING (OR EQUAL)
14. 8-INCH PRESSURE REGULATING VALVE (CLA-VAL MODEL 90G-01ABCSKCX D/S 150 LB FLANGED GLOBE PATTERN PRESSURE REDUCING VALVE OR EQUAL, DUCTILE IRON BODY, STAINLESS STEEL TRIM, INTERIOR AND EXTERIOR EPOXY COATING, 30-300 PSI SPRING RANGE, STAINLESS STEEL PILOT SYSTEM TUBES AND FITTINGS)
15. 4-INCH DUCTILE IRON 90-DEGREE BEND (FLG X FLG)
16. 4-INCH RESILENT WEDGE GATE VALVE WITH HANDWHEEL (FLG X FLG)
17. 4-INCH X 20 1/4-INCH CL 54 DUCTILE IRON PIPE SPOOL (FLG X GROOVE),
18. 4-INCH X 10 1/8-INCH LONG CL 54 DUCTILE IRON PIPE SPOOL (FLG X GROOVE)
19. 4-INCH STYLE 31 VICTAULIC COUPLING (OR EQUAL)
20. 4-INCH PRESSURE REGULATING VALVE (CLA-VAL MODEL 90G-01ABCSKCX D/S 150 LB FLANGED GLOBE PATTERN PRESSURE REDUCING VALVE OR EQUAL, DUCTILE IRON BODY, STAINLESS STEEL TRIM, INTERIOR AND EXTERIOR EPOXY COATING, 30-300 PSI SPRING RANGE, STAINLESS STEEL PILOT SYSTEM TUBES AND FITTINGS)
21. 8-INCH X 4-FT 8-INCH LONG CL 54 DUCTILE IRON PIPE SPOOL (FLG X FLG)
22. TYPE 1 PIPE SUPPORT PER DTL 4 ON SHT 39
23. INSTALL CONCRETE THRUST BLOCK (22.75 SF) PER SDWAS DWG WT-01, SHT 1 THRU SHT 3
24. CHAIN LINK FENCE PER DTL 1 ON THIS SHT
25. 3'-0" WIDE ENTRANCE GATE
26. REMOVABLE PROTECTION POST PER SDWAS DWG WM-05
27. 8-INCH X 18-INCH LONG CL 54 DUCTILE IRON PIPE SPOOL (FLG X FLG)
28. TRACER WIRE ACCESS PORT PER SDWAS WP-01



SCALE: 1/2"=1'-0"

GRAPHIC SCALE
0 1' 2' 4'
SCALE: 1/2"=1'-0"



CHAINLINK FENCE DETAIL 1
NOT TO SCALE

90% PROGRESS SET
NOT FOR CONSTRUCTION

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DRAWN BY: DS
CHECKED BY: GR

PREPARED UNDER THE DIRECT SUPERVISION OF:
GREG RIPPERGER
6/14/24
DATE

RAMONA BARONA PIPELINE

PREPARED FOR

BARONA BAND OF MISSION INDIANS

DUDEK
605 Third Street Encinitas, CA 92024
760.942.5147 Fax 760.632.0164

PRS MECHANICAL PLAN AND SECTION

SHEET No.
OF 39 SHTS.

P:\101.Engineering\Barona Tribe of Mission Indians\13644.01 Ramona_Barona pipeline 46\E-CAD\SHTS 34 AND 35 Pressure Reducing Station\13644 SHS PRS MECH PLAN & SECTION PLOTTED: 6/14/2024 3:00:12 PM

PRESSURE REDUCTION SITE EQUIPMENT

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

LILBURN CORPORATION

FIGURE 12A

The Recycled Water Line. The 8-inch recycled water pipeline commences at the San Vicente Wastewater Reclamation Plant, an existing District pump station located just northeast of the intersection of Vicente Meadows Road and San Vicente Road. The pipeline will traverse District property to Vicente Meadows Road and continue south in Vicente Meadows Road to San Vicente Road. The pipeline will continue west in San Vicente Road to its intersection with Wildcat Canyon Road, then continue south, parallel to the proposed 12-inch potable water pipeline, across the San Vicente Creek bridge along Wildcat Canyon Road to the Reservation boundary just south of Little Klondike Road.

The 8-inch recycled pipeline will also include a magnetic flow meter within the above new metering facility, similar to that of the potable water pipeline. The 8-inch recycled pipeline continues south, parallel to the 12-inch pipeline, over Reservation land, crossing the Wildcat Canyon Road alignment at the same two locations, also by trenchless construction techniques. Where the potable and recycled lines cross under the county road they (and a third dummy pipeline) will be encased in a larger pipe or sleeve to provide support, stability, and access. The 8-inch recycled pipeline continues to parallel the 12-inch potable pipeline in existing Reservation roads to a point just south of the Reservation paintball area, where the 12-inch pipeline pump station is located. The 8-inch pipeline is not connected to the pump station and traverses south a short distance to connect to an existing 6-inch Reservation non-potable pipeline. This connection is the termination point of the new 8-inch recycled water pipeline. The existing non-potable pipeline generally parallels the 12-inch potable pipeline alignment south, terminating at the existing Reservation golf course where the recycled water is tributary to the golf course ponds.

The overall length of the 12-inch pipeline is approximately 41,900 LF. That of the new 8-inch pipeline is approximately 21,700 LF. The two pipelines will be aligned parallel, with a separation of 4 feet depending on conditions, designed and built to District standards. Both pipelines will be of polyvinyl chloride, except downstream of the booster pump station, which will be of ductile iron pipe materials because of the greater pressure at this location and road undercrossings. See Table 2.2-1 for pipeline construction lengths and Table 2.2-2 for sizes of accessory structures to be constructed.

Summary of Project Components

Table 2.2-1: New Below Grade Pipeline Lengths

Construction	Off-Reservation (Lineal Feet / Mile)	On-Reservation (Lineal Feet / Mile)	Total (Lineal Feet / Mile)
12” Diameter Potable	2,100 / 0.39	39,800 / 7.53	41,900 / 7.93
8” Diameter Recycled	3,000 / 0.57	18,700 / 3.54	21,700 / 4.11

Table 2.2-2: New Above Grade Structures (all slab on grade)

Structure	Primary Structure	Secondary Structure
Flow Metering Station	11’11” x 25’10”	
Booster Pump Station	34’1” x 37’4”	12’0” x 17’4”
Pressure Reducing Station	20’4” x 9’2”	

Off-Reservation, Wildcat Canyon Road is maintained by the San Diego County Department of Public Works (County) and is subject to the County's design standards and permitting requirements. It will be necessary to obtain an Encroachment Permit from the County. Approximately 3000 linear feet (LF) of recycled water pipeline and 2100 LF of potable water pipeline will be constructed off-Reservation in Wildcat Canyon Road.

2.3 CONSTRUCTION METHODS

Typical pipeline construction processes are described below:

- Staging Area(s) – At various locations along the construction route, staging areas would be required to store pipe, construction equipment, and other construction-related material. Potential staging areas include vacant private and public land, and parking lots.
- Surface Preparation – Surface preparation involves removing structures (such as fences or posts), pavement, and/or vegetation from the trenching and jack and bore pit areas. Equipment may include jack hammers, pavement saws, graders, bulldozers, excavators, loaders, and trucks.
- Trench Excavation/Shoring - A backhoe, excavator, or trencher would be used to dig trenches for pipe installation. In general, trenches would have vertical side walls to minimize the amount of soil excavated. Soils excavated from the trenches, if of suitable quality, would be stockpiled alongside the trench or in staging areas for later reuse in backfilling the trench. If not reusable, the soil would be hauled off site for disposal. Disposal options include use as cover material at sanitary landfills and use as "clean fill" at other sites. In general, pipe trenches would be 3-5 feet wide and 4-10 feet deep. Deeper installations may be required under special circumstances, such as large utility or channel crossings.

  Pipeline trenches, in any given location, would be open for two to three days on average. During construction, vertical wall trenches would be temporarily "closed" at the end of each work day, by covering with steel plates or backfilled. Trenches would be backfilled with either the excavated soil or imported material. Dump trucks would be used to deliver imported, engineered backfill material to stockpiles near the trenching operation. Native soil would be reused for backfill to the greatest extent possible; however, the soil may not have the properties necessary for compatibility and stability.
- Jack and Boring – Jack and boring employs a non-steerable system that drives an open-ended pipe laterally using a percussive hammer, thereby resulting in the displacement of soil limited to the wall thickness of the pipe. For this construction method, pits would be dug on either side of the surface feature to be avoided (e. g. stream crossing or heavily traveled roadway). The pits are typically 10-15 feet wide and 10-20 feet long for the receiving pit and up to 50 feet long for the jacking pit. The depth would depend on the feature to be avoided. The boring equipment and pipe would be lowered into the pit and aligned at the appropriate depth and angle to achieve the desired exit location. A compressor would supply air to the pneumatic ramming tool to thrust the pipe forward. A cutting shoe may be welded to the front of the lead pipe to help reduce friction and cut through the soil.

  Depending on the size of the installation, spoil from inside the pipe would be removed with an auger, compressed air, water, or a combination of techniques. A seal cap would be installed on the starter pit side of the installation and spoil would be discharged into the receiver pit. Using this technique, ground surface disturbance would not occur, except at the pits.

- Bridge Crossing – A bridge boom, also known as a Snooper™ truck, will be used to hang the pipelines from the bridge crossing. While the truck is parked on the bridge or roadway, this truck provides a portable platform that can be positioned under the bridge that allows workers to attach the pipeline to the bridge without damaging the waterway or vegetated area below the bridge.
- Surface Restoration – After the pipe is installed, the ground surface of the pit areas would be restored. When pipe is installed on paved roadways, the asphalt would be patched and restored to pre-construction conditions. When the pipe is installed in dirt access roads, the dirt would be graded and compacted. In natural or vegetated areas, native plantings may be installed.

2.4 CONSTRUCTION TRIP GENERATION

During construction, the project would generate trips with construction crews and materials deliveries. Construction would generate up to approximately 25 round-trip trips per day, including 20 round trips for off hauling of material and five (5) round trips for delivery of materials. Construction would proceed at a rate of approximately 300 linear feet per day and involve approximately 18,750 cubic yards (cy) of material export, using a conservative assumption that no native fill is reused for backfill of trenches.

2.5 CONSTRUCTION SCHEDULE

Construction is anticipated to last up to 12 to 16 months. The project's maximum area of disturbance during the construction period would encompass approximately 254,500 square feet, or no more than six acres, not including staging areas. The pipelines would be installed at depths of five to six feet below ground surface with a trench width of three to five feet, except the pipelines installed using trenchless techniques. Project construction activity is anticipated to occur continuously between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday only (not on Sundays) and excluding federal holidays, which is compliant with the County of San Diego Ordinance Regulating Noise.

2.6 CONSTRUCTION BEST MANAGEMENT PRACTICES

The District and Tribe will require implementation of the following construction best management practices (BMPs) with the Project:

- Drainage / Erosion Control - During the construction, existing storm water facilities including catch basins, manholes, and ditches would be protected using erosion control measures. Design standards outlined in the San Diego County General Plan Update Final Environmental Impact Report (FEIR) for Hydrology and Water Quality and Land Use, as well as applicable regulations includes National Pollutant Discharge Elimination System (NPDES) and the County Grading Ordinance, would be implemented as applicable to the project site's stormwater drainage features.
- Groundwater Dewatering - The proposed pipe would be installed at a depth of five to six feet below ground surface. If encountered at this depth, groundwater would be controlled using standard methods including stone sumps wrapped in filter fabric and dewatering basins or baffled tanks if required.
- Traffic Controls - Construction of the proposed project may necessitate individual traffic lane closures. Traffic control requirements would require that emergency crews have access, as needed, and that the contractor coordinates the location of the work daily for routing of emergency vehicles. Traffic control would also require the contractor to make reasonable efforts,

wherever possible, to provide landowners access to their property and patrons access to businesses during execution of the work. The contractor may be required to have a County-approved traffic control plan. Refer to mitigation measures TRA-1 Traffic Control Plan.

- Air Quality / Dust Suppression – The construction contractor would be required to comply with San Diego Air Pollution Control District (SDAPCD) rules for air quality and dust suppression. The contractor is required to comply with the California Air Resources Boards (CARB) In-Use Off-Road Diesel-Fueled Fleets Regulations, which would limit vehicle idling time to five minutes, restrict adding vehicles to construction fleets that have lower than Tier 3 engines, and establish a schedule for retiring older, less fuel-efficient engines from the construction fleet.

2.7 OPERATION AND MAINTENANCE

Operationally, the on-reservation facilities downstream of the metering facility will be operated and maintained by the Tribe, and the off-reservation facilities upstream of the metering facility will be dedicated to the District and operated/maintained by the District.

The District would continue to operate its potable water system with no operational modifications. The District's recycled water system operations would be modified by the need for an additional user to call for recycled water and for the District to turn the pumps on at the SVWRP to supply recycled water to Barona. Operation and Maintenance of the off-reservation pipelines will be completed by the District or its contractors and includes maintenance of the metering station (calibration of both recycled water and potable water meters), SCADA monitoring of the metering station, inspection of pipelines crossing the bridge, valve exercising, and inspection/maintenance of pipeline and appurtenances (e.g air vacuum valves, blow offs, hydrants, etc). The two new water meters would be read per established District schedules, but at least once per month.

On-Reservation facilities will include operation and maintenance of a small water pump station, SCADA monitoring of the metering and pump station, pressure reducing station maintenance and monitoring, valve exercising, and inspection/maintenance of pipeline and appurtenances (e.g air vacuum valves, blow offs, hydrants, etc). These services would be provided by the Tribe.

2.8 PERMITS OR APPROVALS REQUIRED

The permits and approvals included in Table 2.8-1 may be required as part of this project.

Table 2.8-1: Permits and Approvals

Agency	*Permit or Approval*
San Diego County	*Encroachment Permit for work within County Right of Way*
The Metropolitan Water District of Southern California (Metropolitan), Ramona MWD, San Diego County Water Authority (SDCWA) and Tribe	*4-Party Agreement for Potable Water Supply to be Provided to the Tribe*
Metropolitan and SDCWA	*CEQA Responsible Agencies*
District and the Tribe	*Recycled Water Delivery Agreement*
San Diego County Local Agency Formation Commission (LAFCO)	*Out of Service Area agreement for the District to provide potable and recycled water to the Tribe, including provision of potable supplies pursuant to the 4-Party Agreement*
Housing and Urban Development (HUD)	*Funding for the potable water portion of the project*
California Department of Water Resources (DWR) and SDCWA	*Funding for the recycled water portion of the project through Proposition 1 grant funding*
San Diego Regional Water Quality Control Board	*Notice of Intent for coverage under the Construction Stormwater General Permit (Order WQ 2022-0057-DWQ) for the portion of the pipeline off of the reservation*

3.0 CEQA EVALUATION

The Ramona Municipal Water District ("District") and Barona Band of Mission Indians ("Tribe") have entered into a Memorandum of Understanding ("MOU") for the purpose of establishing requirements and procedures for the preparation of a joint Environmental Assessment-Initial Study/Mitigated Negative Declaration ("EA-IS/MND) for the District's and the Tribe's proposed Ramona/Barona Tribe Potable and Recycled Water Infrastructure Project ("Project"). This FONSI/MND has been prepared to satisfy the requirements of the National Environmental Policy Act ("NEPA") due to federal funding described in Section 1.3 of this document, and the California Environmental Quality Act ("CEQA") as well as any applicable implementing state and federal regulations and guidelines.

3.1 DETERMINING SIGNIFICANCE UNDER CEQA

The level of significance identifies the degree or severity of an impact with implementation of the Project. Impacts are classified as potentially significant impact, less than significant impacts with mitigation incorporated, less than significant impact, or no impact. Project impacts are the potential environmental changes to the existing physical conditions that may occur if the Project is implemented.

Major sources used in crafting significance criteria include the CEQA Guidelines; County, state, federal, or other standards applicable to an impact category; and officially established significance thresholds. Unless otherwise noted below, the District utilizes the CEQA significance thresholds in Appendix G of the CEQA Guidelines, which are set forth for each environmental factor outlined below. Pursuant to CEQA Guidelines Section 15064(b), "An ironclad definition of significant effect is not possible because the significance of any activity may vary with the setting." Principally, as stated in CEQA Guidelines Section 15382, "a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the Project, including land, air, water, flora, fauna, ambient noise, and objects of historic and aesthetic significance" constitutes a significant impact.

Evidence, based on factual and scientific data, is presented to show the cause-and-effect relationship between the Project and the potential changes in the environment. The exact magnitude, duration, extent, frequency, range, or other parameters of a potential impact are ascertained, to the extent possible, to determine whether impacts may be significant when compared to the presented criteria. The discussion considers all potential direct and reasonably foreseeable indirect, construction-related (short-term), and operational and maintenance (long-term) effects. Each section also addresses cumulative impacts (described further below) and identifies any significant and unavoidable impacts.[8]

[8] Association of Environmental Professionals, CEQA Guidelines 2024

3.2 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact requiring mitigation to be reduced to a level that is less than significant as indicated in the checklist on the following pages.

☐	Aesthetics	☐	Agricultural / Forest Resources	☐	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Energy
☐	Geology / Soils	☐	Greenhouse Gas Emissions	☐	Hazards / Hazardous Materials
☐	Hydrology / Water Quality	☐	Land Use / Planning	☐	Mineral Resources
☒	Noise	☐	Population / Housing	☐	Public Services
☐	Recreation	☒	Transportation	☒	Tribal Cultural Resources
☐	Utilities / Service Systems	☐	Wildfire	☐	Mandatory Findings of Significance

3.3 LEAD AGENCY DETERMINATION

On the basis of this initial evaluation, the following finding is made:

	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature Date

_____ _____

Signature Date

3.4 CEQA ENVIRONMENTAL CHECKLIST

Note that although the on-reservation portion of the proposed Project is not subject to CEQA, analysis of the whole of the Project, including on-reservation portions was considered for full public disclosure. Therefore, responses to each resource impact analysis are given for the entirety of the Project.

I. AESTHETICS

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
Except as provided in Public Resources Code Section 21099, would the project:					
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d)	Create a new source of substantial light or glare, which will adversely affect day or nighttime views in the area?	☐	☐	☐	☒

SUBSTANTIATION: *(Check ☐ if project is located within the view-shed of any Scenic Route listed in the General Plan):*

San Diego County General Plan 2011 (last amended February 10, 2023)

Aesthetics refers to what is perceived as being visually pleasing or beautiful and is an inherently subjective issue. This analysis addresses definable thresholds of significance related to County policy, designated scenic resources, and known landmarks, to determine if the Project will cause significant negative aesthetic effects.

From the County of San Diego General Plan, the focus of the Conservation and Open Space Element is to direct future growth and development of the county with respect to conservation, management, and utilization of natural and cultural resources, protection and preservation of open space, and the provision of park and recreation resources.

Visual resources are one of nine specific resource groups that have specific goals and policies outlined in the General Plan Element. They are to emphasize the protection of scenic corridors and geographically extensive scenic viewsheds, and dark skies within the natural environment and the recognition and enhancement of community character within the built environment.

Urban land uses are focused in the western third of the county, while the eastern two-thirds are largely undeveloped with mountains and desert dominating the landscape. The natural features of these areas contribute to the quality of the existing visual characteristics perceived by the human eye. It is important to note that aesthetic value while focused on the open space and natural environment can include the built environment through architectural design, or historic structures, streetscapes and manufactured landscapes.

Highway corridors include land adjacent to and visible from the vehicular right of way. Scenic Highways pertain to a highway, freeway, road, or other right of way where considerable natural or otherwise scenic landscape can be seen. Scenic corridors can be classified as either State (eligible, or designated), or County (eligible or designated). According to the San Diego County General Plan there are two routes that have been designated State Scenic Highways in the County including State Route 78 through Anzo-Borrego Desert Park, and State Route 125 from State Route 94 in Spring Valley to Interstate 8 in La Mesa. County Scenic Highways are listed in *Table COS-1 County Scenic Highway System*, Chapter 5 of the San Diego County General Plan.

The San Diego County General Plan Conservation and Open Space Element addresses Astronomical Dark Skies in the county. The maintenance of dark skies in San Diego County is vital to the two world-class observatories that depend on them for astronomical research. The five criteria for a high-quality site include: (1) Elevation over 5,000 feet above sea level; (2) clear, cloud-free night sky; (3) proximity to the Pacific Ocean; (4) distance from urban areas; and (5) freedom from nearby sources of light, dust, and smoke. The Palomar and Mount Laguna Observatories both meet all of these criteria. The maintenance of dark skies in the county is vital to the operation and research being performed at these facilities.

As proposed, the Project will meet the following Goals and Policies in an effort to remain consistent with the San Diego County General Plan.

GOAL COS-11

Preservation of Scenic Resources. Preservation of scenic resources, including vistas of important natural and unique features, where visual impacts of development are minimized.

POLICIES

COS-11.1: Protection of Scenic Resources. Require the protection of scenic highways, corridors, regionally significant scenic vistas, and natural features, including prominent ridgelines, dominant landforms, reservoirs, and scenic landscapes.

COS-11.4: Collaboration with Agencies and Jurisdictions. Coordinate with adjacent federal and State agencies, local jurisdictions, and tribal governments to protect scenic resources and corridors that extend beyond the County's land use authority but are important to the welfare of County residents.

COS-11.5: Collaboration with Private and Public Agencies. Coordinate with the California Public Utilities Commission, power companies, and other public agencies to avoid siting energy

generation, transmission facilities, and other public improvements in locations that impact visually sensitive areas, whenever feasible. Require the design of public improvements within visually sensitive areas to blend into the landscape.

COS-11.7: Underground Utilities. Require new development to place utilities underground and encourage "undergrounding" in existing development to maintain viewsheds, reduce hazards associated with hanging lines and utility poles, and to keep pace with current and future technologies.

GOAL COS-13

Dark Skies. Preserve dark skies that contribute to rural character and are necessary for the local observatories.

POLICIES

COS-13.1: Restrict Light and Glare. Restrict outdoor light and glare from development projects in Semi-Rural and Rural Lands and designated rural communities to retain the quality of night skies by minimizing light pollution.

COS-13.3: Collaboration to Retain Night Skies. Coordinate with adjacent federal and State agencies, local jurisdictions, and tribal governments to retain the quality of night skies by minimizing light pollution.

The off-Reservation portion of the Project includes an 8-inch 3,000 LF recycled water pipeline commencing at the San Vicente Wastewater Reclamation Plant, within the San Vicente Road right of way, and a 12-inch 2,100 LF potable water pipeline, within the Wildcat Canyon Road right of way, from San Vicente Road in a southeast direction to the Reservation boundary.

The on-Reservation portion for both pipelines will continue along the alignment of Wildcat Canyon Road, for approximately 0.35 miles before shifting eastward and moving off the road outside of the County right-of-way. The pipes continue to share an alignment until the recycled water line connects to the existing Golf Course Line approximately 1200 feet southeast of the Giant San Diego Paintball Park while the potable line continues overland approximately 20,200 feet until it joins the existing domestic water distribution system.

Impact Discussion:

a) ***Off-Reservation***

Less than Significant Impact. As a proposed underground water pipeline, implementation of the Project on County land will not have a permanent impact on a scenic vista. Construction equipment would be visible temporarily as the Project is being implemented. Less than significant impact can be expected.

On-Reservation

Less than Significant Impact. As a proposed underground water pipeline, implementation of the Project on Reservation land will not have a permanent impact on a scenic vista. The proposed flow meter station located within the Reservation boundary is relatively small at 11'11" x 25'10" feet surrounded by a 6' fence and a Booster Pump Station approximately 34'1" x 37'4" and about 12' in height with an attached secondary

structure at 12’0” x 17’4”. Construction equipment would be visible temporarily as the Project is being implemented. Less than significant impact can be expected.

b) ***Off-Reservation***

No Impact. The 8-inch recycled water underground pipeline construction will begin at the San Vicente Wastewater Reclamation Plant, an existing District pump station located just northeast of the intersection of Vicente Meadows Road and San Vicente Road run westward to the intersection of San Vicente Road and Wildcat Canyon Road before turning and continuing within the Wildcat Canyon right of way in a southeast direction to the Reservation boundary. Approximately 3000 LF of recycled water pipeline and 2100 LF of potable water pipeline will be constructed off-Reservation in Wildcat Canyon Road. The pipeline will continue After crossing the Reservation boundary, the proposed recycled and potable water pipelines will run within the Wildcat Canyon Road right-of-way for approximately 0.35 miles before shifting eastward and moving off the road outside of the County right-of-way. The pipelines continue to share an alignment until the recycled water line connects to the existing Golf Course Line approximately 1200 feet southeast of the Giant San Diego Paintball Park while the potable line continues overland approximately 20,200 feet until it joins the existing domestic water distribution system. The temporary construction within the existing right of way will not substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway. According to the San Diego County General Plan there are two routes that have been designated State Scenic Highways in the County including State Route 78 through Anzo-Borrego Desert Park approximately 15 miles northeast of the Project site, and State Route 125 from State Route 94 in Spring Valley to Interstate 8 in La Mesa approximately 10.6 miles southwest of the Project site. County Scenic Highways are listed in *Table COS-1 County Scenic Highway System*, Chapter 5 of the General Plan. No impact is expected.

On-Reservation

No Impact. As with the off-Reservation temporary construction, temporary construction of the on-Reservation portion of the Project will not substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway. According to the San Diego County General Plan there are two routes that have been designated State Scenic Highways in the County including State Route 78 through Anzo-Borrego Desert Park approximately 15 miles northeast of the Project site, and State Route 125 from State Route 94 in Spring Valley to Interstate 8 in La Mesa approximately 10.6 miles southwest of the Project site.

c) ***Off-Reservation***

No Impact. As proposed, the underground water pipeline implementation of the Project on off Reservation land will not substantially degrade the existing visual character or quality of public views of the site and its surroundings. No impact is expected.

On-Reservation

No Impact. As proposed, the on-Reservation components of the underground water pipeline will not substantially degrade the existing visual character or quality of public views of the site and its surroundings. No impact is expected.

d) ***Off-Reservation***

No Impact. The proposed underground water pipeline on County land will not create a new source of substantial light or glare, which will adversely affect day or nighttime views in the area. No impact is expected.

On-Reservation

No Impact. As is the case on County land portions of the pipeline, the proposed underground water pipelines on-Reservation will not create a new source of substantial light or glare, which will adversely affect day or nighttime views in the area. No lighting will be installed at the metering structure. No impact is expected

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

II. AGRICULTURE AND FORESTRY RESOURCES

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

SUBSTANTIATION: *(Check ☐ if project is located in the Important Farmlands Overlay):*

San Diego County General Plan 2011 (last amended February 10, 2023); California Department of Conservation Farmland Mapping and Monitoring Program

The focus of the following discussion is related to the potential impacts to the conversion of farmland to non-agricultural uses, conflicts with Williamson Act contracts or existing zoning for agricultural use and other changes to the existing environment that could result in the conversion of farmland as set forth in Appendix G of the CEQA Guidelines.

Agricultural resources are one of nine specific resource groups that have specific goals and policies outlined in the Conservation and Open Space General Plan Element. They are to Minimize land use conflicts, preserve agricultural resources, and support the long-term presence and viability of the agricultural industry as an important component of the region's economy and open space linkage.

According to the Conservation and Open Space Element-Agricultural Resources unlike other jurisdictions across the nation, farming in San Diego County is dependent upon the region's unusual microclimates and often has very little relationship to the quality of the soils.

Much of San Diego County's climate supports a year-round growing season that facilitates successful small farms and crop diversification producing over 200 agricultural commodities including high value specialty crops, nursery products, and a variety of fruits. Only six percent of the San Diego region's soils are classified as prime agricultural soils. The small percentage of prime soils, the small farm size, and the high value of agriculture in the region highlight the uniqueness of farming in the County.

As a proposed water pipeline to be placed within an existing right of way, the Project will not conflict with any of the Goals and Policies outlined in the Conservation and Open Space Element-*Agricultural Resources* of the General Plan.

a) **Off-Reservation**

No Impact. No Farmland of Statewide Importance exists in the area of the off-Reservation portion of Wildcat Canyon Road where the pipeline is proposed to be placed. According to the California Farmland Mapping and Monitoring Program most of the land surrounding Wildcat Canyon Road and its intersection with San Vicente Road is categorized as Urban Built-up Land, Grazing Land, with a small portion of Farmland of Local Importance

As such, the water pipeline Project will not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. No impact is expected (see Figure 13 Important Farmland map).

On-Reservation

No Impact. No Farmland of Statewide Importance exists in the area of the on-Reservation portion of the Project where the pipeline is proposed to be placed. According to the California Farmland Mapping and Monitoring Program most of the land surrounding the Project area is categorized as Urban Built-up Land and Grazing Land.

As such, the Project will not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. No impact is expected (see Figure 13 Important Farmland map).

b) **Off-Reservation**

No Impact. The current zoning for the area surrounding the Proposed Project on off-Reservation land is A70, which is intended to create and preserve areas primarily for agricultural crop production. Additionally, a limited number of small farm animals may be kept, and agricultural products raised on the premises may be processed. Typically, the A70 use regulations would be applied to areas throughout the County to protect moderate to high quality agricultural land. The Project would not conflict with the current zoning as the Project is proposed to lay underground within an existing right of way thus not removing any opportunity for agricultural use on the surrounding parcels. The Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. There will be no impact.

On-Reservation

No Impact. The Project would not conflict with the current land uses on Reservation land as the Project is proposed to lay underground within an existing right of way thus not removing any opportunity for agricultural use on the surrounding parcels. The Project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. There will be no impact.

c) **Off-Reservation**

No Impact. The Project would not cause a rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). No impact is expected.

On-Reservation

No Impact. The Project would not cause a rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). No impact is expected.

d) **Off-Reservation**

No Impact. The Project will not result in the loss of forest land or conversion of forest land to non-forest use because it involves underground pipelines. No impact is expected.

On-Reservation

No Impact. The Project will not result in the loss of forest land or conversion of forest land to non-forest use because it involves underground pipelines. No impact is expected.

e) **Off-Reservation**

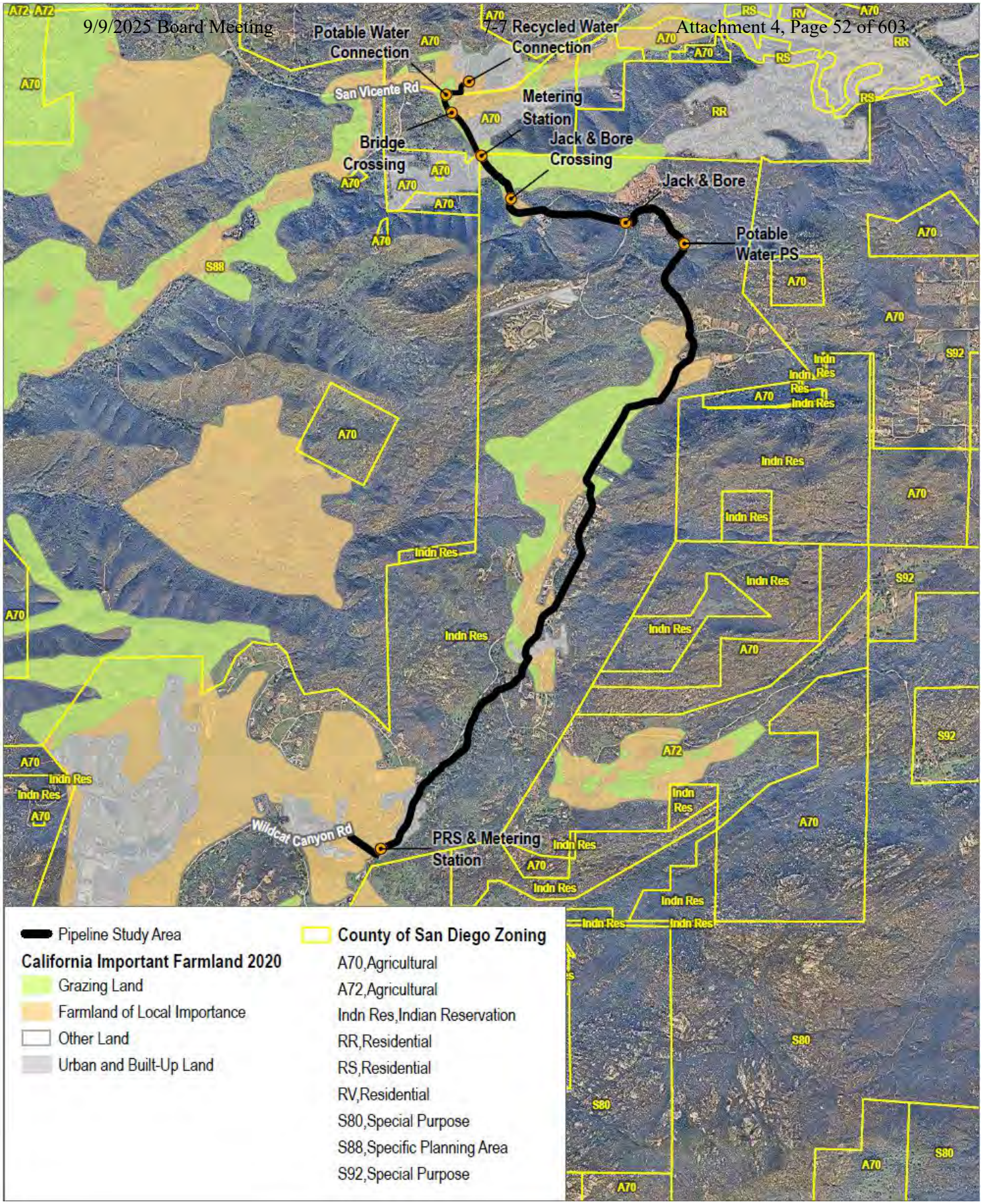
No Impact. As proposed, the Project will be constructed underground within an existing right of way and will not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. There will be no impact.

On-Reservation

No Impact. As proposed, the Project will be constructed underground within an existing right of way and will not involve other changes in the existing environment which, due

to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. There will be no impact.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.



IMPORTANT FARMLANDS

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

LILBURN CORPORATION

FIGURE 13

III. AIR QUALITY

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Where available, the significance criteria established by the applicable air quality management district or air pollution control district might be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☐	☒
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d)	Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☒	☐

SUBSTANTIATION: *(Discuss conformity with the San Diego County Air Pollution Control District, if applicable):*

San Diego County General Plan 2011 (amended February 10, 2023); South Coast Air Quality Management District (SCAQMD); San Diego County Air Pollution Control District (SDAPCD)

The following regulatory framework applies to both the Off and On-Reservation portions of the proposed Project.

Regulatory Framework

USEPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for O_3, CO, NOx, SO_2, PM_{10}, $PM_{2.5}$, and lead. The USEPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The USEPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the California Air Resources Board (CARB). The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance. The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. Substantial reductions in emissions of ROG, NOx and CO are forecast to continue throughout the next

several decades. Unless new particulate control programs are implemented, PM_{10} and $PM_{2.5}$ are forecast to slightly increase.

The San Diego County Air Pollution Control District (SDAPCD) is the agency responsible for the administration and enforcement of air quality regulations in San Diego County. The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the San Diego Air Basin (SDAB). The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991 and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, 2009, and most recently 2022.

The San Diego APCD does not provide quantitative thresholds for determining the significance of construction or mobile source-related impacts. However, the San Diego APCD does specify Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources (APCD Rules 20.2 and 20.3).[9] If these incremental levels for stationary sources are exceeded, an AQIA must be performed for the proposed new or modified source. Although these trigger levels do not generally apply to mobile sources or general land development projects, for comparative purposes these levels may be used to evaluate the increased emissions which would be discharged to the San Diego Air Basin from proposed land development projects. For projects whose stationary-source emissions are below these criteria, no AQIA is typically required, and project level emissions are presumed to be less than significant.

Construction Emissions

SDAPCD Rule 20.2, New Source Review Non-Major Stationary Sources, has established Air Quality Impact Analysis (AQIA) Trigger Levels and the County has adopted the AQIA Trigger Levels as quantitative Screening Level Thresholds (SLTs) to determine whether there would be a significant impact to air quality for CEQA purposes. The SLTs are based on AQIA Trigger Levels which were identified under the NSR program. Air quality impacts related to the Proposed Project estimated in this environmental analysis (Table 3-1) would be considered significant if any of the applicable significance thresholds presented below, which are based on SDAPCD Trigger Levels, are exceeded during construction:[10]

- 100 pounds per day for PM_{10}
- 55 pounds per day for $PM_{2.5}$
- 250 pounds per day for NO_X
- 250 pounds per day for SO_X
- 550 pounds per day for CO
- 75 pounds a day for VOC

[9] Rule 20.2 - New Source Review (NSR)-Non-Major Stationary Sources (06/26/2019) (sdapcd.org)

[10] APCD Rules 20.2 and 20.3 do not have AQIA thresholds for emissions of volatile organic compounds (VOCs) and PM2.5. The use of the screening level for VOCs specified by the South Coast Air Quality Management District (SCAQMD), which generally has stricter emissions thresholds than San Diego's APCD, is recommended for evaluating projects in San Diego County.

Table III-1: CONSTRUCTION EMISSIONS (lbs/day)						
SOURCE	**ROG/VOC**	**NO_X**	**SO_X**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Excavator	0.47	2.02	0.01	4.07	0.08	0.08
Dump Truck	0.37	1.80	0.01	2.78	0.06	0.06
Water truck	0.37	1.80	0.01	2.78	0.06	0.06
Loader	0.47	2.50	0.01	3.46	0.11	0.11
Snooper Truck	0.37	1.80	0.00	2.78	0.06	0.06
Misc. Construction Equipment	0.74	3.59	0.02	5.56	0.13	0.13
Totals (lbs/day)	2.78	13.50	0.06	21.44	0.51	0.51
Screening Threshold	75	250	250	550	100	55
Significant	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Sources: Rule 20.2 - New Source Review (NSR)-Non-Major Stationary Sources (06/26/2019) (sdapcd.org)

Operational Emissions

As an underground water pipeline, operational emissions are considered to be negligible if at all and thus not evaluated further. An emergency generator is proposed for installation at the Tribe's existing Well 30 on the reservation. This generator is not subject to CEQA[11] or SDAPCD regulations; however, may be subject to federal Clean Air Act requirements.

The following addresses all thresholds related to air quality as set forth in Appendix G of the CEQA Guidelines.

a) ***Off-Reservation***

No Impact. The Project would result in construction emissions and negligible operational emissions limited to maintenance vehicle trips. Construction of the off-Reservation portions of the Proposed Project would require earthmoving, and other activities such as removal of vegetation. The Project's construction activities' emissions are considered short-term, temporary emissions. Construction would be required to comply with dust and odor rules established by the SDAPCD. Based on the results of the analysis for air quality and review of the appropriate air quality plans and resources it is determined that the Project would not exceed thresholds for temporary construction emissions and would not conflict with or obstruct implementation of the applicable air quality plan. No impact is expected.

On-Reservation

No Impact. Impacts resulting from construction of the on-Reservation portions of the Proposed Project would be the same as for the on-Reservation construction portions of the Project. Temporary construction emissions would not conflict with or obstruct implementation of any applicable air quality plan. No impact is expected.

b) ***Off-Reservation***

No Impact. The proposed recycled and potable water pipelines on County land would provide and upgrade water service (potable as well as recycled) to the Barona Tribal Reservation from the District. The majority of the pipelines will be on Reservation land and serve the residents of that community. Based on the results of the CalEEMod 2022 air

[11] Although the on-reservation portion of the Project is not subject to CEQA, analysis of the whole of the project, including the on-reservation portion for full public disclosure is provided.

quality analysis and nature, size and location of the proposed pipelines the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard.

On-Reservation

No Impact. The majority of the pipelines will be on Reservation land and serve the residents of that community. Based on the results of the CalEEMod 2022 air quality analysis and nature, size and location of the proposed pipelines the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard.

c) ***Off-Reservation***

Less than Significant Impact. Sensitive receptors in the Project area off-Reservation are mainly single-family residences. Based on this analysis and underground water pipeline as proposed, construction impacts to air quality would be temporary in nature and would not continue during operation of the pipelines. Long term exposure to sensitive receptors to substantial pollutant concentrations would result in a less than significant impact.

On-Reservation

Less than Significant Impact. Sensitive receptors in the Project area on-Reservation are mainly single-family residences, with small businesses, and tribal community facilities towards the southern end of the Reservation. Based on this analysis and underground water pipeline as proposed, construction impacts to air quality would be temporary in nature and would not continue during operation of the pipelines. Long term exposure to sensitive receptors to substantial pollutant concentrations would result in a less than significant impact.

d) ***Off-Reservation***

Less than Significant Impact. Construction impacts to the environment resulting from the off-Reservation portions of the Project would be temporary in nature and would consist of trenching, digging and installing sections of the pipelines. Odors may result from exhaust from trucks entering and exiting the areas where construction activities are occurring, which would be temporary. It can be determined that the Project would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people) and impacts would be less than significant.

On-Reservation

Less than Significant Impact. As with the off-Reservation portions of the proposed pipeline, construction impacts resulting from the construction of the on-Reservation portions of the Project would be temporary in nature and would consist of trenching, digging and installing sections of the pipelines. Odors may result from exhaust from trucks entering and exiting the areas where construction activities are occurring, which would be temporary. It can be determined that the Project would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people) and impacts would be less than significant.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

IV. BIOLOGICAL RESOURCES

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project:				
a)	Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☒	☐
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?	☐	☐	☒	☐

SUBSTANTIATION: *(Check if project is located in the Biological Resources Overlay or contains habitat for any species listed in the California Natural Diversity Database ☐):*

San Diego County General Plan, 2011 (last amended February 10, 2023); Biological Report, April 5, 2024, rev. February 26, 2025, Alden Environmental, Inc. (Appendix B)

The County portion of the Project is within the boundaries of the County's Multiple Species Conservation Program (MSCP) Subarea Plan. San Vicente Road is the dividing line between the San Diego County Subarea and the North San Diego County Subarea. The Project would source water from the Ramona Municipal Water District and is needed because recent estimates of the Tribe's long-term water demand are projected to exceed the sustainable yield of the underlying groundwater basin.[12]

Thresholds used to evaluate potential biological resources impacts are based on applicable criteria in Appendix G of the CEQA Guidelines.

Regulatory Context

Throughout the Study Area, federal regulations are applicable. State and County regulations apply/may apply to the portion of the Study Area on County land and are not anticipated to be applicable on Reservation land. However, although the on-reservation portion of the proposed Project is not subject to CEQA, analysis of the whole of the Project to include on-reservation portions was considered for full public disclosure. Therefore, responses to each resource impact analysis are given for the entirety of the Project.

Federal Regulations

National Environmental Policy Act

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970 and requires federal agencies to assess the environmental effects of their proposed federal actions (projects, permits, authorizations, etc.). NEPA incorporates a systematic interdisciplinary approach to identify potential environmental effects of a federal action. This results in a detailed report which may be an Environmental Impact Statement (EIS) or an Environmental Assessment (EA). The level of analysis and type of report to be prepared is determined by the federal lead responsible agency.

Federal Endangered Species Act

Administered by the USFWS, the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a 'take' under the ESA. Section 9(a) of the ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." 'Harm' and 'harass' are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

The USFWS identifies critical habitat for endangered and threatened species. Critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The goal is to restore healthy populations of listed species within their native habitat so they can be removed from the list of threatened or endangered species. Once an area is

[12] Preliminary Design Report, *Long-Term Potable and Recycled Water Service to Barona Indian Reservation*, Dudek, June 2022

designated as critical habitat pursuant to the federal ESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat. There is no critical habitat designated in the Study Area.

Sections 7 and 10(a) of the federal ESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In this case, take can be authorized via a letter of biological opinion issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species' use of the site and impacts to U.S. Army Corps of Engineers (Corps) jurisdictional areas. Section 10(a) allows issuance of permits for incidental take of endangered or threatened species with preparation of a Habitat Conservation Plan (HCP). The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA; 16 U.S. Code Sections 703-711) includes provisions for protection of migratory birds, including the non-permitted take of migratory birds. The MBTA regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 Code of Federal Regulations Section 10.13. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many others (including those that are not sensitive). Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a "take." The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country and is enforced in the United States by the USFWS. In 1962 it was updated to address how Native American tribes can collect feathers from protected birds for religious ceremonies (a practice otherwise banned by the MBTA). As a general/standard condition, the project must comply with the MBTA.

Bald and Golden Eagle Protection Act

In 1782, Continental Congress adopted the bald eagle (Haliaeetus leucocephalus) as a national symbol. During the next 150 years, the bald eagle was heavily hunted by sportsmen, taxidermists, fisherman, and farmers. To prevent the species from becoming extinct, Congress passed the Bald Eagle Protection Act in 1940. The Act was extremely comprehensive, prohibiting the take, possession, sale, purchase, barter, or offer to sell, purchase, or barter, export or import of the bald eagle "at any time or in any manner." In 1962, Congress amended the Bald Eagle Act to cover golden eagles.

Rivers and Harbors Act and Clean Water Act

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act (CWA). The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all Waters of the U.S. (WUS). Permitting for

projects filling WUS (including wetlands) is overseen by the Corps under Section 404 of the CWA. Projects could be permitted on an individual basis or be covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc. and typically require substantial time (often longer than 6 months) to review and approve, while Nationwide Permits are pre-approved if a project meets appropriate conditions.

State of California

California Environmental Quality Act

Primary environmental legislation in California is found in CEQA and its implementing guidelines (State CEQA Guidelines), which require that projects with potential adverse effects (or impacts) on the environment undergo environmental review. Adverse environmental impacts are typically mitigated because of the environmental review process in accordance with existing laws and regulations.

California Endangered Species Act

The California ESA is like the federal ESA in that it contains a process for listing of species and regulating potential impacts to listed species. California ESA Section 2081 authorizes the CDFW to enter into a memorandum of agreement for the take of listed species for scientific, educational, or management purposes.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in listed plants. The California ESA follows the NPPA and covers both plants and animals designated as endangered or threatened with extinction. Plants listed as rare under NPPA were also designated rare under the California ESA.

California Fish and Game Code

California Fish and Game Code Sections 1600 through 1603 require a CDFW agreement for projects affecting riparian and wetland habitats through issuance of a Lake and Streambed Alteration Agreement (LSA).

Pursuant to California Fish and Game Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors and owls and their active nests are protected by California Fish and Game Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1970 grants the State Water Resource Control Board (SWRCB) and its regional offices (RWQCBs) power to protect water quality and is the primary vehicle for implementation of the State's responsibilities under Section 401 of the CWA. The Porter-Cologne Act grants the SWRCB authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal

sites, and require cleanup of discharges of hazardous materials and other pollutants. Typically, the SWRCB and RWQCB act in concert with the Corps under Section 401 of the federal CWA in relation to permitting fill of federal jurisdictional waters.

California Natural Communities Conservation Planning Act

The California Natural Communities Conservation Planning (NCCP) Act of 1991 (Section 2835) allows the CDFW to authorize interim take of species covered by plans in agreement with NCCP guidelines. A Natural Communities Conservation Program initiated by the State of California focuses on conserving coastal sage scrub, and in concert with the USFWS and the federal ESA, is intended to avoid the need for future federal and State listing of coastal sage scrub-dependent species. The County of San Diego became a participant in the NCCP in 1993 for projects located within the planning area for the Coastal Sage Scrub NCCP with the intent to "…provide for regional protection and perpetuation of natural wildlife diversity while allowing compatible land use and appropriate development and growth." The NCCP process guidelines were established as interim guidelines until formal subregional plans were approved. The South San Diego County MSCP Subarea Plan was approved in 1997. The North San Diego County MSCP Subarea Plan has not yet been adopted. Until adoption, an NCCP 4(d) take permit (Habitat Loss Permit [HLP]; see below) would be required to demonstrate compliance with the NCCP Act within the North San Diego County subarea boundaries.

County of San Diego

Habitat Loss Permit Ordinance (HLP)

The HLP Ordinance was adopted in March of 1994 in response to both the listing of the coastal California gnatcatcher as a federal threatened species and the adoption of the NCCP Act by the State. Pursuant to the Special 4(d) Rule under the federal ESA, the County is authorized to issue "take permits" for the coastal California gnatcatcher (in the form of HLPs) in lieu of Section 7 or 10(a) permits typically required from the USFWS. Although issued by the County, the USFWS and CDFW must concur with the issuance of an HLP for it to become valid as take authorization under the federal ESA.

The HLP Ordinance states that projects must obtain an HLP prior to the issuance of a grading permit, clearing permit, or improvement plan if the project would directly or indirectly impact any of several coastal sage scrub habitat types. The HLP Ordinance requires an HLP if coastal sage scrub or related habitat will be impacted, regardless of whether it is currently occupied by the coastal California gnatcatcher. An HLP is not required, for projects within the boundaries of the MSCP that have an adopted subarea plan (for the Study Area, that is the land within the boundaries of the South County Subarea) however, where the Subarea Plan is still in draft form, an HLP may be required as the County does not have take authorization for the coastal California gnatcatcher that coastal sage scrub is known to support. For the project, this would be for impacts to Diegan coastal sage scrub occurring east of Wildcat Canyon Road not on Reservation land. Based on Attachment G of the County's Protocols for Projects Requiring Habitat Loss Permits, however, the project is exempt from the HLP requirement because it is a utility facility project.

There are areas where coastal sage scrub could be impacted by pipeline trenching on Reservation land (approximately 4,600 feet in areas where the pipeline alignment is not a road right-of-way), but the HLP Ordinance does not apply to Reservation land.

HLPs are not required for projects that have separately obtained Section 7 or 10(a) permits for take of the coastal California gnatcatcher. The gnatcatcher was not found during the protocol presence/absence survey for the species in the Study Area in 2023.

Specific to coastal sage scrub, all projects that occur in low value habitat and projects in medium value habitat outside of identified preserve planning areas, cause the loss of less than 2 acres of coastal sage scrub habitat that is not occupied by California gnatcatcathers, and would not otherwise preclude design of the reserve system are exempt from the Federal and State interim habitat loss (special 4 (d) rule) approval process. Mitigation for these projects will conform with all other underlying resource protection requirements. All losses of coastal sage scrub must still be reported by the jurisdictions to the subregional accounting entity and counted toward the subarea/subregional 5 percent loss allocation

Resource Protection Ordinance

The County regulates natural resources (among other resources) as sensitive biological resources via the RPO (County 2012), the regulations of which cover wetlands, wetland buffers, sensitive plant and animal species, sensitive vegetation communities/habitat types, and habitats containing sensitive animals or plants.

Sensitive Habitat Lands are defined by the RPO as:

- Land which supports unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the State CEQA Guidelines (14 Cal. Admin. Code Section 15000 et seq.), including the area which is necessary to support a viable population of any of the above species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor.

  "Unique vegetation community" refers to associations of plant species which are rare or substantially depleted. These may contain rare or endangered species, but other species may be included because they are unusual or limited due to a number of factors, for example: (a) they are only found in the San Diego region; (b) they are a local representative of a species or association of species not generally found in San Diego County; or (c) they are outstanding examples of the community type as identified by the CDFW listing of community associations.

Biological Mitigation Ordinance

The Biological Mitigation Ordinance (BMO; County 2010) is the ordinance by which the County implements the South County MSCP Subarea Plan at the project level. The BMO contains design criteria and mitigation standards that, when applied to projects requiring discretionary permits, protect habitats and species and ensure that a project does not preclude the viability of the MSCP Preserve System.

The first part of the BMO explains how mitigation for impacts is determined. The habitat and vegetation community must first be identified at the impact site and at the area proposed for mitigation. The second part sets out specific mitigation requirements for impacts to certain species. Protecting these sensitive species is required in to gain coverage of the species under the MSCP. Depending on the sensitivity of the individual species, their avoidance or mitigation

is also necessary to comply with the California Environmental Quality Act. The two parts work together and are to be applied at the same time.

A BMO for the North San Diego County MSCP Subarea Plan has not yet been adopted but would be the ordinance by which the County implements the North County Subarea Plan at the project level.

Listed/Sensitive Plant Species

Fifteen sensitive plant species (listed below) were reported within two miles of the constraints Study Area as listed below. The only federal-listed species is San Diego thorn-mint

- (*Acanthomintha ilicifolia*)
- Engelmann oak (*Quercus engelmannii*)
- Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*)
- Gander's ragwort (*Packera ganderi*)
- Lakeside ceanothus (*Ceanothus cyaneus*)
- Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)
- Mission Canyon bluecup (*Githopsis diffusa* ssp. *filicaulis*)
- Moreno currant (*Ribes canthariforme*)
- Orcutt's brodiaea (*Brodiaea orcuttii*)
- Parry's tetracoccus (*Tetracoccus dioicus*)
- Ramona horkelia (*Horkelia truncata*)
- San Diego milk-vetch (*Astragalus oocarpus*)
- San Diego sagewort (*Artemisia palmeri*)
- San Diego thorn-mint (*Acanthomintha ilicifolia*)
- San Miguel savory (*Clinopodium chandleri*)
- Yucaipa onion (*Allium marvinii*)

The only federal-listed species, San Diego thorn-mint, is not expected to occur within the Study Area on County land or Reservation land due to a lack of clay soils with which this species is associated.

Sensitive Plant Species with Potential to Occur

Based on the vegetation mapped and the Web Soil Survey results (that show no clay soils in the Study Area), it was determined that four sensitive plant species have potential to occur in the Study Area on County land:

- Engelmann Oak (*Quercus engelmannii*): Thirty-three Engelmann oaks were observed in the Study Area
- Parry's Tetracoccus (*Tetracoccus dioicus*): Parry's tetracoccus is a perennial shrub that likely would have been observed on County land if it were present. It was observed throughout a hillside in the Study Area on Reservation land in chaparral
- San Diego Sagewort (*Artemisia palmeri*): Was not observed, but suitable habitat is present for the species.

- San Miguel Savory (*Clinopodium chandleri*): Was not observed, but suitable habitat is present for the species.

Listed/Sensitive Animal Species

Twenty-seven sensitive animal species (listed below), four of which are federal listed (i.e., Quino checkerspot butterfly [*Euphydryas editha quino*], arroyo toad [*Anaxyrus californicus*], coastal California gnatcatcher, and least Bell's vireo [*Vireo bellii pusillus*]) were reported within two miles of the Study Area, or were observed there, as listed below. Based on the vegetation (habitats) mapped, there is some potential for all 27 of the listed/sensitive animal species to occur on County land in the Study Area.

Invertebrates

- Crotch bumble bee (*Bombus crotchii*): While not reported within two miles of the Study Area, the Crotch bumble bee (*Bombus crotchii*) is also being addressed because it was recently designated as a candidate for State listing as endangered and potential habitat is present.
- Quino checkerspot butterfly (*Euphydryas editha quino*): There is suitable habitat for this species in the project vicinity; however, the habitat within the proposed pipeline alignment is generally unsuitable and focused surveys for the species are not recommended.

Amphibians

- Arroyo toad (*Anaxyrus californicus*): Suitable habitat for this species occurs within San Vicente Creek in the County portion of the alignment; however, impacts to the creek at this location are not anticipated. There also is USFWS designated Critical Habitat for this species in San Vicente Creek. The creeks/streams within the Reservation Land are generally unsuitable for this species and it is not anticipated to occur within the pipeline alignment.
- Western spadefoot (*Spea hammondii*): The federal-proposed threatened western spadefoot, listed below, was also reported within two miles.

Reptiles

- California glossy snake (*Arizona elegans occidentalis*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint.
- Coast horned lizard (*Phrynosoma blainvillii*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint. It also is unlikely to occur within the project footprint in the County portion of the alignment as the habitat is disturbed and heavily fragmented.
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint. It also is unlikely to occur

within the project footprint in the County portion of the alignment as the habitat is disturbed and heavily fragmented.

- Coastal whiptail (*Aspidoscelis tigris stejnegeri*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint. It also is unlikely to occur within the project footprint in the County portion of the alignment as the habitat is disturbed and heavily fragmented.
- Coronado skink (*Plestiodon* [*Eumeces*] *skiltonianus*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint. It also is unlikely to occur within the project footprint in the County portion of the alignment as the habitat is disturbed and heavily fragmented.
- Orange-throated whiptail (*Aspidoscelis hyperythra*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint.
- Red-diamond rattlesnake (*Crotalus ruber*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint.
- Rosy boa (*Lichanura orcuttii* [*Charina trivirgata roseofusca*]): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint.
- San Diego banded gecko (*Coleonyx variegatus abbottii*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint.
- Two-striped garter snake (*Thamnophis hammondii*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint. There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint. It also is unlikely to occur within the project footprint in the County portion of the alignment as the habitat is disturbed and heavily fragmented.

Birds

- Barn owl (*Tyto alba*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint. In addition, coast live oak woodland and riparian forest within the County portion of the alignment provides potential habitat for this species.
- Coastal California gnatcatcher (*Polioptila californica californica*): The coastal California gnatcatcher was not found during the protocol presence/absence survey for the species conducted in 2023 (see Appendix B for the Gnatcatcher Survey Report). Furthermore, this species is not anticipated to occur along the alignment as it is at the extent of the species geographic and elevation range.

- Cooper's hawk (*Accipiter cooperii*): The Cooper's hawk was observed east of Wildcat Canyon Road southwest of its intersection with San Vicente Oaks Road. Its habitats also occur on County land in the Study Area; however, as it is not a federal listed species its presence on Reservation land would not be a constraint. In addition, coast live oak woodland and riparian forest within the County portion of the alignment provides potential habitat for this species.
- Golden eagle (*Aquila chrysaetos*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint under the Federal ESA. Additionally, this is not anticipated to occur within or adjacent to the pipeline alignment which would occur far from potential suitable nesting areas for the species, should it occur.
- Grasshopper sparrow (*Ammodramus savannarum*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint.
- Least Bell's vireo (*Vireo bellii pusillus*): There is suitable habitat for this species located at the northernmost extent of the project alignment, within riparian forest habitat in San Vicente Creek. No direct impacts to the San Vicente Creek are anticipated; however, construction activities could have an indirect impact to this species during the nesting season, should it be present. Pre-construction surveys and avoidance measures may be required to help ensure project construction does not impact this species in the County portion of the alignment. Suitable habitat does not occur within or adjacent to the pipeline alignment on Reservation land.
- Red-shouldered hawk (*Buteo lineatus*): The red-shouldered hawk was observed in coast live oak woodland on Reservation land. In addition, coast live oak woodland and riparian forest within the County portion of the alignment provides potential habitat for this species.
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*): The rufous-crowned sparrow was observed in Diegan coastal sage scrub-disturbed in the northern portion of the Reservation land. In addition, coast live oak woodland and riparian forest within the County portion of the alignment provides potential habitat for this species.
- Turkey vulture (*Cathartes aura*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint.
- Western bluebird (*Sialia mexicana*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint. In addition, coast live oak woodland and riparian forest within the County portion of the alignment provides potential habitat for this species.

Mammals

- American badger (*Taxidea taxus*): There is suitable habitat for this species within Reservation land; however, as it is not a federal listed species its presence on Reservation land would not be a constraint.
- Mule deer (*Odocoileus hemionus*): This species is known to occur within Reservation land and adjacent County lands; however, as it is not a federal listed species its presence on Reservation land would not be a constraint.
- San Diego desert woodrat (*Neotoma lepida intermedia*): This species is known to occur within Reservation land and adjacent County lands; however, as it is not a federal listed species its presence on Reservation land would not be a constraint.

Vegetation Mapping

Fourteen vegetation communities and developed land were mapped in the Study Area and within the proposed pipeline alignment. Seven communities and developed were mapped on County land. Thirteen communities and developed were mapped on Reservation land (See Table IV-1).

A description of each community and developed land is provided below:

Riparian Forest

Riparian forest (or southern riparian forest) is found along streams and rivers. Characteristic plant species in the community include western sycamore (*Platanus racemosa*), cottonwood (*Populus* spp.), and other wetland species.

Coast Live Oak Woodland

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*). The shrub layer is poorly developed but may include toyon (*Heteromeles arbutifolia*), currants (Ribes spp.), laurel sumac (*Malosma laurina*), or elderberry (*Sambucus exicana*). The herb component is continuous and dominated by common ripgut (*Bromus diandrus*) and several other introduced taxa. It typically occurs on north-facing slopes and in shaded ravines in the south and more exposed sites in the north.

Chamise Chaparral

A one- to three-meter-tall chaparral dominated by chamise (*Adenostoma fasciculatum*). Associated species contribute little cover. Characteristic associated plants include Arctostaphylos species, Ceanothus species, among others. Chamise chaparral is the dominant chaparral type in San Diego County.

Southern Mixed Chaparral

Southern mixed chaparral is a community of broad-leaved shrubs that, in San Diego County, is dominated by lilacs, particularly Ramona lilac (*Ceanothus tomentosus* var. *olivaceus*) and occurs on dry, rocky, often steep slopes that typically face north. Southern mixed chaparral-disturbed can be described as a community that has been altered by activity that reduces the cover of native shrubs and allows for a notable cover of bare ground and/or non-native plant species.

Diegan Coastal Sage Scrub

Diegan coastal sage scrub is comprised of low, soft-wood subshrubs dominated by species such as coastal sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac, black sage (*Salvia mellifera*), and white sage (*Salvia apiana*). It typically grows on sites with low moisture and is the most wide-spread coastal sage scrub in coastal southern California. Diegan coastal sage scrub-disturbed can be described as a community that has been altered by activity that reduces the cover of native shrubs and allows for a notable cover of bare ground and/or non-native plant species.

Buckwheat Scrub

Buckwheat scrub is comprised of a near monoculture of California buckwheat (*Eriogonum fasiculatum*) often associated with deerweed (*Acmispon glaber*). It often occurs in areas that have been disturbed in coastal and foothill areas of the County. Buckwheat scrub-disturbed can be described as a community that has been altered by activity that has further reduced the cover of the native shrubs and allows for a notable cover of bare ground and/or non-native plant species.

Coastal Sage-Chaparral Scrub

Coastal sage-chaparral scrub (or coastal sage-chaparral transition) is a vegetation type between coastal scrubs and chaparrals; it may be a post-fire community. It is comprised of a mix of woody chaparral and drought-deciduous sage scrub plant species such as chamise, Ceanothus species, coastal sagebrush, black sage, and lemonadeberry *(Rhus integrifolia*). Coastal sage-chaparral scrub-disturbed can be described as a community that has been altered such that the cover of native shrubs has been reduced allowing for a notable cover of bare ground and/or non-native plant species.

Non-native Grassland

Non-native grassland is comprised of at least 50 percent cover of non-native, annual grass species that may be associated with native, annual forbs (wildflowers). In San Diego County, the presence of oats (*Avena* spp.), bromes (*Bromus* spp.), filaree (*Erodium* spp.), and mustard (*Brassica* spp.) are common indicators of this community.

Disturbed Habitat

Disturbed habitat includes areas that have been physically disturbed by human activity and no longer support native or naturalized vegetation. Typically, if vegetation is present, it is almost exclusively composed of non-native plant species that take advantage of disturbance. Examples of disturbed habitat include areas that have been graded, repeatedly cleared for fuel management purposes, and/or that have experienced repeated use that prevents the growth of native habitat (e.g., parking on vegetation, creating/using trails).

Ornamental

Ornamental describes areas that have been planted with ornamental (usually non-native) plant species and are typically associated with current or past development (see Developed below). The plantings may or may not be maintained.

Table IV-1 VEGETATION COMMUNITIES MAPPED IN THE STUDY AREA		
Vegetation Community	**Study Area Acreage on County Land**	**Study Area Acreage on Reservation Land**
Riparian forest	0.90	--
Coast live oak woodland	0.71	16.87
Diegan coastal sage scrub	0.05	13.09
Diegan coastal sage scrub-disturbed	2.73	6.91
Buckwheat scrub	--	0.72
Buckwheat scrub-disturbed	--	0.33
Coastal sage-chaparral scrub	--	8.60
Coastal sage-chaparral scrub-disturbed	--	0.55
Chamise chaparral	--	5.18
Southern mixed chaparral	--	17.30
Southern mixed chaparral-disturbed	--	2.94
Non-native grassland	1.67	19.79
Disturbed habitat	4.23	29.80
Ornamental	0.13	0.01
Developed	3.71	26.62
TOTAL[1]	**14.1**	**148.7**

[1]Total rounded to the nearest 0.1 acre.

Developed

Developed includes areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas where no natural land is evident due to a large amount of debris or other materials being placed upon it may also be considered developed (e.g., a quarry).

a) ***Off-Reservation***

Less than Significant Impact with Mitigation Incorporated. Fourteen vegetation communities and developed land were mapped in the Study Area and within the proposed pipeline alignment. Seven communities and developed land were mapped on off-Reservation County land (See Table IV-1). According to the Biology Report prepared by Alden Environmental, the area of potential impact (see Appendix B, *figures 4a – 4f*) would result in no impacts to Federal listed species and no additional focused surveys for Federal listed species are currently recommended. If the USFWS lists the spadefoot toad then focused surveys for that species may be required. Additional focused surveys for sensitive species may be required, depending upon the final project alignment and regulatory agency input.

It is anticipated that impacts due to the pipeline would occur primarily within the existing roadway and adjacent disturbed areas of the off-Reservation portions of the Project. If work in the off-Reservation area would impact sensitive vegetation communities, then

additional focused surveys may be required (e.g. sensitive plant survey), depending upon the vegetation communities affected. Mitigation for impacts to sensitive vegetation communities also may be required by the County under CEQA. Mitigation typically can include in-place revegetation if impacts are temporary; off-site acquisition and preservation; or purchase of credits in an approved mitigation bank.

The Project also must also comply with the nesting bird restrictions of the MBTA. This may include pre-construction nesting bird surveys during the nesting season and possibly nest monitoring during construction. See mitigation measure **BIO-1 and BIO-2**, which when implemented would reduce impacts to a less than significant level.

On-Reservation

Less than Significant Impact with Mitigation Incorporated.[13] Fourteen vegetation communities and developed land were mapped in the Study Area and within the proposed pipeline alignment. Thirteen communities and developed land were mapped on Reservation land (See Table IV-1). According to the Biology Report prepared by Alden Environmental, the area of potential impact (see Appendix B, *figures 4a – 4f*) would result in no impacts to Federal listed species and no additional focused surveys for Federal listed species are currently recommended.

Based on the vegetation (habitats) mapped, there is potential for three federal-listed or protected animal species to occur on Reservation land in the Study Area. Since there are no riparian habitats in the Study Area on Reservation land, the federal-listed arroyo toad and least Bell's vireo are not expected to occur there.

b) ***Off-Reservation***

Less than Significant Impact. There may be constraints off-Reservation due to sensitive species that would not be considered constraints within the Reservation land. The riparian forest land within San Vicente Creek at the northern most extent of the alignment has the potential to support the federal listed as threatened Least Bell's vireo. While direct impacts to riparian forest are not anticipated (pipeline work would be limited to the attachment of the pipeline to underside of the existing bridge without touching or disturbing the creek or creekbed). Construction activities could have an indirect impact to this species during the nesting season, should it be present. Pre-construction surveys and avoidance measures as described below in mitigation measure **BIO-1** below would help to ensure Project construction does not impact this species on any portion of the alignment.

On-Reservation

Less than Significant Impact. Although suitable habitat for the threatened Least Bell's vireo is located at the northernmost extent of the project alignment off-Reservation land, no direct impacts to this species are anticipated on-Reservation land. However, construction activities could have an indirect impact to this species during the nesting season, should it be present. Pre-construction surveys and avoidance measures may be

[13] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

required to help ensure Project construction does not impact this species in the County portion of the alignment. Suitable habitat does not occur within or adjacent to the pipeline alignment on Reservation land.[14]

c) ***Off-Reservation***

Less than Significant Impact. San Vicente Creek is considered jurisdictional by USACE, CDFW, RWQCB, and the County. This creek currently flows under a bridge as part of Wildcat Canyon Road off-Reservation. It is anticipated that any project impacts from the pipeline would be limited to attaching facilities to the existing bridge, as opposed to physical work (trenching, grading, etc.) within the creek itself.

With Project design complete, the determined construction method to attach the pipeline to the underside of the bridge crossing San Vicente Creek shows no possible impact to waters under the jurisdiction of the state. CA Fish & Game Code §1602 sets forth the threshold for requiring a Lake & Streambed Alteration permit:

An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material where it may pass into any river, stream, or lake without a permit.

The Project will not encroach into or otherwise alter the streambed and will not cause anything to occur that would be prohibited by the statute.

As such, it is reasonable to expect that no direct or indirect impacts to jurisdictional resources at San Vicente Creek would occur.

Based on the proposed method of construction, it is not anticipated that a LSA is needed. If impacts to RWQCB jurisdictional resources were to occur, then a Water Quality Certification under Section 401 of the Federal CWA would be required. The actual permitting requirement would depend on the type and amount of jurisdictional resource impacts in the County (if any). The District's contractor will be required to submit a Notice of Intent for coverage under the Construction Stormwater General Permit (Order WQ 2022-0057-DWQ)[15].

On-Reservation

Less than Significant Impact. Tribal lands are not subject to State and local (County) regulation of jurisdictional/wetland resources. Federal regulations (CWA) for potential impacts to federal jurisdictional resources (should they occur) may be applicable on Tribal lands. Throughout the Study Area on Reservation land, the NHD shows stream/river features, and the NWI shows riverine features. The proposed pipeline alignment would cross Padre Barona Creek, Klondike Creek, and numerous unnamed tributaries to these creeks within the limits of the Reservation.

Subsequent to the Sackett Supreme Court decision, the Environmental Protection Agency (EPA) issued a new definition for what is to be considered a WUS. No federal regulated wetland WUS resources would be affected by the project on Reservation land. Areas are

[14] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.
[15] Construction Stormwater General Permit Order WQ 2022-0057-DWQ (ca.gov)

determined to be non-wetland WUS if there is evidence of intermittent or perennial surface flow (relative permanent water) but the vegetation and/or soils criterion are not met to make a wetland determination. Per the current Corps CWA Rule, unvegetated ephemeral drainages/streambeds are not considered to be jurisdictional WUS.

The streams and tributaries on Reservation land, within the Study Area are anticipated to be ephemeral and therefore not jurisdictional to the Corps and subject to regulation under the CWA. This is based on the historically very dry nature of the streams/tributaries and additional "traditional ecological knowledge" (TEK), provided by Tribal elders and representatives. This knowledge includes historical observations of the streams/tributaries remaining dry most of the year, year after year. The only observed water flow has been during and immediately following rain events, characteristic of ephemeral features.

d) ***Off-Reservation***

Less than Significant Impact. Currently, it is anticipated that pipeline impacts on off-Reservation County land at the northernmost end of the alignment would be within the existing roadway and adjacent disturbed/developed areas. It also is anticipated that any installed pipelines would be attached to the bottom/side of the existing bridge over San Vicente Creek and that the creek itself would not be affected. Therefore, the Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Impact would be less than significant.

On-Reservation

Less than Significant Impact. Throughout the Study Area on Reservation land, the NHD shows stream/river features, and the NWI shows riverine features. The proposed pipeline alignment would cross Padre Barona Creek, Klondike Creek, and numerous unnamed tributaries to these creeks within the limits of the Reservation.

It is anticipated that any installed pipelines would be attached to the bottom/side of the existing bridge crossings and that the creek itself would not be affected. Therefore, the Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Impact would be less than significant

e) ***Off-Reservation***

Less than Significant Impact. Were impacts to occur within the identified communities in the Biology Report, they could be considered significant and require mitigation by the County. Therefore, any conflicts with ordinances protecting biological resources, such as a tree preservation policy or other approved local, regional or state habitat conservation plan may require mitigation to reduce impact levels to less than significant.

On-Reservation

Less than Significant Impact. Reservation land is not subject to County regulations however, any conflicts with ordinances protecting biological resources, such as a tree

preservation policy or other approved local, regional or state habitat conservation plan may require mitigation to reduce impact levels to less than significant.[16]

No impacts to Federal listed species are anticipated and no additional focused surveys for Federal listed species are currently recommended. If the USFWS lists the spadefoot toad, then focused surveys for that species may be required. Additional focused surveys for sensitive species may be required, depending upon the final project alignment and regulatory agency input.

The Project also must comply with the nesting bird restrictions of the BMTA. This may include pre-construction nesting bird surveys during the nesting season and possibly nest monitoring during construction.

f) ***Off-Reservation***

Less than Significant Impact. Based on the findings presented in the Biology Report prepared by Alden Environmental there are four vegetation communities located off-Reservation on County land, that are considered sensitive and may be subject to the California NCCP Act of 1991 (section 2835). These communities are Diegan coastal sage scrub, non-native grassland, coast live oak woodland, and riparian forest (Appendix B).

It is anticipated that impacts due to pipeline implementation would occur primarily within the existing roadway and adjacent disturbed areas. Were impacts to occur within any of the identified communities, they could be considered significant and require mitigation by the County. The amount of mitigation required, if any, would depend on the extent and type and level of significance of impacts. Mitigation typically can include in-place revegetation if impacts are temporary; off-site acquisition and preservation; or purchase of credits in an approved mitigation bank.

On-Reservation

Less than Significant Impact Based on the results of the literature review, Tribal communication, field reconnaissance, vegetation mapping, and coastal California gnatcatcher surveys, no significant impacts to federal regulated biological resources are anticipated on Reservation land. While Federal listed animal species are not anticipated to be impacted by the proposed Project, the Project would still be required to comply with MBTA nesting bird restrictions. Also, no federal listed (threatened or endangered) plant or animal species are anticipated to be affected by the project within the limits of the Reservation, a USFWS Section 7 consultation is not anticipated to be required. This could change if it is later determined that a federal listed species could be affected.

IMPACTS AND POTENTIAL MITIGATION

Reservation Land

Based on the results of the literature review, Tribal communication, field reconnaissance, vegetation mapping, and coastal California gnatcatcher surveys, no significant impacts to federal-regulated biological resources are anticipated on Reservation land. Table IV-2 and *Figures 4a-f* of

[16] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

Appendix B present the anticipated permanent and temporary impacts to vegetation communities on the Reservation.

Table IV-2
IMPACTS TO VEGETATION COMMUNITIES ON RESERVATION LAND

Vegetation Community	Permanent Impacts(acres)[2]	Temporary Impacts (acres)
Riparian forest[1]	--	--
Coast live oak woodland	--	0.924
Diegan coastal sage scrub	--	0.940
Diegan coastal sage scrub-disturbed	--	0.504
Buckwheat scrub	--	0.198
Buckwheat scrub-disturbed	--	0.020
Coastal sage-chaparral scrub	--	0.579
Coastal sage-chaparral scrub-disturbed	--	--
Chamise chaparral	--	0.415
Southern mixed chaparral	--	1.424
Southern mixed chaparral-disturbed	--	0.168
Non-native grassland	--	1.627
Disturbed habitat	0.043	3.381
Ornamental	--	--
Developed	0.004	4.983
TOTAL[3]	**0.047**	**15.16**

[1]Impacts to riparian forest are not anticipated due to the use of jack-and-bore and bridge crossing construction methods.
[2]Permanent impacts would be from a Pressure Reducing Station (Figure 4b) and a Booster Pump Station (Figure 4e).
[3]Totals rounded to nearest 0.01 acre

While federal-listed animal species are not anticipated to be impacted by the proposed project, the project would still be required to comply with MBTA nesting bird restrictions.

As noted above, the streams and tributaries located within the Study Area on Reservation land are anticipated to be ephemeral in nature; therefore, they would not be considered jurisdictional to the Corps.

Finally, since no federal-listed (threatened or endangered) plant or animal species are anticipated to be affected by the project within the limits of the Reservation, a USFWS Section 7 consultation is not anticipated to be required. This could change if it is later determined that a federal-listed species could be affected.

County Land

Based on the results of the literature review, field reconnaissance, vegetation mapping, and coastal California gnatcatcher surveys, the anticipated impacts from pipeline construction on County land, outside of the Reservation Land, would be as follows.

Vegetation Communities

There are five vegetation communities located outside of the Reservation, within the County, that are considered sensitive. These communities are Diegan coastal sage scrub, Diegan coastal sage scrub-disturbed, non-native grassland, coast live oak woodland, and riparian forest (*Figure 4f* of Appendix B). Table IV-3 and *Figure 4a* (Appendix B) present the anticipated temporary impacts to vegetation communities on County land. There would be no permanent impacts on County land.

Table IV-3
TEMPORARY IMPACTS TO VEGETATION COMMUNITIES ON COUNTY LAND (acres)

Vegetation Community	South County MSCP Subarea	North County MSCP Subarea
Riparian forest[1]	--	--
Coast live oak woodland	0.007	0.019
Diegan coastal sage scrub	--	--
Diegan coastal sage scrub-disturbed	0.011	0.020
Buckwheat scrub	--	--
Buckwheat scrub-disturbed	--	--
Coastal sage-chaparral scrub	--	--
Coastal sage-chaparral scrub-disturbed	--	--
Chamise chaparral	--	--
Southern mixed chaparral	--	--
Southern mixed chaparral-disturbed	--	--
Non-native grassland	--	0.012
Disturbed habitat	0.062	0.179
Ornamental	--	0.003
Developed	0.835	1.331
TOTAL[2]	**0.91**	**1.56**

[1]Impacts to riparian forest are not anticipated due to the use of jack-and-bore and bridge crossing construction methods.
[2]Totals rounded to nearest 0.01 acre.

Impacts are not anticipated to riparian forest due to the use of jack-and-bore and bridge-crossing construction methods. Impacts to coast live oak woodland, Diegan coastal sage scrub-disturbed, and non-native grassland, although very limited in extent and temporary (Table IV-3 and Figure *4f* of Appendix B), would still be significant because they are sensitive communities. Mitigation to compensate for the temporary impacts could include revegetating (adequately replacing) the impacted vegetation in place following construction in accordance with a County-approved Revegetation Plan.

Sensitive Species

Within the County (non-Tribal) segment (Figure 4f) there may be constraints (impacts) due to sensitive species that would not be considered constraints within the Reservation land. The riparian forest land within San Vicente Creek at the northern most extent of the alignment has the potential to support the federal-listed endangered least Bell's vireo. While direct impacts to riparian forest are not anticipated, construction activities could have an indirect impact (noise) to this species

during the nesting season, should it be present. Pre-construction surveys and avoidance measures may be required to help ensure project construction does not impact this species in the County portion of the alignment.

In addition, the project would be required to comply with California Fish and Game Code and MBTA nesting bird restrictions.

Jurisdictional Resources (Federal, State, County)

Within the County segment of the pipeline is San Vicente Creek (Figure 5), which likely would be considered jurisdictional by the Corps, CDFW, RWQCB, and the County. This creek currently flows under a bridge as part of Wildcat Canyon Road. It is anticipated that there would be no impacts from pipeline construction to jurisdictional resources associated with the creek due to the use of bridge-crossing and jack-and-bore construction methods.

Should there be impacts to San Vicente Creek then federal (Corps) and State (CDFW and RWQCB) permits may be required for this location in the County. The exact authorization required would depend upon the amount and type of jurisdictional features to be impacted within the County segment. If required, it is anticipated that Nationwide Permit (NWP) 58 (Utility Line Activities for Water and Other Substances) would be the suitable NWP for the project. The Corps NWP process also includes a cultural resources analysis with Tribal consultation. Given that the project is a Tribal project, it is anticipated that a streamlined cultural evaluation would be possible.

Impacts to CDFW jurisdictional resources may require a Lake and Streambed Alteration (LSA) agreement via California Fish and Game Code Section 1602. Impacts to RWQCB jurisdictional resources may require a Water Quality Certification under Section 401 of the federal CWA.

The actual permitting requirement would depend on the type and amount of jurisdictional resource impacts in the County (if any).

MSCP Applicability and Consistency

The South San Diego County MSCP Subarea Plan was approved in 1997. The identification of sensitive resources, potential project impacts, and potential mitigation described above for the pipeline construction in the South County Subarea are consistent with the Subarea Plan and the Biological Mitigation Ordinance 2010, the latter of which enables the County to achieve the conservation goals set forth in the Subarea Plan for the MSCP.

The North San Diego County MSCP Subarea Plan has not yet been adopted; however, this report does consider what resources are identified as sensitive in that draft Plan for pipeline construction in the North County Subarea, and the County provides mitigation for impacts to vegetation communities outside of approved MSCP Subarea Plans 2012.

CONCLUSION

Reservation Land

No significant impacts to federal regulated biological resources are anticipated on Reservation land. If the USFWS lists the western spadefoot, however, then focused surveys for that species may be required. The project must comply with the nesting bird restrictions of the MBTA. This may include pre-construction nesting bird surveys during the nesting season and possibly nest monitoring during construction.

County Land

Impacts to coast live oak woodland, Diegan coastal sage scrub-disturbed, and non-native grassland would be significant because they are sensitive communities. Mitigation to compensate for these temporary impacts could include revegetating the impacted vegetation in place following construction in accordance with a County-approved Revegetation Plan. Impacts are not anticipated to riparian forest due to the use of jack-and-bore and bridge-crossing construction methods.

The project also must comply with the nesting bird restrictions of the MBTA and California Fish and Game Code (within the County area). This may include pre-construction nesting bird surveys during the nesting season and possibly nest monitoring (and noise-impact avoidance measures for the least Bell's vireo) during construction.

Mitigation Measures

BIO-1: Nesting Bird Surveys. Nesting bird nesting season generally extends from February 1 through September 15 in southern California and specifically, March 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist will conduct pre-construction Nesting Bird Surveys (NBS) prior to Project-related disturbance to nestable vegetation to identify any active nests. If no active nests are found, no further action will be required. If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage, and expected types, intensity, and duration of the disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

BIO-2: Revegetation. To compensate for these temporary impacts could include revegetating the impacted vegetation in place following construction in accordance with a County-approved Revegetation Plan.

Possible impacts identified may require additional mitigation measures which if/when implemented would reduce impacts to a less than significant level.

V. CULTURAL RESOURCES

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c)	Disturb any human remains, including those outside of formal cemeteries?	☐	☒	☐	☐

SUBSTANTIATION: (Check if the project is located in the Cultural ☐ or Paleontologic ☐ Resources overlays or cite results of cultural resource review):

San Diego County General Plan, 2011 (last amended February 10, 2023)*; *Submitted Project Materials; A Section 106 (NHPA) Historic Resources Study for the Barona Long-Term Potable and Recycled Water Service Project, BFSA Environmental Services, a Perennial Company, November 15, 2023 (Appendix C); Cultural Historical Resources Information System (CHRIS), South Central Coast Information Center, California State University, Fullerton

As proposed, the Project includes the construction of two roughly parallel underground water pipelines to run from the District facilities, in the county of San Diego, onto and southward through the Barona Indian Reservation to provide both recycled and potable water to the reservation and its residents. BFSA Environmental, a Perennial Company (BFSA), was contracted by the Barona Band of Mission Indians to prepare an historic resources study for the Project. As such, BFSA completed a Class I inventory of a one-mile radius around the undertaking, conducted a Class III intensive pedestrian archaeological survey of the proposed undertaking to assess the potential adverse effects to any historic resources within the Area of Potential Effect (APE), and implement NRHP eligibility testing of archaeological sites where appropriate in accordance with 36 CFR 60.4.

This section evaluates the Project's potential impacts to historical resources, unique archaeological resources, and disturbing human remains as set forth in Appendix G of the State CEQA Guidelines.

a) ***Off-Reservation***

Less than Significant Impact with Mitigation Incorporated. A review of the APE indicates the majority of the alignment and associated 50-foot buffer were previously disturbed by existing roads (paved and unpaved), power lines, trails, and rural residential

development. The historic resources survey was conducted on August 17 and 18 and September 28, 2023 for the entirety of the proposed Project. The survey did not identify any previously unrecorded prehistoric sites on County land. Therefore, a less than significant impact is expected in the APE for portions of the alignment on off-Reservation portions of the pipelines. However, if inadvertent discoveries of unknown archaeological or historic resources may occur, mitigation measure **CUL-1** would reduce impacts to a less than significant level.

On-Reservation

Less than Significant with Mitigation Incorporated.[17] The survey identified five previously unrecorded prehistoric bedrock milling sites (Temp-1 to Temp-5) and one prehistoric isolate (Iso-1) on Reservation land. Through a review of the APE, it was determined that Temp-1 and Iso-1 are well outside of the alignment and will not be impacted by the undertaking.

However, Temp-2 to Temp-5 are located within or directly adjacent to the APE alignment and were subjected to a focused study that included the mapping and recordation of all surface elements and the completion of subsurface tests to search for buried deposits that may be impacted by the proposed undertaking. Sites Temp-2 to Temp-5 were tested through the excavation of 20 shovel test pits (STPs), which did not identify any intact subsurface deposits. A limited artifact assemblage was recovered from sites Temp-3 and Temp-4. As a result of the testing program, it can be concluded that the prehistoric site areas that may be impacted by the undertaking do not retain any additional research potential. As such, sites Temp-2 to Temp-5 are characterized as limited use resource processing locations. Therefore, it is recommended the project be allowed to proceed while adopting a finding of "No Adverse Effect" for historic resources within the APE.

All of the resources identified during the survey are located on the Barona Indian Reservation portion of the Project and subject to federal guidelines (Section 106 of the NHPA and the NEPA). No other sites were discovered therefore, less than significant impact is expected in the APE for all portions of the alignment. However, if inadvertent discoveries of unknown archaeological or historic resources may occur, mitigation measure **CUL-1** would reduce impacts to a less than significant level.

b) ***Off-Reservation***

Less than Significant Impact. An archaeological records search was conducted by the South Coastal Information Center (SCIC) at San Diego State University (SDSU), both the on- and off-Reservation portions of the Project. The search covered all such records within a one-half mile radius around the present project. The SCIC reported no previously recorded archaeological sites within the APE boundaries on the off-Reservation portions of the proposed alignment.

In total, 27 archaeological resource studies have been conducted within one-half mile of the APE, eleven (11) of which overlap portions of the current APE boundaries. Most of these studies are focused along San Vicente Road and its intersection with Wildcat

[17] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

Canyon Road. Based upon the SCIC results, that no formally recorded sites within the APE of the proposed pipeline off-Reservation have been registered with the SCIC as a result of any previous studies.[18]

Additionally, BFSA reviewed the following historic resources:

- The NRHP Index
- The Office of Historic Preservation (OHP), Archaeological Determinations of Eligibility
- The OHP Built Environment Resource Directory
- The 1:62,500 USGS El Cajon (1893) topographic map
- The 1:24,000 USGS El Cajon Mountain (1955) topographic map

No substantial adverse changes in the significance of an archaeological resource pursuant to section 15064.5 are expected. Impacts would be less than significant.

On-Reservation

Less than Significant Impact. The most relevant archaeological resource study relating to the on-Reservation portion of the Project is the Science Applications, Inc. (1981) study[19], which consisted of a survey for the entire Barona Indian Reservation. As a result of their study, 47 prehistoric and historic archaeological sites were identified within the reservation boundaries, but the report on-file with the SCIC does not contain any maps for sites located during the survey. As such, it is possible that the sites identified during the current survey program (Temp-1 to Temp-5) correspond to those identified during the 1981 study; however, this cannot currently be confirmed. Regardless, it is clear, based upon the SCIC results, that no formally recorded sites within the APE of the proposed pipeline on-Reservation have been registered with the SCIC as a result of any previous studies.

c) ***Off-Reservation***

Less than Significant Impact with Mitigation Incorporated. Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regards to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the property has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the project.

The Historic Resources Study prepared by BFSA did not identify previously recorded sites with human remains within the Proposed Project APE on County lands off-Reservation. However, there is a potential for unidentified human remains to be present within the Proposed Project site.

Pursuant to Calif. Pub. Res. Code section 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the landowner and the Tribe(s) cannot agree on the significance or the mitigation for the archaeological or

[18] All studies are referenced in *A Section 106 (NHPA) Historic Resources Study for the Barona Long-Term Potable and Recycled Water Service Project (Appendix C), BFSA Environmental Services, a Perennial Company, November 15, 2023*

[19] Science Applications, Inc. 1981

cultural resources, these issues will be presented to the Planning & Development Services Director for decision. The Planning & Development Services Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the project archeologist and shall take into account the cultural and religious principles and practices of the Tribe.

If present, human remains could be damaged by ground disturbing activities associated with the Proposed Project. If human remains are inadvertently discovered, mitigation measure **CUL-2** would reduce impacts to a less than significant level.

On-Reservation

Less than Significant Impact with Mitigation Incorporated.[20] The Historic Resources Study prepared by BFSA did not identify previously recorded sites with human remains within the Proposed Project APE on Reservation lands. However, there is a potential for unidentified human remains to be present within the Proposed Project site.

As is the case with off-Reservation lands, if present, human remains could be damaged by ground disturbing activities associated with the Proposed Project. If human remains are inadvertently discovered, mitigation measure **CUL-2** would reduce impacts to a less than significant level.

Mitigation Measures

CUL-1: Unanticipated discovery of previously unknown archaeological or historical materials could occur during ground-disturbing activities. If any subsurface cultural resources are encountered during earth-moving activities, all work within 50 feet shall be halted and the applicant shall retain an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology to evaluate the significance of the find and recommend appropriate treatment for the resource. Prehistoric materials can include flaked-stone tools (e.g., projectile points, knives, choppers) or obsidian, chert, or quartzite toolmaking debris; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash, and charcoal, shellfish remains, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Historical materials might include wood, stone, or concrete footings, walls, and other structural remains; debris-filled wells or privies; and deposits of wood, metal, glass, ceramics, and other refuse. The archaeologist will evaluate the find in accordance with state and local guidelines, including those set forth in the California Public Resources Code Section 21083.2. Depending upon the nature of the find, if the discovery proves to be potentially significant under CEQA, as determined by the qualified archaeologist, additional work such as data recovery excavation, avoidance of the area of the find, documentation, testing, data recovery, reburial, archival review and/or transfer to the appropriate museum or educational institution, or other appropriate actions may be warranted at the discretion of the qualified archaeologist. After the find is appropriately mitigated, work in the area may resume. Tribal and archaeological monitors shall be present during all earth-disturbing activities.

[20] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

CUL-2: Should human remains be identified during ground-disturbing activities related to the implementation of the Proposed Project, whether during construction, maintenance, or any other activity, State Public Resources Code Section 5097.98, CEQA Section 15064.5 and Health & Safety Code Section 7050.5 and County-mandated procedures will be followed for the treatment and disposition of those remains, as follows.

- The Property Owner or their representative shall contact the County Coroner and the County Planning and Development Services (PDS) Staff Archaeologist.
- Upon identification of human remains, no further disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin. If the human remains are to be taken offsite for evaluation, they shall be accompanied by the Kumeyaay Native American monitor.
- If the remains are determined to be of Native American origin, the NAHC shall immediately contact the Most Likely Descendant (MLD).
- The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by Public Resources Code Section 5097.98 has been conducted.
- The MLD may with the permission of the landowner, or their authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

Mitigation Measures CUL-1 and CUL-2 would reduce impacts to a less than significant level should inadvertent discoveries of archaeological or historic resources or human remains be made during construction of the Proposed Project.

VI. ENERGY

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project:				
a)	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

SUBSTANTIATION: San Diego County General Plan, 2011 (last amended February 10, 2023)

The focus of this section is to analyze potential impacts related to Energy utilizing significance thresholds in Appendix G of the CEQA Guidelines.

Regulatory Framework

Building Energy Conservation Standards

The California Energy Conservation and Development Commission (California Energy Commission) adopted Title 24, Part 6, of the California Code of Regulations, Energy Conservation Standards for new residential and nonresidential buildings. Title 24 ensures building designs conserve energy. The requirements allow for the opportunities to incorporate updates of new energy efficiency technologies and methods into new developments. In June 2015, the California Energy Commission (CEC) updated the 2016 Building Energy Efficiency Standards. Under the 2016 Standards, residential buildings are approximately 28 percent more energy efficient than the previous 2013 Energy Efficiency Standards. The 2016 Standards improved upon the previous 2013 Standards for new construction of and additions and alterations to residential and nonresidential buildings. The CEC updated the 2019 Building Energy Efficiency Standards in May 2018. The 2019 Title 24 standards state that residential buildings are anticipated to be approximately 7 percent more energy efficient. When the required rooftop solar is factored in for low-rise residential construction, residential buildings that meet the 2019 Title 24 standards would use approximately 53 percent less energy than residential units built to meet the 2016 standards.[21]

Senate Bill 350

Senate Bill (SB) 350 was signed into law in October 2015. SB 350 establishes new clean energy, clean air and greenhouse gas reduction goals for 2030. SB 350 also establishes tiered

[21] Building Energy Efficiency Standards | California Energy Commission

increases to the Renewable Portfolio Standard: 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030.[22]

Senate Bill 100

Senate Bill 100 (SB 100) was signed into law in September 2018 and increased the required Renewable Portfolio Standards. SB 100 requires the total kilowatt-hours of energy sold by electricity retailers to their end-use customers must consist of at least 50 percent renewable resources by 2026, 60 percent renewable resources by 2030, and 100 percent renewable resources by 2045. SB 100 also includes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.[23]

a) ***Off-Reservation***

Less than Significant Impact. Construction of the off-Reservation portion of the Project would result in the use of energy resources during the construction phase. However, the energy use would be temporary, limited, and cease upon completion of construction. Construction would be conducted in compliance with local, state, and federal regulations (e.g., USEPA and the California Air Resources Board [CARB] engine emission standards, which require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption, and limitations on engine idling times, etc.). Compliance with these regulations would minimize short-term energy demand during the project's grading to the extent feasible.

Energy needs for the Project grading/trenching would be temporary and are not anticipated to require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Construction equipment use and associated energy consumptions would be typical of that associated with the construction of residential projects of this size in a semi-rural setting. During Project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. As such, the Project's energy consumption during the grading and construction phase would not be considered wasteful, inefficient, or unnecessary. In addition, natural gas is not anticipated to be required during construction of the Project. Any minor amounts of natural gas that may be consumed as a result of the grading and construction would be temporary and negligible and would not have an adverse effect. Therefore, impacts would be less than significant.

[22] Clean Energy and Pollution Reduction Act - SB 350 (ca.gov)
[23] SB 100 Joint Agency Report (ca.gov)

On-Reservation

Less than Significant Impact. Construction of the on-Reservation portion of the Project would result in the use of energy resources during the construction phase. Impacts would be the same as that of the construction of the off-Reservation portion.

b) ***Off-Reservation***

Less than Significant Impact. Relevant plans that pertain to the efficient use of energy include the 2019 California Energy Efficiency Action Plan, which focuses on energy efficiency. As noted, construction activities for the off-Reservation portion of the Project would be conducted in compliance with local, state, and federal regulations (e.g., USEPA and CARB engine emissions standards, limitations on engine idling times, etc.). Compliance with these regulations would reduce short-term energy demand during the project's construction to the extent feasible and increase the project's energy efficiency. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Project impacts would be less than significant.

On-Reservation

Less than Significant Impact. Impacts resulting from construction of the on-Reservation portion of the Project would be the same as the impacts resulting from the construction of the off-Reservation portion of the Project.

Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

VII. GEOLOGY AND SOILS

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project:				
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map Issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
	ii. Strong seismic ground shaking?	☐	☐	☒	☐
	iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
	iv. Landslides?	☐	☐	☒	☐
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

SUBSTANTIATION: *(Check ☐ if project is located in the Geologic Hazards Overlay District):*

San Diego County General Plan, 2011 (last amended February 10, 2023); San Diego County General Plan Update FEIR; A Paleontological Assessment for the Barona Long-Term Potable and Recycled Water Service Project, June 21, 2024, BFSA Environmental Services, a Perennial Company (Appendix C-1); California Soil Resource Lab. 2024, SoilWeb: An Online Soil Survey Browser; USDA Web Soil Survey

This section analyzes the Project's potential impacts related to geology and soils utilizing the thresholds in Appendix G of the CEQA Guidelines.

a) i-iv) ***Off-Reservation***

Less than Significant Impact. San Diego County is located within the seismically active Southern California Region. The nearest fault zones to the Project area are the Elsinore Fault Zone approximately 19 miles northeast of the Project area, and the Newport Inglewood-Rose Canyon Fault Zone approximately 23 miles to the southwest of the Project area.

Implementation of the Proposed Project would be required to comply with the San Diego County General Plan Update 2011 which designates land uses, which would allow development to occur in areas with geological risks such as seismically induced ground shaking, liquefaction, and landslides. However, future development would be required to comply with all relevant federal, State and local regulations and building standards, including the CBC and County required geotechnical reconnaissance reports and investigations. As no habitable structures are proposed with the Project, impacts from seismically induced fault rupture, ground shaking, liquefaction, and landslides would be less than significant.

On-Reservation

Less than Significant Impact. San Diego County is located within the seismically active Southern California Region. The nearest fault zones to the Project area are the Elsinore Fault Zone approximately 19 miles northeast of the Project area, and the Newport Inglewood-Rose Canyon Fault Zone approximately 23 miles to the southwest of the Project area.

As no habitable structures are proposed with the Project, impacts from seismically induced fault rupture, ground shaking, liquefaction, and landslides would be less than significant.

b) ***Off-Reservation***

Less than Significant Impact. Compliance with the policies and mitigation measures identified in the San Diego County General Plan Update FEIR for Hydrology and Water Quality and Land Use, as well as all applicable regulations including the NPDES, CBC, and the County Grading Ordinance, would prevent potential impacts to soil erosion or the loss of topsoil to below a significant level.

On-Reservation

Less than Significant Impact. Compliance with the policies and mitigation measures identified in the San Diego County General Plan Update FEIR for Hydrology and Water Quality and Land Use, as well as all applicable regulations including the NPDES, CBC, and the County Grading Ordinance, would prevent potential impacts to soil erosion or the loss of topsoil to below a significant level.

c) ***Off-Reservation***

Less than Significant Impact. While there are no habitable structures proposed with this Project off-Reservation land, future development under the General Plan Update would be required to comply with federal, State and local building standards and regulations, including the CBC and County-required geotechnical reconnaissance reports and investigations. Compliance with such regulations would reduce impacts associated with on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse to a less than significant level.

On-Reservation

Less than Significant Impact. No habitable structures are proposed with this Project on-Reservation land however compliance with local building standards and regulations would reduce impacts associated with on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse to a less than significant level.

d) ***Off-Reservation***

Less than Significant Impact. According to the San Diego County General Plan *Safety Element Figure S-4 Expansive Clays*[24], the Project is not at risk from being in an area that is made up of expansive soils on County land. The Project as proposed does not include construction on any habitable structures. Any damage caused by expansive soils, if any, would impact the water pipelines directly.

On-Reservation

Less than Significant Impact. Expansive soils are generally high in clays or silts that shrink or swell with variation in soil moisture content and can adversely affect the structural integrity of underground facilities including pipelines. Soils that are on-Reservation are not classified within the San Diego County General Plan Safety Element. However, according to the UC Davis on-line SoilWeb Tool (accessed 10/3/2024)[25] which covers the State of California including San Diego County and tribal lands, the Project area on-Reservation is underlain primarily by a variety of sandy loam soils which are often regarded as one of the best soils for building. It absorbs water and dries out at a steady rate. There's much less expansion and contraction with loam than with clay. Design of the proposed pipelines would still adhere to professional engineering standards, which would provide regulations related to soils and foundations, to avoid adverse effects of potential expansive soils. Therefore, impacts related to expansive soils would be less than significant.

[24] SafetyElement.pdf (sandiegocounty.gov) Figure S-4
[25] SoilWeb: An Online Soil Survey Browser | California Soil Resource Lab (ucdavis.edu)

e) ***Off-Reservation***

No Impact. The Project as proposed off-Reservation does not include construction on any habitable structures. No septic or alternative wastewater disposal systems will be required as part of this Project. There will be no impact.

On-Reservation

No Impact. The Project as proposed on-Reservation does not include construction on any habitable structures. No septic or alternative wastewater disposal systems will be required as part of this Project. There will be no impact.

f) ***Off-Reservation***

No Impact. The Regulatory setting for the Project is discussed in the *Paleontological Assessment for the Barona Long-Term Potable and Recycled Water Service Project,* prepared by BFSA (Appendix C-2), the goal of numerous laws, regulations, and statutes at federal and state levels is to protect and direct the management of historic cultural, archaeological, and paleontological resources. Paleontological resources are the remains of prehistoric life that have been preserved in geologic strata. These remains are called fossils and include bones, shells, teeth, and plant remains (including their impressions, casts, and molds) in the sedimentary matrix, as well as trace fossils such as footprints and burrows. Fossils are considered a nonrenewable resource under state and local guidelines.

The northern approximately six acres of the Project are located on county of San Diego land, while the remainder of the alignment falls within the Barona Indian Reservation. The portion of the project on unincorporated county land is subject to CEQA and County of San Diego environmental guidelines.

CEQA, patterned after the NEPA, is the overriding environmental regulation that sets the requirement for protecting California's paleontological resources. CEQA mandates that governing permitting agencies (lead agencies) set their own guidelines for the protection of nonrenewable paleontological resources under their jurisdiction.

Pursuant to CEQA, the County of San Diego has developed a comprehensive set of guidelines, practices, and criteria for evaluating the potential for developments to adversely impact significant paleontological resources, and the necessary procedures to implement in order to preserve the resources if discovered. Geologic formations mapped within unincorporated areas in the county are rated as high, moderate, low, marginal, or with no potential to yield paleontological resources. Based on the rating assignment, the County requires the following monitoring criteria, and subsequent salvage of significant paleontological resources if they are found, to adequately mitigate potentially significant impacts:

- For projects within areas of High or Moderate Paleontological Resources Potential that propose excavation equal to or greater than 2,500 cubic yards, the services of a Project Paleontologist and a Paleontological Resources Monitor are required.

- For projects within areas of High or Moderate Paleontological Potential that propose excavation of less than 2,500 cubic yards, monitoring by a Standard Monitor is required.
- For projects within areas of Low or Marginal Potential, monitoring by a Standard Monitor is required.[26]

Research indicates that all of the Project alignment overlies plutonic and metavolcanic rocks, which are not fossiliferous. The County of San Diego accords these rocks with no paleontological potential. The County does not require monitoring in rocks with no potential. Therefore, paleontological mitigation monitoring is not recommended for this portion of the project alignment.

The potential for fossils to occur in areas mapped as plutonic or metavolcanic rocks within the reservation area of the Project alignment is nil. The potential for significant fossils to occur in areas mapped as Holocene alluvial or colluvial deposits is low to nil. While the alluvial deposits become greater in age with increasing depth and, therefore, would have increasing paleontological sensitivity, it is anticipated the proposed water lines will be buried at shallow depths typical for this type of Project and would not impact sensitive deposits. Therefore, paleontological mitigation monitoring is not recommended for this portion of the project alignment.

On-Reservation

No Impact. The northern approximately six acres of the Project are located on county of San Diego land, while the remainder of the alignment falls within the Barona Indian Reservation.

CEQA, patterned after the NEPA, is the overriding environmental regulation that sets the requirement for protecting California's paleontological resources. CEQA mandates that governing permitting agencies (lead agencies) set their own guidelines for the protection of nonrenewable paleontological resources under their jurisdiction.

Research indicates that all of the Project alignment overlies plutonic and metavolcanic rocks, which are not fossiliferous. The County of San Diego accords these rocks with no paleontological potential. The County does not require monitoring in rocks with no potential. Therefore, paleontological mitigation monitoring is not recommended for this portion of the project alignment.

The potential for fossils to occur in areas mapped as plutonic or metavolcanic rocks within the reservation area of the Project alignment is nil. The potential for significant fossils to occur in areas mapped as Holocene alluvial or colluvial deposits is low to nil. While the alluvial deposits become greater in age with increasing depth and, therefore, would have increasing paleontological sensitivity, it is anticipated the proposed water lines will be buried at shallow depths typical for this type of Project and would not impact sensitive deposits. Therefore, paleontological mitigation monitoring is not recommended for this portion of the Project alignment.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

[26] Stephenson et al. 2009

VIII. GREENHOUSE GAS EMISSIONS

Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

SUBSTANTIATION:
San Diego County General Plan, 2011 (last amended February 10, 2023); South Coast Air Quality Management District (SCAQMD); San Diego County Air Pollution Control District (SDAPCD)

According to CEQA Guidelines Section 15064.4, when making a determination of the significance of greenhouse gas emissions, the "lead agency shall have discretion to determine, in the context of a particular project, whether to use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use." In addition, CEQA Guidelines section 15064.7I provides that "a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts" on the condition that "the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

CEQA Guidelines Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies or suggested by other experts, as long as any threshold chosen is supported by substantial evidence.[27] (see CEQA Guidelines Section 15064.7[c]). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15064.4[b]).[28]

The Global Warming Solutions Act of 2006 requires that by the year 2020, the Greenhouse Gas (GHG) emissions generated in California be reduced to the levels of 1990. In the absence of a locally adopted numeric threshold by regional experts and agencies (e.g., SDAPCD), the project is being evaluated according to CEQA Guidelines Section 15064.7(c), which recommends considering whether a project's GHG emissions meet the California Air Pollution Control Officers Association (CAPCOA) 900 metric tons (MT) carbon dioxide equivalent (CO_2e) per year screening level threshold. The screening level threshold was developed based on various

[27] CEQA Guidelines Section 15064.7[c]
[28] CEQA Guidelines Section 15064.4[b]

land use densities and future discretionary project types to determine the size of projects that would likely have a less than cumulatively considerable contribution to climate change.

Per CEQA guidelines, new project emissions are treated as standard emissions, and air quality impacts are evaluated for significance on an air basin or even at a neighborhood level. GHG emissions are treated differently, in that the perspective is global, not local. Therefore, emissions for certain types of projects might not necessarily be considered as new emissions if the project is primarily population driven. Many gases make up the group of pollutants that are believed to contribute to global climate change. However, three gases are currently evaluated and represent the highest concentration of GHG: carbon dioxide (CO_2), Methane (CH_4), and Nitrous oxide (N_2O). SCAQMD provides guidance methods and/or Emission Factors that are used for evaluating a project's emissions in relation to the thresholds.

a) ***Off-Reservation***

Less than Significant Impact. For temporary construction activities the Proposed Project would require earthmoving, trenching and other activities such as re-paving. The Project's construction activities were screened using SCAQMD Off-Road Mobile Source Emissions Factors (2024). Emissions anticipated from the Proposed Project compared to the CAPCOA threshold are shown below in Table VIII-1.

As shown in Table VIII-1 GHG emissions related to the Proposed Project are not anticipated to exceed the CAPCOA GHG emissions threshold for Off-Reservation construction of the Project. Therefore, impacts are anticipated to be less than significant.

On-Reservation

Less than Significant Impact. As with the off-Reservation portion of the Project temporary construction activities would require earthmoving, trenching and other activities such as re-paving.

As shown in Table VIII-1 GHG emissions related to the Proposed Project are not anticipated to exceed the CAPCOA GHG emissions threshold for On-Reservation construction of the Project. Therefore, impacts are anticipated to be less than significant.

Table VIII-1: CONSTRUCTION GREENHOUSE GAS EMISSIONS			
SOURCE	**CO_2 (lbs/day)**	**CH_4 (lbs/day)**	**N_2O (g/day)**
Excavator	960.0	0.042	0.202
Dump Truck	984.0	0.034	0.492
Water truck	1968.0	0.067	0.984
Loader	872.0	0.042	0.492
Snooper Truck	984.0	0.034	0.492
Misc. Construction Equipment	984.0	0.034	0.160
Totals (lbs/g/day)	6752.00	7.08	747.83
Total lbs/day	7387.10		
CAPCOA Threshold $MTCO_2e$ Per Year	**900**		
Total $MTCO_2e$ Per Year	**554.03**		

Source: Off-Road Mobile Source Emission Factors; SCAQMD 2024
Source N2O: California Climate Action Registry General Reporting Protocol, 2009; Table A9-8-C SCAQMD Handbook; Climate Leaders EPA, Section 3, Table 2
Duration: 6 Month (150 days) Construction Period
Source: CAPCOA – California Air Pollution Control Officers Association

b) ***Off-Reservation***

Less than Significant Impact. A significant impact may occur if the Proposed Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG.

In 2006, the state passed the Global Warming Solutions Act of 2006, commonly referred to as Assembly Bill 32, which set the GHG emissions reduction goal for the State of California into law. The law requires that, by 2020, state emissions must be reduced to 1990 levels by reducing GHG emissions from significant sources through regulation, market mechanisms, and other actions. Assembly Bill 32 directed the California Air Resources Board (CARB) to prepare and approve a Scoping Plan to achieve the maximum technologically feasible and cost-effective GHG emissions reductions from sources or categories of sources of GHGs by 2020 and to update the Scoping Plan every 5 years. The 2017 Scoping Plan identified GHG emissions reductions by emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels by 2030. CARB recommended statewide targets of no more than 6 $MTCO_2e$ per capita by 2030 and no more than two (2) $MTCO_2e$ per capita by 2050. The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) lays out a path to achieve targets for carbon neutrality and reduce anthropogenic greenhouse gas (GHG) emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279.[29]

Senate Bill 375, passed in 2008, links transportation and land use planning with global warming. It requires CARB to set regional targets to reduce GHG emissions from passenger vehicles. Under this law, if regions develop integrated land use, housing, and transportation plans that meet Senate Bill 375 targets, new projects in these regions can

[29] 2022 Scoping Plan for Achieving Carbon Neutrality - Executive Summary

be relieved of certain review requirements under CEQA. Pursuant to Senate Bill 375, SANDAG prepared the region's Sustainable Communities Strategy, which is a new element of the 2050 Regional Transportation Plan. The strategy identifies how regional GHG emissions reduction targets, as established by CARB, will be achieved through development patterns, transportation infrastructure investments, and/or transportation measures or policies determined to be feasible.

The Proposed Project would comply with statewide targets and regional regulations for GHG emissions reductions because it would include installation of two underground water pipelines that would result in temporary construction emissions only. Negligible operations emissions would occur only when a maintenance vehicle would access the pipeline and its components during maintenance activities. The Project is not considered a new trip generator that would warrant a vehicle miles traveled assessment and, therefore, would not conflict with the Sustainable Communities Strategy. In addition, construction of the Proposed Project is estimated to emit a total of approximately 554 $MTCO_2e$ annually, below the 900 $MTCO_2e$ threshold from CAPCOA. The Project would not result in additional vehicular traffic and the Project's incremental contribution to cumulative GHG emissions is determined to not be cumulatively considerable. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted to reduce GHG emissions, and impact would be less than significant.

State and regional plans, policies, and regulations are generally intended to set statewide and regional policy and are not directly applicable to individual projects. Additionally, as discussed above, GHG emissions associated with construction of the Proposed Project would not be substantial and would be below CAPCOAs GHG threshold for construction. Further, the Proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing GHG emissions.[30]

The Proposed Project would not emit substantial amounts of GHG emissions, or otherwise hinder implementation of plans, policies, and regulations to reduce GHG emissions. Therefore, the impacts of construction of the Proposed Project would be less than significant, and no mitigation is required.

On-Reservation

Less than Significant Impact. Similar to the off-Reservation portion of the proposed pipelines, the Project would not emit substantial amounts of GHG emissions, or otherwise hinder implementation of plans, policies, and regulations to reduce GHG emissions. Therefore, the impacts of construction of the Proposed Project would be less than significant, and no mitigation is required.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

[30] CAPCOA – California Air Pollution Control Officers Association

IX. HAZARDS AND HAZARDOUS MATERIALS

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or Proposed school?	☐	☐	☒	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

SUBSTANTIATION:

San Diego County General Plan, 2011 (last amended February 10, 2023)

This section analyzes the effects of the proposed Project related hazards and hazardous materials utilizing thresholds as set forth in Appendix G of the CEQA Guidelines.

a) ***Off-Reservation***

Less than Significant Impact. During temporary construction activities of the off-Reservation portion of the Project, the Project would be involved with the transport of gasoline and other petroleum-based products associated with construction equipment. These materials are considered hazardous as they could cause temporary localized soil and water contamination. Incidents of spills or other localized contamination could occur during refueling, operation of machinery, undetected fluid leaks, or mechanical failure.

However, all storage, handling, and disposal of these materials are regulated by California Department of Toxic Substances Control, the USEPA, and the Barona Fire Department and have auto-aide agreements with, Lakeside Fire Protection District, San Diego County Fire Protection District and Central Zone agencies (Heartland Zone) to provide and receive aide in a time of need.[31]

All construction activities involving the transportation, usage, and disposal of hazardous materials would be subject to all applicable federal, state, and local requirements, which would reduce impacts associated with the use and handling of hazardous materials during construction to less than significant.

On-Reservation

Less than Significant Impact. Similar to the off-Reservation construction, the temporary on-Reservation construction portion of the Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

All construction activities involving the transportation, usage, and disposal of hazardous materials would be subject to all applicable federal, state, and local requirements, which would reduce impacts associated with the use and handling of hazardous materials during temporary construction to less than significant.

b) ***Off-Reservation***

No Impact. Hazardous substances/materials are not Proposed to be part of the off-Reservation portion of the Project thus, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There would be no impact.

On-Reservation

No Impact. Hazardous substances/materials are not Proposed to be part of the on-Reservation portion of the Project thus, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There would be no impact.

[31] Barona Fire Department

c) ***Off-Reservation***

Less than Significant Impact. The off-Reservation portion of the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. The proposed pipelines are not within one-quarter mile of an existing or proposed school on the County portion of the Project. Given the temporary nature of the construction. All construction activities involving the transportation, usage, and disposal of hazardous materials would be subject to all applicable federal, state, and local requirements, which would reduce impacts associated with the use and handling of hazardous materials during construction to less than significant.

On-Reservation

Less than Significant Impact. The on-Reservation portion of the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. However, the proposed pipelines on the on-Reservation portion of the Project is within a quarter mile of the Barona Indian Charter School at the south end of the Project area. Given the temporary nature of the construction. All construction activities involving the transportation, usage, and disposal of hazardous materials would be subject to all applicable federal, state, and local requirements, which would reduce impacts associated with the use and handling of hazardous materials during construction to less than significant.

d) ***Off-Reservation***

No Impact. The off-Reservation portion of the Proposed Project will be located within the San Vicente Road and Wildcat Canyon Road right of way. The Project will not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. There would be no impact.

On-Reservation

No Impact. The on-Reservation portion of the Project will not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. There would be no impact.

e) ***Off-Reservation***

No Impact. The off-Reservation portion of the Project site is more than four and a half (4.5) miles southeast of Ramona Airport. The Project is not within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. There would be no impact.

On-Reservation

No Impact. The on-Reservation portion of the Project site is more than five (5) miles southeast of Ramona Airport. The Project is not within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. There would be no impact.

f) ***Off-Reservation***

Less than Significant Impact with Mitigation Incorporated. Temporary construction of the off-Reservation portion of the Project may impact usual traffic patterns and impede access to residents and business to their properties. Transportation mitigation measure **TR-1** discussed in Section XVII of this document would reduce impacts that may impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Temporary impacts would be less than significant.

On-Reservation

Less than Significant Impact with Mitigation Incorporated.[32] Temporary construction of the on-Reservation portion of the Project may impact usual traffic patterns and impede access to residents and business to their properties. Transportation mitigation measure **TR-1** discussed in Section XVII of this document would reduce impacts that may impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Temporary impacts would be less than significant.

g) ***Off-Reservation***

Less than Significant Impact. The off-Reservation portion of the Project site is in a Very High Fire Hazard Severity Zone according to CalFire's Fire Zone Map Viewer[33]. Fire hazard designations are based on topography, vegetation, and weather, among other factors, with more hazardous sites including steep terrain, unmaintained fuels/vegetation, and wildland urban interface locations. Development within or adjacent to areas designated as Very High Fire Hazard Severity Zones and/or wildland-urban interface areas has the potential to exacerbate wildfire risk, particularly if it occurs in areas with steep topography and/or prevailing winds because these conditions contribute to the spread of and make it more difficult to contain wildfires.

No habitable structures are proposed with the Project and thus would not expose people or structures, directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. California Code of Regulations, Title 24, Part 9, California Fire Code (CFC), which was revised in 2010, is based largely on the 2009 IFC. The CFC includes stringent requirements for hazardous and toxic materials and fire-resistance-rated construction, as well as rigorous provisions for Wildland-Urban Interface Fire Areas. Requirements include minimum standards for the storage, use, and handling of hazardous and toxic materials, ratings for building materials, and fuel modification of hazardous (i.e., flammable) vegetation. Also, new buildings proposed in a Wildland-Urban Interface Fire Area must conform to the requirements contained in Chapter 47 of the CFC.

The Project would comply with the International Fire Code; California Fire Code; regulations set forth in Sections 13000 et seq. of the California Health and Safety Code; and Title 14, Division 1.5, of the California Code of Regulations. The Project would comply with County ordinances and the County Consolidated Fire Code.

[32] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.
[33] Fire Hazard Severity Zones in State Responsibility Area (arcgis.com)

All construction activities involving the transportation, usage, and disposal of hazardous materials would be subject to all applicable federal, state, and local requirements, as well as safety measures which would reduce impacts associated with the use and handling of hazardous materials, and construction equipment to less than significant.

On-Reservation

Less than Significant Impact. The on-Reservation portion of the Project, while not included in the Fire Hazard Severity Zone State Responsibility Area map is for the most part surrounded by a Very High Fire Hazard Severity Zone according to CalFire's Fire Zone Map Viewer. Therefore, on-Reservation construction should give consideration to development within or adjacent to areas designated as Very High Fire Hazard Severity Zones and/or wildland-urban interface areas having the potential to exacerbate wildfire risk, particularly if it occurs in areas with steep topography and/or prevailing winds because these conditions contribute to the spread of and make it more difficult to contain wildfires.

All construction activities involving the transportation, usage, and disposal of hazardous materials would be subject to all applicable federal, state, and local requirements, as well as safety measures which would reduce impacts associated with the use and handling of hazardous materials, and construction equipment to less than significant

Implementation of recommended mitigation measure TRA-1 will reduce Project impacts to a less than significant level.

X. HYDROLOGY AND WATER QUALITY

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project:				
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☒
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
	i. result in substantial erosion or siltation on- or off-site;	☐	☐	☐	☒
	ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;	☐	☐	☐	☒
	iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of runoff; or	☐	☐	☐	☒
	iv. impede or redirect flood flows?	☐	☐	☐	☒
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

SUBSTANTIATION:

San Diego County General Plan, 2011 (last amended February 10, 2023)

This section analyzes the effects of the proposed Project related to hydrology and water quality utilizing thresholds as set forth in Appendix G of the CEQA Guidelines.

a) ***Off-Reservation***

No Impact. As an underground pipeline installation, the off-Reservation portions of the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Compliance with the policies and mitigation measures identified in the San Diego County General Plan Update Final Environmental Impact Report (FEIR) for Hydrology and Water Quality and Land Use, as well as all applicable regulations including the National Pollutant Discharge Elimination System (NPDES), California Building Code (CBC), and the County Grading Ordinance, would prevent potential impacts to soil erosion or the loss of topsoil for entirety of the pipeline Project to below a significant level.

Recycled water from the SVWWRP is subject to a Waste Discharge Requirements permit issued by the San Diego Regional Water Quality Control Board.

On-Reservation

No Impact. As an underground pipeline installation, the on-Reservation portions of the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Compliance with the policies and mitigation measures[34] identified in the San Diego County General Plan Update Final Environmental Impact Report (FEIR) for Hydrology and Water Quality and Land Use, as well as all applicable regulations including the National Pollutant Discharge Elimination System (NPDES), California Building Code (CBC), and the County Grading Ordinance, would prevent potential impacts to soil erosion or the loss of topsoil for entirety of the pipeline Project to below a significant level.

San Diego RWQCB does not have jurisdiction on tribal land and the WDR does not apply to the Tribe's use of recycled water on its golf course and for other recycled water uses. The Tribe does however follow best management practices for the use of recycled water to avoid impacts to human health and the environment. There would be no impact.

b) ***Off-Reservation***

No Impact. One of the main purposes of the Project on County land is to reduce the use of limited groundwater supplies therefore the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. There would be no impact.

On-Reservation

No Impact. One of the main purposes of the Project on Reservation land is to reduce the use of limited groundwater supplies therefore the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such

[34] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

that the Project may impede sustainable groundwater management of the basin. There would be no impact.

c) ***Off-Reservation***

No Impact. The underground installation of the proposed water pipelines would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces. Proposed trenching and alteration of the ground surface would be returned to its prior to construction state. There would be no increase of run-off, flood risk, stormwater drainage systems, or cause the redirection of existing flood flows. There would be no impact.

On-Reservation

No Impact. The underground installation of the proposed water pipelines would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces. Proposed trenching and alteration of the ground surface would be returned to its prior to construction state. There would be no increase of run-off, flood risk, stormwater drainage systems, or cause the redirection of existing flood flows. There would be no impact.

D) ***Off-Reservation***

No Impact. Implementation of the Project would not increase flood hazards or result in increased risk of tsunami, seiche or release of pollutants due to Project inundation. There would be no impact.

On-Reservation

No Impact. Implementation of the Project would not increase flood hazards or result in increased risk of tsunami, seiche or release of pollutants due to Project inundation. There would be no impact.

e) ***Off-Reservation***

No Impact. As proposed, the Project would not Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. No impact would occur.

On-Reservation

No Impact. As proposed, the Project would not Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. No impact would occur.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

XI. LAND USE PLANNING

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project:				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

SUBSTANTIATION:

San Diego County General Plan, 2011 (last amended February 10, 2023)

This section analyzes the effects of the Project on land use and planning utilizing thresholds as set forth in Appendix G of the CEQA Guidelines.

a) ***Off-Reservation***

No Impact. The off-Reservation portion of the proposed water pipeline would be underground and mostly within the existing right of way of Wildcat Canyon Road. The 8-inch recycled water pipeline commences at the San Vicente Wastewater Reclamation Plant, at an existing District pump station located just northeast of the intersection of Vicente Meadows Road and San Vicente Road. Once the proposed 8-inch recycled water pipeline reaches the intersection of San Vicente Road and Wildcat Canyon Road, it will share the alignment and run parallel with the proposed 12-inch potable water pipeline in Wildcat Canyon Road. A horizontal separation of 4 feet must be maintained between the recycled and potable water pipelines throughout the alignment. Approximately 3000 LF of 8-inch recycled water pipeline and 2100 LF of 12-inch potable water pipeline will be constructed off-Reservation.

The Project would not physically divide a community in the off-Reservation portion of the Project with its implementation. No impact is expected.

On-Reservation

No Impact. The on-Reservation portion of the proposed water pipeline would be underground and mostly within the existing right of way of Wildcat Canyon Road and the existing alignment of the Golf Course water line. These are the areas of potential impact as the proposed water pipelines are constructed. The overall length of the 12-inch pipeline on-Reservation land is approximately 39,800 LF. That of the new 8-inch pipeline is approximately 18,700 LF. The two pipelines will be aligned parallel, with a separation of 4 feet depending on conditions, designed and built to District standards. The 12-inch pipeline continues back to Reservation roads specifically Ketuull Uunyaa Way and continues south in Ketuull Uunyaa Way and other unnamed local roadways to Featherstone Canyon Way. At Featherstone Canyon Way, the 12-inch pipeline traverses

open land to Barona Road and continues south to connection with an existing 12-inch pipeline within the Reservation water system.

The Project would not physically divide a community on the on-Reservation portion of the Project with its implementation. No impact is expected.

b) ***Off-Reservation***

No Impact. The off-Reservation portion of the Proposed Project will not conflict with the San Diego General Plan Goals and Policies, Zoning Ordinance, or regulation adopted for the purpose of avoiding or mitigating an environmental effect on semi-rural/rural lands. The proposed underground water pipelines will be located within an existing right of way and will not disturb previously undisturbed land. There will be no impact.

On-Reservation

No Impact. The on-Reservation portion of the Project will not conflict with the San Diego General Plan Goals and Policies, Zoning Ordinance, or regulation adopted for the purpose of avoiding or mitigating an environmental effect on semi-rural/rural lands. There will be no impact.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

XII. MINERAL RESOURCES

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project:				
a)	Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

SUBSTANTIATION: *(Check ☐ if project is located within the Mineral Resource Zone Overlay):*

San Diego County General Plan, 2011(last amended February 10, 2023), Conservation and Open Space Element: Mineral Resource Zones Map Figure C-4: Map date:2009

This section analyzes the effects of the proposed Project on mineral resources utilizing thresholds as set forth in Appendix G of the CEQA Guidelines.

a) ***Off-Reservation***

No Impact. Wildcat Canyon Road north of the Barona Reservation is determined to be within an MRZ-3 zone, where mineral resources are potentially present but unknown. Implementation of the Project would not result in the loss of availability of a *known* mineral resource that would be of value to the region and residents of the state. There would be no impact.

On-Reservation

The Barona Reservation lads do not appear on San Diego County General Plan Mineral Resource Zones map.[35]

b) ***Off-Reservation***

No Impact. The installation of the proposed underground water pipelines within the existing right of way of Wildcat Canyon Road on the off-Reservation portions of the Project would not result in the loss of any available locally important resource recovery site delineated on a local general plan, specific plan or other land use plan, as no such delineations of this site are known. No impacts under this issue are anticipated and no mitigation is required.

[35] San Diego County General Plan 2011, Conservation and Open Space Element: Mineral Resource Zones Map Figure C-4: Map date:2009

On-Reservation

No Impact. The installation of the proposed underground water pipelines on the on-Reservation portions of the Project would not result in the loss of any available locally important resource recovery site delineated on a local general plan, specific plan or other land use plan, as no such delineations of this site are known. No impacts under this issue are anticipated and no mitigation is required.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

XIII. NOISE

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project result in:				
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b)	Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c)	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

SUBSTANTIATION: *(Check if the project is located in the Noise Hazard Overlay District ☐ or is subject to severe noise levels according to the General Plan Noise Element ☐):*

San Diego County General Plan, 2011 (last amended February 10, 2023); Noise Analysis for the Ramona/Barona Water Pipeline Project. June 27, 2024, rev. February 11, 2025. Ganddini Group (Appendix F)

Background

The Proposed Project is located adjacent to rural mountain uses including vacant land and large lot residences, in all directions. The background noise in the general area is minimal, consistent with rural mountainous communities.

The unit of sound pressure ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB). Sound or noise can vary in intensity by over one million times within the range of human hearing. A logarithmic loudness scale, similar to the Richter scale for earthquake magnitude, is therefore used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all sound frequencies within the entire spectrum. Noise levels at maximum human sensitivity from around 500 to 2,000 cycles per second are factored more heavily into sound descriptions in a process called “A-weighting,” written as “dBA.”

L_{eq} is a time-averaged sound level; a single-number value that expresses the time-varying sound level for the specified period as though it were a constant sound level with the same total sound energy as the time varying level. Its unit of measure is the decibel (dB). The most common averaging period for L_{eq} is hourly.

Because community receptors are more sensitive to unwanted noise intrusion during more sensitive evening and nighttime hours, state law requires that an artificial dBA (A-weighted decibel) increment be added to quiet time noise levels. The State of California has established guidelines for acceptable community noise levels that are based on the Community Noise Equivalent Level (CNEL) rating scale (a 24-hour integrated noise measurement scale). The guidelines rank noise land use compatibility in terms of "normally acceptable," "conditionally acceptable," and "clearly unacceptable" noise levels for various land use types. The State Guidelines, Land Use Compatibility for Community Noise Exposure, single-family homes are "normally acceptable" in exterior noise environments up to 60 dB CNEL and "conditionally acceptable" up to 70 dB CNEL based on this scale. Multiple family residential uses are "normally acceptable" up to 65 dB CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries and churches are "normally acceptable" up to 70 dB CNEL, as are office buildings and business, commercial and professional uses with some structural noise attenuation.

Regulatory Framework

Federal

National Environmental Policy Act

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970 and requires federal agencies to assess the environmental effects of their proposed federal actions (projects, permits, authorizations, etc.). NEPA incorporates a systematic interdisciplinary approach to identify potential environmental effects of a federal action. This results in a detailed report which may be an Environmental Impact Statement (EIS) or an Environmental Assessment (EA). The level of analysis and type of report to be prepared is determined by the federal lead responsible agency.

Federal Noise Control Act of 1972

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In response, the EPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the day night average sound level (L_{dn}) should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated

Federal agencies, allowing more individualized control for specific issues by designated Federal, State, and local government agencies.

United States Department of Housing and Urban Development (HUD)

Noise Abatement and Control – Introduction "HUD's noise standards may be found in CFR Part 51, Subpart B. For proposed new construction in high noise areas, the project must incorporate noise mitigation features. Consideration of noise applies to the acquisition of undeveloped land and existing development as well. Noise standards set by HUD are intended to protect residential land uses from excessive environmental noise. HUD has not established specific standards for construction related noise. Construction noise thresholds established by San Diego County are used to assess construction noise impacts to potentially affected receptors.

State Regulations

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires lead agencies to consider noise impacts. Under CEQA, lead agencies are directed to assess conformance to locally established noise standards or other agencies' noise standards; measure and identify the potentially significant exposure of people to or generation of excessive ground borne vibration or noise levels; measure and identify potentially significant permanent or temporary increases in ambient noise levels; and measure and identify potentially significant impacts associated with air traffic.

California Noise Control Act

This section of the California Health and Safety Code finds that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare. Though not adopted by law, the State of California General Plan Guidelines 2017, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provides guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of construction relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document (EPA 1974) influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., L_{dn} or CNEL) and in the upper limits for the normally acceptable outdoor exposure of noise-sensitive uses.

Local Regulations

San Diego County General Plan Noise Element

The San Diego County General Plan Noise Element includes land use planning tools to reduce future noise related land use incompatibilities. These include criteria that specify acceptable limits of noise for various land uses throughout the County. These criteria are designed to

integrate noise considerations into land use planning to prevent noise/land use conflicts. The County has adopted their own version of the State Land Use Compatibility Guidelines.

The County of San Diego General Plan includes goals regarding noise within the community. Goals applicable to the proposed project are listed below.

Goal N-1 Land Use Compatibility. A noise environment throughout the unincorporated County that is compatible with the land uses.

Goal N-2 Protection of Noise Sensitive Uses. A noise environment that minimizes exposure of noise sensitive land uses to excessive, unsafe, or otherwise disruptive noise levels.

Goal N-3 Groundborne Vibration. An environment that minimizes exposure of sensitive land uses to the harmful effects of excessive groundborne vibration.

Goal N-5 Non-Transportation-Related Noise Sources. A noise environment that provides minimal noise spillovers from industrial, commercial, agricultural, extractive, and similar facilities to adjacent residential neighborhoods.

Goal N-6 Temporary and/or Nuisance Noise. Minimal effects of intermittent, short-term, or other nuisance noise sources to noise sensitive land uses.

San Diego County Code of Ordinances

Section 36.408 Hours of Operation of Construction Equipment

Except for emergency work, it shall be unlawful for any person to operate or cause to be operated, construction equipment" between 7:00 PM and 7:00 AM, on a Sunday or a holiday. For purposes of this section, a holiday means January 1st, the last Monday in May, July 4th, the first Monday in September, the fourth Thursday in November and December 25th. A person may, however, operate construction equipment on a Sunday or holiday between the hours of 10:00 AM and 5:00 PM at the person's residence or for the purpose of constructing a residence for himself or herself, provided that the operation of construction equipment is not carried out for financial consideration or other consideration of any kind and does violate the limitations in sections 36.409 and 36.410.

Section 36.409 Sound Level Limitations on Construction Equipment

Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 decibels for an eight-hour period, between 7:00 AM and 7:00 PM, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Section 36.410 Sound Level Limitations on Impulsive Noise

In addition to the general limitations on sound levels in section 36.404 and the limitations on construction equipment in section 36.409, the following additional sound level limitations shall apply." Except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25 percent of the minutes in the measurement period.

County of San Diego Guidelines for Determining Significance for Noise

The County of San Diego Guidelines for Determining Significance for Noise (2009) refers to the above discussions of the Federal, State and County guidelines, policies and ordinances (as applicable to this project). For impacts related to groundborne vibration, these guidelines refer to FTA methodology and criteria (FTA 2018).

County of San Diego Guidelines for Determining Significance for Biological Resources

The County has established 60 dBA L_{eq} as the noise impact threshold for potential impacts to the least Bell's vireo during their nesting season (San Diego County 2010).

Impacts to Sensitive Species

Riparian woodland, riparian forest, mule fat scrub, and southern willow scrub. There is suitable habitat for this species located at the northernmost extent of the project alignment, within riparian forest habitat in San Vicente Creek. No direct impacts to the San Vicente Creek are anticipated; however, construction activities could have an indirect impact to this species during the nesting season, should it be present. Pre-construction surveys and avoidance measures may be required to help ensure project construction does not impact this species in the County portion of the alignment. Suitable habitat does not occur within or adjacent to the pipeline alignment on Reservation land. According to the Noise and Vibration Analysis (Appendix F) construction equipment noise levels will exceed 60 dBA L_{eq} in least Bell's vireo habitat as mapped in the Biological Resource Study (Appendix B) prepared for the Proposed Project (Alden Environmental, Inc.). This is considered to be a temporary "indirect impact" If least Bell's vireo are present and mitigation will be required. This impact is potentially significant. Implementation of the following mitigation measure **NOI-11 through NOI-14** would reduce impacts to less than significant.[36]

> **NOI-11:** Avoid construction activities within the mapped 60 dBA L_{eq} construction noise contour (*Figure 11* of Appendix F) during the least Bell's vireo breeding season; OR
>
> **NOI-12:** If least Bell's vireo are not detected during the protocol survey, a qualified biologist shall submit substantial evidence to the City and applicable resource agencies which demonstrates whether or not mitigation measures such as noise walls are necessary as follows: 1) If this evidence indicates the potential is high for least Bell's vireo or southwestern willow flycatcher to be present based site conditions, then mitigation NOI-13 shall be implemented as specified below. 2) If this evidence concludes that no impacts to this species are anticipated, no mitigation measures will be necessary.
>
> **NOI-13:** If least Bell's vireo is detected during required pre-construction surveys, a qualified acoustical professional shall design mitigation to reduce construction noise levels to 60 dBA L_{eq} or to ambient noise levels (whichever is louder) at the edge of mapped least Bell's vireo nesting sites. Mitigation may include but is not limited to strategic placement of temporary noise barriers, berms, walls, sound blankets, or strategic placement of large trucks.

[36] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

Noise monitoring shall be conducted concurrent with implementation of any necessary noise attenuation measures and throughout construction activities within the vicinity of mapped least Bell's vireo nesting sites, to ensure that noise levels from construction activities do not exceed 60 dBA hourly average or the dBA of ambient noise level should they be greater than 60 dBA hourly average (i.e., whichever is greater). If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved until the end of the breeding season or until the fledgling birds have left the nest, whichever occurs first.

NOI-14: Where the placement of stationary equipment is necessary to perform construction activities and the equipment would result in noise levels exceeding ambient levels or 60 dBA L_{eq}, whichever is higher, in the vicinity of nest sites, noise shrouds, sound blankets or screening walls will be used to reduce sounds levels from the equipment to ambient conditions or 60 dBA, whichever is higher. A qualified noise consultant will be consulted in order to verify the effectiveness of said mitigation.

a) ***Off-Reservation***

Less than Significant Impact with Mitigation Incorporated. Construction noise is regulated by Sections 36.408 and 36.409 and 36.410 of the San Diego County Code as presented in section 4 of the Noise Study prepared for the Project. The threshold for determining an indirect impact to the least Bell's vireo, a protected bird species, is 60 dBA L_{eq} during the nesting season.

Worst case construction noise contours were developed using the FTA methodology. Construction noise modeling worksheets for each phase are provided in the *Long-Term Potable and Recycled Water Service to Barona Indian Reservation Focused Construction Noise and Vibration Impact Analysis* prepared by Ganddini Group Inc. (Appendix F). The noise contour maps provided in Appendix E are intended to show the extents of the worst-case hour construction scenario for the 60 dBA one-hour L_{eq} and 75 dBA L_{eq} (8-hour) noise standards and a maximum noise level (L_{25}) scenario for the impulsive noise standards of 82 and 85 dBA L_{25}. In practice, construction will likely occur along one segment of the pipeline at a time, so only receptors in the vicinity of that portion of alignment will be affected. Noise levels at any particular receptor will increase and then decrease as construction moves along the pipeline alignment.

Compliance with Established Hours for Construction

Project construction is expected to occur during normal daytime hours and is not expected to violate the established hours of construction provided in Section 36.4.08 of the County Code. This impact would not be significant.

Project Compliance with 75 dBA L_{eq} (8-hour) Noise Standard

As shown on *Figures 6-11 and in Table 7* of Appendix F, project construction has the potential to exceed 75 dBA L_{eq} (eight-hour) noise standard at existing occupied properties, including residential, commercial and civic land uses. However, the nature of the linear construction means that the construction equipment will be moving from one segment to another, and when averaged over an 8-hour day, the projected noise calculations identify that the proposed work will not exceed the 75 dBA L_{eq} (8-hour)

County requirement. (See Appendix F-1 Noise Study SoundPlan Figures) Impacts would be less than significant with implementation of **Mitigation Measures NOI-1 through NOI-9**, below.

Compliance with 82 dBA L_{25} (25 percent of the time) Noise Standard

Due to the terrain, there may be a need to utilize construction equipment that emits impulsive noise, i.e. blasting, rock excavation, and hoe ram. As shown in *Figures 6-11 and Table 6 and Table 7* of Appendix F, project construction has the potential to exceed 82 dBA L_{25} at existing residential, village and civic land uses for 25 percent of the time at agricultural, commercial or industrial land use. This impact would be significant without mitigation. Implementation of **Mitigation Measures NOI-2, NOI-5, NOI-9 and NOI-10** will reduce potential impacts to less than significant

Compliance with 85 dBA L_{25} (25 percent of the time) Noise Standard

Due to the terrain, there may be a need to utilize construction equipment that emits impulsive noise i.e. blasting, rock excavation, and hoe ram. Project construction activities have the potential to exceed 85 dBA L_{25} at agricultural, commercial or industrial land uses. This impact would be significant without mitigation. Implementation of **Mitigation Measures NOI-2, NOI-5, NOI-9 and NOI-10** will reduce potential impacts to less than significant.

On-Reservation

Less than Significant Impact with Mitigation Incorporated.[37] Compliance with established hours for construction, the 75 dBA Leq (8-hour) noise standard, the 82 dBA Lmax (25 percent of the time) noise standard, the 85 dBA Lmax (25 percent of the time) noise standard, and recommended noise mitigation measures outlined for the off-Reservation construction impacts, would ensure that impacts resulting from construction of the on-Reservation portions of the Project would be reduced to a less than significant level.

Mitigation Measures

NOI-1: All equipment, whether fixed or mobile, will be equipped with properly operating and maintained mufflers, consistent with manufacturer standards.

NOI-2: All stationary construction equipment will be placed so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.

NOI-3: As applicable, all equipment shall be shut off and not left to idle when not in use.

NOI-4: To the degree possible, equipment staging will be located in areas that create the greatest distance between construction-related noise and vibration sources and existing sensitive receptors.

NOI-5: Jackhammers, pneumatic equipment, and all other loud portable stationary noise sources will be directed away and shielded from existing residences in the vicinity of the project site. Either one-inch plywood or sound blankets can be utilized for this purpose. They

[37] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

should reach up from the ground and block the line of sight between equipment and existing residences. The shielding should be without holes and cracks.

NOI-6: No amplified music and/or voice will be allowed on the project site.

NOI-7: Haul truck deliveries will not occur between the hours of 7:00 PM and 7:00 AM.

NOI-8: Delivery trucks shall not arrive in the vicinity before 7:00 AM and idle near sensitive receptors.

NOI-9: Noise monitoring shall be conducted by a qualified noise consultant at the property line of representative occupied land uses that are within the 75 dB L_{eq} noise contour as shown in *Figures 6-11* of Appendix F, during typical construction activities. The measurement shall be conducted over an 8-hour period in order to determine if the 75 dBA L_{eq} (8-hour) standard is violated. If after several noise measurements (3) have been conducted, it is apparent that the mix of equipment and timing of usage will not exceed 75 dBA L_{eq} (8-hour) the noise consultant shall provide a letter report documenting the noise measurements and findings and recommendations as to whether or not continued noise monitoring is necessary.

If noise monitoring does show that construction noise levels exceed the 8-hour Leq standard at occupied properties located within the 75 dBA noise contour, the contractor will implement measures to reduce construction noise levels to below 75 dBA L_{eq} (8-hour) between 7:00 AM and 7:00 PM, on any occupied property located within the 75 dBA noise contour (as measured at the property line).

- If needed, temporary noise barriers will be installed to block the line of sight between the noise source(s) and the occupied property. These barriers shall be of sufficient height to block the line of sight between the source(s) and receptor(s) based on recommendations of a competent noise professional.
- If needed, temporary barriers will be solid, with no holes or gaps, from the ground to the heigh determined by the on-site noise professional.
- For stationary equipment, temporary barriers will also be solid with no holes or gaps, except for openings that are necessary to access the equipment.

NOI-10: *Compliance with County Ordinance 36.410 - Sound Level Limitations on Impulsive Noise*

82 dBA L_{25}

Noise monitoring shall be conducted by a qualified noise consultant at the property line of representative occupied residential land uses that are within the 82 dB L_{25} noise contour as shown in *Figures 6-11* of Appendix F, during typical construction activities. Measurements shall be conducted over a 1-hour period in order to determine if the 82 dBA L_{25} standard is violated at occupied residential, village, or civic land uses. If after several noise measurements (3) have been conducted, and it is apparent that the mix of equipment and timing of usage will not exceed this standard, the noise consultant shall provide a letter report documenting the noise measurements and findings and recommendations as to whether or not continued noise monitoring is necessary.

If noise monitoring does show that construction noise levels exceed 82 dBA L_{25} standard at occupied residential, village, or civic land uses, the contractor will implement the following measures:

- If needed, temporary noise barriers will be installed to block the line of sight between the noise source(s) and the occupied property. These barriers shall be of sufficient height to block the line of sight between the source(s) and receptor(s) based on recommendations of a competent noise professional.
- If needed, temporary barriers will be solid, with no holes or gaps, from the ground to the heigh determined by the on-site noise professional.
- For stationary equipment, temporary barriers will also be solid with no holes or gaps, except for openings that are necessary to access the equipment.

85 dBA L_{25}

Noise monitoring shall be conducted by a qualified noise consultant at the property line of representative occupied residential land uses that are within the 85 dB L_{25} noise contour as shown in *Figures 6-11* of Appendix F, during typical construction activities. Measurements shall be conducted over a 1-hour period in order to determine if the 85 dBA L_{25} standard is violated at occupied agricultural, commercial or industrial land uses. If after several noise measurements (3) have been conducted, and it is apparent that the mix of equipment and timing of usage will not exceed this standard, the noise consultant shall provide a letter report documenting the noise measurements and findings and recommendations as to whether or not continued noise monitoring is necessary.

If noise monitoring does show that construction noise levels exceed 85 dBA L_{25} standard at occupied residential, village, or civic land uses, the contractor will implement the following measures:

- If needed, temporary noise barriers will be installed to block the line of sight between the noise source(s) and the occupied property. These barriers shall be of sufficient height to block the line of sight between the source(s) and receptor(s) based on recommendations of a competent noise professional.
- If needed, temporary barriers will be solid, with no holes or gaps, from the ground to the heigh determined by the on-site noise professional.
- For stationary equipment, temporary barriers will also be solid with no holes or gaps, except for openings that are necessary to access the equipment.

For impulsive noise, the measurement period shall be one-hour. During the measurement period a measurement shall be conducted every minute from a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise exceeds the maximum sound level for any portion of any minute, it will be deemed that the maximum sound level was exceeded during that minute.

b) ***Off-Reservation***

Less than Significant Impact with Mitigation Incorporated In relation to the CEQA Environmental Checklist Noise section, the County of San Diego has not established thresholds of significance concerning groundborne vibration. In the absence of County-established thresholds, groundborne vibration impacts are based on guidance from the *Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual* (FTA, September 2018) (Appendix F).

Accordingly, the off-Reservation portions of the Project would result in a significant impact if the most vibratory piece of equipment expected to be utilized on the project site is a large bulldozer (Appendix F). A large bulldozer can generate a groundborne vibration level of 0.210 at a distance of 25 feet.[38] Potential damage caused by groundborne vibration is dependent upon the distance from the source and the affected structure. There are no existing buildings extremely susceptible to vibration damage near the proposed alignment. The next most sensitive structure would be non-engineered timber and masonry buildings. The damage impact threshold for these structures is 0.2 PPV (Appendix E). If a large bulldozer is utilized within 25 feet of such a structure, there is potential for structural damage. This impact is potentially significant. Implementation of the following mitigation measure **NOI-15** would reduce impacts to less than significant.

On-Reservation

Less than Significant Impact Similarly, the on-Reservation portions of the Project would result in a significant impact if the most vibratory piece of equipment expected to be utilized on the Project site is a large bulldozer (Appendix F). A large bulldozer can generate a groundborne vibration level of 0.210 at a distance of 25 feet. Recommended mitigation measures outlined for the off-Reservation construction impacts, would ensure that impacts resulting from construction of the on-Reservation portions of the Project would be reduced to a less than significant level.

Mitigation Measures

NOI-15: The use of large bulldozers shall be avoided within 14 feet of existing structures and the use of vibratory rollers shall be avoided within 25 feet of existing structures. A small bulldozer is an acceptable alternative.

c) ***Off-Reservation***

No Impact. The closest airport to the project site is Ramona Airport which is located approximately 4.5 miles northwest of the off-Reservation portion of the Project site. Therefore, as the Project is not within two miles of a public airport or in the vicinity of a private airstrip, the Project would not expose people residing or working in the project area to excessive noise levels associated with airports.

On-Reservation

No Impact. The closest airport to the project site is Ramona Airport which is located approximately 5.0 miles northwest of the on-Reservation portion of the Project site.

[38] Long-Term Potable and Recycled Water Service to Barona Indian Reservation Focused Construction Noise and Vibration Impact Analysis, June 27, 2024, Ganddini Group Inc.

Therefore, as the Project is not within two miles of a public airport or in the vicinity of a private airstrip, the Project would not expose people residing or working in the project area to excessive noise levels associated with airports.

Implementation of recommended mitigation measures will reduce Project impacts to a less than significant level.

XIV. POPULATION AND HOUSING

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project:				
a)	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b)	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SUBSTANTIATION:

San Diego County General Plan, 2011 (last amended February 10, 2023); Long-Term Potable and Recycled Water Service to Barona Indian Reservation, June 2022, Dudek

This section analyzes the effects of the proposed Project related to population and housing utilizing thresholds as set forth in Appendix G of the CEQA Guidelines.

a) ***Off-Reservation***

Less than Significant Impact. The Project would not induce substantial *unplanned* population growth in the area, either directly or indirectly on off-Reservation portions of the Project. The Project is in effect a *plan* to sustainably increase the availability of water resources (potable and recycled) to the Barona Tribe as the tribal population grows, increasing demand. Impacts resulting from implementation of the Project are expected to be less than significant.

On-Reservation

Less than Significant Impact. On-Reservation, recent projections show the Tribe's long-term water demand exceeding the sustainable yield of the underlying groundwater basin as droughts lengthen and become more frequent. The Tribe expects average annual potable water demand to increase by 25% because of steady residential development. The number of homes on the Reservation in 2002 was 186, the number in 2022 was 282, an increase of 96 homes over a 20-year period. Meanwhile, the Tribe's ultimate potable water demand is estimated at approximately 1500 acre-feet per year (afy) when the Reservation is fully developed. Implementation of the Project would not induce substantial *unplanned* population growth in the area, either directly or indirectly. The Project is in effect a *plan* to sustainably increase the availability of water resources

(potable and recycled) as the tribal population grows, increasing demand. Impacts resulting from implementation of the Project are expected to be less than significant.[39]

b) ***Off-Reservation***

No Impact. Wildcat Canyon Road on the off-Reservation portion of the Project where the proposed water pipelines would be installed provides access to eight parcels under county jurisdiction. Four are vacant and four are developed with a single-family residence each. Aside from temporary construction of the Project, none of the parcels would be impacted by the displacement of substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. There would be no impact.

On-Reservation

No Impact. The on-Reservation portion of the Project will pass single family residential parcels when within the right of way of Reservation roads specifically Ketuull Uunyaa Way and continues south in Ketuull Uunyaa Way and other unnamed local roadways to Featherstone Canyon Way and the terminus of the pipeline. Implementation of the Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. There would be no impact.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

[39] As a matter of Tribal sovereignty and federal law, the Barona Band is entitled to control the use and development of the lands of the Barona Indian Reservation.

XV. PUBLIC SERVICES

Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire Protection?	☐	☐	☒	☐
Police Protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other Public Facilities?	☐	☐	☒	☐

SUBSTANTIATION:

San Diego County General Plan, 2011 (last amended February 10, 2023); Barona-nsn.gov/community; Barona Band of Mission Indians (barona-nsn.gov);

This section analyzes the effects of the proposed Project related to public services utilizing thresholds as set forth in Appendix G of the CEQA Guidelines.

a) ***Off-Reservation***

Less than Significant Impact. For the 2,100 lineal feet of 12-inch potable water pipeline and 3,000 lineal feet of 8-inch recycled water pipeline on the off-Reservation portion of the Project there would be no substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services listed above.

On-Reservation

Less than Significant Impact.

Fire Protection:

Based on the nature of the Project, there would be no significant fire or emergency response hazard, nor is the Proposed Project forecast to cause a significant demand for fire protection services. San Diego County Fire Protection District (SDCFPD) has jurisdiction over the portion of the Project that is off-Reservation. SDCFPD is the closest responding agency to this area with three stations nearby, they are:

- Station 80-Ramona – approximately 4.0 miles north of the Project area
- Station 81-Ramona – approximately 2.4 miles east of the Project area

- Station 82-Ramona – approximately 3.8 miles west of the Project area

On-Reservation, the Barona Fire Protection District was established in 1998 to provide its own positive, professional, and dedicated fire service to the residents and patrons of the Barona Reservation. There are currently 20 full-time fire personnel and one administrative person. They are neighbors with Lakeside to the South and Ramona to the North and have auto-aide agreements with Lakeside Fire Protection District, SDCFPD, and Central Zone agencies to provide and receive aid when needed.

Police Protection:
The San Diego County Sheriff's Department provides law enforcement services to the 18 Indian Reservations throughout the County. The Barona Indian Reservation also employs members of the Barona Tribal Enforcement Detail who serve as a liaison with allied agencies when on Tribal lands such as the San Diego Sheriff's Department, California Highway Patrol, Local Fire Departments etc.

As an underground water pipeline, the Project is not expected to result in any unique or more extensive crime problems that cannot be handled with the existing level of police resources. Therefore, impacts to police protection resources from implementation of the Proposed Project are considered less than significant.

Schools:
The Project is not anticipated to generate any new direct demand for the area schools. As previously discussed, the Project will provide a more sustainable water source for the planned expected growth of the Barona Tribe's population on the reservation. The Project will not induce a need for additional schools on or off the Reservation. School aged children who reside along Wildcat Canyon Road and its intersection with San Vicente Road, likely attend elementary, middle, and high school within the city of Ramona. Impacts would be less than significant.

Parks:
Implementation of the Project would not induce the need for the creation of new parks or recreational facilities. Many recreational opportunities exist on and off the reservation. The need may increase in the future with expected growth on the reservation and surrounding area. However, impacts from the Proposed Project would be less than significant.

Other Public Facilities:
As an underground water pipeline to serve the residents of the Barona Tribe to the south, there would be less than significant impacts to public facilities outside of the reservation. Impacts would be less than significant.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

XVI. RECREATION

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	☐	☐	☐	☒
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

SUBSTANTIATION:

San Diego County General Plan, 2011 (last amended February 10, 2023); **Barona-nsn.gov/community**

This section analyzes the effects of the proposed Project related to recreation utilizing thresholds as set forth in Appendix G of the CEQA Guidelines.

a) ***Off-Reservation***

No Impact. As a proposed water pipeline Project, there would not be an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated. There would be no impact.

On-Reservation

No Impact. As a proposed water pipeline Project, there would not be an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated. There would be no impact.

b) ***Off-Reservation***

No Impact. The Project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. There would be no impact.

On-Reservation

No Impact. The Project does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. There would be no impact.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

XVII. TRANSPORTATION

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project:				
a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
b)	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?	☐	☐	☒	☐
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d)	Result in inadequate emergency access?	☐	☒	☐	☐

SUBSTANTIATION:

San Diego County General Plan, 2011 (last amended February 10, 2023)

California Senate Bill 743 (SB 743) changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change was made by replacing level of service (LOS) with vehicle miles travelled (VMT) and providing streamlined review of land use and transportation projects that will help reduce future VMT growth. This shift in transportation impact focus is expected to better align transportation impact analysis and mitigation outcomes with the State's goals to reduce GHG emissions, encourage infill development, and improve public health through more active transportation[40]

CEQA Guidelines Section 15064.3, subdivision (b) stipulates criteria for analyzing transportation impacts in terms of "vehicle miles traveled" for land use projects and transportation projects. VMT refers to the amount and distance of automobile travel attributable to a project.

a) ***Off-Reservation***

Less than Significant Impact with Mitigation Incorporated. The Proposed Project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Construction of the Proposed Project in off-Reservation areas may necessitate individual traffic lane closures. To ensure the appropriate traffic controls are implemented and potential traffic impacts related to lane closures are less than significant, the Proposed Project shall implement project coordination with emergency responders and

[40] What is SB 743? (sandiegocounty.gov)

development of an approved Traffic Control Plan. Implementation of mitigation measure **TRA-1** would ensure that potential traffic impacts related to road closures and detours would be less than significant.

On-Reservation

Less than Significant Impact with Mitigation Incorporated.[41] The Proposed Project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Construction of the Proposed Project in on-Reservation areas may necessitate individual traffic lane closures. To ensure the appropriate traffic controls are implemented and potential traffic impacts related to lane closures are less than significant, the Proposed Project shall implement project coordination with emergency responders and development of an approved Traffic Control Plan. Implementation of mitigation measure **TRA-1** would ensure that potential traffic impacts related to road closures and detours would be less than significant.

b) ***Off-Reservation***

Less than Significant Impact. Construction of the Proposed Project would involve temporary trips associated with workers, delivery of construction supplies and equipment, and hauling materials to and from the site. Vehicle trips would include employees that may be onsite, and construction vehicles moving materials and equipment. These trips would be temporary and would not result in a perceivable increase in vehicle miles traveled that would exceed County thresholds of significance. Truck trips associated with operation and maintenance would be scheduled and non-scheduled (as needed). Therefore, the project would be consistent with CEQA Guidelines Section 15064.3, subdivision (b) and there would be no impact.

Based on the County of San Diego Transportation Study Guidelines the Proposed Project would qualify as "screened out" for further transportation analysis under the following conditions based on project type.

- Small Projects: Does the Project result in 110 daily trips or less? Yes

  Temporary Project construction would not generate an excess of 110 vehicle trips

- Locally Serving Retail or **Public Facility**, or Recreational? Yes

  The Project associated with a utility to serve the public would not be subject to further transportation analysis based on the operation of the pipelines. Maintenance vehicles may access components of the pipelines (booster pump station, flow meter station etc.) intermittently for maintenance throughout each year[42]

On-Reservation

Less than Significant Impact. Construction of the Proposed Project would involve temporary trips associated with workers, delivery of construction supplies and

[41] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.
[42] Transportation Study Guide - FINAL - September 2022 - Updated Maps.pdf (sandiegocounty.gov)

equipment, and hauling materials to and from the site. Vehicle trips would include employees that may be onsite, and construction vehicles moving materials and equipment. These trips would be temporary and would not result in a perceivable increase in vehicle miles traveled that would exceed County thresholds of significance. Truck trips associated with operation and maintenance would be scheduled and non-scheduled (as needed). Therefore, the project would be consistent with CEQA Guidelines Section 15064.3, subdivision (b) and there would be no impact.

c) ***Off-Reservation***

No Impact. The Proposed Project would install a 12-inch potable water pipeline at approximately 41,900 LF and a new 8-inch recycled water pipeline at approximately 21,700 LF. Additional facilities include a proposed flow meter station at 11’11” x 25’10” surrounded by a 6’ fence, a pressure reducing station at 20’4” x 9’2” with surrounding 6’ fence, and a Booster Pump Station at approximately 34’1” x 37’4” and about 12’ in height with an attached secondary structure at 12’0” x 17’4”. The proposed flow meter station would be located in the County right-of-way, but the other facilities (pressure reducing station, booster pump station, etc.) would be located on Reservation land outside of the County right-of-way. The associated onsite piping, meters, hydrants and valves would not have a permanent impact on geometric roadway design. The District follows County guidelines on installation of facilities in the County right-of-way and does not include bollards surrounding fire hydrants, air release valves, and other minor appurtenances structures. All disturbed areas would be restored to original grade. The District would continue to operate its water system with no operational modifications using standard vehicles, which would not introduce incompatible uses to roadways. The Project would not result in transportation hazards. There would be no impact.

On-Reservation

No Impact. The Proposed Project would install a 12-inch potable water pipeline at approximately 41,900 LF and a new 8-inch recycled water pipeline at approximately 21,700 LF. Additional facilities include a proposed flow meter station at 11’11” x 25’10” surrounded by a 6’ fence, a pressure reducing station at 20’4” x 9’2” with surrounding 6’ fence, and a Booster Pump Station at approximately 34’1” x 37’4” and about 12’ in height with an attached secondary structure at 12’0” x 17’4”. The proposed flow meter station would be located in the County right-of-way, but the other facilities (pressure reducing station, booster pump station, etc.) would be located on Reservation land outside of the County right-of-way. The associated onsite piping, meters, hydrants and valves would not have a permanent impact on geometric roadway design. All disturbed areas would be restored to original grade. Barona would continue to operate its water system with no operational modifications using standard vehicles, which would not introduce incompatible uses to roadways. The Project would not result in transportation hazards. There would be no impact.

d) ***Off-Reservation***

Less than Significant Impact with Mitigation Incorporated. Construction of the Project off-Reservation would generate trips associated with construction crews and materials deliveries and may necessitate individual traffic lane closures. Lane closures and other construction activities have the potential to result in inadequate access for

emergency vehicles. Traffic control requirements would require that emergency crews have access, as needed, and that the contractor coordinates the location of the work daily for routing of emergency vehicles. Traffic control would also require the contractor to make reasonable efforts, wherever possible, to provide landowners access to their property and patrons access to businesses during execution of the work. To ensure that project construction would not interfere with emergency response times, the Proposed project would implement mitigation measure **TRA-1**. With the incorporation of traffic control measures identified in mitigation measure **TRA-1**, impacts would be less than significant. There would be no impacts resulting in the operation of the Project.

On-Reservation

Less than Significant Impact with Mitigation Incorporated.[43] Construction of the Project on-Reservation would generate trips associated with construction crews and materials deliveries and may necessitate individual traffic lane closures. Lane closures and other construction activities have the potential to result in inadequate access for emergency vehicles. Traffic control requirements would require that emergency crews have access, as needed, and that the contractor coordinates the location of the work daily for routing of emergency vehicles. Traffic control would also require the contractor to make reasonable efforts, wherever possible, to provide landowners access to their property and patrons access to businesses during execution of the work. To ensure that project construction would not interfere with emergency response times, the Proposed project would implement mitigation measure **TRA-1**. With the incorporation of traffic control measures identified in mitigation measure **TRA-1**, impacts would be less than significant. There would be no impacts resulting in the operation of the Project.

Mitigation Measure

TRA-1: Construction activities may impact access to or from adjacent land uses. Therefore, residents and businesses should be notified of potential obstructions. Blocked access to nearby properties would require advance coordination with property owners and tenants. Contractor shall submit a Traffic Control Plan to the County and the Tribe to include:

- Identification of construction staging site locations and potential road closures,
- Alternate routes of traffic detours, including emergency response contact information,
- Planned routes for construction-related vehicle traffic (haul routes), and
- Identification of alternative safe routes to maintain pedestrian safety during construction.

Implementation of recommended mitigation measure will reduce Project impacts to a less than significant level.

[43] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

XVIII. TRIBAL CULTURAL RESOURCES

Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
a) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

SUBSTANTIATION:

San Diego County General Plan, 2011 (last amended February 10, 2023); A Section 106 (NHPA) Historic Resources Study for the Barona Long-Term Potable and Recycled Water Service Project, BFSA Environmental Services, a Perennial Company, November 15, 2023; Cultural Historical Resources Information System (CHRIS), South Central Coast Information Center, California State University, Fullerton

This section analyzes the effects of the proposed Project related to tribal cultural resources utilizing thresholds as set forth in Appendix G of the CEQA Guidelines.

Consultation with California Native American Tribes

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

The following is a summary of AB 52 tribal notification to the tribe that requested to be notified and given the opportunity to consult.

On June 18, 2024 the District mailed notification pursuant to AB52 to the following tribe:

- Wilton Rancheria.

Requests for consultations were due to the District by July 18, 2024. No response has been received.

As proposed, the Project includes the construction of two roughly parallel underground water pipelines to run from the Ramona Municipal Water District facilities, in the county of San Diego, onto and southward through the Barona Indian Reservation to provide both recycled and potable water to the reservation and its residents. BFSA Environmental, a Perennial Company (BFSA), was contracted by the Barona Band of Mission Indians to prepare an historic resources study for the Barona Long-Term Potable and Recycled Water Service Project (Barona LTPRWS Project). As such, BFSA completed a Class I inventory of a one-mile radius around the undertaking, conducted a Class III intensive pedestrian archaeological survey of the proposed undertaking to assess the potential adverse effects to any historic resources within the Area of Potential Effect (APE), and implement National Register of Historic Places (NRHP) eligibility testing of archaeological sites where appropriate in accordance with 36 CFR 60.4.

a-i) ***Off-Reservation***

Less than Significant Impact. A review of the APE indicates the majority of the alignment and associated 50-foot buffer were previously disturbed by existing roads (paved and unpaved), power lines, trails, and rural residential development. The historic resources survey was conducted on August 17 and 18 and September 28, 2023. All of the resources identified during the survey are located on the Barona Indian Reservation portion of the project and subject to federal guidelines (Section 106 of the NHPA and the NEPA). No other sites were discovered therefore, less than significant impact is expected on the off-Reservation portion of the alignment.

On-Reservation

Less than Significant Impact with Mitigation Incorporated.[44] The historic resources survey was conducted on August 17 and 18 and September 28, 2023. The survey identified five previously unrecorded prehistoric bedrock milling sites (Temp-1 to Temp-5) and one prehistoric isolate (Iso-1). Through a review of the APE, it was determined that Temp-1 and Iso-1 are well outside of the alignment and will not be impacted by the undertaking. However, Temp-2 to Temp-5 are located within or directly adjacent to the APE alignment and required testing and significance evaluations. All of the resources identified during the survey are located on the Barona Indian Reservation portion of the project and subject to federal guidelines (Section 106 of the NHPA and the NEPA). No other sites were discovered therefore, less than significant impact is expected on the off-Reservation portion of the alignment. Mitigation measure **CUL-1** will reduce impacts of inadvertent discoveries of archaeological and historical resources to a less than significant level.

[44] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

a-ii) ***Off-Reservation***

Less than Significant Impact with Mitigation Incorporated. Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regards to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the property has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the project.

The Historic Resources Study prepared by BFSA did not identify previously recorded sites with human remains within the off-Reservation portions of the Proposed Project APE. However, there is a potential for unidentified human remains to be present within the Proposed Project site. If present, the human remains could be damaged by ground disturbing activities associated with the Proposed Project. If inadvertent discoveries of human remains occur, mitigation measure **CUL-2** below would reduce impacts to a less than significant level.

On Reservation

Less than Significant Impact with Mitigation Incorporated.[45] The Historic Resources Study prepared by BFSA did not identify previously recorded sites with human remains within the on-Reservation portions of the Proposed Project APE. However, there is a potential for unidentified human remains to be present within the Proposed Project site. If present, the human remains could be damaged by ground disturbing activities associated with the Proposed Project. If inadvertent discoveries of human remains occur, mitigation measure **CUL-2** below would reduce impacts to a less than significant level.

Mitigation Measure

CUL-1: Unanticipated discovery of previously unknown archaeological or historical materials could occur during ground-disturbing activities. If any subsurface cultural resources are encountered during earth-moving activities, all work within 50 feet shall be halted and the applicant shall retain an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology to evaluate the significance of the find and recommend appropriate treatment for the resource. Prehistoric materials can include flaked-stone tools (e.g., projectile points, knives, choppers) or obsidian, chert, or quartzite toolmaking debris; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash, and charcoal, shellfish remains, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Historical materials might include wood, stone, or concrete footings, walls, and other structural remains; debris-filled wells or privies; and deposits of wood, metal, glass, ceramics, and other refuse. The archaeologist will evaluate the find in accordance with state and local guidelines, including those set forth in the California Public Resources Code Section 21083.2. Depending upon the nature of the find, if the discovery proves to be potentially significant under CEQA, as determined by the qualified archaeologist, additional work such as data recovery excavation, avoidance of the area of the find, documentation, testing, data recovery, reburial, archival review and/or transfer to the appropriate museum or educational institution, or other

appropriate actions may be warranted at the discretion of the qualified archaeologist. After the find is appropriately mitigated, work in the area may resume.

CUL-2: Should human remains be identified during ground-disturbing activities related to the implementation of the Proposed Project, whether during construction, maintenance, or any other activity, State Public Resources Code Section 5097.98, CEQA Section 15064.5 and Health & Safety Code Section 7050.5 and County-mandated procedures will be followed for the treatment and disposition of those remains, as follows.

- The Property Owner or their representative shall contact the County Coroner and the PDS Staff Archaeologist.
- Upon identification of human remains, no further disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin. If the human remains are to be taken offsite for evaluation, they shall be accompanied by the Kumeyaay Native American monitor.
- If the remains are determined to be of Native American origin, the NAHC shall immediately contact the Most Likely Descendant (MLD).
- The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by Public Resources Code Section 5097.98 has been conducted.
- The MLD may with the permission of the landowner, or their authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

Implementation of recommended mitigation measures will reduce Project impacts to a less than significant level.

[45] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

XIX. UTILITIES AND SERVICE SYSTEMS

	Issues	*Potentially Significant Impact*	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
	Would the project:				
a)	Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b)	Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c)	Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d)	Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	☒
e)	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

SUBSTANTIATION: San Diego County General Plan, 2011 (last amended February 10, 2023)

This section analyzes the effects of the proposed Project related to utilities and service systems utilizing thresholds as set forth in Appendix G of the CEQA Guidelines.

a) ***Off-Reservation***

Less than Significant Impact. The proposed water pipelines will run roughly parallel to each other as well as to Wildcat Canyon Road which runs north to south through the

Reservation. The 8-inch recycled water pipeline will begin at the San Vicente Wastewater Reclamation Plant on San Vicente Road approximately 0.23 miles east of the intersection of San Vicente Road and Wildcat Canyon Road and run westward to Wildcat Canyon Road turn southward and run parallel with the 12-inch pipeline. The potable water 12-inch pipeline will begin at the intersection of San Vicente Road and Wildcat Canyon Road within the right of way of Wildcat Canyon Road. While new sections of water pipeline are proposed to carry potable as well as recycled water to tribal residences, much of the alignment is parallel to and/or replacing existing waterline infrastructure. Implementation of the Project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

On-Reservation

Less than Significant Impact. While new sections of water pipeline are proposed to carry potable water to tribal residences and facilities and recycled water to the Barona Golf Course, much of the alignment is parallel to and/or replacing existing waterline infrastructure. Implementation of the Project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects

b) ***Off-Reservation***

No Impact. The purpose of the Project is to provide a sustainable water supply to the Barona Reservation while reducing the use of limited groundwater supplies. Off-Reservation water supplies would not be affected as both the District and SDCWA have sufficient water capacity to supply anticipated tribal needs. In the District's 2020 Urban Water Management Plan, water supply and use were projected at approximately 4,839 AFY in 2025 and 5,268 AFY in 2040 (see Table XIX-1). Due to water conservation regulations, the implementation of water saving technologies for residential, commercial and agricultural users, and the District's high cost of water, the District's water use continues to decline as shown in Table XIX-2 with the exception of Fiscal Year 2020-2021 during the extended drought. Due to restrictions on development by the County, the District is anticipated to have a very low development rate, approximately 0.4% and with the change from avocados and other high water use crops to grapes and olive trees, agricultural water use has significantly declined since 2007 when the Witch Creek Fire decimated many of the District's avocado groves and is projected to continue to decline. During extended multi-year droughts, the District will need to draw more heavily on SDCWA as noted in Fiscal Year 2020-2021. Section 11 of SDCWA's Urban Water Management Plan (available online here: 2020-UWMP_Final-Print-Version-July-2021-1.pdf (sdcwa.org)) discusses how the SDCWA and its member agencies respond to water shortages. In the recent Fiscal Year 2020-2021 drought, SDCWA had excess supply due to its substantial investment in alternative water supplies over the last two decades, such as the Carlsbad Desalination Plant, San Vicente Emergency Storage Project and the Imperial Irrigation District Quantification Settlement Agreement (QSA) water transfer.

The District is prepared to enter into a 4-party agreement for potable water service and the 2-party agreement for recycled water service as described in Section 1.0 (Introduction). Potable water provided by Metropolitan, SDCWA, and the District will be used only within the agreed-upon Water Service Area, of approximately 1784 acres as shows in Figure 14.

As noted above, the Tribe will have to enter into a four-party potable water supply agreement with the District, SDCWA, and Metropolitan and agree to comply with all serving public agencies' water service regulations, like any other customer. Thus, SDCWA member agencies are called on to conserve water due to a supply shortage, these requirements would also apply to the Barona reservation and are included in the water supply agreement between the District, the tribe, SDCWA and Metropolitan. Therefore, there is sufficient water supply for both the District's proposed developments and the Barona Reservation even in multiple dry years. There would be no impact.

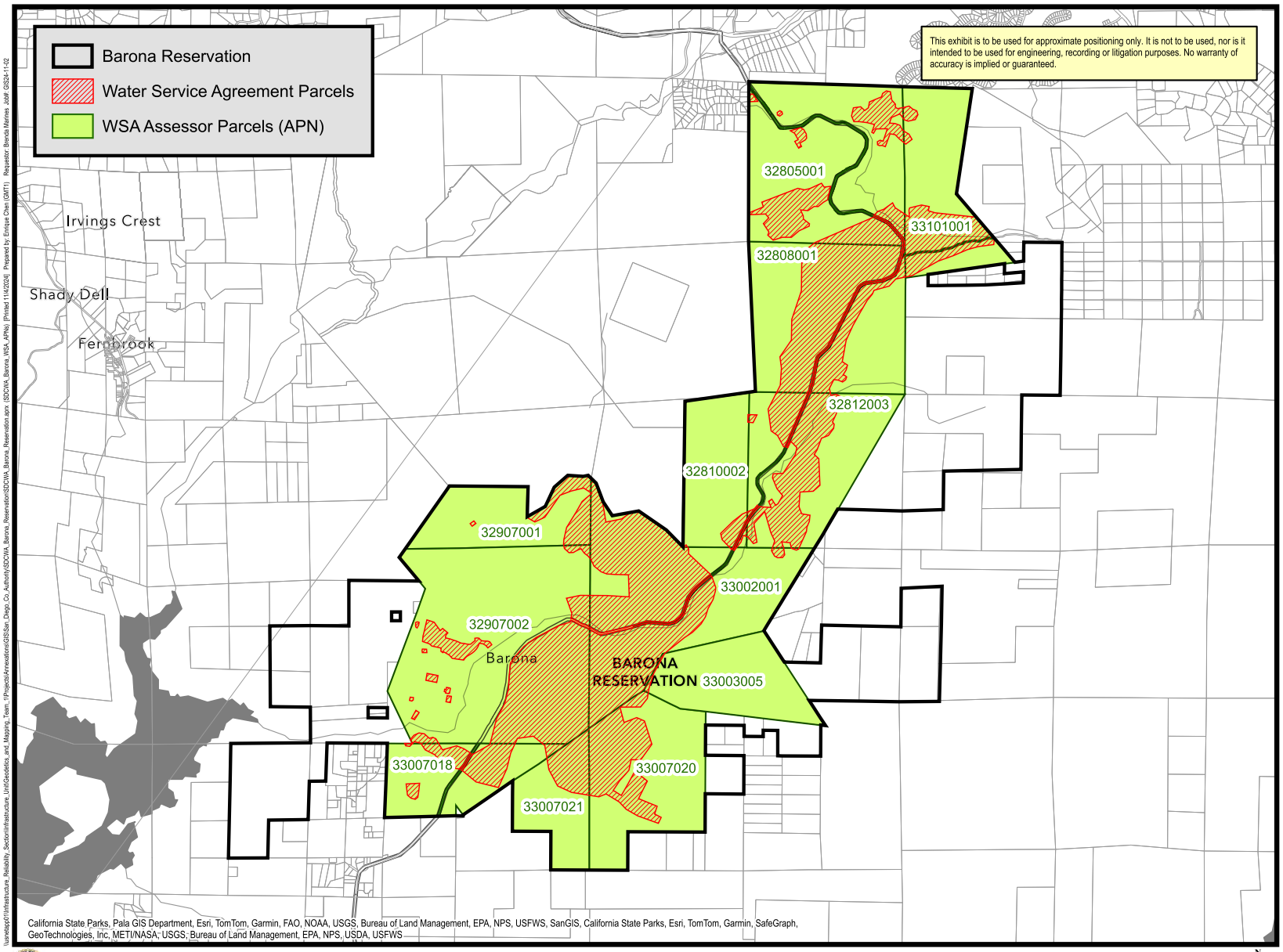
On-Reservation

No Impact. There is sufficient water supply for both the District's proposed developments and the Barona Reservation even in multiple dry years. There would be no impact.

Table XIX-1 Projected Water Supply and Use from the District's 2020 Urban Water Management Plan		
Year	**Projected Supply (AFY)**	**Projected Use (AFY)**
2025	4,839	4,838
2030	4,977	4,977
2035	5,121	5,120
2040	5,268	5,268

Table XIX-2 District Water Sales Compared to Anticipated 2025 Usage		
Fiscal Year	**Actual Water Sales (AFY)**	**Actual Use Compared to 2025 Projection (AFY)**
2018-2019	4,360	(478)
2019-2020	4,137	(701)
2020-2021	4,869	31
2021-2022	4,580	(258)
2022-2023	3,854	(987)
2023-2024	3,687	(1,151)

The 2020 UWMP is available online at 637798357567600000 (rmwd.org)



The Metropolitan Water District of Southern California
Engineering Services Group

Barona Reservation
Water Service Agreement (WSA) Parcels

WATER SERVICE AREAS

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

LILBURN CORPORATION

FIGURE 14

c) ***Off-Reservation***

No Impact. As a proposed water pipeline, the Project would not directly generate wastewater. Residences constructed off reservation, would be subject to County of San Diego requirements for septic systems. Sewer is not available along the pipeline alignment between San Vicente Road and Little Klondike Road. The Project is not anticipated to result in new residential or other facilities off of the reservation. There would be no impact.

On-Reservation

No Impact. As a proposed water pipeline, the Project would not directly generate wastewater. Tribal residences to be constructed in the future will likely be on individual septic systems or directed to the Tribe's existing wastewater plant. There would be no impact.

d) ***Off-Reservation***

No Impact. As a proposed water pipeline, the Project would not generate solid waste. There would be no impact.

On-Reservation

No Impact. As a proposed water pipeline the Project would not generate solid waste. There would be no impact.

e) ***Off-Reservation***

No Impact. As a proposed water pipeline the Project would not affect regulations related to solid waste. There would be no impact.

On-Reservation

No Impact. As a proposed water pipeline the Project would not affect regulations related to solid waste. There would be no impact.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

XX. WILDFIRE

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

SUBSTANTIATION:

County of San Diego General Plan 2011 (last amended February 10, 2023);* San Diego County General Plan, Safety Element *Fire Hazard Severity Zones Map

This section analyzes the effects of the proposed Project related to wildfire utilizing thresholds as set forth in Appendix G of the CEQA Guidelines.

The northern portion of the Proposed Project alignment that is within the County is within a San Diego County identified "Very High Fire Hazard Severity Zone" (VHFHSZ), while the portion of the Project that is on the Barona Reservation is not covered by the San Diego County General Plan Overlay as it is a Federal Responsibility Area (FRA) according to the San Diego County General Plan, Safety Element *Fire Hazard Severity Zones* Map.[46]

a) ***Off-Reservation***

Less than Significant Impact with Mitigation Incorporated. As proposed, the off-Reservation portions of the Project would not substantially impair an adopted

[46] SafetyElement.pdf (sandiegocounty.gov) Figure S-1

emergency response plan or emergency evacuation plan. Less than significant impact would occur with implementation of mitigation measure **TRA-1** discussed in Section XVII Transportation.

Emergency service providers and first responders, such as the San Diego County Sherriff, CALFIRE, and San Diego County Fire Protection District, would be notified of construction sequencing and the potential for temporary reductions to one-lane for construction with two-way traffic control, as identified in Traffic Control Plan required by mitigation measure **TRA-1** to be approved by the County of San Diego.

Emergency access could be temporarily affected by construction delays due to the reduction to one-lane. However, the proposed project would implement a Traffic Control Plan required by mitigation measure **TRA-1** to ensure that emergency vehicle access for fire responders is maintained throughout construction.

On-Reservation

Less than Significant Impact with Mitigation Incorporated.[47] As proposed, the on-Reservation portions of the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Less than significant impact would occur with implementation of mitigation measure **TRA-1** discussed in Section XVII Transportation.

The same impacts for emergency service providers and first responders could occur on-reservation. The Traffic Control Plan required by mitigation measure **TRA-1** will also require approval by the Tribe for the on-reservation portion of the project. The Tribe has its own police and fire departments, which will review and provide input on the Traffic Control Plan.

b) ***Off-Reservation***

Less than Significant Impact. Off-Reservation Project implementation does not include habitable structures. The Project would not cause an impact due to slope, prevailing winds, and other factors. Nor would the Project exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from wildfire or the uncontrolled spread of a wildfire. As discussed in section IX Hazards and Hazardous Materials, the California Fire Code (CFC) includes stringent requirements for hazardous and toxic materials and fire-resistance-rated construction, as well as rigorous provisions for Wildland-Urban Interface Fire Areas. Requirements include minimum standards for the storage, use, and handling of hazardous and toxic materials, ratings for building materials, and fuel modification of hazardous (i.e., flammable) vegetation. Also, new buildings proposed in a Wildland-Urban Interface Fire Area must conform to the requirements contained in Chapter 47 of the CFC.

On-Reservation

Less than Significant Impact. On-Reservation Project implementation does not include habitable structures. The Project would not cause an impact due to slope, prevailing winds, and other factors. Nor would the Project exacerbate wildfire risks, and

[47] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

thereby expose Project occupants to pollutant concentrations from wildfire or the uncontrolled spread of a wildfire. As discussed in section IX Hazards and Hazardous Materials, the California Fire Code (CFC) includes stringent requirements for hazardous and toxic materials and fire-resistance-rated construction, as well as rigorous provisions for Wildland-Urban Interface Fire Areas. Requirements include minimum standards for the storage, use, and handling of hazardous and toxic materials, ratings for building materials, and fuel modification of hazardous (i.e., flammable) vegetation. Also, new buildings proposed in a Wildland-Urban Interface Fire Area must conform to the requirements contained in Chapter 47 of the CFC.

c) ***Off-Reservation***

No Impact. As an underground water pipeline Project, off-Reservation implementation would not create circumstances that would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. The Project would provide additional water supply along Wildcat Canyon Road and on Reservation land that would include increased access to fire hydrants along the pipeline alignment. There would be no impact.

On-Reservation

No Impact. As an underground water pipeline Project, on-Reservation implementation would not create circumstances that would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water resources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. The Project would provide additional water supply along Wildcat Canyon Road and on Reservation land that would include increased access to fire hydrants along the pipeline alignment. There would be no impact.

d) ***Off-Reservation***

No Impact. Off-Reservation Project implementation does not include habitable structures, and no circumstances exist that would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. There would be no impact.

On-Reservation

No Impact. On-Reservation Project implementation does not include habitable structures, and no circumstances exist that would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. There would be no impact.

Less than significant impact would occur with implementation of mitigation measure TRA-1 discussed in Section XVII Transportation.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	*Less than Significant with Mitigation Incorporated*	*Less than Significant*	*No Impact*
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects, which would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

a) **Less than Significant Impact with Mitigation Incorporated.**[48] The Project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or

[48] Although not required under CEQA, the Barona Tribe is not opposed to implementation of mitigation measures that will help to reduce impacts to a less than significant level on tribal land.

prehistory. Implementation of mitigation measures recommended in sections IV, V, IX XIII, XVII, and XVIII would reduce impacts to a less than significant level.

b) **No Impact.** Due to the nature of the Project, impacts would be temporary during construction. The Proposed Project includes trenching and placing pipelines underground. Then covering to bring surface back to existing condition. No grading will be performed, and no cut and fill is proposed. Cumulative impacts would occur if the incremental effects of the project are considerable when viewed in connection with the effects of past or present projects or reasonably foreseeable future actions. No evidence has been identified that would result in the Project contributing to environmental impacts in this way.

c) **No Impact.**

All potential impacts have been thoroughly evaluated and have been deemed to be neither individually significant nor cumulatively considerable in terms of any adverse effects upon the region, the local community or its inhabitants. At a minimum, the project will be required to meet the conditions of approval for the project to be implemented. It is anticipated that all such conditions of approval will further ensure that no potential for adverse impacts will be introduced by construction activities, initial or future land uses authorized by the Project approval.

Therefore, implementation of mitigation measures recommended would reduce possible adverse impacts to a less than significant level.

4.0 FEDERAL CROSS-CUTTING ENVIRONMENTAL REGULATIONS EVALUATION

The federal nexus triggering the application of NEPA in this case is the award by Congress of Grant no. B-23-CP-CA-0319. Congress made this grant of $2,000,000, and many others, under the Community Development Fund of the Act of December 29, 2022, P.L. 117-328, 136 Stat. 5154, 5155, for "Barona Band of Mission Indians Water Infrastructure Project." This statute names the U.S. Department of Housing & Urban Development as the federal agency to administer this Fund and its grants.

As with most such HUD-funded projects, HUD delegates responsibility for compliance with NEPA to Responsible Entities, subject to review, oversight, and final approval by HUD for compliance with NEPA. "Responsible entities shall assume the responsibility for environmental review, decision-making, and action that would otherwise apply to HUD under NEPA Responsible entities that receive assistance directly from HUD assume these responsibilities by execution of a grant agreement with HUD" 24 CFR section 58.4(a). Grantees that are Indian tribes are Responsible Entities. The "Responsible Entity" is, "[w]ith respect to environmental responsibilities under the programs listed in 58.1(b)(3)(ii) and (6) through (12) [in this case, (7)], an Indian tribe when it is the recipient under the program." 24 CFR section 58.2(a)(7)(ii).

The Barona Band has executed such a grant agreement with HUD for this grant and is thus the Responsible Entity regarding this grant. HUD has delegated to the Barona Band "the responsibility for environmental review, decision-making, and action that would otherwise apply to HUD under NEPA." Thus, in this case the Barona Band performs the functions of a lead agency under NEPA, although under the supervision, control, and approval authority of HUD, which remains at least the nominal lead agency. The District is a cooperating agency.

4.1 Federal Endangered Species Act

Section 7 of the Federal Endangered Species Act (FESA) requires federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of these species. Under Section 7, a project that could result in incidental take of a listed threatened or endangered species must consult with the USFWS to obtain a Biological Opinion (BO). If the BO finds that the project could jeopardize the existence of a listed species ("jeopardy opinion"), the agency cannot authorize the project until it is modified to obtain a "non-jeopardy" opinion.

The information contained within the IS/MND and the Biological Resources Technical Study (Alden Environmental, Inc., Appendix B) may be used to support project compliance with FESA and MBTA.

Section 3.2 IV Biological Resources, describes that there are four vegetation communities located outside of the Reservation, within the County, that are considered sensitive and could be a constraint to pipeline construction. These communities are Diegan coastal sage scrub, non-native grassland, coast live oak woodland, and riparian forest. It is anticipated that impacts due to the pipeline in this County segment would occur primarily within the existing roadway and adjacent disturbed areas. The only federal-listed species, San Diego thorn-mint, is not expected to occur within the study area on County land or Reservation land due to a lack of clay soils with which

this species is associated. Were impacts to occur within these communities, they could be considered significant and require mitigation.

The riparian forest land within San Vicente Creek at the northern most extent of the alignment has the potential to support the federal listed as threatened least Bell's vireo. There is suitable habitat for this species located at the northernmost extent of the project alignment, within riparian forest habitat in San Vicente Creek. No direct impacts to the San Vicente Creek are anticipated; however, construction activities could have an indirect impact to this species during the nesting season, should it be present. Pre-construction surveys and avoidance measures may be required to help ensure project construction does not impact this species in the County portion of the alignment. Suitable habitat does not occur within or adjacent to the pipeline alignment on Reservation land.

Within the County segment of the pipeline there is the San Vicente Creek, which likely would be considered jurisdictional by USACE, CDFW, RWQCB, and the County. This creek currently flows under a bridge as part of Wildcat Canyon Road. It is anticipated that any project impacts from the pipeline would be limited to attaching facilities to the existing bridge, as opposed to physical work (trenching, grading, etc.) within the creek itself. As such, it is anticipated that no impacts to jurisdictional resources at San Vicente Creek would occur.

4.2 National Historic Preservation Act, Section 106

The purpose of the National Historic Preservation Act (NHPA) is to protect, preserve, rehabilitate, or restore significant historical, archaeological, and cultural resources. Section 106 requires federal agencies to take into account effects on historic properties. Section 106 review involves a step-by-step procedure described in detail in the implementing regulations (36 CFR Part 800).

A review of the APE indicates the majority of the alignment and associated 50-foot buffer were previously disturbed by existing roads (paved and unpaved), power lines, trails, and rural residential development. The historic resources survey was conducted on August 17 and 18 and September 28, 2023. The survey identified five previously unrecorded prehistoric bedrock milling sites (Temp-1 to Temp-5) and one prehistoric isolate (Iso-1). Through a review of the APE, it was determined that Temp-1 and Iso-1 are well outside of the alignment and will not be impacted by the undertaking. However, Temp-2 to Temp-5 are located within or directly adjacent to the APE alignment and required testing and significance evaluations. All of the resources identified during the survey are located on the Barona Indian Reservation portion of the Project and subject to federal guidelines (Section 106 of the NHPA and the NEPA). No other sites were discovered therefore, less than significant impact is expected in the APE for all portions of the alignment. If inadvertent discoveries of unknown archaeological or historic resources may occur, mitigation measure **CUL-1** would reduce impacts to a less than significant level, **Mitigation Measure CUL-2** would be implemented to ensure proper procedures would be in place if human remains were unearthed during construction activities. With implementation of **Mitigation Measures CUL-1, and CUL-2** impacts to historical resources under CEQA would be less than significant and no effects to historic properties under the NHPA for the Proposed Project are expected.

4.3 Clean Air Act

U.S. Congress adopted general conformity requirements as part of the Clean Air Act (CAA) Amendments in 1990 and the USEPA implemented those requirements in 1993 (Sec. 176 of the FCAA (42 United States Code [U.S.C.] section 7506) and 40 CFR Part 93, Subpart B). General

conformity requires that all federal actions "conform" with the State Implementation Plan as approved or promulgated by USEPA. The purpose of the general conformity program is to ensure that actions taken by the federal government do not undermine State or local efforts to achieve and maintain the national ambient air quality standards. Before a federal action is taken, it must be evaluated for conformity with the State Implementation Plan. All "reasonably foreseeable" emissions predicted to result from the action are taken into consideration. These include direct and indirect emissions and must be identified as to location and quantity. If it is found that the action would create emissions above de minimis threshold levels specified in USEPA regulations (40 CFR section 93.153(b)), or if the activity is considered "regionally significant" because its emissions exceed 10% of an area's total emissions, the action cannot proceed unless mitigation measures are specified that would bring the Proposed Project into conformance.

As described in *Section 3.2 III Air Quality*, the Project's construction activities' emissions are considered short-term, temporary emissions. Construction would be required to comply with dust and odor rules established by the SDAPCD. Based on the results of the analysis and review of the appropriate air quality plans and resources it is determined that the Project would not exceed thresholds for temporary construction emissions and would not conflict with or obstruct implementation of the applicable air quality plan. The proposed pipelines would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard

The results of the air quality modeling showed that pollutant emissions would not exceed federal General Conformity de minimis thresholds (**Appendix A**). Accordingly, the lead agency would be in compliance with the CAA.

4.4 Clean Water Act

As with the Clean Air Act, Congress acted in the Clean Water Act of October 18, 1972, 33 U.S.C. Section 1251(a), et seq (CWA) to "restore and maintain the chemical, physical and biological integrity of the Nation's waters," in initially through the United States Environmental Protection Agency (USEPA). Instead of performing this regulatory function itself, the Clean Water Act allows and encourages the USEPA effectively to delegate most of its functions to the states, which must regulate to federal standards, or more stringent standards. In this regard, Sections 402 and 404 of the CWA authorizes the delegation most of the implementation of federal permitting standards to California for the National Pollution Discharge Elimination System (NPDES) for discharge of pollutants into the "Waters of the United States." In California, the Porter-Cologne Water Quality Control Act implements these standards through state agencies such as the Water Resources Control Board and its Regional Boards.

The segment of the current Project located outside the Barona Indian Reservation is thus fully subject to such state regulation. The segment located on the Barona Indian Reservation is subject only to direct regulation by the USEPA. But the standards are the same, as is the scope of direct EPA regulation and indirect regulation through the State. Both segments are subject to certain aspects of the Clean Water Act, such as the requirement for obtaining a Section 404 permit or NPDES permit for discharge of any pollutant into "waters of the United States", with determinations of such jurisdiction to require a permit entrusted to the U.S. Army Corps of Engineers.

The two pipelines of the current Project cross San Vicente Creek off the Barona Indian Reservation and a tributary of Padre Barona Creek on the Barona Indian Reservation. This segment of San

Vicente Creek does meet the current definition of "waters of the United States" as "relatively permanent, standing or continuously flowing bodies of water" 33 C.F.R. Section 328.3(a)(3), and 40 C.F.R. Section 120.2(a)(3). The on-reservation Padre Barona Creek and its tributary are both ephemeral streams due to lack of a relatively continuous surface flow or connection to an intermittent or continuously flowing watercourse, and flow only during or in direct response to precipitation. Therefore, the CWA does not directly apply to the segment of the Project on the Barona Indian Reservation, and no permit is needed from the U.S. Army Corps of Engineers or any other federal agency under the CWA for that segment of the Project.

However, since the relevant segment of San Vicente Creek is "waters of the United States", it would normally require a permit under the NPDES or Section 404 of the CWA. The trigger for this permit requirement is discharge of any pollutant into "waters of the United States". Even though this segment of the Project thus crosses "waters of the United States," not one molecule of any pollutant should be discharged into the bed or flow of San Vicente Creek. No work will occur in the creekbed. No equipment will be located in the creekbed. The bridge over San Vicente Creek already exists. The Project will simply attach the two pipelines to the side of the existing bridge with equipment that will be located only on the bridge. Therefore, no permit is needed because there is no discharge of any pollutant. No jurisdictional determination need be sought.

4.4.1 Streambed Alteration Agreement

Similarly, no Streambed Alteration Agreement need be sought or obtained from the California Department of Fish & Game. Mere attachment of the pipelines to the existing bridge over San Vicente Creek, and operation of the pipelines, will not "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material where it may pass into any river, stream, or lake" California Fish & Game Code Section 1602.

4.5 Coastal Zone Management Act

The Coastal Zone Management Act (CZMA), passed by Congress in 1972 and managed by the National Oceanic and Atmospheric Administration's Office of Ocean and Coastal Resource Management, is designed to balance completing land and water issues in coastal zones. It also aims to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." Within California, the CZMA is administered by the Bay Conservation and Development Commission, the California Coastal Conservancy, and the California Coastal Commission.

No portion of the Proposed Project is within the coastal zone. The Project area is located approximately 25 miles east of the Pacific Coast. Therefore, the CMZA does not apply to the Proposed Project.

4.6 Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) requires a federal agency to consider the effects of its actions and programs on the nation's farmlands. The FPPA is intended to minimize the impact of federal programs with respect to the conversion of farmland to nonagricultural uses. It assures that, to the extent possible, federal programs are administered to be compatible with State, local, and private programs and policies to protect farmland.

As described in *Section 3.2 II Agriculture and Forestry Resources*, the Project area is located within the northern San Diego County, which contains agricultural lands. No Farmland of

Statewide Importance exists in the area of Wildcat Canyon Road where the 0.35-mile pipeline is proposed to be placed. According to the California Farmland Mapping and Monitoring Program most of the land surrounding Wildcat Canyon Road and its intersection with San Vicente Road as well as on the Barona Reservation is categorized as Urban Built-up Land, Grazing Land, with a small portion of Farmland of Local Importance

There is no designated important farmland or Williamson Act contracted lands within the Project area. The Proposed Project would be constructed within roadway rights-of-way, as well as on private or public land. The majority of the Proposed Project components would be located below-grade and ground surfaces would be restored to pre-construction conditions. The Proposed Project would not result in land use changes and would, therefore, not impact important farmland, conflict with agricultural zoning regulations, or result in other changes that would indirectly result in conversion of nearby farmland to non- agricultural use. Therefore, the Proposed Project would not adversely affect any farmland areas and the lead agency would be in compliance with the FPPA.

4.7 Executive Order 11988 – Floodplain Management

Executive Order (EO) 11988 requires federal agencies to recognize the values of floodplains and to consider the public benefits from restoring and preserving floodplains.

As described in *Section 3.2 X Hydrology and Water Quality*, compliance with the policies and mitigation measures identified in the San Diego County General Plan Update Final Environmental Impact Report (FEIR) for Hydrology and Water Quality and Land Use, as well as all applicable regulations including the National Pollutant Discharge Elimination System (NPDES), California Building Code (CBC), and the County Grading Ordinance, would prevent potential impacts to soil erosion or the loss of topsoil for both the on-Reservation and off-reservation portions of the pipeline Project to below a significant level. As such, the lead agency would be in compliance with this EO. Furthermore, examination of the current FEMA flood plain maps shows that no part of the Project is located within or near any designated floodplain. See Federal Emergency Management Administration Map Service, maps nos. 06073C1140G and 06073C1425G.

4.8 Federal Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and Executive Order 13168

The MBTA and the Bald and Golden Eagle Protection Act prohibit the take of migratory birds (or any part, nest, or eggs of any such bird) and the take and commerce of eagles. EO 13168 (Sep 22, 2000) requires that any project with federal involvement address impacts of federal actions on migratory birds.

As described in *Section 3.2 IV Biological Resources*, within the off-Reservation segment (County) of the pipelines there may be constraints due to sensitive species that would not be considered constraints within the Reservation land. The riparian forest land within San Vicente Creek at the northern most extent of the alignment has the potential to support the federal listed as threatened least Bell's vireo. While direct impacts to riparian forest are not anticipated (pipelines would be attached to the existing bridge), construction activities could have an indirect impact (noise) to this species during the nesting season, should it be present. Preconstruction surveys and avoidance measures may be required to help ensure Project construction does not impact this species. The Project would have less than significant impact on nesting birds with implementation of **Mitigation Measure BIO-1** if construction cannot be avoided during nesting season. Thus, the lead agency would be in compliance with this EO.

4.9 Executive Order 11990 – Protection of Wetlands

Under EO 11990 (May 24, 1977), federal agencies must avoid affecting wetlands unless it is determined that no practicable alternative is available.

As described in *Section 3.2 IV Biological Resources*, San Vicente Creek is considered jurisdictional by USACE, CDFW, RWQCB, and the County. This creek currently flows under a bridge as part of Wildcat Canyon Road. It is anticipated that any Project impacts from the pipeline would be limited to attaching facilities to the existing bridge, as opposed to physical work (trenching, grading, etc.) within the creek itself. As such, it is reasonable to expect that no direct or indirect impacts to jurisdictional resources at San Vicente Creek would occur.

Also, impacts to CDFW jurisdictional resources may require a Lake and Streambed Alteration (LSA) agreement via California Fish and Game Code Section 1602. Impacts to RWQCB jurisdictional resources may require a Water Quality Certification under Section 401 of the Federal CWA. The actual permitting requirement would depend on the type and amount of jurisdictional resource impacts in the County (if any).

Tribal lands are not subject to State and local (County) regulation of jurisdictional/wetland resources. Federal regulations (Clean Water Act, CWA) for potential impacts to federal jurisdictional resources (should they occur) may be applicable on Tribal lands. Throughout the Study Area on Reservation land, the National Hydrography Dataset (NHD) shows stream/river features, and the National Wetlands Inventory (NWI) shows riverine features. The proposed pipeline alignment would cross Padre Barona Creek, Klondike Creek, and numerous unnamed tributaries to these creeks within the limits of the Reservation. However, as noted in Section 4.4 above, none of these on-Reservation drainages has a relatively permanent or continuous surface flow or connection to another body that has a relatively continuous surface flow, and flows only during and immediately after rain. All these on-Reservation features are therefore ephemeral, do not meet the definition of "wetland", and thus are not "waters of the United States" subject to the CWA.

There would be no impacts to wetlands and the lead agency would be in compliance with EO 11990.

4.10 Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act was passed in 1968 to preserve and protect designated rivers for their natural, cultural, and recreational value.

There are no designated Wild and Scenic Rivers within the Project area, nor will any designated rivers be adversely affected by the Proposed Project. As a result, the Wild and Scenic Rivers Act does not apply to the Proposed Project

4.11 Safe Drinking Water Act – Source Water Protection

Section 1424(e) of the Safe Drinking Water Act established the USEPA's Sole Source Aquifer Program. This program protects communities from groundwater contamination from federally funded projects. Within USEPA's Region 9, which includes California, there are nine sole source aquifers. None of these sole source aquifers are located within the Project area. Therefore, the Sole Source Aquifer Program does not apply to the Proposed Project, and the lead agency would be in compliance with Section 1424(e) of the Safe Drinking Water Act.

4.12 Executive Order on Trails for America in the 21st Century

The EO on Trails for America (January 18, 2001) requires federal agencies to protect, connect, promote, and assist trails of all types throughout the United States. According to the trails map in the *San Diego County Regional Trails Plan*[49], there are no existing or proposed trails through the Barona Reservation nor are there any to the north within the County portion of the Project alignment. As a result, no adverse effects on trails would occur and the lead agency is in compliance with this EO.

4.13 Executive Order 13007 – Indian Sacred Sites

Sacred sites are defined in Executive Order 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site."

As discussed in *Section 3.2 XVIII Tribal Cultural Resources*, a review of the APE indicates the majority of the alignment and associated 50-foot buffer were previously disturbed by existing roads (paved and unpaved), power lines, trails, and rural residential development. The historic resources survey was conducted on August 17 and 18 and September 28, 2023. The survey identified five previously unrecorded prehistoric bedrock milling sites (Temp-1 to Temp-5) and one prehistoric isolate (Iso-1). Through a review of the APE, it was determined that Temp-1 and Iso-1 are well outside of the alignment and will not be impacted by the undertaking. However, Temp-2 to Temp-5 are located within or directly adjacent to the APE alignment and required testing and significance evaluations. All of the resources identified during the survey are located on the Barona Indian Reservation portion of the Project and subject to federal guidelines (Section 106 of the NHPA and the NEPA). No other sites were discovered therefore, no impact is expected on the on-Reservation or off-Reservation portions of the alignment.

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regards to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the property has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the Project.

The Historic Resources Study prepared by BFSA did not identify previously recorded sites with human remains within the Proposed Project APE. However, there is a potential for unidentified human remains to be present within the Proposed Project site. If present, the human remains could be damaged by ground disturbing activities associated with the Proposed Project. If inadvertent discoveries of human remains occur, mitigation measure **CUL-1** and **CUL-2** would reduce impacts to a less than significant level.

4.14 Magnuson Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) of 1976 as amended (16 U.S.C. section 1801 et seq.), is the primary act governing federal management of fisheries in federal waters, from the 3- nautical-mile state territorial sea limit to

[49] Chapter (sandiegocounty.gov)

the outer limit of the U.S. Exclusive Economic Zone. It establishes exclusive U.S. management authority over all fishing within the Exclusive Economic Zone, all anadromous fish throughout their migratory range except when in a foreign nation's waters, and all fish on the continental shelf. The Act also requires federal agencies to consult with NMFS on actions that could damage Essential Fish Habitat (EFH), as defined in the 1996 Sustainable Fisheries Act (Public Law 104-297).

The Proposed Project would not be located in or impact any U.S. federal waters regulated under the Magnuson-Stevens Act. As described in *Section 3.2 IV Biological Resources*, the Proposed Project is not expected to have adverse effect on resident or migratory fish, or fish habitat in the Proposed Project area.

4.15 Environmental Justice

The United States Environmental Protection Agency (USEPA or EPA) has a policy regarding how it works with native peoples, entitled *EPA Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples.* That Policy calls for and defines Environmental Justice and Fair Treatment of native peoples:

> *Environmental Justice* – the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.
>
> *Fair Treatment* – no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies, July 24, 2014, www.epa.gov/environmentaljustice/ [50]

In the current Project, the Barona Band of Mission Indians, as successor to the Capitan Grande Band of Mission Indians, seeks the environmental justice and fair treatment for which the EPA Policy calls. The Barona Band does not ask for free water, free transport of water, or free construction of infrastructure. It does not ask for reparations of any kind or special treatment beyond what California law already allows. But it does ask for justice, for fair treatment as it proceeds through a process in a quest for the means by which its people may live on the remaining remnant of their own land.

With the adoption of Senate Bill 1000 (SB1000) in 2016, the California Government Code Section 65302(h) regarding general plans was amended to include requirements related to incorporating environmental justice into local land use planning processes. SB1000 requires local governments to address pollution and other hazards that disproportionately impact low-income communities and communities of color within their jurisdiction as a way to proactively plan for and address environmental concerns when developing and updating components of the General Plan. These requirements are organized into two subsections [Section 65302 (h)(1) through Section 65302 (h)(2)], which are summarized below:

- 65302 (h) (1) add to the required elements of the general plan an environmental justice element, or related goals, policies, and objectives integrated in other elements, that identifies "disadvantaged communities".

[50] Environmental Justice | US EPA

- 65302 (h) (1) (A) identify objectives and policies to promote:
  - Public facilities in disadvantaged communities.
  - Food access in disadvantaged communities.
  - Safe and sanitary homes in disadvantaged communities.
  - Physical activity in disadvantaged communities.

65302 (h) (1) (A) identify objectives and policies to reduce:

  - Exposure to pollution, including improving air quality in disadvantaged communities.
  - Any unique or compounded health risks in disadvantaged communities not otherwise addressed above.

- 65302 (h) (1) (B) identify objectives and policies to promote civic engagement in the public decision-making process in disadvantaged communities.
- 65302 (h) (1) (C) identify objectives and policies that prioritize improvements and programs that address the needs of disadvantaged communities.
- 65302 (h) (2) adoption or revision of environmental justice element, or related goals, policies, and objectives, upon the revision of two or more elements concurrently on or after January 1, 2018.[51]

The USEPA defines environmental justice as:

"The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means no group of people, including racial, ethnic, or economic groups should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, State, local, and tribal programs and policies"[52]. Surely being forcibly dispossessed by the United States of a free-flowing river from aboriginal lands inflicts "a disproportionate share of negative environmental consequences resulting from the execution of federal programs and policies" on the tribe that, alone, was dispossessed.

Impact Analysis

For the purposes of this analysis, an impact related to environmental justice would be significant if the Proposed Project would cause impacts to minority or low-income populations that are disproportionately high and adverse, either directly, indirectly, or cumulatively.

Although construction would generate impacts (e.g., dust, traffic, and noise), such activities would be intermittent and temporary and would cease upon completion of work activities. Where potential impacts would occur, mitigation measures have been identified to reduce such effects to less-than-significant levels. Therefore, with the consideration of the benefits provided to these communities through implementation of the Proposed Project and implementation of mitigation included in this document, the Proposed Project would not result in any disproportionately high adverse impacts on minority or low-income communities. Further, the Census tract CT2010D:169.02 identified as encompassing the northern (County) portion of the Project as well

[51] 09 Environmental Justice.pdf (sandiegocounty.gov)
[52] EJScreen: Environmental Justice Screening and Mapping Tool | US EPA

as the Barona Reservation is not identified as an Environmental Justice Area.[53] Impacts would be less than significant.

[53] Environmental and Climate Justice: San Diego Region (sandiegocounty.gov)

5.0 ALTERNATIVES

5.1 ALTERNATIVES ELIMINATED

Four adjacent water districts were met with in fall 2021 including the Ramona Municipal Water District (District) to discuss their ability to provide water service to the Reservation. At that time, the District was the nearest water supplier, and the only agency of the four that was able to provide service from north of the Reservation and could provide both recycled and potable water. The District is able to provide potable water, derived from the San Diego County Water Authority (SDCWA), and recycled water, from the San Vicente Water Reclamation Plant (SVWWRP) to the Reservation. District potable water is derived through SDCWA's RAM-3 turnout, located in Poway. Title 22 tertiary recycled water is produced at the SVWWRP. Both water services are available to the Reservation at the intersection of Wildcat Canyon Road and San Vicente Road.

The Barona Reservation is bordered on the north by the District water service area. Similarly, the Reservation is bordered on the south by the Lakeside Water District (LWD), Helix Water District (HWD), and Padre Dam Municipal Water District (PDMWD). Lands to the west of the Reservation belong to the cities of San Diego and Poway, but no water services are available to the Reservation in these adjacent lands. See Figure 15 for location of the surrounding water districts in relation to the Barona Reservation.

After initial discussions with the following agencies, it was determined which one or more could potentially meet the Projects objectives and warrant further discussion, and which should be eliminated from further consideration.

Lakeside Water District

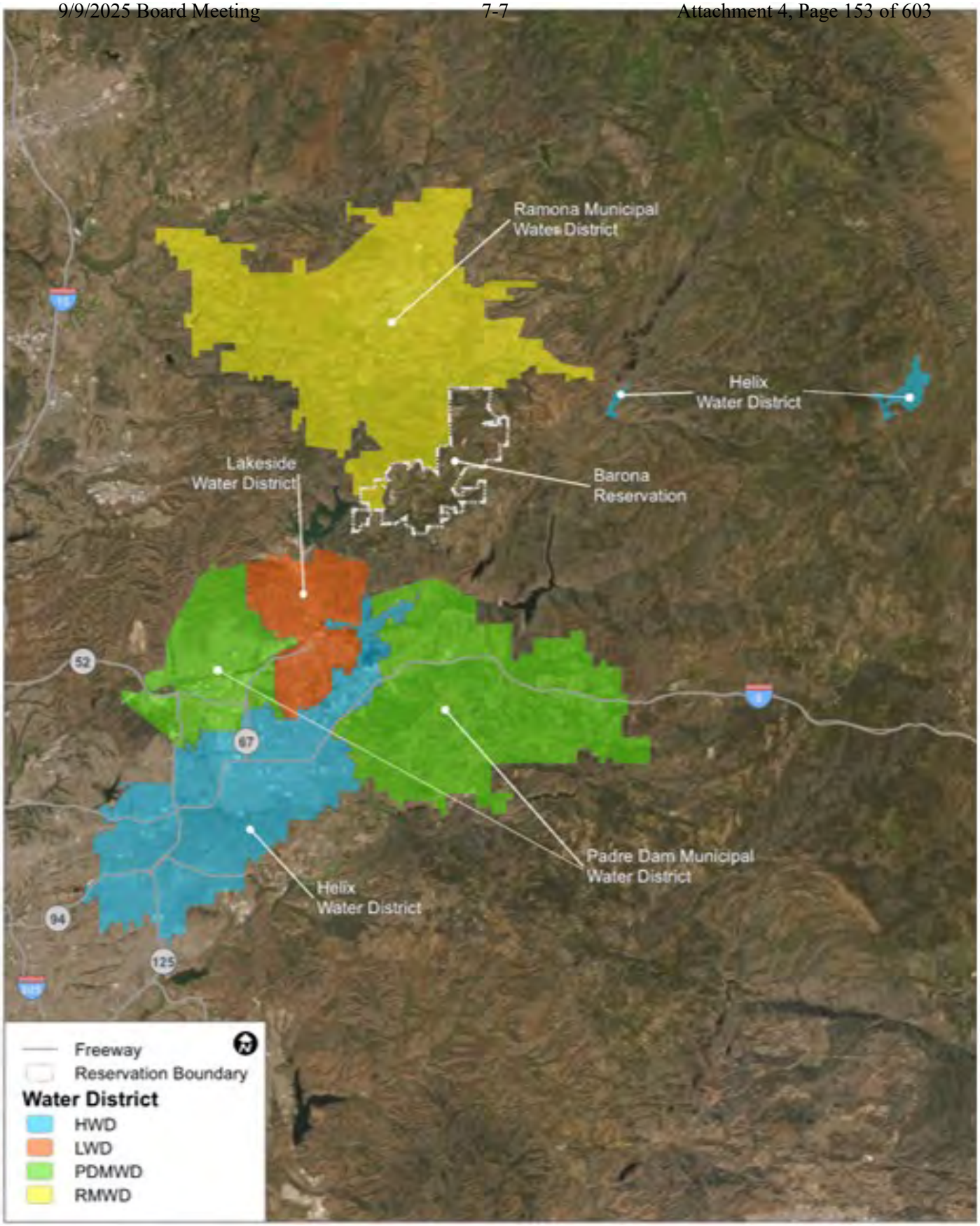
While Lakeside Water District expressed initial interest in participating in this Project, staff ultimately agreed they do not currently have the infrastructure necessary to convey water to the Tribe. This water service option was therefore eliminated.

Padre Dam Municipal Water District

Padre Dam has the water capacity to provide water to the Tribe. PDMWD does not have untreated water supplies readily available, and its recycled water is not positioned to effectively meet the Tribe's needs. As a result, treated water is the only water service option available from this agency. The closest PDMWD distribution pipeline defines an approximate 925-foot hydraulic grade differential and approximately 6.7 miles of new pipeline, the majority of which would not be constructed on Reservation property. This option does not meet the tribe's recycled water needs and would require several miles of additional off-Reservation pipeline making this option infeasible.

Helix Water District

Helix Water District (HWD) has the infrastructure required to provide water service to the Tribe. Unlike PDMWD, Helix has both potable and raw water available to the Tribe. The projected cost of raw water from HWD is lower than potable water service from PDMWD or the District. Service of raw water from the HWD requires overcoming approximately a 1,100-foot hydraulic grade and a pipeline distance of approximately 5.5 miles. Also, the infrastructure cost is projected to be significantly higher for PDMWD potable water service than raw water service from HWD, primarily a result of higher hydraulic grade difference and the longer length of pipeline. Based on



ALTERNATIVE WATER DISTRICTS

RAMONA-BARONA WATER PIPELINE PROJECT
BARONA INDIAN RESERVATION
County of San Diego, California

LILBURN
CORPORATION

FIGURE 15

this, PDMWD water service was eliminated in favor of the HWD raw water alternative. Due to infrastructure constraints (length of additional pipeline) this option was eliminated.

5.2 ALTERNATIVES EVALUATED

Two alternatives to the Project are evaluated in this section: 1) The No Project/No Action Alternative; and 2) Proposed Project Alternative. Under the No Project/No Action Alternative the Ramona/Barona Potable and Recycled Water Pipeline Project would not be constructed and the homes and businesses on the Barona Reservation would continue to operate under current conditions. Water would continue to be supplied through private on-site wells, distributed with existing on-site pipeline network and treated through individual on-site systems. The No Project/No Action Alternative would not provide a safer more reliable water supply to existing communities.

Table 5.3-1 provides a comparison between the potential environmental impacts of the Ramona/Barona Potable and Recycled Water Pipeline Project (Preferred Action) and the no Action Alternative. (No Project/No Action) with regard to the resource topics addressed in State CEQA Appendix G, Environmental Checklist, as well as the applicable federal cross-cutters. This alternatives analysis presents the environmental analysis behind choosing the Proposed Project.

No Action Alternative

NEPA requires a review of a "No Action/No Project" Alternative to determine the impact of not implementing the Project. Under this alternative, environmental impacts to the resources outlined in this document would remain similar to existing conditions. Conditions may in fact worsen as population grows within the reservation and groundwater supplies are further depleted. Recent projections show the Tribe's long-term water demand exceeding the sustainable yield of the underlying groundwater basin as droughts lengthen and become more frequent. The Tribe expects average annual potable water demand to increase by 25% because of steady residential development. This alternative would not meet the objective of providing a secure, safe and reliable supply of drinking water as well as the opportunity to access recycled water for other needs. Therefore, there would be no Project related impacts as defined in the CCR, Title 14, Division 6, Chapter 3, Section 15382.

Proposed Project/Preferred Action

The No Project/No Action Alternative would not achieve the Project objectives to improve the reliability, safety and security of the water supply. After comparison to the Alternatives listed above, the Proposed Project as described in section 2.2 remains the preferred action for the Project. The District operates a 16-inch potable water pipeline at the intersection of Wildcat Canyon and San Vicente Roads. Potable water service requires overcoming a hydraulic grade of approximately 472 feet, requiring approximately 27,800 LF of new potable water pipeline, including 2,100 LF of water line to the Reservation boundary plus 25,700 LF to connect from the boundary to the existing system. The potable water infrastructure necessary for service from the District is less costly than that from PDMWD or raw water service from HWD, primarily because of the pumping facilities required to overcome the hydraulic grade difference from these southern agencies.

Recycled water service is available to the Reservation from the District, with an existing pump station capable of overcoming the required hydraulic grade. Recycled water can be used as irrigation water for agricultural and recreational (golf course) uses. The District has identified that

a total of 150 to 200 acre-feet per year (afy) of recycled water may be available, with a potential up to 250 afy.

Considering the four agencies, the recycled water from the District is unique from the other three options. If the Tribe can use the recycled water to offset current potable water demand, it was determined to be a very beneficial alternative. But it is not potable water, so it may have uses limited to irrigation and agriculture. Recycled water is also a significantly lower cost than potable water under the other alternatives, assuming the Tribe can use the Golf Course Line. As the Tribe has beneficial uses for recycled water, this Project is highly recommended.

Comparing potable water from the District and raw water from HWD is more complicated. In addition to the cost difference between the two water sources, there are several additional factors to consider. As the cost analysis for the infrastructure identifies a strong preference for receiving water from the District, these other considerations were evaluated on a non-monetary basis. The recycled water line from the District would be constructed in the same alignment as the potable water pipeline. The Tribe will experience cost savings during design and construction for these sections of pipeline that are parallel. The overall construction for receiving service from the District is less complicated than the other alternatives due to terrain and distance. This alternative provides for the highest portion of needed facilities being constructed on Reservation land and provides the least long-term operation and maintenance cost to the Tribe.

As described in detail above at the beginning of section 1.2 the development of any additional on-Reservation water supply was rejected because with new wells drilled in years following 2002, all available groundwater is currently being accessed and is at or beyond the sustainable yield, at least during drought years.

5.3 COMPARISON OF ALTERNATIVES – ENVIRONMENTAL IMPACTS

Table 5.3-1 presents a summary of the environmental impacts of the Proposed Project, the Proposed Project with mitigation incorporated (if applicable), the No Project/No Action Alternative, and the Preferred Action Table 5.3-1 summarizes the impacts as either No impact; Less than Significant Impact; Potentially Significant Impact; or Not Applicable (N/A).

Table 5.3-1 Comparison of Alternatives

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
Aesthetics				
Scenic vistas; Visual character and quality; Light and glare	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Scenic resources along a State Scenic Highway	No impact	N/A	No impact	No impact
As discussed in section 3.4-I *Aesthetics*, there are no scenic highways in the Project area. Construction would occur primarily during daytime hours and any lighting necessary for construction would be directed towards installation activities and away from adjacent land uses. During construction, aesthetics would be temporarily impaired by construction equipment; however, once construction is complete, the Preferred Action would not be visible and would not result in permanent changes to scenic vistas, visual quality, or light and glare. The No Project/ No Action Alternative would not involve construction of new structures that would impede views, change visual character, or add new substantial sources of light, and thus would not result in aesthetic impacts. The Preferred Action would have temporary visual impacts during construction; however, once construction is complete the facilities would not be visible and would not result in permanent impacts. The proposed flow meter station at 11’11” x 25’10” surrounded by a 6’ fence a pressure reducing station at 20’4” x 9’2” with surrounding 6’ fence, and a Booster Pump Station at approximately 34’1” x 37’4” and about 12’ in height with an attached secondary structure at 12’0” x 17’4”are small and unobtrusive and would not obstruct views of the surrounding landscape. Less than significant impact can be expected.				
Agriculture and Forestry				
Convert farmland; Conflict with zoning for agricultural use; Indirect conversion of farmland	No Impact	N/A	No impact	No Impact
Loss of forest use; Conflict with zoning for forest use	No impact	N/A	No impact	No impact
The Pipelines would be constructed primarily within existing roadways and some public and privately owned properties with connections to existing small water systems including onsite improvements on privately owned properties and would not result in conversion of farmland or loss of forest land. Similarly, neither the No Project/ No Action Alternative nor the Preferred Action would impact agricultural or forest land.				
Air Quality				
Consistency with AQMP; Non-attainment criteria pollutants	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Consistency with air quality standards; Sensitive receptors	Less than Significant Impact	N/A	No impact	Less than Significant Impact

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
Objectionable odors	Less than Significant Impact	N/A	No impact	Less than Significant Impact
The Project would result in construction emissions and negligible operational emissions limited to maintenance vehicle trips. Construction of the Preferred Action would require earthmoving, and other activities such as removal of vegetation. The Project's construction activities' emissions are considered short-term, temporary emissions. Construction would be required to comply with dust and odor rules established by the SDAPCD. Based on the results of the analysis for air quality and review of the appropriate air quality plans and resources it is determined that the Project would not exceed thresholds for temporary construction emissions and would not conflict with or obstruct implementation of the applicable air quality plan. Sensitive receptors in the Project area are mainly single-family residences. Based on this analysis and underground water pipeline as proposed, construction impacts to air quality would be temporary in nature and would not continue during operation of the pipelines. Long term exposure to sensitive receptors to substantial pollutant concentrations would result in a less than significant impact. Construction impacts to the environment would be temporary in nature and would consist of trenching, digging and installing sections of the pipelines. Odors may result from exhaust from trucks entering and exiting the areas where construction activities are occurring, which would be temporary. It can be determined that the Project would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people) and impacts would be less than significant. In the No Project/No Action Alternative there would be no construction and conditions regarding Air Quality would remain unchanged.				
Biological Resources				
Sensitive species	Potentially Significant Impact	Less than Significant Impact	No impact	Potentially Significant / Less than Significant with Mitigation
Sensitive habitat; Wetlands; Wildlife corridors;	Potentially Significant Impact	Less than Significant Impact	No impact	Potentially Significant / Less than Significant with Mitigation
Local policies and ordinances	No Impact	N/A	No impact	No impact
Habitat Conservation Plans or Natural Community Conservation Plans	Less than Significant Impact	N/A	No impact	Less than Significant Impact

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
According to the Biology Report prepared by Alden Environmental, the Area of Potential Effect (APE) would result in no impacts to Federal listed species and no additional focused surveys for Federal listed species are currently recommended. Impacts to the Preferred Action APE would remain unchanged from the CEQA evaluation. It is anticipated that impacts due to the Preferred Action would occur primarily within the existing roadway and adjacent disturbed areas. If work would impact sensitive vegetation communities, then additional focused surveys may be required (e.g. sensitive plant survey), depending upon the vegetation communities affected. Mitigation measure **BIO-1** for Nesting Bird Surveys would reduce impacts to nesting birds to less than significant. San Vicente Creek is considered jurisdictional by USACE, CDFW, RWQCB, and the County. This creek currently flows under a bridge as part of Wildcat Canyon Road. It is anticipated that any Project impacts from the pipeline would be limited to attaching facilities to the existing bridge, as opposed to physical work (trenching, grading, etc.) within the creek itself. As such, it is reasonable to expect that no direct or indirect impacts to jurisdictional resources at San Vicente Creek would occur. The Preferred Action would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Were impacts to occur within the identified communities in the Biology Report, they could be considered significant and require mitigation. Therefore, any conflicts with ordinances protecting biological resources, such as a tree preservation policy or other approved local, regional or state habitat conservation plan may require mitigation to reduce impact levels to less than significant. The No Project/No Action Alternative would not involve construction and therefore conditions would remain unchanged with no impact to biological resources.				
Cultural Resources				
Historical resources; Archaeological resources;	Potentially Significant Impact	Less than Significant Impact	No impact	Potentially Significant / Less than Significant with Mitigation
Human remains	Potentially Significant Impact	Less than Significant Impact	No impact	Potentially Significant / Less than Significant with Mitigation
An historic resources survey was conducted on August 17 and 18 and September 28, 2023. All of the resources identified during the survey are located on the Barona Indian Reservation portion of the Project and subject to federal guidelines (Section 106 of the NHPA and the NEPA). No other sites were discovered therefore, less than significant impact is expected in the APE for all portions of the alignment. If inadvertent discoveries of unknown archaeological or historic resources occur, mitigation measure **CUL-1** would reduce impacts to a less than significant level. If present, human remains could be damaged by ground disturbing activities associated with the Preferred Action. If human remains are inadvertently discovered, mitigation measure **CUL-2** would reduce impacts to a less than significant level. There is a possibility of identifying unanticipated cultural resources during ground disturbing activities associated with the Preferred Action. The No Project/No Action Alternative would not involve construction and therefore would not have the potential to disturb previously unknown cultural resources or human remains.				

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
Energy				
Wasteful, inefficient or unnecessary consumption of energy resources	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Conflict with state or local plans for renewable energy or energy efficiency	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Construction would be conducted in compliance with local, state, and federal regulations (e.g., USEPA and the California Air Resources Board [CARB] engine emission standards, which require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption, and limitations on engine idling times, etc.). Compliance with these regulations would minimize short-term energy demand during the Project's construction to the extent feasible. Construction of the Preferred Action would comply with required energy efficiency measures and would support the *2017 Climate Change Scoping Plan* objective to reduce energy demand by improving coordination and management of water supplies. The Preferred Action would thus not conflict with state or local plans for energy efficiency and impacts would be less than significant. The No Project/No Action Alternative would not use energy for construction or operation. Energy use would remain the same as under existing conditions. The Preferred Action would thus require more construction energy, but impacts would still be less than significant with implementation of required energy efficiency measures.				
Geology and Soils				
Geological hazards; Erosion and topsoil loss; Unstable soils; Expansive soils	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Alternative wastewater disposal systems	No impact	N/A	No impact	No impact
Paleontological Resources	Less than Significant Impact	N/A	No impact	Less than Significant Impact
The Preferred Action as well as all future development would require compliance with all relevant federal, state and local regulations and building standards, including the California Building Code (CBC) and County required geotechnical reconnaissance reports and investigations. As no habitable structures are proposed with the Project, impacts from seismically induced fault rupture, ground shaking, liquefaction, and landslides would be less than significant. Expansive soils and erosion of topsoil would not put alternate wastewater disposal systems at risk as they are not a part of the Preferred Action. Also, as stated the Paleontological Assessment of the MND indicates that the entire Project alignment overlies plutonic and metavolcanic rocks, are not fossiliferous. The County of San Diego accords these rocks with no paleontological potential. The County does not require monitoring in rocks with no potential. The No Project/No Action Alternative would result in no change to current conditions as no construction would take place.				

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
Greenhouse Gas (GHG) Emissions				
GHG emissions	Less than Significant Impact	N/A	No Impact	Less than Significant Impact
Conflict with GHG reduction plans	Less than Significant Impact	N/A	Potentially Significant Impact	Less than Significant Impact
The Project's construction activities were screened using SCAQMD Off-Road Mobile Source Emissions Factors (2024). Emissions anticipated from the Proposed Project compared to the California Air Pollution Control Officers Association (CAPCOA) significance thresholds for greenhouse gas emissions. The Project is not considered a new trip generator that would warrant a vehicle miles traveled assessment and, therefore, would not conflict with the Sustainable Communities Strategy prepared by SANDAG per SB 375. In addition, construction of the Proposed Project is estimated to emit a total of approximately 554 $MTCO_2e$ annually, below the 900 $MTCO_2e$ threshold from CAPCOA. Therefore, impacts are anticipated to be less than significant. The No Project/No Action Alternative would not involve construction and GHG impacts of operation would not change from the existing condition.				
Hazards and Hazardous Materials				
Routine handling of hazardous materials; Listed hazardous materials sites; Airport safety hazard; Wildland fire	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Accidental release of hazardous materials;	Potentially Significant Impact	Less than Significant Impact	No impact	Potentially Significant / Less than Significant with Mitigation
Emergency response or evacuation plans conflict	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Hazardous materials near schools	Less than Significant Impact	N/A	No impact	Less than Significant Impact
During temporary construction activities, the Preferred Action would be involved with the transport of gasoline and other petroleum-based products associated with construction equipment. These materials are considered hazardous as they could cause temporary localized soil and water contamination. Incidents of spills or other localized contamination could occur during refueling, operation of machinery, undetected fluid leaks, or mechanical failure. The Preferred Action would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. The proposed Pipelines are not within one-quarter mile of an existing or proposed school on the County portion of the Project. However, the Barona Indian Charter School on the Reservation is within a quarter mile of the south end of the proposed Pipeline. Given the temporary nature of the construction. All construction activities involving the transportation, usage, and disposal of hazardous materials would be subject to all applicable federal, state, and local requirements, which would reduce impacts associated with the use and handling of hazardous materials during construction to less than significant. All construction activities involving the transportation, usage, and disposal of hazardous materials would be subject to all				

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
applicable federal, state, and local requirements, as well as safety measures which would reduce impacts associated with the use and handling of hazardous materials, during construction to less than significant. The No Action Alternative current conditions would remain unchanged. There would be no construction, and there would be no impact in this area.				
Hydrology and Water Quality				
Water quality standards or otherwise degrade water quality	No impact	No impact	No impact	No impact
Groundwater supply and recharge	No impact	N/A	No impact	No impact
Drainage alterations that cause erosion/sedimentation; flooding; exceed capacity of stormwater system; redirect or impede flood flows;	No impact	N/A	No impact	No impact
In flood hazard, tsunami, or seiche zones risk release of pollutants	No impact	N/A	No impact	No impact
Conflict with or obstruct water quality control plan or sustainable groundwater management plan	No impact	N/A	No impact	No impact
As an underground pipeline installation, the Preferred Action would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. One of the main purposes of the Preferred Action is to reduce the use of limited groundwater supplies. Therefore the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management. The underground installation of the proposed water pipelines would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces. Proposed trenching and alteration of the ground surface would be returned to its prior to construction state. There would be no increase of run-off, flood risk, stormwater drainage systems, or cause the redirection of existing flood flows. Disturbance of drainage patterns and runoff to the stormwater drainage system would be temporary and less than significant. The Project would not have an impact related to flooding risks, or seiche, tsunami, or mudflows. The No Project/No Action Alternative would not involve construction of new facilities so would not have construction or operational impacts on water quality or drainage patterns, and there would be no impact related to flooding risks, or seiche, tsunami, or mudflows. The Preferred Action would comply with the permitting requirements of the Construction General Permit and thus would have a less than significant impact on water quality. The Preferred Action would not impact groundwater supplies, as was discussed in the hydrology and water quality section of the MND. There would be no impact related to flooding risks, or seiche, tsunami, or mudflows.				

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
Land Use and Planning				
Divide an established community;	No impact	N/A	No impact	No impact
Conflict with an applicable land use plan	No impact	N/A	No impact	No impact
The Preferred Action would not divide an established community and would not change land use, so it would not conflict with any applicable plan, policy or regulation with jurisdiction over the Project. The No Project/No Action Alternative would not divide an established community and would not change land use; thus, no impact would occur. Once constructed, the Preferred Action would not divide an established community and would comply with applicable land use plans.				
Mineral Resources				
Loss of availability of a known, valuable mineral resource or mineral resource recovery site	No Impact	N/A	No impact	No Impact
Wildcat Canyon Road north of the Barona Reservation is determined to be within an MRZ-3 zone, where mineral resources are potentially present but unknown. Implementation of the Preferred Action would not result in the loss of availability of a *known* mineral resource that would be of value to the region and residents of the state. Impacts would be less than significant because there are no known mineral resources or mineral recovery sites in the vicinity of the Project corridor. The same would be true for the Preferred Action. Under the No Project/ No Action Alternative, no construction would occur thus no impacts would occur.				
Noise				
Excessive noise; Permanent increase in noise levels; Temporary increase in noise levels; Ground-borne vibration	Potentially Significant Impact	Less than Significant Impact	No impact	Potentially Significant / Less than Significant with Mitigation
Aircraft noise	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Construction noise from the Preferred Action is similar to the discussion in the MND with recommended mitigation presented. There would be temporary noise exposure to any single receptor limited to a few days at most. Construction noise associated with proposed pipeline that may impact nearby residents' impacts are considered potentially significant, so noise control measures would be employed to ensure that impacts are less than significant. Operation of the Preferred Action would not generate perceptible noise. The No Project/No Action Alternative would not entail construction of new facilities and would thus have no temporary or permanent noise impacts. The impacts from temporary construction noise and vibration for the Preferred Action would be less than significant with implementation of recommended mitigation discussed in the MND; there would be no operational noise impacts, and impacts associated with aircraft noise would be less than significant.				

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
Population and Housing				
Population growth	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Displacement of housing or people	No impact	N/A	No impact	No impact
Implementation of the Preferred Action would not induce substantial *unplanned* population growth in the area, either directly or indirectly. The Project is in effect a *plan* to sustainably increase the availability of water resources (potable and recycled) as the tribal population grows, increasing demand. Impacts resulting from implementation of the Project are expected to be less than significant. The Preferred Action would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. The No Project/No Action Alternative would not include new facilities and would not induce population growth. There are no impacts associated with either alternative.				
Public Services / Recreation				
Fire protection services; Police protection services	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Schools; Other services-libraries	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Recreational facilities	Less than Significant Impact	N/A	No impact	Less than Significant Impact
The Project would not require additional or unusual fire or police protection resources or change existing demand for public services. The Preferred Action does not propose new recreational facilities that would impact the environment. Impacts to public services or recreation associated with the Preferred Action would be temporary during construction and would be considered less than significant. There would also be no impacts from the No Project/No Action Alternative or the Preferred Action.				
Transportation				
Circulation system performance; Emergency access	Potentially Significant Impact	Less than Significant Impact	No impact	Potentially Significant / Less than Significant with mitigation
Consistency with CEQA Guidelines section 15064.3 subdivision (b) (VMT); Traffic hazards	No impact	N/A	No impact	No impact

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
Construction would require lane closures for pipeline construction and would generate only minimal vehicle trips for construction workers. To ensure that potential traffic impacts are less than significant, the Preferred Action would implement transportation mitigation measures, including notifying emergency service providers and schools, implementing a traffic control plan, and avoiding high volume intersections. The buried pipelines would not result in traffic hazards. The No Project/ No Action Alternative involves no construction and would not impact traffic circulation, emergency access, VMT, alternative transportation facilities, or create traffic hazards. The Preferred Action would implement mitigation recommended in the MND to minimize construction impacts on congestion, traffic, and emergency vehicle access. The Preferred Action would not have a permanent impact involving VMT or traffic hazards.				
Tribal Cultural Resources				
Tribal Cultural Resources	Potentially Significant Impact	Less than Significant Impact	No impact	Potentially Significant / Less than Significant with Mitigation
No Comments were received in response to the tribal notification letter send June 18, 2024. Although no tribal cultural resources have been identified in the Project area, there is always the potential for undiscovered resources to be encountered during construction. To reduce the potential impacts on tribal cultural resources, the Preferred Action would implement mitigation measures including archaeological monitoring and best practices in the event of an unanticipated discovery of cultural resources and/or human remains during Project construction. Implementation of cultural resources mitigation measures would reduce impacts to less than significant. The No Project/No Action Alternative would not impact tribal cultural resources because it would not involve ground-disturbing activities.				
Utilities and Service Systems				
Construction of new utilities causing environmental effects	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Sufficient water supply	Less than Significant Impact	N/A	No impact	Less than Significant Impact
Wastewater treatment capacity	No impact	N/A	No impact	No impact
Solid waste capacity; Solid waste compliance	Less than Significant Impact	N/A	No impact	Less than Significant Impact
The Preferred Action includes new water lines but construction would not have significant environmental effects; no new wastewater, stormwater, power, or telecommunications facilities would be required. The District has determined that it has sufficient water supplies to serve the new service connections associated with the Project. The Preferred Action would not require wastewater treatment capacity. Construction would generate a minimal amount of excess soils that would be reused onsite to the extent feasible; there would be no long-term solid waste generated by the Preferred Action therefore impacts would be less than significant. The No Project/ No Action Alternative would not include construction of any facilities and would have no additional demands for water, wastewater or solid waste facilities.				

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
Wildfire				
Impair an adopted emergency response or evacuation plan	Potentially Significant / Less than Significant with Mitigation	Less than Significant Impact	No Impact	Potentially Significant / Less than Significant with Mitigation
Exacerbate wildfire risk due to slope, prevailing winds, or other factors	Less than Significant Impact	N/A	No Impact	Less than Significant Impact
Exacerbate wildfire risk due to required installation or maintenance of associated infrastructure	No Impact	N/A	No Impact	No Impact
Expose people or structures to risks resulting from runoff, post-fire slope instability, or drainage changes	No Impact	N/A	No Impact	No Impact
The County portion of the Preferred Action is in a Very High Fire Hazard Severity Zone, therefore standard fire safety practices would be used during construction. The Project would not cause an impact due to slope, prevailing winds, and other factors. Nor would the Project exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from wildfire or the uncontrolled spread of a wildfire. Thus, no impacts are expected related to exacerbation of wildfire risk. The No Project/No Action Alternative would involve no construction and would thus have no impacts associated with exacerbation of wildfire risk and would not impact emergency response or evacuation plans. The Preferred Action construction could impede emergency access vehicles, mitigation measure **TRA-1** is recommended in order to reduce possible access impacts to a less than significant level. The Preferred Action is not expected to result in significant impacts associated with exacerbation of wildfires.				
Federal Cross-Cutters				
Federal Endangered Species Act	**Comply**	**Comply**	**No Impact**	**Comply**
According to the Biology Report prepared by Alden Environmental, the area of potential effect would result in no impact to Federal listed species and no additional focused surveys for Federal listed species are currently recommended. If the USFWS lists the spadefoot toad then focused surveys for that species may be required. Additional focused surveys for sensitive species may be required, depending upon the final Project alignment and regulatory agency input. The Preferred Action is not expected to result in direct or indirect impacts on special-status plant species. Mitigation measure **BIO-1** would minimize potential impacts on protected nesting birds. The No Project/ No Action Alternative would involve no construction and thus would not impact sensitive species. The Preferred Action would not jeopardize listed species.				

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
National Historic Preservation Act, Section 106	**Comply**	**Comply**	**No impact**	**Comply**
The Cultural Resources survey identified five previously unrecorded prehistoric bedrock milling sites (Temp-1 to Temp-5) and one prehistoric isolate (Iso-1). Through a review of the APE, it was determined that Temp-1 and Iso-1 are well outside of the alignment and will not be impacted by the undertaking. However, Temp-2 to Temp-5 are located within or directly adjacent to the APE alignment and require testing and significance evaluations. All of the resources identified during the survey are located on the Barona Indian Reservation portion of the Project. The Preferred Action would implement mitigation measures in the event of unanticipated discovery of cultural resources or human remains. The No Project/ No Action Alternative would not affect undisturbed soils or historical resources. The Preferred Action would conduct a cultural resources assessment, implement mitigation measures to reduce impacts to a less than significant level.				
Clean Air Act	**Comply**	**N/A**	**No impact**	**Comply**
The results of the air quality modeling showed that temporary construction pollutant emissions would not exceed federal General Conformity *de minimis* thresholds and impacts were less than significant; the Preferred Action would be in compliance with the Federal Clean Air Act (CAA). The No Project/ No Action Alternative would result in no changes to existing emission and air quality. For the Preferred Action, impacts to air quality from construction emissions is expected to comply with the CAA.				

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
Clean Water Act	**Comply**	**N/A**	**No Impact**	**Comply**
The two pipelines of the current Project cross San Vicente Creek off the Barona Indian Reservation and a tributary of Padre Barona Creek on the Barona Indian Reservation. This segment of San Vicente Creek does meet the current definition of "waters of the United States" as "relatively permanent, standing or continuously flowing bodies of water" 33 C.F.R. Section 328.3(a)(3), and 40 C.F.R. Section 120.2(a)(3). The on-reservation Padre Barona Creek and its tributary are both ephemeral streams due to lack of a relatively continuous surface flow or connection to an intermittent or continuously flowing watercourse, and flow only during or in direct response to precipitation. Therefore, the CWA does not directly apply to the segment of the Project on the Barona Indian Reservation, and no permit is needed from the U.S. Army Corps of Engineers or any other federal agency under the CWA for that segment of the Project.				
Coastal Zone Management Act	**N/A**	**N/A**	**N/A**	**N/A**
No portion of the Preferred Action area, the No Project/ No Action Alternative Area, nor the Preferred Action area are within the coastal zone. Therefore, the Coastal Zone Management Act does not apply.				

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
Farmland Protection Policy Act (FPAA)	**Comply**	**N/A**	**No impact**	**Comply**
Neither the Preferred Action, No Project/ No Action Alternative, nor the Preferred Action are located in areas currently under agricultural production. The Project will not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. The Proposed Project and Alternatives would not conflict with State, local, and private programs and policies to protect farmland and would be in compliance with the FPAA.				
Executive Order 11988 – Floodplain Management	**Comply**	**N/A**	**No impact**	**Comply**
The Preferred Action pipelines would be located underground and would not interfere with floodplain management or expose people or structures to a significant flooding risk. As such, the Project would be in compliance with Executive Order 11988. Likewise, the No Project/ No Action Alternative and the Preferred Action would not expose people or structures to significant flood-related risk.				
Federal Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and Executive Order 13168	**Comply**	**Comply**	**No impact**	**Comply**
The Preferred Action would have less than significant impact on protected birds with implementation of mitigation if construction cannot be avoided during the nesting season. The No Project/ No Action Alternative would involve no construction and would not be expected to affect protected birds. The Preferred Action with the incorporation of mitigation to protect nesting birds, would have a less than significant impact.				
Executive Order 11990 – Protection of Wetlands	**Comply**	**N/A**	**No impact**	**Comply**
The Preferred Action does not involve construction within federally protected wetlands as defined by Clean Water Act (CWA) Section 404. The Proposed Project would utilize trenchless crossing of the San Vicente Creek in order to avoid direct impacts to wetlands. Similarly, the Preferred Action would involve trenchless crossing of San Vicente Creek by attaching the pipelines to the underside of the bridge from the bridge deck. Impacts to CDFW jurisdictional resources may require a Lake and Streambed Alteration (LSA) agreement via California Fish and Game Code Section 1602. Impacts to RWQCB jurisdictional resources may require a Water Quality Certification under Section 401 of the Federal CWA. The actual permitting requirement would depend on the type and amount of jurisdictional resource impacts in the County. The No Project/No Action Alternative would not involve construction and would not impact federally protected wetlands.				
Wild and Scenic Rivers Act	**N/A**	**N/A**	**N/A**	**N/A**
There are no designated Wild and Scenic Rivers within the Project area. Implementation of the Preferred Action, as well as the No Project/ No Action alternative would result in no impact.				

Issue Areas	Proposed Project (CEQA)		Alternatives (NEPA)	
	MND Findings	With Mitigation	No Project/ No Action	Preferred Action
Safe Drinking Water Act – Source Water Protection	**N/A**	**N/A**	**N/A**	**N/A**
There are no sole-source aquifers in the project area. Implementation of the Preferred Action, as well as the No Project/ No Action alternative would result in no impact.				
Executive Order on Trails for America in the 21st Century	**N/A**	**N/A**	**N/A**	**N/A**
There are no trails in the Project area. Implementation of the Preferred Action, as well as the No Project/ No Action alternative would result in no impact.				
Executive Order 13007 – Indian Sacred Sites	**N/A**	**N/A**	**N/A**	**N/A**
Implementation of the Preferred Action, as well as the No Project/ No Action alternative would result in no impact. No part of the Preferred Action would be located on or impact any federal land that is identified as an Indian sacred site.				
Magnuson-Stevens Fishery Conservation and Management Act	**N/A**	**N/A**	**N/A**	**N/A**
The Preferred Action is not located in, nor would it impact any U.S. federal waters regulated under the Magnuson-Stevens Act. The Proposed Action is not expected to have an adverse effect on Essential Fish Habitat, migratory fish, wildlife species, or fish habitat in a protected area. Similarly, the No Project/ No Action Alternative would not affect Essential Fish Habitat or waters regulated under the Magnuson-Stevens Act.				
Environmental Justice	**Comply**	**N/A**	**Comply**	**Comply**
The Preferred Action alignment of the water pipelines would be located within approximately 3,000 feet within the right of way on San Vicente Road and Wildcat Canyon Road which is within the County of San Diego. According to the County of San Diego General Plan - *Chapter 9 Environmental Justice Element*, this area which is immediately south of Ramona is not considered Environmental Justice Area. However, the majority of the Project alignment would be located on the Barona Reservation. The United States Environmental Protection Agency (USEPA or EPA) has a policy regarding how it works with native peoples, entitled *EPA Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples.* That Policy calls for and defines Environmental Justice and Fair Treatment of native peoples. The Preferred Action would have short-term construction impacts but would achieve the long-term goal of supplying a safer, more reliable water supply to this community. The No Project/ No Action Alternative would have no impacts but would result in no benefits to the community. Therefore, the Preferred Action would have short-term impacts but would result in long-term benefits to the community.				

6.0 CUMULATIVE IMPACTS

6.1 REGULATORY FRAMEWORK

According to the CEQA guidelines section 15130; where a lead agency is examining a Project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable. As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project together with other projects causing related impacts.[54] Under NEPA the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions shall be addressed (40 CFR section 1508.7)[55]

6.2 PROPOSED/PREFERRED ACTION

The Preferred Action for the entirety of the Project includes trenching and placing pipelines underground, then covering to bring surface back to existing condition. No grading will be performed, and no cut and fill is proposed. All soil to remain onsite. Cumulative impacts would occur if the incremental effects of the Project are considerable when viewed in connection with the effects of past or present projects, and reasonably foreseeable future actions. No evidence has been identified that would result in the Project contributing to environmental impacts in this way. Impacts would be minimal and temporary.

6.3 NO ACTION ALTERNATIVE

Under the No Action Alternative, the Project would not be implemented, and there would be no change to current conditions, thus no cumulative impact with past or present projects, and reasonably foreseeable future actions.

There would be no significant cumulative impacts based on incremental effects of the Project when viewed in connection with the effects of past projects. No mitigation measures are necessary.

[54] Association of Environmental Professionals, 2024 CEQA Guidelines
[55] Report - Considering Cumulative Effects Under NEPA (doe.gov)

7.0 CONSTRUCTION IMPACTS

The proposed water pipelines off-Reservation will run roughly parallel to each other as well as to Barona Road which runs north to south through the Reservation. The 8-inch recycled water pipeline will begin at the San Vicente Wastewater Reclamation Plant on San Vicente Road approximately 0.23 miles east of the intersection of San Vicente Road and Wildcat Canyon Road and run westward to Wildcat Canyon Road turn southward and run parallel with the 12-inch pipeline. The potable water 12-inch pipeline will begin at the intersection of San Vicente Road and Wildcat Canyon Road within the right of way of Wildcat Canyon Road passing by several residential parcels zoned A70 under the jurisdiction of San Diego County and travel southeastward approximately 0.37 miles to the northern boundary of and onto the Barona Indian Reservation. After approximately 0.35 miles of the on-Reservation portion of the Project the pipelines would turn eastward towards the Giant San Diego Paintball Park before turning south and southwest to the proposed terminus near the intersection of Wildcat canyon Road and Barona Road across from the Barona Indian Charter School, just north of the Barona Fire Department. This alignment traverses vacant lands scattered local farmland and residential development (more concentrated in the south end) for approximately 500 residents.

Project construction activities include trenching and placing pipelines underground, then covering to bring the ground surface back to existing condition. No grading will be performed, and no cut and fill is proposed. All soil excavated is to remain onsite and used for backfilling. Equipment used for both the on-Reservation and off-Reservation sections of the pipeline installation will be similar and will include excavators, dump truck, water truck, and front loaders. For the bridge installation of the pipeline, a snooper truck will be needed which is a truck with a crane that has a working platform attached to the arm that allows work from the bridge.

The Project as proposed would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. However, temporary construction activities may impact businesses and residents where the pipeline is being installed within the right of way. Mitigation Measure TRA-1 from section 3.4-XVII is recommended in order to reduce these impacts to a less than significant level.

8.0 LIST OF PREPARERS

Table 8.1 List of Preparers of this Environmental Assessment and Initial Study			
Name	Agency or Company	Title	Responsibilities
Art Bunce	Bunce Law	Attorney	Representative of Project applicant
Erica Wolski	Ramona Municipal Water District	General Manager	Lead Agency for CEQA
Sheilla Alvarez	Barona Band of Mission Indians	Director of Government Affairs	Responsible Agency for CEQA U.S. Department of Housing and Urban Development as delegated to Barona Band of Mission Indians, Lead Agency for NEPA
Cheryl Tubbs	Lilburn Corp.	Principal	QA/QC EA/IS-MND
Anthony DeLuca	Lilburn Corp.	Project Manager	Preparation of the EA/IS-MND
Andrew Garrison	BFSA Environmental Services, a Perennial Company	Project Archaeologist	Section 106 Historic Resources Study, Archaeological investigation and report preparation
Jenni Stropes	BFSA Environmental Services, a Perennial Company	Principal Historian	Paleontological investigation and report preparation.
Brian Lohstroh	Alden Environmental, Inc.	Biologist	Biological investigation and report preparation.
Roma Stromberg	Ganddini Group, Inc.	Senior Associate	Preparation of the Noise Study

9.0 REFERENCES

California Air Resources Board. *California Greenhouse Gas Emission Inventory – 2018 Edition*. Accessed from https://www.arb.ca.gov/cc/inventory/data/data.htm

California Department of Conservation. *California Important Farmland Finder*. Accessed on 12/12/2023 from DLRP Important Farmland Finder (ca.gov)

California Department of Fish and Wildlife. April 2019. *California Natural Community Conservation Plans*. Accessed on 12/14/2023 from https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=68626&inline

California Department of Toxic Substances Control. *EnviroStor*. Accessed on 12/12/2023.

California Energy Commission. *2018 Renewables Portfolio Standard (RPS)*. Accessed from http://www.energy.ca.gov/portfolio/

California Energy Commission Efficiency Division. *Title 24: 2019 Building Energy Efficiency Standards*. Accessed on 12/01/2023 from https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf

County of San Diego. *Zoning Ordinance*. Updated April 2022.

County of San Diego. *General Plan 2011*. Adopted 2011.

IPCC, 2013. *Climate Change 2013: The Physical Science Basis*. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535 pp. https://www.ipcc.ch/report/ar5/wg1/

Science Applications, Inc. 1981. *Final Report Volume 1A: Cultural Resources Survey and Evaluation of the Barona Reservation of San Diego County, California*. Unpublished report on file at the South Coastal Information Center at San Diego State University, San Diego, California.

South Coast Air Quality Management District. *Off-Road Mobile Source Emission Factors (2019)*. Accessed 12/11/2023 from http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/off-road-mobile-source-emission-factors .

United States Department of Transportation, Federal Highway Administration. *Motor Fuel Use – 2017*. Accessed 12/12/2023 from https://www.fhwa.dot.gov/policyinformation/statistics/2016/mf21.cfm

United States Energy Information Administration (EIA). *California - Profile Overview*. Last modified November 15, 2018. Accessed from https://www.eia.gov/state/?sid=CA

9.1 PROJECT SPECIFIC REFERENCES

Barona. 2020. Barona Band of Mission Indians accessed 6.25.2024 Barona Band of Mission Indians (barona-nsn.gov)

BFSA. 2023. *Section 106 (NHPA) Historic Resources Study for the Barona Long-Term Potable and Recycled Water Service Project*. BFSA Environmental Services, a Perennial Company, November 15, 2023

BFSA. 2024. *A Paleontological Assessment for the Barona Long-Term Potable and Recycled Water Service Project,* BFSA Environmental Services, a Perennial Company, June 21, 2024

California Soil Resource Lab. 2024. *SoilWeb: An Online Soil Survey Browser*. SoilWeb: An Online Soil Survey Browser | California Soil Resource Lab (ucdavis.edu). accessed 10.3.2024

County of San Diego. 2022. *County of San Diego Transportation Study Guidelines*, Adopted September 2022.

County of San Diego Biological Mitigation Ordinance COUNTY OF SAN DIEGO, accessed February 25, 2025

Dudek 2022. *Preliminary Design Report, Long-Term Potable and Recycled Water Service to Barona Indian Reservation,* Dudek, 2021

Dudek. 2021. *Urban Water Management Plan 2020 Update,* Dudek, June 2021

Dudek. 2022. Preliminary Design Report, *Long-Term Potable and Recycled Water Service to Barona Indian Reservation*, Dudek, June 2022

FMMP. 2023. California Department of Conservation Farmland Mapping and Monitoring Program accessed 12.17.2023, Farmland Mapping & Monitoring Program (ca.gov)

Ganddini. 2024.Ganddini Group, LLC, *Noise Analysis for the Ramona/Barona Water Pipeline Project*. June 15, 2024

Ninyo & Moore, 2000. *Second Environmental Evaluation of Off-Reservation Effects of Barona Casino Resort Expansion Project*

South San Diego County MSCP Subarea Plan 1997. County Subarea Plan, accessed February 28, 2025

SSURGO 2.2. 2021. U.S. Department of Agriculture, Natural Resources Conservation Service 2021, accessed 12.17.2023 Soil Survey Geographic Database (SSURGO) | Natural Resources Conservation Service (usda.gov)

Stephenson, R.A., Giffen, J.H., and Gibson, E.E. 2009. *County of San Diego guidelines for determining significance [for] paleontological resources*. Report (2007, revised in 2009) prepared by the San Diego County Land Use and Environment Group, Department of Planning and Land Use and Department of Public Works, San Diego. Pp. i-vi + 1-47, figs. 1-10, table 1.

Tanis C. Thorne, 2012. *El Capitan*, Malki-Ballena Press, plate 6.

USDA-NRCS. 2021. U.S. Department of Agriculture, Natural Resources Conservation Service 2021, Home | Natural Resources Conservation Service (usda.gov) accessed 12.17.2023

USDA-NRCS. 2019. U.S. Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey 2019, Web Soil Survey - Home (usda.gov) accessed 10.3.2024

U.S. Geological Survey, *Water Resources of Indian Reservations, San Diego County, California*, Open File Report 77-289, October 1977

10.0 MITIGATION MEASURES

Section IV Biological Resources:

- **BIO-1:** Nesting Bird Surveys. Nesting bird nesting season generally extends from February 1 through September 15 in southern California and specifically, March 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist will conduct pre-construction Nesting Bird Surveys (NBS) prior to Project-related disturbance to nestable vegetation to identify any active nests. If no active nests are found, no further action will be required. If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage, and expected types, intensity, and duration of the disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.
- **BIO-2:** Revegetation. To compensate for these temporary impacts could include revegetating the impacted vegetation in place following construction in accordance with a County-approved Revegetation Plan.

Section V Cultural Resources

CUL-1: Unanticipated discovery of previously unknown archaeological or historical materials could occur during ground-disturbing activities. If any subsurface cultural resources are encountered during earth-moving activities, all work within 50 feet shall be halted and the applicant shall retain an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology to evaluate the significance of the find and recommend appropriate treatment for the resource. Prehistoric materials can include flaked-stone tools (e.g., Projectile points, knives, choppers) or obsidian, chert, or quartzite toolmaking debris; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash, charcoal, shellfish remains, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Historical materials might include wood, stone, or concrete footings, walls, and other structural remains; debris-filled wells or privies; and deposits of wood, metal, glass, ceramics, and other refuse. The archaeologist will evaluate the find in accordance with state and local guidelines, including those set forth in the California Public Resources Code Section 21083.2. Depending upon the nature of the find, if the discovery proves to be potentially significant under CEQA, as determined by the qualified archaeologist, additional work such as data recovery excavation, avoidance of the area of the find, documentation, testing, data recovery, reburial, archival review and/or transfer to the appropriate museum or educational institution, or other appropriate actions may be warranted at the discretion of the qualified archaeologist. After the find is appropriately mitigated, work in the area may resume.

- **CUL-2:** Should human remains be identified during ground-disturbing activities related to the implementation of the Proposed Project, whether during construction, maintenance, or any other activity, State Public Resources Code Section 5097.98, CEQA Section 15064.5 and Health & Safety Code Section 7050.5 and County-mandated procedures will be followed for the treatment and disposition of those remains, as follows.

- The Property Owner or their representative shall contact the County Coroner and the PDS Staff Archaeologist.
- Upon identification of human remains, no further disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin. If the human remains are to be taken offsite for evaluation, they shall be accompanied by the Diegueño Native American monitor.
- If the remains are determined to be of Native American origin, the NAHC shall immediately contact the Most Likely Descendant (MLD).
- The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by Public Resources Code Section 5097.98 has been conducted.
- The MLD may with the permission of the landowner, or their authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

Section IX Hazards and Hazardous Materials

- **See Mitigation Measure TRA-1**

Section XIII Noise:

- **NOI-1:** All equipment, whether fixed or mobile, will be equipped with properly operating and maintained mufflers, consistent with manufacturer standards.
- **NOI-2:** All stationary construction equipment will be placed so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
- **NOI-3:** As applicable, all equipment shall be shut off and not left to idle when not in use.
- **NOI-4:** To the degree possible, equipment staging will be located in areas that create the greatest distance between construction-related noise and vibration sources and existing sensitive receptors.
- **NOI-5:** Jackhammers, pneumatic equipment, and all other loud portable stationary noise sources will be directed away and shielded from existing residences in the vicinity of the project site. Either one-inch plywood or sound blankets can be utilized for this purpose. They should reach up from the ground and block the line of sight between equipment and existing residences. The shielding should be without holes and cracks.
- **NOI-6:** No amplified music and/or voice will be allowed on the project site.
- **NOI-7:** Haul truck deliveries will not occur between the hours of 7:00 PM and 7:00 AM.
- **NOI-8:** Delivery trucks shall not arrive in the vicinity before 7:00 AM and idle near sensitive receptors.

- **NOI-9:** Noise monitoring shall be conducted by a qualified noise consultant at the property line of representative occupied land uses that are within the 75 dB L_{eq} noise contour as shown in *Figures 6-11* of Appendix F, during typical construction activities. The measurement shall be conducted over an 8-hour period in order to determine if the 75 dBA L_{eq} (8-hour) standard is violated. If after several noise measurements (3) have been conducted, it is apparent that the mix of equipment and timing of usage will not exceed 75 dBA L_{eq} (8-hour) the noise consultant shall provide a letter report documenting the noise measurements and findings and recommendations as to whether or not continued noise monitoring is necessary.

  If noise monitoring does show that construction noise levels exceed the 8-hour Leq standard at occupied properties located within the 75 dBA noise contour, the contractor will implement measures to reduce construction noise levels to below 75 dBA L_{eq} (8-hour) between 7:00 AM and 7:00 PM, on any occupied property located within the 75 dBA noise contour (as measured at the property line).

  - If needed, temporary noise barriers will be installed to block the line of sight between the noise source(s) and the occupied property. These barriers shall be of sufficient height to block the line of sight between the source(s) and receptor(s) based on recommendations of a competent noise professional.
  - If needed, temporary barriers will be solid, with no holes or gaps, from the ground to the heigh determined by the on-site noise professional.
  - For stationary equipment, temporary barriers will also be solid with no holes or gaps, except for openings that are necessary to access the equipment.

- **NOI-10:** Noise *Compliance with County Ordinance 36.410 - Sound Level Limitations on Impulsive Noise*

  82 dBA L_{25}

  Noise monitoring shall be conducted by a qualified noise consultant at the property line of representative occupied residential land uses that are within the 82 dB L_{25} noise contour as shown in *Figures 6-11* of Appendix F, during typical construction activities. Measurements shall be conducted over a 1-hour period in order to determine if the 82 dBA L_{25} standard is violated at occupied residential, village, or civic land uses. If after several noise measurements (3) have been conducted, and it is apparent that the mix of equipment and timing of usage will not exceed this standard, the noise consultant shall provide a letter report documenting the noise measurements and findings and recommendations as to whether or not continued noise monitoring is necessary.

  If noise monitoring does show that construction noise levels exceed 82 dBA L_{25} standard at occupied residential, village, or civic land uses, the contractor will implement the following measures:

  - If needed, temporary noise barriers will be installed to block the line of sight between the noise source(s) and the occupied property. These barriers shall be of sufficient height to block the line of sight between the source(s) and receptor(s) based on recommendations of a competent noise professional.
  - If needed, temporary barriers will be solid, with no holes or gaps, from the ground to the heigh determined by the on-site noise professional.

- For stationary equipment, temporary barriers will also be solid with no holes or gaps, except for openings that are necessary to access the equipment.

85 dBA L_{25}

Noise monitoring shall be conducted by a qualified noise consultant at the property line of representative occupied residential land uses that are within the 85 dB L_{25} noise contour as shown in *Figures 6-11* of Appendix F, during typical construction activities. Measurements shall be conducted over a 1-hour period in order to determine if the 85 dBA L_{25} standard is violated at occupied agricultural, commercial or industrial land uses. If after several noise measurements (3) have been conducted, and it is apparent that the mix of equipment and timing of usage will not exceed this standard, the noise consultant shall provide a letter report documenting the noise measurements and findings and recommendations as to whether or not continued noise monitoring is necessary.

If noise monitoring does show that construction noise levels exceed 85 dBA L_{25} standard at occupied residential, village, or civic land uses, the contractor will implement the following measures:

- If needed, temporary noise barriers will be installed to block the line of sight between the noise source(s) and the occupied property. These barriers shall be of sufficient height to block the line of sight between the source(s) and receptor(s) based on recommendations of a competent noise professional.
- If needed, temporary barriers will be solid, with no holes or gaps, from the ground to the heigh determined by the on-site noise professional.
- For stationary equipment, temporary barriers will also be solid with no holes or gaps, except for openings that are necessary to access the equipment.

For impulsive noise, the measurement period shall be one-hour. During the measurement period a measurement shall be conducted every minute from a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise exceeds the maximum sound level for any portion of any minute, it will be deemed that the maximum sound level was exceeded during that minute.

- **NOI-11:** Avoid construction activities within the mapped 60 dBA L_{eq} construction noise contour (*Figure 11* of Appendix F) during the least Bell's vireo breeding season; OR
- **NOI-12:** If least Bell's vireo are not detected during the protocol survey, a qualified biologist shall submit substantial evidence to the City and applicable resource agencies which demonstrates whether or not mitigation measures such as noise walls are necessary as follows: 1) If this evidence indicates the potential is high for least Bell's vireo or southwestern willow flycatcher to be present based site conditions, then mitigation NOI-13 shall be implemented as specified below. 2) If this evidence concludes that no impacts to this species are anticipated, no mitigation measures will be necessary.
- **NOI-13:** If least Bell's vireo is detected during required pre-construction surveys, a qualified acoustical professional shall design mitigation to reduce construction noise levels to 60 dBA L_{eq} or to ambient noise levels (whichever is louder) at the edge of mapped least Bell's vireo

nesting sites. Mitigation may include but is not limited to strategic placement of temporary noise barriers, berms, walls, sound blankets, or strategic placement of large trucks.

Noise monitoring shall be conducted concurrent with implementation of any necessary noise attenuation measures and throughout construction activities within the vicinity of mapped least Bell's vireo nesting sites, to ensure that noise levels from construction activities do not exceed 60 dBA hourly average or the dBA of ambient noise level should they be greater than 60 dBA hourly average (i.e., whichever is greater). If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved until the end of the breeding season or until the fledgling birds have left the nest, whichever occurs first.

- **NOI-14:** Where the placement of stationary equipment is necessary to perform construction activities and the equipment would result in noise levels exceeding ambient levels or 60 dBA L_{eq}, whichever is higher, in the vicinity of nest sites, noise shrouds, sound blankets or screening walls will be used to reduce sounds levels from the equipment to ambient conditions or 60 dBA, whichever is higher. A qualified noise consultant will be consulted in order to verify the effectiveness of said mitigation.
- **NOI-15:** The use of large bulldozers shall be avoided within 14 feet of existing structures and the use of vibratory rollers shall be avoided within 25 feet of existing structures. A small bulldozer is an acceptable alternative.

Section XVII: Transportation:

- **TRA-1:** Construction activities may impact access to or from adjacent land uses. Therefore, residents and businesses should be notified of potential obstructions. Blocked access to nearby properties would require advance coordination with property owners and tenants. Contractor shall submit a Traffic Control Plan to the County and the Tribe to include:
  - Identification of construction staging site locations and potential road closures,
  - Alternate routes of traffic detours, including emergency response contact information,
  - Planned routes for construction-related vehicle traffic (haul routes), and
  - Identification of alternative safe routes to maintain pedestrian safety during construction.

Section XVIII Tribal Cultural Resources:

- **See Mitigation Measures CUL-1 and CUL-2**

Section XX Wildfire:

- **See Mitigation Measures TRA-1**

IS/MND, Appendices 2A

INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION/ ENVIRONMENTAL ASSESSMENT

Ramona Municipal Water District/Barona Indian Tribe Potable and Recycled Water Infrastructure Project

Prepared for:

Barona Band of Mission Indians
and
Ramona Municipal Water District

Prepared by:

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March 2025

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- Appendix D: June 2022 Preliminary Design Report by Dudek
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Appendix A

Construction Equipment Emissions Calculations

Ramona Municipal Water District/Barona Indian Tribe Potable and Recycled Water Infrastructure Project
Construction Equipment Emissions

			Equation Variables		Emissions				
Operation	Emission Factor	Units	1	2	PM-10 lbs/day	ROG/VOC lbs/day	CO lbs/day	NOX lbs/day	SOX lbs/day
Excavation Equipment Exhaust Emissions			Pieces of Equipment	Operating Hours					
PM-10									
Excavator	0.010	lbs/hr	1	8	0.08				
Dump Truck	0.008	lbs/hr	1	8	0.06				
Water Truck	0.008	lbs/hr	1	8	0.06				
Loader	0.014	lbs/hr	1	8	0.11				
Snopper Truck	0.008	lbs/hr	1	8	0.06				
Other Construction Equipment	0.008	lbs/hr	2	8	0.13				
ROG									
Excavator	0.059	lbs/hr	1	8		0.47			
Dump Truck	0.046	lbs/hr	1	8		0.37			
Water Truck	0.046	lbs/hr	1	8		0.37			
Loader	0.059	lbs/hr	1	8		0.47			
Snopper Truck	0.046	lbs/hr	1	8		0.37			
Other Construction Equipment	0.046	lbs/hr	2	8		0.74			
CO									
Excavator	0.509	lbs/hr	1	8			4.07		
Dump Truck	0.348	lbs/hr	1	8			2.78		
Water Truck	0.348	lbs/hr	1	8			2.78		
Loader	0.432	lbs/hr	1	8			3.46		
Snopper Truck	0.348	lbs/hr	1	8			2.78		
Other Construction Equipment	0.348	lbs/hr	2	8			5.56		
NOX									
Excavator	0.252	lbs/hr	1	8				2.02	
Dump Truck	0.224	lbs/hr	1	8				1.80	
Water Truck	0.224	lbs/hr	1	8				1.80	
Loader	0.313	lbs/hr	1	8				2.50	
Snopper Truck	0.224	lbs/hr	1	8				1.80	
Other Construction Equipment	0.224	lbs/hr	2	8				3.59	
SOX									
Excavator	0.001	lbs/hr	1	8					0.01
Dump Truck	0.001	lbs/hr	1	8					0.01
Water Truck	0.001	lbs/hr	1	8					0.01
Loader	0.001	lbs/hr	1	8					0.01
Snopper Truck	0.001	lbs/hr	1	8					0.00
Other Construction Equipment	0.001	lbs/hr	2	8					0.02
				Total	0.51	2.78	21.44	13.50	0.06

Sources: Off-Road Mobile Source Emission Factors; SCAQMD 2024

Ramona Municipal Water District/Barona Indian Tribe Potable and Recycled Water Infrastructure Project

GHG-Construction Equipment Emissions

Operation	Emission Factor	Units	Equation Variables 1	Equation Variables 2	GHG Emissions CO2 lbs/day	GHG Emissions CH4 lbs/day	GHG Emissions N2O g/day
Excavation Equipment Exhaust Emissions			Pieces of Equipment	Operating Hours			
CO2							
Excavator	120.0	lbs/hr	1	8	960.0		
Dump Truck	123.0	lbs/hr	1	8	984.0		
Water Truck	123.0	lbs/hr	2	8	1968.0		
Loader	109.0	lbs/hr	1	8	872.0		
Snopper Truck	123.0	lbs/hr	1	8	984.0		
Other Construction Equipment	123.0	lbs/hr	1	8	984.0		
CH4							
Excavator	0.005	lbs/hr	1	8		0.042	
Dump Truck	0.004	lbs/hr	1	8		0.034	
Water Truck	0.004	lbs/hr	2	8		0.067	
Loader	0.005	lbs/hr	1	8		0.042	
Snopper Truck	0.004	lbs/hr	1	8		0.034	
Other Construction Equipment	0.004	lbs/hr	1	8		0.034	
				Miles Per Day			
N2O*							
Excavator	0.101	g/mile	1	2			0.202
Dump Truck	0.246	g/mile	1	2			0.492
Water Truck	0.246	g/mile	2	2			0.984
Loader	0.246	g/mile	1	2			0.492
Snopper Truck	0.246	g/mile	1	2			0.492
Other Construction Equipment	0.080	g/mile	1	2			0.160
				Total lbs/g/day	6752.00	7.08	747.83
				Total lbs/day	7387.10		
				Total MTCO2e per Year	554.03		

Sources: Off-Road Mobile Source Emission Factors; SCAQMD 2024
Source N2O: California Climate Action Registry General Reporting Protocol, 2009I;
Table A9-8-C SCAQMD Handbook; Climate Leaders EPA, Section 3, Table 2
Duration: 6 Month (150 days) Construction Period

Appendix B

February 2025 Biological Assessment by Alden Environmental, Inc.

February 26, 2025

Mr. Brian Smith
BFSA Environmental Services
14010 Poway Road, Suite A
Poway, CA 92064

Dear Mr. Smith:

This letter report presents the results of a field reconnaissance, a protocol presence/absence coastal California gnatcatcher (*Polioptila californica californica*) survey, vegetation mapping, and a biological impacts analysis for Long-Term Potable and Recycled Water Service to the Barona Indian Reservation (the project). Sensitive resources, including potential jurisdictional resources, identified are described along with the proposed impacts from development. The potential for sensitive plant and animal species to occur have been assessed and recommendations made for additional studies/surveys that may be necessary to construct the project.

PROJECT LOCATION AND DESCRIPTION

Approximately 5.79 miles of the approximately 6.34-mile-long project is located on the Reservation; the northern-most segment (approximately 0.55 mile) is in unincorporated San Diego County within the boundaries of the County's Multiple Species Conservation Program (MSCP) Subarea Plan (Figures 1-3). Wildcat Canyon Road is the dividing line between the South San Diego County Subarea and the North San Diego County Subarea. The project would source water from the Ramona Municipal Water District and is needed because recent estimates of the Tribe's long-term water demand are projected to exceed the sustainable yield of the underlying groundwater basin (Dudek 2022)**.**

Project construction would include the use of staging areas along the route including vacant private land, public land, and parking lots. Surface preparation would be conducted including removing structures such as fences/posts, pavement and/or vegetation from trenching and jack-and-bore pit areas. Trenches would be excavated for pipe installation; excavated soil would be stockpiled alongside the trench and used for backfill or would be hauled off site for disposal. Pipe trenches would generally be 3 to 5 feet wide and 4 to 10 feet deep, with deeper installations potentially required such as at large utility or channel crossings.

Pipeline trenches, in any given location, would be open for two to three days on average. During construction, vertical wall trenches would be temporarily "closed" at the end of each work day by covering with steel plates or backfilled. Trenches would be backfilled with either the excavated soil or imported material. Dump trucks would be used to deliver imported, engineered backfill material to stockpiles near the trenching operation. Native soil would be reused for backfill to the greatest extent possible; however, the soil may not have the properties necessary for compatibility and stability.

Jack-and-bore construction employs a non-steerable system that drives an open-ended pipe laterally using a percussive hammer, thereby resulting in the displacement of soil limited to the wall thickness of the pipe. For this construction method, pits would be dug on either side of the surface feature to be avoided (e.g., stream crossing or heavily traveled roadway). The pits are typically 10 to 15 feet wide and 10 to 20 feet long for the receiving pit and up to 50 feet long for the jacking pit. The depth would depend on the feature to be avoided. The boring equipment and pipe would be lowered into the pit and aligned at the appropriate depth and angle to achieve the desired exit location. A compressor would supply air to the pneumatic ramming tool to thrust the pipe forward. A cutting shoe may be welded to the front of the lead pipe to help reduce friction and cut through the soil.

Depending on the size of the installation, spoil from inside the pipe would be removed with an auger, compressed air, water, or a combination of techniques. A seal cap would be installed on the starter pit side of the installation and spoil would be discharged into the receiver pit. Using this technique, ground surface disturbance would not occur, except at the pits.

Bridge-crossing construction would utilize a bridge boom, also known as a Snooper™ truck, to hang the pipeline from the bridge crossing. While the truck is parked on the bridge or roadway, this truck provides a portable platform that can be positioned under the bridge that allows workers to attach the pipeline to the bridge without damaging the waterway or vegetated area below the bridge.

After the pipe is installed, the ground surface of the pit areas would be restored. When pipe is installed on paved roadways, the asphalt would be patched and restored to pre-construction conditions. When the pipe is installed in dirt access roads, the dirt would be graded and compacted. In natural or vegetated areas, native plantings may be installed.

LITERATURE REVIEW

Available biological database information was reviewed as part of this analysis prior to conducting the field reconnaissance. Database queries for vegetation; soils; federal-listed/protected, State-listed/sensitive, and County-sensitive plant and animal species; and potential jurisdictional wetlands and waters were made within a 2.0-mile radius of the constraints Study Area. The following databases were queried: SANDAG 2012 Vegetation, Natural Resources Conservation Service Web Soil Survey, California Natural Diversity Database (CNDDB; Attachment A), SanBIOS, U.S. Fish and Wildlife Service (USFWS; Attachment A) listed species database, National Wetlands Inventory (NWI), and National Hydrography Dataset (NHD).

METHODS

A Study Area was defined for this report as a linear polygon approximately 200-feet wide within which the pipeline would be located. The field reconnaissance was conducted on June 21, 2023 by vehicle, which was driven by Barona personnel. Vegetation in the Study Area was compared with the SANDAG Vegetation in the field, and more detailed mapping was done during the coastal California gnatcatcher survey.

Due to the reconnaissance by vehicle, the Study Area could not be surveyed for potential jurisdictional wetlands and waters, and no formal jurisdictional delineation was conducted. Therefore, this letter reports the results of the NWI and NHD query results.

The potential for federal-listed/protected, State-listed/sensitive, and County-sensitive plant and animal species to occur was determined based on the database query results, vegetation (habitat) mapping, and soils data.

A presence/absence survey of nine site visits for the coastal California gnatcatcher (*Polioptila californica californica*) was conducted in accordance with USFWS 1997 protocol in the constraints Study Area during the period August 16, 2023 and December 6, 2023. The survey report is included as Attachment B to this letter.

Vegetation community names follow Oberbauer et al. (2008). Plant names and listing/sensitivity follow California Native Plant Society (CNPS; 2024). Animal names and listing/sensitivity follow California Department of Fish and Wildlife (CDFW 2024).

REGULATORY CONTEXT

Throughout the Study Area, federal regulations are applicable. State and County regulations apply/may apply to the portion of the Study Area on County land and are not anticipated to be applicable on Reservation land.

Federal Regulations

Federal Endangered Species Act

Administered by the USFWS, the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a ‘take’ under the ESA. Section 9(a) of the ESA defines take as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” ‘Harm’ and ‘harass’ are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species’ behavioral patterns.

The USFWS identifies critical habitat for endangered and threatened species. Critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The goal is to restore healthy populations of listed species within their native habitat so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the federal ESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat. There is no critical habitat designated in the Study Area.

Sections 7 and 10(a) of the federal ESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major construction activity if it may affect listed species. In this case, take can be authorized via a letter of biological opinion issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species' use of the site and impacts to U.S. Army Corps of Engineers (Corps) jurisdictional areas. Section 10(a) allows issuance of permits for incidental take of endangered or threatened species with preparation of a Habitat Conservation Plan (HCP). The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA; 16 U.S. Code Sections 703-711) includes provisions for protection of migratory birds, including the non-permitted take of migratory birds. The MBTA regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50 Code of Federal Regulations Section 10.13. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many others (including those that are not sensitive). Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a "take." The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country, and is enforced in the United States by the USFWS. In 1962 it was updated to address how Native American tribes can collect feathers from protected birds for religious ceremonies (a practice otherwise banned by the MBTA). As a general/standard condition, the project must comply with the MBTA.

Bald and Golden Eagle Protection Act

In 1782, Continental Congress adopted the bald eagle (*Haliaeetus leucocephalus*) as a national symbol. During the next 150 years, the bald eagle was heavily hunted by sportsmen, taxidermists, fisherman, and farmers. To prevent the species from becoming extinct, Congress passed the Bald Eagle Protection Act in 1940. The Act was extremely comprehensive, prohibiting the take, possession, sale, purchase, barter, or offer to sell, purchase, or barter, export or import of the bald eagle "at any time or in any manner." In 1962, Congress amended the Bald Eagle Act to cover golden eagles.

Rivers and Harbors Act and Clean Water Act

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the Clean Water Act (CWA). The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all Waters of the U.S. (WUS). Permitting for projects filling WUS (including wetlands) is overseen by the Corps under Section 404 of the CWA. Projects could be permitted on an individual basis or be covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc. and typically require substantial time (often longer than 6 months) to review and approve, while Nationwide Permits are pre-approved if a project meets appropriate conditions.

State of California

California Environmental Quality Act

Primary environmental legislation in California is found in CEQA and its implementing guidelines (State CEQA Guidelines), which require that projects with potential adverse effects (or impacts) on the environment undergo environmental review. Adverse environmental impacts are typically mitigated because of the environmental review process in accordance with existing laws and regulations.

California Endangered Species Act

The California ESA is like the federal ESA in that it contains a process for listing of species and regulating potential impacts to listed species. California ESA Section 2081 authorizes the CDFW to enter into a memorandum of agreement for the take of listed species for scientific, educational, or management purposes.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in listed plants. The California ESA follows the NPPA and covers both plants and animals designated as endangered or threatened with extinction. Plants listed as rare under NPPA were also designated rare under the California ESA.

California Fish and Game Code

California Fish and Game Code Sections 1600 through 1603 require a CDFW agreement for projects affecting riparian and wetland habitats through issuance of a Lake and Streambed Alteration Agreement (LSA).

Pursuant to California Fish and Game Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors and owls and their active nests are protected by California Fish and Game Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1970 grants the State Water Resource Control Board (SWRCB) and its regional offices (RWQCBs) power to protect water quality and is the primary vehicle for implementation of the State's responsibilities under Section 401 of the CWA. The Porter-Cologne Act grants the SWRCB authority and responsibility to adopt plans and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. Typically, the SWRCB and RWQCB act in concert with the Corps under Section 401 of the federal CWA in relation to permitting fill of federal jurisdictional waters.

California Natural Communities Conservation Planning Act

The California Natural Communities Conservation Planning (NCCP) Act of 1991 (Section 2835) allows the CDFW to authorize interim take of species covered by plans in agreement with NCCP guidelines. A Natural Communities Conservation Program initiated by the State of California focuses on conserving coastal sage scrub, and in concert with the USFWS and the federal ESA, is intended to avoid the need for future federal and State listing of coastal sage scrub-dependent species. The County of San Diego became a participant in the NCCP in 1993 for projects located within the planning area for the Coastal Sage Scrub NCCP with the intent to "…provide for regional protection and perpetuation of natural wildlife diversity while allowing compatible land use and appropriate development and growth." The NCCP process guidelines were established as interim guidelines until formal subregional plans were approved. The South San Diego County MSCP Subarea Plan was approved in 1997. The North San Diego County MSCP Subarea Plan has not yet been adopted. Until adoption, an NCCP 4(d) take permit (Habitat Loss Permit [HLP]; see below) may be required to demonstrate compliance with the NCCP Act within the North San Diego County subarea boundaries.

County of San Diego

Habitat Loss Permit Ordinance

The HLP Ordinance was adopted in March of 1994 in response to both the listing of the coastal California gnatcatcher as a federal threatened species and the adoption of the NCCP Act by the State. Pursuant to the Special 4(d) Rule under the federal ESA, the County is authorized to issue "take permits" for the coastal California gnatcatcher (in the form of HLPs) in lieu of Section 7 or 10(a) permits typically required from the USFWS. Although issued by the County, the USFWS and CDFW must concur with the issuance of an HLP for it to become valid as take authorization under the federal ESA.

The HLP Ordinance states that projects must obtain an HLP prior to the issuance of a grading permit, clearing permit, or improvement plan if the project would directly or indirectly impact any of several coastal sage scrub habitat types. The HLP Ordinance requires an HLP if coastal sage scrub or related habitat will be impacted, regardless of whether it is currently occupied by the coastal California gnatcatcher. An HLP is not required, however, for projects within the boundaries of the MSCP that have an adopted subarea plan (for the Study Area, that is the land within the boundaries of the South County Subarea). Within the boundaries of the North San Diego County MSCP Subarea, however, where the Subarea Plan is still in draft form, an HLP may be required as the County does not have take authorization for the coastal California gnatcatcher that coastal sage scrub is known to support. For the project, this would be for impacts to Diegan coastal sage scrub occurring east of Wildcat Canyon Road not on Reservation land. Based on Attachment G of the County's Protocols for Projects Requiring Habitat Loss Permits, however, the project is exempt from the HLP requirement because it is a utility facility project.

There are areas where coastal sage scrub could be impacted by pipeline trenching on Reservation land (approximately 4,600 feet in areas where the pipeline alignment is not a road right-of-way), but the HLP Ordinance does not apply to Reservation land.

HLPs are not required for projects that have separately obtained Section 7 or 10(a) permits for take of the coastal California gnatcatcher. The gnatcatcher was not found during the protocol presence/absence survey for the species in the Study Area in 2023 (see Attachment B).

Resource Protection Ordinance

The County regulates natural resources (among other resources) as sensitive biological resources via the RPO (County 2012), the regulations of which cover wetlands, wetland buffers, sensitive plant and animal species, sensitive vegetation communities/habitat types, and habitats containing sensitive animals or plants.

Sensitive Habitat Lands are defined by the RPO as:

- Land which supports unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the State CEQA Guidelines (14 Cal. Admin. Code Section 15000 *et seq*.), including the area which is necessary to support a viable population of any of the above species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor.
    - "Unique vegetation community" refers to associations of plant species which are rare or substantially depleted. These may contain rare or endangered species, but other species may be included because they are unusual or limited due to a number of factors, for example: (a) they are only found in the San Diego region; (b) they are a local representative of a species or association of species not generally found in San Diego County; or (c) they are outstanding examples of the community type as identified by the CDFW listing of community associations.

Biological Mitigation Ordinance

The Biological Mitigation Ordinance (BMO; County 2010) is the ordinance by which the County implements the South County MSCP Subarea Plan at the project level. The BMO contains design criteria and mitigation standards that, when applied to projects requiring discretionary permits, protect habitats and species and ensure that a project does not preclude the viability of the MSCP Preserve System.

The first part of the BMO explains how mitigation for impacts is determined. The habitat and vegetation community must first be identified at the impact site and at the area proposed for mitigation. The second part sets out specific mitigation requirements for impacts to certain species. Protecting these sensitive species is required in to gain coverage of the species under the MSCP. Depending on the sensitivity of the individual species, their avoidance or mitigation is also necessary to comply with the California Environmental Quality Act. The two parts work together and are to be applied at the same time.

A BMO for the North San Diego County MSCP Subarea Plan has not yet been adopted but would be the ordinance by which the County implements the North County Subarea Plan at the project level.

RESULTS

Vegetation Mapping

Fourteen vegetation communities and developed land were mapped in the Study Area and within the proposed pipeline alignment. Seven communities and developed were mapped on County land. Thirteen communities and developed were mapped on Reservation land (Figures 4a-f; Table 1).

A description of each community and developed land (from Oberbauer et al. [2008]) is provided below along with its associated five-digit Holland Code when applicable.

Riparian Forest (61300)

Riparian forest (or southern riparian forest) is found along streams and rivers. Characteristic plant species in the community include western sycamore (*Platanus racemosa*), cottonwood (*Populus* spp.), and other wetland species.

Coast Live Oak Woodland (71160)

Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*). The shrub layer is poorly developed but may include toyon (*Heteromeles arbutifolia*), currants (*Ribes* spp.), laurel sumac (*Malosma laurina*), or elderberry (*Sambucus mexicana*). The herb component is continuous and dominated by common ripgut (*Bromus diandrus*) and several other introduced taxa. It typically occurs on north-facing slopes and in shaded ravines in the south and more exposed sites in the north.

Table 1 VEGETATION COMMUNITIES MAPPED IN THE STUDY AREA		
Vegetation Community	**Study Area Acreage on County Land**	**Study Area Acreage on Reservation Land**
Riparian forest	0.90	--
Coast live oak woodland	0.71	16.87
Diegan coastal sage scrub	0.05	13.09
Diegan coastal sage scrub-disturbed	2.73	6.91
Buckwheat scrub	--	0.72
Buckwheat scrub-disturbed	--	0.33
Coastal sage-chaparral scrub	--	8.60
Coastal sage-chaparral scrub-disturbed	--	0.55
Chamise chaparral	--	5.18
Southern mixed chaparral	--	17.30
Southern mixed chaparral-disturbed	--	2.94
Non-native grassland	1.67	19.79
Disturbed habitat	4.23	29.80
Ornamental	0.13	0.01
Developed	3.71	26.62
TOTAL[1]	**14.1**	**148.7**

[1]Total rounded to the nearest 0.1 acre.

Chamise Chaparral (37200)

A one- to three-meter-tall chaparral dominated by chamise (*Adenostoma fasciculatum*). Associated species contribute little cover. Characteristic associated plants include *Arctostaphylos* species, *Ceanothus* species, among others. Chamise chaparral is the dominant chaparral type in San Diego County.

Southern Mixed Chaparral (including -disturbed; 37120)

Southern mixed chaparral is a community of broad-leaved shrubs that, in San Diego County, is dominated by lilacs, particularly Ramona lilac (*Ceanothus tomentosus* var. *olivaceus*) and occurs on dry, rocky, often steep slopes that typically face north. Southern mixed chaparral-disturbed can be described as a community that has been altered by activity that reduces the cover of native shrubs and allows for a notable cover of bare ground and/or non-native plant species.

Diegan Coastal Sage Scrub (including -disturbed; 32500)

Diegan coastal sage scrub is comprised of low, soft-wood subshrubs dominated by species such as coastal sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac, black sage (*Salvia mellifera*), and white sage (*Salvia apiana*). It typically grows on sites with low moisture and is the most wide-spread coastal sage scrub in coastal southern California. Diegan coastal sage scrub-disturbed can be described as a community that has been altered by activity that reduces the cover of native shrubs and allows for a notable cover of bare ground and/or non-native plant species.

Buckwheat Scrub (including -disturbed; 32800)

Buckwheat scrub is comprised of a near monoculture of California buckwheat (*Eriogonum fasiculatum*) often associated with deerweed (*Acmispon glaber*). It often occurs in areas that have been disturbed in coastal and foothill areas of the County. Buckwheat scrub-disturbed can be described as a community that has been altered by activity that has further reduced the cover of the native shrubs and allows for a notable cover of bare ground and/or non-native plant species.

Coastal Sage-Chaparral Scrub (including -disturbed; 37G00)

Coastal sage-chaparral scrub (or coastal sage-chaparral transition) is a vegetation type between coastal scrubs and chaparrals; it may be a post-fire community. It is comprised of a mix of woody chaparral and drought-deciduous sage scrub plant species such as chamise, *Ceanothus* species, coastal sagebrush, black sage, and lemonadeberry (*Rhus integrifolia*). Coastal sage-chaparral scrub-disturbed can be described as a community that has been altered such that the cover of native shrubs has been reduced allowing for a notable cover of bare ground and/or non-native plant species.

Non-native Grassland (42200)

Non-native grassland is comprised of at least 50 percent cover of non-native, annual grass species that may be associated with native, annual forbs (wildflowers). In San Diego County, the presence of oats (*Avena* spp.), bromes (*Bromus* spp.), filaree (*Erodium* spp.), and mustard (*Brassica* spp.) are common indicators of this community.

Disturbed Habitat (11300)

Disturbed habitat includes areas that have been physically disturbed by human activity and no longer support native or naturalized vegetation. Typically, if vegetation is present, it is almost exclusively composed of non-native plant species that take advantage of disturbance. Examples of disturbed habitat include areas that have been graded, repeatedly cleared for fuel management purposes, and/or that have experienced repeated use that prevents the growth of native habitat (e.g., parking on vegetation, creating/using trails).

Ornamental (12000)

Ornamental describes areas that have been planted with ornamental (usually non-native) plant species and are typically associated with current or past development (see Developed below). The plantings may or may not be maintained.

Developed (12000)

Developed includes areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas where no natural land is evident due to a large amount of debris or other materials being placed upon it may also be considered developed (e.g., a quarry).

Listed/Sensitive Plant Species

Fifteen sensitive plant species (listed below) were reported within two miles of the Study Area as listed below. The only federal-listed species is San Diego thorn-mint (*Acanthomintha ilicifolia*).

Engelmann oak (*Quercus engelmannii*)
Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*)
Gander's ragwort (*Packera ganderi*)
Lakeside ceanothus (*Ceanothus cyaneus*)
Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)
Mission Canyon bluecup (*Githopsis diffusa* ssp. *filicaulis*)
Moreno currant (*Ribes canthariforme*)
Orcutt's brodiaea (*Brodiaea orcuttii*)
Parry's tetracoccus (*Tetracoccus dioicus*)
Ramona horkelia (*Horkelia truncata*)
San Diego milk-vetch (*Astragalus oocarpus*)
San Diego sagewort (*Artemisia palmeri*)
San Diego thorn-mint (*Acanthomintha ilicifolia*)
San Miguel savory (*Clinopodium chandleri*)
Yucaipa onion (*Allium marvinii*)

Based on the vegetation mapped and the Web Soil Survey results (that show no clay soils in the Study Area), it was determined that four sensitive plant species have potential to occur in the Study Area on County land (see below).

The only federal-listed species, San Diego thorn-mint, is not expected to occur within the Study Area on County land or Reservation land due to a lack of clay soils with which this species is associated.

Sensitive Plant Species with Potential to Occur

No federal-listed plant species are anticipated to occur. The following State/County sensitive species have potential to occur.

Engelmann Oak (*Quercus engelmannii*)
Sensitivity: CNPS Rare Plant Rank 4.2; County List D; North County MSCP Draft Covered
Habitat(s): Chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland.
Presence: Thirty-three Engelmann oaks were observed in the Study Area (Figures 4a-4f).

Parry's Tetracoccus (*Tetracoccus dioicus*)
Sensitivity: CNPS Rare Plant Rank 1B.2; County List A; South County MSCP Covered; North County MSCP Draft Covered
Habitat(s): Chaparral, coastal scrub.
Presence: Parry's tetracoccus is a perennial shrub that likely would have been observed on County land if it were present. It was observed throughout a hillside in the Study Area on Reservation land in chaparral (Figure 4f).

San Diego Sagewort (*Artemisia palmeri*)
Sensitivity: CNPS Rare Plant Rank 4.2; County List D
Habitat(s): Chaparral; coastal scrub; riparian forest, scrub, and woodland.
Presence: Was not observed, but suitable habitat is present for the species.

San Miguel Savory (*Clinopodium chandleri*)
Sensitivity: CNPS Rare Plant Rank 1B.2; County List A; South County MSCP Covered; North County MSCP Draft Covered
Habitat(s): Chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland sometimes with gabbroic or rocky soils.
Presence: Was not observed, but suitable habitat is present for the species.

Listed/Sensitive Animal Species

Twenty-seven sensitive animal species (listed below), four of which are federal-listed (i.e., Quino checkerspot butterfly [*Euphydryas editha quino*], arroyo toad [*Anaxyrus californicus*], coastal California gnatcatcher, and least Bell's vireo [*Vireo bellii pusillus*]) were reported within two miles of the Study Area, or were observed there, as listed below. The federal-proposed threatened western spadefoot, listed below, was also reported within two miles.

While not reported within two miles of the Study Area, the Crotch bumble bee (*Bombus crotchii*) is also being addressed because it was recently designated as a candidate for State listing as endangered, and potential habitat is present.

Invertebrates
Crotch bumble bee (*Bombus crotchii*)
Quino checkerspot butterfly (*Euphydryas editha quino*)

Amphibians
Arroyo toad (*Anaxyrus californicus*)
Western spadefoot (*Spea hammondii*)

Reptiles
California glossy snake (*Arizona elegans occidentalis*)
Coast horned lizard (*Phrynosoma blainvillii*)
Coast patch-nosed snake (*Salvadora hexalepis virgultea*)
Coastal whiptail (*Aspidoscelis tigris stejnegeri*)
Coronado skink (*Plestiodon* [*Eumeces*] *skiltonianus*)
Orange-throated whiptail (*Aspidoscelis hyperythra*)
Red-diamond rattlesnake (*Crotalus ruber*)
Rosy boa (*Lichanura orcuttii* [*Charina trivirgata roseofusca*])
San Diego banded gecko (*Coleonyx variegatus abbottii*)
Two-striped garter snake (*Thamnophis hammondii*)

Birds
Barn owl (*Tyto alba*)
Coastal California gnatcatcher (*Polioptila californica californica*)
Cooper's hawk (*Accipiter cooperii*)
Golden eagle (*Aquila chrysaetos*)
Grasshopper sparrow (*Ammodramus savannarum*)
Least Bell's vireo (*Vireo bellii pusillus*)
Red-shouldered hawk (*Buteo lineatus*)
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)
Turkey vulture (*Cathartes aura*)
Western bluebird (*Sialia mexicana*)

Mammals
American badger (*Taxidea taxus*)
Mule deer (*Odocoileus hemionus*)
San Diego desert woodrat (*Neotoma lepida intermedia*)

Listed/Sensitive Animal Species with Potential to Occur

Based on the vegetation (habitats) mapped, there is some potential for all 27 of the listed/sensitive animal species to occur on County land in the Study Area.

Crotch Bumble Bee (*Bombus crotchii*)
Sensitivity: State Candidate Endangered
Habitat(s): Open grassland and scrub habitats with flowering plants.

Quino Checkerspot Butterfly (*Euphydryas editha quino*)
Listing: Federal Endangered; County Group 1; North County MSCP Draft Covered
Habitat(s): Potential habitat includes vegetation communities with relatively open areas that typically include patches of dwarf plantain (*Plantago erecta*), purple owl's clover (*Castilleja exserta*), and nectaring plants. These habitats include open coastal sage scrub, vernal pools, lake margins, non-native grassland, perennial grassland, disturbed habitat, disturbed wetlands, and open areas within shrub communities. The Study Area is within the USFWS recommended survey area (USFWS 2014).
Presence: There is suitable habitat for this species in the project vicinity; however, the habitat within the proposed pipeline alignment is generally unsuitable, and a focused survey for the species is not recommended.

Arroyo Toad (*Anaxyrus californicus*)
Listing: Federal Endangered; State Species of Special Concern; County Group 1; South County MSCP Covered; North County MSCP Draft Covered
Habitat(s): Found on banks with open-canopy riparian forest characterized by willows, cottonwoods, or sycamores; breeds in areas with shallow, slowly moving streams; burrows in adjacent uplands during dry months.
Presence: Suitable habitat for this species occurs within San Vicente Creek in the County portion of the alignment; however, impacts to the creek at this location are not anticipated. There also is USFWS designated Critical Habitat for this species in San Vicente Creek. The creeks/streams within the Reservation land are generally unsuitable for this species and it is not anticipated to occur within the pipeline alignment.

Western Spadefoot (*Spea hammondii*)
Sensitivity: Federal Proposed Threatened; State Species of Special Concern; County Group 2; North County MSCP Draft Covered
Habitat(s): Occurs in open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; requires temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs (*Rana catesbiana*) or crayfish (*Procambarus* sp.).
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint. Should it become a federal-listed species, then focused surveys may be required to determine presence within streams proposed for impacts within the Reservation. There also is suitable habitat for this species within San Vicente Creek in the County portion of the alignment; however, impacts to the creek at this location are not anticipated.

California Glossy Snake (*Arizona elegans occidentalis*)
Sensitivity: State Species of Special Concern
Habitat(s): Arid scrub, rocky washes, grasslands, and chaparral with soil loose enough for burrowing.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint.

Coast Horned Lizard (*Phrynosoma blainvillii*)
Sensitivity: State Species of Special Concern; County Group 2; South County MSCP Covered; North County MSCP Draft Covered
Habitat(s): Frequents a variety of habitats from sage scrub and chaparral to coniferous and broadleaf woodlands. Habitat requirements include open areas for sunning, bushes for cover, fine loose soil for rapid burial, and native ant species such as harvester ants (*Pogonomyrmex* sp.).
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint. It also is unlikely to occur within the project footprint in the County portion of the alignment as the habitat is disturbed and heavily fragmented.

Coast Patch-nosed Snake (*Salvadora hexalepis virgultea*)
Sensitivity: State Species of Special Concern; County Group 2
Habitat(s): Semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint. It also is unlikely to occur within the project footprint in the County portion of the alignment as the habitat is disturbed and heavily fragmented.

Coastal Whiptail (*Aspidoscelis tigris stejnegeri*)
Sensitivity: State Species of Special Concern; County Group 2
Habitat(s): Coastal sage scrub, grassland, and ruderal habitats.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint. It also is unlikely to occur within the project footprint in the County portion of the alignment as the habitat is disturbed and heavily fragmented.

Coronado Skink (*Plestiodon* [*Eumeces*] *skiltonianus*)
Sensitivity: State Watch List; County Group 2
Habitat(s): Grassland, woodlands, pine forests, chaparral, especially in open sunny areas. Rocky areas near streams with vegetation but also found away from water.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint. It also is unlikely to occur within the project footprint in the County portion of the alignment as the habitat is disturbed and heavily fragmented.

Orange-throated Whiptail (*Aspidoscelis hyperythra*)
Sensitivity: State Watch List; County Group 2; South County MSCP Covered; North County MSCP Draft Covered
Habitat(s): Coastal sage scrub and chaparral.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint.

Red-diamond Rattlesnake (*Crotalus ruber*)
Sensitivity: State Species of Special Concern; County Group 2; North County MSCP Draft Covered
Habitat(s): Favors rocky outcrops in coastal sage scrub, chaparral, creosote bush scrub, and areas dominated by cactus. Also encountered along rocky canyon bottoms and on the flats adjacent to rocky, desert foothills.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint.

Rosy Boa (*Lichanura orcuttii* [*Charina trivirgata roseofusca*])
Sensitivity: County Group 2
Habitat(s): Arid scrublands, semi-arid shrublands, rocky shrublands, rocky deserts, canyons, and other rocky areas.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint.

San Diego Banded Gecko (*Coleonyx variegatus abbottii*)
Sensitivity: State Species of Special Concern; County Group 1
Habitat(s): Rocky areas in coastal sage and chaparral.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint.

Two-striped Garter Snake (*Thamnophis hammondii*)
Sensitivity: State Species of Special Concern; County Group 1; North County MSCP Draft Covered
Habitat(s): Generally found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint. There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint. It also is unlikely to occur within the project footprint in the County portion of the alignment as the habitat is disturbed and heavily fragmented.

Barn Owl (*Tyto alba*)
Sensitivity: County Group 2
Habitat(s): Woodland habitats and open areas with trees or other structures that can offer shelter.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint. In addition, coast live oak woodland and riparian forest within the County portion of the alignment provides potential habitat for this species.

Coastal California Gnatcatcher (*Polioptila californica californica*)
Listing: Federal Threatened; County Group 1; South County MSCP Covered; North County MSCP Draft Covered
Habitat: Coastal sage scrub.
Presence: The coastal California gnatcatcher was not found during the protocol presence/absence survey for the species conducted in 2023 (see Attachment B for the survey report). Furthermore, this species is not anticipated to occur along the alignment as it is at the extent of the species geographic and elevation range.

Cooper's Hawk (*Accipiter cooperii*)
Sensitivity: State Watch List; County Group 1; South County MSCP Covered
Habitat(s): Oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests.
Presence: The Cooper's hawk was observed east of Wildcat Canyon Road southwest of its intersection with San Vicente Oaks Road. Its habitats also occur on County land in the Study Area; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint. In addition, coast live oak woodland and riparian forest within the County portion of the alignment provides potential habitat for this species.

Golden Eagle (*Aquila chrysaetos*)
Sensitivity: Bald and Golden Eagle Protection Act; State Fully Protected, State Watch List; County Group 1; South County MSCP Covered; North County MSCP Draft Covered
Habitat(s): Forages in grassy and open, shrubby habitats. Nests most often on cliffs, less often in trees. Tend to require places of solitude and are usually found at a distance from human habitation.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint under the federal ESA. Additionally, this is not anticipated to occur within or adjacent to the pipeline alignment which would occur far from potential suitable nesting areas for the species, should it occur.

Grasshopper Sparrow (*Ammodramus savannarum*)
Sensitivity: State Species of Special Concern; County Group 1; North County MSCP Draft Covered
Habitat: Grassland
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint.

Least Bell's Vireo (*Vireo bellii pusillus*)
Listing: Federal Endangered; State Endangered, State Watch List; County Group 1; South County MSCP Covered; North County MSCP Draft Covered
Habitat(s): Riparian woodland, riparian forest, mule fat scrub, and southern willow scrub. There is suitable habitat for this species located at the northernmost extent of the project alignment, within riparian forest habitat in San Vicente Creek. No direct impacts to the San Vicente Creek are anticipated; however, construction activities could have an indirect impact to this species during the nesting season, should it be present. Pre-construction surveys and avoidance measures may be required to help ensure project construction does not impact this species in the County portion of the alignment. Suitable habitat does not occur within or adjacent to the pipeline alignment on Reservation land.

Red-shouldered Hawk (*Buteo lineatus*)
Sensitivity: County Group 1
Habitat(s): Riparian woodland, oak woodland, orchards, eucalyptus groves, or other areas with tall trees.
Presence: The red-shouldered hawk was observed in coast live oak woodland on Reservation land (Figure 4a). In addition, coast live oak woodland and riparian forest within the County portion of the alignment provides potential habitat for this species.

Southern California Rufous-crowned Sparrow (*Aimophila ruficeps canescens*)
Sensitivity: State Watch List; County Group 1; South County MSCP Covered; North County MSCP Draft Covered
Habitat(s): Coastal sage scrub where it occurs on rocky hillsides and in canyons but also may be found in open sage scrub/grassy areas of successional growth (i.e., after a fire).
Presence: The rufous-crowned sparrow was observed in Diegan coastal sage scrub-disturbed in the northern portion of the Reservation land (Figure 4f). In addition, coast live oak woodland and riparian forest within the County portion of the alignment provides potential habitat for this species.

Turkey Vulture (*Cathartes aura*)
Sensitivity: County Group 1
Habitat(s): Most open habitats with breeding occurring in crevices among boulders.
The turkey vulture was observed just outside the Study Area in the northern portion of Reservation land (Figure 4f). It has some potential to utilize habitats in the Study Area for foraging but is not likely to nest within it due to limited/lacking, suitable boulder crevices and proximity to Wildcat Canyon Road and existing development.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint.

Western Bluebird (*Sialia mexicana*)
Sensitivity: County Group 2; South County MSCP Covered
Habitat(s): Open woodlands and areas where meadows or grasslands occur among groves of oak or pine. The western bluebird was observed on the border between Reservation and County land in sage scrub near non-native grassland that occurs on both Reservation and County land in the vicinity of the sighting (Figure 4f).
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint. In addition, coast live oak woodland and riparian forest within the County portion of the alignment provides potential habitat for this species.

American Badger (*Taxidea taxus*)
Sensitivity: State Species of Special Concern; County Group 2; South County MSCP Covered; North County MSCP Draft Covered
Habitat(s): Prefers open areas such as grasslands and deserts on flat terrain to moderate slopes with friable soils. Occurs mainly in large blocks of undeveloped land absent urban development in San Diego County.
Presence: There is suitable habitat for this species within Reservation land; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint.

Mule Deer (*Odocoileus hemionus*)
Sensitivity: County Group 2; South County MSCP Covered
Habitat(s): Coastal sage scrub, riparian and montane forests, chaparral, grasslands, croplands, and open areas if some scrub cover present.
Presence: This species is known to occur within Reservation land and adjacent County lands; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint.

San Diego Desert Woodrat (*Neotoma lepida intermedia*)
Sensitivity: State Species of Special Concern; County Group 2
Habitat(s): Open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca.
Presence: This species is known to occur within Reservation land and adjacent County lands; however, as it is not a federal-listed species its presence on Reservation land would not be a constraint.

Federal-listed or Protected Animal Species with Potential to Occur on Reservation Land

Based on the vegetation (habitats) mapped, there is potential for three federal-listed or protected animal species to occur on Reservation land in the Study Area. Since there are no riparian habitats in the Study Area on Reservation land, the federal-listed arroyo toad and least Bell's vireo are not expected to occur there.

Potential Jurisdictional Resources

Tribal lands are not subject to State and local (County) regulation of jurisdictional/wetland resources. Federal regulations (CWA) for potential impacts to federal jurisdictional resources (should they occur) may be applicable on Tribal lands. Throughout the Study Area on Reservation land, the NHD shows stream/river features, and the NWI shows riverine features. The proposed pipeline alignment would cross the Padre Barona Creek, Klondike Creek, and numerous unnamed tributaries to these creeks within the limits of the Reservation (Figure 5).

Subsequent to the Sackett Supreme Court decision, the Environmental Protection Agency issued a new definition for what is to be considered a WUS. No federal regulated wetland WUS resources would be affected by the project on Reservation land. Areas are determined to be non-wetland WUS if there is evidence of intermittent or perennial surface flow (relative permanent water), but the vegetation and/or soils criterion are not met to make a wetland determination. Per the current Corps CWA Rule, unvegetated ephemeral drainages/streambeds are not considered to be jurisdictional WUS.

The streams and tributaries on Reservation land within the Study Area are anticipated to be ephemeral and, therefore, not jurisdictional to the Corps and subject to regulation under the CWA. This is based on the historically very dry nature of the streams/tributaries and additional "traditional ecological knowledge" (TEK), provided by Tribal elders and representatives. This knowledge includes historical observations of the streams/tributaries remaining dry most of the year, year after year. The only observed water flow has been during and immediately following rain events, characteristic of ephemeral features.

In addition to the above, there are potential jurisdictional resources on County land (outside of the Reservation land) in the Study Area including NHD stream/river and NWI freshwater forested/shrub wetland (Figure 5). The NWI also shows freshwater forested/shrub wetland in the northern portion of the Study Area in the County (Figure 5).

IMPACTS AND POTENTIAL MITIGATION

Reservation Land

Based on the results of the literature review, Tribal communication, field reconnaissance, vegetation mapping, and coastal California gnatcatcher surveys, no significant impacts to federal-regulated biological resources are anticipated on Reservation land. Table 2 and Figures 4a-f present the anticipated permanent and temporary impacts to vegetation communities on the Reservation.

Table 2 IMPACTS TO VEGETATION COMMUNITIES ON RESERVATION LAND		
Vegetation Community	**Permanent Impacts (acres)[2]**	**Temporary Impacts (acres)**
Riparian forest[1]	--	--
Coast live oak woodland	--	0.924
Diegan coastal sage scrub	--	0.940
Diegan coastal sage scrub-disturbed	--	0.504
Buckwheat scrub	--	0.198
Buckwheat scrub-disturbed	--	0.020
Coastal sage-chaparral scrub	--	0.579
Coastal sage-chaparral scrub-disturbed	--	--
Chamise chaparral	--	0.415
Southern mixed chaparral	--	1.424
Southern mixed chaparral-disturbed	--	0.168
Non-native grassland	--	1.627
Disturbed habitat	0.043	3.381
Ornamental	--	--
Developed	0.004	4.983
TOTAL[3]	**0.047**	**15.16**

[1]Impacts to riparian forest are not anticipated due to the use of jack-and-bore and bridge crossing construction methods.
[2]Permanent impacts would be from a Pressure Reducing Station (Figure 4b) and a Booster Pump Station (Figure 4e).
[3]Totals rounded to nearest 0.01 acre

While federal-listed animal species are not anticipated to be impacted by the proposed project, the project would still be required to comply with MBTA nesting bird restrictions.

As noted above, the streams and tributaries located within the Study Area on Reservation land are anticipated to be ephemeral in nature; therefore, they would not be considered jurisdictional to the Corps.

Finally, since no federal-listed (threatened or endangered) plant or animal species are anticipated to be affected by the project within the limits of the Reservation, a USFWS Section 7 consultation is not anticipated to be required. This could change if it is later determined that a federal-listed species could be affected.

County Land

Based on the results of the literature review, field reconnaissance, vegetation mapping, and coastal California gnatcatcher surveys, the anticipated impacts from pipeline construction on County land, outside of the Reservation Land, would be as follows.

Vegetation Communities

There are five vegetation communities located outside of the Reservation, within the County, that are considered sensitive. These communities are Diegan coastal sage scrub, Diegan coastal sage scrub-disturbed, non-native grassland, coast live oak woodland, and riparian forest (Figure 4f). Table 3 and Figure 4a present the anticipated temporary impacts to vegetation communities on County land. There would be no permanent impacts on County land.

Table 3
TEMPORARY IMPACTS TO VEGETATION COMMUNITIES ON COUNTY LAND (acres)

Vegetation Community	South County MSCP Subarea	North County MSCP Subarea
Riparian forest[1]	--	--
Coast live oak woodland	0.007	0.019
Diegan coastal sage scrub	--	--
Diegan coastal sage scrub-disturbed	0.011	0.020
Buckwheat scrub	--	--
Buckwheat scrub-disturbed	--	--
Coastal sage-chaparral scrub	--	--
Coastal sage-chaparral scrub-disturbed	--	--
Chamise chaparral	--	--
Southern mixed chaparral	--	--
Southern mixed chaparral-disturbed	--	--
Non-native grassland	--	0.012
Disturbed habitat	0.062	0.179
Ornamental	--	0.003
Developed	0.835	1.331
TOTAL[2]	**0.91**	**1.56**

[1]Impacts to riparian forest are not anticipated due to the use of jack-and-bore and bridge crossing construction methods.
[2]Totals rounded to nearest 0.01 acre.

Impacts are not anticipated to riparian forest due to the use of jack-and-bore and bridge-crossing construction methods. Impacts to coast live oak woodland, Diegan coastal sage scrub-disturbed, and non-native grassland, although very limited in extent and temporary (Table 3 and Figure 4f), would still be significant because they are sensitive communities. Mitigation to compensate for the temporary impacts could include revegetating (adequately replacing) the impacted vegetation in place following construction in accordance with a County-approved Revegetation Plan (County 2012).

Sensitive Species

Within the County (non-Tribal) segment (Figure 4f) there may be constraints (impacts) due to sensitive species that would not be considered constraints within the Reservation land. The riparian forest land within San Vicente Creek at the northern most extent of the alignment has the potential to support the federal-listed endangered least Bell's vireo. While direct impacts to riparian forest are not anticipated, construction activities could have an indirect impact (noise) to this species during the nesting season, should it be present. Pre-construction surveys and avoidance measures may be required to help ensure project construction does not impact this species in the County portion of the alignment.

In addition, the project would be required to comply with California Fish and Game Code and MBTA nesting bird restrictions.

Jurisdictional Resources (Federal, State, County)

Within the County segment of the pipeline is San Vicente Creek (Figure 5), which likely would be considered jurisdictional by the Corps, CDFW, RWQCB, and the County. This creek currently flows under a bridge as part of Wildcat Canyon Road. It is anticipated that there would be no impacts from pipeline construction to jurisdictional resources associated with the creek due to the use of bridge-crossing and jack-and-bore construction methods.

Should there be impacts to San Vicente Creek then federal (Corps) and State (CDFW and RWQCB) permits may be required for this location in the County. The exact authorization required would depend upon the amount and type of jurisdictional features to be impacted within the County segment. If required, it is anticipated that Nationwide Permit (NWP) 58 (Utility Line Activities for Water and Other Substances) would be the suitable NWP for the project. The Corps NWP process also includes a cultural resources analysis with Tribal consultation. Given that the project is a Tribal project, it is anticipated that a streamlined cultural evaluation would be possible.

Impacts to CDFW jurisdictional resources may require a Lake and Streambed Alteration (LSA) agreement via California Fish and Game Code Section 1602. Impacts to RWQCB jurisdictional resources may require a Water Quality Certification under Section 401 of the federal CWA.

The actual permitting requirement would depend on the type and amount of jurisdictional resource impacts in the County (if any).

MSCP Applicability and Consistency

The South San Diego County MSCP Subarea Plan was approved in 1997. The identification of sensitive resources, potential project impacts, and potential mitigation described above for the pipeline construction in the South County Subarea are consistent with the Subarea Plan and the Biological Mitigation Ordinance (County 2010), the latter of which enables the County to achieve the conservation goals set forth in the Subarea Plan for the MSCP.

The North San Diego County MSCP Subarea Plan has not yet been adopted; however, this report does consider what resources are identified as sensitive in that draft Plan for pipeline construction in the North County Subarea, and the County provides mitigation for impacts to vegetation communities outside of approved MSCP Subarea Plans (County 2012)

CONCLUSION

Reservation Land

No significant impacts to federal regulated biological resources are anticipated on Reservation land.

If the USFWS lists the western spadefoot, however, then focused surveys for that species may be required.

The project must comply with the nesting bird restrictions of the MBTA. This may include pre-construction nesting bird surveys during the nesting season and possibly nest monitoring during construction.

County Land

Impacts to coast live oak woodland, Diegan coastal sage scrub-disturbed, and non-native grassland would be significant because they are sensitive communities. Mitigation to compensate for these temporary impacts could include revegetating the impacted vegetation in place following construction in accordance with a County-approved Revegetation Plan. Impacts are not anticipated to riparian forest due to the use of jack-and-bore and bridge-crossing construction methods.

The project also must comply with the nesting bird restrictions of the MBTA and California Fish and Game Code (within the County area). This may include pre-construction nesting bird surveys during the nesting season and possibly nest monitoring (and noise-impact avoidance measures for the least Bell's vireo) during construction.

Please contact me if you have any questions.

Sincerely,



Greg Mason
Senior Biologist

Enclosures:
Figure 1 – Regional Location
Figure 2 – Project Location
Figure 3 – MSCP
Figures 4a-f – Vegetation and Sensitive Resources
Figure 5 – NWI and NHD
Attachment A – CNDDB and USFWS Database Query Results
Attachment B – Coastal California Gnatcatcher Survey Report

REFERENCES

California Department of Fish and Wildlife. 2024. Special Animals List. January. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline

California Native Plant Society. 2024. Rare Plant Inventory (online edition, v9.5). https://rareplants.cnps.org/

County of San Diego. 2012. San Diego County Code Title 8 Zoning and Land Use Regulations, Division 6. Miscellaneous Land Use Regulations. Chapter 6. Resource Protection Ordinance. October 25.

2010. Biological Mitigation Ordinance. San Diego County Code Title 8, Division 6, Chapter 5. April 2.

Dudek. 2022. Long-Term Potable and Recycled Water Service to Barona Indian Reservation. June.

Oberbauer, Thomas, Meghan Kelly, and Jeremy Buegge. March 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California", Robert F. Holland, Ph.D., October 1986.

U.S. Army Corps of Engineers. 2021. Nationwide Permit 58 – Utility Line Activities for Water and Other Substances. March 15. https://www.swt.usace.army.mil/Portals/41/docs/missions/regulatory/2021%20NWP/2021%20nwp-58.pdf?ver=n07Ucn6ig9l0A9WtHnTTfw%3D%3D

U.S. Fish and Wildlife Service. 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol. https://www.fws.gov/sites/default/files/documents/survey-protocol-for-coastal-california-gnatcatcher.pdf

2014. Quino Checkerspot Butterfly Survey Guidelines. December 15. https://www.fws.gov/sites/default/files/documents/survey-guidelines-for-quino-checkerspot-butterfly.pdf

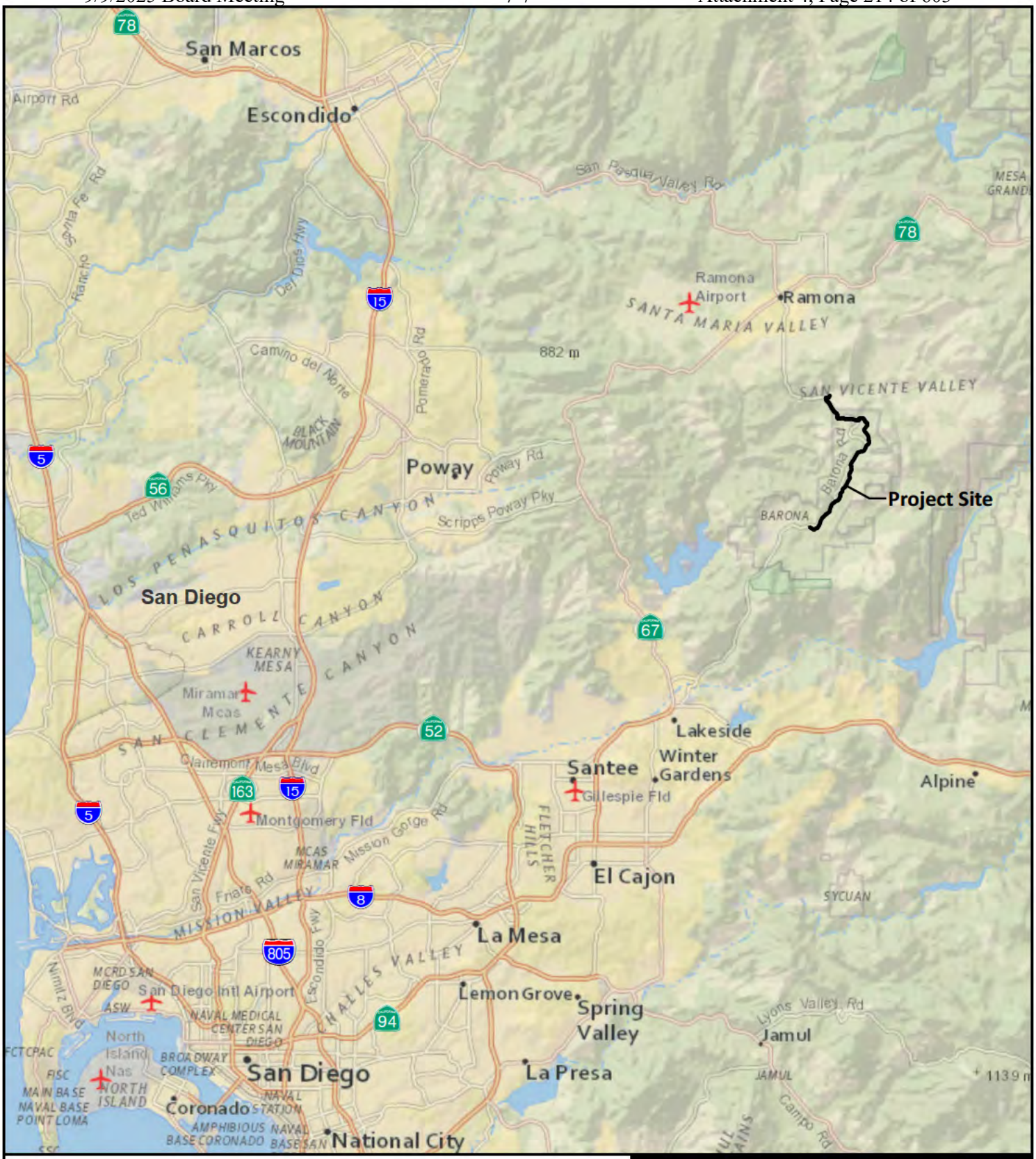


Figure 1

Regional Location

LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION

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ALDEN ENVIRONMENTAL, INC



ALDEN ENVIRONMENTAL, INC

Figure 2

Project Location

LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION

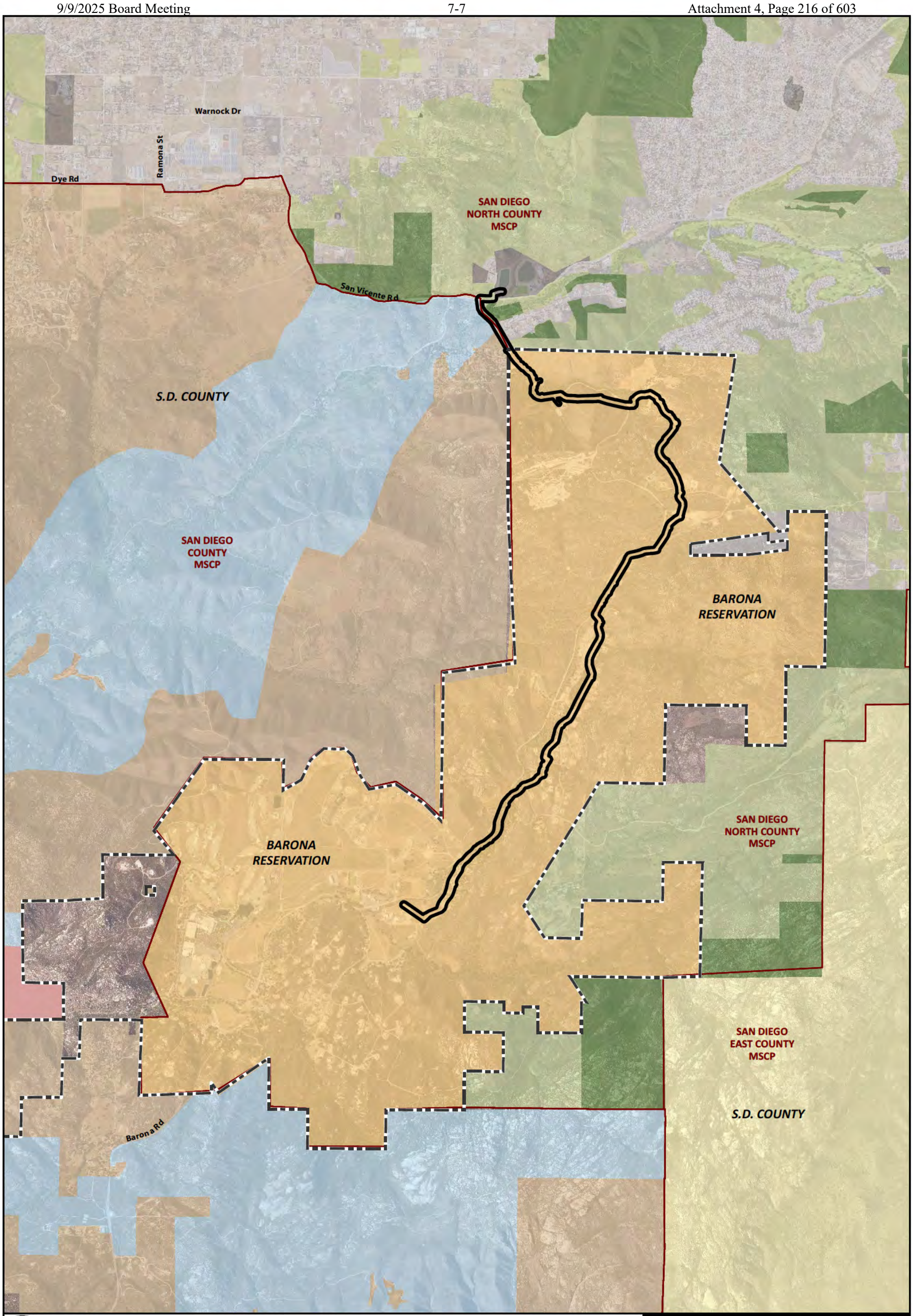
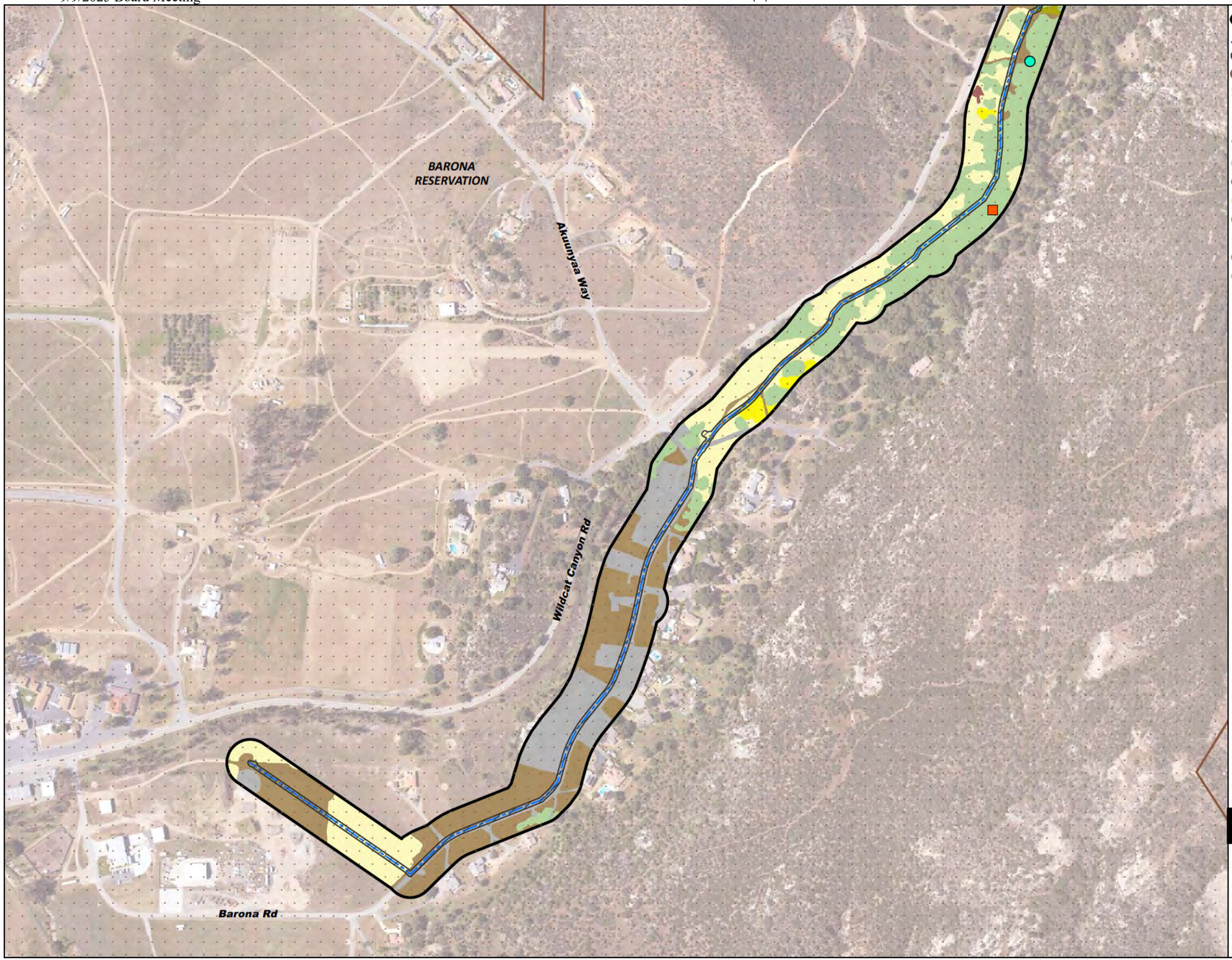


Figure 3

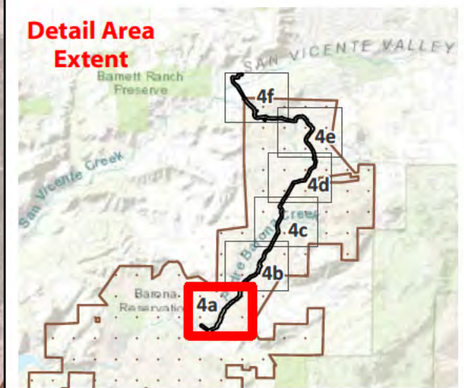
County of San Diego - MSCP Areas

LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION



Survey Area
Proposed Potable Water Pipeline
Temporary Impacts
Barona Reservation
Special Status Species
Engelmann Oak (*Quercus engelmannii*)
Red-shouldered Hawk (*Buteo lineatus*)
Vegetation
Coast Live Oak Woodland
Diegan Coastal Sage Scrub - Disturbed
Buckwheat Scrub
Buckwheat Scrub - Disturbed
Non-native Grassland
Disturbed Habitat
Developed

Detail Area Extent



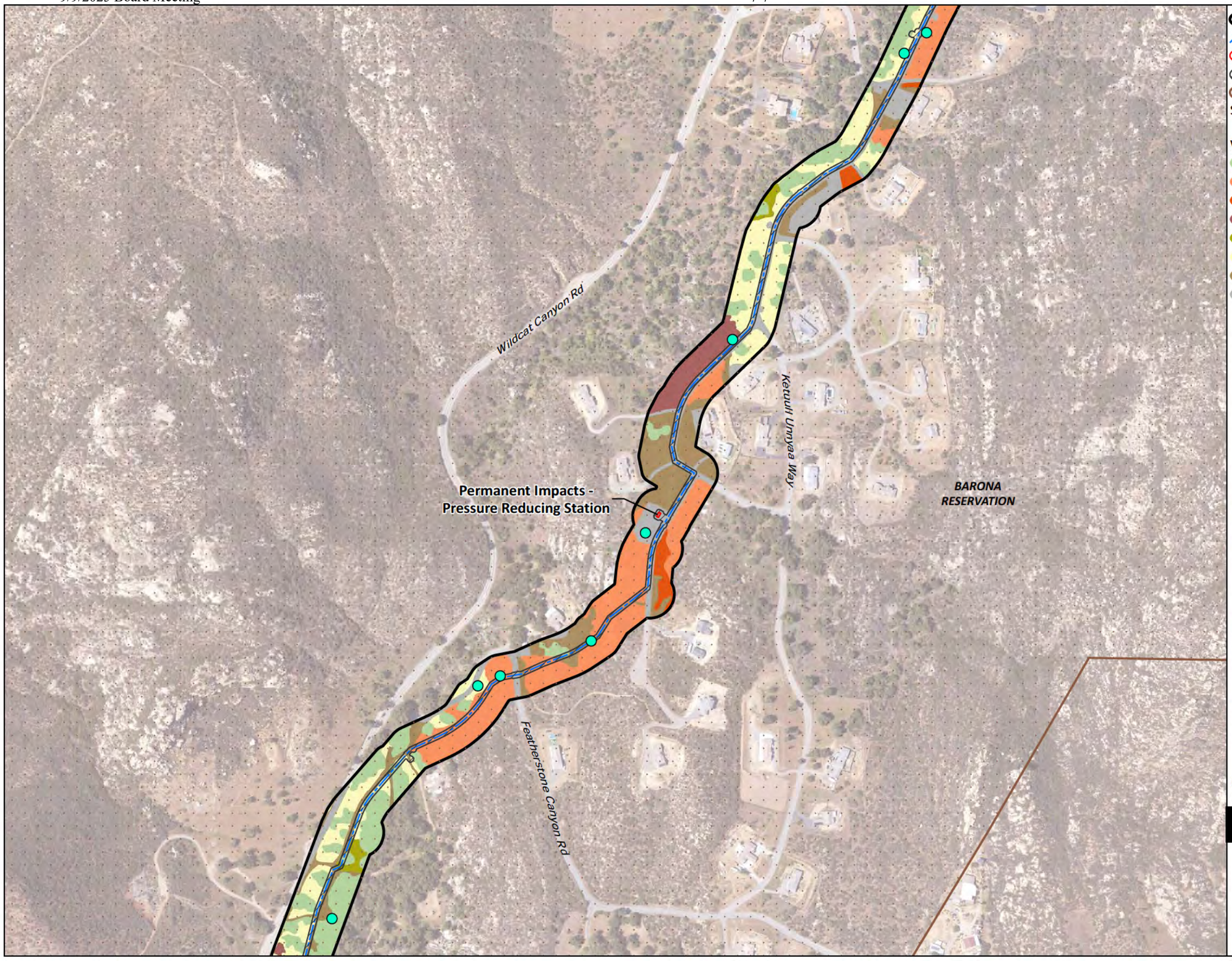
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Figure 4a

Vegetation and Sensitive Resources

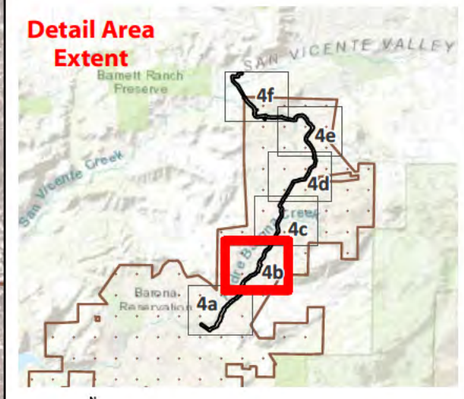
LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION



Survey Area
Proposed Potable Water Pipeline
Permanent Impacts
Temporary Impacts
Barona Reservation

Special Status Species
Engelmann Oak (*Quercus engelmannii*)

Vegetation
Coast Live Oak Woodland
Coastal Sage-Chaparral Scrub
Coastal Sage-Chaparral Scrub - Disturbed
Diegan Coastal Sage Scrub - Disturbed
Buckwheat Scrub - Disturbed
Non-native Grassland
Disturbed Habitat
Developed



N
W E
S
0 200 400
Feet

ALDEN ENVIRONMENTAL, INC

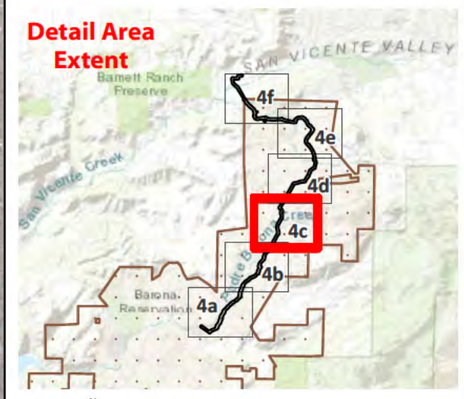
Figure 4b

Vegetation and
Sensitive Resources

LONG-TERM POTABLE AND
RECYCLED WATER SERVICE
TO BARONA INDIAN RESERVATION



Survey Area
Proposed Potable Water Pipeline
Temporary Impacts
Barona Reservation
Special Status Species
Engelmann Oak (*Quercus engelmannii*)
Vegetation
Coast Live Oak Woodland
Coastal Sage-Chaparral Scrub
Coastal Sage-Chaparral Scrub - Disturbed
Diegan Coastal Sage Scrub
Diegan Coastal Sage Scrub - Disturbed
Non-native Grassland
Disturbed Habitat
Developed



N
W E
S
0 200 400 Feet

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Figure 4c

Vegetation and Sensitive Resources

LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION

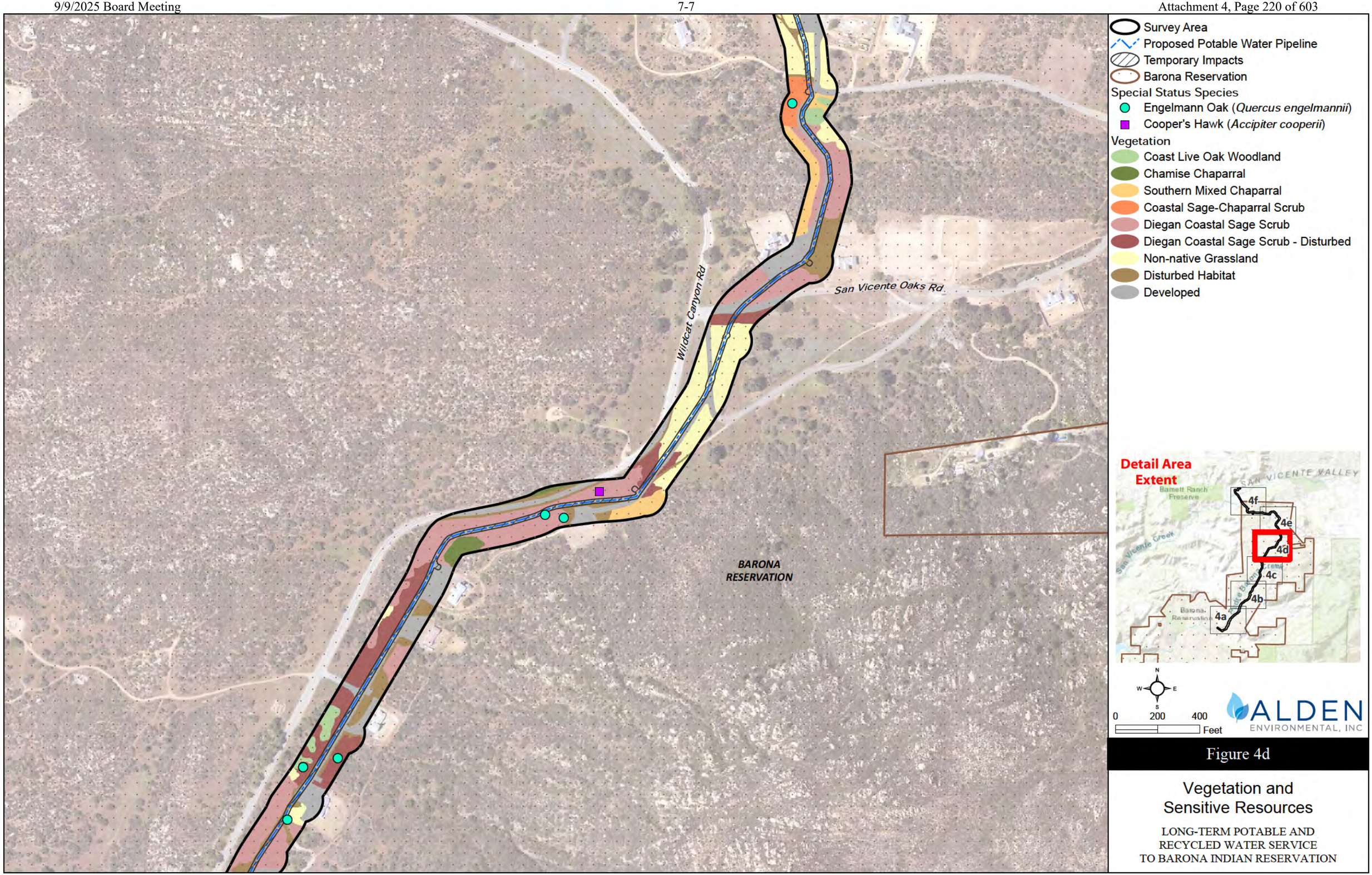
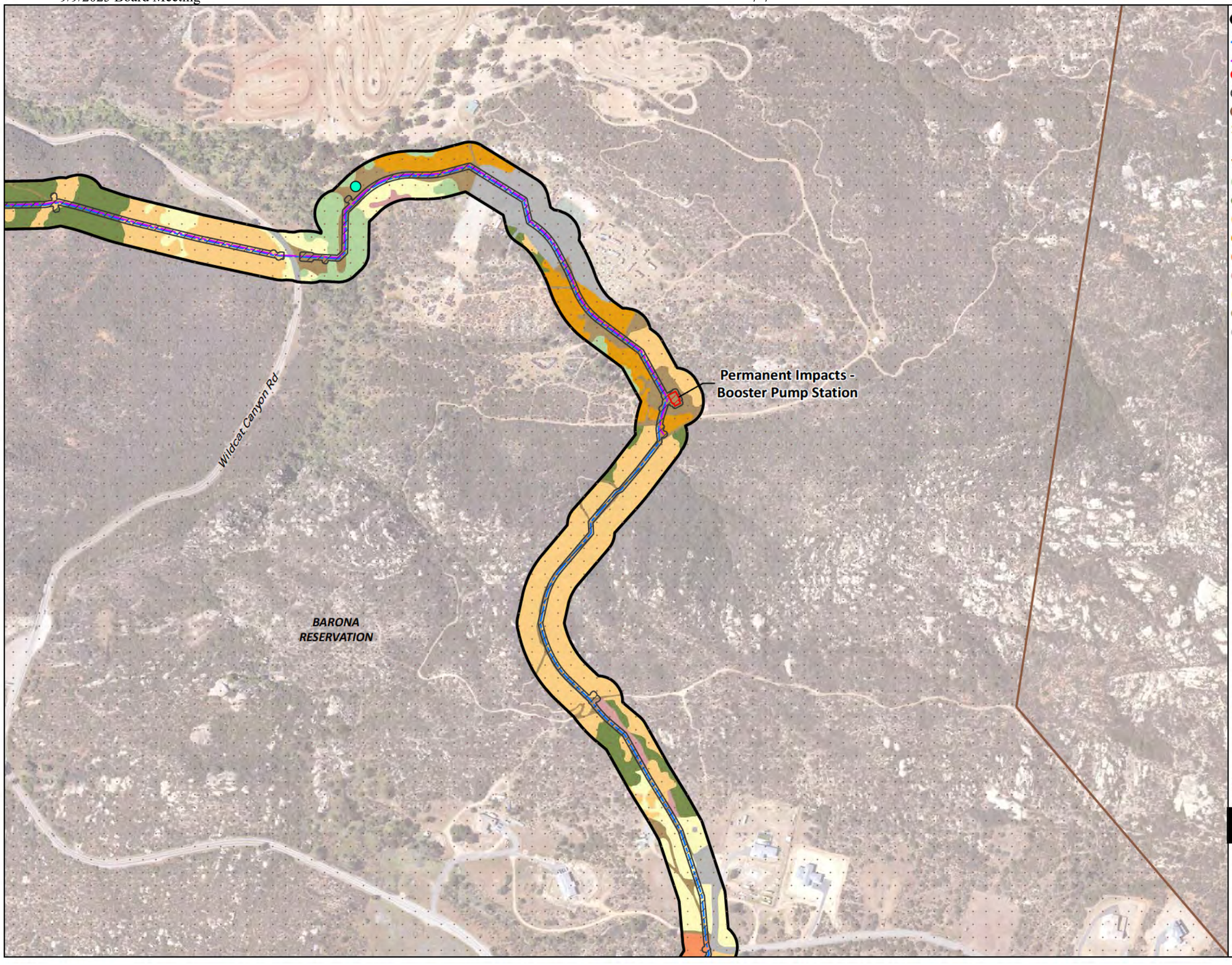


Figure 4d

Vegetation and Sensitive Resources

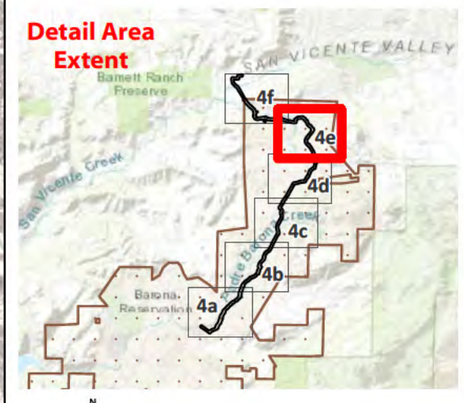
LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION



Survey Area
Proposed Potable Water Pipeline
Proposed Recycled Water Pipeline
Permanent Impacts
Temporary Impacts
Barona Reservation

Special Status Species
Engelmann Oak (*Quercus engelmannii*)

Vegetation
Coast Live Oak Woodland
Chamise Chaparral
Southern Mixed Chaparral
Southern Mixed Chaparral - Disturbed
Coastal Sage-Chaparral Scrub
Diegan Coastal Sage Scrub
Non-native Grassland
Disturbed Habitat
Developed



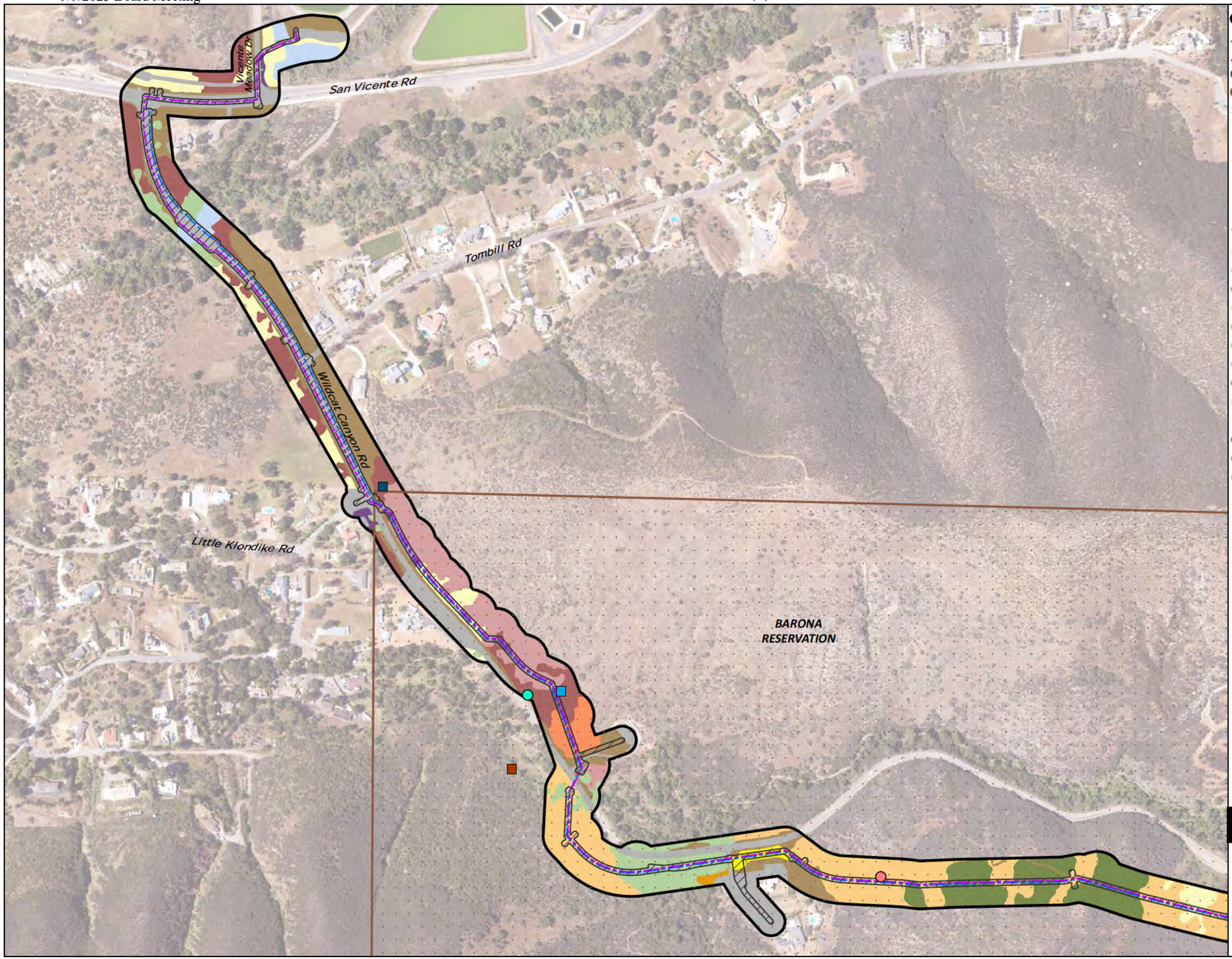
N
W E
S
0 200 400
Feet

ALDEN
ENVIRONMENTAL, INC

Figure 4e

Vegetation and
Sensitive Resources

LONG-TERM POTABLE AND
RECYCLED WATER SERVICE
TO BARONA INDIAN RESERVATION

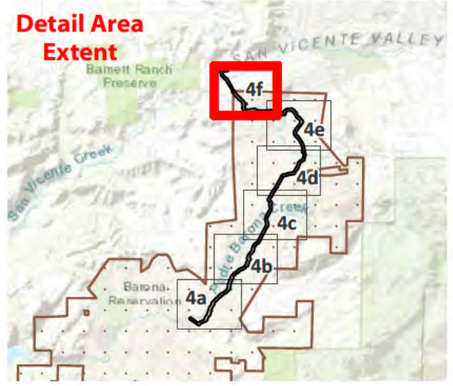


Survey Area
Proposed Potable Water Pipeline
Proposed Recycled Water Pipeline
Temporary Impacts
Barona Reservation

Special Status Species
- Engelmann Oak (*Quercus engelmannii*)
- Parry's tetracoccus (*Tetracoccus dioicus*)
- Rufous-crowned Sparrow (*Aimophila ruficeps*)
- Turkey Vulture (*Cathartes aura*)
- Western Bluebird (*Sialia mexicana*)

Vegetation
- Riparian Forest
- Coast Live Oak Woodland
- Chamise Chaparral
- Southern Mixed Chaparral
- Southern Mixed Chaparral - Disturbed
- Coastal Sage-Chaparral Scrub
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Buckwheat Scrub
- Non-native Grassland
- Ornamental
- Disturbed Habitat
- Developed

Detail Area Extent



N W E S

0 200 400 Feet

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Figure 4f

Vegetation and Sensitive Resources

LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION

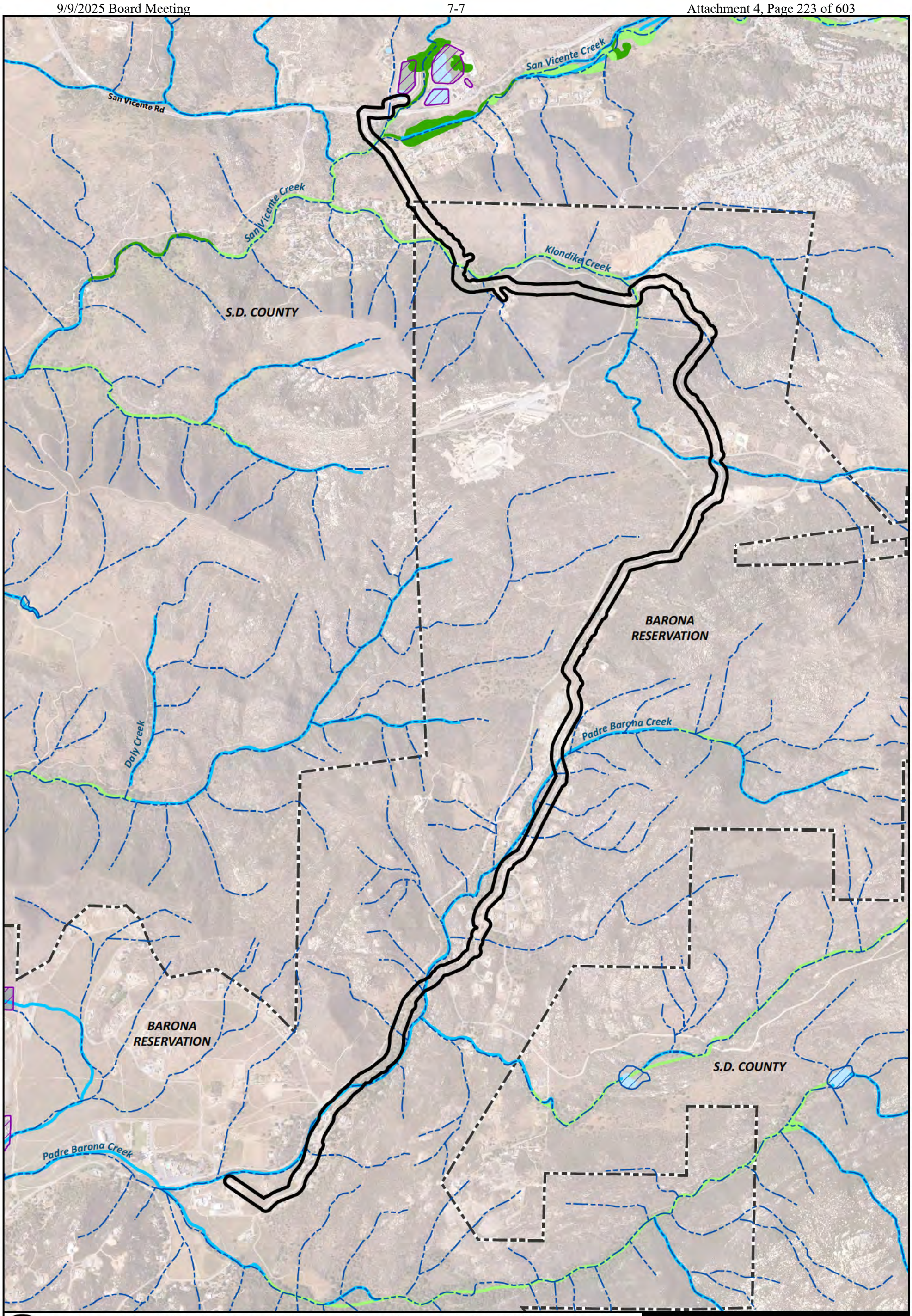


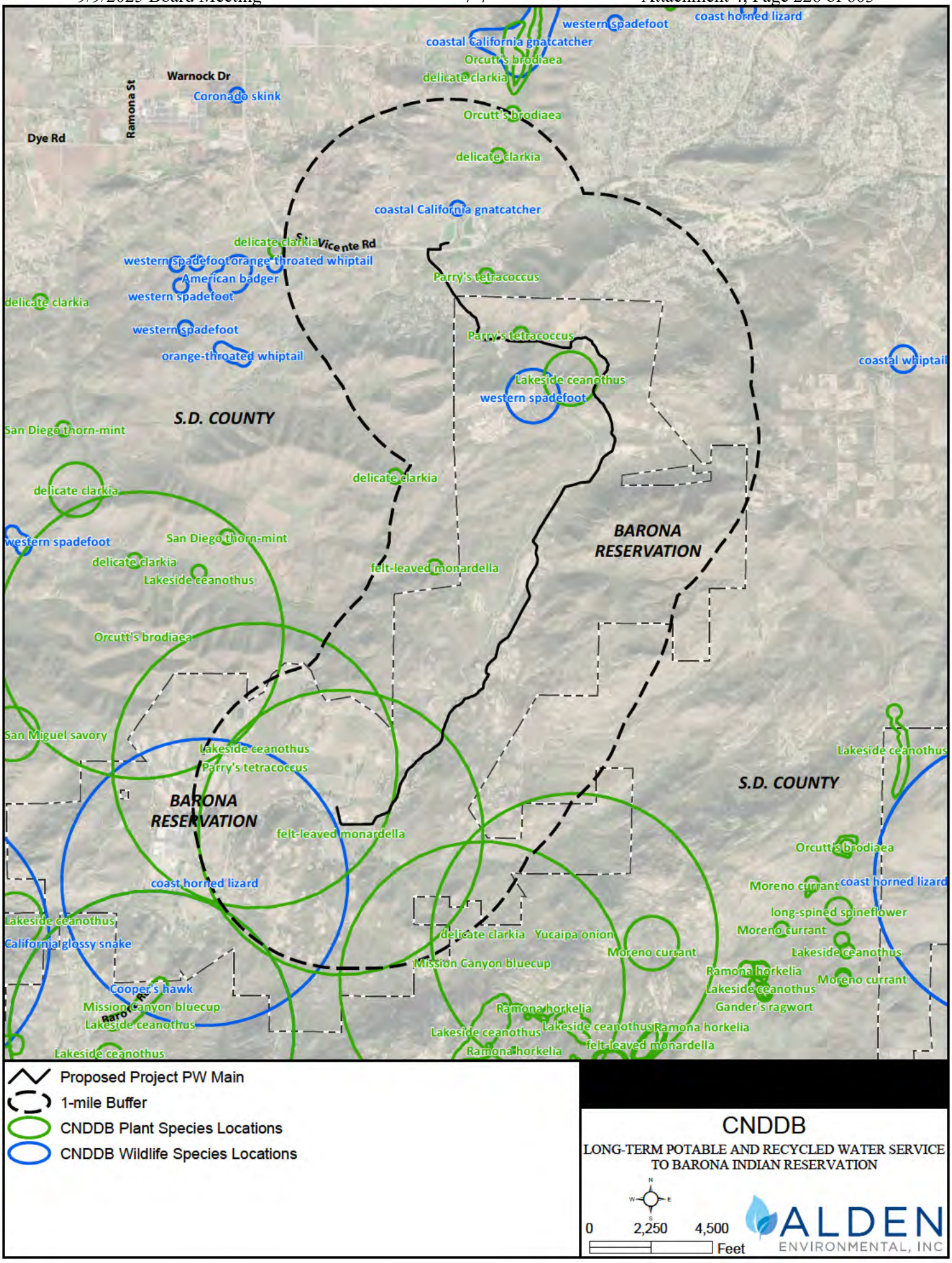
Figure 5

NWI and NHD

LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION

Attachment A

CNDDB & USFWS Database Query Results



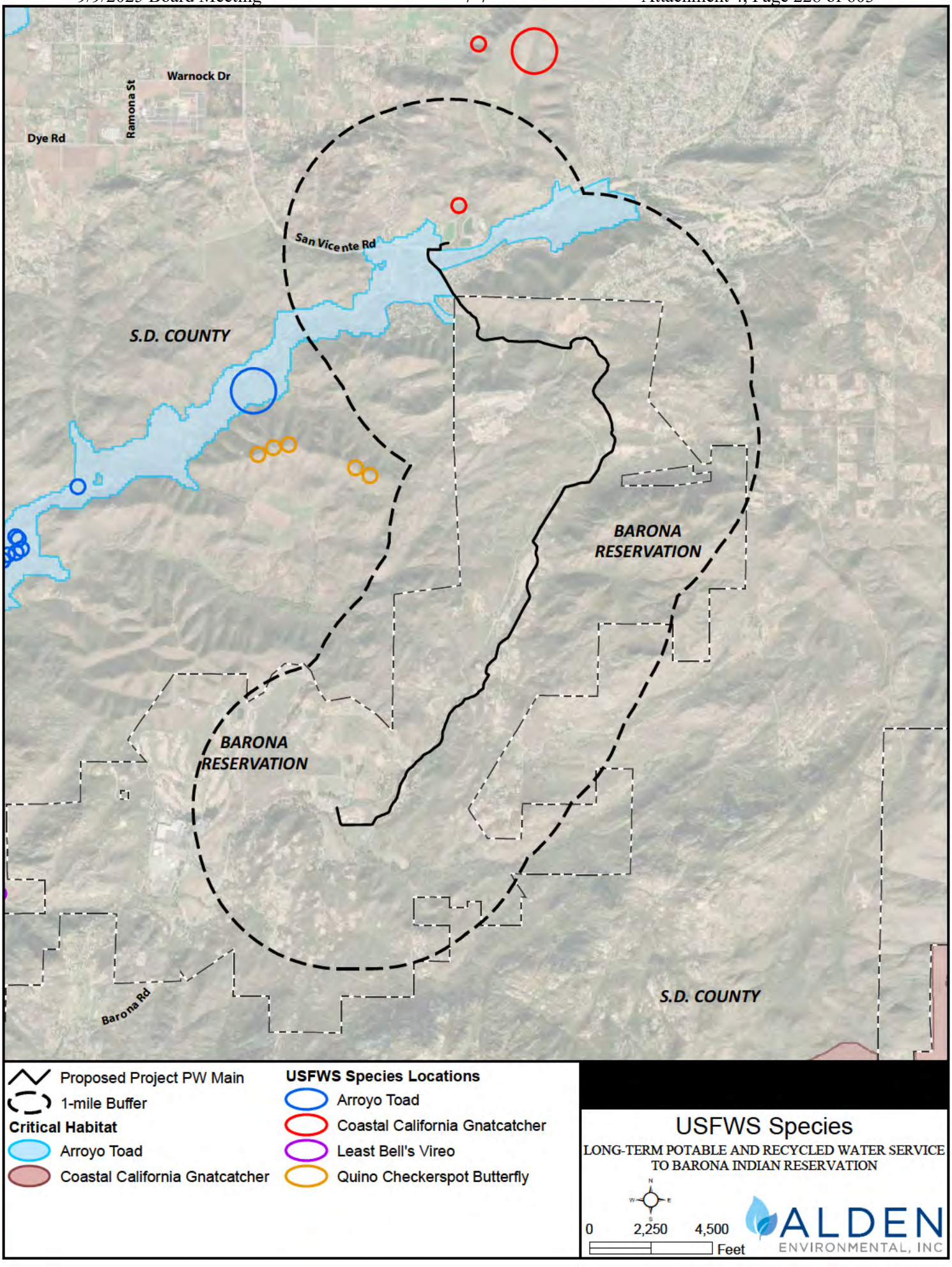
Proposed Project PW Main
1-mile Buffer
CNDDB Plant Species Locations
CNDDB Wildlife Species Locations

CNDDB

LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION

0 2,250 4,500 Feet

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Warnock Dr
Ramona St
Dye Rd
San Vicente Rd
S.D. COUNTY
BARONA RESERVATION
BARONA RESERVATION
S.D. COUNTY
Barona Rd
Proposed Project PW Main
1-mile Buffer
Critical Habitat
Arroyo Toad
Coastal California Gnatcatcher
USFWS Species Locations
Arroyo Toad
Coastal California Gnatcatcher
Least Bell's Vireo
Quino Checkerspot Butterfly
USFWS Species
LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION
0
2,250
4,500
Feet
ALDEN ENVIRONMENTAL, INC

Attachment B

Coastal California Gnatcatcher Survey Report

2023 Report
U.S. Fish and Wildlife Service Protocol Level Presence/Absence Surveys for the Coastal California Gnatcatcher (*Polioptila californica californica*)

Prepared for:

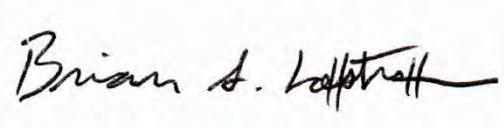
BFSA Environmental Services
14010 Poway Road, Suite A
Poway, CA 92064

Prepared by:

Alden Environmental, Inc.
3245 University Ave., #1188
San Diego, CA 92104

December 15, 2023

I certify that the information in this survey report and attached exhibits fully and accurately represent my work.



Brian Lohstroh (ES 063608-7)

ALDEN ENVIRONMENTAL, INC

TABLE OF CONTENTS

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INTRODUCTION 1

METHODS 1

SURVEY RESULTS 1

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Number	Title	Follows Page
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2	USGS Topographic Map	2
3	Survey Results	2

LIST OF APPENDICES

Letter	Title
A	Summary of Field Survey Conditions
B	Copies of Field Forms
C	Animal Species Observed

INTRODUCTION

This report documents the results of a survey conducted for the federally listed as threatened coastal California gnatcatcher (*Polioptila californica californica*; CAGN) on the Barona Reservation Water Pipeline Project site. The project consists of an approximately 8-mile long water pipeline on the Barona Indian Reservation with about 40 acres of suitable coastal sage scrub habitat along the pipeline alignment. Given that the site is not within a participating NCCP and that the surveys were conducted outside of the breeding season for this species, the survey consisted of nine separate site visits.

METHODS

The non-breeding season surveys were performed in accordance with the Year 1997 Survey Protocol Information (USFWS 1997) by US Fish & Wildlife Service (USFWS) permitted biologist Brian Lohstroh (ES063608-7). The survey visits were conducted between August 16 and December 6, 2023.

Dates, times, and weather conditions at the start and end of each survey are presented in Appendix A. The survey was conducted by walking through, and adjacent to, suitable CAGN habitat on site. Birds were viewed with the aid of binoculars, where necessary. Recorded CAGN vocalizations ("mew calls") were broadcast for approximate 5-second durations at approximately 50-yard increments along the survey route, or as needed to adequately cover each suitable habitat patch. Recorded vocalizations were only broadcast to initially detect the possible presence of CAGNs. Copies of field forms from each survey are presented in Appendix B.

SURVEY RESULTS

The habitat surveyed onsite included patches of buckwheat scrub, Diegan coastal sage scrub and coastal sage-chaparral scrub. Dominant species observed varied according to the habitat type and included combinations of California buckwheat (Eriogonum fasciculatum), California sagebrush (Artemisia californica), laurel sumac (Malosma laurina), scrub oaks (Quercus spp.), chamise (Adenostema fasciclatum) and deerweed (Acmispon glaber). Common annuals in the understory include short-pod mustard (Hirschfeldia incana), tocalote (Centaurea melitensis), and non-native grasses (Bromus spp., Avena spp.).

CAGN are known to occur 5 miles to the west of the survey area (Lohstroh 2019), which is likely near the eastern edge of the known range for CAGN within central San Diego County. Although there is suitable habitat within the survey area, the climate extremes in the local area likely preclude CAGN from permanently residing in the area. No CAGN were observed during any of the survey visits. A list of species observed is provided as Appendix C.

REFERENCES

USFWS. 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines. February 28.

Lohstroh, Brian. 2019. Personal observation of California gnatcatcher breeding pairs at Lakeside Ranch, Lakeside CA. Protocol surveys 2016-2019.



Figure 1

Regional Location

BARONA PIPELINE
2023 COASTAL CALIFORNIA
GNATCATCHER SURVEY

N
W E
S
0 2 4 Miles

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Figure 2

Project Location

BARONA PIPELINE
2023 COASTAL CALIFORNIA
GNATCATCHER SURVEY

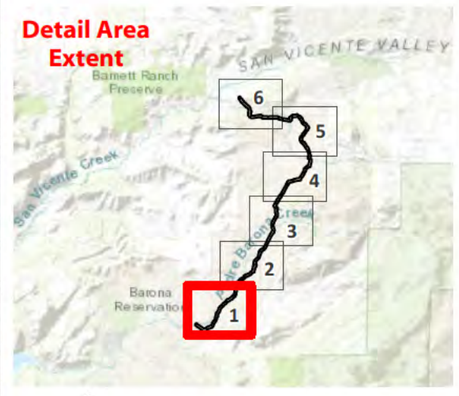


Survey Area

Vegetation

- Coast Live Oak Woodland
- Buckwheat Scrub
- Buckwheat Scrub - Disturbed
- Non-native Grassland
- Disturbed Habitat
- Developed

Detail Area Extent



N W E S

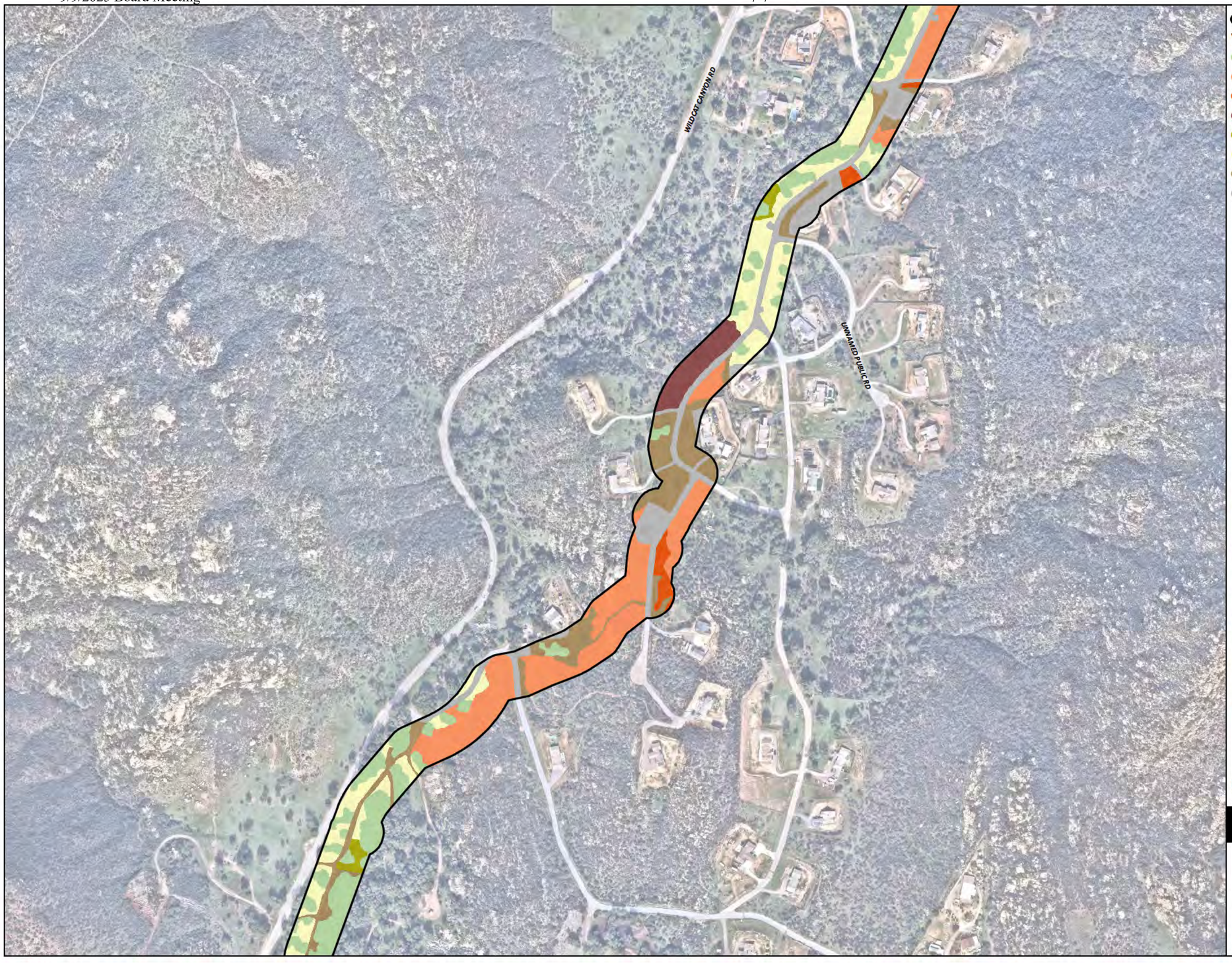
0 200 400 Feet

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Figure 3 - Page 1 of 6

Coastal California Gnatcatcher Survey Results

BARONA PIPELINE
2023 COASTAL CALIFORNIA
GNATCATCHER SURVEY

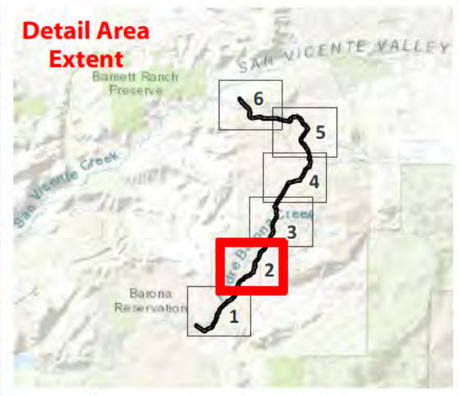


Survey Area

Vegetation

- Coast Live Oak Woodland
- Coastal Sage-Chaparral Scrub
- Coastal Sage-Chaparral Scrub - Disturbed
- Diegan Coastal Sage Scrub - Disturbed
- Buckwheat Scrub - Disturbed
- Non-native Grassland
- Disturbed Habitat
- Developed

Detail Area Extent



N W E S

0 200 400 Feet

ALDEN ENVIRONMENTAL, INC

Figure 3 - Page 2 of 6

Coastal California Gnatcatcher Survey Results

BARONA PIPELINE
2023 COASTAL CALIFORNIA GNATCATCHER SURVEY

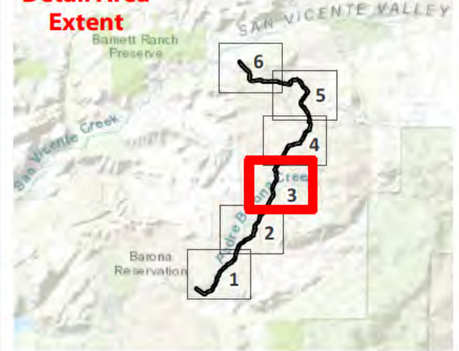


Survey Area

Vegetation

- Coast Live Oak Woodland
- Coastal Sage-Chaparral Scrub
- Coastal Sage-Chaparral Scrub - Disturbed
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Non-native Grassland
- Disturbed Habitat
- Developed

Detail Area Extent



N W E S

0 200 400 Feet

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Figure 3 - Page 3 of 6

Coastal California Gnatcatcher Survey Results

BARONA PIPELINE
2023 COASTAL CALIFORNIA GNATCATCHER SURVEY

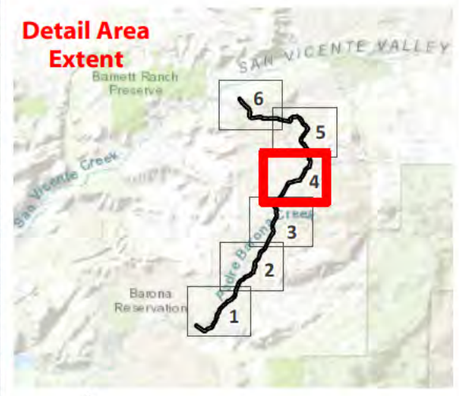


Survey Area

Vegetation

- Coast Live Oak Woodland
- Chamise Chaparral
- Southern Mixed Chaparral
- Coastal Sage-Chaparral Scrub
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Non-native Grassland
- Disturbed Habitat
- Developed

Detail Area Extent



N W E S

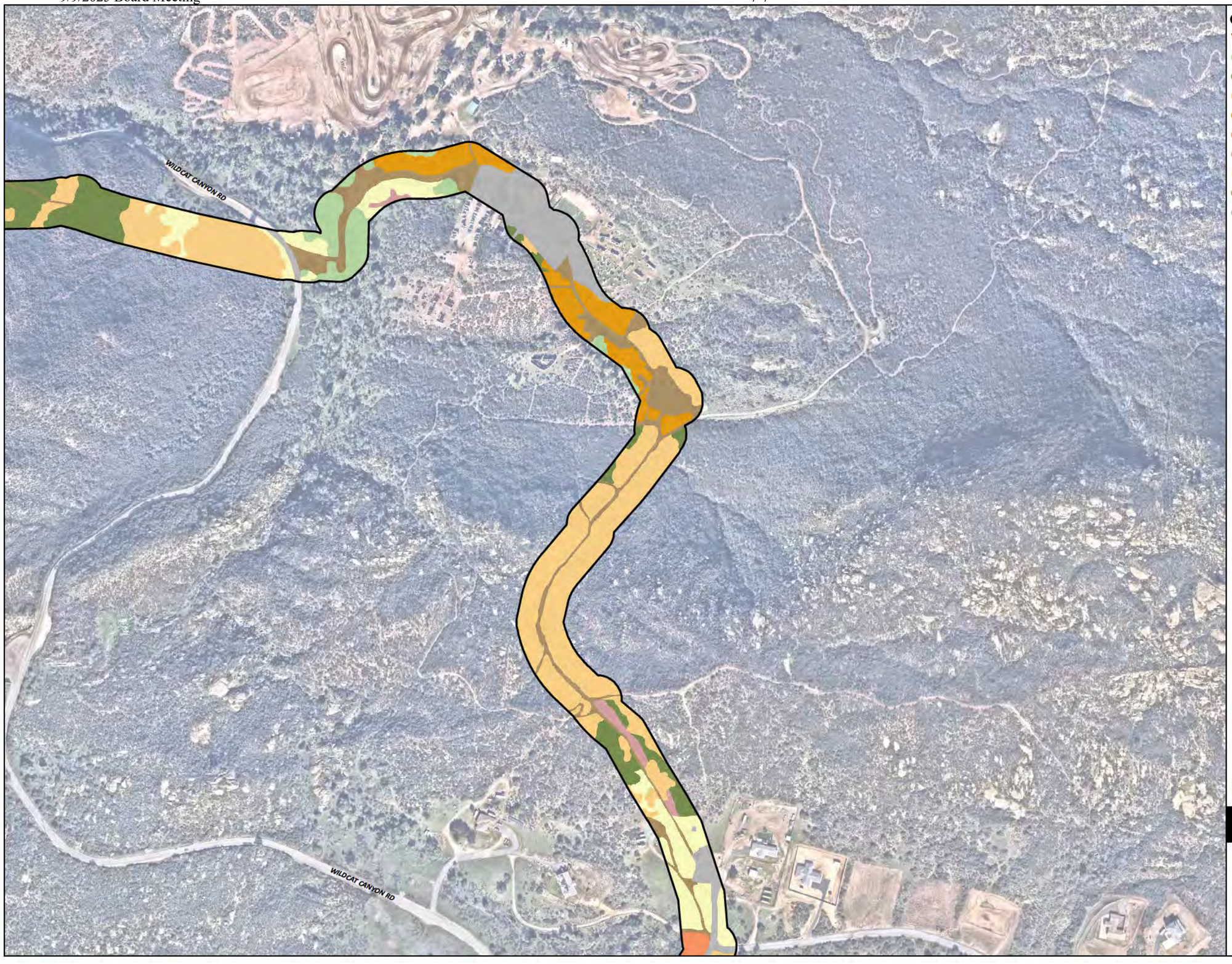
0 200 400 Feet

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Figure 3 - Page 4 of 6

Coastal California Gnatcatcher Survey Results

BARONA PIPELINE
2023 COASTAL CALIFORNIA GNATCATCHER SURVEY

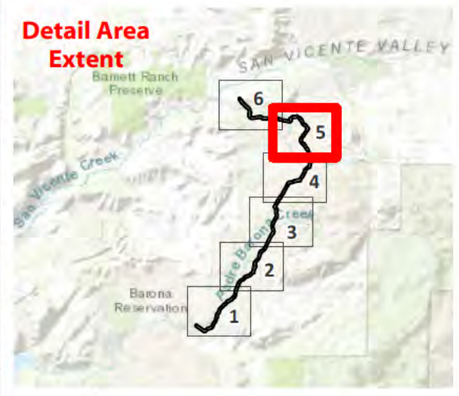


Survey Area

Vegetation

- Coast Live Oak Woodland
- Chamise Chaparral
- Southern Mixed Chaparral
- Southern Mixed Chaparral - Disturbed
- Coastal Sage-Chaparral Scrub
- Diegan Coastal Sage Scrub
- Non-native Grassland
- Disturbed Habitat
- Developed

Detail Area Extent



N W E S

0 200 400 Feet

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Figure 3 - Page 5 of 6

Coastal California Gnatcatcher Survey Results

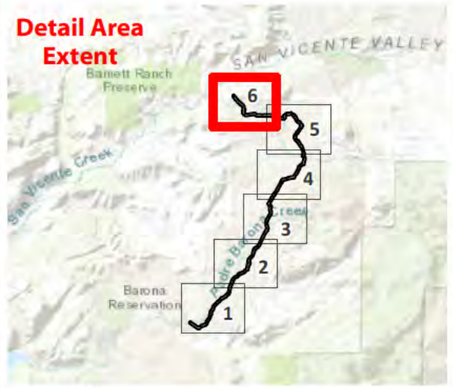
BARONA PIPELINE
2023 COASTAL CALIFORNIA GNATCATCHER SURVEY



Survey Area

Vegetation

- Coast Live Oak Woodland
- Chamise Chaparral
- Southern Mixed Chaparral
- Southern Mixed Chaparral - Disturbed
- Coastal Sage-Chaparral Scrub
- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub - Disturbed
- Buckwheat Scrub
- Non-native Grassland
- Ornamental
- Disturbed Habitat
- Developed



N W E S

0 200 400 Feet

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Figure 3 - Page 6 of 6

Coastal California Gnatcatcher Survey Results

BARONA PIPELINE
2023 COASTAL CALIFORNIA GNATCATCHER SURVEY

Appendix A
SUMMARY OF 2023 FIELD SURVEY CONDITIONS

Survey	Date	Survey Times (start/stop)	Weather Conditions (start/stop)
1	8/16	0640-1015	10% cover, 69°F, wind 0-2 mph/ 45% cover, 87°F, wind 0-5 mph
2	8/30	0635-1025	0% cover, 72°F, wind 0-2 mph / 0% cover, 93°F, wind 0-5 mph
3	9/13	0630-1000	100% cover, 64°F, wind 0-2 mph/ 0% cover, 69°F, wind 0-4 mph
4	9/27	0645-1040	10% cover, 56°F, wind 0-1 mph/ 30% cover, 78°F, wind 0-3 mph
5	10/11	0700-1100	100% cover, 61°F, wind 0-3 mph/ 70% cover, 60°F, wind 2-5 mph
6	10/25	0700-1100	100% cover, 60°F, wind 0-3 mph/ 100% cover, 62°F, wind 1-4 mph
7	11/8	0655-1045	5% cover, 46°F, wind 0-3 mph/ 0% cover, 65°F, wind 1-3 mph
8	11/22	0700-1100	10% cover, 51°F, wind 5-7 mph/ 0% cover, 75°F, wind 4-7 mph
9	12/6	0650-1030	0% cover, 43°F, wind 0-3 mph/ 0% cover, 68°F, wind 4-6 mph

Appendix B
COPIES OF FIELD FORMS

Avian Field Survey Survey Data Sheet

Date: 8/16/23 Project: Barona Waterline Survey Type: CAGN

Subarea: N/A Survey #: 1

Surveyor: BRIAN LOHSTROH Permit #: ES-063608-7 Affiliation: Lohstroh Bio

Add'l Persons: Ed (escort) Affiliation: Barona

Start Time: 0640 T: 69 °F %CC: 10 Wind MPH: 0-2 Gen Wx Cond: mild, calm

End Time: 1015 T: 87 °F %CC: 45 Wind MPH: 0-5 Gen Wx Cond: calm, warm

Special Status Spp. Observed: TETDIO, RCSP, QUEENG

Habitat Description: inland BWS, CSS, w/ CLOW, NNG, DH, CSS/chap

BWS/CSS dom: ERIFAS, ARTCAL, ACMGLA, QUEBER, TOXDIV
with: HIRINC, ADEFAC, CEAMMEL, STEDIE

General Notes: Ed + drove entire alignment in Polaris
Edited veg map

NO CAGN OBS.

Avian Species Detected:

AMWO							
CALT							
WBNU							
EUST							
NUWO							
BEWR							
LEGO							
BLPH							
MODO							
WREN							
HOWR							
AMPI							
OATI							
CAQU							
WEBL							
CALI							
RCSP*							
HUVI							

Herps/Mammals Detected:

Other Incidental Observations:

TetDIO -	North End	w/ Gabbro	soils				
QUEENG -	mixed into	CLOW +	CSS/chap				

Avian Field Survey Survey Data Sheet

Date: 8/30/23 Project: Barona Waterline Survey Type: CAGN

Subarea: N/A Survey #: 2

Surveyor: BRIAN LOHSTROH Permit #: ESOG3608-7 Affiliation: LOHSTROH BIO

Add'l Persons: Ed (Escort) Affiliation: Barona

Start Time: 0635 T: 72 °F %CC: 0 Wind MPH: 0-2 Gen Wx Cond: Mild

End Time: 1025 T: 93 °F %CC: 0 Wind MPH: 0-5 Gen Wx Cond: HOT

Special Status Spp. Observed: RCSP (North end)

Habitat Description: BWS/CSS

General Notes: Ed w/ Polaris.
Edited veg map

NO CAGN OBS.

Avian Species Detected:

BEWR	SATO						
CMLT	HOFI						
OATI	RCSP *						
WREN	TUVU						
ANHU	RTHA						
CAGN							
NWWO							
SCJA							
CATH							
EUST							
LEGO							
BUSH							
ACWO							
PLPI							
CAKI							
WBNU							
AMCR							
AMAI							
MODO							
HOSP							

Herps/Mammals Detected:

OTBE	SCOC						

Other Incidental Observations:

Avian Field Survey Survey Data Sheet

Date: 9/13/23 Project: Barrow Waterline Survey Type: CAGN
Subarea: N/A Survey #: 3
Surveyor: BRIAN LOHSTROH Permit #: ES-063606-4 Affiliation: LOHSTROH BIO
Add'l Persons: Ed (ESCORT) Affiliation: Barrow
Start Time: 0630 T: 64 °F %CC: 100 Wind MPH: 0-2 Gen Wx Cond: cool, cloudy
End Time: 1000 T: 69 °F %CC: 0 Wind MPH: 0-4 Gen Wx Cond: mild
Special Status Spp. Observed:
Habitat Description: CSS, BWS, CSS/CHM

General Notes: Ed w/ Polaris
NO CAGN OBS.

Avian Species Detected:

ACWO	CAGN						
OATI	WEBL						
CALT	CANW						
RTHA	EUST						
WREN	TUVU						
CATH	SAPH						
MODO	HOOR						
AMH4	CORA						
BUSH	SBMU						
AMCR							
HUVI							
BEWR							
WRWU							
LEGO							
CAST							
NUWO							
SOSP							
HOWR							
SPTO							
HOFI							

Herps/Mammals Detected:

Other Incidental Observations:

Avian Field Survey Survey Data Sheet

Date: 9/27/23	Project: Barona Waterline		Survey Type: CAGN
Subarea: N/A			Survey #: 4
Surveyor: BRIAN LOHSTROH	Permit #: ES-063608-7		Affiliation: LOHSTROH BIO
Add'l Persons: Ed (Escara)			Affiliation: Barona
Start Time: 0645	T: 56 °F %CC: 10	Wind MPH: 0-1	Gen Wx Cond: Brisk
End Time: 1040	T: 78 °F %CC: 30	Wind MPH: 0-3	Gen Wx Cond: Warm, Mostly Sunny
Special Status Spp. Observed:			

Habitat Description: CSS, BWS, CSS/CHAP

General Notes: Ed w/ Polaris
NO CAGN OBS

Avian Species Detected:

CALT	RTHA						
BEWR	MODO						
CATH	WEBL						
WBNU	ANHU						
SPTO	ROWR						
ACWO	SBMU						
HOFI							
OATI							
CAST							
CAQU							
AMCR							
HOWR							
LEGO							
WREN							
RSHA							
CEDW							
EUST							
NUMO							
BUSH							
BLPH							

Herps/Mammals Detected:

Other Incidental Observations:

Avian Field Survey Survey Data Sheet

Date: 10/11/23	Project: Barona Waterline		Survey Type: CAGN
Subarea: N/A			Survey #: 5
Surveyor: BRIAN LOHSTROH	Permit #: ES 063608-7		Affiliation: LOHSTROH BIO
Add'l Persons: FRED (ESCORT)			Affiliation: Barona
Start Time: 0900	T: 61 °F	%CC: 100	Wind MPH: 0-3	Gen Wx Cond: misty
End Time: 1100	T: 60 °F	%CC: 70	Wind MPH: 2-5	Gen Wx Cond: cool, mostly cloudy
Special Status Spp. Observed: RCSP - North end				

Habitat Description: CSS/CHAP, CGS, BWS

General Notes: Fred w/ Polaris
No CAGN OBS.

Avian Species Detected:

ACWO	MODO						
OATI	OCWA						
CALT	RCSP*						
HOFI	ANHU						
AMCR	NOMO						
RTHA	SBMU						
BEWR	LASP						
SPTO							
BUSH							
WEBL							
CATH							
CAQU							
CAST							
WBNU							
NUWO							
YRWA							
WREN							
WCSP							
NOFL							
HOWR							

Herps/Mammals Detected:

SyAn							

Other Incidental Observations:

Avian Field Survey Survey Data Sheet

Date: 10/25/23 Project: Baroma Waterline Survey Type: CAGN
Subarea: N/A Survey #: 6
Surveyor: BRIAN LOHSTROH Permit #: ES 063608-7 Affiliation: LOHSTROH BIO
Add'l Persons: Ed Affiliation: Baroma
Start Time: 0700 T: 60 °F %CC: 100 Wind MPH: 0-3 Gen Wx Cond: light drizzle
End Time: 1100 T: 62 °F %CC: 100 Wind MPH: 1-4 Gen Wx Cond: mostly cloudy
Special Status Spp. Observed: COHA (GPS)
Habitat Description: CSS/CHA, BWS, CSS

General Notes: Ed w/ Polaris
No CAGN obs.

Avian Species Detected:

CATH	CAGN						
LEGO	BEWR						
CALT	RTHA						
WCSP	WEBL						
CASJ	AMHA						
YRWA	RDWR						
AGWO	MODO						
WREN	COHA						
RSHA	CAKI						
COHA							
SPTO							
OATI							
RCKI							
NOFL							
BUSH							
WBNU							
BLPH							
NUWO							
HOFI							
AMGR							

Herps/Mammals Detected:

Other Incidental Observations:

Avian Field Survey Survey Data Sheet

Date: 11/8/23	Project: Barona waterline		Survey Type: CAGN
Subarea: N/A			Survey #: 7
Surveyor: BRIAN LOHSTROH	Permit #: ES 063608-7		Affiliation: LOHSTROH BIO
Add'l Persons: Ed (escort)			Affiliation: Barona
Start Time: 0655 T: 46 °F	%CC: 5	Wind MPH: 0-3	Gen Wx Cond: cold, mostly clear
End Time: 1045 T: 65 °F	%CC: 0	Wind MPH: 1-3	Gen Wx Cond: cool, mostly sunny
Special Status Spp. Observed:			

Habitat Description: CSS/chap, CSS, BWS

General Notes: Ed w/ Polaris
Dead CA Toad in Road
NO CAGN OBS.

Avian Species Detected:

SCJA	AMCR						
CATH	SEMU						
ACWO	CORA						
NUWO	WBNU						
OATI	NOFL						
CALT	ITDWR						
SPTO							
CAQU							
MODO							
WEBL							
RTHA							
YRWA							
RCKI							
WCSP							
LEGO							
WREN							
BEWR							
EUST							
LASP							
HOFI							

Herps/Mammals Detected:

OTBE	ANBO						
	SCOC						

Other Incidental Observations:

Avian Field Survey Survey Data Sheet

Date: 11/22/23	Project: Barona Waterline		Survey Type: CAGN
Subarea: N/A			Survey #: 8
Surveyor: BRIAN LOHSTROH	Permit #: ES063605-F		Affiliation: LOHSTROH 360
Add'l Persons: FRED (Escort)			Affiliation: Barona
Start Time: 0650	T: 51 °F %CC: 10	Wind MPH: 5-7	Gen Wx Cond: Mostly Sunny, cool
End Time: 1030	T: 75°F %CC: 0	Wind MPH: 4-7	Gen Wx Cond: clear, warm
Special Status Spp. Observed:			

Habitat Description:

General Notes:

Avian Species Detected:

YRWA	LEGO						
RSHA	WBNU						
CAKI	SAPH						
CASJ	CAQU						
OATI	CORA						
CALT	WEBL						
RCKI	COHA						
SATO	SBMM						
NUWO	BLPH						
ACWO							
HOFI							
WRUM							
EUST							
MODO							
CRTH							
AMCR							
BUSH							
WCSP							
RTHA							
BEWR							

Herps/Mammals Detected:

Other Incidental Observations:

SYAU							

Avian Field Survey Survey Data Sheet

Date: 12/6/23	Project: Barona Winterline		Survey Type: CAGN
Subarea: N/A			Survey #: 9
Surveyor: BRIAN LOHSTROH	Permit #: ES 063608-7		Affiliation: LOHSTROH BIO
Add'l Persons: Ed (Escort)			Affiliation: Barona
Start Time: 0650 T: 43 °F %CC: 0	Wind MPH: 0-3		Gen Wx Cond: clear and cold
End Time: 1030 T: 68 °F %CC: 0	Wind MPH: 4-6		Gen Wx Cond: clear and mild
Special Status Spp. Observed:			

Habitat Description: CSS/CHAP, CSS, BWS

General Notes: Ed w/ Polaris
NO CAGN OBS.
Last survey, NO CAGN detected during any survey 1-9.

Avian Species Detected:

CASJ	RTHA						
WBNU	CAGN						
HOFI	SAPH						
YRWA	NOMO						
OATI	CATH						
ACWO	ANHU						
NUWO	BLPH						
WREN	CAKI						
EUST							
WCSP							
NOFL							
moJO							
BEWR							
SPTO							
CALT							
RCKI							
AMCR							
HOWR							
LEGO							
BUSH							

Herps/Mammals Detected:

Other Incidental Observations:

Appendix C **ANIMAL SPECIES OBSERVED** **BARONA PIPELINE CAGN SURVEY**	
SCIENTIFIC NAME	**COMMON NAME**
VERTEBRATES	
Amphibian	
Anaxyrus boreas halophilus	California toad
Reptiles	
Sceloporus occidentalis longipes	great basin fence lizard
Birds	
Accipiter cooperii	Cooper's hawk
Aimophila ruficeps	Rufous-crowned sparrow
Aphelocoma californica	California scrub-jay
Baeolophus inornatus	oak titmouse
Bombycilla cedrorum	cedar waxing
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
Callipepla californica	California quail
Calypte anna	Anna's hummingbird
Cathartes aura	turkey vulture
Catherpes mexicanus	canyon wren
Chamaea fasciata	wrentit
Chondestes grammacus	lark sparrow
Colaptes auratus	Northern flicker
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Haemorhous mexicanus	house finch
Icterus cucullatus	hooded oriole
Lonchura punctulata	scaly-breasted munia
Melanerpes formicivorus	acorn woodpecker
Melospiza melodia	song sparrow
Melozone crissalis	California Towhee
Mimus polyglottus	northern mockingbird
Oreothlypis celata	orange-crowned Warbler
Passer domesticus	house sparrow
Phainopepla nitens	phainopepla
Picoides nuttallii	Nuttall's woodpecker
Pipilo maculatus	spotted towhee
Psaltriparus minimus	bushtit
Regulus calendula	Ruby-crowned Kinglet
Salpinctes obsoletus	rock wren
Sayornis nigricans	black phoebe

Appendix C (continued) **ANIMAL SPECIES OBSERVED** **BARONA PIPELINE CAGN SURVEY**	
SCIENTIFIC NAME	**COMMON NAME**
Birds	
Sayornis saya	Say's phoebe
Selasphorus sp.	selasphorus hummingbird
Setophaga coronata	yellow-rumped warbler
Sialia mexicana	western bluebird
Sitta carolinensis	white-breasted Nuthatch
Spinus psaltria	lesser goldfinch
Sturnus vulgaris	European starling
Thryomanes bewickii	Bewick's Wren
Toxostoma redivivum	California thrasher
Troglodytes aedon	house Wren
Tyrannus vociferans	Cassin's kingbird
Vireo huttoni	Hutton's Vireo
Zenaida macroura	mourning dove
Zonotrichia leucophrys	white-crowned sparrow
Mammals	
Canis latrans	coyote
Otospermophilus beecheyi	California ground squirrel
Sylvilagus audubonii	desert cottontail

Appendix C

June 2024

Section 106 (NHPA) Historic Resources Study

by BFS Environmental Services, a Perennial Company

This document is confidential.

Appendix C-1

June 2024

Paleontological Assessment

by BFS Environmental Services, a Perennial Company

A PALEONTOLOGICAL ASSESSMENT FOR THE BARONA LONG-TERM POTABLE AND RECYCLED WATER SERVICE PROJECT

COUNTY OF SAN DIEGO, BARONA INDIAN RESERVATION, CALIFORNIA

APNs 285-081-18, -21, -25, and -31, 285-090-07 and -51, 328-050-01, 328-080-01, 328-100-02, 328-120-03, 330-020-01, and 331-010-01

Submitted to:

Barona Band of Mission Indians
1095 Barona Road
Lakeside, California 92040

Prepared for:

Barona Band of Mission Indians
1095 Barona Road
Lakeside, California 92040

Prepared by:

BFSA Environmental Services,
a Perennial Company
14010 Poway Road, Suite A
Poway, California 92064

June 21, 2024

BFSA Environmental Services
A Perennial Company

Paleontological Database Information

Author:	Todd A. Wirths, M.S., Senior Paleontologist, California Professional Geologist No. 7588
Consulting Firm:	BFSA Environmental Services, a Perennial Company 14010 Poway Road, Suite A Poway, California 92064 (858) 484-0915
Report Date:	June 21, 2024
Report Title:	Paleontological Assessment for the Barona Long-Term Potable and Recycled Water Service Project, County of San Diego, Barona Indian Reservation, California
Submitted to:	Barona Band of Mission Indians 1095 Barona Road Lakeside, California 92040
Prepared for:	Barona Band of Mission Indians 1095 Barona Road Lakeside, California 92040
USGS Quadrangle:	*El Cajon Mountain, California* (7.5-minute) Quadrangle
Study Area:	Approximately 75.3 acres
Assessor's Parcel Numbers:	285-081-18, -21, -25, and -31, 285-090-07 and -51, 328-050-01, 328-080-01, 328-100-02, 328-120-03, 330-020-01, and 331-010-01
Key Words*:*	Paleontological assessment; no monitoring recommended.

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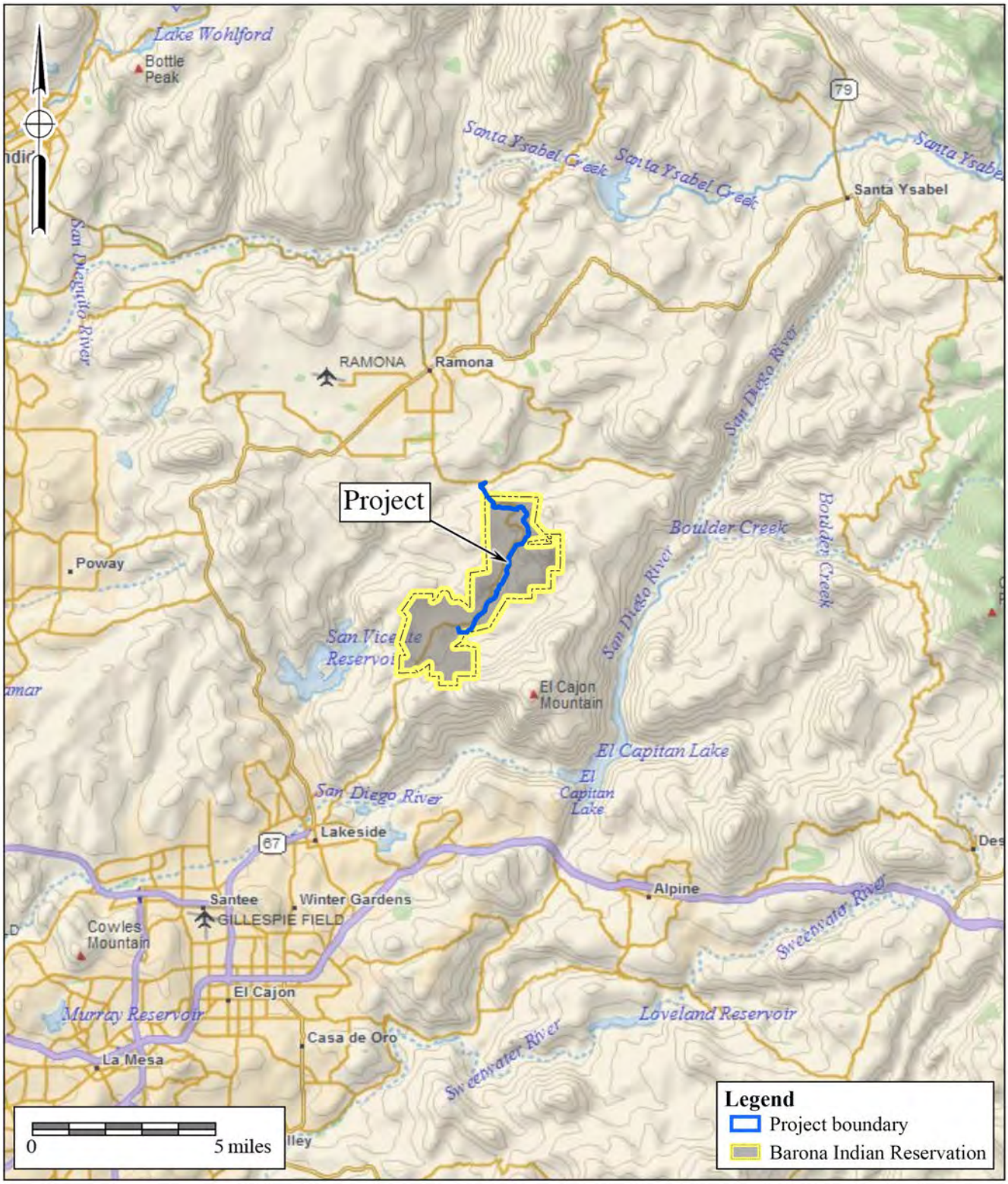
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I. INTRODUCTION AND LOCATION

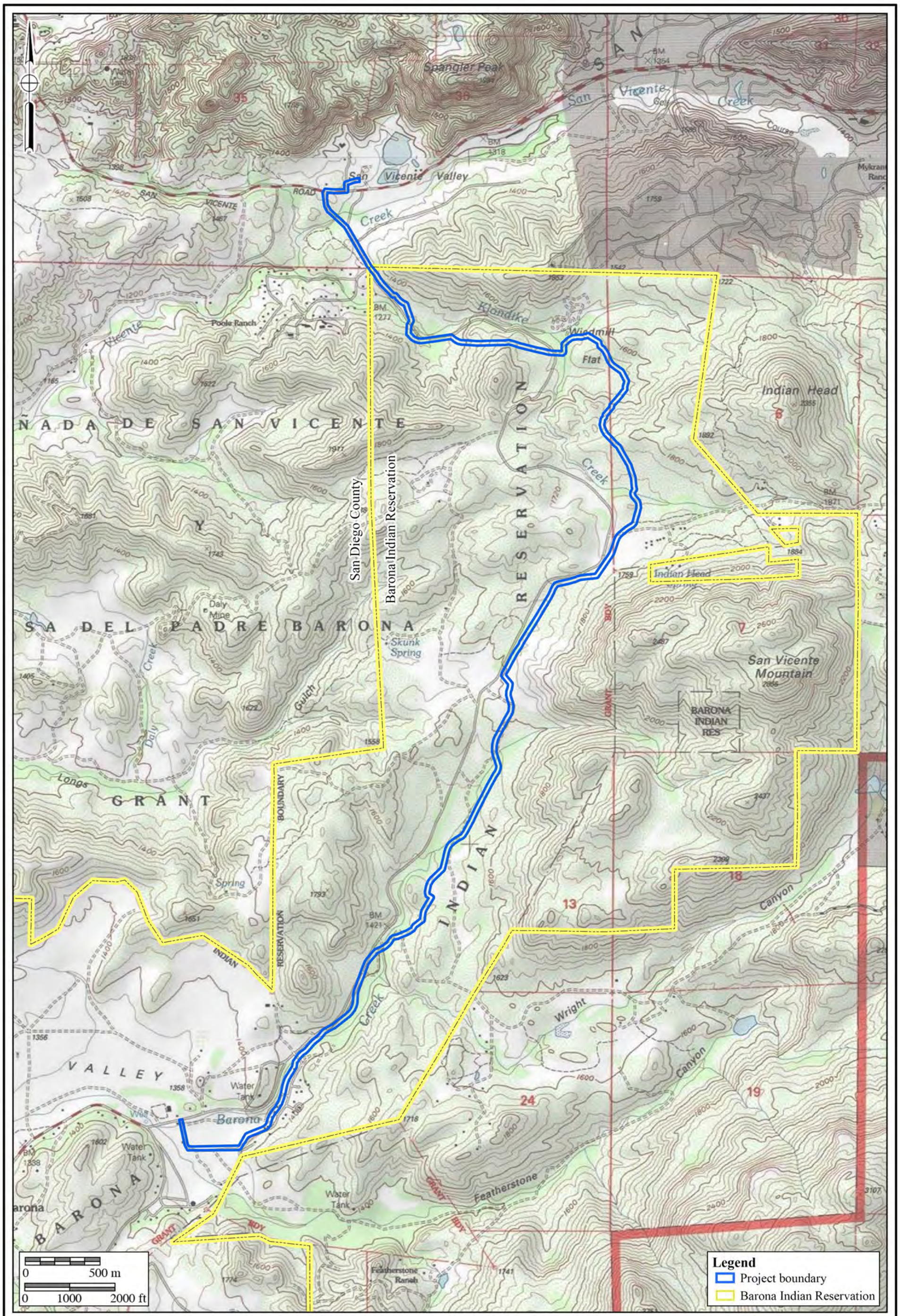
BFSA Environmental Services, a Perennial Company (BFSA), was contracted by the Barona Band of Mission Indians to supply a paleontological resources study report in support of the Barona Long-Term Potable and Recycled Water Service Project (Barona LTPRWS Project). The paleontological assessment of the Barona LTPRWS Project included a review of paleontological literature and fossil locality records in the area, a review of the underlying geology, and recommendations to monitor for impacts to potential paleontological resources, if necessary. The project is parallel to Wildcat Canyon Road on both the Barona Indian Reservation and unincorporated county of San Diego land, northeast of the San Vicente Reservoir and south of San Vicente Road (Figure 1). Elevations within the Barona LTPRWS Project vary, beginning from the north around 1,280 feet above mean sea level (AMSL) near the intersection of San Vicente and Wildcat Canyon roads, ascending to approximately 1,750 feet AMSL just south of Capitan Grande Road, and descending again to approximately 1,350 feet AMSL near Barona Road. The Barona LTPRWS Project is situated within an unsectioned area of Township 14 South, Range 1 East of the San Bernardino Baseline and Meridian, as shown on the U.S. Geological Survey (USGS) *El Cajon Mountain, California* (7.5-minute) topographic quadrangle map (Figure 2).

As proposed, the Barona LTPRWS Project includes the construction of two roughly parallel underground water pipelines to run from the Ramona Municipal Water District facilities, in the county of San Diego, into and through the Barona Indian Reservation, to provide both recycled and potable water to the reservation and its residents. The recycled water pipeline will be eight inches in diameter and the potable water pipeline will be 12 inches in diameter. Pipes for potable and recycled water will be separated by 10 feet, except in special situations, such as where they pass under a road. The potable line will extend 41,900 linear feet, and the recycled line will extend 21,700 linear feet. The proposed pipeline alignment extends from the Ramona Municipal Water District facilities south and east along Vicente Meadows Drive and San Vicente Road to Wildcat Canyon Road before traveling approximately six miles south from San Vicente Road in the county of San Diego through the Barona Indian Reservation to Barona Road. As such, the Barona LTPRWS Project includes the proposed pipeline alignment and a 50-foot buffer, measured from the center of the alignment, which collectively comprise approximately 75.3 acres.



BFSA Environmental Services
A Perennial Company

Figure 1
General Location Map
The Long-Term Potable and Recycled Water Service to the Barona Indian Reservation Project
DeLorme (1:250,000)



BFSA Environmental Services
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Figure 2
Project Location Map
The Long-Term Potable and Recycled Water Service
to the Barona Indian Reservation Project
USGS *El Cajon Mountain* Quadrangle (7.5-minute series)

II. REGULATORY SETTING

The northern approximately six acres of the Barona LTPRWS Project are located on county of San Diego land, while the remainder of the alignment falls within the Barona Indian Reservation. The portion of the project on unincorporated county land is subject to California Environmental Quality Act (CEQA) and County of San Diego environmental guidelines.

CEQA, patterned after the National Environmental Policy Act, is the overriding environmental regulation that sets the requirement for protecting California's paleontological resources. CEQA mandates that governing permitting agencies (lead agencies) set their own guidelines for the protection of nonrenewable paleontological resources under their jurisdiction.

Pursuant to CEQA, the County of San Diego has developed a comprehensive set of guidelines, practices, and criteria for evaluating the potential for developments to adversely impact significant paleontological resources, and the necessary procedures to implement in order to preserve the resources if discovered (Stephenson et al. 2009). Geologic formations mapped within unincorporated areas in the county are rated as high, moderate, low, marginal, or with no potential to yield paleontological resources. Based on the rating assignment, the County requires the following monitoring criteria, and subsequent salvage of significant paleontological resources if they are found, to adequately mitigate potentially significant impacts:

- For projects within areas of High or Moderate Paleontological Resources Potential that propose excavation equal to or greater than 2,500 cubic yards, the services of a Project Paleontologist and a Paleontological Resources Monitor are required.
- For projects within areas of High or Moderate Paleontological Potential that propose excavation of less than 2,500 cubic yards, monitoring by a Standard Monitor is required.
- For projects within areas of Low or Marginal Potential, monitoring by a Standard Monitor is required. (Stephenson et al. 2009)

Based on these criteria, the Barona LTPRWS Project is evaluated for paleontological resource sensitivity and the need for mitigation monitoring in Section V of this report.

III. GEOLOGY

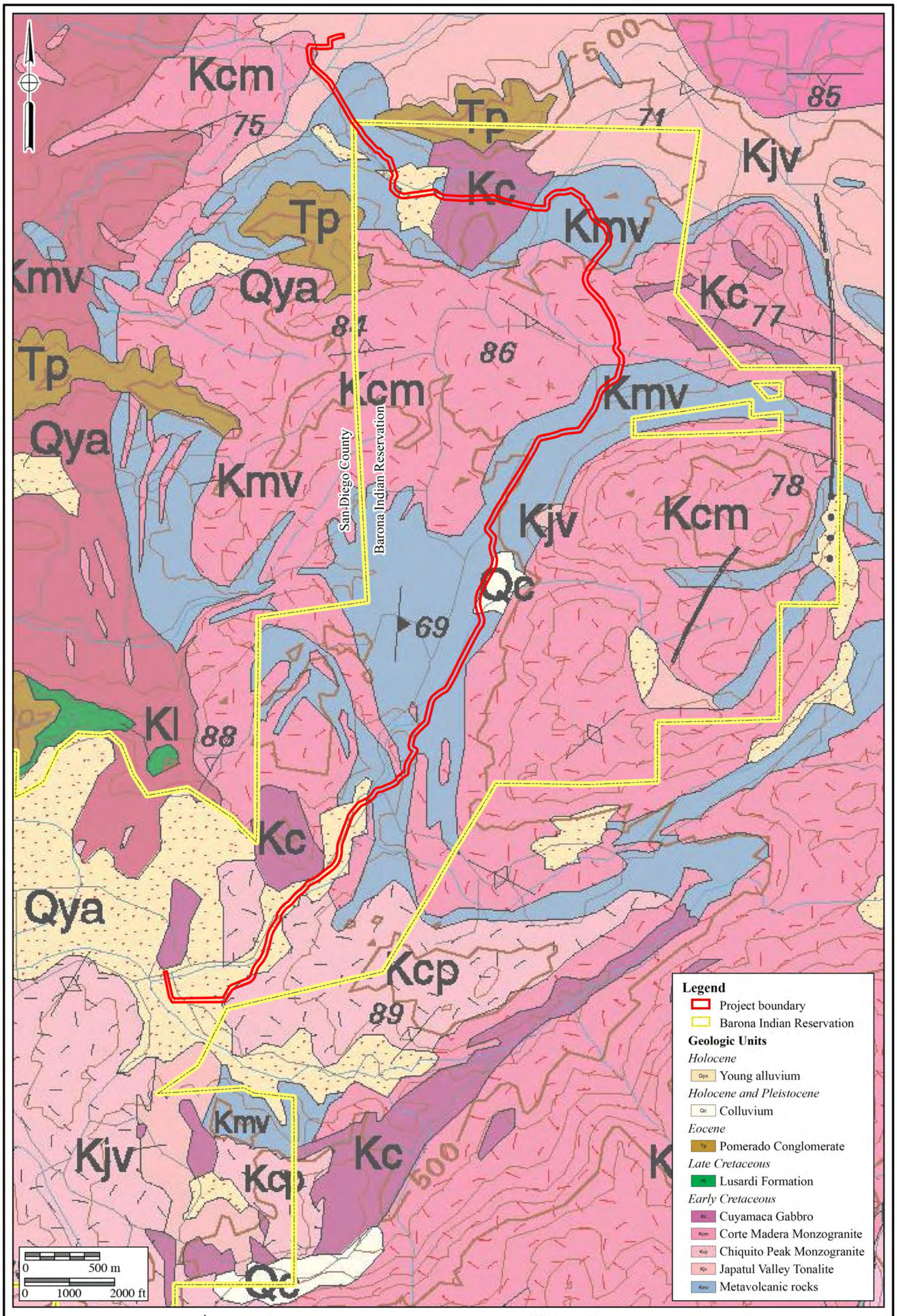
The Barona LTPRWS Project lies within the western foothills of the Cuyamaca Mountains, a part of the Peninsular Ranges that extend from the Santa Ana Mountains in Orange County to the southern tip of Mexico's Baja California. The rock units that compose the Peninsular Ranges typically consist of tectonically uplifted plutonic rocks, and most of the project alignment traverses this rock type as well. As shown in Figure 3 (after Todd 2004), the project alignment crosses a variety of plutonic rocks—tonalite, monzogranite, and gabbro—as well as metavolcanic rocks. All are lower to middle Cretaceous in age, a time span of approximately 140 to 90 million years ago. Valleys and lowland areas are covered by a veneer of Holocene-aged young alluvium (yellow areas labeled "Qya" in Figure 3). The southern portion of the alignment traverses these deposits and crosses a small patch near the alignment's northern end. The young alluvial deposits consist of sand, silt, and gravel in modern streambeds and washes. In the middle of the project, the alignment passes through a patch of Holocene to late Pleistocene-aged colluvium (pale yellow area labeled "Qc" in Figure 3), characterized as slope wash, debris-flow, and talus deposits composed of sand and gravel.

Near the project are outcrops of what Todd (2004) labels as the "Pomerado Conglomerate." These isolated outcrops of sand, gravel, and cobbles (brown areas labeled "Tp" in Figure 3) are remnants of a continuous riverbed from a river that was actively flowing during the Eocene Epoch, about 50 to 40 million years ago, originating from Sonora, Mexico, to a point just west of the San Vicente Reservoir (Minch 1979; Abbott 1999). From there, the Ballena River, as the ancient river is called, transitioned to a river delta that now forms the elevated, heavily dissected highland south of Poway, and into the Pacific Ocean. The materials forming the outcrops are known as the "Ballenas gravels," after nearby Whale Peak (Spanish: whale = ballena).

IV. PALEONTOLOGICAL RESOURCES

Definition

Paleontological resources are the remains of prehistoric life that have been preserved in geologic strata. These remains are called fossils and include bones, shells, teeth, and plant remains (including their impressions, casts, and molds) in the sedimentary matrix, as well as trace fossils such as footprints and burrows. Fossils are considered older than 5,000 years of age (Society of Vertebrate Paleontology [SVP] 2010) but may include younger remains (subfossils) when viewed in the context of local extinction of the organism or habitat, for example. Fossils are considered a nonrenewable resource under state and local guidelines (Sections II and V of this report).



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Figure 3
Geologic Map
The Long-Term Potable and Recycled Water Service
to the Barona Indian Reservation Project
Geology after Todd (2004)

Fossil Locality Search

The nearest-known fossils are located several miles to the west, discovered during mitigation monitoring at the Sycamore Estates development in Poway, about eight miles away. The fossils consist of Eocene-aged bones and teeth of small mammals including marsupials, insectivores, primates, rodents, and an archaic camel, from the conglomerate member of the Friars Formation (Deméré et al. 2016; San Diego Society of Natural History fossil localities 5615 and 5616). Despite a suitable depositional environment and age of the nearby Ballena gravels, fossils are not known from these deposits.

V. PALEONTOLOGICAL SENSITIVITY

Overview

The degree of paleontological sensitivity of any particular area is based on a number of factors, including the documented presence of fossiliferous resources on a site or in nearby areas, the presence of documented fossils within a particular geologic formation or lithostratigraphic unit, and whether or not the original depositional environment of the sediments is one that might have been conducive to the accumulation of organic remains that may have become fossilized over time. Plutonic rocks, having crystalized millions of years ago from a molten state several miles below the surface of the earth, do not contain fossils. Holocene alluvial deposits are typically too young to yield significant fossils. In San Diego County, most Cenozoic and Mesozoic-aged sedimentary rock formations (since 75 million years ago) are known to produce fossils (Stephenson et al. 2009; Deméré and Walsh 2011).

Professional Standard

The SVP (2010) has drafted guidelines that include four categories of paleontological sensitivity for geologic units (formations) that might be impacted by a proposed project, as listed below:

- *High Potential:* Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered.
- *Undetermined Potential:* Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment, and that further study is needed to determine the potential of the rock unit.
- *Low Potential:* Rock units that are poorly represented by fossil specimens in institutional collections or based upon a general scientific consensus that only preserve fossils in rare circumstances.
- *No Potential:* Rock units that have no potential to contain significant paleontological resources, such as high-grade metamorphic rocks and plutonic igneous rocks.

Using these criteria, based on the geologic formations at the project, the various plutonic and metavolcanic rocks underlying most of the project alignment have no potential. The Holocene alluvial deposits can be considered to have a low potential to yield fossils on account of their young geologic age. The Holocene and late Pleistocene-aged colluvial deposits in the middle of the project alignment probably consist of a wedge of earthen debris at the foot of San Vicente Mountain, deposited as a result of a catastrophic debris flow during a storm. Fossils are not typically found in debris flow deposits. Furthermore, the age designation of "Holocene and late Pleistocene" for the colluvial deposits covers every outcrop mapped as such within the whole 30' x 60' El Cajon quadrangle, an area of roughly 1,500 square miles (Todd 2004), implying that the age of this specific deposit at the project is only estimated. A Holocene age is assigned to this colluvial deposit here, based on its position at the mouth of a canyon, where debris flow deposits older than Holocene, if they exist at all, have been buried by younger sediments. Therefore, a low paleontological potential can be assigned to the colluvial deposits.

County of San Diego Assessment of Paleontological Sensitivity

Geologic formations in unincorporated areas of the county have been rated for their degree of paleontological sensitivity by the County of San Diego (Stephenson et al. 2009; Deméré and Walsh 2011). Sensitivity ratings of high, moderate, low, marginal, and none are assigned to the various formations based on rock type and record for yielding fossil material. The plutonic and metavolcanic rocks mapped underlying most of the project alignment are accorded no paleontological sensitivity, since these rocks do not have fossils. The County rates the Holocene alluvial and colluvial deposits with a low paleontological sensitivity, "based on their relatively young age and/or high-energy depositional history, are judged unlikely to produce unique fossil remains. Low resource potential formations rarely produce fossil remains of scientific significance and are considered to have low sensitivity" (Stephenson et al. 2009).

The County does not require monitoring for developments occurring within geological formations with no paleontological sensitivity. However, for projects occurring in formations with a low or marginal sensitivity, monitoring by a "Standard Monitor" is required. A Standard Monitor is defined as "any one person who is on the project site during all the original cutting of undisturbed substratum. The Standard Monitor must be designated by the Applicant and given the responsibility of watching for fossils so that the project is in conformance with Section 87.430 of the Grading Ordinance." Furthermore, "Section 87.430 of the Grading Ordinance provides for the requirement of a paleontological monitor at the discretion of the County. In addition, the suspension of grading operation is required upon the discovery of fossils greater than twelve inches in any dimension" (Stephenson et al. 2009).

VI. CONCLUSIONS AND RECOMMENDATIONS

County Land

Research indicates that all of the Barona LTPRWS Project alignment that lies outside of the reservation overlies plutonic and metavolcanic rocks, which are not fossiliferous. The County of San Diego accords these rocks with no paleontological potential. The County does not require monitoring in rocks with no potential. Therefore, paleontological mitigation monitoring is not recommended for this portion of the project alignment.

Reservation Land

The potential for fossils to occur in areas mapped as plutonic or metavolcanic rocks within the reservation area of the Barona LTPRWS Project alignment are nil. The potential for significant fossils to occur in areas mapped as Holocene alluvial or colluvial deposits is low to nil. While the alluvial deposits become greater in age with increasing depth and, therefore, would have increasing paleontological sensitivity, it is anticipated the proposed water lines will be buried at shallow depths typical for this type of project and would not impact sensitive deposits. Therefore, paleontological mitigation monitoring is not recommended for this portion of the project alignment.

VII. CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this paleontological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief and have been compiled in accordance with CEQA criteria.



June 21, 2024

Todd A. Wirths
Senior Paleontologist
California Professional Geologist No. 7588

Date

VIII. REFERENCES

Abbott, P.A. 1999. The Rise and Fall of San Diego: 150 Million Years of History Recorded in Sedimentary Rocks. Sunbelt Publications, San Diego, California.

Deméré, T.A., and Walsh, S.L. 2011. Paleontological Resources – County of San Diego, California. Report prepared by the Department of Paleontology, San Diego Natural History Museum. Revised from 1993. Pp. i-iii + 1-62, figs. 1-4.

Deméré, T.A., Ekdale, E.G., and Donohue, S.L. 2016. Paleontological Resource Assessment, Mission Trails Regional Park Master Plan Update, San Diego County, California. Consulting report prepared for RECON Environmental, Inc., San Diego, California, by the Department of PaleoServices, San Diego Natural History Museum, San Diego, California.

Minch, J.A. 1979. The Late Mesozoic-Early Tertiary Framework of Continental Sedimentation, Northern Peninsular Ranges, Baja California, Mexico. *In*, Abbott, P.A., ed., Eocene Depositional Systems, San Diego, California. Pacific Section SEPM, Los Angeles, California. Pp. 43-67.

Society of Vertebrate Paleontology. 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources; by the SVP Impact Mitigation Guidelines Revision Committee. https://vertpaleo.org/wp-content/uploads/2021/01/SVP_Impact_Mitigation_Guidelines-1.pdf.

Stephenson, R.A., Giffen, J.H., and Gibson, E.E. 2009. County of San Diego guidelines for determining significance [for] paleontological resources. Report (2007, revised in 2009) prepared by the San Diego County Land Use and Environment Group, Department of Planning and Land Use and Department of Public Works, San Diego. Pp. i-vi + 1-47, figs. 1-10, table 1.

Todd, V.R. 2004. Preliminary Geologic Map of the El Cajon 30' x 60' Quadrangle, Southern California. USGS Open-File Report 2004-1361.

APPENDIX A

Qualifications of Key Personnel

Education

Master of Science, Geological Sciences, San Diego State University, California **1995**

Bachelor of Arts, Earth Sciences, University of California, Santa Cruz **1992**

Professional Certifications

California Professional Geologist #7588, 2003
Riverside County Approved Paleontologist
San Diego County Qualified Paleontologist
Orange County Certified Paleontologist
OSHA HAZWOPER 40-hour trained; current 8-hour annual refresher

Professional Memberships

Board member, San Diego Geological Society
San Diego Association of Geologists; past President (2012) and Vice President (2011)
South Coast Geological Society
Southern California Paleontological Society

Experience

Mr. Wirths has more than a dozen years of professional experience as a senior-level paleontologist throughout southern California. He is also a certified California Professional Geologist. At BFSA, Mr. Wirths conducts on-site paleontological monitoring, trains and supervises junior staff, and performs all research and reporting duties for locations throughout Los Angeles, Ventura, San Bernardino, Riverside, Orange, San Diego, and Imperial Counties. Mr. Wirths was formerly a senior project manager conducting environmental investigations and remediation projects for petroleum hydrocarbon-impacted sites across southern California.

Selected Recent Reports

2019 *Paleontological Assessment for the 10575 Foothill Boulevard Project, City of Rancho Cucamonga, San Bernardino County, California*. Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Assessment for the MorningStar Marguerite Project, Mission Viejo, Orange County, California.* Prepared for T&B Planning. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Monitoring Report for the Nimitz Crossing Project, City of San Diego.* Prepared for Voltaire 24, LP. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2019 *Paleontological Resource Impact Mitigation Program (PRIMP) for the Jack Rabbit Trail Logistics Center Project, City of Beaumont, Riverside County, California.* Prepared for JRT BP 1, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Monitoring Report for the Oceanside Beachfront Resort Project, Oceanside, San California.* Prepared for S.D. Malkin Properties. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Impact Mitigation Program for the Nakase Project, Lake Forest, Orange County, San California.* Prepared for Glenn Lukos Associates, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Impact Mitigation Program for the Sunset Crossroads Project, Banning, Riverside County*. Prepared for NP Banning Industrial, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Assessment for the Ortega Plaza Project, Lake Elsinore, Riverside County*. Prepared for Empire Design Group. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Resource Record Search Update for the Green River Ranch III Project, Green River Ranch Specific Plan SP00-001, City of Corona, California*. Prepared for Western Realco. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Assessment for the Cypress/Slover Industrial Center Project, City of Fontana, San Bernardino County, California*. Prepared for T&B Planning, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2020 *Paleontological Monitoring Report for the Imperial Landfill Expansion Project (Phase VI, Segment C-2), Imperial County, California*. Prepared for Republic Services, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Assessment for the Manitou Court Logistics Center Project, City of Jurupa Valley, Riverside County, California*. Prepared for Link Industrial. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Resource Impact Mitigation Program for the Del Oro (Tract 36852) Project, Menifee, Riverside County*. Prepared for D.R. Horton. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Assessment for the Alessandro Corporate Center Project (Planning Case PR-2020-000519), City of Riverside, Riverside County, California*. Prepared for OZI Alessandro, LLC. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

2021 *Paleontological Monitoring Report for the Boardwalk Project, La Jolla, City of San Diego*. Prepared for Project Management Advisors, Inc. Report on file at Brian F. Smith and Associates, Inc., Poway, California.

Appendix D

June 2022

Preliminary Design Report by Dudek

Preliminary Design Report

Long-Term Potable and Recycled Water Service to Barona Indian Reservation

JUNE 2022

Prepared for:

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Opinion of Probable Construction Cost Detail
San Diego County Excavation, Encroachment, and Traffic Control Application Package

Appendix D

June 2022

Preliminary Design Report by Dudek

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
afy	Acre-feet per year
CEQA	California Environmental Quality Act
DEM	Digital elevation model
fps	Feet per second
gpm	Gallons per minute
LF	Linear feet
RMWD	Ramona Municipal Water District

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Appendix D-1

December 2021

Water Supply Feasibility Study by Dudek

1 Introduction

1.1 Project Background and Purpose

In 2021 Dudek conducted a feasibility study evaluating potential potable and recycled water sources from neighboring water districts. The study was initiated as recent estimates of the Tribe's long-term water demand are projected to exceed the sustainable yield of the underlying groundwater basin.

California Water Code Section 71611.5 details guidelines for municipal water districts to provide service to Indian tribal lands. Section 71611.5 stipulates that upon request by an Indian tribe and satisfaction of conditions established by the California Water Code, a district can provide water service to the requesting tribe at substantially the same terms as its existing customers. However, Section 71611.5 has a sunset clause of January 1, 2023. The Tribe is motivated to establish the necessary service agreements with a suitable municipal water district prior to January 1, 2023, to avoid the potential loss of valuable water opportunities.

The feasibility study completed by Dudek in 2021 concluded that Ramona Municipal Water District (RMWD) is the best possible source of potable and recycled water for the Tribe. The study found that sourcing water from RMWD will allow for most required new infrastructure to be constructed on Reservation land, which is not subject to many environmental and permitting requirements, as well as the lowest operations and maintenance cost to the Tribe.

The objectives of this Preliminary Design Report (PDR) are as follows:

- Analyze the Tribe's existing and future potable and recycled water systems and demands
- Present preliminary design criteria for the proposed recycled water and potable water facilities, including pipe sizing, materials, points of connections, and alignments
- Summarize permitting and environmental requirements
- Present the preliminary opinion of probable construction costs and schedule

2 Existing System Summary and Hydraulic Model Analysis

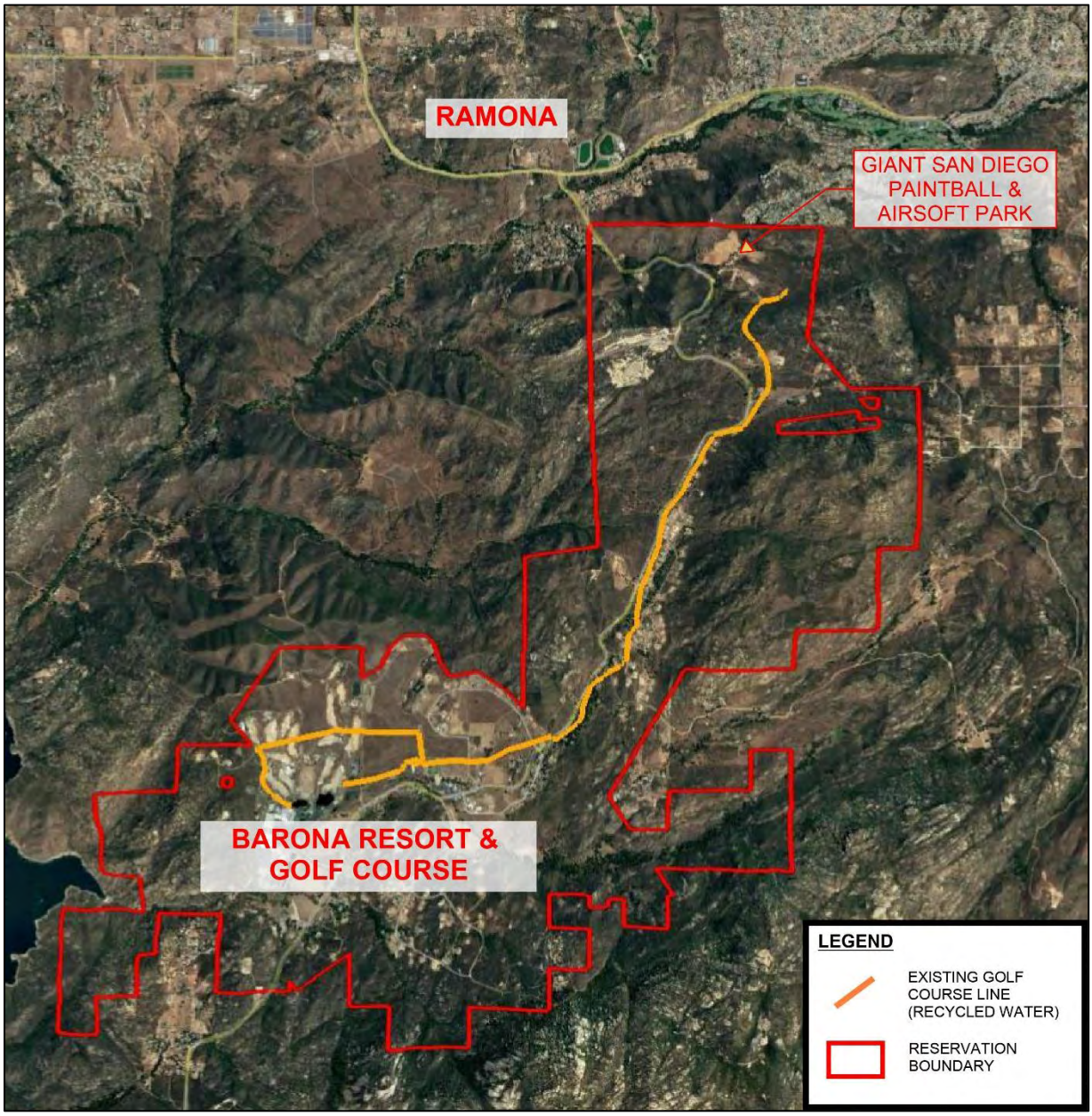
The following section describes the Tribe's existing potable and recycled water systems and demands, as well as future demands based on projected growth. In addition, the following section summarizes the development of a hydraulic model of the Tribe's potable water system and the model analysis results used to determine the appropriate sizing of proposed facilities.

2.1 Existing Tribal Systems

2.1.1 Recycled Water

The Tribe operates a 6-inch recycled water pipeline to irrigate Barona Creek Golf Club, the eighteen-hole golf course surrounding Barona Resort and Casino (Resort). The pipeline, commonly referred to as the "Golf Course Line", originates southeast of the Giant San Diego Paintball Park at Well 29 and continues along Ketuull Uunyaa Way before terminating at the irrigation ponds serving the golf course. The following **Figure 1** depicts the existing alignment of the Golf Course Line.

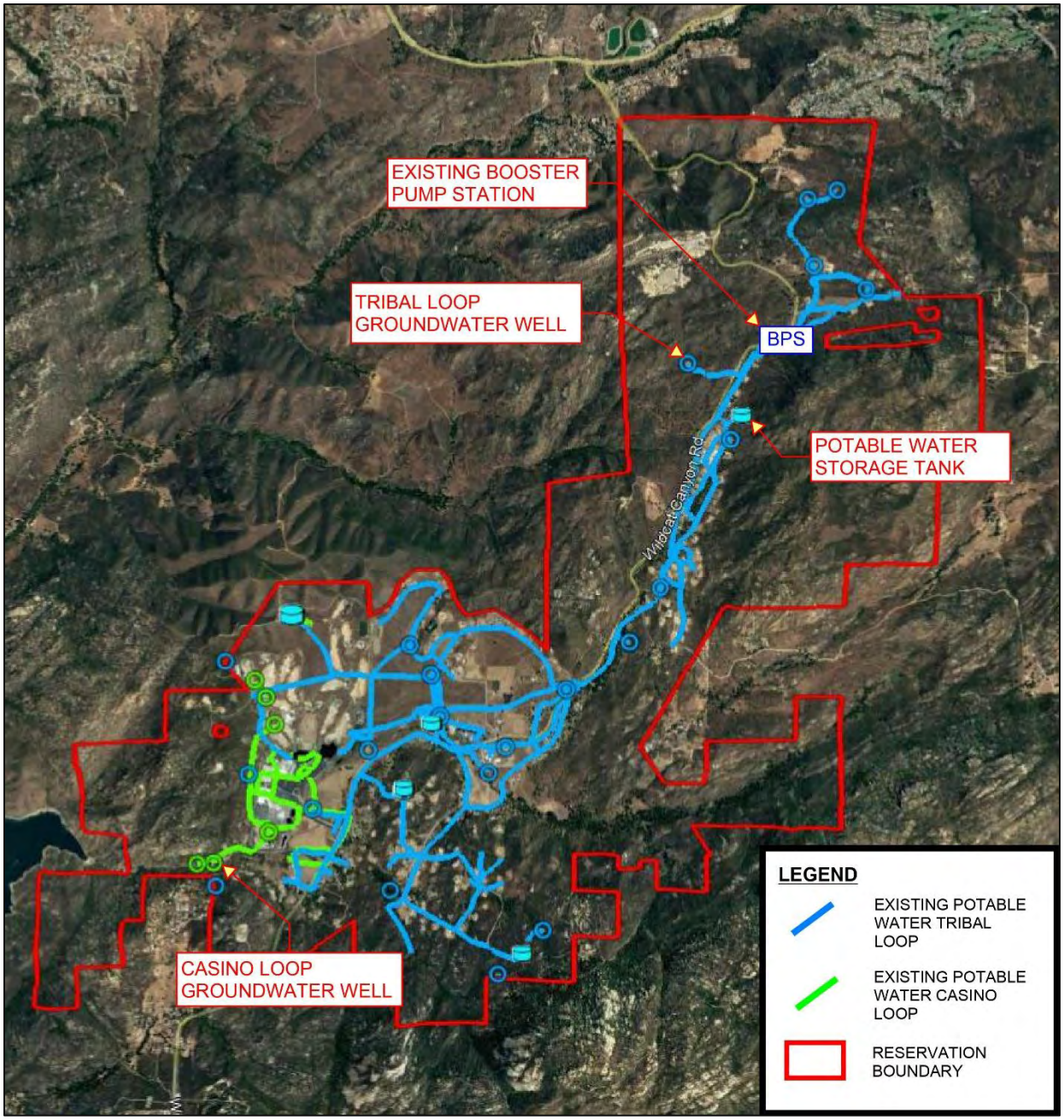
Figure 1: Existing Barona Golf Course Line (Recycled Water) Alignment



2.1.2 Potable Water

The Tribe operates a system of groundwater wells, tanks, booster pump stations, and pipelines to transport potable water throughout the Reservation. There are 28 wells that treat the groundwater and pump into the distribution system to supply the Reservation. There is also a water treatment plant at the Casino that treats groundwater and delivers it to the Casino and resort. The system includes a northern pressure zone and the southern pressure zone that serves the main portion of the Reservation. The following **Figure 2** illustrates the Tribe's existing potable water system.

Figure 2: Existing Barona Potable Water System (Tribal and Casino Loops)



2.2 Existing and Projected Tribal Demands

2.2.1 Recycled Water

San Vicente Wastewater Reclamation Plant (SVWWRP), located near the Tribe's northern Reservation boundary, currently produces 450 afy of recycled water. Approximately 300 afy is being delivered to the San Diego Country Estates Golf Course. The remaining 150 afy of recycled can presently be supplied to the Tribe. Conservation efforts by other RMWD customers may result in an additional 50 to 100 afy of recycled water being made available to the Tribe for additional irrigation needs. Ultimately, the Tribe is expected to receive a recycled water supply of 200 afy from RMWD.

The proposed recycled water pipeline connecting the Tribe's existing recycled water system to RMWD must be sized to accommodate the projected ultimate demand of 200 afy while maintaining velocities of less than 7 feet per second. An 8-inch pipeline can convey the expected demand at approximately 0.8 fps, with ample additional capacity should the Tribe obtain increased recycled water resources in the future.

2.2.2 Potable Water

The Tribe provided Dudek with available potable water data for the Reservation and Casino during the 2021 calendar year. Demand data was unavailable as the Tribe does not maintain individual water meters for each customer. In the absence of individual customer usage data, the daily supply data was used to calculate demand. Realistically, daily supply flows are greater than demands since supply flows do not include system water loss.

The average daily demand (ADD) and maximum daily demand (MDD) of the Reservation and Casino were calculated based on supply data. The MDD is the highest one-day demand over the entire year. Typically, water demands peak in the summer and reach a minimum during winter. A peaking factor, defined as the ratio of MDD to ADD, was also determined for both the Reservation and Casino. **Table 1** summarizes the ADD, MDD, and peaking factors for the Reservation and Casino.

Table 1. Existing Potable Water Demands (Average Daily, Maximum Daily, and Peaking Factors)

	ADD (afy)	MDD (afy)	Peaking Factor
Reservation	263.1	492.3	1.87
Casino	91.3	149.5	1.64
Total	354.4	641.8	N/A

The Tribe expects average annual potable water demand to increase by 25% because of projected residential development. Meanwhile, the Tribe's ultimate potable water demand is estimated at approximately 1500 afy when the Reservation is fully developed. **Table 2** summarizes the projected ADD and MDD of the Reservation and Casino for both near-term (25% increase) and ultimate (1500 afy) growth scenarios.

Table 2. Projected ADD and MDD – Near-Term (25% Increase) and Ultimate (1500 afy)

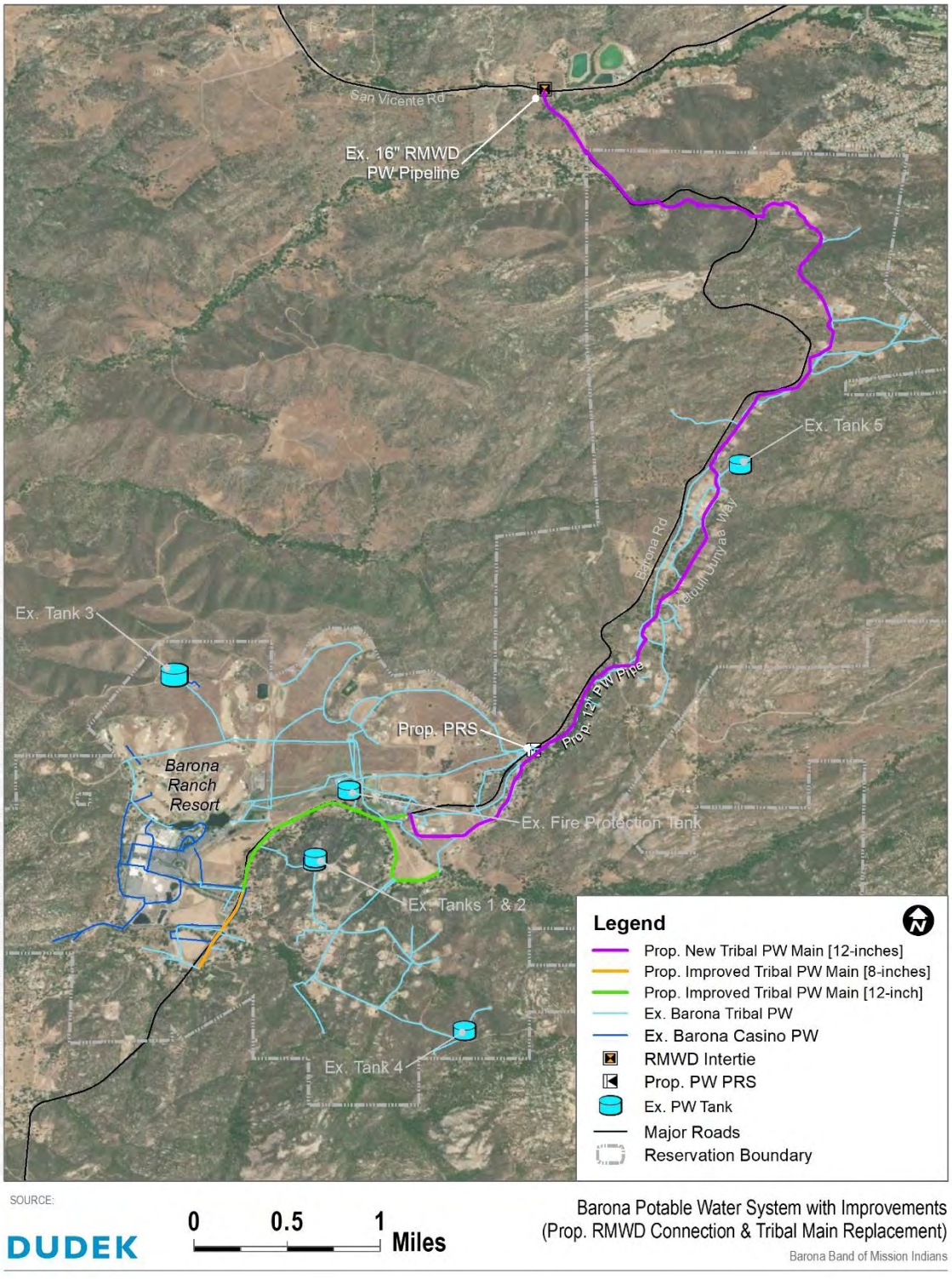
	Near-Term (25% Increase)		Ultimate (1500 afy)	
	ADD (afy)	MDD (afy)	ADD (afy)	MDD (afy)
Reservation	328.2	614.1	1113	2003
Casino	113.8	186.6	387	697
Total	442.1	800.7	1500	2700

2.3 Hydraulic Model Development

Dudek developed a hydraulic model of the Tribe's existing potable water system using InfoWater™. GIS data of the Tribe's existing system served as the basis for the model. Existing tank levels and booster pump station settings provided by the Tribe were incorporated to calibrate the model to existing operating conditions. In addition, model junctions were assigned elevations using a digital elevation model (DEM) of the Reservation and surrounding areas.

Since individual customer billing data was unavailable, the Reservation and Casino demands described in Section 2.2.2 were allocated evenly across the model junctions. Two demand scenarios, near-term MDD and ultimate MDD, were analyzed to determine the optimal sizing of the proposed potable water pipeline. The proposed point of connection with RMWD was modeled as a source reservoir at the intersection of San Vicente Rd and Barona Rd, north of the Tribe's northern Reservation boundary. The following **Figure 3** depicts the Tribe's existing system with the addition of the 12-inch potable water pipeline connection to RMWD.

Figure 3: Existing Potable Water System with 12-inch Pipeline Connection to RMWD



3 Preliminary Design

The following section provides preliminary design criteria for the recycled and potable water infrastructure required to connect the Tribe's systems to RMWD. The proposed points of connection to RMWD and the Tribe's systems, off- and on-Reservation alignments, and additional design criteria including pipe material selection and soil classification will be described in detail within the following section.

3.1 Pipeline Size

The model was used to size the pipelines for the recycled water and potable water. 8-inch (recycled) and 12-inch (potable) pipelines were independently modeled from the RMWD point of connection to the proposed point of connection with the Tribe's southern Reservation loop. The following **Table 3** presents the maximum velocities and flows predicted by the hydraulic model within the 8-inch and 12-inch pipelines under both near-term and ultimate MDD scenarios.

Table 3. Hydraulic Model Results for 8-inch and 12-inch Proposed Potable Water Pipeline

	8-inch Proposed Pipeline		12-inch Proposed Pipeline	
	Near-Term MDD	Ultimate MDD	Near-Term MDD	Ultimate MDD
Maximum Velocity (ft/sec)	4.41	4.71	1.96	2.22
Maximum Flow (gpm)	691.4	781.4	691.4	781.4

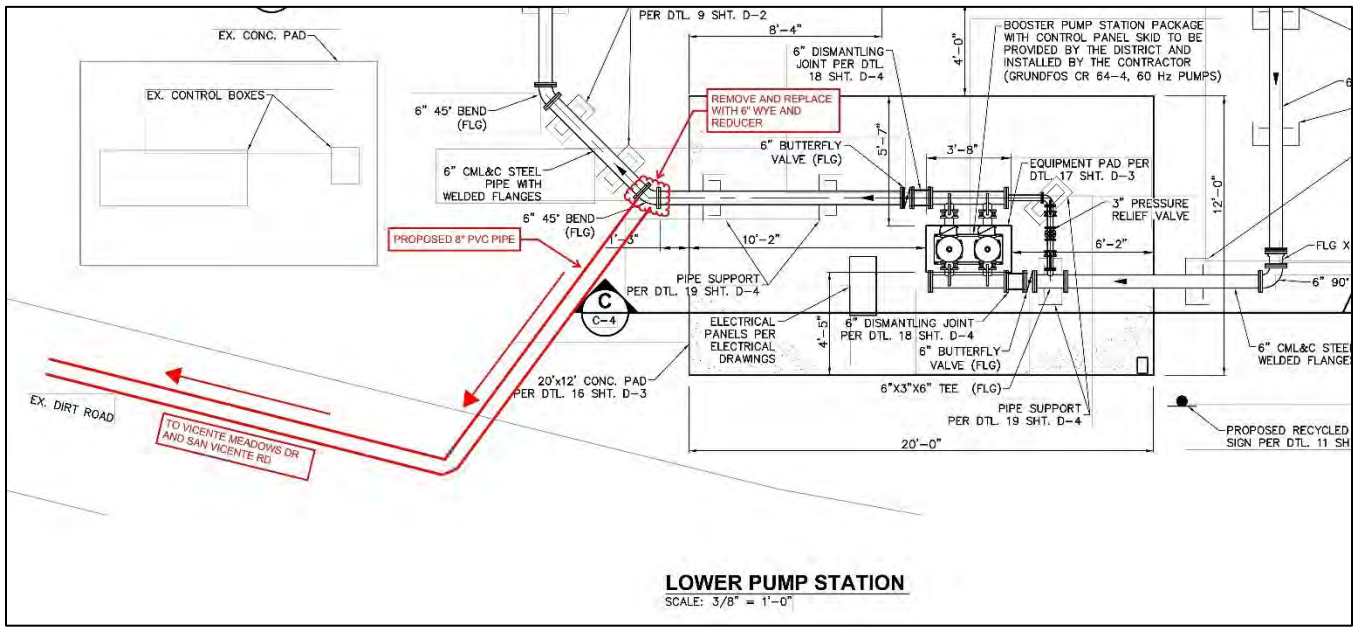
For potable water facilities under MDD conditions, the typical maximum pipeline velocity design criterion is 5 feet per second. Therefore, the proposed potable water pipeline connecting the Tribe's existing system with RMWD should be at least 12-inch to accommodate future increased demands.

3.2 Connection to Existing RMWD Systems

3.2.1 Recycled Water

The proposed 8-inch recycled water line will commence at the San Vicente Wastewater Reclamation Plant (SVWWRP), located at the intersection of San Vicente Rd and Barona Rd. The plant converts sewage flows from neighboring residences to recycled water and currently serves the San Vicente Golf Course and nearby avocado groves. The plant operates two pump stations, known as the Upper Pump Station and the Lower Pump Station. The proposed recycled water line will connect to the Lower Pump Station as shown on the following plan view as-built drawing in **Figure 4**. The 6-inch 45-degree elbow called out in Figure 4 will be removed and replaced with a 6-inch wye-fitting and reducer, to which the proposed 8-inch pipeline will connect.

Figure 4: Proposed Recycled Water Connection Point at Existing Lower Pump Station (Source: Dudek)



The 8-inch pipeline will continue southwest from the Lower Pump Station along an existing dirt road before turning south into Vicente Meadows Dr and running west along San Vicente Rd as shown in **Figure 5**. Approximately 1000 linear feet of 8-inch pipeline will be installed from the Lower Pump Station to the intersection of San Vicente Rd and Barona Rd.

Figure 5: Proposed Recycled Water Alignment (Lower Pump Station to Intersection of San Vicente & Barona)

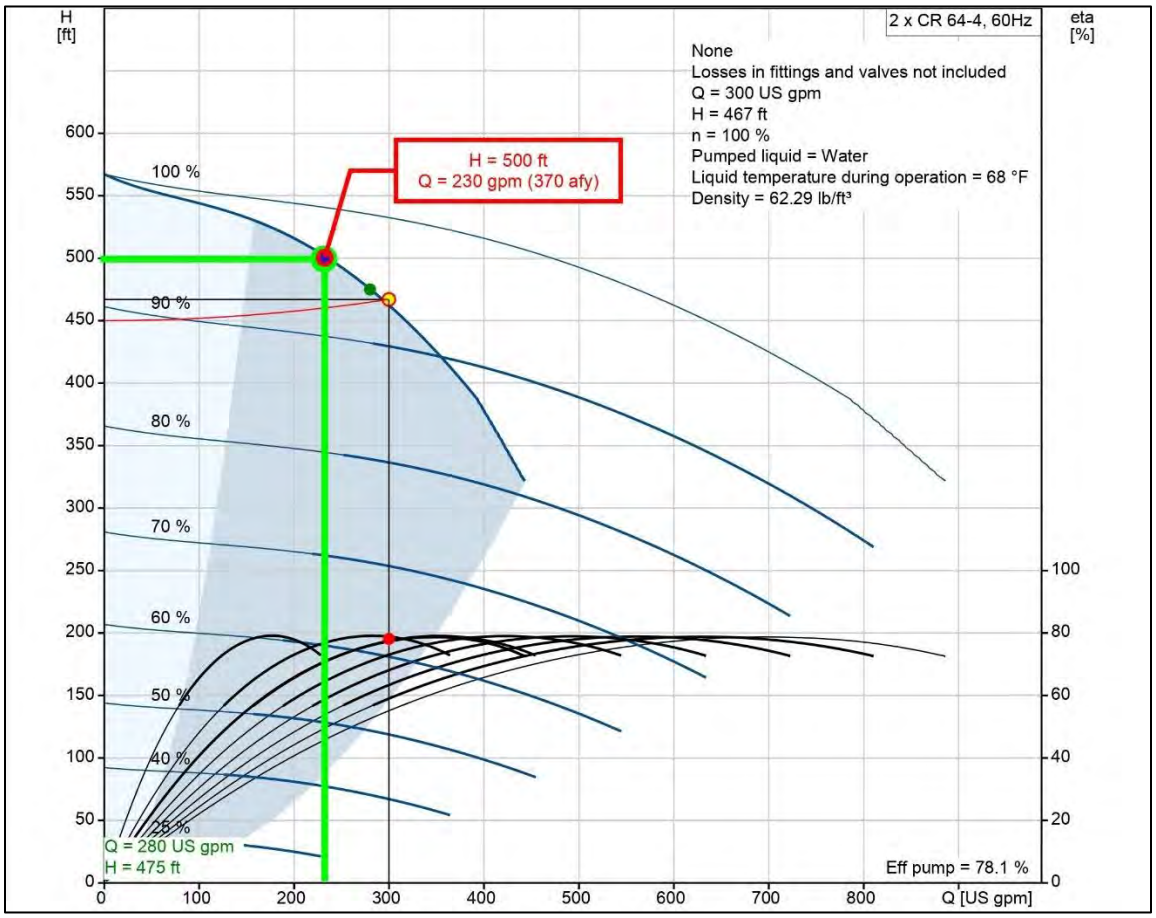


3.2.1.1 Pumping Requirements

The high elevation point of the proposed recycled water alignment occurs on-Reservation at 1762 ft along the existing 6-inch Golf Course Line. As the ground elevation of the Lower Pump Station is 1263 ft, the existing Lower Pump Station pump must be capable of overcoming approximately 500 ft of total dynamic head (TDH).

The Lower Pump Station features two Grundfos CR 64-4 60 Hz pumps, both operating on variable frequency drives (VFDs). The design point of the pump is 300 gpm at 467 feet of head. At 500 feet of head, the pump is expected to be able to deliver approximately 230 gpm. The Tribe anticipates an ultimate recycled water demand of only 200 afy (approximately 124 gpm) from RMWD. As shown on the existing Lower Pump Station pump curve in the following **Figure 6**, the existing pump will be able to meet the required 500 ft of TDH and deliver recycled water over the proposed alignment's high elevation point and provide approximately twice the expected demand.

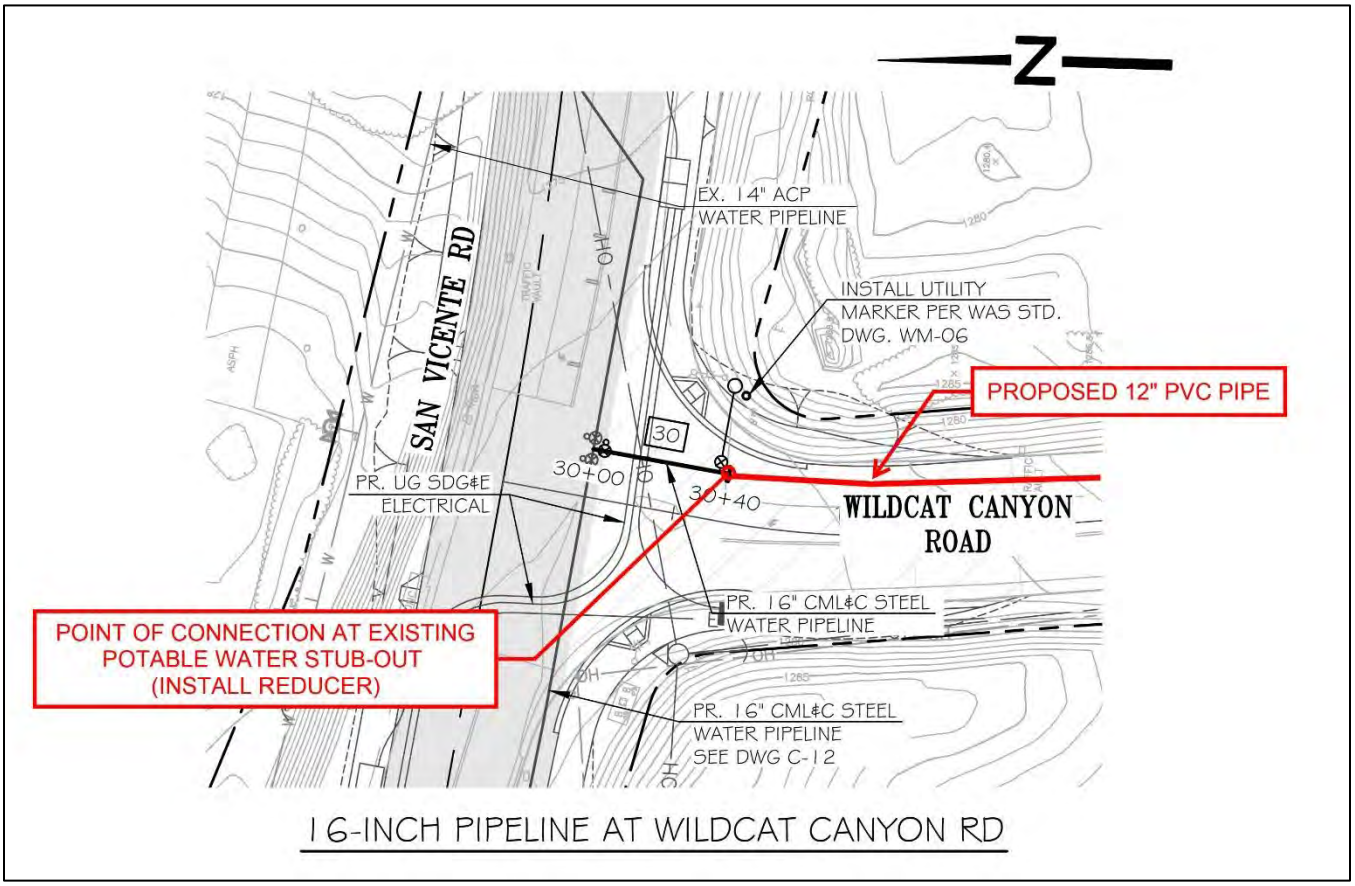
Figure 6: Existing Lower Pump Station Pump Curve with Proposed Recycled Water Demand (Source: Dudek/Grundfos)



3.2.2 Potable Water

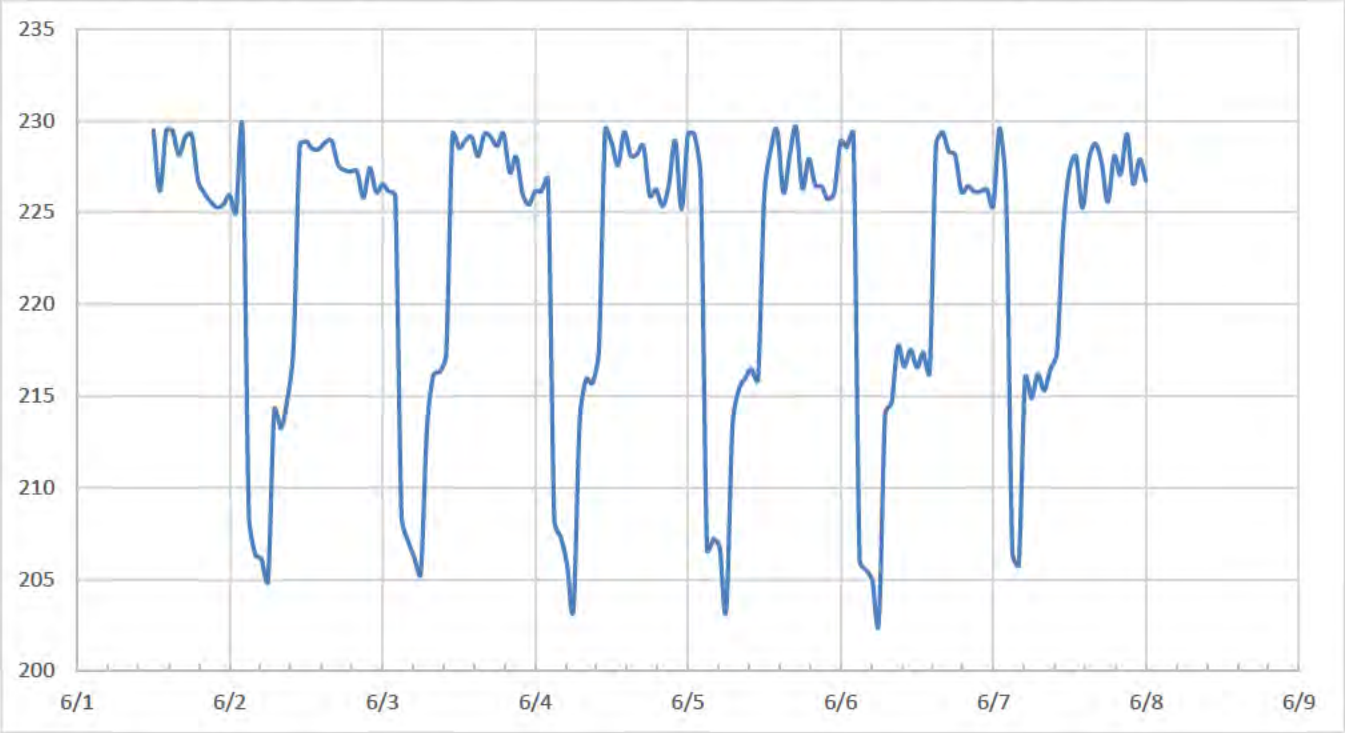
The proposed 12-inch potable water line will commence at the existing RMWD 16-inch CML&C steel water pipeline in San Vicente Rd. As-built drawings from the San Vicente Rd pipeline relocation project completed in 2016 depict a 16-inch CML&C steel stub-out at the intersection of San Vicente Rd and Barona Rd (also known as Wildcat Canyon Rd). As shown on the plan view as-built drawing in **Figure 7** below, the proposed 12-inch line will connect to the 16-inch stub-out via a reducer before continuing south along Barona Rd (Wildcat Canyon Rd).

Figure 7: Proposed Potable Water Connection Point at 16-inch RMWD Potable Water Pipeline (Source: NV5)



RMWD installed a pressure logger on the fire hydrant approximately 1300 feet east of the proposed connection. The data was logged every hour from June 1, 2021, until April 20, 2022. The system pressure followed a consistent pattern. The pressure was consistently between 225 psi and 230 psi from 11am until 2am. The pressure started dropping at approximately 2am each day until it reached approximately 205 psi at 6am. The pressure would range between 205 psi and 225 psi until 11am. The following **Figure 8** shows a typical pressure pattern over a week.

Figure 8: Typical Weekly Pressure Pattern Near Proposed RMWD Potable Water Point of Connection



Based on the pressure pattern, the hourly pressure data was summarized into bins of 10 psi to understand the amount of time the system is at a lower pressure. **Table 4** below shows that the system pressure was above 225 psi for 70% of the data points and was below 205 psi less than 1%of the time.

Table 4. RWMD System Pressures

Pressure Range (psi)	Number of Data Points	Percentage
< 205	53	0.7%
205-215	884	11.4%
215-225	1399	18.1%
> 225	5411	69.8%

The ground elevation at the point of connection is 1280 ft. A system pressure of 227 psi is a hydraulic grade line of 1802 ft. At a low of 202 psi, it would be a HGL of 1745 ft. The high elevation point of the proposed potable water alignment occurs on-Reservation at 1762 ft. Additionally, the pipeline also must provide pressure to fill Tank #5, which has a high-water line of 1794 feet. Neglecting head losses, the RMWD system pressure of 227 psi (1802 HGL) is capable of conveying water over the high elevation point of 1762 ft with a static pressure of approximately 17 psi. There would also be sufficient pressure to fill Tank #5 at 1794 ft. However the RMWD pressure of 202 psi (1745 HGL) would not have sufficient pressure to overcome the high point in the pipeline or supply Tank #5.

RMWD would be capable of serving the Reservation solely from system pressure approximately 70% of the time, generally from 11am-2am. Additional head would be required to serve the Reservation the remaining 30% of the time, generally from 2am-11am. We recommend constructing a small booster station at the north Reservation boundary as shown in **Figure 9** to provide the head necessary to always maintain an HGL of 1800 feet. The booster pump will need to be capable of providing up to 55 feet of head when RWMD system pressure drops to 205 psi. The most common system pressure is 214-217 psi, (14% of data points), which would require additional 25 feet of additional head. As discussed in Section 3.1, the MDD is anticipated to be 837 gpm. This equates to a design point of 25 feet of head at 835 gpm, with the capability to provide up to 55 feet of head. It is recommended to have a pump station that can deliver the maximum pressure required with an additional pump available on standby for redundancy.

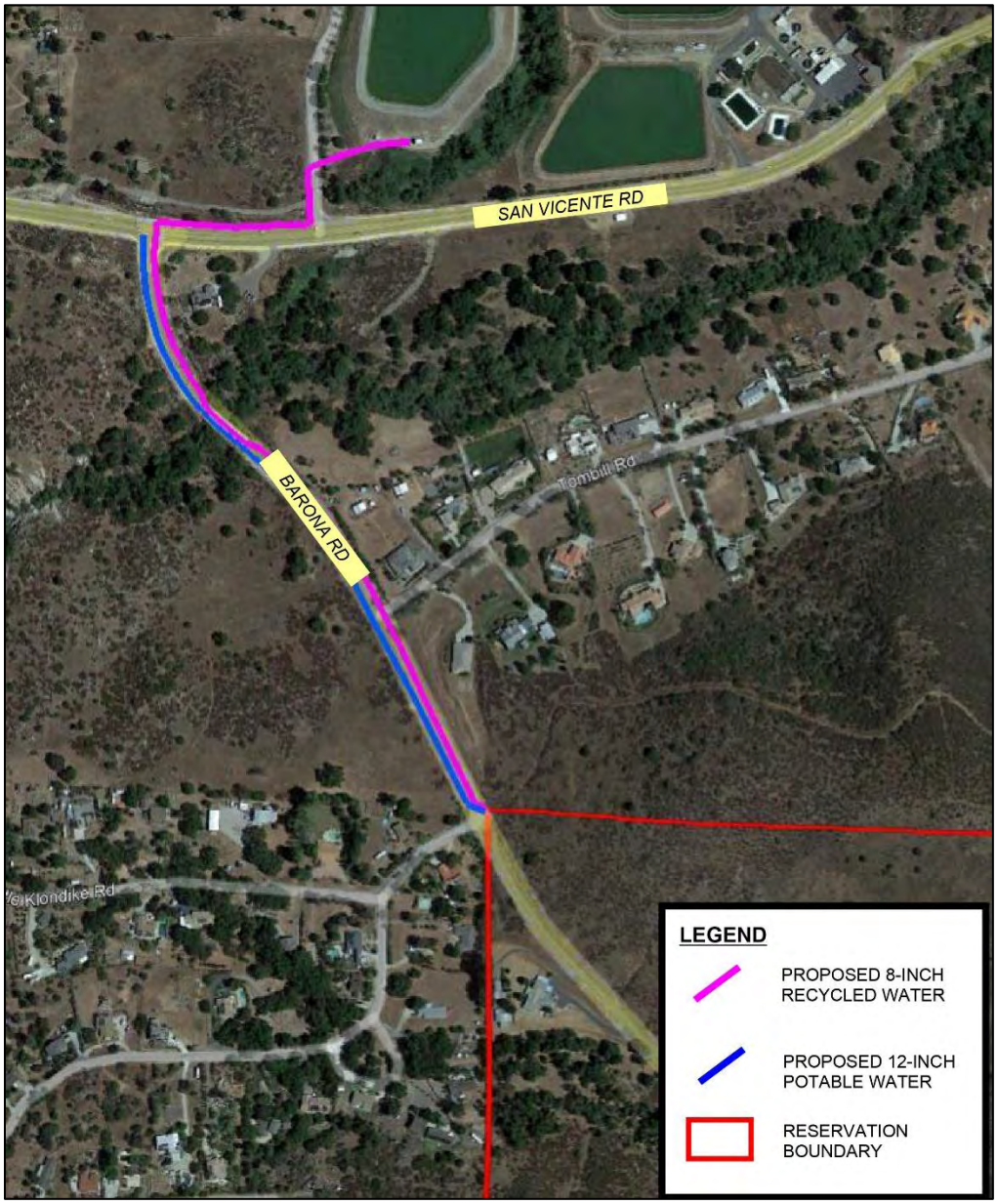
Figure 9: Proposed Booster Pump Station at Northern Reservation Boundary



3.3 Off-Reservation Alignment

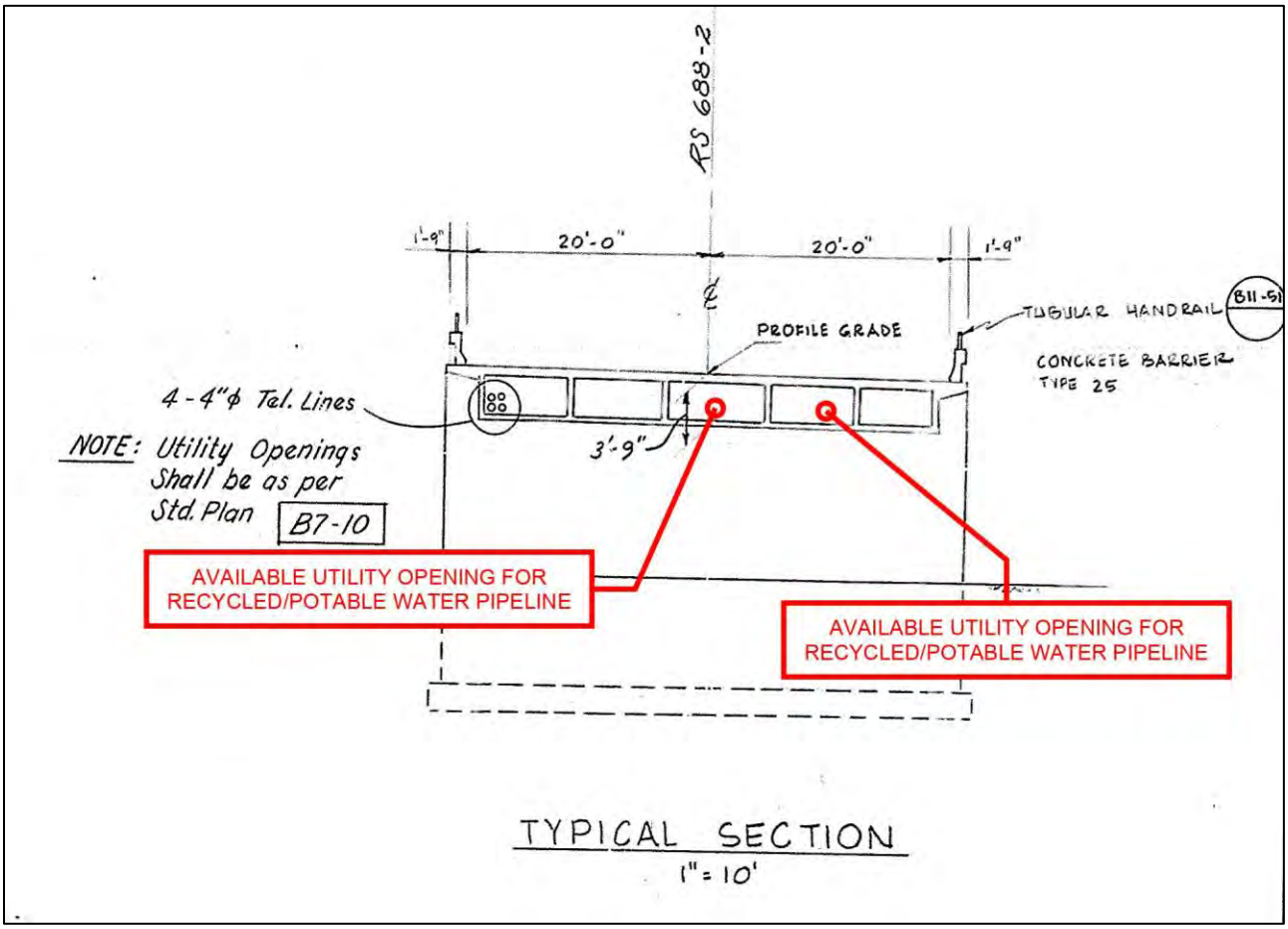
The proposed recycled and potable water pipelines will share an alignment off-Reservation and within Barona Rd. A horizontal separation of 10 feet must be maintained between the recycled and potable water pipelines throughout the alignment, both off- and on-Reservation. **Figure 10** depicts the limits of the off-Reservation alignment as defined by the Tribe's Reservation borders. Off-Reservation, Barona Rd is maintained by the San Diego County Department of Public Works (DPW) and thus subject to the County's design standards and permitting requirements. It will be necessary to obtain an Encroachment permit from the County. Approximately 3000 LF of recycled water pipeline and 2100 LF of potable water pipeline will be constructed off-Reservation in Barona Rd.

Figure 10: Proposed Off-Reservation Recycled and Potable Water Shared Alignment



The shared recycled and potable water alignment must traverse the length of an existing bridge within Barona Rd. The bridge, referred to as Wildcat Canyon Rd Bridge by DPW, was constructed in 1984. Design drawings of the bridge obtained from DPW depict five (5) utility openings, each with a vertical clearance of approximately 2'-5/8" and width of 6'-10". **Figure 11** is a typical bridge section from the design drawings showing four (4) 4-inch telephone lines, all contained within one of the five openings. The recycled and potable water pipelines can each be installed in one of the four remaining openings while maintaining the required horizontal separation of 10 feet. Prior to finalizing the water alignment, the design engineer should verify with DPW if any additional utilities beyond the four telephone lines have since been installed within the bridge openings. The bridge crossing design and permitting will be a part of the Encroachment Permit review process with the County DPW.

Figure 11: Wildcat Canyon Rd Bridge Typical Section, with Utility Openings (Source: San Diego County DPW)



3.4 On-Reservation Alignment

After crossing the Reservation boundary, the proposed recycled and potable water pipelines will move off the road outside of the County right-of-way and onto Reservation land. The pipes continue to share an alignment until the recycled water line connects to the existing Golf Course Line approximately 1200 feet southeast of the Giant San Diego Paintball Park. Initially the pipeline can run parallel to the road, but after approximately 1,000 feet the terrain adjacent to the road becomes very steep. The road is very narrow in this area and cut into the hillside. It would be very difficult to construct the pipeline without shutting down the road. Since this is the only road accessing the Reservation from the north side, this would be a major disruption to traffic on the Reservation. This would also put the pipeline back in the County easement and would cumulatively be over one mile, which would trigger a CEQA Initial Study. Lastly, it is very likely that the County will require that the street be repaved as a part of the project. The costs and impacts of this option are significant. To avoid these challenges, two alternate alignment options were evaluated and are presented in Sections 3.3.1 and 3.3.2 below.

3.4.1 Option 1

The first proposed on-Reservation shared alignment ("Option 1") is depicted in **Figure 12**. For the initial approximately 1000 LF of pipeline southeast of the Reservation boundary, the terrain north of Barona Rd is moderately sloped and can be traversed with typical construction equipment. However, as the alignment continues east and away from Barona Rd, the terrain becomes considerably steeper and significantly more difficult to navigate. The soil is rocky and overgrown with thick vegetation, and the alignment would be forced to cross several natural hillside depressions. **Figure 13**, an image taken in early spring 2022, provides a general impression of the vegetative growth and terrain for a sizable portion of the alignment.

Figure 12: Option 1 On-Reservation Shared Alignment, with Horizontal Directional Drilling Extents



Figure 13: Thick Vegetation Growth and Sloping Terrain of Option 1 On Reservation Shared Alignment





The overall length of Option 1 is approximately 7000 LF from the most northwestern edge of the Reservation boundary to the proposed recycled water pipeline connection point with the existing Golf Course Line. Construction of Option 1 will require either horizontal directional drilling (HDD) or construction of significant segments of the alignment on piers. The estimated extents of HDD or pier construction are highlighted in yellow on Figure 10 and total approximately 1800 LF. Both HDD and pier construction are expensive and carry a significant risk of unforeseen additional costs and schedule delays during design and construction.

3.4.2 Option 2

Given the difficulties described in Section 3.3.1 of Option 1, a second alignment south of Barona Rd was developed ("Option 2") for the Tribe's consideration. Option 2 will require crossing a dry streambed and Barona Rd at two (2) locations, respectively. Each of the three (3) crossings will require jack and bore, a trenchless construction method in which a jack and bore machine drills a hole underground horizontally from a sending pit to a receiving pit without impacting the above ground surface. As the machine drills, it also functions as a jackhammer to push the new potable water pipeline into place. Option 2, including the three jack and bore locations, is depicted in **Figure 14** below.

Figure 14: Option 2 On-Reservation Shared Alignment, with Jack and Bore Construction Extents



Jack and bore will not disturb the surface of the environmentally sensitive dry streambed and thus avoid a costly and time-consuming permitting process with the U.S. Army Corps of Engineers (USACE). An USACE permit is required for any construction that will introduce pollutants, even native soil, to a waterway of the United States such as the streambed. Meanwhile, jack and bore at the two (2) Barona Rd crossings will prevent traffic closures and repaving costs associated with trenching and construction in-street.

The overall length of Option 2 is approximately 7700 LF from the most northwestern edge of the Reservation boundary to the proposed recycled water pipeline connection point with the existing Golf Course Line. Approximately 400 LF of the total length will require jack and bore construction.

The ground terrain throughout Option 2 is relatively easy to traverse and contains noticeably less rocks than Option 1. Since Option 2 will adhere more closely to Barona Rd than Option 1, the shared alignment must lie at least 15 ft from the paved asphalt road to stay outside the easement. Most existing plant growth along Option 2 is small shrubs that can be removed prior to construction. Southeast of the streambed crossing lies a cluster of trees just north of Barona Rd that may impede construction if not removed, as shown in **Figure 15**. There continues to be dense growth beyond the cluster of trees. However, it appears that the large trees are close to the road and can be avoided if the pipeline moves further away from the road. The portion of the alignment from the streambed to the street crossing is the most difficult portion of this alignment due to the vegetation growth.

Once past the large vegetation, the pipeline will cross Barona Road and traverse the hillside on the south side of the road. Although the hillside south of Barona Rd slopes upward, the area is clear of major vegetation and can be accessed by construction equipment, as shown in **Figure 16**. The pipeline will then cross Barona Road a second time at the entrance to the Paintball Park. It will cross the parking lot and then turn south to intersect the recycled water line. The potable water line will then parallel the golf course line.

Figure 15: Tree Growth Southeast of Streambed Crossing



Figure 16: Hillside South of Barona Rd, Prior to Third Jack and Bore Location



3.4.3 Recommendations

It is recommended for the Tribe to proceed with Option 2 for the shared on-Reservation alignment, as it is significantly more constructible and has a lower expected cost than Option 1. **Table 5** presents a summary of the cost comparison between Option 1 and Option 2.

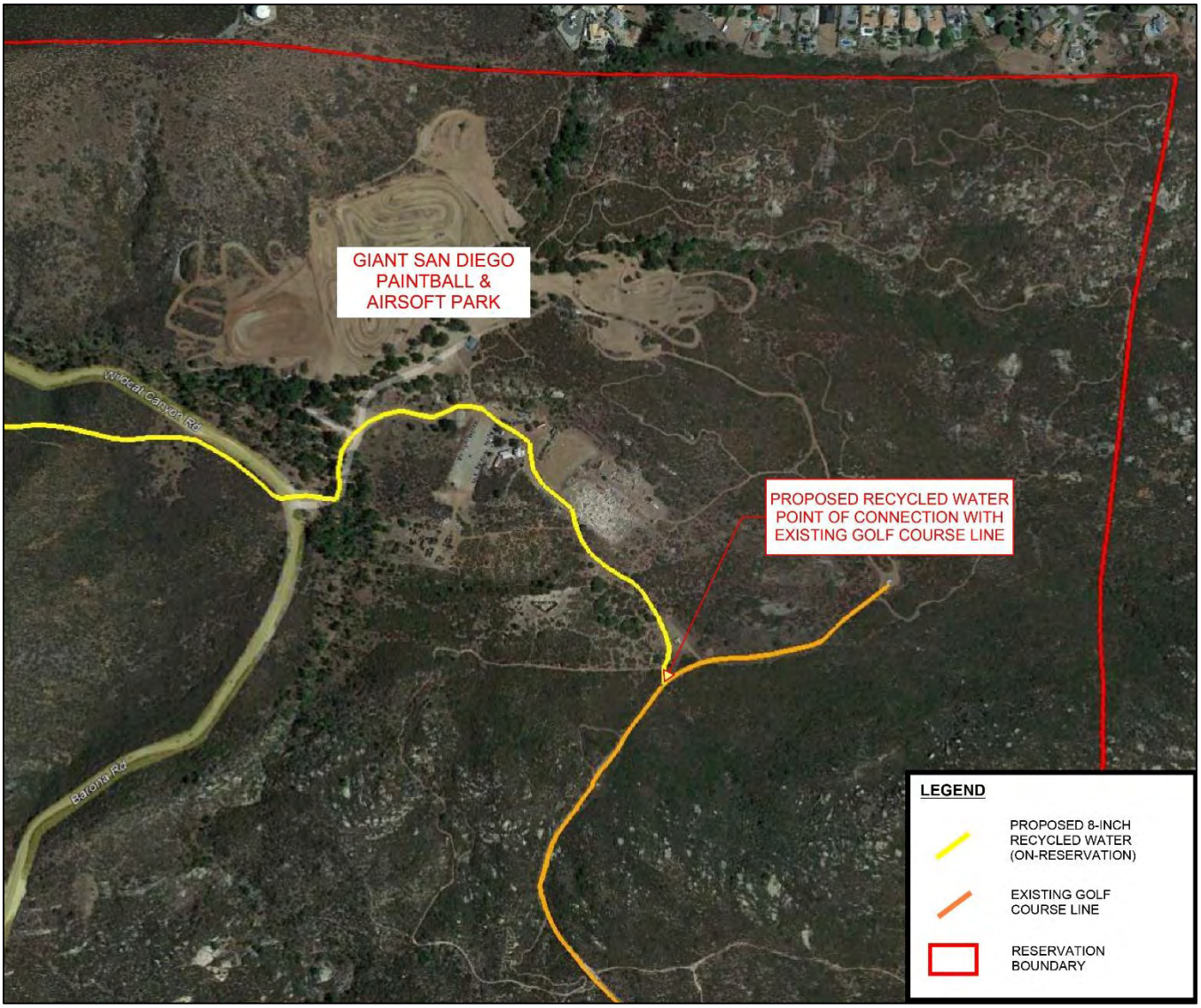
Table 5. Cost Comparison Between Options 1 and 2

On-Reservation Alignment	Option 1 HDD	Option 2 Jack and Bore
Before Recycled Water Connection Point with Existing Golf Course Line	$8,546,000	$4,752,000
After Recycled Water Connection Point with Existing Golf Course Line	$9,476,000	
Total	$18,022,000	$14,228,000

3.4.4 Recycled Water Connection

The proposed 8-inch recycled water line will connect to the Tribe's existing Golf Course Line via hot tap approximately 1200 feet southeast of the Giant San Diego Paintball Park, as shown in **Figure 17** below. Establishing a point of connection near the origin of the Golf Course Line will allow the Tribe to maximize use of its existing recycled water infrastructure. The recycled water supplied by RMWD will be transported via the Golf Course Line before reaching its destination, the golf course irrigation ponds.

Figure 17: Proposed 8-inch Recycled Water Line Point of Connection with Existing Golf Course Line



3.4.5 Potable Water

After the proposed recycled water pipeline joins with the Tribe's existing system, it will be necessary to continue the new 12-inch potable water pipeline to transmit the water to the lower Reservation loop. There is insufficient capacity in the existing upper zone piping to transmit the expected demand to the lower zones, particularly the Casino and Resort. The proposed potable water pipeline will continue south along Ketuull Uunyaa Way for approximately 20,000 LF (3.7 miles) before connecting to the existing southern Reservation loop.

Initially, the potable water line will parallel the existing Golf Course Line. This will include cresting the mountain south of the Paintball Course, which is the high spot of the pipeline at 1762 feet. It will continue paralleling the GCL until it reaches the access road for Tank #5. At that point, the potable pipeline will diverge from the GCL onto Ketuull Uunyaa Way. As shown in **Figure 18**, a pipeline will branch off the main pipeline and connect to the Tank #5 as the first connection point to the Reservation distribution system. The upper pressure zones will be served from this tank.

Figure 18: Tank 5 Connection with Proposed Potable Water Line



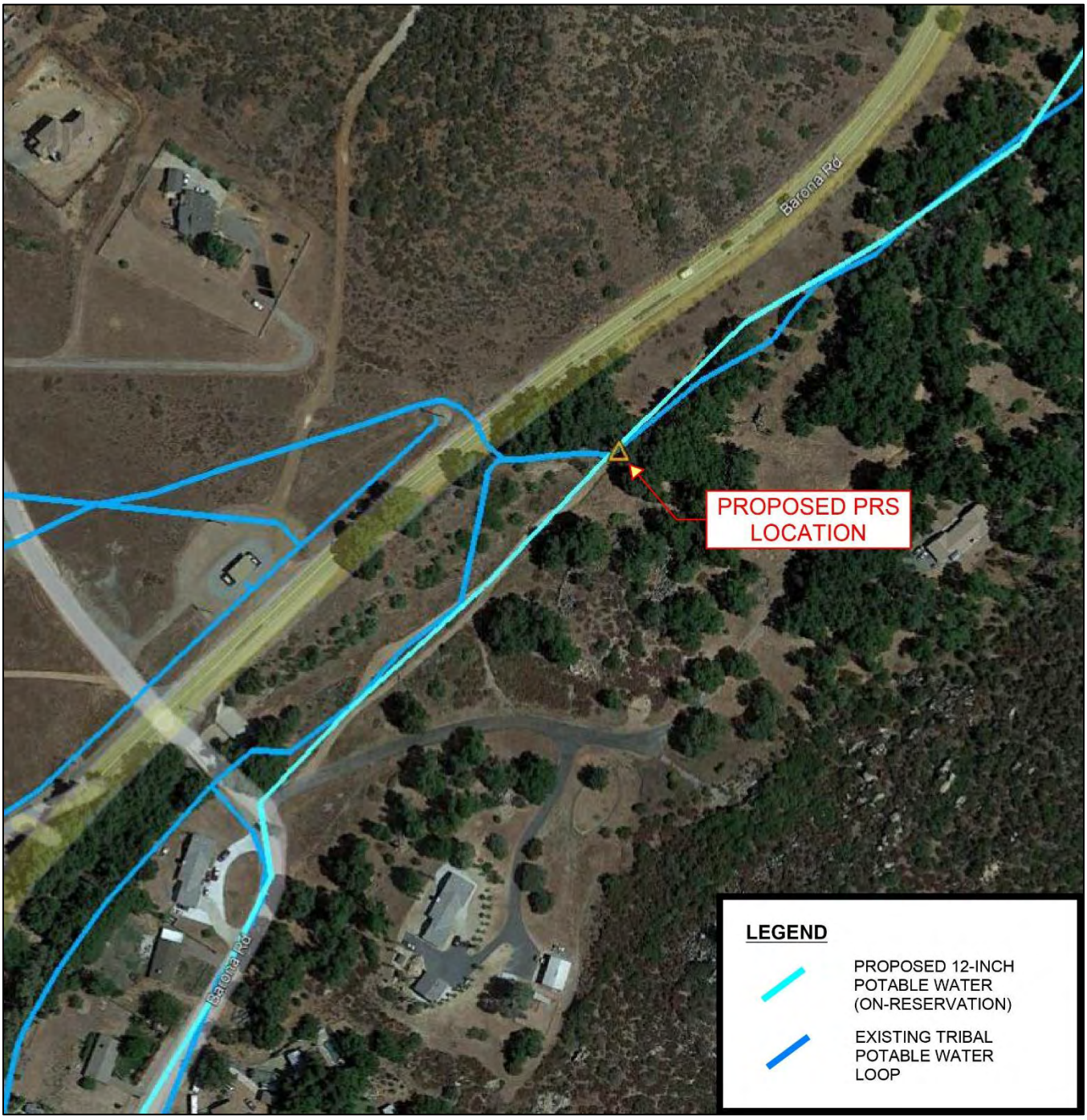
The pipeline will continue in Ketuull Uunyaa Way for approximately 4,400 feet until it continues straight on a residential road. Near the dead-end of the road, it'll turn west and parallel the Golf Course Line cross country to Featherstone Canyon Road. It briefly runs in Featherstone Canyon Road until it connects to a frontage road parallel to Wildcat Canyon Road. It will continue approximately 3,000 feet until it intersects Barona Road as shown in **Figure 19** below, which is the north end of the lower pressure zone.

Figure 19: Proposed Potable Water Line Alignment North of Reservation Lower Pressure Zone



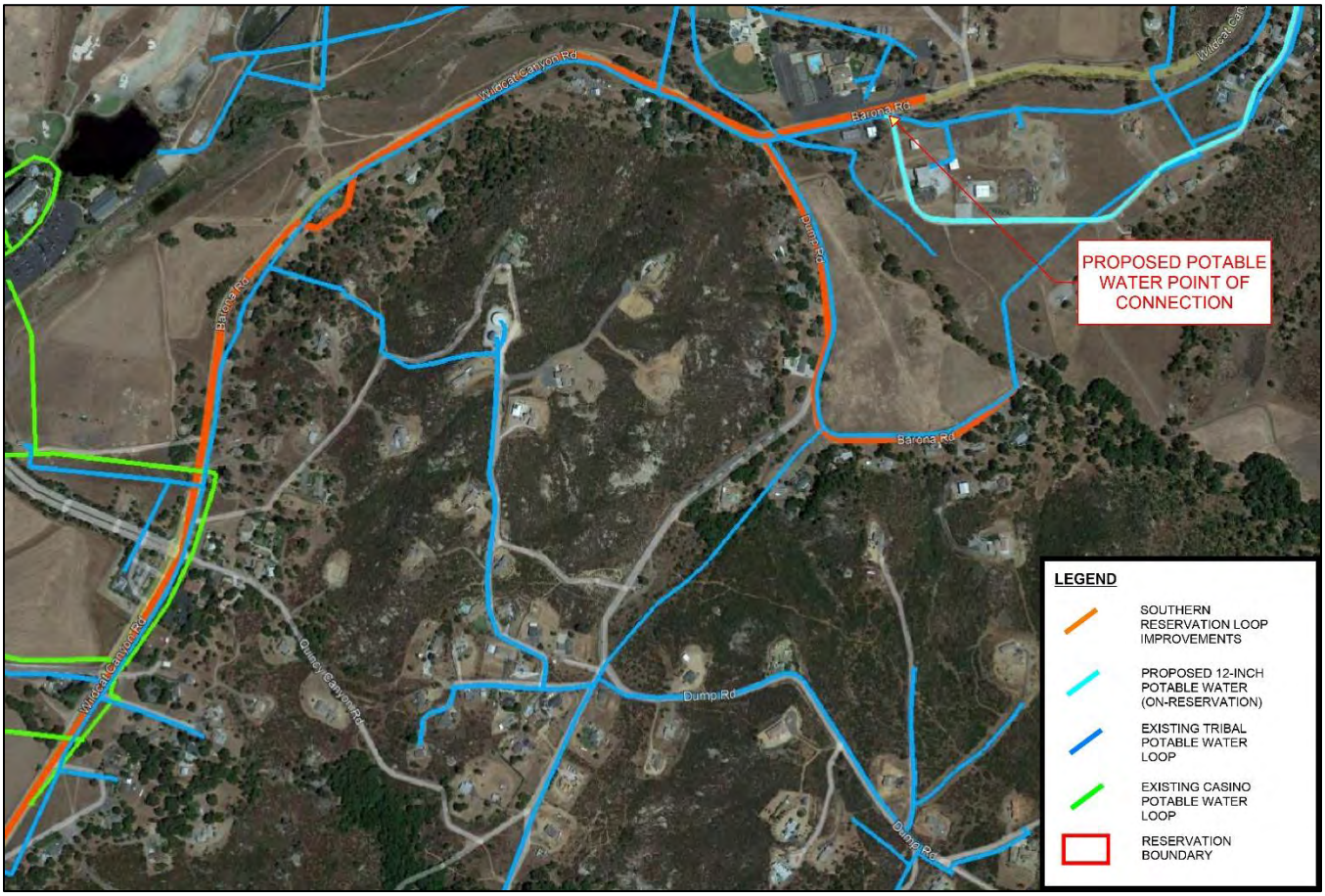
A new pressure reducing station (PRS) is recommended at the approximate location shown on **Figure 20** below, based on a convergence point of the existing potable water system's pressure zones. The PRS will allow the Tribe to deliver water to multiple zones of the distribution system at a single location.

Figure 20: Proposed PRS Location North of Reservation Lower Pressure Zone



Once the proposed 12-inch potable water pipeline connects to the PRS, the existing smaller pipelines can distribute water throughout the area. However, the capacity of the existing pipelines is insufficient to handle the increased water demand, particularly during fire flow scenarios. It will be necessary to continue the proposed 12-inch pipeline south of Barona Rd for approximately 5000 LF before connecting to the existing pipeline 700 feet east of the intersection of Barona Rd and Dump Rd as shown in **Figure 21** below. Figure 20 also depicts a separate improvement project involving replacement of the Tribe's southern potable water transmission main is slated to begin construction in late 2022. It is assumed the southern water main replacement project will be completed prior to the construction of new infrastructure conveying water from RMWD to the Tribe. Once both projects are completed there will be a continuous 12-inch pipeline from Ramona to the entrance of the Casino.

Figure 21: Proposed 12-inch Potable Water Alignment Connection with Existing Tribal System



3.4.5.1 Potential New Tank

In addition to the zone served by Tank #5, there is an additional small closed zone north of the tank that is served by a small booster pump as shown in **Figure 22**. At this time this configuration will remain the same. However as the northern area of the Reservation is developed, it may be necessary to add a tank to serve this upper pressure zone.

The likely location of the tank would be east of the high point of the water line on the mountain. The elevations of the highest homes in the area appear to be around 1800 feet. In order to serve these homes, the new tank would need to be at an elevation of approximately 1900 feet. **Figure 23** shows the band of elevations for the tank, with a potential location near an existing dirt road highlighted. The approximate cost of the tank is $2.6 million, including the required booster pump station upgrades and pipeline connection to the existing system. A detailed cost estimate of the potential new tank is included in Appendix A.

Figure 22: Existing Tribal Booster Pump Station North of Tank #5



Figure 23: Elevation Band and Proposed Location of Potential New Tribal Tank



3.4.5.2 Cross Connections

Currently there are four potable water wells that are connected to the Golf Course Line, Each of these wells will have to be disconnected from the recycled water line and connected to either the new pipeline or other existing distribution pipelines in the system. If the wells are connected to the new potable water line, the pumps will have to be checked to ensure they can overcome the higher pressure of the new transmission line. The production from the wells may decrease due to the higher head required to overcome system pressure.

3.4.5.3 Pipe Material

Both the proposed recycled water and potable water pipelines will be PVC (poly-vinyl chloride) material. PVC pipe is lightweight, easy to install, and less expensive than other water pipe materials such as galvanized steel. Given the large quantity of new piping required for both the recycled water and potable water alignments, PVC material can provide a significant benefit in maintaining construction schedule and cost.

4 Permitting

4.1 CEQA

Pipelines constructed on Reservation land are not subject to the CEQA process. Therefore, only the portions of pipeline that are constructed within the County of San Diego easement are required to comply with CEQA regulations. According to CCR 21080.21, a pipeline less than one mile qualifies for a statutory exemption. Since the proposed pipeline within the County easement will be less than one mile, we anticipate filing a Notice of Exemption for the project to comply with CEQA.

4.2 County Permits

The portion of the pipeline that will be constructed within the County easement, including the bridge crossing, will require permitting through the County of San Diego. This will require obtaining approval from the planning department. Ramona Water District has a liaison that will route the plans to the Planning Department and through the appropriate County departments for review. The preliminary drawings should be submitted to him directly to begin the review/approval process:
Lawrence M. Hirsch
Utilities Coordinator
CIP Project Development
Department of Public Works
Phone: 858.694.2215
Fax: 858.694.2499
E-mail: lawrence.hirsch@sdcounty.ca.gov

Once the drawings have been approved by the County, three permits will be required prior to construction: Encroachment, Excavation, and Traffic Control. These permits are typically obtained by the construction contractor, but the County has an alternate dual permitting process that can be completed to make the permitting process easier for the construction contractor. This would require that traffic control plans be completed as part of the design.

A copy of the permit requirements are included in Appendix B. The County has design standards on their website, including CAD standards, design standards, title blocks, and standard drawings, at www.sandiegocounty.gov/content/sdc/dpw/pfdlist.html.

Appendix A

Opinion of Probable Construction Cost Detail

Barona Rd New Pipelines -
Ramona Connection to Existing Golf Course Line w/Horizontal Directional Drilling

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Item Total
1	Barona Rd 8-inch C900 PVC Pipe (Off-Reservation, from San Vicente Wastewater Reclamation Plant to Reservation Boundary)	LF	3,000	$160.00	$ 480,000
2	AC Paving/Concrete Underlay (Off-Reservation Barona Rd only)	SF	15,000	$15.00	$ 225,000
3	Off-Road 8-inch C900 PVC Pipe (On-Reservation, from Reservation Boundary to Connection Point with Ex. Golf Course Line. Excludes horizontal drilling segment.)	LF	5,900	$160.00	$ 944,000
4	Off-Road 12-inch C900 PVC Pipe (On-Reservation, from Reservation Boundary to Point 2 on figure. Excludes horizontal drilling segments.)	LF	3,700	$240	$ 888,000
5	Horizontal Drilling Construction	LF	1,800	$2,200.00	$ 3,960,000
6	8-inch Gate Valves	EA	7	$3,000.00	$ 21,000
7	MagMeter	EA	1	$5,000.00	$ 5,000
				Construction Total	**$ 6,523,000**
				Soft (Non-Construction) Costs	
				Contingency (15%)	$ 978,450
				Planning & Design (8%)	$ 521,840
				Construction Management (8%)	$ 521,840
				Project Total	**$ 8,546,000**

Barona Rd New Pipeline -
Ramona Connection to Existing Golf Course Line w/Jack & Bore

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Item Total
1	Barona Rd 8-inch C900 PVC Pipe (Off-Reservation, from San Vicente Wastewater Reclamation Plant to Reservation Boundary)	LF	3,000	$160.00	$ 480,000
2	AC Paving/Concrete Underlay (Off-Reservation Barona Rd only)	SF	15,000	$15.00	$ 225,000
3	Off-Road 8-inch C900 PVC Pipe (On-Reservation, from Reservation Boundary to Connection Point with Ex. Golf Course Line. Excludes jack & bore segments)	LF	7,300	$160.00	$ 1,168,000
1	Off-Road 12-inch C900 PVC Pipe (On-Reservation, from Reservation Boundary to Point 2 on figure.	LF	5,100	$240	$ 1,224,000
4	Jack and Bore Construction at Creek (1) and Barona Rd (2) Crossings - Three Segments Total, Each Approx. 100 LF	LF	400	$1,260.00	$ 504,000
5	8-inch Gate Valves	EA	7	$3,000.00	$ 21,000
6	MagMeter	EA	1	$5,000.00	$ 5,000
				Construction Total	**$ 3,627,000**
				Soft (Non-Construction) Costs	
				Contingency (15%)	$ 544,050
				Planning & Design (8%)	$ 290,160
				Construction Management (8%)	$ 290,160
				Project Total	**$ 4,752,000**

Ketuull Uunyaa Way & Southern Loop New PW Pipeline - Required for Both 1a & 1b (PW-2)

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Item Total
1	Barona Rd 12-inch C900 PVC Pipe (Off-Reservation, from Connection Point with 16-inch RMWD Main to Reservation Boundary)	LF	2,100	$240	$ 504,000
2	AC Paving/Concrete Underlay (Off-Reservation & Southwest of PRS On-Reservation only)	SF	31,750	$15	$ 476,250
3	Booster Pump Station at Northen Reservation Boundary (incl. Building)	LS	1	$250,000	$ 250,000
4	Off-Road 12-inch C900 PVC Pipe (On-Reservation, from Point 2 on figure to Connection Point with Southern Loop	LF	24,850	$240	$ 5,964,000
5	12-inch Gate Valves	EA	21	$4,000	$ 84,000
6	Meters	EA	1	$7,500	$ 7,500
7	Pressure Reducing Station (w/ 8-inch PRV)	EA	1	$100,000	$ 100,000
8	12-inch Connections to Existing Tribal Loop Tanks	EA	5	$5,000	$ 25,000
9	Mob/De-mob, Traffic Control, SWPPP, Pressure Testing, Potholing, etc.	LS	1	$50,000	$ 50,000
				Construction Total	**$ 7,460,750**
				Soft (Non-Construction) Costs:	
				Contingency (15%)	$ 1,119,112.5
				Engineering (6%)	$ 447,645
				Construction Management (6%)	$ 447,645
				Project Total	**$ 9,476,000**

Future New Potable Water Tank - Northern Reservation

Item No.	Item Description	Unit	Estimated Quantity	Unit Price	Item Total
1	Potable Water Tank	Gal	500,000	$2	$ 1,000,000
2	8-inch Pipeline Connection to Tank	LF	1,800	$160	$ 288,000
3	Booster Pump Station Upgrades	LS	1	$25,000	$ 25,000
4	Site Work (e.g. Grading, excavation, site clearing, etc.)	LS	1	$600,000	$ 600,000
				Construction Total	**$ 1,913,000**
				Soft (Non-Construction) Costs:	
				Contingency (20%)	$ 382,600
				Engineering (8%)	$ 153,040
				Construction Management (8%)	$ 153,040
				Project Total	**$ 2,602,000**

Appendix B

San Diego County Excavation, Encroachment, and Traffic Control Application Package

IMPORTANT NOTICE

Section 4216/4217 of the Government Code requires a DigAlert Identification Number (ID) be issued before a "Permit to excavate" will be valid.

For your DigAlert ID Number
Call Underground Service Alert
TOLL FREE 811
Two working days before you dig.

For more information, go to:
www.digalert.org

Applications should be submitted to:

County of San Diego
Planning and Development Services (PDS)
Land Development Counter
5510 Overland Avenue, Suite 110
San Diego, CA 92123

(858) 694-2055
Fax (858) 279-7020

Email: rowpermitcounter@sdcounty.ca.gov

FOR GENERAL INFORMATION ONLY
NOT TO SUPERSEDE THE APPROPRIATE ORDINANCE

DPW Rev. Sep/2021

EXCAVATION PERMIT:

FOR WORK WITHIN THE COUNTY RIGHT-OF-WAY



COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS

www.sdcounty.ca.gov/dpw

EXCAVATION PERMIT

PERMIT REQUIRE

A Excavation Permit is required before starting work related to road construction, improvement or repair, which work shall make or cause to be made any encroachment including an excavation, fill or obstruction, for the purpose of installing utilities including, but not limited to: sanitary sewer, private storm drainage, domestic and irrigation water, oil and natural gas, electric power, telephone, and television signals, both main and lateral lines, or any other related work in the County Right-of-Way.

APPLICATION PROCEDURE

The applicant shall provided the following:

- Location relative to the road Right-of-Way (R/W)
- Type of surface to be cut in R/W
- Dimensions including length, width and depth
- Purpose, extent and nature of excavation, fill or obstruction
- Size and type of pipe where applicable
- Duration of existence
- Signed plans or drawings
- $156.00 permit fee (checks payable to "County of San Diego), OR
- $62.00 Permit renewal fee
- Inspection deposits, $5.00 per lineal foot, first 1000feet; thereafter $1.75 per lineal foot; minimum of $965.00 deposit.
- Traffic control application and traffic control plan
- Licensed contractor number (the County accepts only General Engineering Class A, Excavation/ Pavement Contractor C12, Pipeline Contractor C34 or Sanitation System Contractor C42 for excavation work)
- Financially Responsible Party Agreement
- Environmental Review Questionnaire (CEQA)
- Contractor must also provide: **A CERTIFICATE OF INSURANCE** for General Liability ($500,000 minimum), naming County of San Diego Department of Public Works as **CERTIFICATE HOLDER**.
- Approval from utility company allowing connection to their system, **"Encroachment Only" permit (if applicable).**

SPECIAL REQUIREMENTS

- The County's "Pavement Cut Policy" limits trenching on new and newly resurfaced publicly maintain roads.
- Excavations exceeding 1,000 linear feet or using the "Rock Saw" trenching method require a pre-issuance field review.
- **Permanent Road Division Zones(previously known as County Service Area Roads) require a pre-issuance field review before the work can start.**
- Trenches exceeding five (5) feet in vertical depth require a CAL-OSHA permit. CAL-OSHA's telephone number is (619) 767-2280
- Public notification may be required prior to commencement of construction



FOR COUNTY USE ONLY
RECORD ID:
DPW20 _____
RWEXCP-_____

APPLICATION FOR EXCAVATION PERMIT

COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS

5510 OVERLAND AVENUE, SUITE 110
SAN DIEGO, CA 92123
PHONE (858) 694-2055 • FAX (858) 279-7020
E-mail ROWPERMITCOUNTER@SDCOUNTY.CA.GOV

Date _____

THOMAS GUIDE		
YEAR/ EDITION	PAGE	COORD

Permit Owner _____ Telephone # _____
Last Name *First*

Mailing Address _____
Street *City* *State* *Zip Code*

Hereby makes application for permit to excavate and/or construct the following on the public roads, subject to provisions of Title 7, Div. 1 of San Diego County Code of Regulatory Ordinances. Permit revocable at option of Director, Department of Public Works when necessary.

Application Contact Name _____ Email Address _____ Telephone # _____

Contractor _____ Telephone # _____ License # _____
Name *Ins. Exp. Date*

Email Address _____

Utility Owner (if applicable) _____ Agency Job Number: _____

Is the work part of a larger project or program requiring multiple permits, or currently under review for permit? YES ❒ NO ❒

If yes provide: Related Permits _____ Assessor Parcel # _____

Is this a utility relocation in connection with a County Capital Improvement Project? YES ❒ NO ❒

If yes provide: Name of Project _____

Location of work _____
Street Name and Number and nearest cross street

Standard Drawing: ❒ G-24A Type D or DS-22 ❒ G-25 ❒ SP-02 ❒ WP-02 ❒ Other: _____

Excavation Length _____ Width _____ Depth _____

If pipe is to be placed, state size _____ and kind _____

Detailed Description of Work _____

Requested Permit Duration (ex: 90 days) _____ A general liability insurance certificate is required for this time period.

Surface to be cut: ❒ Asphalt ❒ Concrete ❒ Dirt

Sample Application (link here)
Attachments/Requirements at Application (links to samples provided):

- ❒ Financially Responsible Party Agreement
- ❒ Inspection Deposits and Permit Fee
- ❒ Traffic Control Permit Application
- ❒ Traffic Control Plan or Regional Standard Drawing
- ❒ Location Map (link to tool LAYER NEEDS TO BE DEVELOPED) and Construction Drawing
- ❒ Environmental Review Questionnaire (CEQA)
- ❒ Contractor's License and Proof of Liability Insurance
- ❒ Signed Engineering Plans (excavation over 1,000 LF)
- ❒ Utility Company Connection Approval (if applicable)
- ❒ Linear Underground/Overhead Project form (RWQCB Exemption) (for projects greater than or equal to 1500 LF)

I hereby agree as a condition of the granting of this permit to provide defense and indemnification in accordance with Section 71.103 of the San Diego County Code of Regulatory Ordinances as follows: Permit Owner agrees to indemnify, hold harmless and defend the County and each of its officers and employees from any liability of responsibility for accident, loss or damage to persons or property arising by reason of the work done by Permit Owner, or Permit Owner's agents, employees or representatives.

Permit Owner agrees that all work within the County right-of-way will be accomplished in accordance with Approved Plans, the Standard Specifications of the Department of Public Work, "Special Provisions for Work Done Under Excavation Permit", "Special Provisions and Specifications for Improvement of New Streets", or Regional Standard Drawings and as stated on the Permit, and shall be subject to inspection and approval of the Director, Department of Public Works. If any tank, pipe, conduit, duct, tunnel or other facility (collectively "facilities") placed in the right-of-way interferes with the operation, improvement, grading or realignment of the highway by the County, the above signed will at their own expense completely remove the facilities and restore the right-of-way, or relocate the facilities to a location designated by the Director, Department of Public Works, and restore the right-of-way. All work shall be completed to the satisfaction of the Director, Department of Public Works. The Permit Owner further agrees to pay any damages resulting to County of San Diego from the negligent or improper design, construction or installation of the facilities or performance of permitted work and will restore the right-of-way, as near as may be possible to its former state and so as not to have impaired unnecessarily its usefulness or will repay to County of San Diego its cost of such restoration. Notwithstanding the foregoing, this permit is not to be interpreted to supersede prior rights or franchise rights in the right-of-way that are owned by a Permit Owner, but should be interpreted to supplement or explain those rights whenever practical to do so without contradicting an express term of a title document or grant of franchise.

I declare under penalty of perjury under the laws of the State of California that the statements made herein are true and correct.

Signed _____ _____
Permit Owner *Date*

ISSUANCE FEE AND DEPOSITS ARE PAYABLE IN ADVANCE

IMPORTANT NOTICE

Section 4216/4217 of the Government Code requires a DigAlert Identification Number (ID) be issued before a "Permit to excavate" will be valid.

For your DigAlert ID Number
Call Underground Service Alert
TOLL FREE 811
Two working days before you dig.

For more information, go to:
www.digalert.org

Applications should be submitted to:

County of San Diego
Planning and Development Services (PDS)
Land Development Counter
5510 Overland Avenue, Suite 110
San Diego, CA 92123

(858) 694-2055
Fax (858) 279-7020

Email: rowpermitcounter@sdcounty.ca.gov

FOR GENERAL INFORMATION ONLY
NOT TO SUPERSEDE THE APPROPRIATE ORDINANCE

DPW Rev. Sep/2021

ENCROACHMENT PERMIT:

TO ENCROACH UPON COUNTY HIGHWAY



COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS

www.sdcounty.ca.gov/dpw

ENCROACHMENT PERMIT

PERMIT PURPOSE

The County may be held all or partially responsible when a person is injured or property is damaged in the County road Right-of –Way

DEFINITION

An encroachment means any tower, pole, pipeline, private pipe, private pipeline, nonstandard driveway, private road, fence, billboard, stand or building, or any structure or object of any kind or character, which is placed in, under or over any portion of the highway

PERMIT REQUIRED

A written Encroachment Permit is required prior to placing, changing or reviewing an Encroachment in, under or over any portion of the County Road R/W in accordance with Section 71 (Highway and Traffic) of the San Diego County code of Regulatory Ordinances.

SPECIAL REQUIREMENTS

- Public notification may be required prior to commencement of construction

APPLICATION PROCEDURE

The applicant shall provide the following:

- Location of Proposed Encroachment
- Description of structure or object
- Justification for encroachment
- Will it interfere with the public use/maintenance?
- Duration for which permit is sought (one day, days, in-definite)
- Date request is to be effective
- $156.00 issuance fee (checks payable t County of San Diego
- $62.00 permit renewal fee.
- An additional deposit may be required
- Drawings or sign plan
- Lights, barriers, warnings signs or other measure de-signed to protect the traveling public, where applicable
- *An Encroachment Removal Agreement may be required and a deposit

POLICY

All permits other than those issued to public agencies or a public utility having legal authority to occupy the public road right-of-Way are revocable on five days' notice and the encroachment must be removed or relocated as may be specified by the Director in the notice revoking the permit and within a reasonable time specified by the Director unless the permit provides a specified time. Encroachments not removed within the period shall be removed by County forces with the cost borne by the owner. Encroachment determined to obstruct or prevent public use of County road Right-of-Way, consist of refuse, cause a traffic hazard, or in violation of other specific regulations will be removed immediately.

NOTE:

PAINTING HOUSE ADDRESS NUMBER ON CURBS:

Vendors must obtain a solicitor's license from the County Sheriff's Department (858) 974-2020 as well as an encroachment permit before painting house numbers on curbs within the unincorporated areas of the County. A copy of the solicitors license must be submitted with the encroachment permit application. Specific guidelines for painting addresses on curbs are available from the Planning and Development Services Construction/ Road Right-of-Way Counter.

FOR COUNTY USE ONLY
RECORD ID:
DPW20 _____
RWENCP-_____

APPLICATION TO ENCROACH UPON COUNTY HIGHWAY

GOVERNED BY CHAPTER 6, DIVISION 1
TITLE 7 OF SAN DIEGO COUNTY CODE
COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
5510 OVERLAND AVENUE, SUITE 110
SAN DIEGO, CA 92123
PHONE (858) 694-2055 • FAX (858) 279-7020
E-mail ROWPERMITCOUNTER@SDCOUNTY.CA.GOV

Date _____

THOMAS BROTHERS		
YEAR	PAGE	COORD

Permit Owner _____ Telephone # _____
Last Name First

Mailing Address _____
Street City State Zip Code

Application Contact Name _____ Email Address _____ Telephone # _____

Is the work part of a larger project or program requiring multiple permits, or currently under review for permit? YES ❒ NO ❒

If yes provide: Related Permits _____ Assessor Parcel # _____

Is this a utility relocation in connection with a County Capital Improvement Project? YES ❒ NO ❒

If yes provide: Name of Project _____

Location of encroachment _____
Street Name and Number and nearest cross street

❒ Fencing ❒ Political Signs ❒ Scaffolding ❒ Storage ❒ Yard ❒ Other

Describe _____

_____

Will encroachment interfere with the public use and maintenance of?

Travelled way	❒ Yes	❒ No	Side path or sidewalk	❒ Yes	❒ No
Shoulder or parking lane	❒ Yes	❒ No	Drainage structure or watercourse	❒ Yes	❒ No

Justification for Encroachment _____

Permit requested: ❒ 1 day ❒ 3 days ❒ 10 days ❒ indefinite ❒ _____ days Effective date _____ 12.01 a.m.

AGREEMENT

In consideration of the granting of this permit, the applicant agrees:

1. I hereby agree as a condition of the granting of this permit to provide defense and indemnification in accordance with Section 71.103 of the San Diego County Code of Regulatory Ordinances as follows: Permit Owner agrees to indemnify, hold harmless and defend the County and each of its officers and employees from any liability of responsibility for accident, loss or damage to persons or property arising by reason of the work done by Permit Owner, or Permit Owner's agents, employees or representatives.
2. To comply with all applicable laws in the establishment, maintenance and removal of the encroachment.
3. That the Permittee and any other person engaged in any work authorized by this permit shall conform to all due safety precautions for the protection of persons and property.
4. To remove or relocate any encroachment placed, changed or renewed under the authority of this permit; prior to its expiration or within 24 hours of notification to remove, if the duration is 10 days or less; or within 5 day of notification to remove, if the permit is of indefinite duration
5. After removing or relocation the encroachment, to restore the highway to the equivalent or better condition than it was prior to the date this permit became effective, or prior to the date the encroachment was first placed, whichever is earlier.

"I declare under penalty of perjury under the laws of the State of California that the statements made herein are true and correct."

Signed _____ _____
Owner Date

Rev: Oct/2020

ISSUANCE FEE AND DEPOSITS ARE PAYABLE IN ADVANCE

ENVIRONMENTAL REVIEW QUESTIONNAIRE
FOR WORK WITHIN THE COUNTY OF SAN DIEGO ROAD RIGHT OF WAY
(TO BE FILLED OUT BY APPLICANT)

PERMITTEE NAME OR ORGANIZATION: _____

PROJECT NUMBER OR NAME: _____

PROJECT LOCATION: _____

Please Check YES or NO for the following statements. (Note: further environmental review may be required by applicant and/or County staff for a "Yes" answer.)

YES	NO	
☐	☐	The project proposes grading, filling, or dredging within a creek or wetland area
☐	☐	The project will remove vegetation adjacent to a creek or wetland area
☐	☐	The project will harm or remove healthy, mature, or scenic trees
☐	☐	The project is located on a hazardous waste site per Section 65962.5 of Gov. Code
☐	☐	The project will degrade surface water quality
☐	☐	The project will impact groundwater quality or quantity
☐	☐	The project will have significant impact to aesthetics or visual resources
☐	☐	The project is located on a dedicated trail, or pathway
☐	☐	The project will impact historic, tribal cultural, or prehistoric resources
☐	☐	The project will conflict with the County Noise Ordinance (San Diego County Code of Regulatory Ordinances, Title 3, Division 6, Chapter 4)

The following language shall be placed on the project plans and will become permit conditions:

"If during the course of any ground disturbing activities any historic or pre-historic resources are identified, work will be ceased immediately in that area and the Department of Public Works notified. Work will commence once authorized by the Department of Public Works."

"To avoid harm to any mature trees, the applicant will not place any concrete, fill, or grade within the canopy of any tree with a diameter of 3 inches or greater unless only hand-tools are used or an arborist provides direction and certification that such activities would not cause harm to the tree."

"If existing landscaping is to be removed, the applicant will replace it in kind".

"As defined by the County Noise Ordinance, general sound levels will not exceed the limits defined in Section 36.404 of the Noise Ordinance. Further, construction Activities will not occur before 7 a.m or after 7 p.m. nor will any construction occur on Sundays or holidays without first obtaining a noise variance."

"No grading, fill, or any activities are permitted within a creek or wetland area."

I hereby certify the above answers are true and correct to the best of my knowledge:

SIGNATURE: _____ DATE: _____

County of San Diego, Planning & Development Services
APPLICATION DEPOSIT ACKNOWLEDGEMENT AND AGREEMENT
SUPPORT SERVICES DIVISION

Do you already have an existing active Trust Account with PDS/DPW for the same site/application/project: **Yes ☐ No ☐**

This can be through a Use Permit, Site Plan, TM, GP, or other Discretionary approval. Grading permits associated with a site that has a Discretionary permit in place should be tied to that trust account.

Are we linking this site/application/project to the existing Trust Account: **Yes ☐ No ☐**

If the existing Discretionary permit has been approved it should still be tied to the work being done through this action for tracking purposes.

If linking, please provide existing Trust Account number:

No additional information is necessary. The rest of this form does not need to be completed.

If you do not know the trust account number but know the record associated with the Use Permit, Site Plan, TM, or GP, please indicate the discretionary permit number here:

INTRODUCTION

It is the policy of the County of San Diego to recover from applicants for land development approvals the full cost of processing such applications, including all time spent by County staff to review, comment, coordinate and communicate with applicants and the public on the processing of a proposed application. (See Board of Supervisors' Policy B-29: http://www.sdcounty.ca.gov/cob/docs/policy/B-29.pdf). For application types where processing costs vary substantially between individual applications, the County establishes a Trust Account to assure cost recovery. In such cases, an initial **deposit** is required, in an amount as set by ordinance to cover the estimated costs of the initial review (Scoping) of a project following intake of the application. In the event the estimated deposit is not sufficient to cover actual costs of the initial scoping, an additional deposit will be required. At the conclusion of scoping of the project (approximately 30 days after application), a refined project-specific estimate of total costs to process your application to completion, based upon a number of assumptions, will be provided with a complete listing of project specific issues, revisions, and studies required as deemed necessary for compliance with State and County codes and ordinances.

The cost associated with processing a discretionary permit with Planning & Development Services (PDS) varies widely depending on the type of entitlement being applied for and the complexity of the project. Estimates of processing costs for a variety of permit types have been identified based on historic data for recently completed projects. These summaries are available on the PDS website at http://www.sandiegocounty.gov/content/dam/sdc/pds/zoning/formfields/PDS-PLN-369.pdf. Actual cost may vary substantially from the ranges listed online due to project location, environmental issues, planning constraints, appeals or code/ordinance compliance. The applicant is required to pay all costs associated with application processing, regardless of the original estimate provided or historic costs. When the application and case closure process is complete, any remaining funds in the Trust Account will be refunded.

----- OFFICIAL USE ONLY -----

AGREEMENT

The person named below as “Depositor" is herewith depositing, or has previously deposited with the County of San Diego the sum of $ _____ for the initial review (Scoping) of the following application being filed with the County:

Said deposit and any subsequent deposits are made on behalf of the person, corporation or partnership named below as the "Financially Responsible Party". With reference to said application and deposits, Depositor and Financially Responsible Party hereby acknowledge and agree as follows:

1. Said initial deposit and any subsequent deposits shall be held by the County in an account under the name of Financially Responsible Party, and Financially Responsible Party shall be considered the owner of all funds in said account, and Depositor (if different from Financially Responsible Party) releases any interest in said funds. Except as provided below, any funds remaining in said account at the completion of work shall be refunded to the Financially Responsible Party at the address below. In the case that the Financially Responsible Party transfers ownership of the subject property and wishes to transfer responsibility of the Trust Account to the new owner, a Change of Financial Responsibility form must be completed to authorize transfer of ownership of funds in said account. The Financially Responsible Party may contact the Trust Account Customer Service Unit at: PDSDevDep@sdcounty.ca.gov or by calling (858) 694-2320 to request the form

2. All costs incurred by the County in processing said application, including overhead, whether within or over the amount of project-specific estimate provided at the conclusion of the initial Scoping of the project (typically 30 days), shall be paid by the Financially Responsible Party. This is the Financially Responsible Party’s personal obligation and shall not be affected by sale or transfer of the property subject to the application, changes in Financially Responsible Party's business organization, or any other reason. As work proceeds on an application, actual County costs, as established by County Ordinance, will be recorded and invoiced against the deposit account. County is authorized to deduct such costs from said deposits at such times and in such amounts as County determines. The County may allow incremental deposit submittals by the Financially Responsible Party over the course of the project processing such as prior **to** each submittal, public review, and hearing(s), as applicable to the permit. “Costs incurred by the County” as identified in this paragraph may include costs for the services of an outside contractor. Where the County determines it is necessary to engage the services of an outside contractor or other County Departmental staff to assist with application processing, costs for such services are to be paid by the Financially Responsible Party in the same manner identified above. If the Financially Responsible Party withdraws an application not involving a violation of a County ordinance, County will cease processing of the application within one day and will proceed with the case closure process. The Financially Responsible Party is responsible for all case closure costs. Case closure costs will be minimized to the maximum extent practicable.

3. If it is determined that the estimated cost provided in the original cost estimate will not be adequate to cover all costs associated with application processing, the estimate will be refined, and additional monies may be required. County may make a written demand for additional deposit(s) and the Financially Responsible Party shall deposit with County such additional sums demanded within 14 days of the date of County's request. If Financially Responsible Party fails to deposit such additional sums within said period, County staff will cease work on said application until such funds have been deposited. If no deposit is received within 30 days, the County may forward said application to the appropriate decision-maker with a recommendation for denial. The application will not be finalized for hearing or decision until required deposits are paid in full. If at any point in the processing of the project, the deposit account becomes depleted, County staff shall stop work on the project until sufficient funds are restored. When the processing of the application is completed, any unused amount in deposit account will be refunded.

4. If the amount of costs incurred by County exceeds the amount of funds on deposit, and the Financially Responsible Party has failed to pay County sufficient funds to cover said deficit after demand, County may, in addition to ceasing work on said application, take any or all of the following actions:

    a) cease work and refer the account to the County’s collection agency;
    b) commence suit or pursue any other legal or equitable remedies available to it.

5. If County commences suit to recover any deficit in processing costs, the party prevailing in such suit shall be entitled to recover as costs from the other party its costs of litigation, including reasonable attorneys' fees.

County of San Diego, PDS, Support Services Division
APPLICATION DEPOSIT ACKNOWLEDGEMENT AND AGREEMENT
Continued

FINANCIALLY RESPONSIBLE PARTY

The information of the Financially Responsible Party provided below must be 100% accurate. All Developer Deposit customer statements and refund checks, if any, will be mailed to the name and address stated below.

If the information stated on this form is inconsistent with our system, then the Financially Responsible Party must clarify and correct before the application can be accepted.

If the Financially Responsible Party is a COMPANY or ORGANIZATION, please complete below (*additional information may be required if an agent signed this form*):

Company/Business/Trust Name: _____

If Attention/Care of/ Doing Business as: _____

Billing Address: _____

City: _____ State: _____ Zip Code: _____

Preferred Phone: _____ Alt. Phone: _____

Email: _____

If the Financially Responsible Party is an INDIVIDUAL, please complete below:

First Name: _____ MI: _____ Last Name: _____

Billing Address: _____

City: _____ State: _____ Zip Code: _____

Preferred Phone: _____ Alt. Phone: _____

Email: _____

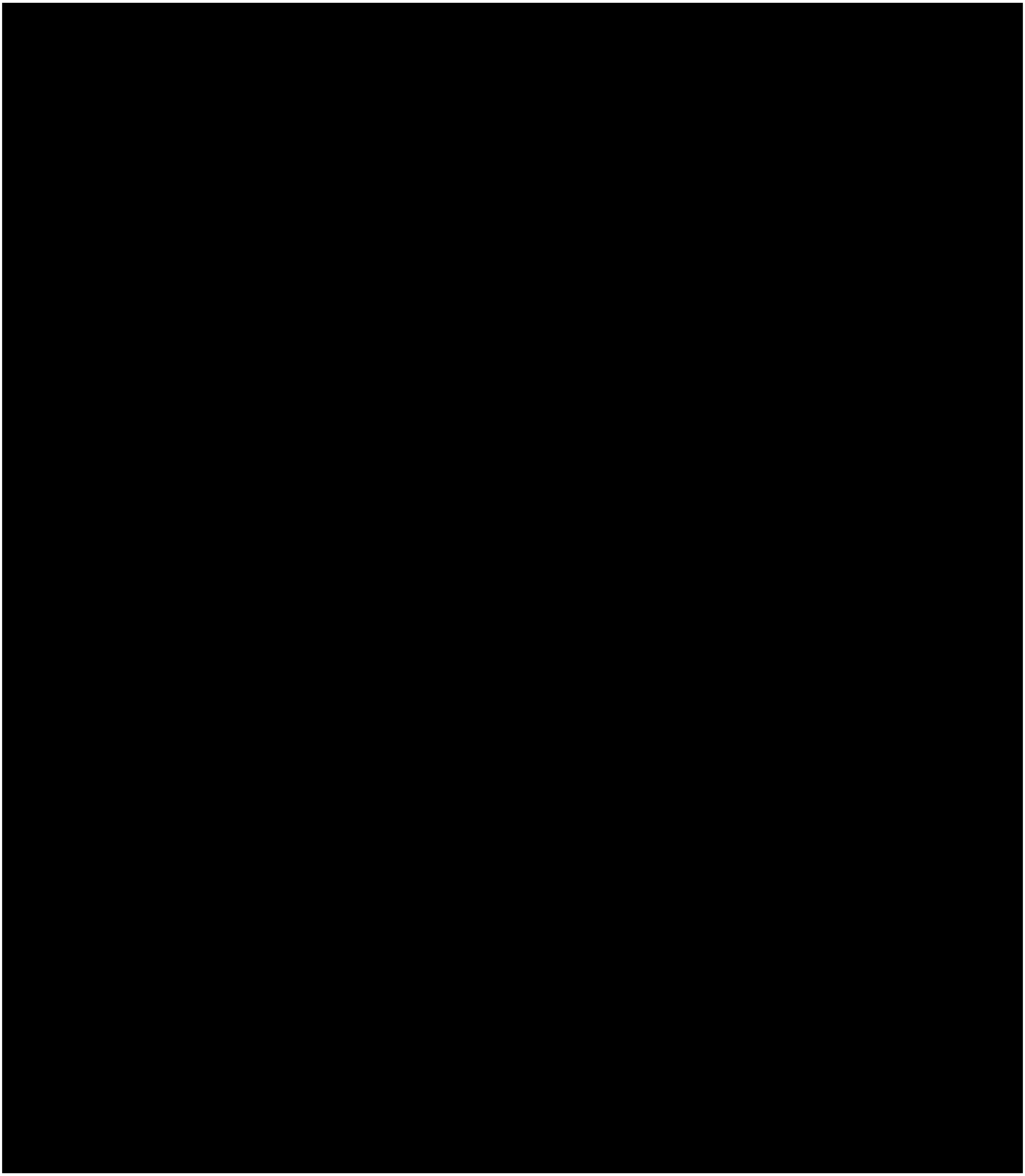
I have read this form and understand all funds deposited into the Trust Account are owned by and any refund will be sent to the Financially Responsible Party (FINRESP) listed above. I understand and agree that the Financially Responsible Party is responsible for payment of all fees associated with this project including all hourly or other fees which may accrue during the review and/or post-issuance whether the permit is issued or whether the application is canceled or denied before the permit is issued.

Financially Responsible Party Name (Print): _____

Financially Responsible Party's Signature: _____ Date: _____

***Did you know you can request access to your Trust Account online**—which allows you to review charges, make deposits, and see your account balances—in real time? Please go to http://www.sandiegocounty.gov/content/sdc/pds/AccelaUpdates.html for additional instruction.*

----- OFFICIAL USE ONLY -----					
Trust Account No.		-		-	
Associated Records:					
Associated Records:					





Home | Online Services | Check A License

Check a Contractor License or Home Improvement Salesperson (HIS) Registration

Look up a contractor license or Home Improvement Salesperson (HIS) registration to verify information, including complaint disclosure. Before hiring a contractor or signing a contract, CSLB recommends you read the Hiring a Contractor page.

License Number | Business Name | Personnel Name | HIS Number | HIS Name

Enter the contractor license number to check the status of their license.

Contractor License #

SEARCH TIPS

A California contractor license number doesn't contain alphabetic characters. Each contractor's plastic pocket license will show the respective license number. Begin entry of your license number at the left position and don't exceed 8 digits in the license number.

SAMPLE

Please note: Our database is unavailable Sundays at 8 p.m. through Monday at 6 a.m. due to scheduled maintenance.

Trying to hire a licensed contractor and don't know where to start? Click here to create a list of licensed contractors by City or ZIP code.

Back to Top Conditions of Use Privacy Policy Accessibility Accessibility Certification

Copyright © 20222021 State of California

County of San Diego

Planning & Development Services (PDS)
Land Development/Right-of-Way Counter
5510 Overland Ave., Suite 110, San Diego, CA 92123

Information Sheet For Insurance Requirements For Right-of-Way Permits

Please mail or fax proof of insurance to:

County of San Diego
Planning & Development Services (PDS)
Land Development/Right-of-Way Counter
5510 Overland Avenue, Suite 110
San Diego, CA 92123

Contact: **permit coordinator**
Telephone: **(858) 694-2055**
Fax phone: **(858) 279-7020**
Email: ROWPERMITCOUNTER@SDCOUNTY.CA.GOV

Contractors, Organizations, or Persons encroaching in the County maintained Right-of-Way shall provide proof of insurance, in the form of a **CERTIFICATE OF LIABILITY INSURANCE**, from a generally recognized domestic insurance carrier for the duration of the permitted encroachment (please refer to samples) as follows:

1) **CERTIFICATE OF LIABILITY INSURANCE** showing evidence of Commercial General Liability with a $1,000,000 per occurrence limit of liability.
2) The County of San Diego named as **CERTIFICATE HOLDER** and Additionally Insured on **CERTIFICATE OF LIABILITY INSURANCE**.
3) A separate **ADDITIONAL INSURANCE ENDORSEMENT** (CG 20 12 04 13, use latest version if available) naming the County of San Diego, its agents, officers and employees as Additional Insured for above noted Commercial General Liability policy.

NOTE: An insurance policy number must be indicated on the items submitted as proof for # 1 and # 3 above.

Sample of Items 1 & 2

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 01/01/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Name & Address of Insurance Company Producing Certificate	CONTACT NAME: Producer Contact Name PHONE (A/C, No, Ext): (123)456-7890 FAX (A/C, No): E-MAIL ADDRESS:
	INSURER(S) AFFORDING COVERAGE — NAIC #
	INSURER A: Name of Insurer A — 12345
INSURED Name & Address of Insured Contractor/Organization	INSURER B: Name of Insurer B — 12345 INSURER C: INSURER D: INSURER E: INSURER F:

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY PRO-JECT LOC OTHER:	X		EXMPL12345	01/01/2020	01/01/2021	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $ $
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE DED RETENTION $						EACH OCCURRENCE AGGREGATE	$ $ $
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N Y	N/A	EXMPL12345	01/01/2020	01/01/2021	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Permit.
The County of San Diego, its officers, agents, & employees are included as additionally insured in accordance to General Liability policy provisions.

CERTIFICATE HOLDER

County of San Diego
5510 Overland Avenue, Suite 110
San Diego, CA 92123

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

SAMPLE

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ACORD 25 (2016/03) The ACORD name and logo are registered marks of ACORD

Sample of Item 3

POLICY NUMBER: EXMPL12345

COMMERCIAL GENERAL LIABILITY
CG 20 12 04 13

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – STATE OR GOVERNMENTAL AGENCY OR SUBDIVISION OR POLITICAL SUBDIVISION – PERMITS OR AUTHORIZATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

State Or Governmental Agency Or Subdivision Or Political Subdivision:
County of San Diego, its officers, agents, & employees 5510 Overland Avenue, Suite 110 San Diego, CA 92123
Information required to complete this Schedule, if not shown above, will be shown in the Declarations

SAMPLE

A. Section II – Who Is An Insured is amended to include as an additional insured any state or governmental agency or subdivision or political subdivision shown in the Schedule, subject to the following provisions:

1. This insurance applies only with respect to operations performed by you or on your behalf for which the state or governmental agency or subdivision or political subdivision has issued a permit or authorization.

   However:

   a. The insurance afforded to such additional insured only applies to the extent permitted by law; and

   b. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

2. This insurance does not apply to:

   a. "Bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the federal government, state or municipality; or

   b. "Bodily injury" or "property damage" included within the "products-completed operations hazard".

B. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

 © Insurance Services Office, Inc., 2012


Overview Map
Aurora Dr
Starland Dr
Amelia Dr
Flaven Ln
Mecill Ave
Google Earth
© 2018 Google
N
400 ft

IMPORTANT NOTICE

Section 4216/4217 of the Government Code requires a DigAlert Identification Number (ID) be issued before a "Permit to excavate" will be valid.

For your DigAlert ID Number
Call Underground Service Alert
TOLL FREE 811 or www.contact811.org
Two working days before you dig.

For more information, go to:
www.digalert.org

DPW Rev. (02/2020)

Applications should be submitted to:

County of San Diego
Planning and Development Services (PDS)
Land Development Counter
5510 Overland Avenue, Suite 110
San Diego, CA 92123

(858) 694-2055
Fax (858) 279-7020

Email:
rowpermitcounter@sdcounty.ca.gov

FOR GENERAL INFORMATION ONLY
NOT TO SUPERSEDE THE APPROPRIATE ORDINANCE

TRAFFIC CONTROL PERMIT: FOR TRAFFIC CONTROL WITHIN COUNTY MAINTAINED ROADS DURING CONSTRUCTION



COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS

www.sdcounty.ca.gov/dpw

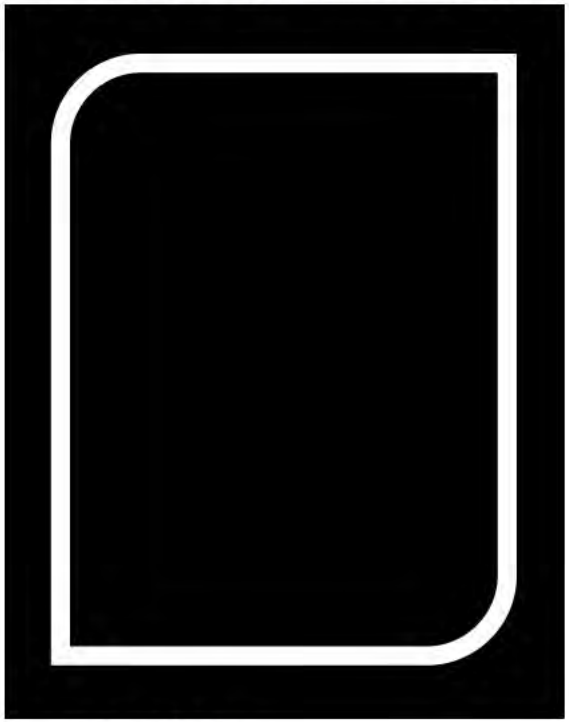
TRAFFIC CONTROL PERMIT

WHAT IS TRAFFIC CONTROL?

Traffic Control is the provision of a safe work area for workers within the public right-of-way (ROW) while maintaining a safe and efficient flow of traffic for all road users including motorists, bicyclists, and pedestrians.

PERMIT REQUIRED

A Traffic Control Permit must be obtained before—starting construction of repair of curbs, gutters, sidewalks, commercial and residential driveways, roadway surfaces, retaining walls, culverts, street light(s) or other work of any nature in the County right-of-way.



DPW Rev. (02/2020)

APPLICATION PROCEDURE

When applying for a traffic control permit, the appropriate (ROW) permits (Encroachment, Excavation, and Construction) should be concurrently applied for from the Planning Development Services (PDS) Land Development Counter. **A Traffic Control Permit will not be processed until the appropriate ROW permits are approved.**

The applicant shall provide the following:

- Complete Traffic Control application form:
  - Reason for Traffic Control Permit;
  - Exact work location; and
  - Desired dates and time of work.
- Traffic Control Permit application submittal checklist
- 11x17 size Traffic Control Plans or current San Diego Regional Standard Drawings (SDRSD) that include the work being performed, exact location of work, and proposed temporary Traffic Control through the work area.

EXTENSION OF PERMITS

All requests for extensions should be submitted through PDS Land Development Counter at least seven days prior to the end of the original finish date. All permit conditions and requirements are to remain in effect.

SPECIAL REQUIREMENTS

- The permit holder must contact **The Department of Public Works Private Development Construction Inspection team at (858) 694-3165** at least **24 Hours** before start and finish of work.
- Appropriate lights, barriers, warning signs or other measures designed to protect the traveling public must be erected by the permittee per the Approved Traffic Control Permit.

NO FEES

There is no fee for a Traffic Control Permit. It takes **approximately six weeks** to process a Traffic Control Permit because it requires review and approval by the County Traffic Engineer.



COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING SECTION

APPLICATION FOR TRAFFIC CONTROL PERMIT _____

Type of traffic control: flag, shift, etc.

County of San Diego
DPW Traffic Engineering Section
Room 470, MS O332
5510 Overland Ave, Suite 410
San Diego, CA 92123-1239

Telephone/voice mail: (858) 694-3863
Secretary (858) 694-3850
Fax (858) 694-3928
DPWTRAFFICCONTROL.PERMIT@SDCOUNTY.CA.GOV

Encroachment/excavation/construction permit #_____

Applicant Information

Company _____

Agent/applicant _____
Last Name *First*

Agent Telephone #_____ Agent Fax #_____

Agent Mailing Address: _____
Street Name and Number *City* *State* *Zip Code*

Agent E-mail Address _____

Reason for Traffic Control: _____

Start Date: _____ Start Time: _____ a.m. / p.m.

Finish Date: _____ End Time: _____ a.m. / p.m.

It is requested that a permit be granted for traffic control on the following street/streets:

STREET 1 _____ From Street _____ To_____

STREET 2 _____ From Street _____ To_____

COMMUNITY _____ Thomas Brothers Map Page and Grid # _____

Signed _____ _____
Agent or Applicant Date

See Attached Plan (s) and Traffic Control Notes

This request is:

APPROVED ☐ **DENIED** ☐

Director, Department of Public Works

By _____
For Road Commissioner

Ref: Section 72.75 County Code of Regulatory Ordinances

DPW Form #4(7/2017)

DPW COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS

TRAFFIC CONTROL PERMIT APPLICATION SUBMITTAL CHECKLIST

Application package must include the following requirements at a minimum. Application is subject to rejection if any of the following information is not completed.

☐ **Description/type of work being done** *(Ex. access manhole, replace overhead lines on existing poles, replace water service line, etc.)* _____

_____

☐ **Roadway Characteristics:**

☐ **Names of Road(s)** _____

☐ **County Maintained Road(s)** (Yes/No) _____

☐ **Work affecting other jurisdictions** (Yes/No) If yes, please list. _____

☐ **Road Classification on Mobility Element Map** _____
(Ex. 2.2E Light Collector, 4.1A Major Road, Not on Mobility Element Map, etc.)
https://www.sandiegocounty.gov/pds/generalplan.html

☐ **Speed Limit** _____
http://library.amlegal.com/nxt/gateway.dll?f=templates&fn=default.htm&vid=amlegal:sandiegoco_ca_mc

☐ **# of Lanes** _____

☐ **Roadway Width** _____

☐ **Centerline Striping** (Yes/No) _____

☐ **Bike Lanes** (Yes/No) _____

☐ **Sidewalk** (Yes/No) _____

☐ **Traffic Signal in County Right of Way** (Yes/No) _____

☐ **Traffic Signal in other jurisdiction** (Yes/No) _____

☐ **School zone within ½ mile of work zone** (Yes/No) If yes, list school hours. _____

☐ **Bus route or bus stops within work zone** (Yes/No) _____

https://www.sdmts.com/
http://www.gonctd.com/

☐ **Overview map.** Show location and limits of work area (length, width), including road name and distance to cross streets. See Example #1.

☐ **Traffic control plans or appropriate San Diego Regional Standard Drawing (SDRSD) Traffic Control Plan**. If submitting an SDRSD, please denote roadway width and work area dimensions on TCP. Include offsets of work area to points of interest (edge of pavement, adjacent lanes, etc.). See Example #2.

I hereby certify the above information and attachments are true and correct to the best of my knowledge.

_____	_____	_____
Applicant Printed Name	Applicant Signature	Date

For County Use Only:

☐ Contractor Insurance _____

☐ Encroachment Permit Approval and/or Pavement Cut Policy _____

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

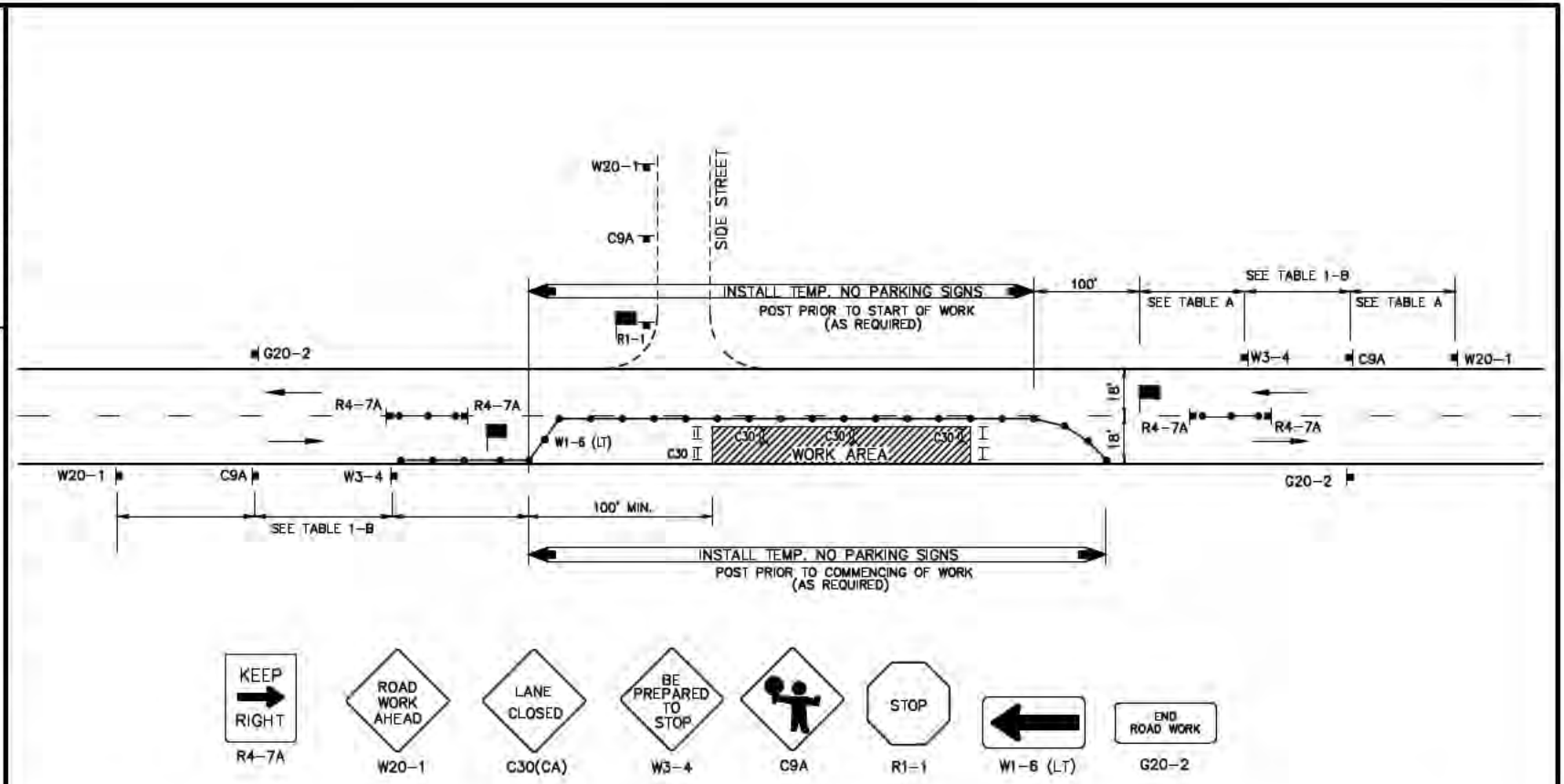
Chairperson R.C.E. 19246 — 12/17/15

DRAWING NUMBER **TCP-09**

SAN DIEGO REGIONAL STANDARD DRAWING

SIDE OF ROAD WORK AREA

TWO LANE TRAFFIC CONTROL WITH FLAGGERS



LEGEND

● CONE ⊢⊣ BARRICADE FLAGGER SIGN FLASHING ARROW SIGN WORK AREA TRAFFIC DIRECTION

AGENCY ENGINEER'S COMMENTS

APPLICANT USE AGENCY USE

SUBMITTED BY:
NAME
COMPANY
ADDRESS
PHONE

POSTED SPEED LIMIT	APPROACH SPEED	TAPER LENGTH	SPACING OF CONES	SIGN SPACING

GENERAL NOTES

FOR HOURS OF DARKNESS, CHANGE COMES TO VERTICAL BARRICADES WITH STEADY BURN LIGHTS. THIS PLAN MAY NOT APPLY TO SIGNALIZED OR MULTI-WAY STOP INTERSECTIONS. CONSULT THE LOCAL JURSIDICTION WHEN PREPARING TRAFFIC CONTROL PLANS NEAR THESE INTERSECTIONS. THIS PLAN MAY NOT APPLY WHEN THE WORK AREAS AFFECT BIKE LANES, SIDEWALKS PEDESTRIAN ACCESS AND CURVED OR NARROW ROADWAYS. CONSULT THE APPROVING AGENCY WHEN PREPARING THE TRAFFIC CONTROL PLANS OR THESE AREAS.

NOTHING CONTAINED ON THIS DRAWING SHALL PREVENT LOCAL JURISDICTIONS FROM MODIFYING CHANGING OR ADOPTING NEW SPECIFICATIONS DEEMED NECESSARY. CRITERA FOR POSITION, LOCATION AND USE OF TRAFFIC CONTROL DEVICES IS SOLELY FOR THE PURPOSE OF GUIDANCE TO ASSIST IN THE SET UP OF THE TRAFFIC CONTROL PLANS.

TCP IS REQUIRED FOR ALL TRAFFIC CONTROL PLANS.

Revision	By	Approved	Date
Reviewed	DG	T.Stanton	9/15
Revised	BUSS		2/11

Appendix D-1

December 2021

Water Supply Feasibility Study by Dudek

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TECHINICAL MEMORANDUM

To:	Art Bunce, Barona Legal and Sheila Alvarez, Barona
From:	Elizabeth Caliva, P.E., Greg Ripperger, P.E., Dudek
Subject:	Water Supply Feasibility Study
Date:	December 14, 2021
cc:	
Attachment(s):	

As a result of ongoing concerns with drought conditions in southern California, the Barona Tribe (Tribe) has expressed a desire to acquire an imported source of water. The purpose of this study is to evaluate the potential for acquiring and transporting imported water to the Reservation. Assembly Bill 1361, passed in 2017, allows interagency agreements to be established between Tribal communities and California Water District. This analysis evaluates water import options available to the Tribe, with recommendations on the most appropriate option for implementation.

1 Project Background

1.1 Historical Perspective

The Capitan Grande Reservation was originally located along the San Diego River, in and around the flood zone of what is now El Capitan Reservoir. The City of San Diego purchased these lands in 1919 and 1932, to allow construction of the El Capitan Dam. After many years of legal struggle, a portion of the Capitan Grande community relocated to Barona Ranch, located northwest of Capitan Grande, now the Barona Reservation. The remainder of the community relocated to Barona Long Ranch, located southeast of Capitan Grande, now the Viejas Reservation. The large Capitan Grande Reservation continues to be owned collectively by the Barona and Viejas people as "successors in interest," which now serves as an ecological preserve.

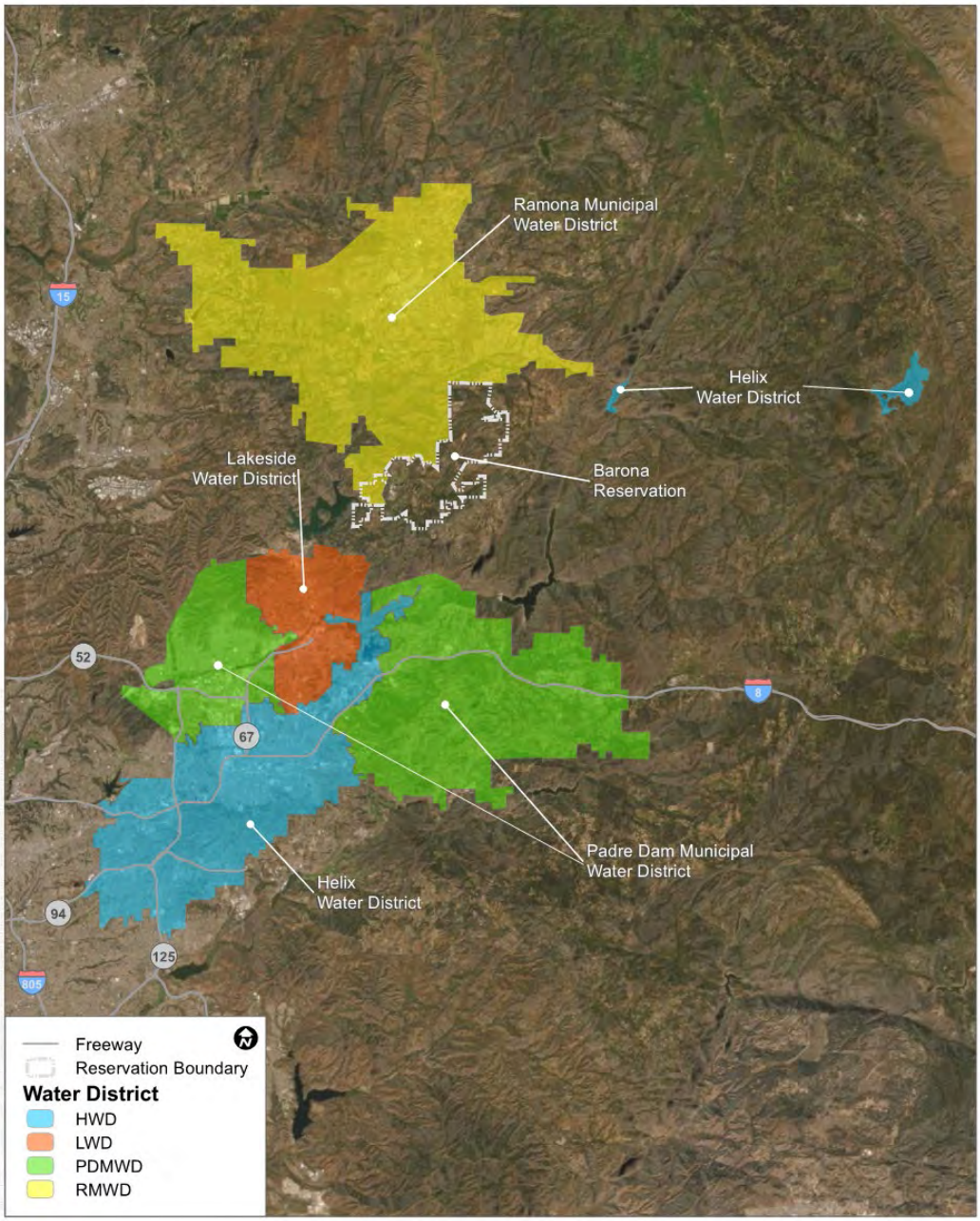
1.2 Contemporary Perspective

The Barona Tribe's economic challenges continued through the early 1990s. In 1994, the Tribe opened the Barona Casino "Big Top", which became the world-class Barona Valley Ranch Resort and Casino. The casino has become the means to a restoration of self-sufficiency, prosperity, and renewal for the Barona people. With this prosperity, the Tribe has seen increased Reservation development, which has subsequently increased stress on the Reservation's existing water resources. As a result, the Tribe hired Dudek to evaluate various import water options, with a recommendation on the most beneficial project to implement.

2 Project Purpose & Approach

The purpose of this Water Study is to identify and evaluate imported water resources from adjacent California water districts that may be available for the Tribe's use. As shown on **Figure 1**, the Barona Reservation is bordered on the north by the Ramona Municipal Water District (RMWD) water service area. Similarly, the Reservation is bordered on the south by the Lakeside Water District (LWD), Helix Water District (HWD), and Padre Dam Municipal Water District (PDMWD). Lands to the west of the Reservation belong to the cities of San Diego and Poway.

Figure 1. Barona Reservation and Surrounding Water Districts



2.1 Legal Authority

The Reservation is currently outside the service areas of these existing water agencies. However, California Water Code Section 71611.5 (AB-1361) allows service by California Water Districts to existing Reservation lands by agreement, without annexation, and stipulates approval by the Local Area Formation Commission (LAFCO). Water Code Section 71611.5 stipulates with request by the Tribe and satisfaction of conditions established by the Code, a District can provide water service at substantially the same terms as other District customers. Tribal lands not located within the Water District boundary are required to be treated as if they were fully annexed for provision of this water service.

Section 71611.5 has a sunset clause of January 1, 2023. This sunset clause does not preclude extension of this legislation but is a condition that is critical for the completion of this Water Study. The Tribe wants to identify the most appropriate water service and negotiate the necessary agreements prior to the January 1, 2023, date to avoid potential loss of these water opportunities, if the legislation is not extended. Agreements that are sent to LAFCO before January 1, 2023, must be approved by LAFCO, and may continue to extend service to the Tribe after January 1, 2023, provided the agreement continues to comply with any conditions imposed by LAFCO.

In addition, before a district provides water service, the Tribe must satisfy the following conditions:

- Comply with federal and tribal laws.
- Acquire federal and tribal approvals necessary for the District to provide water service at substantially the same terms applicable to customers of the District.
- Accept, by agreement, terms of, and payments to (including service payments), the District and any public agency providing water to said District, as if the Tribe's lands were fully annexed into the District and into the service area of any other public agency, which terms and payments are also a condition of continued service by a District and by any public agency providing water to said District.

The water service period is defined to be the longest of the following: (1) The time water service is provided by the District to the Tribe, (2) The time moneys are owed by the Tribe to the District for water service, or (3) The term of any agreement between the District and Tribe.

Section 71611.5 specifically designates that water service must be provided by a Water District. As such, the cities of San Diego and Poway, adjacent to the Reservation, are not eligible to provide water service to the Reservation. For each of the four adjacent Water Districts, Dudek conducted a comprehensive evaluation of the financial, engineering, hydraulic and political requirements of each agency for provision or needed water service. The resulting water service agreement, when negotiated, is intended to be a long-term arrangement, and the providing agency will need to have both current and long-term ability to meet the Tribe’s water needs. It may be determined that the most beneficial water service for the Tribe includes agreements with one or more Districts, where direct or indirect (water wheeling) supply of treated water, untreated water, recycled water, and/or advanced treated water are considered. Each adjacent District may have a variety of service options that are evaluated.

Finally, the facilities needed to consistently provide water service to the Reservation are defined relative to each option identified. These facilities need to be consistent with the existing infrastructure of the Reservation, and may involve revisions to current Reservation facilities, including potential increasing or decreasing of currently proposed system improvements. Construction and annual operating costs for the various water service options are defined. Identification of the most beneficial water supply option(s) for the Tribe is identified and prioritized for presentation

to the Tribal Council. As always, cost is a critical decision factor in any public water works plan. However, other non-monetary and political considerations are also critical to the decision-making process.

3 Service Provider Information Summary

In August and September of 2021, Dudek staff met with staff from the four adjacent water districts to discuss potential water service to the Tribe. The following discussions summarize the initial discussions and findings with those Districts, including their interest in providing service, the available water supplies, and the facilities from which the water service could or would be provided.

3.1 Lakeside Water District

Dudek met with Brett Sanders, General Manager of Lakeside Water District (LWD), on August 24, 2021. Approximately 80 percent of LWD's treated water is derived from Helix Water District, with the remaining 20 percent being derived from local groundwater wells. These water resources include treated water with chloramine disinfection. No other water supplies were determined to be available from LWD.

LWD currently has a limited water distribution system. The Muth Valley development (up to 650 new homes) is resulting in a northward extension the water distribution system, with a 550-psi pressure required to serve this new development and a maximum pipeline size of 12-inch. It was noted by LWD that they currently do not possess sufficient infrastructure capability to convey water to the Barona Reservation.

3.2 Padre Dam Municipal Water District

Dudek met with Kyle Swanson, AWP Manager, and Allen Carlisle, General Manager, of Padre Dam Municipal Water District (PDMWD) on August 30, 2021. PDMWD expressed interest in supplying water to the Barona Reservation. Presently, PDMWD receives treated water from the San Diego County Water District (SDCWA) and from Helix Water District (HWD) via the Levy Water Treatment Plant. PDMWD's Advanced Water Purification (AWP) water is developed to replace imported water supplies when placed into service. Future AWP water will be jointly owned by HWD (69 percent) and PDMWD (31 percent), with a total anticipated average production of 11.5 MGD. PDMWD has an extensive recycled water distribution system within its Western Service Area. However, PDMWD is presently evaluating whether to continue recycled water service, considering the success of the AWP project.

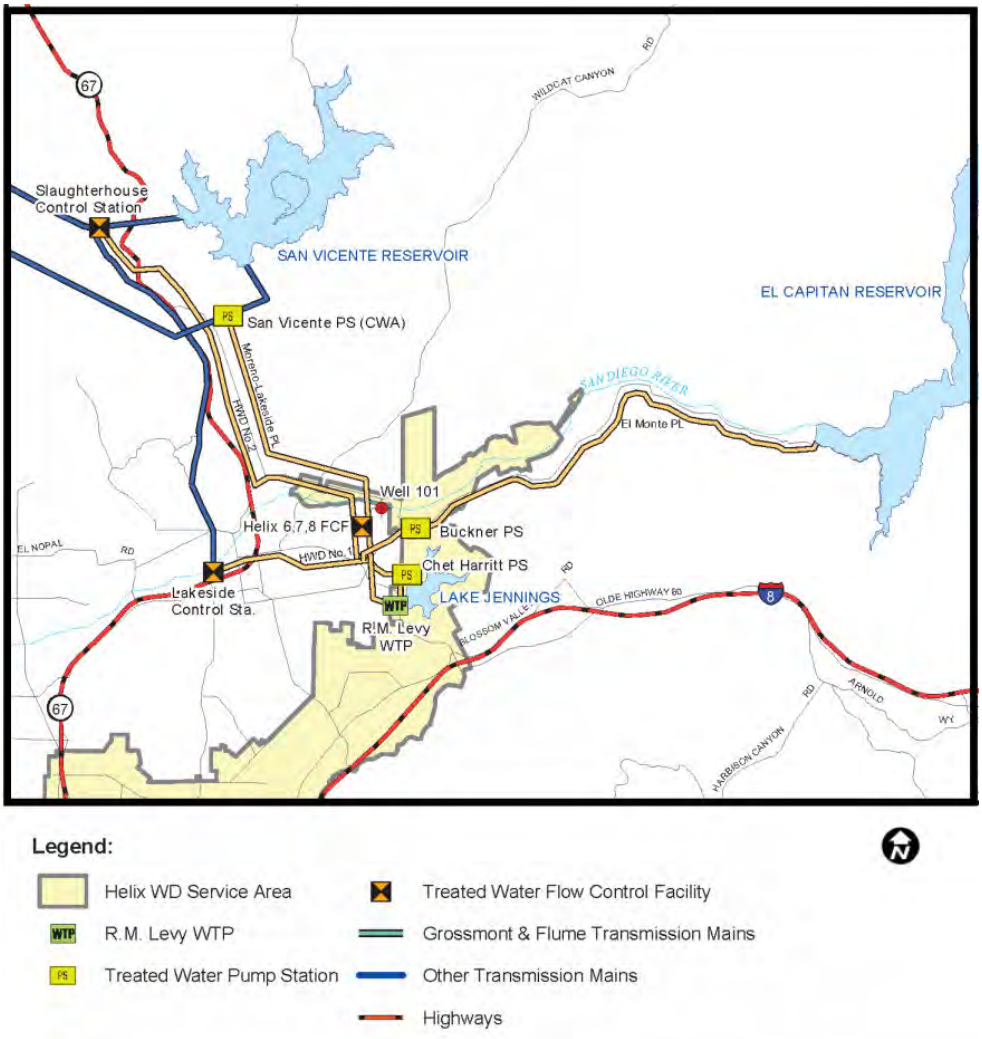
Padre Dam currently provides water service to the Sycuan Reservation. As such, PDMWD understands the interagency agreement process necessary to serve the Barona Reservation. Water served to the Sycuan Reservation is treated water with chloramine disinfection, derived from the SDCWA (CWA Connections #4 and #6) and HWD (Helix/Padre #2) water supplies within its Eastern Service Area. As with the Sycuan Reservation, water service to the Barona Reservation would be focused on treated water from this District. PDMWD does not have untreated water available, and its recycled water is not positioned to effectively meet the Tribe's needs. However, PDMWD has sufficient water resources to provide treated water to the Barona Reservation. The closest water distribution pipeline is located within Lakeside Avenue. Delivery of water from this pipeline would result in an approximate 925-foot hydraulic grade differential, requiring a minimum of two pump stations and approximately 6.7 miles of new pipeline, the majority of which would not be constructed on Reservation property.

3.3 Helix Water District

On September 9, 2021, Dudek met with Tim Ross, Assistant Director of Engineering, Aneld Anub, Associate Engineer, and Michelle Berens, System Operations Manager, of Helix Water District (HWD). HWD purchases both untreated and treated water from the SDCWA. HWD owns and operates the Levy Water Treatment Plant, rated at 106 MGD, of which approximately 40 to 60 MGD of this capacity is being used. Approximately one-third of Levy WTP production is owned by the SDCWA. Treated water is disinfected with chloramines.

Untreated water is conveyed to the Levy WTP through a 36-inch pipeline (HWD No. 2), located within the Willow Road right-of-way, as shown in **Figure 2**. The hydraulic grade of this untreated water pipeline is approximately 90 to 120 psi. Additionally, the SDCWA maintains a parallel untreated water pipeline within Willow Road, the Moreno-Lakeside Pipeline. These untreated water resources represent a potential significant benefit to the Barona Reservation. Untreated water provided to Barona can be used to recharge groundwater supplies, irrigate agricultural and recreational areas, and be treated by Barona for drinking water distribution. Disinfection with free chlorine can continue if an untreated water supply is provided. However, the differences between groundwater and surface water disinfection must be addressed (trihalomethane production), potentially requiring improvements to the Tribe's existing treatment plant.

Figure 2. HWD Infrastructure near Barona Road (Source: 2015 HWD UWMP)

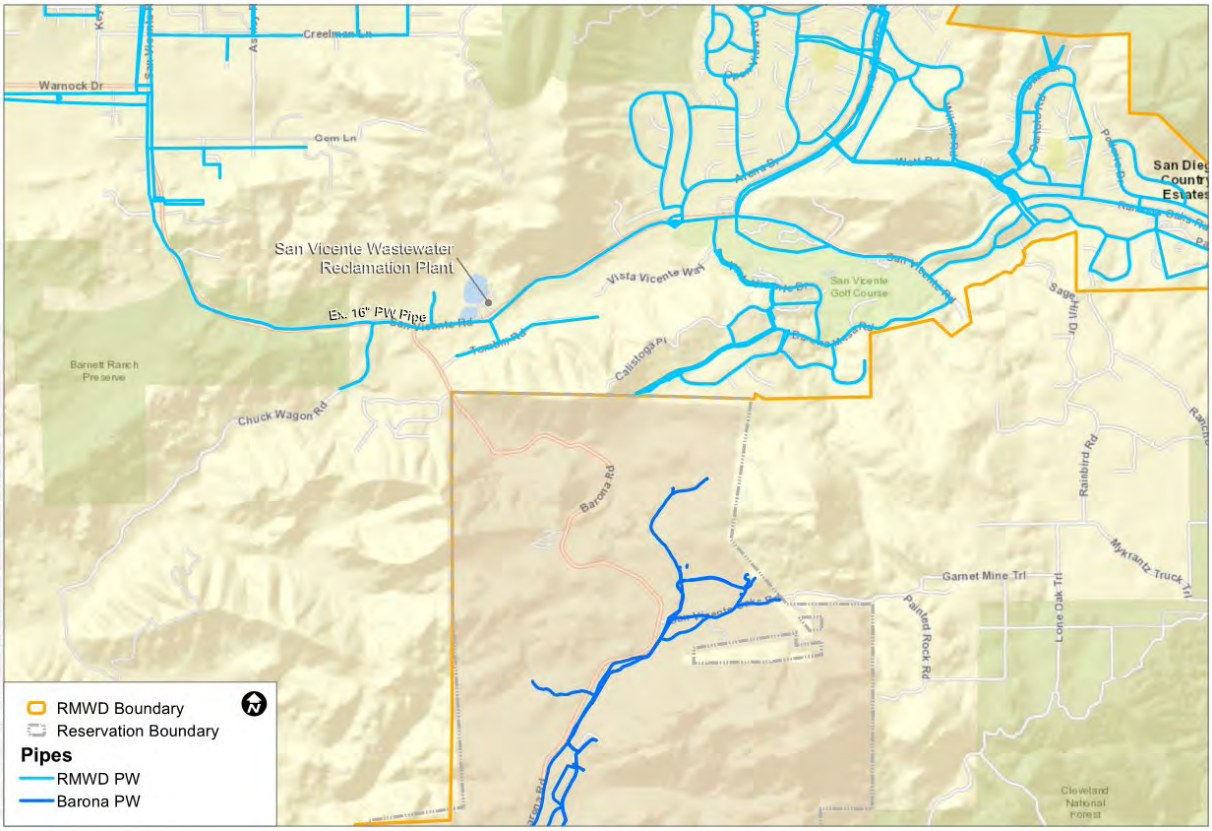


Following our first meeting with HWD, we were notified that continued discussions with HWD staff would require payment of a $2,915 fee, including $305 project initiation fee plus $2,610 special study/investigation deposit.

3.4 Ramona Municipal Water District

Dudek met with Craig Schmollinger, Acting General Manager, of RMWD on September 16, 2021. At present, RMWD can provide treated water, derived from the Water Authority, and recycled water, from the San Vicente Water Reclamation Plant, to the Barona Reservation. RMWD is the only agency able to provide service from north of the Reservation. Treated water is derived from the Ramona #1 turnout, located in Poway. Title 22 recycled water is produced at the San Vicente WRP. Both water services are available to the Reservation at the intersection of Barona Road and San Vicente Road, as shown in **Figure 3**. Like other districts, treated water is disinfected with chloramines.

Figure 3. RMWD Infrastructure near the Barona Service Area



RMWD operates a 16-inch treated water pipeline at the intersection of Barona and San Vicente Roads. Treated water service requires overcoming a hydraulic grade of approximately 472 feet, requiring approximately 27,800 feet of new treated water pipeline, including 2,100 feet of water line to the Reservation boundary plus 25,700 feet to connect from the boundary to the existing system. The treated water infrastructure necessary for service from RMWD is less costly than that from PDMWD or untreated water service from HWD, primarily because of the pumping facilities required to overcome the hydraulic grade difference from these southern agencies.

Recycled water service is available to the Reservation from RMWD, with an existing pump station capable of overcoming the required hydraulic grade. Recycled water can be used for groundwater recharge, if required distances from existing drinking water wells are maintained. Also, recycled water can be used as irrigation water for agricultural and recreational (golf course) uses. Ramona has identified that a total of 150 to 200 acre-feet per year (afy) of recycled water may be available, with a potential up to 250 afy. Ramona also indicated that it would be willing to provide recycled water at a reduced cost over the time if necessary for Barona to recoup the cost of the infrastructure required for this service.

4 Barona Supply and Demand Projections

The Barona Reservation has an estimated groundwater demand of more than 500 acre-feet per year (afy) and has in the past exceeded the sustainable yield of the local groundwater basin. The Barona Tribal Water Authority (BTWA) prepared a report in 2002 detailing the Need for Emergency Water Supply. That report documented ongoing depletion of groundwater supplies for the Reservation and concluded that the groundwater basin would not be able to supply current demand without significantly exceeding the basin safe yield. Groundwater levels, at that time, were reported to be at historic lows and some existing wells were reported to only operate for short durations. In 2007, the Tribe reportedly was required to truck water to supplement the declining groundwater supply.

In 2010, the County of San Diego prepared a Groundwater Study as part of its General Plan Update. According to this document, 2010 Barona Reservation groundwater use was approximately 476 afy for the golf course, casino, event center, convention center, and hotel, with an additional 162 afy for residential housing units. Projected groundwater demand by 2030 was identified to be approximately 567 afy. For that study, housing units were derived from the San Diego Association of Governments (SanDAG) with an allocation of approximately 0.5 afy per home. It is critical, prior to implementation of an imported water system, to develop an accurate understanding of current, near-term, and long-term water demand throughout the Reservation. Current estimates of long-term water demand have been estimated in the range of 1,000 to 1,500 afy.

While the Tribe relies primarily on groundwater for it drinking water, recycled water is also available to serve non-treated water needs. Phase I of the Barona Water Recycling Facility (WRF) has a design capacity of 0.75 MGD and treats high strength commercial wastewater from the casino resort and hotel. The WRF receives tributary flow from the casino, governmental office building, 18-hole golf course, the hotel/resort and approximately 12 private homes. Based on available information, it is estimated that the WRF is currently operating at a capacity of approximately 250,000 gallons per day (gpd). As such, additional recycled water production capacity is available, should the Tribe continue to experience increased wastewater generation. Increasing recycled water volumes may be accomplished either through increased development or expansion of the hotel and/or casino.

New housing development is currently taking place along the east side of Barona Road, in the northern extents of the Reservation. It is projected that new development, on the order of up to 5 to 10 homes per year, will be experienced. As such, this water study has defined the anticipated boundary of the proposed water service area (Section 8). This water service area is important to accurately define the type and numbers of anticipated homes and/or other land use types. In addition, since new water supplies may include treated water deliveries from the San Diego County Water Authority and Metropolitan Water District, the water service area is defined to develop the connection fees imposed by these agencies. Of the approximate 8,000 acres of the Barona Reservation, approximately 1,000 acres are projected to be included in the Water Service Area.

5 Alternatives Development

After initial discussions with each agency, a captative evaluation of the potential options was developed to assist in determining which options are worth further consideration.

5.1 Lakeside Water District

While LWD expressed initial interest in participating in this project, staff ultimately agreed they do not currently have the infrastructure necessary to convey water to the Tribe. This water service option was therefore eliminated.

5.2 Padre Dam Municipal Water District and Helix Water District

Padre Dam understands the interagency agreement and has the water capacity to provide water to Barona. PDMWD does not have untreated water supplies readily available, and its recycled water is not positioned to effectively meet the Tribe's needs. As a result, treated water is the only water service option available from this agency. The closest PDMWD distribution pipeline defines an approximate 925-foot hydraulic grade differential and approximately 6.7 miles of new pipeline, the majority of which would not be constructed on Reservation property.

Like PDMWD, Helix has the infrastructure required to provide water service to the Tribe. Unlike PDMWD, Helix has both treated and raw water available to the Tribe. The projected cost of untreated water from HWD is lower than treated water service from PDMWD or HWD. Service of untreated water from the HWD requires overcoming approximately a 1,100-foot hydraulic grade and a pipeline distance of approximately 5.5 miles.

Comparing these two alternatives, the infrastructure cost is projected to be significantly higher for PDMWD water service than untreated water service from HWD, primarily a result of higher hydraulic grade difference and the longer length of pipeline. In addition, the cost of water from PDMWD is higher, as it is treated water. Based on this, PDMWD water service was eliminated in favor of the HWD untreated water alternative.

5.3 Ramona Municipal Water District

RMWD has both recycled and treated water available to the Tribe, near its northern Reservation boundary. Based on the proximity of the Ramona and Barona boundaries, water service from RMWD results in most required infrastructure being able to be constructed on Reservation property. This fact is a significant difference between Ramona service and that of the southern agencies. For this reason, both recycled water and treated water service from RMWD continued for further evaluation.

Of the four initial water service options, only RMWD and HWD offer viable combinations of constructability and cost that justify additional hydraulic and budgetary analysis requirements. The following discussions summarize the hydraulic and cost consideration of these available water service options.

6 Hydraulic Analysis and Construction Cost Opinion

The following sections describe proposed alignments for RMWD recycled water, RMWD treated water, and HWD raw water service to the Reservation. These discussions provide a broad overview of the infrastructure required to convey water from its source or connection point to the Reservation, followed by an opinion of probable cost.

6.1 RMWD Recycled Water

Recycled water supplied by RMWD is sourced from the San Vicente Wastewater Reclamation Plant (SVWWRP), located near the intersection of San Vicente Road and Barona Road, as shown on **Figure 4**. RMWD produces a total recycled water volume of approximately 450 afy. The San Diego County Estates San Vicente Golf Resort currently consumes approximately 300 afy of this recycled water supply, leaving approximately 150 afy available to the Tribe. Future water conservation measures by San Vicente Golf Resort may result in a reduction of recycled water consumption by 50 afy, leaving 200 afy available for use by the Tribe. Based on current projections, it is possible that the San Vicente Golf Resort may continue to reduce their consumption by up to an additional 50 afy. In the future, it may be possible that the Tribe could receive up to 250 afy. 200 afy is used for this analysis, as it is the current anticipated demand over the near-term.

There exists a 6-inch pipeline (commonly referred to by Tribal staff as “Golf Course Line”) designed to irrigate the golf course surrounding the Barona Ranch Resort (Resort). The Golf Course Line originates southeast of the Giant San Diego Paintball Park and continues along Ketuull Uunyaa Way, ending at the Resort’s golf course irrigation ponds. The most cost-effective method of transporting recycled water from RMWD to the Tribe’s recycled water system is to make use of this existing pipeline.

Using a projected recycled water supply of 200 afy, it was determined that a 6-inch pipe has sufficient capacity to convey recycled water to Barona with a projected flow velocity of less than seven feet per second (fps). It is anticipated that RMWD would construct a 6-inch pipeline from the recycled water source to the connection to the existing 6-inch Golf Course Line. The pipeline size will assure that no additional pumping will be required, and the existing 6-inch pipeline flows essentially by gravity to the golf course pond.

RMWD currently operates a pump station at SVWWRP that transports recycled water to an existing spray field approximately 3,000 feet northeast of the plant site. The existing pump is designed to overcome approximately 530 feet of total dynamic head (TDH). The elevation difference between SVWWRP and the highest point of the proposed recycled water alignment along Barona Road is approximately 472 feet. Therefore, the existing pump can convey recycled water to Barona with no additional pumping.

Approximately 3,000 ft of 6-inch recycled water pipeline is required off-reservation, in San Vicente Road and Barona Road. The pipeline continues in Barona Road on the reservation for 5,200 feet, then runs 2,500 feet cross-country through the Paintball Park until it intersects the Golf Course Line east of the parking lot.

Figure 4: Proposed RMWD Recycled Water Line Alignment



Table 1 presents an opinion of probable cost for constructing a new 6-inch recycled water line from SVWWRP to the proposed connection with the Golf Course Line (Project ID: RW-1a). As the new 6-inch line will be constructed in Barona Road and thus subject to County of San Diego requirements, additional cost associated with environmental and CEQA compliance have been included in the cost opinion. An alternative opinion of probably cost (Project ID: RW-1b) is also presented representing the cost if the Golf Course Line is not sufficiently viable and it is necessary to construct a new 6-inch pipeline to the irrigation ponds

Table 1: RMWD Recycled Water Service Cost Opinion Summary

Project ID	Project Name	Description	Justification	Project Costs ($1000)
Ramona Recycled Water Pipeline Projects				
RW-1a	Barona Rd New RW Pipeline - Connect to Existing Golf Course Line	Build 16,200 LF of 6-inch Recycled Water pipeline and connect to existing 6-inch line on reservation	RW pipeline connects to existing 6-inch line to supply Resort's golf course irrigation ponds	$ 3,402
RW-1b	Barona Rd & Ketuull Uunyaa Way New RW Pipeline - Abandon Ex. Golf Course Line & Construct New Line to Golf Course Irrigation Ponds	Build 36,800 LF of 6-inch Recycled Water pipeline emptying into Resort irrigation ponds; abandon existing 6-inch line	If site investigations reveal existing 6-inch line should be abandoned due to age or poor condition, this project includes construction of new line to irrigation ponds	$ 7,728

6.2 RMWD Potable Water

Treated water from RMWD is sourced from a connection with the existing RMWD-operated 16-inch water line in San Vicente Road. Two demand scenarios (1,000 afy and 1,500 afy) were evaluated to better assist the Tribe in planning for projected growth. Table 2 presents the criteria for each scenario and its conversion to gpm and cfs.

Unlike recycled water, treated water demands are sensitive to seasonal peaking factors. For example, water usage typically reaches a maximum during the warm summer months before receding to a minimum in the winter. A properly designed treated water system should be sized to accommodate the maximum demand. Based on typical seasonal peaking factors, a peaking factor of 1.5 was applied to each demand scenario shown in **Table 2**.

Table 2: Summary of Average Demand Scenarios

Demand (afy)	Demand (gpm)	Demand (cfs)
1,000	620	1.38
1,500	930	2.07

Table 3 presents the demand scenarios analyzed in this section, after application of peaking factors. The maximum demands were used to determine the appropriate pipe size for each scenario.

Table 3: Summary of Maximum Demand Scenarios

Average Demand (afy)	Maximum Demand (afy)	Maximum Demand (cfs)
1,000	1,500	2.07
1,500	2,250	3.11

Pipelines are sized for each water service scenario at the maximum demand with a maximum velocity under 7 fps. For an average demand of 1,000 afy (maximum demand of 1,500 afy), an 8-inch pipeline is the minimum standard-size at which flow velocity does not exceed 7 fps. Similarly, for an average demand of 1,500 afy (maximum demand of 2,250 afy), a 12-inch pipeline is the minimum standard-size at which flow velocity does not exceed 7 fps.

According to RMWD staff, the existing system pressure at the proposed connection point with the 16-inch treated water line is 230 psi. Like the recycled water alignment, the maximum ground elevation along the proposed treated water alignment is 1,752 feet. Given the connection point will be at approximately 1,280 feet elevation, it is expected that pressure from the RMWD system is sufficient to deliver treated water to the Reservation.

Figure 5 depicts the alignment of the proposed new treated water pipeline under the 1,000 afy average demand scenario which follows that of the recycled water pipeline along Barona Road and Ketuul Uunyaa Way, up to the Resort. Approximately 2,100 feet of 8-inch treated water pipeline would be constructed on off-reservation land. The 8-inch pipeline continues for 37,100 feet on-reservation and connect to the Casino treated water system. The pipe connects to the existing Tribal Loop Tank 5 and fire protection tank. Connecting to existing tanks allows the Tribe to fill those tanks directly from the transmission line, while also having a connection point to the distribution system at the pressure reducing station (PRS). The on-reservation pipelines are proposed to be built, maintained, and operated by the Tribe. A new PRS will need to be installed approximately 25,400 feet from the intersection of Barona Road and Little Klondike Road. The PRS location is selected based on where the Tribe's pressure zones converge, allowing the Tribe to make connections and deliver water to multiple zones of the distribution system at a single location. A 6-inch PRV and corresponding PRS are included in the cost opinion summary for both average demand scenarios as outlined in **Table 4**

Under the 1,500-afy average demand scenario, the alignment shown on **Figure 6** is required with 2,100 LF of new 12-inch treated water pipeline off-reservation and 25,500 LF of 12-inch pipeline on-reservation to PRS. The new pipeline transitions from 12-inches to 8-inches downstream of the PRS and travels approximately 11,600 LF before terminating at the Casino Loop. The reduction in pipeline diameter is justified as a decrease in flow within the line is anticipated after the PRS, because it is expected that water will be delivered to the system at Tank 5 and the PRS. No reduction in pipeline diameter was suggested for the 1,000 afy average demand scenarios as 8-inch is the industry standard minimum for treated water lines.

Figure 5: Proposed RMWD Potable Water Alignment – 1,000 afy Average Demand

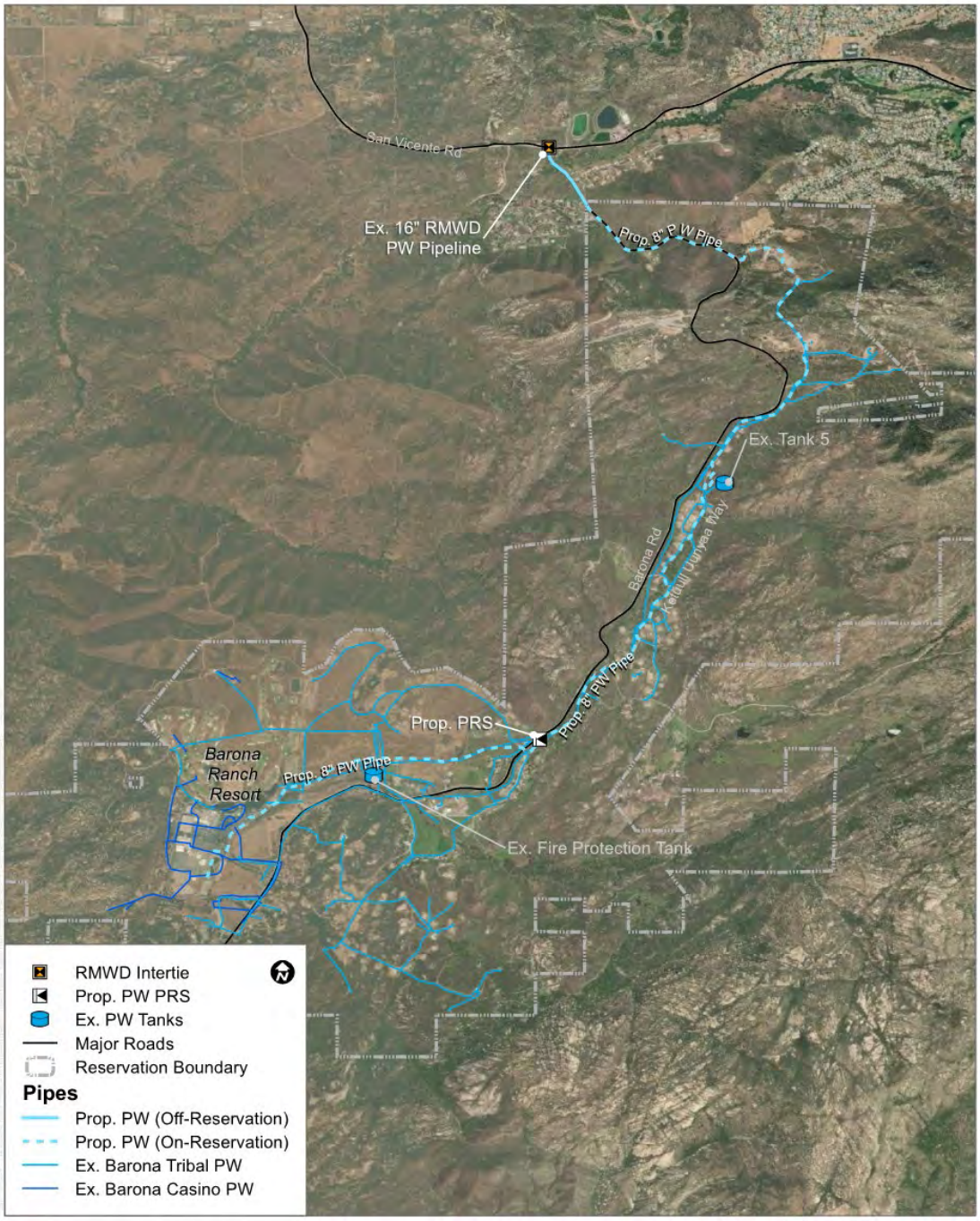


Figure 6: Proposed RMWD Potable Water Alignment – 1,500 afy Average Demand

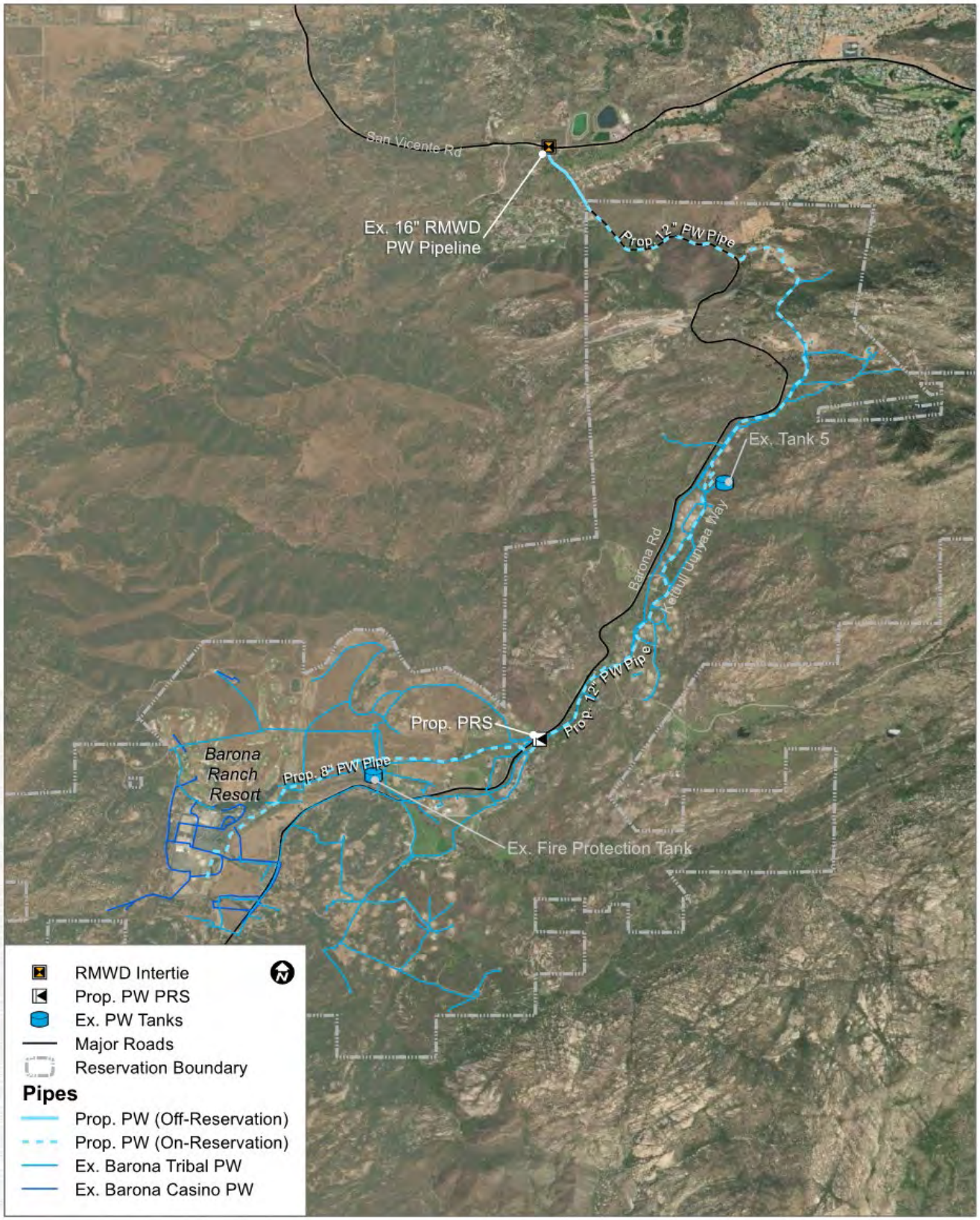


Table 4: Ramona Potable Water Service Cost Opinion Summary

Project ID	Project Name	Description	Justification	Project Costs ($1000)
Ramona Potable Water Pipeline Projects				
PW-1	Barona Rd & Ketuull Uunyaa Way New PW Pipeline - 1,000 afy Average Demand	Build 39,200 LF of 8-inch Potable Water Pipeline, construct one PRS, build pipeline connections to existing tribal loop tanks	Satisfy 1,000 afy average demand scenario	11,508
PW-2	Barona Rd & Ketuull Uunyaa Way New PW Pipeline - 1,500 afy Average Demand	Build 27,600 LF of 12-inch and 11,600 LF of 8-inch Potable Water Pipeline, construct one PRS, build pipeline connections to existing tribal loop tanks	Satisfy 1,500 afy average demand scenario	15,568

6.3 HWD Raw Water

Raw water provided by HWD is sourced from a HWD No. 2 connection in Willow Road, as shown in **Figure 7**. For raw water service, two separate average demand scenarios of 1,000 afy and 1,500 afy were analyzed. As discussed in Section 6.2, a peaking factor of 1.5 was applied to each average demand to properly size the new raw water pipeline and pump stations for maximum demands.

Although an 8-inch pipeline can accommodate maximum demand in the 1,000 afy average demand scenario without violating typical velocity criteria, the HWD raw water alternative requires the construction of two pump stations to overcome an 890-foot hydraulic grade change between the connection point and the Tribal water treatment plant. The additional head loss resulting from flow in an 8-inch pipeline increases the total dynamic head at each pump station, resulting in the need for a pump with greater horsepower. Therefore, a 12-inch pipeline is suggested for both the 1,000 afy and 1,500 afy average demand scenarios to reduce the size of the pump motors.

Figure 7 depicts a proposed alignment of the new raw water pipeline. Approximately 29,000 LF of new pipeline is required to transport raw water from the HWD No. 2 connection point to the Resort. Roughly 23,000 LF of pipeline will be constructed off-reservation along Barona Road, followed by 6,000 LF of pipeline on-reservation before terminating at the Barona Water Treatment Plant. For raw water services, the Tribe would be responsible for building, maintaining, and operating the entire reach of pipeline (both off-reservation and on-reservation) beginning at the HWD No. 2 connection point.

According to HWD staff, the HWD No. 2 pipeline typically operates between 90 and 120 psi. The ground elevation at the intersection of Willow Road and Barona Road, where the Tribe's new raw water service would connect to the HWD No. 2 line, is approximately 420 feet. Assuming a conservative operating pressure of 90 psi in the HWD No. 2 pipeline, raw water can only be conveyed along Barona Road to an elevation of approximately 630 feet before requiring a booster pump station. **Figure 7** also includes proposed locations of the two required pump stations along Barona Road. At the pump station elevations shown in **Figure 7**, the total dynamic head each pump station (Pump Stations #1 & #2) must overcome is essentially the same, and results in the same size (horsepower) pumps required at each station.

Under the 1,000 afy average demand scenario, each pump station must be sized to provide 200 hp. To meet this capacity while providing redundancy, it is recommended to install two 100-hp duty pumps and a third identical standby pump. Similarly, under the 1,500 afy average demand scenario, each pump station must be sized to provide 250 hp. It is recommended to install two 125-hp duty pumps and a third identical standby pump to accommodate the demand. **Table 5** summarizes projected costs of constructing the raw water pipeline and pump stations.

In addition to construction costs, the Tribe will also need to consider the costs of operating both pump stations. **Table 6** summarizes projected annual operating costs for each average demand scenario. It was assumed that both pump stations will be operating twenty-four hours a day, 365 days a year.

Figure 7: Proposed HWD Raw Water Line Alignment

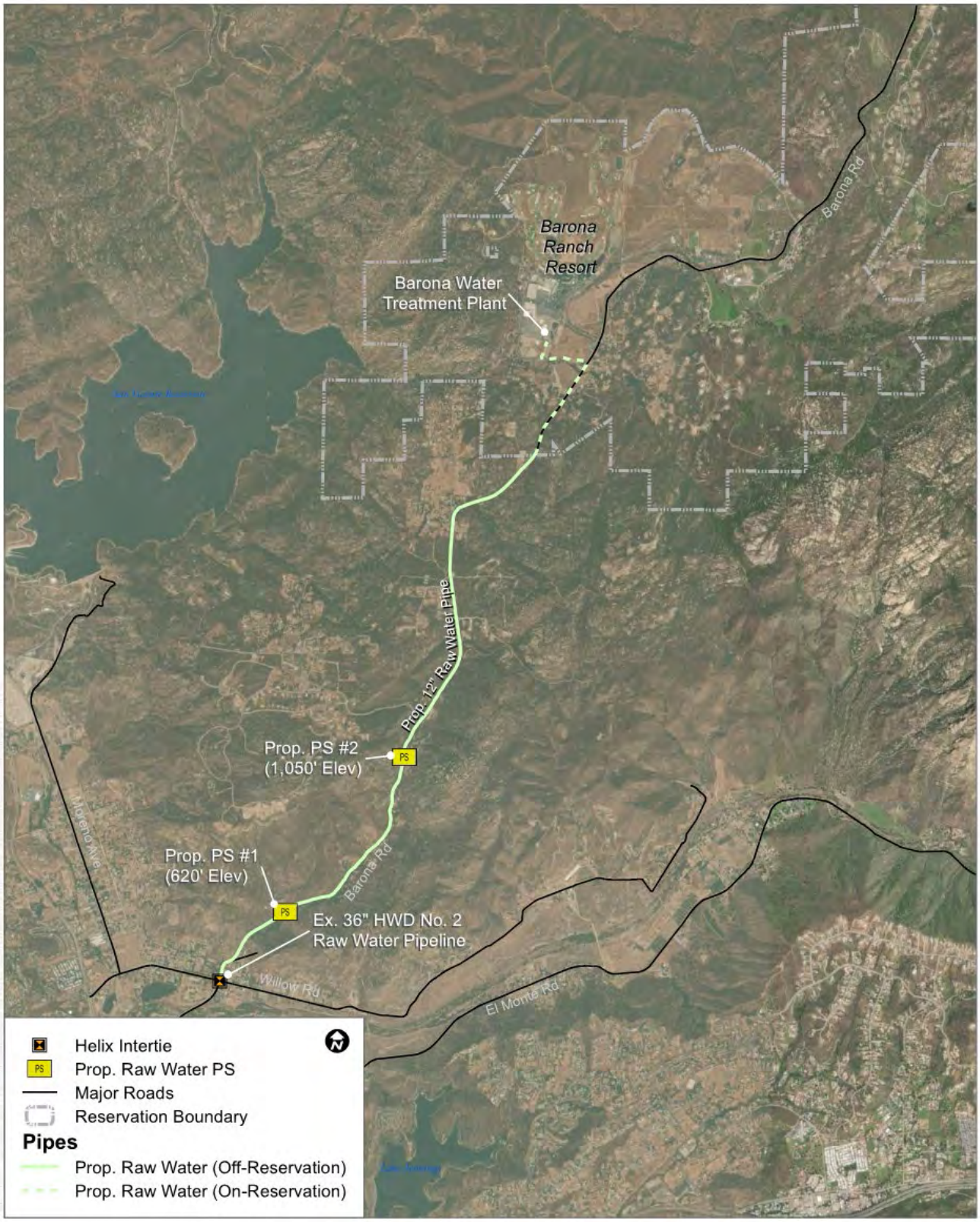


Table 5: HWD Raw Water Service Cost Opinion Summary

Project ID	Project Name	Description	Justification	Project Costs ($1000)
Helix Raw Water Pipeline Projects				
RawW-1	Barona Rd New Raw Water Pipeline - 1,000 afy Demand	Build 28,800 LF of 12-inch Raw Water Pipeline, construct two pump stations each containing two 100 HP duty pumps and one standby	Satisfy 1,000 afy demand scenario	$ 15,066
RawW-2	Barona Rd New Raw Water Pipeline - 1,500 afy Demand	Build 28,800 LF of 12-inch Raw Water Pipeline, construct two pump stations each containing two 125 HP duty pumps and one standby	Satisfy 1,500 afy demand scenario	$ 15,936

Table 6: Annual Pump Stations Operations Cost Summary

Average Demand (afy)	Annual Operations Costs
1,000	$523,000
1,500	$654,000

7 Alternatives Analysis

Considering the three alternatives, the recycled water from RMWD is unique from the other two options. If the Tribe can use the recycled water to offset current treated water demand, it is very beneficial alternative. But it is not treated water, so it may have uses limited to irrigation and agriculture. Recycled water is also a significantly lower cost than treated water under the other alternatives, assuming the Tribe can use the Golf Course Line. As the Tribe has beneficial uses for recycled water, this project is highly recommended.

Comparing treated water from RMWD and raw water from HWD is more complicated. In addition to the cost difference between the two water sources, there are several additional factors to consider. As the cost analysis for the infrastructure identifies a strong preference for receiving water from RMWD, these other considerations are discussed on a non-monetary basis.

7.1 Cost of Water

The water available from RMWD is treated water, which will be more expensive than raw untreated water from HWD. The costs of water from both agencies will require negotiations between the Tribe and those Districts. However, it is noted that long-term untreated water rates from the Water Authority have been increasing significantly as the demand for untreated water diminishes. Advanced water projects, such as the PDMWD AWP project, the San Diego AWP project, and others, reduce the need for imported raw water, which would be treated at local water treatment plants. RMWD is in the process of decommissioning its untreated water system, as the significant reduction in demand has made the operation and maintenance of the system untenable. Therefore, the cost of treated water will increase, as will the cost of untreated water in the future.

7.2 Treatment

Untreated water from HWD requires treatment before entering the Tribe's distribution system. The Tribe currently operates a water treatment plant for the Casino, but it may require upgrades to handle the additional volume required to supply the reservation or additional treatment if the raw water requires additional treatment that the plant is not currently capable of providing. There are also additional costs to treat the imported untreated water compared to the groundwater traditionally used by the Tribe. This additional cost may be offset somewhat by the lower water cost but would require additional analysis of the Tribe's current treatment operational costs and capabilities.

While water from RMWD is treated, it is disinfected with chloramines. The Tribe currently uses free chlorine disinfection at each of its well-head sites, as well at its treatment plant. As the Tribe will continue to use water from their wells as a redundant source of water, it would require modification of their well-head disinfection to chloramine disinfection.

7.3 Environmental

The pipeline from RMWD will be 2,100 feet off-reservation and 37,100 feet on-reservation, compared with HWD alternative where the length of pipeline is 22,900 feet off-reservation and 5,900 feet on-reservation. The pipelines constructed on-reservation are not subject to federal, state, and local regulations. The Tribe could avoid a CEQA document or obtain permits from any governmental agency to construct for the portions of pipeline on-reservation. This avoided cost is difficult to quantify. Depending on the CEQA/permitting requirements, it could be substantial.

7.4 Operation and Maintenance

This study focused on capital costs required to construct facilities necessary to deliver water to the Tribe. The cost of power is quantified for the pump stations required from HWD, but no other costs are defined. These facilities have ongoing operation and maintenance costs, including costs to maintain the pump stations (HWD) and PRS (RMWD), ongoing treatment costs that were identified in the previous section, and maintenance of the pipelines. It is projected that the HWD alternative will have higher operational costs because of the pump station requirements.

In addition, it is projected that there will be additional maintenance costs associated with the pump stations. Large capacity pumps require ongoing, continuous maintenance. In addition, the high operating pressures in conjunction with the cycling of the pumps at the pump stations will increase the risk of pipeline leaks or failures and require transient control to handle water hammer conditions. This increased complexity and risk is projected to add additional cost to the Tribe over the life of the pump stations.

7.5 Real Estate Acquisition

The two pump stations required to deliver water from HWD will need to be constructed on private property adjacent to Barona Road. Since this area is off-reservation, it will be necessary for the Tribe to purchase or lease property at the two locations of the pump stations. This requirement is typically not a significant cost for an easement, but if land acquisition is required, costs could be significantly higher. Also, the off-reservation facilities bring outside forces into the discussion, which can result in project delays and additional project costs beyond the scope of this analysis.

7.6 Transmission Costs

Receiving water from both agencies (and SDCWA) require the Tribe to pay a portion of the agency's costs for transmission of the water to the Tribe's connection point. These costs have not been quantified at this time. However, the distance of travel from the Water Authority facilities to the HWD connection point is significantly longer than that through the RMWD system.

The Tribe is required to pay their fair share of costs to SDCWA and MWD, buying into these water systems. The cost will be different based on the two alternatives because SDCWA uses different facilities to transmit treated and untreated water. The cost of these two fees is based on the assumed Water Service Area, discussed in Section 8.

7.7 Difficulty of Construction

Most of the facilities would be constructed in difficult mountainous terrain. The soil is rocky and there is the potential for significant unexpected construction impacts. This fact is a similar concern for both projects since they are similar lengths and terrain. However, whether the construction is on- or off-reservation will significantly impact this cost.

7.8 Consolidation Cost Savings

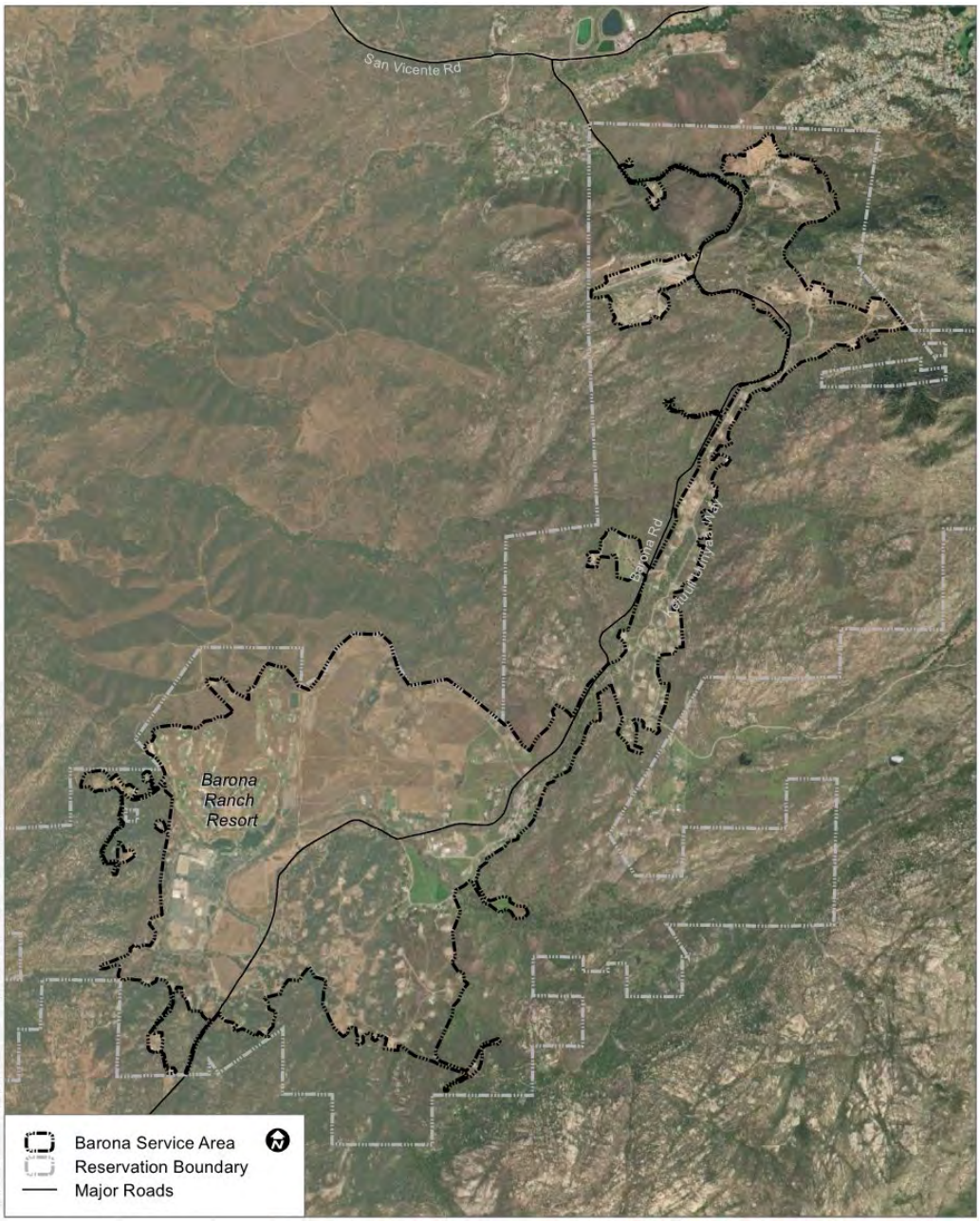
If the Tribe constructs the recycled water line from RMWD, it would be constructed in the same alignment as the treated water pipeline. The Tribe will experience cost savings during design and construction for these sections of pipeline that are parallel. There will be separation requirements for the treated and untreated pipelines, so the recycled and treated line should not be constructed in the same trench.

8 Water Service Area

As discussed previously, the Tribe will be required under California Water Code Section 71611.5 (AB-1361) to define the Water Service Area (WSA). The reason for this definition is derived from the fact that the water agency is not required to annex the tribal area into its district to provide service. However, for the purposes of defining Water Authority and MWD fees, the WSA is required. Therefore, based on this requirement, Dudek has prepared **Figure 8** illustrating the proposed WSA for the Tribe under a potential water service agreement with a local water agency. Of the approximate 7,000 acres of the Barona Reservation, approximately 1,000 acres are projected to be included in the WSA.

Figure 8 – Proposed Barona Service Area Boundary

9



Summary & Recommendations

After completing a capital cost valuation and a qualitative analysis of several additional consideration, the following summary is provided for the three identified water service options.

9.1 RMWD Recycled Water

Table 7: RMWD Recycled Water Summary Table

Project ID	Project Name	Project Costs ($1,000)
Ramona Recycled Water Pipeline Projects		
RW-1a	Barona Road New RW Pipeline - Connect to Existing Golf Course Line	$2,247
RW-1b	Barona Road & Ketuull Uunyaa Way New RW Pipeline - Abandon Ex. Golf Course Line & Construct New Line to Golf Course Irrigation Ponds	$7,749
Advantages		
• Lowest cost alternative • Minimal Transmission/O&M Costs • Potential to consolidate with treated water design and construction		
Disadvantages		
• Specifically Used for Irrigation Purposes (untreated)		
Summary		
As the Tribe can effectively utilize the water, this option is recommended to be implemented		

9.2 RMWD Potable Water

Table 8: RMWD Potable Water Summary Table

Project ID	Project Name	Project Costs ($1,000)
Ramona Recycled Water Pipeline Projects		
PW-1	Barona Road & Ketuull Uunyaa Way New PW Pipeline - 1,000 afy Average Demand	$11,508
PW-2	Barona Road & Ketuull Uunyaa Way New PW Pipeline - 1,500 afy Average Demand	$15,568
Advantages		
• No treatment required • Constructed Primarily on the reservation (Reduced environmental and real estate costs) • Minimal Operation and Maintenance Costs • Potential to consolidate with recycled water design and construction		
Disadvantages		
• Cost of Water is higher than untreated water • Requires conversion of water system to chloramine disinfection • Difficulty of Construction within Barona Road		
Summary		
While the construction costs are high, this option provides treated water to the Tribe with minimal operating costs.		

9.3 HWD Raw Water

Table 9: HWD Raw Water Summary Table

Project ID	Project Name	Project Costs ($1000)
Ramona Recycled Water Pipeline Projects		
RawW-1	Barona Road New Raw Water Pipeline - 1,000 afy Demand, with $500,000 per year in additional pump station operating cost (not included here – Present Worth = $7 million over 15 years)	$15,066
RawW-2	Barona Road New Raw Water Pipeline - 1,500 afy Demand, with $650,000 per year in additional pump station operating cost (not included here – Present Worth = $9 million over 15 years)	$15,936
Advantages		
• Cost of Water is likely lower		
Disadvantages		
• Pump Station operating costs have a present worth of approximately $7 to $9 million over the typical 15-year useful life of the pump stations • Will require treatment at Barona Treatment Plant • Higher environmental/permitting costs • Higher Operation and Maintenance costs (Electrical, pump station operation, pipeline maintenance) • Will require acquisition of real estate • Difficulty of Construction		
Summary		
While the construction costs are like Ramona PW-2, it is likely that the qualitative costs will be significantly more expensive. The Tribe will need to assess if the reduced cost of water outweighs the other disadvantages.		

Recommendation

Based on the information developed throughout this study, it is recommended that the Tribe proceed with conversations with RMWD for both treated water and recycled water service. These options result in the highest portion of needed facilities being constructed on Reservation land and provide the least long-term operation and maintenance cost to the Tribe. We are pleased to meet with you and discuss the findings of this report in detail.

10 Project Costs of Recommended Projects

The project will include ongoing annual costs in addition to the construction cost. Since several of these costs are unknown at this time, they were included as part of the contingency of the construction costs. However, the costs that can currently be identified are estimated and summarized for each of the recommended projects. The costs are preliminary estimates based on discussions with Ramona.

10.1 Recycled Water

The additional costs for recycled water should be minimal other than the cost of the water. Based on the 2018 rate study conducted by Bartie Wells Associates for the recycled water produced by San Vicente, the current rate for recycled water is $1050/AF. Based on an expected volume of 200 afy, the annual costs for the recycled water will be $210,000.

Table 10: Cost of Ramona Recycled Water

Fee	Annual Cost
Commodity	$210,000

Table 11: Total Costs Ramona Recycled Water

Fee	Annual Cost
Construction	$2,250,000
Annual Cost of Water	$210,000

10.2 Potable Water

The Ramona potable water will require additional costs compared to the recycled water. The additional costs will include the costs that Ramona will incur to transmit water from SDCWA to the reservation. These costs will include cost-sharing for the facilities that the District will use to deliver water from CWA to the reservation. Initial discussions with Ramona provide the following estimated breakdown of costs for the water. There could potentially be additional fees that are not included.

Table 12: Cost of Ramona Potable Water

Fee	Cost per AF
Commodity	$1,500
Fixed Fee	$450
Ramona O&M	$250
Ramona CIP Fee	$500
Administration Costs	$350
Total	**$3,050**

Based on the expectation that the tribe will use 1000 afy, the annual cost of water would be $3.050.000.

Based on the California Water Code cited in 2.1 Legal Authority, Ramona will be required to annex the areas of the reservation that they are serving water to. Since they are serving imported water, they will be required to pay fees to MET and SDCWA based on the acres of annexed land. The District will pass these fees on to the Tribe. Additionally, the Tribe will be required to become a member agency of the SDCWA. SDCWA has been contacted to determine the fees that they will require, but the fees that will be incurred are not known at this point.

Table 13: Total Costs Ramona Recycled Water

Fee	Annual Cost
Construction	$15,600,000
Annual Cost of Water	$3,050,000

IS/MND, Appendices 2B

INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION/ ENVIRONMENTAL ASSESSMENT

Ramona Municipal Water District/Barona Indian Tribe Potable and Recycled Water Infrastructure Project

Prepared for:

Barona Band of Mission Indians
and
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Volume 2-B
Appendices

March 2025

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Volume 2-B

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Appendix E

June 2021

Ramona Municipal Water District

Urban Water Management Plan 2020 Update

by Dudek

Urban Water Management Plan
2020 Update

Prepared for:

Ramona Municipal Water District
105 Earlham Street
Ramona, California 92065

JUNE 2021

Printed on 30% post-consumer recycled material.

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Appendix F

February 2025

Focused Construction Noise and Vibration Analysis

by Ganddini Group, Inc.

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
AF	acre-feet
AFY	acre-feet per year
BMP	best management practice
CUWCC	California Urban Water Conservation Council
CWC	California Water Code
DMM	Demand Management Measure
DWR	California Department of Water Resources
ERP	Emergency Response Plan
ESP	Emergency Storage Project
gpcd	gallons per capita per day
MG	million gallons
MGD	million gallons per day
MOU	Memorandum of Understanding
PWS	public water system
RUWMP	Regional Urban Water Management Plan
SANDAG	San Diego Association of Governments
SB	Senate Bill
UWMP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan
WSDRP	Water Shortage and Drought Response Plan
WRP	Water Reclamation Plant

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1 Introduction and Lay Description

1.1 Background and Purpose

This section of the 2020 Urban Water Management Plan (UWMP) provides an introduction to the Ramona Municipal Water District (District), summarizes the Urban Water Management Planning Act (UWMP Act), the coordination process, the history and description of the District, the physical water delivery system, and service area characteristics.

The District is a public agency organized under the Municipal Water District Law of 1911, California Water Code (CWC) Section 71000. The District is governed by five-member Board of Directors, whose members are publicly elected to staggered 4-year terms, and an appointed General Manager. The mission of the District is to provide a safe and reliable supply of water to its customers in the District Service Area of San Diego County. This 2020 UWMP identifies a mix of water resources projected to ensure long-term water supply reliability for the District over the next 20 years.

The District is a member agency of the San Diego County Water Authority (Water Authority), which is in turn a member agency of the Metropolitan Water District of Southern California (Metropolitan). The District relies on Metropolitan and the Water Authority to continue to provide a reliable supply of imported treated and untreated water to the region.

1.2 Urban Water Management Planning and the California Water Code

The sections below are summaries of the CWC sections applicable to UWMPs. The California Department of Water Resources (DWR) provides guidance on addressing CWC UWMP requirements, but water suppliers are solely responsible for ensuring that all CWC requirements and applicable laws have been met.

1.2.1 Urban Water Management Planning Act of 1983

The UWMP Act requires the District to develop UWMPs. The UWMPs provide a framework for long-term water planning and inform the public of a supplier's plans for long-term resource planning that ensures adequate water supplies for existing and future demands.

This part of the CWC requires urban water suppliers to report, describe, and evaluate:

- Water deliveries and uses
- Water supply sources
- Efficient water uses
- Demand management measures
- Water shortage contingency planning

1.2.2 Water Conservation Act of 2009 (SB X7-7)

The Water Conservation Act of 2009 required retail urban water suppliers to report in their UWMPs their base daily per capita water use (baseline gallons per capita per day [gpcd]), 2015 interim urban water use target, 2020 urban water use target, and compliance daily per capita water use. These terms are defined in DWR 2016 (Methodologies) consistent with SB X7-7 requirements (DWR 2016).

1.3 Urban Water Management Plans in Relation to Other Planning Efforts

Urban water suppliers provide information on water management specific to their service areas. However, water management does not happen in isolation; there are other planning processes that integrate with the UWMP to accomplish urban planning. Some of these plans include city and county general plans, water master plans, recycled water master plans, integrated resource plans, integrated regional water management plans, groundwater management plans, and others.

This UWMP has been prepared in accordance with State of California Assembly Bill (AB) 797. The bill, adopted in 1983, required all water suppliers in California with more than 3,000 customers or a demand exceeding 3,000 acre-feet (AF) annually to prepare and adopt a UWMP by 1985. The legislation also required the suppliers to adopt follow-up plans by December 31, 1990. Since originally adopted in 1983, the UWMP Act has been modified by several bills:

1. AB 2661, adopted in July 1990, formally extended the process, requiring suppliers to update their plans every 5 years.
2. Subsequently, Senate Bill 553 (SB 553) was signed into law on September 28, 2000, revising the Urban Water Management Planning Act by replacing the 16 Demand Management Measures (DMMs) with the 14 best management practices (BMPs) currently being implemented by Group 1 signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California.
3. AB 2552 was signed into law on September 28, 2000, and requires each urban water supplier to notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing its UWMP and considering changes to the UWMP.
4. AB 1420 was adopted in 2007, and requires water suppliers to implement the water DMMs to be eligible for water management grants or loans administered by DWR.
5. SB X7-7, adopted in 2009, was passed with the goal of reducing municipal water use by 20% by the year 2020. SB X7-7 requires water suppliers to report baseline per capita water use, 2020 interim per capita water use target, 2025 per capita water use targets, and the basis for determining the estimates.

1.4 UWMP Organization

This section provides a brief description of the contents of the plan by section.

Chapter 1 – Introduction and Lay Description: This introductory chapter provides a discussion on the importance and extent of the District's water management planning efforts.

Chapter 2 – Plan Preparation: Chapter 2 provides information on the District's process for developing the UWMP, including efforts in coordination and outreach.

Chapter 3 – System Description: Chapter 3 contains an overview of the District, including history, organizational structure, service area, population, climate and a description of existing facilities.

Chapter 4 – Customer Water Use: Past, current, and projected water use is summarized in Chapter 4. Water use is quantified for 5-year increments through the year 2040 for uses such as single- family residential, industrial, commercial, etc.

Chapter 5 – Conservation Target Compliance: The calculation of baseline per capita water use and per capita water use targets are described and presented in Chapter 5 to demonstrate whether the District has achieved the 2020 water use target.

Chapter 6 – System Supplies: This chapter reviews the sources for water in the District, including groundwater, imported water, surface water, and recycled water.

Chapter 7 – Water System Reliability: This chapter discusses the reliability of the water supplies through the planning horizon. It provides a normal, single dry year, and 5 consecutive dry year analysis. It also completes the drought risk assessment.

Chapter 8 – Water Shortage Contingency Planning: This chapter provides a plan for the District's contingency analysis for water shortages, including discussions of catastrophic water shortages and drought management planning.

Chapter 9 – Demand Management Measures: Chapter 9 provides a description of the District's efforts to promote conservation and to reduce demand on its water supply.

Chapter 10 – Plan Adoption, Submittal, and Implementation: This chapter describes the steps taken to adopt and submit the UWMP and to make it publicly available. This chapter also discusses the District's plan to implement the UWMP.

Chapter 11 – References: This chapter presents full citations for the documents referred to in this UWMP.

Appendix A **Urban Water Management Plan Checklist**

Appendix B **Ramona Municipal Water District Board of Directors Resolution**

Appendix C **Ramona Municipal Water District Drought Response Conservation Program**

Appendix D **Proof of Publication: UWMP Public Hearing Notice**

1.5 UWMPs and Grant or Loan Eligibility

Funding Eligibility for Retail and Wholesale Suppliers

In order for an urban water supplier to be eligible for any water management grant or loan administered by DWR, the agency must have a current UWMP on file that has been determined by DWR to address the requirements of the CWC. A current UWMP must also be maintained by the water supplier throughout the term of any grant or loan administered by DWR.

An UWMP may also be required in order to be eligible for other state funding, depending on the conditions that are specified in the funding guidelines. Agencies should seek guidance on the specifics of any state funding source from the funding agency or agencies.

Changes to California law require that beginning in 2016, urban retail water suppliers must comply with water conservation requirements established by the Water Conservation Act of 2009 in order to be eligible for state water grants or loans.

1.6 Lay Description

1.6.1 Water Supply

The District's 2020 UWMP provides a comprehensive analysis and review of the District's water supplies and ability to supply water in drought conditions. The District relies on imported water from the Water Authority for its water supply. The District purchases treated and untreated water from the Water Authority, which purchases water from Metropolitan. Metropolitan imports water from the Colorado River Aqueduct and the facilities of the State Water Project. In 2020, the Water Authority obtained 31 percent of its water from Imperial Irrigation District, 19 percent from the canal lining program, 18 percent from Metropolitan Water District, 10 percent from surface water, 8 percent from desalinization, and 14 percent from other sources. Metropolitan's water supplies are further detailed in the Water Authority's 2020 UWMP (Water Authority 2021a). In recent years, the District has been 99 percent dependent on Water Authority water and its efforts to develop and manage a diverse, reliable supply for the region.

A small but growing share of the District's local supply comes from recycled water. Recycled water is produced by two wastewater treatment plants operated by the District, the San Vicente and Santa Maria Water Reclamation Plants. The District currently provides recycled water from the Santa Maria Water Reclamation Plant to the Mt. Woodson Golf Club and recycled water from the San Vicente Water Reclamation Plant to the San Vicente Golf Resort (previously the San Diego Country Estates Golf Course). It used to provide water to Spangler Peak Ranch, but the ranch did not renew the recycled water agreement with the District and does not take water anymore.

The District's current and projected water supplies during normal water years are provided in Table 1-1. The District projects to receive all potable water from the Water Authority. The recycled water projections are based on wastewater generation to increase at a similar rate to water demand projections of 0.6% annually.

Table 1-1. Retail: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	Projected Water Supply (Acre-Feet) Reported to the Extent Practicable									
		2025		2030		2035		2040		2045 (Opt)	
		Reasonably Available Volume	*Total Right or Safe Yield (optional)*	*Reasonably Available Volume*	*Total Right or Safe Yield (optional)*	*Reasonably Available Volume*	*Total Right or Safe Yield (optional)*	*Reasonably Available Volume*	*Total Right or Safe Yield (optional)*	*Reasonably Available Volume*	*Total Right or Safe Yield (optional)*
Purchased or Imported Water	Water Authority	4,839		4,977		5,121		5,268			
Purchased or Imported Water	Poway	0		0		0		0			
Recycled Water		1,158		1,193		1,229		1,267			
Total		**5,997**	**0**	**6,170**	**0**	**6,350**	**0**	**6,535**			

Source: DWR 2021a, Submittal Table 6-9.
Notes: opt = optional; Water Authority = San Diego County Water Authority; Poway = City of Poway.

1.6.2 Water Use

The District's water use has declined 3% annually on average over the last 5 years, while the District's population has increased at 0.2% annually[1]. The District projects that population will increase at 0.6% annually over the next 20 years[2], which is higher than the population increase the District has seen over the last 5 years.

Even though demand has decreased over the last 5 years, the projected increase in population growth is higher than the District has seen over the last 5 years. In order to be conservative, the District is projecting an increase in demand of 0.6% annually, consistent with the expected population increase. The demand projections are shown in Table 1-2.

[1] The population increase was calculated using the Department of Water Resource's Population Tool.
[2] The population projection is from SANDAG Series 13 projections. See section 3.4

Table 1-2. Retail: Total Water Use (Potable and Non-Potable) (Acre-Feet)

	2020	2025	2030	2035	2040	2045 (Opt)
Potable Water, Raw, Other Non-potable	4,747	4,838	4,977	5,120	5,268	
Recycled Water Demand	611	520	520	520	520	
Optional Deduction of Recycled Water Put Into Long-Term Storage[1]	—	—	—	—	—	
Total Water Use	**5,358**	**5,358**	**5,497**	**5,640**	**5,788**	

Source: DWR 2021a, Submittal Table 4-3.
Notes: opt = optional.
[1] Long-term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier **may** deduct recycled water placed in long-term storage from their reported demand.

1.6.3 Water Supply Reliability

As stated previously, the District relies on the Water Authority for their water supply. As part of the Water Authority's 2020 UWMP, the Water Authority reviewed multiple potential drought scenarios. The analyses found that no reduction in in the availability of supplies would be necessary over the 20-year planning horizon due to the drought resilience and diversity of water supplies (Water Authority 2021a).

2 Plan Preparation

This chapter includes specific information on how the 2020 UWMP was prepared, coordinated with other agencies and the public, and adopted. This section also includes information on how the UWMP will be implemented by the District.

2.1 Basis for Preparing a Plan

In accordance with the CWC, urban water suppliers with 3,000 or more service connections or supplying 3,000 or more AF of water per year are required to prepare a UWMP every 5 years.

If an agency is below this defined threshold for the year that a UWMP is due but meets the threshold before the next reporting cycle, the agency is required to adopt a UWMP within 1 year after meeting the reporting threshold.

Water suppliers will provide a brief discussion of the applicability of CWC Section 10617 to their agency.

2.1.1 Public Water Systems

Public water systems (PWSs) are the systems that provide drinking water for human consumption. These systems are regulated by the State Water Resources Control Board, Division of Drinking Water. The California Health and Safety Code defines a PWS as a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days per year.

PWS data reported to the State Water Resources Control Board are used to determine whether a retail supplier has reached the UWMP reporting threshold of 3,000 or more connections or 3,000 AF of water supplied. This is done by reviewing the number of connections and volume of water supplied by each PWS that is managed by the water supplier.

Reporting the PWS(s) that are managed by a water agency determines the basis of reporting; that is, it demonstrates whether the agency is considered an urban water supplier for the purposes of submitting a UWMP.

2.1.2 Agencies Serving Multiple Service Areas/Public Water Systems

Many water suppliers within the state have more than one PWS. Such suppliers may determine regional groupings and reporting for these systems based on internal planning requirements, geographic distribution, and similarities between systems. Each PWS that exceeds the UWMP size threshold must either have an individual plan or be included in a multiple system plan.

The names and numbers of each PWS (drinking water only) that is managed by the District and reported in this UWMP are provided in Table 2-1.

Table 2-1. Retail Only: Public Water Systems

Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 (Acre-Feet)
3710019	Ramona Municipal Water District	9,696	4,747
	Total	9,696	4,747

Source: DWR 2021a, Submittal Table 2-1.
In this UWMP, all units of measure for volume are in acre-feet (AF), as the District has specified in DWR Submittal Table 2-3 (Table 2-3 in this UWMP).

2.2 Regional Planning

Before developing the UWMP, water agencies should consider the extent to which they will become involved in regional planning processes. Developing a cooperative UWMP may be a natural continuation of other regional coordination efforts, such as Integrated Regional Water Management, or may present an opportunity to begin regional collaboration.

Regional planning can deliver mutually beneficial solutions to all agencies involved by reducing costs for the individual agency, assessing water resources at the appropriate geographic scale, and allowing for solutions that cross jurisdictional boundaries.

Some of the other possible benefits, depending on the level of regional cooperation, can include:

- More reliable water supplies
- Increased regional self-reliance
- Improved water quality
- Better flood management
- Increased economic stability
- Restored and enhanced ecosystems
- Reduced conflict over resources

In support of regional UWMPs and regional water conservation targets, the UWMP portion of the CWC provides mechanisms for participating in area-wide, regional, watershed, or basin-wide urban water management planning.

2.3 Individual Planning and Compliance

Before developing the UWMP, water suppliers should decide what level of regional coordination they wish to engage in for the 2020 cycle of urban water management planning.

Regional planning provides many benefits, including increased regional self-reliance, reduced need for imported water, and proper management of regional water assets. Good regional planning considers all interests and works across jurisdictional boundaries.

Agencies may choose:

- **Individual Reporting** – An agency develops a UWMP that reports solely on its service area. The individual UWMP addresses all requirements of the CWC. The agency notifies and coordinates with appropriate regional agencies and constituents.
- **Regional Reporting** – Working with an Integrated Regional Water Management group, wholesaler, other retailers, or another regional entity, an agency becomes part of a regional group that may develop either of the following:
  - **RUWMP** – A regional group develops a regional urban water management plan (RUWMP) that reports on their combined regional service area. The RUWMP addresses all the requirements of the CWC. The requirements of SB X7-7 may be addressed either by individual agencies or through a Regional Alliance. RUWMPs will submit data for multiple agencies, requiring duplication of many standardized tables.
  - **Regional Alliance** – A regional group develops a Regional Alliance that addresses only the requirements of the Water Conservation Act of 2009 (SB X7-7)—that is, planning, reporting, and complying as a Regional Alliance on 2015 and 2020 water use targets. All other elements of the CWC must be addressed through either an individual UWMP or an RUWMP.

Table 2-2 indicates that the District will prepare an individual UWMP.

Table 2-2. Plan Identification

Select Only One	Type of Plan	Name of RUWMP or Regional Alliance (if Applicable)
☒	Individual UWMP	
	☐ Water Supplier is also a member of a RUWMP	—
	☐ Water Supplier is also a member of a Regional Alliance	—
☐	Regional Urban Water Management Plan (RUWMP)	—

Source: DWR 2021a, Submittal Table 2-2.
Notes: RUWMP = regional urban water management plan; UWMP = urban water management plan.

2.4 Fiscal or Calendar Year and Units of Measure

2.4.1 Fiscal or Calendar Year

A water supplier may report on a fiscal year or calendar year basis, but must clearly state in the UWMP the type of year that is used for reporting. The type of year should remain consistent throughout the UWMP.

DWR prefers that agencies report on a calendar year basis in order to ensure UWMP data is consistent with data submitted in other reports to the state. However, DWR also understands that for some agencies fiscal year reporting ensures consistency with local, regional, and/or financial reports. The agency may report either calendar year or fiscal year data in the UWMP.

The District is reporting based on the calendar year in this UWMP.

2.4.2 Reporting Complete 2020 Data

2020 UWMPs are required to include the water use and planning data for the entire calendar year of 2020, if an agency is reporting on a calendar year basis.

2.4.3 Units of Measure

Water agencies use various units of measure when reporting water volumes, such as acre-feet (AF), million gallons (MG), or hundred cubic feet (CCF). Agencies may report volumes of water in any of these units, but must maintain consistency throughout the UWMP.

The type of year (calendar) and units of measure (acre-feet) the District will be using throughout the UWMP are reported in Table 2-3.

Table 2-3. Supplier Identification

Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☒	Supplier is a retailer
Fiscal or Calendar Year (select one)	
☒	UWMP Tables are in calendar years
☐	UMWP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP[1]	
Unit	AF

Source: DWR 2021a, Submittal Table 2-3.
Notes: UWMP = urban water management plan; AF = acre-feet.
[1] Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in this table (based on DWR Submittal Table 2-3).

2.5 Coordination and Outreach

2.5.1 Wholesale and Retail Coordination

Retail agencies that receive a water supply from one or more wholesalers are required to provide their wholesaler(s) with the retail agency's projected water demand from that source, in 5-year increments for 20 years, or as far as data is available.

2.5.2 Coordination with Other Agencies and the Community

Water suppliers must coordinate the preparation of their UWMP with other appropriate agencies in the area, to the extent practicable. In order to verify that agencies have fulfilled provisions set forth in CWC Section 10620(d)(3) and CWC Section 10642.

2.5.3 Public Outreach

In accordance with the UWMP Act, the District notified the land use jurisdictions within its service area that it was preparing the 2020 UWMP. The draft 2020 UWMP was available for public review at the District's office and on the District's website. The District reviewed all of the comments received from stakeholders and revised the UWMP accordingly. A copy of the adopted 2020 UWMP will be provided to all applicable parties within 60 days of submission to DWR.

2.5.4 Notice to Cities and Counties

CWC Section 10621(b) requires that suppliers notify cities and counties to which they serve water that the UWMP is being updated and reviewed. The CWC specifies that this must be done at least 60 days prior to the public hearing.

2.5.4 Agency Coordination

This report constitutes the 2020 update to the District's 2015 UWMP. To adequately demonstrate that the District will have a reliable water supply over the next 20 years, the 2020 UWMP quantifies the mix of existing and projected local and imported supplies necessary to meet future water demands within the District's service area. While the 2020 UWMP includes specific documentation on development of the District's water supplies, the UWMPs submitted by the Water Authority and Metropolitan provide details on their water supplies that are the major contributors to the diversification and reliability of supplies for the District (Water Authority 2021; Metropolitan 2021).

Maintaining consistency among the plans of the District, Water Authority, and Metropolitan is important to the accurate reflection of the projected supplies available to meet the demands of the District. To facilitate coordination of UWMPs, the Water Authority formed an UWMP Working Group made up of staff from the Water Authority and its member agencies. This group provided a forum for exchanging demand and supply information. In addition, DWR hosted a special workshop to review the requirements of the UWMP Act. At a separate workshop, the UWMP Working Group received a briefing from Metropolitan on its regional plan, and participants discussed strategies for coordination between the supply agencies.

2.6 Plan Adoption

This 2020 update of the UWMP was prepared from March 2021 through June 2021. The District's Board of Directors held a public hearing regarding the 2020 UWMP on June 8, 2021, and adopted the 2020 UWMP on June 8, 2021, after the public rate hearing was completed. The updated UWMP was submitted to DWR in June 2021. See Appendix B for a copy of the resolution approving the filing of the 2020 UWMP Update. This plan includes all information necessary to meet the requirements of California Water Code Division 6, Part 2.6 (Urban Water Management Planning).

A copy of the adopted UWMP was submitted to DWR and the California State Library, and is available to the public at the District's office:

Ramona Municipal Water District Office (Engineering Counter)
105 Earlham Street

Ramona, California 92065

2.7 Plan Implementation

This UWMP provides a comparison of water supplies available to the District with the projected water demand through the year 2040, as well as discusses conservation measures the District has implemented to ensure a safe and reliable water source is available to residents of the District. As with previous UWMP updates prepared by the District, this plan will be used to provide the basis for determining that sufficient water supply is available for future proposed development.

The District has incorporated information on the District's wastewater operations in addressing the water recycling element of the 2020 UWMP, which describes the wastewater treatment requirements and water recycling potential.

This UWMP also includes a Water Supply Contingency Plan that the District adopted along with the UWMP.

3 System Description

This section presents history, service area description, and population growth information for the District, as well as a summary of the climate in the District's service area.

3.1 General Description

3.1.1 History of the Ramona Municipal Water District

A timeline detailing the history of the District is presented below.

Year	History
1925	Ramona Irrigation District organized to encompass 660 acres, using water obtained from wells.
1956	Ramona Municipal Water District organized on August 15, 1956, to encompass 20,600 acres that surrounded the Irrigation District.
1958	Poway Pump Station built to deliver Water Authority filtered water to the District. Pump station and 18-inch pipeline become the District's treated water supply.
1967	The District acquires the Ramona Irrigation District.
1970	Annexed San Diego Country Estates, a 3,650-acre development with water and sewer system.
1972	Bargar Water Treatment Plant placed in service. Capacity is rated at 5.3 MGD but clarifiers are limited to 4.0 MGD.
1978	Untreated Water Pump Station (8.4 MGD) and 27-inch pipeline completed in 1978. Capacity is limited by 18-inch supply line, meter rated to 10.8 MGD, and flow rate of 8.2 MGD.
1979	Assessment District 79-1 organized to provide untreated water and encompassed 6,200 acres of agricultural land, primarily avocado groves.
1981	Ramona Fire Protection District dissolved and merged with Ramona Municipal Water District on June 2, 1981.
1981	Ramona Sanitation District (formed in 1946) dissolved and merged with Ramona Municipal Water District (Santa Maria [800 acres, 8,000 population, 2,400 EDU] and San Vicente [2,400 acres, 8,000 population, 2,600 EDU] on July 1, 1981.
1988	Lake Ramona (13,400 AF; can be expanded to 18,400 AF) dedicated for untreated water use on August 27, 1988.
2003	New Poway Pump Station and 30-inch pipeline constructed. Placed in service September 29, 2003. Capacity limited by Water Authority meter to 18.6 MGD.
2003	Construction of San Vicente Water Reclamation Plant expansion to 0.80 MGD and addition of tertiary facilities and pond 3 were completed April 29, 2003.
2015	Replacement of 900 HP pump motor with 900 HP natural gas engine to operate pump at Poway Pump Station.
2020	Board approved decommissioning of the Untreated Water System

Notes: Water Authority = San Diego County Water Authority; District = Ramona Municipal Water District; MGD = million gallons per day; AFD = acre-feet per day; EDU = equivalent dwelling unit; AF = acre-feet; WRP = water reclamation plant; HP = horsepower.

Before 1947, the District and the San Diego region relied on local surface water runoff and groundwater pumped from local aquifers. As the economy and population have grown, local resources have become insufficient to meet the District's water supply needs. The Poway Pump Station was built in 1958 and began delivery of Water Authority treated water to the District. In 1972 the Bargar Water Treatment Plant (WTP) was placed in service to treat water from Lake Sutherland. In 1978 the Poway pump station and pipeline were built to deliver Water Authority water to the District. In August 1988, Lake Ramona was dedicated and the Poway pump station began delivery of untreated

water to the lake. In 2003 an additional Poway pump station and 30-inch pipeline were added to the treated water system, bringing the ultimate capacity to 18.6 million gallons per day (MGD). Since 2007 the District's Bargar WTP has been offline and it does not currently provide any water. Currently, the Water Authority provides all of the District's treated and untreated water supply.

3.1.2 Description of Existing Facilities

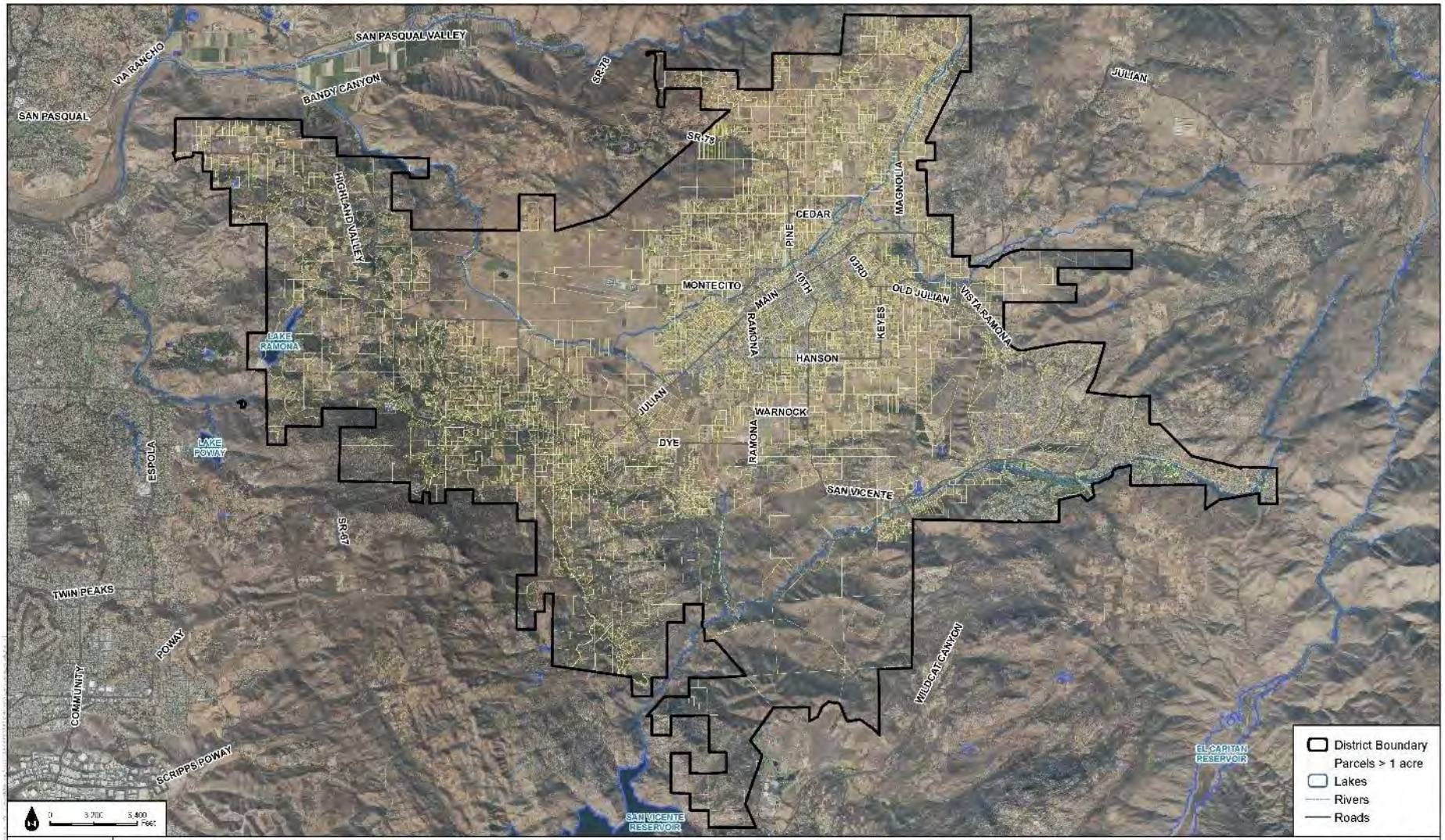
The District purchases treated and untreated water from the Water Authority, delivers recycled water to three recycled water customers, and owns three wells that may be used in an emergency. In 2020, the District delivered approximately 4,747 AF of potable and non-potable water. The District's water delivery system consists of 209 miles of water mains; 15 treated water reservoirs with a capacity of 28 million gallons (MG) 7 untreated reservoirs with a capacity of 13.5 MG, and two water reclamation plants producing recycled water at a capacity of 0.35 MGD and 0.50 MGD.

A small but growing share of the District's local supply comes from recycled water. Groundwater does not produce any significant water supply and groundwater recovery projects have not been attempted by the District. Yield from these projects would be considered drought proof since their yield is primarily independent of precipitation.

3.2 Service Area Boundary Maps

The District provides water for urban and agricultural uses to unincorporated areas in the central area of San Diego County, including the census-designated places of Ramona and San Diego Country Estates. The District's service area covers a total of 45,796 acres (72 square miles) and is the eastern boundary of the Water Authority and Metropolitan service areas. The District encompasses the Santa Maria Valley, San Vicente Valley, and surrounding hillsides, with elevations from 840 feet above mean sea level (amsl) to more than 2,800 feet amsl. Figure 1 shows the District's service area. The District also provides untreated water to other parcels outside of the service area under separate agreements.

The District's service area was primarily agricultural prior to 1970, when the district annexed the San Diego Country Estates and further suburban development began in the region. The County's Multiple Species Conservation Plan has identified large areas of the community of Ramona for grasslands and native habitat preservation. The District provides service to approximately 7,000 urban parcels and 3,000 rural parcels (greater than 1 acre).


SAN PASQUAL VALLEY
VIA RANCHO
SAN PASQUAL
BANDY CANYON
SR-78
JULIAN
SR-78
HIGHLAND VALLEY
MAGNOLIA
CEDAR
PINE
MONTECITO
MAIN
10TH
02RD
OLD JULIAN
VISTA RAMONA
RAMONA
KEYES
LAKE RAMONA
HANSON
JULIAN
WARNOCK
DYE
RAMONA
LAKE POWAY
ESPOLA
SAN VICENTE
SR-67
TWIN PEAKS
POWAY
COMMUNITY
WILDCAT CANYON
SCRIPPS POWAY
EL CAPITAN RESERVOIR
SAN VICENTE RESERVOIR
District Boundary
Parcels > 1 acre
Lakes
Rivers
Roads
DUDEK
SOURCE: SANGIS 2014, 2016
Ramona Water District
FIGURE 1
Ramona Service Area

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3.3 Climate

Climate within the District's service area consists of hot summers and mild winters. The District receives an annual average of 16.7 inches of precipitation in the form of rainfall. The majority of precipitation (more than 80%) occurs during the months of December through April. On a monthly basis, water requirements tend to increase significantly during the summer months, when a decrease in rainfall combined with an increase in temperatures and evapotranspiration levels leads to demands 2–3 times the average daily demand. A monthly climate summary for the District's service area is provided in Table 3-1 and 3-2.

Table 3-1. Ramona Municipal Water District Service Area Monthly Climate Summary

	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Annual
Average Max Temperature (°F)	66.6	67.2	68.4	72.6	76.7	84.4	90.2	91.1	88.1	80.5	73.1	67.4	77.2
Average Min Temperature (°F)	38.1	39.1	41	43.1	48.3	51.7	56.3	57.4	55.2	48.1	41.9	36.8	46.4
Average Total Precipitation (in.)	3.47	3.53	3.17	1.21	0.39	0.07	0.11	0.16	0.33	0.68	1.36	1.71	16.22
Average Monthly ET (in.)	2.17	2.80	4.03	5.10	5.89	6.60	7.44	6.82	5.70	4.03	2.70	1.86	55.10

Source: WRCC 2021; DWR 2021b.
Notes: ET = evapotranspiration.

Table 3-2. Ramona Municipal Water District Service Area Historical Temperature

Average Max Temperature	2016	2017	2018	2019	2020
	72.8	72.1	72.5	70.9	73.2

Source: WRCC 2021

3.4 Population and Demographics

When the District was formed in 1956, the population within the District's service area was approximately 5,600 inhabitants. In 2020, the population within the service area is estimated at 33,986 according to the Department of Water Resource's Population Tool. The average population density is approximately 3.0 persons per household. Over the past 10 years the average annual growth rate within the District's service area has been 0.24%. The population projection for the District's service area through 2045 was forecasted using SANDAG's Series 13 Regional Growth Forecast (SANDAG 2013) and is summarized in Table 3-3.

Table 3-3. Retail: Population — Current and Projected

Population Served	2020	2025	2030	2035	2040	2045 *(opt)*
	33,986	34,386	34,791	35,201	35,615	36,035

Source: DWR 2021a, Submittal Table 3-1.
Note: opt = optional.

Other Demographic Factors

The District's service area consists mostly of single-family residential connections. With the small number of multi-family residential, commercial, and industrial connections, domestic water demand is relatively low. A larger water demand can be seen from the local landscape and agricultural connections that the District serves in this rural portion of the County.

3.5 Land Uses / Capital Improvement Program

The District's water system Water Capital Improvement Program (CIP) (fund 43) consists of projects to improve system capacity and reliability and to be built between FY 20-21 with a total use of funds of $535,000. The District's water Capital Replacement Program (CRP) (funds 10 & 11) consists of replacement and betterment projects required to maintain and enhance the system reliability. The FY 20-21 budget totals $4,072,736, which includes the replacement of existing cast Iron pipelines in the downtown area of Ramona.

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4 Customer Water Use

This chapter summarizes historic and future water demands within the District's service area. In 2020 the District supplied 4,747 AF to its customers. The District's entire water supply, excluding recycled water, is currently imported from the Water Authority.

4.1 Potable, Raw, and Recycled Water Use

The District currently provides potable, raw water, and recycled water to customers in their area. The raw water system has seen a significant drop in demand over the last 5 years and the District intends to decommission it in the near future. The raw water customers will have the option of converting to the potable water system if they desire. To be conservative, it has been assumed that all raw water customers will exercise this option. Therefore, the projections will show that 100% of the raw water demand will be shifted to the potable water system. The District provides 300 AF of untreated water directly from the lake as part of the Malone agreement. That water will continue to be delivered and is left in the projections as raw water demand. This chapter addresses potable water demand and also provides the reporting of raw water demand for the year 2020. Raw water use in 2020 is reported in Table 4-1 (see Section 4.2.1, Past Water Use).

Recycled water is addressed comprehensively in Section 6.4 of Chapter 6, but a summary of recycled water demand is included in Section 4.2.4,Total Water Use. The District currently provides recycled water from the Santa Maria Water Reclamation Plant to the Mt. Woodson Golf Club and recycled water from the San Vicente Water Reclamation Plant to the San Vicente Golf Resort. It used to provide water to Spangler Peak Ranch, but the ranch has not renewed their agreement for recycled water with the District and does not take water anymore.

4.2 Past, Current, and Projected Water Use by Sector

This section details the District's past and projected water use. The District tracks reports water use based on the billing system records. The billing records are based on monthly or bi-monthly meter reads of all customers. Each customer is classified into a sector when the account is established. The water use is reported based upon the customer classifications in the billing records.

4.2.1 Past Water Use

The District's raw and potable water use over the last 5 years is shown in Table 4-1. The District has seen its water demand trend down over the last 5 years. The District's population has continued to rise over the last 5 years, so the decrease in demand is attributed to continued improvements in conservation throughout the District.

Table 4-1. Past Water Use

Year	Total Water Use (Acre-Feet)
2016	5,379
2017	5,030
2018	5,241
2019	4,254
2020	4,747

4.2.2 Current Water Use

The District's potable and raw water demands for 2020 are provided in Table 4-2. The demands provided show the breakdown of water use by sector based on the customer classifications and billing data. The 2020 water demand includes water losses, also provided in Table 4-2.

Table 4-2. Retail: Demands for Potable and Non-Potable Water – Actual

Use Type	2020 Actual		
	Additional Description (as Needed)	*Level of Treatment When Delivered*	*Volume (AF)*
Single family	—	Drinking water	2,600
Multi-family	—	Drinking water	483
Institutional/governmental	—	Drinking water	223
Agricultural irrigation	—	Drinking water	29
Agricultural irrigation	—	Raw water	820
Commercial	—	Drinking water	270
Other potable	Construction	Drinking water	17
Losses	—	Drinking water	305
		Total	4,747

Source: DWR 2021a, Submittal Table 4-1.
Notes: AF = acre-feet.
Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4 (see Chapter 6).

4.2.3 Projected Water Use

Projected water use over the next 20 years in 5-year increments is provided in this section. As discussed in Section 4.2.1, the District's water use has declined 3% annually on average over the last 5 years, while the District's population has increased at 0.2% annually[3]. The District's residential demand has declined at the same rate as their overall demand, indicating that the decrease in demand is likely the result of conservation and can reasonably be expected to continue even as the population continues to increase. The District projects that the population will increase at 0.6% annually[4] over the next 20 years, which is higher than the population increase the District has seen over the last 5 years.

The District does not have land use data available to calculate land-use based demand. However, the population projections from SANDAG used by the District also included expected housing demand increases. The housing unit projections and persons per household projections indicated that the expected increase in population would be primarily single-family homes. The residential demand was analyzed in comparison with the overall demand and it was found that the residential demand changes correlated closely with the overall system demands. Since they correlated closely to overall demand, the demand projections used overall population increase to calculate the demand projections. Even though demand has decreased over the last 5 years, the projected increase in population growth is higher than the District has seen over the last 5 years. In order to be conservative, the District is projecting

[3] The population increase was calculated using the Department of Water Resource's Population Tool
[4] The population projection is from SANDAG Series 13 projections. See section 3.4

an increase in demand of 0.6% annually, consistent with the expected population increase. The demand projections are shown in Table 4-3.

As stated in Section 4.2.1, the raw water system is expected to be decommissioned in 2021. All raw water demand is projected to be filled with potable water, because recycled water infrastructure is not in place to serve the raw water customers. The District is still projected to provide 300 AF of untreated water as part of the Malone agreement. That water will continue to be delivered and is in the projections as raw water demand.

Table 4-3. Retail: Use for Potable and Non-Potable Water – Projected

Use Type	Additional Description (as Needed)	Projected Water Use (Acre-Feet) Report edto the Extent that Records Are Available				
		2025	*2030*	*2035*	*2040*	*2045 (Opt)*
Single family	—	2,678	2,759	2,843	2,929	
Multi-family	—	498	513	528	544	
Institutional/governmental	—	229	236	243	250	
Agricultural irrigation	Raw water	300	300	300	300	
Agricultural irrigation	—	576	602	630	658	
Commercial	—	278	286	295	304	
Other potable	Construction	17	18	18	19	
Losses	—	263	263	263	263	
Total		**4,838**	**4,977**	**5,120**	**5,268**	

Source: DWR 2021a, Submittal Table 4-2.
Note: Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4 (see Chapter 6).

4.2.4 Total Water Use

Total water system projections are shown in Table 4-4. The projections include projections from Table 4-3 and Table 6-4 (see Section 6.4.3.1, Current and Planned Uses of Recycled Water).

Table 4-4. Retail: Total Water Use (Potable and Non-Potable) (Acre-Feet)

	2020	2025	2030	2035	2040	2045 (Opt)
Potable water, raw, other non-potable	4,747	4,838	4,977	5,120	5,268	
Recycled water demand	611	520	520	520	520	
Optional deduction of recycled water put into long-term storage[1]	—	—	—	—	—	
Total water use	5,358	5,358	5,497	5,640	5,788	

Source: DWR 2021a, Submittal Table 4-2.
Notes: opt = optional.

4.3 Distribution System Water Losses

Distribution system water losses (also known as "real losses") are the physical water losses from the water distribution system and the District's storage facilities, up to the point of customer consumption. The District has completed an annual water audit and submitted it to DWR every year since 2016. The 2020 water losses are based on a draft 2020 water audit because the 2020 water audit has not been validated and submitted to the state prior to the completion of the 2020 UWMP. The water losses reported in the annual water audits are presented in Table 4-5.

Table 4-5. Retail: Last Five Years of Water Loss Audit Reporting

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss (Acre-Feet)[1]
01/2016	272.953
01/2017	296.471
01/2018	248.11
01/2019	194.374
01/2020	305.197

Source: DWR 2021a, Submittal Table 4-4.
Notes: 2020 water losses are reported based on a draft 2020 water audit. The 2020 water audit had not been validated prior to the completion of the UWMP.
[1] Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the American Water Works Association (AWWA) Free Water Audit Software v 6.0 worksheet.

4.4 Water Use for Lower Income Households

The projected water demand for lower income housing as required by the UWMP Act is described in this section. A *lower-income household* is defined as a household whose income is 80% or less of the median income in the District's service area. The number of low-income households in the District's service area was forecasted using SANDAG's Series 13 Regional Growth Forecast (SANDAG 2013).

Table 4-6. Retail Only: Inclusion in Water Use Projections

Are Future Water Savings Included in Projections?	No
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found.	
Are Lower-Income Residential Demands Included in Projections?	Yes

Source: DWR 2021a, Submittal Table 4-5.

4.5 Climate Change Considerations

The District conducted a climate change analysis by evaluating their supplies and demands and their vulnerability to climate change. The District relies on the Water Authority for its water supply, which has done extensive research on climate change impacts to their water supplies. In their 2020 UWMP, they concluded that they continue to develop a diverse mix of local water supplies and conduct annual tracking to ensure water supply availability is sufficient to meet demands. These ongoing efforts help to ensure the District's water supplies will be resilient to future climate change.

On the demand side, the District has a large volume of agricultural demand. The District anticipates that climate change could result in an increase in irrigation demands from the agricultural sector. However, the District has also seen a decrease in demand in the agricultural sector, which is likely attributable to improvements in irrigation techniques and a decrease in the volume of land that is used for agriculture. Therefore, the District considers a significant change in demand due to climate change to be unlikely.

5 Conservation Target Compliance

With the adoption of the Water Conservation Act of 2009, also known as SB X7-7, the State of California is required to reduce urban per capita water use by 20% by the year 2020. CWC Section 10608.16(a) states: "The state shall achieve a 20 percent reduction in urban per capita water use in California on or before December 31, 2020." In order to achieve this statewide objective, the Legislature required each retail supplier subject to the Water Conservation Act to develop an urban water use target to help the state collectively achieve a 20% reduction. The Legislature stated that the cumulative results of all retail suppliers' reductions would meet the statewide legislative requirement.

5.1 Baseline Per Capita Water Use

The determination of baseline per capita water use for the District is summarized in Table 5-1. The District's baseline and targets presented were calculated in the 2015 UWMP (District 2016). The District's service area has not changed since 2015, so the 2015 baselines and targets have not been recalculated.

The baseline use is the average annual per capita water use calculated over a period of 10 years between 1997 and 2006. The 10-year baseline was used because recycled water deliveries by the District did not meet the threshold of 10% of total water deliveries. As shown in Table 5-1, the District's 10-year (1997–2006) baseline per capita water use is 294 gallons per capita per day (gpcd) and its 5-year baseline is 226 gpcd (note that the previous statement that acre-feet [AF] would be used throughout this UWMP for volume does not apply to per capita water use discussions). The District's confirmed 2020 target is 215 gpcd.

Table 5-1. Baselines and Targets Summary from SB X7-7 Verification Form

Baseline Period	Start Year	End Year	Average Baseline (gpcd)	Confirmed 2020 Target
10–15 year	1997	2006	294	215
5 year	2006	2010	226	

Source: DWR 2021a, Submittal Table 5-1.
Notes: gpcd = gallons per capita per day.
Per DWR direction, all cells in this table have been populated manually from the supplier's SB X7-7 Verification Form and reported in gallons per capita per day (gpcd); note that the previously stated use of acre-feet for volume throughout this UWMP does not apply for per capita use.

5.2 Service Area Population

The District's population of 33,986, reported in Table 5-2, was calculated using DWR's online Population Tool.

Table 5-2. 2020 Compliance Year Population

Compliance Year	Population
2020	33,986

Source: DWR 2021c.

5.3 Gross Water Use

The District's gross water use is provided in Table 5-3. The gross water includes potable and raw water sources; recycled water is excluded.

Table 5-3. 2020 Gross Water Use (Acre-Feet)

Compliance Year 2020	2020 Volume Into Distribution System	2020 Deductions					2020 Gross Water Use
		Exported Water	*Change in Dist. System Storage (+/−)*	*Indirect Recycled Water*	*Water Delivered for Agricultural Use*	*Process Water*	
	4,000	—	—	—	—	—	4,000

Source: SB X7-7 Table 4.

5.4 2020 Compliance Daily Per Capita Water Use

The District's daily per capita water use is calculated as 105 gpcd, as shown in Table 5-4.

Table 5-4. 2020 Gallons per Capita per Day (gpcd)

2020 Gross Water *From SB X7-7 Table 4*	2020 Population *From SB X7-7 Table 3*	2020 gpcd
4,000	33,986	**105**

Source: SB X7-7 Table 5.

As described above and summarized in Table 5-5, the District's baseline per capita water use target is 215 gpcd. The District has achieved its target 2020 gpcd and has complied with SB X7-7.

Table 5-5. 2020 Compliance (gpcd)

Actual 2020 gpcd[1]	Optional Adjustments to 2020 gpcd					2020 Confirmed Target gpcd [1,2]	Did Supplier Achieve Targeted Reduction for 2020?
	Enter "0" if Adjustment Not Used			*Total Adjustments*	***Adjusted 2020 gpcd** (Adjusted if Applicable)*		
	Extraordinary Events	*Weather Normalization*	*Economic Adjustment*				
105	0	0	0	0	105	215	**Yes**

Source: SB X7-7 Table 9.
Notes: gpcd = gallons per capita per day.
[1] As required, all values are reported in gallons per capita per day.
[2] 2020 confirmed target gpcd is taken from the supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.

6 System Supplies

This section contains a discussion about existing and planned sources of water including imported water, groundwater, surface water, and recycled water.

6.1 Imported Water

The District purchases treated and untreated water from the Water Authority, which purchases water from Metropolitan. Metropolitan imports water from the Colorado River Aqueduct and the facilities of the State Water Project. Metropolitan's water supplies are further detailed in the Water Authority's 2020 UWMP (Water Authority 2021a). In recent years the District has been 99% dependent on Water Authority water and its efforts to develop and manage a diverse and reliable supply for the region.

Water Authority

The District is a member agency of the Water Authority. The Water Authority's 24 member agencies purchase water for retail distribution within their service territories. The Water Authority was established in 1943 to provide supplemental water supply to the San Diego region. The Water Authority is the County's chief source of water, supplying from 75% to 95% of the region's needs, depending on weather conditions and yield from surface, recycled, and groundwater projects (Water Authority 2021a).

After experiencing severe shortages from Metropolitan during the 1987–1992 drought, the Water Authority began aggressively pursuing actions to diversify the region's supply sources by developing water supplies independent of Metropolitan. The Water Authority's 2020 UWMP provides additional information about these projects, which include an agreement with the Imperial Irrigation District to transfer up to 200,000 AF of conserved Colorado River water to the Water Authority by the year 2021; lining of the All-American Canal and the Coachella Canal to provide up to 77,700 acre-feet per year (AFY) of conserved Colorado River water to the Water Authority; and the Carlsbad Seawater Desalination Project, which provides a highly reliable local supply of 56,000 AFY to the region (Water Authority 2021a).

The Water Authority's 2020 UWMP also provides information on the local resources being developed and managed by its member agencies, which include surface water, groundwater, and recycled water, as well as future seawater desalination projects.

The District's sources of treated and untreated water from the Water Authority are the Poway pump stations and pipeline discussed in Section 3.1.1, History of the Ramona Municipal Water District.

6.2 Groundwater

The District owns three wells with a total capacity of 330 gallons per minute and a potential yield of 200 AFY. The District wells are currently not being used due to high nitrate concentrations and would require recertification prior to being placed back in service. Groundwater from private wells is used by local landowners. Because the District does not rely on any groundwater for its water supply, the District is not required to prepare a groundwater management plan.

Due to issues that limit District involvement in groundwater development, which include economic and financial considerations as well as legal, institutional, regulatory, environmental, and water quality issues, the District has not moved forward with plans to use groundwater in its service area. The Santa Maria Basin lies within a major portion of the District's service area. The Santa Maria Basin has numerous private wells and water rights, which are a major concern that would need to be resolved before groundwater projects could move forward. The District did not pump groundwater within the last 5 years.

6.3 Surface Water

The District has two surface storage reservoirs available for use, Lake Ramona and Lake Sutherland. Lake Ramona is owned by the District and is filled with untreated water purchased from the Water Authority. Minimal amounts of surface water runoff enter the lake. Lake Ramona is used to supply untreated irrigation water to customers in the agricultural area on the northwest end of the District.

Lake Sutherland is owned by the City of San Diego; local runoff provides the lake's primary source of untreated water.

6.4 Wastewater and Recycled Water

6.4.1 Wastewater Collection, Treatment, and Disposal

Recycled water that meets Title 22 standards is produced by two wastewater treatment plants operated by the District. The Santa Maria Water Reclamation Plant produces an effluent which meets secondary treatment standards. This treated effluent is then conveyed to the tertiary treatment facilities located at the Rangeland Road treatment site. The San Vicente Water Reclamation Plant produces secondary- and tertiary-level treated effluent.

6.4.1.1 Wastewater Collected within Service Area

The District collected 1,334 AF of wastewater in 2020, as shown in Table 6-2.

Table 6-2. Retail: Wastewater Collected Within Service Area in 2020

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	*Wastewater Volume Metered or Estimated?*	*Volume of Wastewater Collected from UWMP Service Area 2020 (AF)*	*Name of Wastewater Treatment Agency Receiving Collected Wastewater*	*Treatment Plant Name*	*Is WWTP Located within UWMP Area?*	*Is WWTP Operation Contracted to a Third Party? (Optional)*
Ramona Municipal Water District	Metered	763	Ramona Municipal Water District	Santa Maria Water Reclamation Plant	Yes	No

Table 6-2. Retail: Wastewater Collected Within Service Area in 2020

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	*Wastewater Volume Metered or Estimated?*	*Volume of Wastewater Collected from UWMP Service Area 2020 (AF)*	*Name of Wastewater Treatment Agency Receiving Collected Wastewater*	*Treatment Plant Name*	*Is WWTP Located within UWMP Area?*	*Is WWTP Operation Contracted to a Third Party? (Optional)*
Ramona Municipal Water District	Metered	571	Ramona Municipal Water District	San Vicente Water Reclamation Plant	Yes	No
Total Wastewater Collected from Service Area in 2020		1,334				

Source: DWR 2021a, Submittal Table 6-2.
Notes: UWMP = urban water management plan; WRP = water reclamation plant; WWTP = wastewater treatment plant.

6.4.1.2 Wastewater Treatment and Discharge within Service Area

Table 6-3 identifies the volume of treated wastewater either recycled or disposed of within the service area. In 2020, the District provided recycled water to three customers, including Mt. Woodson Golf Course, San Vicente Golf Course, and Spangler Peak Ranch. In recent months, Spangler Peak Ranch has ceased receiving recycled water from the District. Recycled water not sold to permitted recycled water users is disposed of through spray fields associated with each treatment plant.

Table 6-3. Retail: Wastewater Treatment and Discharge within Service Area in 2020

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number (Optional)	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2020 Volumes (Acre-Feet)				
							Wastewater Treated	*Discharged Treated Wastewater*	*Recycled Within Service Area*	*Recycled Outside of Service Area*	*Instream Flow Permit Requirement*
Santa Maria	Spray fields	Rangeland Road spray fields	—	Land disposal	No	Secondary, Undisinfected	500	500	—	—	—
Santa Maria	Mt. Woodson Golf Club	16422 N. Woodson Dr.	—	Land disposal	No	Tertiary	179	—	179	—	—
San Vicente	Spangler Peak Ranch	—	—	Land disposal	No	**Secondary, Disinfected – 2.2**	91	—	91	—	—
San Vicente	San Vicente Golf Resort	—	—	Land disposal	No	Tertiary	341	—	341	—	—
San Vicente	Spray fields	—	—	Land disposal	No	Secondary, Disinfected – 2.2	47	47	—	—	—
						Total	1,158	547	611	0	0

Source: DWR 2021a, Submittal Table 6-3.

6.4.2 Recycled Water System

Recycled water that meets Title 22 standards is produced by two wastewater treatment plants operated by the District: the San Vicente and Santa Maria Water Reclamation Plants. The recycled water system for each facility is described below.

6.4.2.1 San Vicente Wastewater Service Area

The District's San Vicente Wastewater Service Area serves a population of roughly 10,000, located primarily within San Diego Country Estates, a planned community initially developed in the 1970s that includes the San Vicente Golf Resort. Wastewater from this service area is conveyed to the San Vicente Water Reclamation Plant for treatment and effluent disposal. The treatment plant has a current capacity of 0.80 MGD of average dry weather flow.

6.4.2.2 Santa Maria Wastewater Service Area

Existing recycled water facilities for the Santa Maria Wastewater Service Area consist of a tertiary treatment plant and a transmission main to a single end user. Reclaimed water is currently produced at the Santa Maria Water Reclamation Plant at Rangeland Road. This tertiary treatment plant has an influent capacity of 0.360 MGD, with an effluent capacity of 0.342 MGD. Recycled water is conveyed from the Rangeland Road Santa Maria Water Reclamation Plant to the Mt. Woodson Golf Club. Mt. Woodson Golf Club is currently the sole end user of recycled water in the Santa Maria Water Service Area.

6.4.3 Recycled Water Beneficial Uses

6.4.3.1 Current and Planned Uses of Recycled Water

The District relies on recycled water as a means of disposal for treated wastewater effluent at both wastewater treatment facilities. The treatment plants produce both secondary and tertiary effluent, which is used to provide recycled water to the Mt. Woodson Golf Club and San Vicente Golf Resort and for agricultural irrigation. The District currently provides recycled water to its customers under an effluent disposal agreement that details recycled water pricing and each party's responsibilities. Alternative and more beneficial uses of recycled water are currently being evaluated by the District to offset current potable and raw water demands.

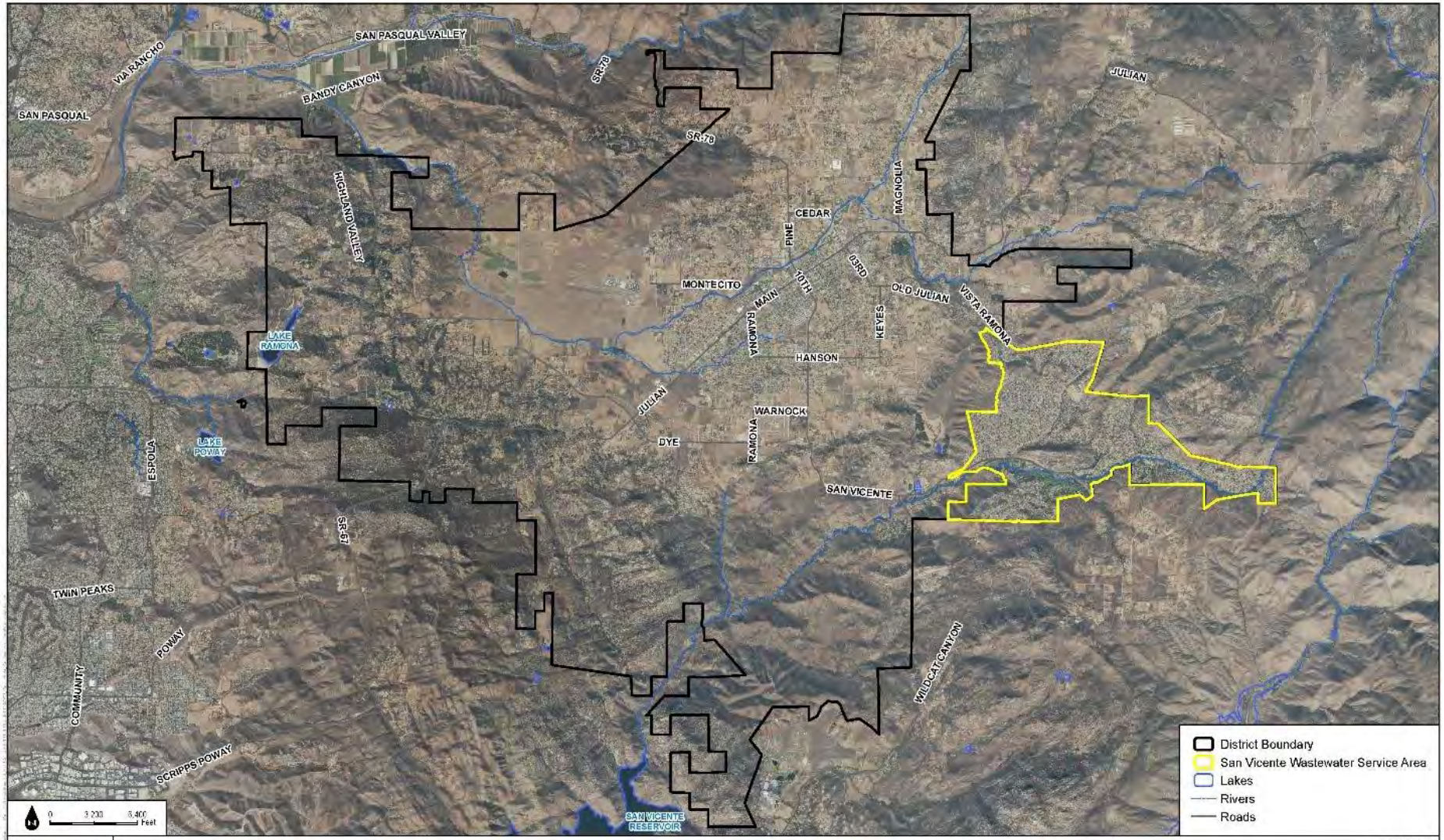
Table 6-4 quantifies the current and projected recycled water to be used within the District's service area. Spangler Peak Ranch didn't renew the recycled water agreement with the District and is therefore no longer receiving recycled water. The projected recycled water demands do not project any future demands from Spangler Peak Ranch. The golf courses' recycled water demand has increased by 25% since 2015. However, the District does not anticipate that the demands will continue to increase, so the projections for the golf courses are constant over the planning horizon.

The 2015 UWMP classified the sprayfields as recycled water used for irrigation. However, the water discharged in the sprayfields is not used beneficially, so it has been reclassified as discharged treated wastewater in Table 6-4 and is not included in the recycled water projections.

Table 6-4. Retail: Recycled Water Direct Beneficial Uses within Service Area (Acre-Feet)

Name of Supplier Producing (Treating) the Recycled Water:	Ramona Municipal Water District									
Name of Supplier Operating the Recycled Water Distribution System:	Ramona Municipal Water District									
Supplemental Water Added in 2020 (volume) Include units	—									
Source of 2020 Supplemental Water	—									
Beneficial Use Type	Potential Beneficial Uses of Recycled Water (Describe)	Amount of Potential Uses of Recycled Water (Quantity)	General Description of 2020 Uses	Level of Treatment	2020	2025	2030	2035	2040	2045 (Opt)
Agricultural irrigation	—	—	Spangler Peak Ranch	Secondary, Disinfected - 2.2	91	0	0	0	0	
Landscape irrigation (exc. golf courses)	—	—	—	—	—	—	—	—	—	
Golf course irrigation	—	—	Mt. Woodson Golf Club and San Vicente Golf Resort	Tertiary	520	520	520	520	520	
Other (description required)	—	—	—	—	—	—	—	—	—	
				Total	611	520	520	520	520	

Source: DWR 2021a, Submittal Table 6-4.


SAN PASQUAL VALLEY
VIA RANCHO
SAN PASQUAL
BANDY CANYON
SR-78
JULIAN
HIGHLAND VALLEY
CEDAR
PINE
MAGNOLIA
MONTECITO
10TH
03RD
OLD JULIAN
VISTA RAMONA
MAIN
RAMONA
KEYES
LAKE RAMONA
HANSON
JULIAN
WARNOCK
DYE
RAMONA
LAKE POWAY
ESPOLA
SAN VICENTE
SR-67
TWIN PEAKS
POWAY
COMMUNITY
WILDCAT CANYON
SCRIPPS POWAY
SAN VICENTE RESERVOIR
0 3,200 6,400 Feet
District Boundary
San Vicente Wastewater Service Area
Lakes
Rivers
Roads
DUDEK
SOURCE: SANGIS 2014, 2018
Ramona Water District
FIGURE 3
San Vicente Wastewater Service Area

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Figure 3 Santa Maria Wastewater Service Area



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6.4.3.2 Planned Versus Actual Use of Recycled Water

Table 6-5 compares 2015 UWMP recycled water use projections for 2020 to actual 2020 recycled water use. As noted in Section 6.4.3.1, Spangler Peak Ranch did not renew the recycled water agreement with the District, which lowered the recycled water demand. In addition, the Santa Maria WRP spray fields have been reclassified from landscape irrigation to discharge water in this update since the spray fields do not provide a beneficial use. These changes explain the differences for agricultural irrigation and landscape irrigation between 2020 projections and actual uses.

Table 6-5. Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual

Beneficial Use Type	2015 Projection for 2020 (AF)	2020 Actual Use (AF)
Agricultural irrigation	234	138
Landscape irrigation (exc. golf courses)	300	
Golf course irrigation	413	520
Commercial use	—	—
Industrial use	—	—
Geothermal and other energy production	—	—
Seawater intrusion barrier	—	—
Recreational impoundment	—	—
Wetlands or wildlife habitat	—	—
Groundwater recharge (IPR)	—	—
Reservoir water augmentation (IPR)	—	—
Direct potable reuse	—	—
Other (description required)	—	—
Total	947	658

Source: DWR 2021a, Submittal Table 6-5.
Notes: UWMP = Urban Water Management Plan; AF = acre-feet; IPR = indirect potable reuse.

6.4.4 Actions to Encourage and Optimize Future Recycled Water Use

The District is currently evaluating alternative and more beneficial uses of recycled water to offset current potable and raw water demands but has not identified any future recycled water opportunities at this time. The District is open for discussion with any private party, developer, or public agency interested in obtaining recycled water from either of the wastewater reclamation plants. There may be opportunities for current raw water customers to take recycled water, since the raw water system is being decommissioned. There may also be opportunities for the District to utilize some of the raw water infrastructure being decommissioned; for example, the Woodson untreated water tank has been identified as a potential conversion tank to recycled water tank to add storage to the recycled water system in the Santa Maria Wastewater Service Area. The recycled water infrastructure is not currently in place to provide recycled water to any raw water customers, but the District will consider options to increase recycled water infrastructure in any way they can. However, the District does not currently have any plans to expand recycled water use in the future.

6.5 Desalinated Water Opportunities

Development of desalinated water sources is not included in the District's planning horizon due to the prohibitive costs associated with desalination when compared to supplying the District's demands with water purchased from the Water Authority. The Water Authority has completed the Carlsbad Desalination Project, which provides a highly reliable local supply of 56,000 AFY for the region and its member agencies. Additional information regarding this project is included in Section 4.4 of the Water Authority's 2020 UWMP (Water Authority 2021a).

6.6 Future Water Projects

As previously mentioned, the District's Bargar WTP is a conventional water treatment plant originally constructed in 1974. Several improvements were implemented after the plant's original construction, including the addition of an inline static mixer (1978), a splitter box (1982), filter-to-waste piping (1998), a chlorine scrubber system (1998), additional sludge drying beds and sludge pumps, and modifications to the chemical feed room.

The Bargar WTP is currently offline and was last operated in 2007, leaving the District dependent on the Water Authority to meet potable water demands. The District currently has no plans for placing Bargar WTP back into service as a source of potable water. Therefore, because the District has no expected future water supply projects or programs that would provide a quantifiable increase to the District's water supply.

6.7 Summary of Existing and Planned Sources of Water

The San Diego County Water Authority is the single water purveyor for treated and untreated water to the San Diego region. The district has three service connections. Two treated and one untreated, Ramona 1 and Ramona 3 are the untreated and treated connections respectively from the water authority. Ramona 2 is the treated connection from the City of Poway Treatment Plant facility. Actual source and volume of water for the year 2020 are provided in Table 6-6. Projections for the volume of water, by source, that is reasonably available, based on historical deliveries for normal years, are provided in Table 6-6.

Table 6-6. Retail: Water Supplies — Actual

Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume (AF)	***Water Quality***	***Total Right or Safe Yield (AF) (Optional)***
Purchased or imported water	Water Authority	3,918	Drinking water	—
Transfers	Poway	79	Drinking water	—
Purchased or imported water	Water Authority	3	Other non-potable water	—
Recycled water	Santa Maria and San Vicente WRPs	1,345	Recycled water	—
	Total	**5,345**	—	—

Source: DWR 2021a, Submittal Table 6-8.
Notes: AF = acre-feet; Water Authority = San Diego County Water Authority; Poway = City of Poway; WRP = water reclamation plant.

6.8 Projected Water Supply

The District's current and projected water supplies during normal water years are provided in Table 6-7. The District expects to receive all potable water from the Water Authority. Water from the City of Poway is not expected to be used on a regular basis, so this amount is projected at 0. The recycled water projections are based on the assumption that wastewater generation will increase at a similar rate to water demand projections of 0.6% annually.

Table 6-7. Retail: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	Projected Water Supply (Acre-Feet) Report to the Extent Practicable									
		2025		2030		2035		2040		2045 (Opt)	
		Reasonably Available Volume	*Total Right or Safe Yield (Optional)*	*Reasonably Available Volume*	*Total Right or Safe Yield (Optional)*	*Reasonably Available Volume*	*Total Right or Safe Yield (Optional)*	*Reasonably Available Volume*	*Total Right or Safe Yield (Optional)*	*Reasonably Available Volume*	*Total Right or Safe Yield (Optional)*
Purchased or Imported Water	Water Authority	4,839	—	4,977		5,121	—	5,268			
Purchased or Imported Water	Poway	0	—	—	—	0	—	0			
Recycled Water	—	1,158		1,193		1,229	—	1,267			
	Total	**5,997**	**0**	**6,170**	**0**	**6,350**	**0**	**6,535**			

Source: DWR 2021a, Submittal Table 6-9.
Notes: opt = optional; Water Authority = San Diego County Water Authority; Poway = City of Poway.

6.9 Energy Use

The total water treated and distributed at the two treatment plants, San Vicente and Santa Maria, was reported, as shown in Table 6-8. Volume data were read from the water meters at the plants. The total energy consumed came directly from San Diego Gas & Electric Company monthly billing statements. The data are reported in Table 6-8. The total energy intensity for the District was 3,576.1 kilowatt-hours/MG.

Table 6-8. Recommended Energy Reporting – Water Supply Process Approach

	Urban Water Supplier Operational Control							
	Water Management Process						*Non-Consequential Hydropower (if Applicable)*	
Units	*Extract and Divert*	*Place into Storage*	*Conveyance*	*Treatment*	*Distribution*	*Total Utility*	*Hydropower*	*Net Utility*
Volume of Water Entering Process (AF)	—	—	—	1,334	1,158	1,158	0	1,158
Energy Consumed (kWh)	—	—	—	1,349,378	—	1,349,378	0	1,349,378
Energy Intensity (kWh/MG)	0.0	0.0	0.0	3,104.3	0.0	3,576.1	0.0	3,576.1

Source: DWR 2021a, Energy Use Table O-1A.
Notes: AF = acre-feet; kWh = kilowatt-hours; kWh/MG = kilowatt-hours per million gallons.
Reporting period was January 1, 2020, through December 31, 2020. Data Source: volume of water was read off meters at the plant and energy use is from San Diego Gas & Electric Company billing statement.

7 Water System Reliability

As stated in the UWMP Act, every urban water supplier shall include, as part of its plan, an assessment of the reliability of its water supply. The water supply and demand assessment must compare the total projected water use with the expected water supply over the next 20 years in 5-year increments. This reliability assessment is required for normal water years, single dry water years, and multiple dry water years.

7.1 Constraints on Water Sources

The District is reliant on the Water Authority's efforts to develop actions to diversify the region's supply sources. The Water Authority's documentation of the existing and projected supply sources being implemented to ensure consistency of their wholesale water supply are provided in the Water Authority's 2020 UWMP (Water Authority 2021a). Factors that could result in inconsistency of the Water Authority supply to the District are presented in Table 7-1.

Table 7-1. Factors Resulting in Inconsistency of Supply

Water Supply Sources	Specific Source Name	Limitation Quantification	Legal & Environmental	Water Quality	Climatic
Water Authority	—	—	Current supply from the Delta is occasionally inconsistent due to legal and environmental decisions. Future supply may not be consistent due to delays in construction, legal rulings, or environmental decisions. Legal decisions regarding the Quantification Settlement Agreement could reduce supplies from the Colorado River.	None.	Drought and climate change could result in reduction of imported water supply. Colorado River supply may be reduced due to an extended drought period.
Recycled Water	—	—	None.	None.	None.

7.2 Reliability by Type of Year

The District currently imports 99% of its water supply from the Water Authority; therefore, the assessment and projected reliability over the next 20 years as stated in this 2020 UWMP is based on the Water Authority's draft 2020 UWMP (Water Authority 2021a). This section presents a summary of the water demands and supplies available to the Water Authority and in turn to the District. The Water Authority's basis of water year data for estimating demands is provided in Table 7-2.

Table 7-2. Water Year Type Base Years

Water Year Type	Base Year(s)
Normal Water Year	2018
Single Dry Water Year	2015
Multiple Dry Water Year	2011–2015

7.2.1 Water Authority Normal Year Assessment

Table 9-1 in the Water Authority's 2020 UWMP shows the normal year assessment, summarizing the total water demands for the Water Authority through the year 2040 along with the supplies necessary to meet demands under normal conditions. If Metropolitan, the Water Authority, and member agency supplies are developed as planned, along with achievement of the SB X7-7 retail conservation target, no shortages are anticipated within the Water Authority's service area in a normal year through 2045 (Water Authority 2021a).

7.2.2 Water Authority Dry Water Year Assessment

The UWMP Act also requires an assessment to compare supply and demands under single dry and multiple dry water years over the next 20 years, in 5-year increments. The single dry-year assessment is presented in Table 9-2 of the Water Authority's 2020 UWMP (Water Authority 2021a).

7.2.3 Water Authority Multiple Dry Water Year Assessment

Tables 9-3 through 9-7 in the Water Authority's 2020 UWMP show the multiple-dry-water-year assessments in 5-year increments (see Table 7-3 in this UWMP). The member agencies' surface and groundwater yields shown in these tables are reflective of supplies available during the 2011–2015 drought.

For the multiple-dry-year reliability analysis, the conservative planning assumption is that Metropolitan will be allocating supplies to its member agencies. By assuming allocations in this reliability assessment, it allows the Water Authority to analyze how storage supplies could be utilized and the likelihood of shortages. Currently, Metropolitan allocates supplies through its Water Supply Allocation Plan. Under the specific parameters assumed in the multiple-dry-year analysis, the Water Authority has determined that some level of shortage could be experienced. Under this scenario, the items discussed in the Water Authority and District shortage contingency analyses, included as Chapter 8 of this UWMP, would be implemented as necessary (Water Authority 2021a).

Table 7-3. Retail: Basis of Water Year Data (Reliability Assessment)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		Volume Available (AF)	*% of Average Supply*
Normal Year	2018	5,123	100%
Single Dry Year	2016	4,728	—
Consecutive Dry Years: 1st Year	2014	5,066	—
Consecutive Dry Years: 2nd Year	2015	5,049	—
Consecutive Dry Years: 3rd Year	2016	4,728	—
Consecutive Dry Years: 4th Year	2017	5,042	—

Table 7-3. Retail: Basis of Water Year Data (Reliability Assessment)

Year Type	Base Year	Available Supplies if Year Type Repeats	
		Volume Available (AF)	*% of Average Supply*
Consecutive Dry Years: 5th Year	2018	5,123	—

Source: DWR 2021a, Submittal Table 7-1.
Notes: AF = acre-feet.

7.3 Water Service Reliability – Ramona

The District currently imports 99% of its water supply from the Water Authority; therefore, the assessment contained in the District's 2020 UWMP projects reliability through the next 20 years based on the Water Authority's draft 2020 UWMP (Water Authority 2021a).

As previously stated, the Water Authority has determined that it will be able to meet the District's water demands during normal year, single dry year, and multiple dry year conditions through 2040. Projected District demands are based on the Water Authority's projections and included SB X7-7 water conservation goals as determined in Chapter 5, Conservation Target Compliance, of this UWMP. Recycled water supply is considered a "drought-proof" supply and is not expected to reduce during dry-year periods.

7.3.1 Normal Year Assessment – Ramona

A supply and demand comparison for normal water years is presented in Table 7-4.

Table 7-4. Retail: Normal Year Supply and Demand Comparison (Acre-Feet)

	2025	2030	2035	2040	2045 *(Opt)*
Supply totals	5,997	6,170	6,350	6,535	
Demand totals	5,358	5,497	5,640	5,788	
Difference	639	673	710	747	

Source: DWR 2021a, Submittal Table 7-2.
Note: opt = optional.

7.3.2 Dry Water Year Assessment – Ramona

Projected water supplies compared to demands for single dry years are presented in Table 7-5.

Table 7-5. Retail: Single Dry Year Supply and Demand Comparison (Acre-Feet)

Metric	2025	2030	2035	2040	2045 (Opt)
Supply totals	5,599	5,811	6,007	6,172	
Demand totals	4,744	4915	5,068	5,188	
Difference	855	896	939	984	

Source: DWR 2021a, Submittal Table 7-3.
Notes: opt = optional.

7.3.3 Multiple Dry Water Year Assessment – Ramona

Projected water supplies compared to demands for multiple dry years are presented in Table 7-6.

Table 7-6. Retail: Multiple Dry Years Supply and Demand Comparison

Year	Metric	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF) (Opt)
First year	Supply totals	4,592	4,768	4,943	5,106	
	Demand totals	4,592	4,768	4,943	5,106	
	Difference	0	0	0	0	
Second year	Supply totals	4,592	4,768	4,943	5,106	
	Demand totals	4,592	4,768	4,943	5,106	
	Difference	0	0	0	0	
Third year	Supply totals	4,592	4,768	4,943	5,106	
	Demand totals	4,592	4,768	4,943	5,106	
	Difference	0	0	0	0	
Fourth year	Supply totals	4,592	4,768	4,943	5,106	
	Demand totals	4,592	4,768	4,943	5,106	
	Difference	0	0	0	0	
Fifth year	Supply totals	4,592	4,768	4,943	5,106	
	Demand totals	4,592	4,768	4,943	5,106	
	Difference	0	0	0	0	
Sixth year *(optional)*	Supply totals	4,592	4,768	4,943	5,106	
	Demand totals	4,592	4,768	4,943	5,106	
	Difference	0	0	0	0	

Source: DWR 2021a, Submittal Table 7-4.
Notes: AF = acre-feet; opt = optional.

7.4 Drought Risk Assessment

The Water Authority assessed a projected drought from 2021 to 2025 using a historical period of 2014–2018, which were the years of the lowest local water supply. The Water Authority found that no reduction in in the availability of supplies over the 5-year period would be necessary due to the drought resilience of these supplies. The analysis shown in Section 9.6 of the draft 2020 UWMP concluded that the Water Authority has a surplus of water supplies in all 5 years and actions under the Water Shortage Contingency Plan (WSCP) are not required (Water Authority 2021a).

8 Water Shortage Contingency Planning

Water shortage contingency planning is a strategic planning process to prepare for and respond to water shortages. Good planning and preparation can help agencies maintain reliable supplies and reduce the impacts of supply interruptions. The UWMP Act requires urban water agencies conduct a water shortage contingency analysis as part of their 2020 UWMP. This section addresses the District's analysis of a catastrophic shortage situation and drought management plan that is based on the draft Water Authority 2020 UWMP (Water Authority 2021a) and includes a summary of the Water Authority's analysis.

8.1 Water Supply Reliability Analysis

The water supply reliability analysis conducted in Chapter 7 of this UWMP found that the District's water supply is drought resilient and is expected to reliably meet demands throughout the planning horizon. The District relies on the Water Authority for its water supply, so the analysis looked at the Water Authority's Draft 2020 UWMP and their determination on the reliability of their water supply. The Water Authority's analysis determined that their water supplies are drought resilient (Water Authority 2021a).

8.2 Contingency Plan Levels

Table 8-1 identifies the water supply conditions associated with each stage of action. The District has identified each stage by the percent supply reduction and the water supply condition.

Table 8-1. Water Shortage Contingency Plan Levels

Shortage Level	Percent Shortage Range	Shortage Response Actions
1	Up to 10%	**Voluntary Reductions.** Stop washing down paved surfaces. Stop water waste resulting from inefficient landscape irrigation. Irrigate residential and commercial landscape before 10 a.m. and after 6 p.m. only.
2	Up to 20%	**Voluntary Reductions.** Limit residential and commercial landscape irrigation to no more than three (3) assigned days per week. Limit lawn watering and landscape irrigation using sprinklers to no more than 10 minutes. Stop operating ornamental fountains.
3	Up to 30%	**Mandatory Reductions.** Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week. Stop filling or refilling ornamental lakes or ponds. Stop washing vehicles except at commercial carwashes that recirculate water.
4	Up to 40%	**Emergency Mandatory Reductions.** Stop all landscape irrigation, except crops and landscape products of commercial growers. Repair all water leaks within twenty-four (24) hours of notification.
5	Up to 50%	—
6	>50%	—

Source: DWR 2021a, Submittal Table 8-1.

Following the major drought in California of 1987–1992, which led to severe water supply shortages throughout the state, the Water Authority and its member agencies aggressively developed plans to minimize the impact of potential shortages. In 2006, the Water Authority Board of Directors adopted the Water Shortage and Drought

Response Plan (WSDRP) to serve as a comprehensive plan in the event that the region faced supply shortages due to drought or other water shortage conditions (Water Authority 2006).

8.2.1 Water Authority Water Shortage and Drought Response Plan

The WSDRP was developed by the Water Authority in coordination with its member agencies to provide a balanced, flexible, systematic approach to identifying regional actions necessary to reduce the impacts from shortages. It includes all aspects of drought planning, from steps to avoid rationing, to drought response stages, allocation methodology, pricing, tracking actual reductions in water use, and a communication strategy. Multiple actions are identified to manage shortage situations, including both supply augmentation measures and demand reductions up to 50% in water supply. Conservation savings is an essential component of meeting the need for water in a time when available supplies are limited.

The UWMP Act requires information on the stages of action to be undertaken in response to water supply shortages, including up to a 50% reduction in water supply. To meet the requirements, the District is dependent on the Water Authority. The Water Authority, with input from the member agencies, developed a regional drought response matrix. The matrix, presented in Table 8-2, summarizes the three stages: voluntary supply management, supply enhancement, and mandatory cutbacks, including a supply allocation methodology detailed in the WSDRP.

Table 8-2. Water Authority Drought Response Matrix – Firm Demands

Potential Water Authority Drought Actions	Stages		
	Voluntary	*Supply Enhancement*	*Mandatory Cutbacks*
Ongoing BMP implementation	X	X	X
Communication strategy	X	X	X
Monitoring supply conditions and storage levels	X	X	X
Call for voluntary conservation	X	X	X
Draw from Water Authority carryover storage	X	X	X
Secure transfer option contracts	X	X	X
Buy phase 1 spot transfers (cost at or below Tier 2 rate)	—	X	X
Call transfer options	—	X	X
Buy phase 2 spot transfers (cost at or below Tier 2 rate)	—	X	X
Implement allocation methodology	—	—	X
Utilized ESP Supplies	—	—	X

Source: Water Authority 2016, Table 11-1.
Notes: Water Authority = San Diego County Water Authority; BMP = best management practice; ESP = Emergency Storage Project.

Additional details of the WSDRP are provided in Section 11 of the Water Authority's 2020 UWMP (Water Authority 2021a).

8.2.2 District Drought Response Conservation Program

On May 12, 2009, the District's Board of Directors adopted the District's Drought Response Conservation Program, included in Appendix C of this UWMP. The Drought Response Conservation Program establishes regulations to be implemented during times of declared water shortages or declared water shortage emergencies. It establishes four levels of drought response actions ("Drought Response Levels") to be implemented in times

of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies (see Table 8-3). Drought Response Level 1 drought condition response measures are voluntary and will be reinforced through local and regional public education and awareness measures that may be funded in part by the District. During Drought Response Levels 2 through 4, all conservation measures and water-use restrictions are mandatory and become increasingly restrictive in order to attain escalating conservation goals (see Table 8-4). Violations of this chapter are subject to criminal, civil, and administrative penalties and remedies specified in this District's legislative code and as provided by law.

Table 8-3. Water Shortage Contingency – Rationing Stages to Address Water Supply Shortages

Stage No.	Water Supply Conditions	% Shortage
Drought Response Level 1 – Drought Watch Condition	A Level 1 condition applies when the Water Authority notifies its member agencies that due to drought or other supply reductions, there is a reasonable probability there will be supply shortages and that a consumer demand reduction of up to 10% required in order to ensure that sufficient supplies be available to meet anticipated demands. The General Manager may declare the existence of a Response Level 1 and take action to implement the Level 1 conservation practices identified in the Drought Response Conservation Program.	Up to 10% Voluntary Restrictions
Drought Response Level 2 – Drought Alert Conditions	A Drought Response Level 2 condition is also referred to as a "Drought Alert" condition. A Level 2 condition applies when the Water Authority notifies agencies that due to cutbacks caused by drought or other reduction of supplies, a consumer demand reduction of up to 20% is required in order to have sufficient supplies available to meet anticipated demands. The District Board of Directors may declare the existence of a Drought Response Level 2 condition and implement the Level 2 conservation measures identified in the Drought Response Conservation Program.	Up to 20% Voluntary Restrictions
Drought Response Level 3	A Drought Response Level 3 condition is also referred to as a "Drought Critical" condition. A Level 3 condition applies when the Water Authority notifies its member agencies that due to increasing cutbacks caused by drought or other reduction of supplies, a consumer demand reduction of up to 40% is required in order to have sufficient supplies available to meet anticipated demands. The District Board of Directors may declare the existence of a Drought Response Level 3 condition and implement the Level 3 conservation measures identified in the Drought Response Conservation Program.	Up to 40% Mandatory Restrictions
Drought Response Level 4 – Drought Emergency Condition	A Drought Response Level 4 condition is also referred to as a "Drought Emergency" condition. A Level 4 condition applies when the Water Authority Board of Directors declares a water shortage emergency pursuant to California Water Code Section 350 and notifies its member agencies that Level 4 requires a demand reduction of more than 40% in order for the Authority to have maximum supplies available to meet anticipated demands. Upon declaration by the Authority of a Drought	Above 40% Mandatory Restrictions

Table 8-3. Water Shortage Contingency – Rationing Stages to Address Water Supply Shortages

Stage No.	Water Supply Conditions	% Shortage
	Emergency Condition, the District may declare a Drought Emergency in the manner and on the grounds provided in California Water Code Section 350 et seq.	

Table 8-4. Water Shortage Contingency – Consumption Reduction Methods and Mandatory Prohibitions

Examples of Prohibitions	Level when Prohibition Becomes Mandatory	Projected Reduction
Stop washing down paved surfaces, including but not limited to sidewalks, driveways, parking lots, tennis courts, or patios, except when it is necessary to alleviate safety or sanitation hazards.	Level 2	Up to 10%
Stop water waste resulting from inefficient landscape irrigation, such as runoff, low head drainage, or overspray, etc. Similarly, stop water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.	Level 2	Up to 10%
Irrigate residential and commercial landscape before 10 a.m. and after 6 p.m. only.	Level 2	Up to 10%
Use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas, including trees and shrubs located on residential and commercial properties that are not irrigated by a landscape irrigation system.	Level 2	Up to 10%
Irrigate nursery and commercial growers' products before 10 a.m. and after 6 p.m. only. Watering is permitted any time with a hand-held hose equipped with a positive shut-off nozzle, a bucket, or when a drip/micro-irrigation system/equipment or rotating nozzles are used.	Level 2	Up to 10%
Limit residential and commercial landscape irrigation to no more than three (3) assigned days per week on a schedule established by the General Manager.	Level 2	Up to 20%
Limit lawn watering and landscape irrigation using sprinklers to no more than ten minutes per watering station per assigned day.	Level 2	Up to 20%
Repair all leaks within seventy-two (72) hours of notification by the District unless other arrangements are made with the General Manager.	Level 2	Up to 20%
Stop operating ornamental fountains or similar decorative water features unless recycled water is used.	Level 2	Up to 20%
Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the District.	Level 3	Up to 40%
Stop filling or refilling ornamental lakes or ponds, except to the extent to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a Drought Response Level.	Level 3	Up to 40%
Stop washing vehicles except at commercial carwashes that recirculate water, or by high-pressure/low-volume wash systems.	Level 3	Up to 40%

Table 8-4. Water Shortage Contingency – Consumption Reduction Methods and Mandatory Prohibitions

Examples of Prohibitions	Level when Prohibition Becomes Mandatory	Projected Reduction
Repair all leaks within forty-eight (48) hours of notification by the District unless other arrangements are made with the General Manager.	Level 3	Up to 40%
Stop all landscape irrigation, except crops and landscape products of commercial growers and nurseries and as specified in the DRCP.	Level 4	Above 40%
Repair all water leaks within twenty-four (24) hours of notification by the District unless other arrangements are made with the General Manager.	Level 4	Above 40%

Note: DRCP = Drought Response Conservation Program.

8.3 Prohibitions on End Uses

The District has made its own determination as to which prohibitions, and which stage for each prohibition, are most appropriate for its service area. Table 8-5 reports the prohibitions that the District places on end uses in each stage.

Table 8-5. Demand Reduction Actions

Shortage Level	Demand Reduction Actions	How Much Is This Going to Reduce the Shortage Gap?	Additional Explanation or Reference (Optional)	Penalty, Charge, or Other Enforcement?
1	Other – Prohibit use of potable water for washing hard surfaces	1%	—	No
1	Landscape – Restrict or prohibit runoff from landscape irrigation	1%	—	No
1	Landscape – Limit landscape irrigation to specific times	3%	—	No
1	Landscape – Other landscape restriction or prohibition	1%	—	No
1	Water Features – Restrict water use for decorative water features, such as fountains	1%	—	No
1	Other – Require automatic shut-off hoses	<1%	—	No
1	CII – Restaurants may only serve water upon request	<1%	—	No
1	Other – Customers must repair leaks, breaks, and malfunctions in a timely manner	1%	—	No
2	Landscape – Limit landscape irrigation to specific days	5%	—	No
2	Landscape – Prohibit certain types of landscape irrigation	3%	—	No

Table 8-5. Demand Reduction Actions

Shortage Level	Demand Reduction Actions	How Much Is This Going to Reduce the Shortage Gap?	Additional Explanation or Reference (Optional)	Penalty, Charge, or Other Enforcement?
2	CII – Lodging establishments must offer opt out of linen service	1%	—	No
3	Pools – Allow filling of swimming pools only when an appropriate cover is in place	1%	—	Yes
3	Other – Prohibit vehicle washing except at facilities using recycled or recirculating water	1%	—	Yes
4	Landscape – Prohibit all landscape irrigation	10%	—	Yes

Source: DWR 2021a, Submittal Table 8-2.
Note: CII = commercial, industrial, and institutional.

8.4 Supply Augmentation

In addition to the demand reduction actions, the District will implement the supply augmentation actions required at each shortage level, as shown in Table 8-6.

Table 8-6. Supply Augmentation and Other Actions

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How Much Is This Going to Reduce the Shortage Gap?	Additional Explanation or Reference (Optional)
1	Expand Public Information Campaign	5%	—
2	Other Actions (describe)	1%	Restrict new service installations
2	Implement or Modify Drought Rate Structure or Surcharge	3%	—
3	Implement or Modify Drought Rate Structure or Surcharge	5%	—
4	Implement or Modify Drought Rate Structure or Surcharge	12%	—

Source: DWR 2021a, Submittal Table 8-3.

8.5 Determining Water Shortage Reductions

Determination of actual water savings made from implementing the stages of the water shortage contingency plan is estimated based on recording the production and consumption of water as monitored through service meters.

8.6 Catastrophic Supply Interruption

8.6.1 Emergency Response Plan

Interruption and/or damage to the water supply system and/or the sewage system will require immediate emergency response by District staff to direct repairs of the system and restore essential services to the community.

The purpose of the District's Emergency Response Plan (ERP) Manual is to provide a response plan to conduct and manage emergency response operations of the District in the event of such interruption and/or damage. The guidelines set forth in the ERP address the immediate phase of emergency operations and are based on the assumed impacts of a worst-case scenario. Minor emergencies are those incidents that generally affect only a small number of customers, last less than 1 day, and are managed by District personnel. Major emergencies and disasters such as floods, wars, drinking water contamination, earthquakes, droughts, terrorist acts, etc., may affect large service areas beyond normal District capabilities.

The ERP can be considered multi-hazard, as most of the emergency response functions and responsibilities are standard regardless of the nature or the intensity of the emergency. The ERP Manual does not attempt to describe in detail every step necessary to handle a particular emergency; instead, it relies on the individual expertise of District staff members under the direction of District management.

The ERP is integrated with the Water Authority's Integrated Contingency Plan, the County ERP, the Unified San Diego County Emergency Services Organization, and the procedures for emergency response and recovery for the State of California and the Federal Emergency Management Agency.

The ERP includes the following:

- Authorities, policies, and procedures associated with emergency response activities
- Emergency Operations Center activities – including Emergency Operations Center activation and deactivation guidelines
- Multi-agency and multi-jurisdictional coordination, particularly between the District and the Water Authority
- Emergency staffing, management, and organization required to assist in mitigating any significant emergency or disaster
- Mutual aid agreements and covenants that outline the terms and conditions under which mutual aid assistance will be provided
- Pre-emergency planning and emergency operations procedures

In addition, the ERP Manual provides a step-by-step approach to emergency response planning by providing action checklists, resource and information lists, personnel rosters, and listings of established policies and procedures.

8.6.2 Water Authority Emergency Storage Project

In 1998, the Water Authority's Board of Directors authorized implementation of the Emergency Storage Project (ESP) to reduce the risk of potential catastrophic damage that could result from a prolonged interruption of imported water due to earthquake, drought, or other disasters. The ESP is a system of reservoirs, pipelines, and other facilities

located throughout San Diego County that will work together to store and move water around the County in the event of a natural disaster. When completed, the ESP will provide 90,100 AF of stored water for emergency purposes to meet the County's needs through at least 2030. The Water Authority Board of Directors may also authorize supplies from the ESP to be used in a prolonged drought or other water shortage situation where imported and local supplies do not meet 75% of the Water Authority's member agencies' municipal and industrial demands (Water Authority 2021a).

In sizing the ESP, the Water Authority assumed a 75% level of service to all Water Authority member agencies during an outage and full implementation of the water conservation best management practices (BMPs). The following steps from the Water Authority's August 2002 Emergency Water Delivery Plans show the methodology for calculating the allocation of ESP supplies to member agencies in a prolonged outage situation without imported supplies:

1. Estimate the duration of the emergency (i.e., time needed to repair damaged pipelines).
2. Determine each member agency's net demand during the emergency period by adding municipal and industrial water demands and agricultural water demands and then subtracting recycled water supplies.
3. Determine each member agency's usable local supplies during the emergency period (local supplies include surface water and groundwater).
4. Determine each member agency's level of service based on usable local supplies and net demand.
5. Adjust the allocation of ESP supplies based on a member agency's participation in an interruptible agricultural program (e.g., Metropolitan's Interim Agricultural Water Program or the Water Authority's Special Agricultural Water Rate). Interruptible agricultural program customers will be required to take a reduction in deliveries during a water shortage due to an emergency at double the system-wide reduction, up to a maximum of 90%. Water not delivered to interruptible agricultural program customers will be redistributed to member agencies based on the "system-wide" level of service targets.
6. Determine the amount of local supplies that can be transferred between member agencies, with transfers occurring only after a member agency has a level of service greater than 75% based on their usable local supplies.
7. Allocate delivery of usable ESP storage supplies along with available Water Authority and Metropolitan supplies to member agencies, with the goal of equalizing the level of service among the member agencies.

8.7 Communication Protocols

The District uses multiple methods of communication to keep their customers up to date with water shortage concerns. As each stage of conservation is reached, the District will communicate to their customers the current restrictions that are being put in place. The communication that will be done at each level beyond shortage level 1 will include the following:

- Updates posted on the website
- Updates posted in public locations in the service area
- Notices in the customers' monthly billing statements
- Notices/notifications in other media outlets, as available

8.8 Compliance and Enforcement

The District expects high levels of compliance from its customers when conservation is required. The District will continue to focus on education and communication programs to obtain compliance from their customers. If the District is not obtaining the levels of conservation required at each stage, the District will have their field employees issue citations to customers that are not complying with the requirements (see Table 8-7).

Table 8-7. Water Shortage Contingency – Consumption Reduction Methods and Mandatory Prohibitions

Penalties or Charges	Stage When Penalty Takes Effect
Following the effective date of the water allocation as established by the District, any person that uses the water in excess of the allocation shall be subject to a penalty equal to two (2) times the District's billing rate for each billing unit of water in excess of the allocation. The penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed for violation of the DRCP. Each billing period in which an allocation is exceeded shall count as a separate violation. Subsequent violations that occur during a calendar year shall count cumulatively for the purpose of assessing administrative fines for second violations and additional violations.	Level 3
Following the effective date of the water allocation as established by the District, any person that uses the water in excess of the allocation shall be subject to a penalty equal to three (3) times the District's billing rate for each billing unit of water in excess of the allocation. The penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed for violation of the DRCP. Each billing period in which an allocation is exceeded shall count as a separate violation. Subsequent violations that occur during a calendar year shall count cumulatively for the purpose of assessing administrative fines for second violations and additional violations.	Level 4

Note: DRCP = Drought Response Conservation Program.

8.9 Revenue and Expenditure Impacts

Well-designed drought rate structures can reduce the potential financial effects of water shortages and enable the supplier to recover its purchase, treatment, and delivery costs, as well as the additional costs related to the water shortage response program. The District has taken significant steps to reduce potential revenue impacts resulting from fluctuating water sales. In 2002, the District created a Rate Stabilization Fund to provide funds that would mitigate the need for rate increases in the event of an unexpected decline in water sales.

The Water Authority has two rates, a melded municipal and industrial rate of $280/AF for untreated and $925/AF for treated and an agricultural rate of $755/AF for untreated and $1,035/AF for treated. Additionally there is a transportation rate of $132/AF and annual fixed rate charges for Customer Service, Emergency Storage, Infrastructure Access, Supply Reliability, Capacity Reservation, and Readiness-to-Serve functions.

8.10 Resolution or Ordinance

Water agencies are required to develop a water shortage contingency resolution or ordinance for submittal with the UWMP. The approved/adopted water conservation resolution is included as Appendix B of this UWMP.

8.11 Monitoring and Reporting

If the District initiates a conservation step, it will monitor the system water demand. It will report the monthly water use compared to the previous year's monthly demand. It will also report the year-over-year water demand reduction. This will include posting the updates on the website and at the District's offices and reporting the reductions to the state as requested.

8.12 Plan Adoption, Submittal, and Availability

The shortage contingency analysis included in this section demonstrates that the District, in conjunction with the Water Authority and its other member agencies, through the District's ERP and the Water Authority's Integrated Contingency Plan, ESP, and WSDRP, are taking actions to prepare for and appropriately handle a catastrophic interruption of water supplies to the District's service area and customers.

The WSCP will be adopted, submitted, and made available as part of this 2020 UWMP. The WSCP will be made available for review and comment, a public hearing will be conducted, and the WSCP will be submitted to all parties as part of the 2020 UWMP and as discussed in Chapter 10.

9 Demand Management Measures

The goal of this Demand Management Measures (DMM) chapter is to provide a comprehensive description of the water conservation programs that the District has implemented, is currently implementing, and plans to implement in order to meet its urban water use reduction targets. Demand management, or water conservation, is frequently the lowest-cost resource available to the District. Water conservation is a critical part of the 2020 UWMP for meeting water supply needs of the Ramona area. The goals of the District water conservation program are to (1) reduce demand for water imported from the Water Authority, (2) demonstrate continued commitment to the BMPs and agricultural efficient water management practices, (3) ensure a reliable future water supply, and (4) reduce consumption during periods of high treated-water demand.

9.1 Demand Management Measure for Retail Agencies

The following sections describe the planned efforts of the District in implementing each of the following DMM categories to meet water use targets.

9.1.1 Water Waste Prevention Ordinances

The District's legislative code, Chapter 7.40: Water Conservation, explicitly states that the waste of water is to be prohibited, and prohibits specific actions that waste water, such as excessive runoff from landscape irrigation and outdoor use of a hose without a shut-off nozzle. This legislative code is in place at all times and is not dependent upon a water shortage for implementation.

9.1.2 Metering

The District is a fully metered agency. Currently, every meter in the District is replaced every 10 years to ensure accuracy and calibration. The District is currently in the process of converting all meters to advanced metering infrastructure or automatic meter reading units, which will increase the accuracy and frequency of meter reading.

9.1.3 Public Education and Outreach

The District supports and participates in County-wide programs established by the Water Authority, including sponsored fourth-grade poster contests and conservation outreach programs. The District also includes public outreach information regarding water conservation on customer bills.

9.1.4 Programs to Assess and Manage Distribution System Real Loss

Currently, the District closely monitors variations in water usage between customers to determine potential sources of water loss in the system.

9.1.5 Water Conservation Program Coordination and Staffing Support

Water conservation program coordination is handled by a single staff member of the District. This staff member coordinates the outreach efforts described in Section 9.1.3 and is also responsible for reporting required information to the State Water Resources Control Board on behalf of the District

9.2 Members of the California Urban Water Conservation Council

California Urban Water Conservation Council (CUWCC) members have the option of submitting their 2013–2014 BMP annual reports in lieu of, or in addition to, describing the DMMs in their UWMP. The option of submitting the CUWCC BMP report in lieu of describing the DMMs is only available if the supplier is in full compliance with the CUWCC's Memorandum of Understanding (MOU). The submitted reports must include documentation from the CUWCC that the supplier has met the MOU coverage requirements and is in full compliance with the MOU. The District is in full compliance with the MOU and has opted to not submit an annual BMP report as part of this UWMP.

9.3 Reporting Implementation

The District has continued to encourage conservation and educate their customers on its importance. They have continued to take part in conservation programs with the Water Authority and individually. The District has maintained its wastewater prevention ordinance that was previously put in place and continues to educate customers on proper landscape irrigation. The District has replaced 6,152 of their meters with radio-read meters. The new meters have increased the accuracy of their customer meters and are able to provide alerts of potential leaks based on abnormal water usage.

9.4 Future Water Conservation Savings

Projected water savings and effectiveness provided in the 2020 UWMP are based on industry standard methodologies for calculating savings, as defined by the CUWCC. The Water Authority assists the CUWCC in conducting pilot programs and analyzing ways to increase the accuracy of savings calculation methodologies.

This conservation target is appropriate to implement the BMPs and fulfill the District's commitment to the MOU. Additionally, this target coincides with the availability of anticipated funds from the District, the Water Authority, and/or Metropolitan. The estimates of future water savings are based on savings projections from implementing various conservation measures and as a result of state and national efficiency standards. The savings are a projection of the amount of water that will be conserved based on the best information available at this time.

Future water conservation savings are based on historical activity for Residential Surveys, Residential Retrofits, High-Efficiency Clothes Washer Incentives, and Toilet Incentives. Efficiency Standards include water-saving devices installed in new residential construction as part of state-required codes, as well as toilets replaced through natural replacement outside of the toilet incentive. Updated SANDAG demographic information helps determine savings for new construction through BMP implementation, and these data have been incorporated into the District's revised demand forecast, as discussed in Chapter 4, Customer Water Use.

Water savings in the commercial, industrial, and institutional sectors are based on both historical activity and anticipated new water-efficient products that will experience expanded use. These products include multi-load commercial high-efficiency washers, food steamers, commercial dishwashers, and waterless urinals.

A number of financial assistance programs are available to San Diego County agencies: the Water Authority's Financial Assistance Program and Reclaimed Water Development Fund; Metropolitan's Local Resources Program; the U.S. Bureau of Reclamation Title XVI Grant Program; and the State Water Resources Control Board's low-interest loan programs. Together, these programs offer funding assistance for all project phases, from initial planning and design to construction and operation. The District staff periodically reviews the available financial assistance programs to determine whether any of them are appropriate for District activities.

10 Plan Adoption, Submittal, and Implementation

This chapter provides guidance for addressing the CWC requirements for a public hearing, completing the UWMP adoption process, submitting an adopted UWMP, implementing the UWMP, and amending an adopted UWMP.

10.1 Inclusion of all 2020 Data

This UWMP includes comprehensive water use and planning data for the entire year of 2020.

10.2 Notice of Public Hearing

The district provided notice of a public hearing in the local newspaper, the Ramona Sentinel. The posting stipulated the subject matter of the public hearing, date, time, UWMP revision schedule, contact information for the preparer, the location of the hearing, and the location at which to view or obtain a copy of the UWMP. Because the District is neither a city nor a county, it is not required to uphold the 60-day notification requirement. A copy of the public notice is included in Appendix D of this UWMP.

10.3 Public Hearing and Adoption

The public hearing and adoption will take place at the same meeting on June 8, 2021. The meeting agenda includes the public hearing as an agenda item. The public hearing portion of the meeting will take place prior to the adoption portion of the meeting. If necessary, the District's Board may modify the UWMP in response to public input prior to adoption. During the public hearing, the District will provide information on their baseline values, water use targets, and implementation plan required in the Water Conservation Act of 2009. Before the UWMP is submitted to DWR, the District will formally adopt the UWMP, and the adoption resolution will be included as an appendix of the final version of the UWMP.

10.4 Plan Submittal

The following sections provide guidance for submitting UWMPs to DWR, the California State Library, and cities and counties.

10.4.1 Submitting a UWMP to DWR

2020 UWMPs must be submitted to DWR within 30 days of adoption and by July 1, 2021. UWMP submittal will be done electronically through WUEdata, an online submittal tool that will be available in adequate time for submittal of the 2020 UWMPs.

After the UWMP has been submitted, DWR will review the plan using the provided checklist (Appendix A) and make a determination as to whether the UWMP addresses the requirements of the CWC. The DWR reviewer will contact the District as needed during the review process. Upon completion of the UWMP review, DWR will issue a letter to the District with the results of the review.

10.4.2 Electronic Data Submittal

The UWMP, including the WSCP and associated electronic data, will be submitted electronically through the WUEdata portal. The 2020 UWMP submittal tables, the energy analysis, and the 2020 UWMP will be uploaded through the portal.

10.4.3 Submitting a UWMP to the California State Library

No later than 30 days after adoption, the water agency shall submit a CD or hardcopy of the adopted 2020 UWMP, including the WSCP, to the California State Library at the following address:

California State Library
Government Publications Section
PO Box 942837
Sacramento, California 94237-0001
Attention: Coordinator, Urban Water Management Plans

If delivered by courier or overnight carrier to the California State Library, use the following street address instead of the PO Box:

California State Library
Government Publications Section
914 Capitol Mall
Sacramento, California 95814

10.5 Public Availability

The adopted UWMP will be made available for public review at the front desk of the District office during normal business hours.

10.6 Amending an Adopted UWMP

If the District amends an adopted UWMP, each of the steps for notification, public hearing, adoption, and submittal must also be followed for the amended plan.

11 References

District (Ramona Municipal Water District). *2015 Urban Water Management Plan*. Prepared for the District by Dudek. Encinitas, California: Dudek. May 2016.

DWR (California Department of Water Resources). 2016. *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use (for the Consistent Implementation of the Water Conservation Act of 2009)*. February 2016. https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans.

DWR. 2021a. *Urban Water Management Plan Guidebook 2020*. Final. March 2021. https://water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Urban-Water-Management-Plans.

DWR. 2021b. "ETo Maps (Spatial CIMIS)." California Irrigation Management Information System (CIMIS). April 2021. Accessed April 18, 2021. cimis.water.ca.gov.

DWR. 2021c. Population Tool. Water Use Efficiency Data (WUEdata) webpage. https://wuedata.water.ca.gov/.

Metropolitan (Metropolitan Water District of Southern California). 2021. *2020 Urban Water Management Plan*. Draft. April 2021. http://www.mwdh2o.com/AboutYourWater/Planning/Planning-Documents.

SANDAG (San Diego Association of Governments). 2013. "Series 13 Regional Growth Forecast." Technical Appendix 2 in *2050 Regional Transportation Plan*. October 2013.

Water Authority (San Diego County Water Authority). 2006. *Water Shortage and Drought Response Plan*. Water Authority, Water Resources Department. May 2006; updated April 2012.

Water Authority. 2016. *San Diego County Water Authority Final 2015 Urban Water Management Plan*. San Diego: Water Authority, Water Resources Department. June 2016.

Water Authority. 2021a. *2020 Urban Water Management Plan*. Public Review Draft. San Diego: Water Authority. March 2021.

Water Authority. 2021b. "Reservoirs: Reservoir Storage Data." Last updated March 11, 2021. Accessed May 26, 2021. https://www.sdcwa.org/your-water/reservoirs-rainfall/reservoirs/.

WRCC (Western Regional Climate Center). 2021. "Period of Record Monthly Climate Summary." April 2021. Accessed April 18, 2021. wrcc.dri.edu.

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Appendix B

Ramona Municipal Water District
Board of Directors Resolution

Appendix A

Urban Water Management Plan Checklist

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	1.1
x	x	Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	1.6
x	x	Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	2.1
x	x	Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	2.5
x	x	Section 2.6.2	10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	2.5.2
x		Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	2.5.1
	x	Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	2.5.1
x	x	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	3.2
x	x	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	3.3
x	x	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	3.4
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	3.4
x	x	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	3.4
x	x	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	3.5
x	x	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	4.2
x	x	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	4.3
x	x	Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans and other policies or laws.	System Water Use	4.2.3
x	x	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	4.2.3
x	optional	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	4.3
x	optional	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	4.4
x	x	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	4.5
x		Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	5.1
x		Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	5.4
	x	Section 5.1	10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	n/a
x		Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	n/a
x		Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	5.4
x		Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	5.4
x	x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	7.3
x	x	Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, *including changes in supply due to climate change.*	System Supplies	7.3
x	x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	n/a
x	x	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	6.1
x	x	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	6.8
x	x	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	6.2
x	x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	6.2
x	x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	6.2
x	x	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	n/a
x	x	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	n/a
x	x	Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	n/a
x	x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	n/a
x	x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	System Supplies	n/a
x	x	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	6.4
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	6.4.2
x	x	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	6.4.3
x	x	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	6.4.3.1
x	x	Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	6.4.4
x	x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	6.4.4
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	6.5
x	x	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	6.4.1
x	x	Section 6.2.8, Section 6.3.7	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	6.6
x	x	Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	6.9
x	x	Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	7.1
x	x	Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	7.2
x	x	Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	7.3
x	x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	7.4

x	x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	7.4
x	x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	7.2
x	x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	7.3
x	x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	7.3
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	8
x	x	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	8.1
x	x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	8.2
x	x	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	8.2
x	x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	8.2
x	x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	8.2.2
x	x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	8.2.2
x	x	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	8.4
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	8.3
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	8.2
x	x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	8.2
x	x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	8.3
x	x	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	8.6
x	x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	8.7
x	x	Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	8.7
x		Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	8.8
x		Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	8.8
x	x	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	8.8
x	x	Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	n/a
x	x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	8.9
x	x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	8.9
x		Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	8.9
x		Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	8.11
x		Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	8.2
x	x	Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	8.12
x	x	Section 8.12	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Water Shortage Contingency Planning	8.12
	x	Sections 9.1 and 9.3	10631(e)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	9.1
x		Sections 9.2 and 9.3	10631(e)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	9.1 and 9.3
x		Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	10
x	x	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	10.2
x	x	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	10.4
x	x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	10.2, 10.3, 10.5
x	x	Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	10.2, 10.3
x	x	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	10.3
x	x	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	10.4.3
x	x	Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	10.4.1
x	x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	10.4.1 and 10.4.2
x	x	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	10.5
x	x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	10.5
x	x	Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	n/a
x	x	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	n/a

RESOLUTION NO. 21-1554

RESOLUTION OF THE BOARD OF DIRECTORS OF THE RAMONA MUNICIPAL WATER DISTRICT TO ADOPT THE 2020 URBAN WATER MANAGEMENT PLAN

WHEREAS, California Water Code Section 10610, et seq., known as the Urban Water Management Planning Act mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan ("Plan"), the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, the Ramona Municipal Water District (RMWD) delivers water supplies to a population of over 36,000; and

WHEREAS, the Ramona Municipal Water District has implemented conservation measures consistent with the Urban Water Management Plan, and

WHEREAS, The Plan shall be periodically reviewed at least once every five years, and that RMWD shall make any amendment or changes to its Plan which are indicated by the review; and

WHEREAS, The Plan must be adopted after public review and hearing and filed with the California Department of Water Resources by July 1, 2021; and

WHEREAS, RMWD has therefore prepared and circulated for public review a draft 2020 Urban Water Management Plan ("2020 Plan"), and a properly noticed Public Hearing regarding said 2020 Plan was held by RMWD on June 8, 2021; and

WHEREAS, RMWD did prepare and shall file said 2020 Plan with the California Department of Water Resources.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Ramona Municipal Water District as follows:

1. That the above recitals are true and correct.
2. RMWD's 2020 Plan is hereby adopted and the Acting General Manager is hereby authorized and directed to file the 2020 Plan with the California Department of Water Resources by the July 1, 2021 due date.

PASSED, APPROVED AND ADOPTED at the regular meeting of the Board of Directors of Ramona Municipal Water District held on the 8th day of June 2021.

Jim Hickle
President, Board of Directors
Ramona Municipal Water District

ATTEST:

Jim Robinson
Secretary, Board of Directors
Ramona Municipal Water District

Appendix C

Ramona Municipal Water District
Drought Response Conservation Program

Chapter 7.40

WATER CONSERVATION

Contents:

Section 7.40.010 Declaration of Policy.
Section 7.40.020 Findings.
Section 7.40.030 Voluntary Guidelines.
Section 7.40.040 Drought Response Conservation Program.
Section 7.40.041 Violations and Penalties.
Section 7.40.042 Variance.

Section 7.40.010 Declaration of Policy.

California Water Code Sections 375 et seq. and 71640 et seq., authorizes municipal water districts to adopt water conservation measures in a comprehensive water conservation program to reduce the quantity of water used by the people for the purposes of conserving the water supplies of the District and of the State, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, prevent unreasonable use of water, prevent unreasonable method of use of water within the District in order to assure adequate supplies of water to meet the needs of the public, and further the public health, safety, and welfare, recognizing that water is a scarce natural resource that requires careful management not only in times of drought, but at all times. The District may also prohibit use of water during designated periods and for specific uses that it finds to be nonessential. Understanding that the community of Ramona wishes to utilize its limited water resources as efficiently as possible, all members of the Ramona community are encouraged to take steps to voluntarily reduce water consumption throughout the year regardless of whether drought conditions exist. The Board has established an effective cooperative Water Conservation program to provide resources and education to the public. Information about the program can be obtained by contacting the District office, or through the District's website.

The policy established herein is part of the Ramona Municipal Water District's comprehensive Water Conservation program pursuant to California Water Code Sections 375 et seq. and 71640 et seq., based upon the need to conserve water supplies and to avoid or minimize the effects of any future shortage. The Board fully anticipates, encourages and appreciates the joint efforts between the District and the public to conserve water to protect water supplies.

This policy also establishes regulations to be implemented during times of declared water shortages, or declared water shortage emergencies. It establishes four levels of drought response actions (“Drought Response Levels”) to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies. Drought Response Level 1 drought condition response measures are voluntary and will be reinforced through local and regional public education and awareness measures that may be funded in part by the District.

During Drought Response Levels 2 through 4, all conservation measures and water-use restrictions are mandatory and become increasingly restrictive in order to attain escalating conservation goals. Violations of this Chapter are subject to criminal, civil, and administrative penalties and remedies specified in this Chapter 7.40 and as provided by law.

Section 7.40.020 Findings.

The District finds and determines the conditions prevailing in the Ramona Municipal Water District service area require water resources be put to maximum beneficial use, to every extent possible. The waste or unreasonable use of water must be prevented, and the conservation of water encouraged. The District's objective is to obtain the maximum reasonable and beneficial use of its water resources, to best serve the members of the community and to ensure public health, safety and welfare.

Section 7.40.030 Voluntary Guidelines.

A. The following voluntary water conservation guidelines have been established to reduce overall water consumption, and preserve the District's water supply. The District encourages all customers to incorporate water conservation practices into their daily lifestyle, for enhancing the beneficial use of water resources.

1. Acknowledging that landscape irrigation is the single highest usage of water in single-family homes - about 60% of water used, the District establishes the following guidelines to conserve water for landscape and other outside use:

a. Water lawn and landscaping only during the cool parts of the day. Early morning is best, as it helps prevent the growth of fungus (watering may be done at any time with a bucket, a hand-held hose equipped with a positive shut-off nozzle, with drip irrigation or rotating nozzles);

b. Water lawn only when it needs it - step on the grass, if it springs up underfoot, it does not need water;

c. When watering the lawn, water it long enough to seep down into the roots, as surface watering will simply evaporate and be wasted;

d. Practice water-wise gardening by using drought tolerant and California-Friendly plants and trees;

e. Put a layer of mulch around trees and plants to slow the evaporation of moisture;

f. Delay new plantings until the cooler fall months, when plants need less water;

g. Water for several short periods instead of one long period, so the soil can absorb the moisture, without wasteful runoff;

h. Use a broom to clean off sidewalks, driveways, parking areas, tennis courts, patios or other paved areas;

i. Check for leaks in pipes, hoses, faucets and couplings; repair as soon as possible;

j. Use a hand-held bucket or a hand-held hose equipped with a positive shut-off nozzle when washing autos, trucks, trailers, boats, airplanes and other types of mobile equipment; and

k. Use untreated or recycled water for grading, if possible.

2. To conserve indoor water use:

a. Check toilet(s) for leaks. Put a few drops of food coloring in the toilet tank. If, without flushing, the coloring begins to appear in the bowl, the tank has a leak that may be wasting up to 100 gallons of water a day. Install a high-efficiency or an ultra low-flush toilet;

b. Take shorter showers. Limit showers to the time it takes to wash and rinse;

c. Install water-saving shower heads or flow restrictors;

d. Take baths instead of showers. A partially filled tub uses less water than a shower;

e. Turn off the water while brushing teeth and shaving;

f. Check faucets and pipes for leaks;

g. Use automatic dishwashers only for full loads, as every load uses about 25 gallons of water;

h. Use automatic clothes washers only for full loads, as every load uses 30 to 35 gallons a cycle. Consider purchasing a High-Efficiency Washer (HEW), when replacing your clothes washer;

i. Do not let the faucet run while cleaning vegetables or when washing dishes, as rinsing can be done in a sink full of clean water;

j. Do not leave water running for rinsing when washing dishes by hand;

k. Serve water to restaurant customers only when specifically requested.

Section 7.40.040 Drought Response Conservation Program.

A. Definitions

1. The following words and phrases whenever used in this chapter shall have the meaning defined in this section:

   a. “Grower” refers to those engaged in the growing or raising, in conformity with recognized practices of husbandry, for the purpose of commerce, trade, or industry, or for use by public educational or correctional institutions, of agricultural, horticultural or floricultural products, and produced: (1) for human consumption or for the market; or (2) for the feeding of fowl or livestock produced for human consumption or for the market; or (3) for the feeding of fowl or livestock for the purpose of obtaining their products for human consumption or for the market. “Grower” does not refer to customers who purchase water subject to the Water Authority Special Agricultural Rate programs.

   b. “Water Authority” means the San Diego County Water Authority.

   c. “DMP” means the Water Authority’s Drought Management Plan in existence on the effective date of this Chapter 7.40 and as readopted or amended from time to time, or an equivalent plan of the Water Authority to manage or allocate supplies during shortages.

   d. “Metropolitan” means the Metropolitan Water District of Southern California.

   e. “Person” means any natural person, corporation, public or private entity, public or private association, public or private agency, government agency or institution, school district, college, university, or any other user of water provided by the District.

   f. “SAWR” means the Special Agricultural Water Rate program available from Metropolitan that is administered by the Water Authority.

B. Application

1. The provisions of Chapter 7.40 apply to any person in the use of any water provided by the District and proposed users of District water, as applicable.

2. Chapter 7.40 is intended solely to further the conservation of water. It is not intended to implement any provision of federal, state, or local statutes, ordinances, or regulations relating to protection of water quality or control of drainage or runoff. Refer to the local jurisdiction or Regional Water Quality Control Board for information on any stormwater ordinances and stormwater management plans.

3. Nothing in Chapter 7.40 is intended to affect or limit the ability of the District to declare and respond to an emergency, including an emergency that affects the ability of the District to supply water.

4. The provisions of Chapter 7.40 do not apply to use of water from private wells or to recycled water.

5. Unless otherwise specifically authorized in this Legislative Code, nothing in Chapter 7.40 shall apply to use of water that is subject to a special supply program. Violations of the conditions of special supply programs are subject to the penalties established under the applicable program.

C. Drought Response Level 1: Drought Watch Condition

1. A Drought Response Level 1 condition is also referred to as a "Drought Watch" condition. A Level 1 condition applies when the Water Authority notifies its member agencies that due to drought or other supply reductions, there is a reasonable probability there will be supply shortages and that a consumer demand reduction of up to 10 percent is required in order to ensure that sufficient supplies will be available to meet anticipated demands. The General Manager may declare the existence of a Drought Response Level 1 and take action to implement the Level 1 conservation practices identified in this Section.

2. During a Level 1 Drought Watch condition, District will increase its public education and outreach efforts to emphasize increased public awareness of the need to implement the following water conservation practices:

a. Stop washing down paved surfaces, including but not limited to sidewalks, driveways, parking lots, tennis courts, or patios, except when it is necessary to alleviate safety or sanitation hazards.

b. Stop water waste resulting from inefficient landscape irrigation, such as runoff, low head drainage, or overspray, etc. Similarly, stop water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.

c. Irrigate residential and commercial landscape before 10 a.m. and after 6 p.m. only.

d. Use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas, including trees and shrubs located on residential and commercial properties that are not irrigated by a landscape irrigation system.

e. Irrigate nursery and commercial grower's products before 10 a.m. and after 6 p.m. only. Watering is permitted at any time with a hand-held hose equipped with a positive shut-off nozzle, a bucket, or when a drip/micro-irrigation system/equipment or rotating nozzles are used. Irrigation of nursery propagation beds is permitted at any time. Watering of livestock is permitted at any time.

f. Use re-circulated water to operate ornamental fountains.

g. Wash vehicles using a bucket and a hand-held hose with positive shut-off nozzle, mobile high pressure/low volume wash system, or at a commercial site that re-circulates (reclaims) water on-site. Avoid washing during hot conditions when additional water is required due to evaporation.

h. Serve and refill water in restaurants and other food service establishments only upon request.

i. Offer guests in hotels, motels, and other commercial lodging establishments the option of not laundering towels and linens daily.

j. Repair all water leaks within five (5) days of notification by the District unless other arrangements are made with the General Manager.

k. Use recycled or non-potable water for construction purposes when available and feasible.

D. Drought Response Level 2: Drought Alert Condition

1. A Drought Response Level 2 condition is also referred to as a “Drought Alert” condition. A Level 2 condition applies when the Water Authority notifies its member agencies, including the District, that due to cutbacks caused by drought or other reduction in supplies, a consumer demand reduction of up to twenty percent (20%) is required in order to have sufficient supplies available to meet anticipated demands. The District’s Board of Directors may declare the existence of a Drought Response Level 2 condition and implement the mandatory Level 2 conservation measures identified in this Chapter 7.40.

2. All District water use shall comply with Level 1 Drought Watch water conservation practices during a Level 2 Drought Alert and shall also comply with the following additional conservation measures:

a. Limit residential and commercial landscape irrigation to no more than two (2) days per week. During the months of November through May, landscape irrigation is limited to no more than once per week. This section shall not apply to commercial growers or nurseries.

b. Limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per watering day. This provision does not apply to landscape irrigation systems using water efficient devices, including but not limited to: weather based controllers, drip/micro-irrigation systems and rotating nozzles.

c. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by Section D(2)(a) above, on the same schedule set forth in Section D(2)(a) above, by using a bucket, hand-held hose with positive shut-off nozzle, or low-volume non-spray irrigation.

d. Repair all leaks within seventy-two (72) hours of notification by the District unless other arrangements are made with the General Manager.

e. Stop operating ornamental fountains or similar decorative water features unless recycled water is used.

f. No irrigating outdoors during and within 48 hours following measurable rainfall.

g. Irrigation with potable water of ornamental turf on public street medians is prohibited.

3. During a Drought Response Level 2 condition, the District Board of Directors may find that drought conditions are such that an emergency condition exists and may take additional action to declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350. In the event of a declared Drought Emergency, no applications for new potable metered water service or upsizing of metered water service shall be accepted, no new temporary meters or permanent meters shall be provided and no new statements of ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability, commitment letters, agency clearance forms, out-of-district potable water service agreements) shall be issued, except under the following circumstances:

   a. A valid, unexpired building permit has been issued for the project; or

   b. The project is necessary to protect the public's health, safety, and welfare; or

   c. The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the District, in its sole discretion.

   This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore services that have been interrupted for less than a year.

4. The District may establish a water allocation for property served by the District using a method that does not penalize persons for the prior implementation of conservation methods or the installation of water saving devices. If the District establishes a water allocation, the District shall provide notice of the allocation by including the allocation in the regular billing statement for the fee or charge or by any other mailing to the address to which the District customarily mails the billing statement for fees or charges for on-going water service. Any penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed for violation of this Chapter. For the purpose of assessing

administrative fines pursuant to Chapter 7.40.041, each billing period in which an allocation is exceeded shall count as a separate violation. Subsequent violations that occur during a calendar year shall count cumulatively for the purpose of assessing administrative fines for second violations and additional violations.

E. Drought Response Level 3: Drought Critical Condition

1. A Drought Response Level 3 condition is also referred to as a "Drought Critical" condition. A Level 3 condition applies when the Water Authority notifies its member agencies that due to increasing cutbacks caused by drought or other reduction of supplies, a consumer demand reduction of up to forty percent (40%) is required in order to have sufficient supplies available to meet anticipated demands. The District Board of Directors may declare the existence of a Drought Response Level 3 condition and implement the Level 3 conservation measures identified in this policy.

2. All District water use shall comply with Level 1 Drought Watch and Level 2 Drought Alert water conservation practices and measures during a Level 3 Drought Critical condition and shall also comply with the following additional mandatory conservation measures:

   a. Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the District. During the months of November through May, landscape irrigation is limited to no more than once per week on a schedule established by the General Manager and posted by the District. This section shall not apply to commercial growers or nurseries.

   b. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by Section E(2)(a), on the same schedule set forth in Section E(2)(a) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation.

   c. Stop filling or re-filling ornamental lakes or ponds, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a Drought response level under this Chapter 7.40.

   d. Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems.

   e. Repair all leaks within forty-eight (48) hours of notification by the District unless other arrangements are made with the General Manager.

3. During a Drought Response Level 3 condition, the District Board of Directors may find that drought conditions are such that an emergency condition exists and may declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350. In the event of a declared Drought Emergency, no new potable water service shall be provided, no new temporary meters or permanent meters shall be provided and no applications for new potable metered water service or upsizing of metered water service shall be accepted, no new temporary meters or permanent meters shall be provided and no new statements of ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability, commitment letters, agency clearance forms, out-of-district potable water service agreements) shall be issued, except under the following circumstances:

   a. A valid, unexpired building permit has been issued for the project; or

   b. The project is necessary to protect the public's health, safety, and welfare; or

   c. The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the District, in its sole discretion.

      This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore services that has been interrupted for less than a year.

4. The District may establish a water allocation for property served by the District using a method that does not penalize persons for the prior implementation of conservation methods or the installation of water saving devices. If the District establishes a water allocation, the District shall provide notice of the allocation by including the allocation in the regular billing statement for the fee or charge or by any other mailing to the address to which the District customarily mails the billing statement for fees or charges for on-going water service. Any penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed for violation of this Chapter. For the purpose of assessing administrative fines pursuant to Chapter 7.40.041, each billing period in which an allocation is exceeded shall count as a separate violation. Subsequent violations that occur during a calendar year shall count cumulatively for the purpose of assessing administrative fines for second violations and additional violations.

F. Drought Response Level 4: Drought Emergency Condition

1. A Drought Response Level 4 condition is also referred to as a "Drought Emergency" condition. A Level 4 condition applies when the Water Authority Board of Directors declares a water shortage emergency pursuant to California Water Code section 350 and notifies its member agencies that Level 4 requires a demand reduction of more than forty

percent (40%) percent in order for the Authority to have maximum supplies available to meet anticipated demands. Upon declaration by the Authority of a Drought Emergency Condition, the District may declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350 *et seq.*

2. All District water use shall comply with conservation practices and measures required during Level 1 Drought Watch, Level 2 Drought Alert, and Level 3 Drought Critical conditions and shall also comply with the following additional mandatory conservation measures:

   a. Stop all landscape irrigation, except crops and landscape products of commercial growers and nurseries. This restriction shall not apply to the following categories of use unless the District has determined that recycled water is available and may be lawfully applied to the use.

      i. Maintenance of trees and shrubs that are watered on the same schedule set forth in Section E(2)(a) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation;

      ii. Maintenance of existing landscaping necessary for fire protection as specified by the Fire Marshal of the local fire protection agency having jurisdiction over the property to be irrigated;

      iii. Maintenance of existing landscaping for erosion control;

      iv. Maintenance of plant materials identified to be rare or essential to the well being of rare animals;

      v. Maintenance of landscaping within active public parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week according to the schedule established under Section E(2)(a) above;

      vi. Watering of livestock; and

      vii. Public works projects and actively irrigated environmental mitigation projects.

   b. Repair all water leaks within twenty-four (24) hours of notification by the District unless other arrangements are made with the General Manager.

The District may establish a water allocation for property served by the District. If the District establishes water allocation it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the District customarily mails the billing statement for fees or charges for on-going water service. Any penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed

for violation of this Chapter. For the purpose of assessing administrative fines pursuant to Chapter 7.40.041, each billing period in which an allocation is exceeded shall count as a separate violation. Subsequent violations that occur during a calendar year shall count cumulatively for the purpose of assessing administrative fines for second violations and additional violations.

G. Correlation Between Drought Management Plan and Drought Response Levels

1. The correlation between the Water Authority's Drought Management Plan ("DWP") stages and the District Drought response levels identified in this Chapter is described herein. Under DMP Stage 1, the District may implement Drought Response Level 1 actions. Under DMP Stage 2, the District would implement Drought Response Level 1 or Level 2 actions. Under DMP Stage 3, the District may implement Drought Response Level 2, Level 3, or Level 4 actions.

The Drought Response Levels identified in this Chapter correspond with the Water Authority DMP as identified in the following table:

Drought Response Levels	Use Restrictions	Conservation Target	DMP Stage
1 - Drought Watch	Voluntary	Up to 10%	Stage 1 or 2
2 - Drought Alert	Mandatory	Up to 20%	Stage 2 or 3
3 - Drought Critical	Mandatory	Up to 40%	Stage 3
4 - Drought Emergency	Mandatory	Above 40%	Stage 3 or 4

H. Procedures for Determination and Notification of Drought Response Level

1. The existence of a Drought Response Level 1 condition may be declared by the General Manager upon a written determination of the existence of the facts and circumstances supporting the determination. A copy of the written determination shall be filed with the Clerk or Secretary of the District and provided to the District Board of Directors. The General Manager may publish a notice of the determination of existence of Drought Response Level 1 condition in one or more newspapers, including a newspaper of general circulation within the District. The District may also post notice of the condition on their website.

2. The existence of Drought Response Level 2 or Level 3 conditions may be declared by resolution of the District Board of Directors adopted at a regular or special public meeting held in accordance with State law, including but not limited to Water Code section 350 *et seq*. The mandatory conservation measures applicable to Drought Response Level 2 or Level 3 conditions shall become effective as stated in the Board Resolution. Within ten (10) days following the declaration of the response level, the District shall publish a copy of the resolution in a newspaper used for publication of official notices.

3. The existence of a Drought Response Level 4 condition may be declared in accordance with the procedures specified in California Water Code sections 351 and 352. The mandatory conservation measures applicable

to Drought Response Level 4 conditions shall become effective as stated in the Board Resolution. Within ten (10) days following the declaration of the response level, the District shall publish a copy of the resolution in a newspaper used for publication of official notices. If the District establishes a water allocation, it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the District customarily mails the billing statement for fees or charges for on-going water service. Water allocation shall become effective as stated in the Board Resolution.

4. The General Manager may declare the end of Drought Response Level 1. The District Board of Directors may declare an end to a Drought Response Level by the adoption of a resolution at any regular or special meeting held in accordance with State law.

Section 7.40.041 Violations and Penalties.

A. Violation of Chapter 7.40. Any person, who uses, causes to be used, or permits the use of water in violation of this Chapter 7.40 is guilty of an offense punishable as provided herein.

B. Separate Offense. Each day that a violation of this Chapter 7.40 occurs is a separate offense.

C. Administrative Fines. Administrative fines may be levied for each violation of a provision of this Chapter 7.40 as follows:

1. One hundred dollars ($100) for a first violation.

2. Two hundred dollars ($200) for a second violation of any provision of this ordinance within one (1) calendar year.

3. Five hundred dollars ($500) for each additional violation of this ordinance within one (1) calendar year.

D. Administrative Procedures for Imposing Fines.

1. Notice of Violation. If the District General Manager determines to impose a fine on a person (“violator”) who has violated any provision of Chapter 7.40, he or she shall cause a written notice of the violation to be sent to the violator. The notice shall provide in sufficient detail the violation(s), the amount of the penalty being imposed, and the date or times by which the penalty shall be paid to the District. The notice shall notify the violator that the fine will be imposed in the violator’s next water bill and that the violator may appeal the District’s imposition of the fine in writing within ten (10) calendar days of the date of said notice. Service of any notice required under this Section shall be made by the following means:

a. Personal service in the same manner as a summons in a civil action; or

b. Registered United States mail, which service shall be completed at the time of deposit into the United States mail.

2. Appeal. Within ten (10) calendar days of the date of such notice from the District, the customer may appeal the proposed fine to the District General Manager in writing, setting forth a description of the violation, any cure measures undertaken, the amount of the fine, the basis for the appeal, and the remedy sought. The General Manager shall consider the appeal and shall issue a written decision to the appellant customer. If the customer fails to appeal the ten (10) calendar days period specified in the District's notice to the customer, the customer shall lose its right to appeal the District's fine.

3. Appeals to District Board of Directors. An applicant may appeal a decision of the General Manager on an appeal of an administrative fine to the District Board of Directors within ten (10) days of the decision upon written request for a hearing. The request shall state the grounds for the appeal. At a public meeting, the District Board of Directors shall act as the approval authority and review the appeal de novo (granting no deference to the prior decision of the General Manager). The decision of the District Board of Directors is final. The violator shall not be permitted to seek a variance pursuant to Section 7.40.042.

E. Flow-Restricting Devices. Violation of a provision of the mandatory provisions of this Chapter 7.40 is subject to enforcement through installation of a flow-restricting device in the meter.

F. Misdemeanor. Each violation of the mandatory provisions of this Chapter 7.40 may be prosecuted as a misdemeanor punishable by imprisonment in the county jail for not more than thirty (30) days.

G. Discontinuation of Service. Willful violations of the mandatory conservation measures and water use restrictions applicable during a declared Drought Emergency condition during either drought Response Levels 3 or 4 may be enforced by discontinuing service to the property at which the violation occurs as provided by Water Code section 356.

H. Cumulative Remedies. All remedies provided for herein shall be cumulative and not exclusive.

Section 7.40.042 Variance.

A. If a District conservation measure disproportionately impacts a District customer, then the person may apply for a variance to the requirements as provided in this section.

B. The variance may be granted or conditionally granted by the Board, only upon a written finding of the existence of facts demonstrating that the application of this Section 7.40 impacts a District customer in a manner that is disproportionate to

the impacts to District water users generally or to similar property or classes of water use due to specific and unique circumstances of the user or the user's property.

1. Application. Application for a variance shall be a form prescribed by the District.

2. Supporting Documentation. The application shall be accompanied by documentation, such as but not limited to, water bills, invoices and receipts, photographs, maps, drawings, and other information, including a written statement of the applicant demonstrating those water conservation measures undertaken by the applicant.

3. Required Findings for Variance. An application for a variance may be denied if it is found that, based on the information provided in the application, supporting documents, or such additional information as may be requested, and on water use information for the property as shown by the records of the District, all of the following:

   a. That the variance does not constitute a grant of special privilege inconsistent with the limitations upon other District customers.

   b. That because of special circumstances applicable to the property or its use, the strict application of Chapter 7.40 would have a disproportionate impact on the property or use that exceeds the impacts to customers generally.

   c. That the authorizing of such variance will not be of substantial detriment to adjacent properties, and will not materially affect the ability of the District to effectuate the purpose of this chapter and will not be detrimental to the public interest.

   d. That the condition or situation of the subject property or the intended use of the property for which the variance is sought is not common, recurrent or general in nature.

4. Approval Authority. The General Manager shall exercise approval authority and act upon any completed application no later than 10 days after submittal and may approve, conditionally approve, or deny the variance. The applicant requesting the variance shall be promptly notified in writing of any action taken. The variance shall specify the duration for which the variance applicable to the subject property shall apply.

C. Appeals to District Board of Directors. An applicant may appeal a decision or condition of the General Manager on a variance application to the District Board of Directors within ten (10) days of the decision upon written request for a hearing. The request shall state the grounds for the appeal. At a public meeting, the District Board of Directors shall act as the approval authority and review the appeal de novo (granting no deference to the prior decision of the General Manager) by following the variance procedure delineated in Section 7.40.042(A) through (B), (1)-(4) above. The decision of the District Board of Directors is final.

Appendix D

Proof of Publication: UWMP Public Hearing Notice

PROOF OF PUBLICATION (2015.5 C.C.P.)

State Of California,
County of San Diego

I am a citizen of the United States and a resident of the County aforesaid: I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am an authorized representative of
Ramona Sentinel
a newspaper of general circulation, printed and published weekly in the County of San Diego, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of San Diego, State of California, under the date of April 23, 1927, Case Number 51489; that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of the said newspaper and not in any supplement thereof on the following
Dates, to-wit:

May 20 & May 27, 2021

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

Dated: **May 27, 2021**
At: San Diego, California

CGaza
Signature
Cris Gaza
UT Community Press

7780871

RAMONA MUNICIPAL WATER DISTRICT

NOTICE OF PUBLIC HEARING

Notice is hereby given that on the **8th day of June, 2021, at the hour of 6:00 p.m.**, the Board of Directors of the Ramona Municipal Water District will conduct a Public Hearing. The purpose of the hearing will be to take public input on:

Adoption of the 2020 Urban Water Management Plan

Prior to this meeting, copies of the appropriate documents related to the 2020 Urban Water Management Plan will be available for review on the District's website at www.rmwd.org. Written comments can be addressed to the District Office at 105 Earlham Street, Ramona, California 92065 Attn: UWMP 2020 and sent any time prior to the day set for the public hearing.

At the time stated above, the Board of Directors shall hear and consider all comments, if any, to the 2020 Urban Water Management Plan; and at the conclusion of the hearing, the Board may adopt, revise, change, or amend the Plan.

Date: May 14, 2021

RAMONA MUNICIPAL WATER DISTRICT
105 Earlham Street, Ramona, CA 92065
Phone: 760-789-1330

RA7780871 5/20 & 5/27/2021

Appendix F

February 2025

Focused Construction Noise and Vibration Analysis

by Ganddini Group, Inc.

LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION FOCUSED CONSTRUCTION NOISE AND VIBRATION IMPACT ANALYSIS

Barona Reservation (San Diego County)
June 27, 2024
Revised February 11, 2025

gandhi

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

LONG-TERM POTABLE AND RECYCLED WATER SERVICE TO BARONA INDIAN RESERVATION FOCUSED CONSTRUCTION NOISE AND VIBRATION IMPACT ANALYSIS

Barona Reservation (San Diego County)

June 27, 2024
Revised February 11, 2025

prepared by
Roma Stromberg, INCE, MS
Catherine Howe, MS

GANDDINI GROUP INC.
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Santa Ana, California 92705
(714) 795-3100 | ganddini.com

Project No. 19726

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EXECUTIVE SUMMARY

The proposed project consists of two (2) largely parallel new pipelines to convey water, each of less than one (1) mile from existing water distribution facilities within the Ramona Municipal Water District service area, by connection within a county road easement to an existing bridge over San Vicente Creek, along the county road easement to the boundary of the Barona Indian Reservation. The two pipelines include a new 12"-diameter pipeline to convey potable (treated) water, and a new 8"-diameter pipeline to convey recycled water from the District's facilities to the Reservation boundary. The Barona Indian Band of Mission Indians is obtaining a U.S. Housing and Urban Development (HUD) grant which requires compliance with National Environmental Policy Act (NEPA). It is the lead agency under the National Environmental Policy Act (NEPA) for both the on and off-Reservation portions of the project. The Ramona Municipal Water District (RMWD) is the California Environmental Quality Act (CEQA) lead agency for the portion of the pipeline alignments that are off-Reservation.

This noise study is intended to analyze potential noise and vibration impacts in light of applicable policies and ordinances. However, neither the RMWD nor the Barona Band of Mission Indians have adopted noise criteria and the United States Department of Housing and Urban Development (HUD) does not have noise criteria that apply to construction activities. The proposed project is within and adjacent to the County of San Diego. Noise and groundborne vibration thresholds established by the County of San Diego were utilized in the following analysis.

Project Construction Impacts

Project construction will not occur outside of the hours outlined in Section 8.54.070 of the County of San Diego's Municipal Code which prohibits construction activities other than between the hours of 7:00 AM to 7:00 PM. Project construction may however violate the 60 dBA one-hour L_{eq} (in least Bell's vireo habitat) and 75 dBA $L_{eq\ (8\text{-}hour)}$ at occupied land uses. Construction activities may also violate the 82 and 85 dBA L_{25} noise standards for the impulsive noise at specified land uses. In practice, construction will likely occur along one segment of the pipeline at a time, so only receptors in the vicinity of that portion of alignment will be affected and noise levels at any particular receptor will increase and then decrease as construction moves along the pipeline alignment. Mitigation is required as provided in Section 6 of this report.

Groundborne Vibration Impacts

The most vibratory piece of equipment expected to be utilized on the project site is a large bulldozer. A large bulldozer can generate a groundborne vibration level of 0.210 at a distance of 25 feet. Potential damage caused by groundborne vibration is dependent upon the distance from the source and the affected structure. There are no existing buildings extremely susceptible to vibration damage near the proposed alignment. The next most sensitive structure would be non-engineered timber and masonry buildings. The damage impact threshold for these structures is 0.2 PPV. If a large bulldozer is utilized within 25 feet of a such a structure, there is potential for structural damage. There are several pieces of construction equipment including a vibratory roller, and a large bulldozer that may be utilized to construct the project that could result in damage due to groundborne vibration if they are used too close to an existing structure. Potential damage caused by groundborne vibration is dependent upon the distance from the source and the affected structure. There are no existing buildings extremely susceptible to vibration damage near the proposed alignment. The next most sensitive structure would be non-engineered timber and masonry buildings. Implementation of Mitigation Measure 15 (presented in Section 6 of this report) will reduce this impact to less than significant.

1. INTRODUCTION

This section describes the purpose of this study and the proposed project.

PURPOSE AND OBJECTIVES

The purpose of this Noise Study is to model construction noise and groundborne vibration noise associated with installation of two (2) largely parallel new pipelines to convey potable and recycled water to the Barona Reservation from Ramona Municipal Water District facilities. The Barona Band of Mission Indians is the lead agency under the National Environmental Policy Act (NEPA) for the water pipeline project for both the on and off-Reservation portions of the project. Ramona Municipal Water District (RMWD) is the lead agency under the California Environmental Quality Act (CEQA) for the off-Reservation portion of the two pipelines from the District pump station to the Barona Reservation boundary.

This noise study is intended to analyze potential noise and vibration impacts in light of applicable policies and ordinances. However, neither the RMWD or the Barona Band of Mission Indians have adopted noise criteria and the United States Department of Housing and Urban Development (HUD) does not have noise criteria that apply to construction activities. The proposed project is within and adjacent to the County of San Diego. Noise and groundborne vibration thresholds established by the County of San Diego were utilized in the following analysis.

Although this is a technical report, effort has been made to write the report clearly and concisely. A list of acronyms and glossary are provided in Appendix A and Appendix B of this report to assist the reader with technical terms related to noise analysis.

PROJECT DESCRIPTION

The Project consists of two segments: an off-Reservation segment and an on-Reservation segment. The off-Reservation segment consists of two (2) largely parallel new pipelines to convey water, each of less than one (1) mile from existing water distribution facilities within the Ramona Municipal Water District service area, by connection within a county road easement to an existing bridge over San Vicente Creek, along the county road easement to the boundary of the Barona Indian Reservation, all to be performed by the RMWD. The two pipelines include a new 12”-diameter pipeline to convey potable (treated) water, and a new 8”-diameter pipeline to convey recycled water from the District’s facilities to the Reservation boundary. The project location is shown on Figure 1 and the proposed alignment is shown on Figure 2.

The Potable Water Line. The 12-inch potable (treated) water pipeline originates at the intersection of San Vicente Road and Wildcat Canyon Road, within the District’s service area. The District currently operates a 16-inch diameter water line within the San Vicente Road right-of-way, to which the new 12-inch pipeline will connect. The 12-inch pipeline will be constructed within the Barona Road (Wildcat Canyon Road) right-of-way from the connection point south, crossing an existing bridge over San Vicente Creek, continuing south to the Reservation boundary just past Little Klondike Road. A new water metering facility will be constructed just inside the Reservation boundary to meter water deliveries from the District to the Reservation. The meter facility will consist of a magnetic flow meter and related equipment mounted on a 12’ x 25’ concrete pad enclosed by chain link fence.

After the metering station, the 12-inch pipeline leaves the Barona Road (Wildcat Canyon Road) right-of-way, continuing south across Reservation land. The 12-inch pipeline crosses Wildcat Canyon Road twice, using trenchless construction techniques, traversing existing Reservation roads to a point just south of the Reservation paintball area. At this location the Tribe will construct a small pump station, located adjacent to an existing Reservation well site (Well 30). The pump station will be comprised of a concrete block building, approximately 35 feet by 35 feet. This building will house the existing well, the booster pumps, and the

electrical equipment. There will also be an emergency diesel generator on the exterior of the building, enclosed in a 12-foot by 18-foot concrete block wall.

Leaving the pump station, the 12-inch pipeline continues in Reservation roads to Ketuull Uunyaa Way and continues south in Ketuull Uunyaa Way and other unnamed local roadways to Featherstone Canyon Way. At Featherstone Canyon Way, the 12-inch pipeline traverses open land to Barona Road and continues south to connection with an existing 12-inch pipeline within the Reservation water system, adjacent to an existing Reservation well site (Well 21). At this existing location and prior to connection with the existing Reservation distribution system, a Pressure Reducing Station (PRS) will be constructed above ground, with piping, pressure reducing valve, and other miscellaneous equipment and electrical gear connected to the nearby existing well building. The Tribe will construct all on-Reservation pipeline and related facilities.

The Recycled Water Line. The 8-inch recycled water pipeline commences at the San Vicente Wastewater Reclamation Plant, an existing District pump station located just northeast of the intersection of Vicente Meadows Road and San Vicente Road. The pipeline will traverse District property to Vicente Meadows Road and continue south in Vicente Meadows Road to San Vicente Road. The pipeline will continue west in San Vicente Road to its intersection with Wildcat Canyon Road, then continue south, parallel to the proposed 12-inch potable (treated) water pipeline, across the Klondike Creek bridge along Wildcat Canyon Road to the Reservation boundary, a total distance of less than one mile, all to be constructed by the District.

The 8-inch recycled pipeline will also include a magnetic flow meter within the above new metering facility, similar to that of the potable (treated) water pipeline. The 8-inch recycled pipeline continues south, parallel to the 12-inch pipeline, over Reservation land, crossing the Wildcat Canyon Road alignment at the same two locations, also by trenchless construction techniques. Where the potable and recycled lines cross under the county road they (and a third dummy pipeline) will be encased in a larger pipe or sleeve to provide support, stability, and access. The 8-inch recycled pipeline continues to parallel the 12-inch potable pipeline in existing Reservation roads to a point just south of the Reservation paintball area, where the 12-inch pipeline pump station is located. The 8-inch pipeline is not connected to the pump station and traverses south a short distance to connect to an existing 6-inch Reservation non-potable pipeline. This connection is the termination point of the new 8-inch recycled water pipeline. The existing non-potable pipeline generally parallels the 12-inch potable pipeline alignment south, terminating at the existing Reservation golf course where the recycled water is tributary to the golf course ponds.

The overall length of the 12-inch pipeline is approximately 41,900 linear feet. That of the new 8-inch pipeline is approximately 21,700 linear feet. The two pipelines will be aligned parallel, with a separation of 4 feet depending on conditions, designed and built to District standards. Both pipelines will be of polyvinyl chloride, except downstream of the booster station, which will be of steel pipe materials because of the greater pressure at this location.

PROJECT LOCATION

All elements of the Proposed Project lie within Section 35, T13S, R1E, SBB&M (off-Reservation), and T14S, R1 and 2E, SBB&M (un-sectioned because formerly Mexican land grant). The Project Site includes all or a portion of the following APNs:

285-090-07
328-050-01
331-010-01
328-080-01
328-120-03
328-100-02
330-020-01

Off-Reservation Alignment

The 8-inch recycled water pipeline commences at the San Vicente Wastewater Reclamation Plant, an existing District pump station located just northeast of the intersection of Vicente Meadows Road and San Vicente Road. Once the proposed 8-inch recycled water pipeline reaches the intersection of San Vicente Road and Wildcat Canyon Road it will share the alignment and run parallel with the 12-inch potable water pipeline in Wildcat Canyon Road. A horizontal separation of 4 feet must be maintained between the recycled and potable water pipelines throughout the alignment, both off- and on-Reservation. Figure 2 depicts the limits of the off-Reservation alignment as defined by the Tribe's Reservation borders. Off-Reservation, Wildcat Canyon Road is maintained by the San Diego County Department of Public Works (DPW) and thus subject to the County's design standards and permitting requirements. It will be necessary to obtain an Encroachment permit from the County. Approximately 3000 LF of recycled water pipeline and 2100 LF of potable water pipeline will be constructed off-Reservation in Wildcat Canyon Road.

On-Reservation Alignment

After crossing the Reservation boundary Wildcat Canyon Road becomes Barona Road. The proposed recycled and potable water pipelines will run within the Barona Road right of way for approximately 0.35 miles before shifting eastward and moving off the road outside of the County right-of-way and onto Reservation land. The pipes continue to share an alignment until the recycled water line connects to the existing Golf Course Line approximately 1200 feet southeast of the Giant San Diego Paintball Park. Initially the pipeline can run parallel to the road, but after approximately 1,000 feet the terrain adjacent to the road becomes very steep. The road is very narrow in this area and cut into the hillside. It would be very difficult to construct the pipeline without shutting down the road. Since this is the only road accessing the Reservation from the north side, this would be a major disruption to traffic on the Reservation. This would also put the pipeline back in the County easement and would cumulatively be over one mile, which would trigger a CEQA Initial Study which is contained in this document.

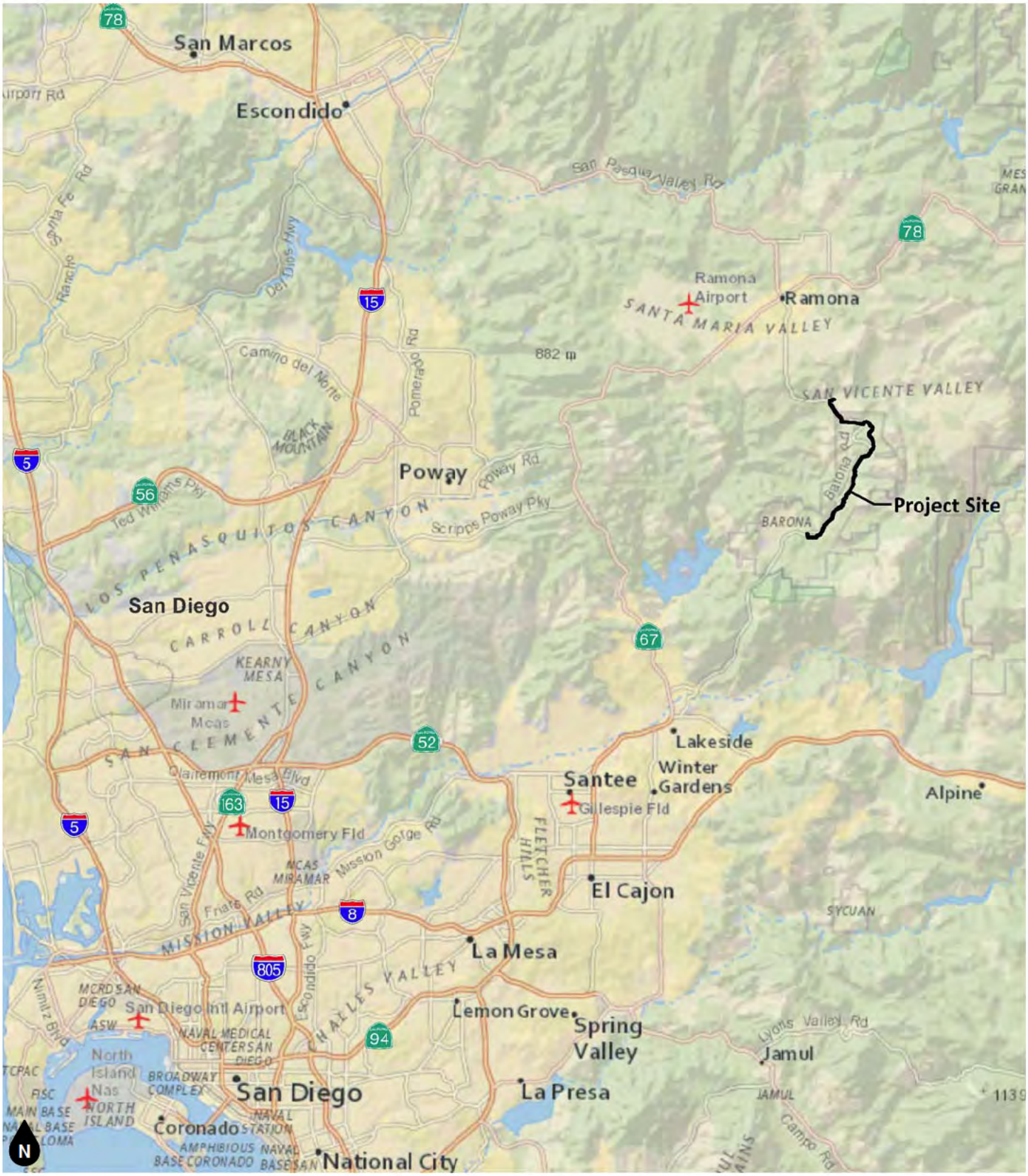


Figure 1
Project Location Map

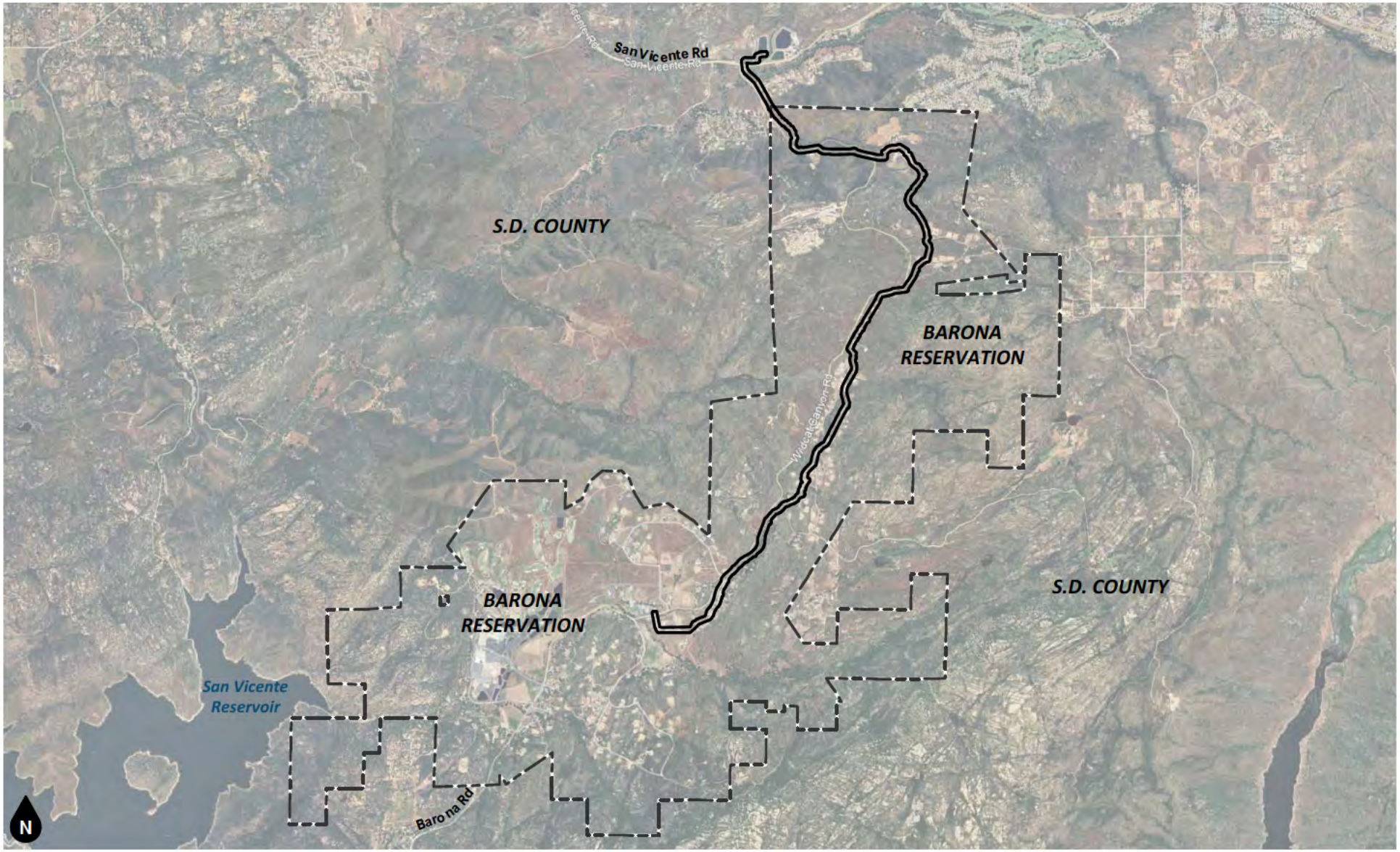


Figure 2
Site Plan

2. NOISE AND VIBRATION FUNDAMENTALS

This section provides an overview of key noise and vibration concepts.

NOISE FUNDAMENTALS

Sound is a pressure wave created by a moving or vibrating source that travels through an elastic medium such as air. Noise is defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and in extreme circumstances, hearing impairment.

Commonly used noise terms are presented in Appendix B. The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the "A-weighted" noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dB(A) or dBA.

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features. Sound from point sources, such as air conditioning condensers, radiates uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as a doubled traffic volume, would increase the noise levels by 3 dBA; halving of the energy would result in a 3 dBA decrease. Figure 3 shows the relationship of various noise levels to commonly experienced noise events.

Average noise levels over a period of minutes or hours are usually expressed as dBA L_{eq}, or the equivalent noise level for that period of time. For example, $L_{eq(3\text{-}hour)}$ would represent a 3-hour average. When no period is specified, a one-hour average is assumed.

L_n represents the sound level exceeded for a given percentage of a specified period. For example, L_{25} is the sound level exceeded 25 percent of the time, and L_{90} is the sound level exceeded 90 percent of the time.

Noise standards for land use compatibility are stated in terms of the Community Noise Equivalent Level (CNEL) and the Day-Night Average Noise Level (DNL). CNEL is a 24-hour weighted average measure of community noise. CNEL is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours. DNL is a very similar 24-hour average measure that weights only the nighttime hours.

It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA; that a change of 5 dBA is readily perceptible, and that an increase (decrease) of 10 dBA sounds twice (half) as loud. This definition is recommended by the California Department of Transportation's Technical Noise Supplement to the Traffic Noise Analysis Protocol (2013).

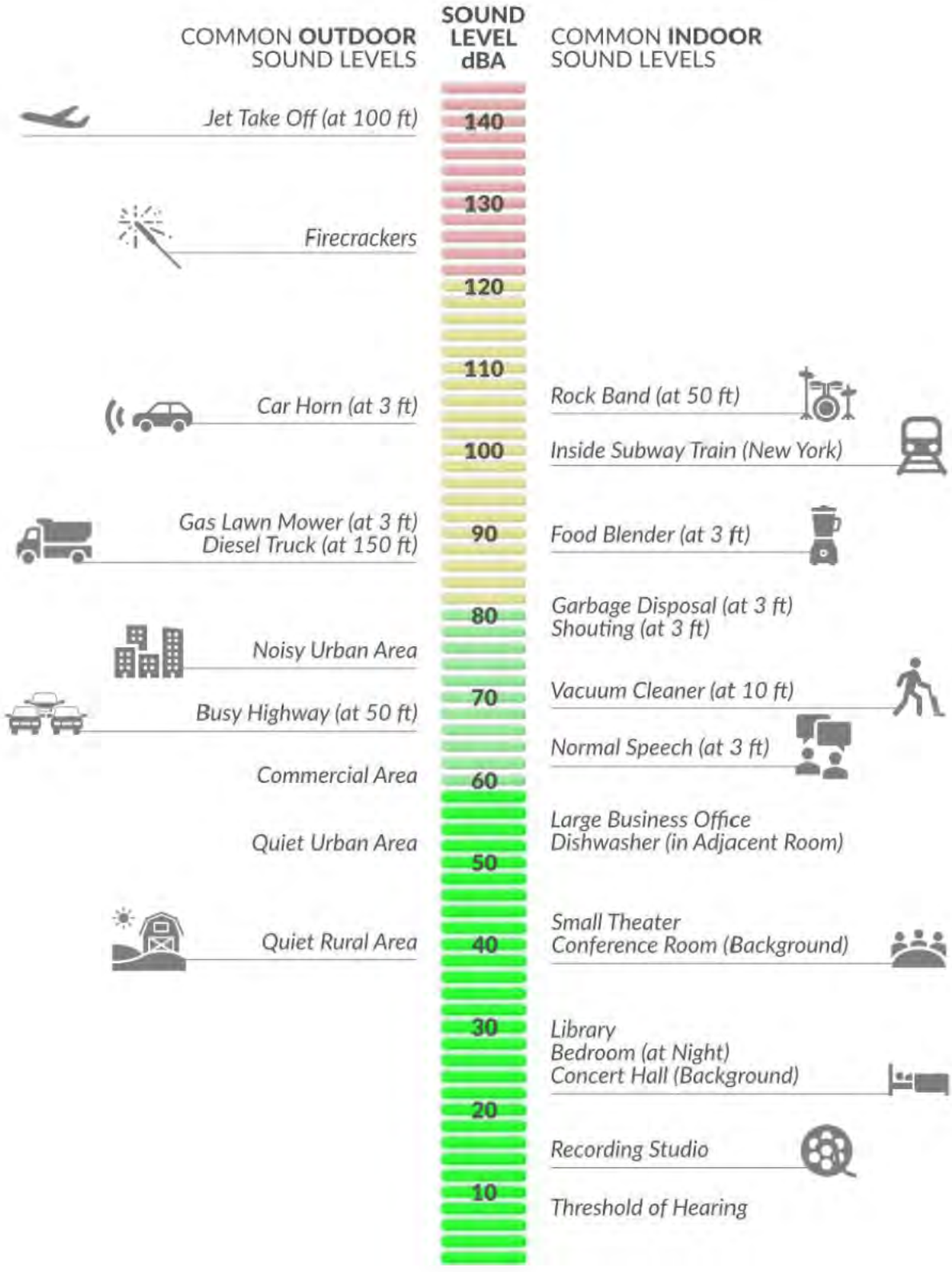
VIBRATION FUNDAMENTALS

The way in which vibration is transmitted through the earth is called propagation. Propagation of earthborn vibrations is complicated and difficult to predict because of the endless variations in the soil through which waves travel. There are three main types of vibration propagation: surface, compression and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. Compression waves, or P-waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. Shear waves, or S-waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation".

As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

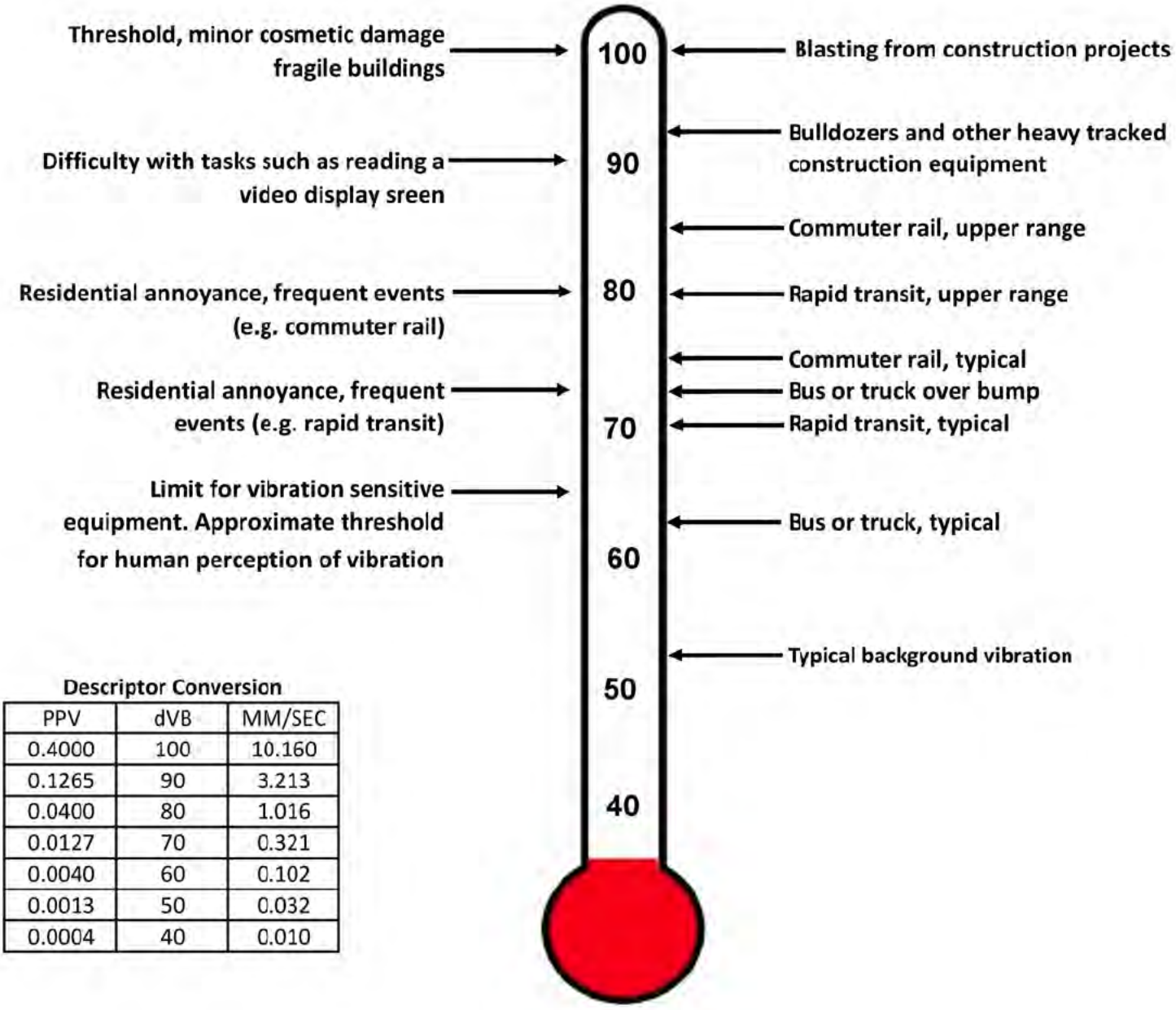
Vibration amplitudes are usually expressed as either peak particle velocity (PPV) or the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous peak of the vibration signal in inches per second. The RMS of a signal is the average of the squared amplitude of the signal in vibration decibels (VdB), ref one micro-inch per second. The Federal Railroad Administration uses the abbreviation "VdB" for vibration decibels to reduce the potential for confusion with sound decibel.

PPV is appropriate for evaluating the potential of building damage and VdB is commonly used to evaluate human response. Decibel notation acts to compress the range of numbers required in measuring vibration. Similar to the noise descriptors, L_{eq} and L_{max} can be used to describe the average vibration and the maximum vibration level observed during a single vibration measurement interval. Figure 4 illustrates common vibration sources and the human and structural responses to ground-borne vibration. As shown in Figure 4, the threshold of perception for human response is approximately 65 VdB; however, human response to vibration is not usually substantial unless the vibration exceeds 70 VdB. Vibration tolerance limits for sensitive instruments such as magnetic resonance imaging (MRI) or electron microscopes could be much lower than the human vibration perception threshold.



© Ganddini Group, Inc.
Based on Policy & Guidance from Federal Aviation Administration

Figure 3
A-Weighted Comparative Sound Levels



Descriptor Conversion

PPV	dVB	MM/SEC
0.4000	100	10.160
0.1265	90	3.213
0.0400	80	1.016
0.0127	70	0.321
0.0040	60	0.102
0.0013	50	0.032
0.0004	40	0.010

Source: FRA, 2012. Federal Railroad Administration High-Speed Ground Transportation Noise and Vibration Impact Assessment. Office of Railroad Policy Development, Washington, D.C. DOT/FRA/ORD-12/15. September.

Figure 4
Typical Levels of Groundborne Vibration

3. EXISTING NOISE ENVIRONMENT

This section describes the existing noise setting in the project vicinity.

EXISTING LAND USES AND SENSITIVE RECEPTORS/AFFECTED ENVIRONMENT

Sensitive Receptors

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, single and multiple-family residential, including transient lodging, motels and hotel uses make up the majority of these areas.

Sensitive land uses that may be affected by project noise include existing single-family residential properties, a cultural center, a charter school and potentially, the least Bell's vireo, a protected bird species.

Sensitive Species – Least Bell's Vireo

Based on a study conducted by the San Diego Association of Governments (SANDAG) in 1991, it was theoretically estimated that noise levels in excess of 60 dBA L_{eq} in vireo habitat would mask the bird's song, subsequently reducing the reproductive success of this species during their breeding season which occurs between mid-March and mid-September, and its ability to defend its territory.

AMBIENT NOISE MEASUREMENTS

Ambient noise measurements were taken consistent with Section 36.403 of County Code. Specifically, an American National Standards Institute (ANSI Section SI.4 2014, Class 1) Larson Davis model LxT sound level meter was used to document existing ambient noise levels. In order to document existing ambient noise levels in the project area, eight (8) 15-minute daytime noise measurements were taken between 1:38 PM and 7:02 PM on May 24, 2024. Figure 5 shows the noise measurement location map.

Table 1 provides a summary of the short-term ambient noise data. Field worksheets and noise measurement worksheets are provided in Appendix C.

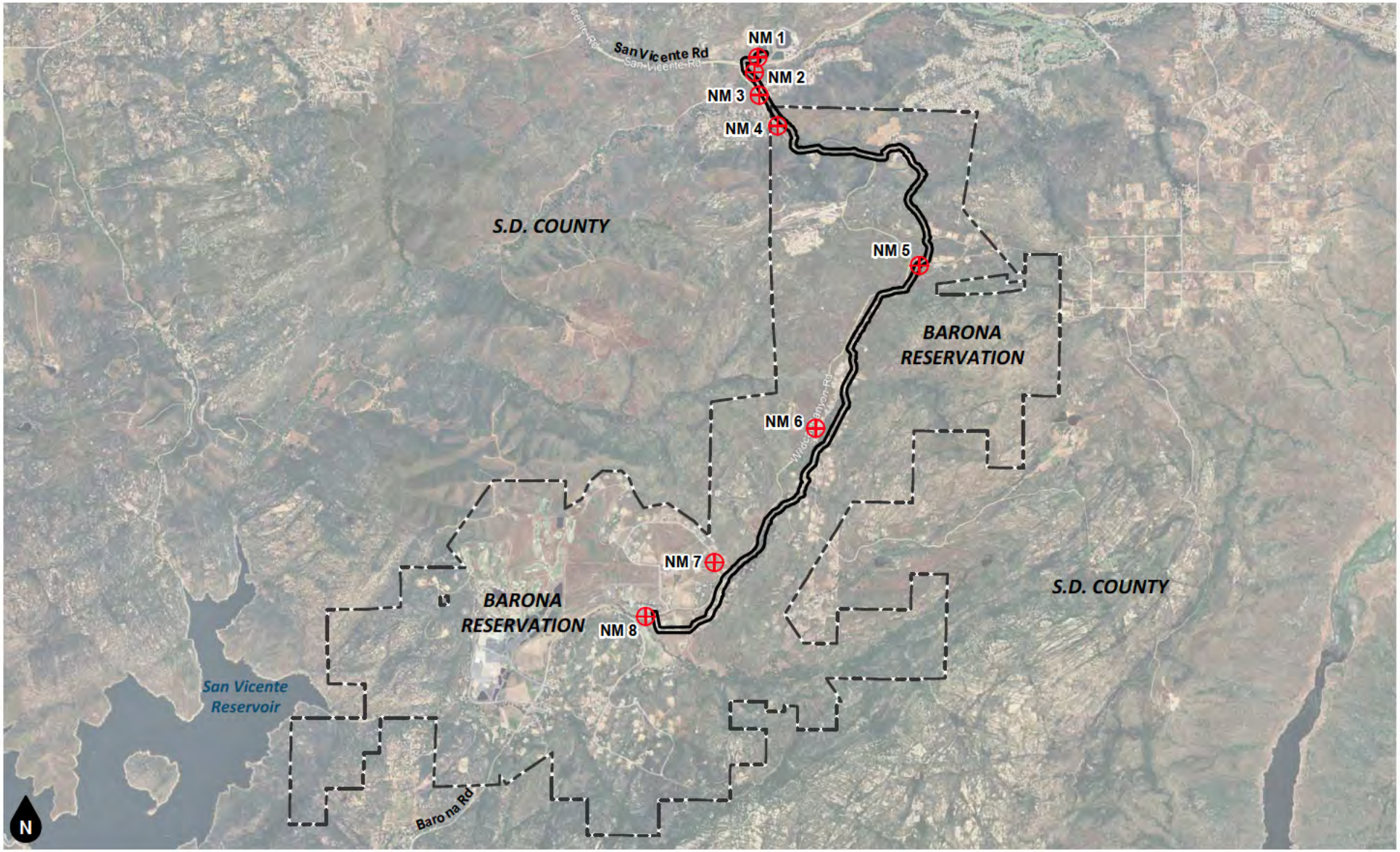
Measured noise levels in the project vicinity ranged between 48.1 and 72.9 dBA L_{eq}. Vehicles traveling on area roadways were the primary noise source. Other noise sources included a one-time flyover of an F18 aircraft, bird song, occasional distant aircraft. As shown on Figure 5, existing ambient noise measurements were taken at the following locations:

- NM1: represents the existing noise environment within the Riparian Woodland area located near the north end of the proposed pipeline.
- NM2: represents the existing noise environment in the Riparian Woodland area located south of the San Vicente Road and east of Wildcat Canyon Road.
- NM3: represents the existing noise environment at the residential land uses located east of the project site at Tombill Road.
- NM4: represents the existing noise environment of the residential uses located approximately one-half mile south of San Vicente Road on the west side of Barona Road.
- NM5: represents the existing noise environment of the residential land uses east of Wildcat Canyon Road at Capitan Grande Road.
- NM6: represents the existing noise environment of the residential land uses east of Wildcat Canyon Road in the vicinity of Ketuull Uunyaa Way.
- NM7: represents the existing noise environment of the residential land uses west of Wildcat Canyon Road in the vicinity of Akuunyaa Way.
- NM8: represents the existing noise environment of the commercial, school and public land uses in the vicinity of Barona Road between Akuunyaa Way and Dump Road.

Table 1
Noise Measurement Summary

Site Location[1]	Time Started[2]	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
NM1	1:38 PM	51.2	61.0	42.7	57.4	54.7	52.0	49.7
NM2	2:14 PM	49.0	59.1	39.7	55.5	52.4	49.7	47.2
NM3	3:03 PM	70.0	86.9	41.4	79.8	73.6	69.4	58.4
NM4	3:55 PM	72.9	86.8	37.8	80.5	78.1	74.7	64.9
NM5	4:47 PM	48.7	57.3	35.6	54.1	52.7	50.0	47.3
NM6	5:24 PM	57.7	68.0	36.2	64.3	62.4	59.2	54.5
NM7	6:10 PM	48.1	61.6	35.1	54.4	52.2	48.7	45.4
NM8	6:47 PM	67.9	79.5	38.9	75.4	73.4	69.6	60.2

Notes:
(1) See Figure 5 for noise measurement locations. Each noise measurement was performed over a 15-minute duration.
(2) Noise measurements performed on May 24, 2024.



Legend

⊕ Noise Measurement Location

NM 1

Figure 5
Noise Measurement Location Map

4. REGULATORY SETTING

FEDERAL REGULATION

National Environmental Policy Act

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970 and requires federal agencies to assess the environmental effects of their proposed federal actions (projects, permits, authorizations, etc.). NEPA incorporates a systematic interdisciplinary approach to identify potential environmental effects of a federal action. This results in a detailed report which may be an Environmental Impact Statement (EIS) or an Environmental Assessment (EA). The level of analysis and type of report to be prepared is determined by the federal lead responsible agency.

Federal Noise Control Act of 1972

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In response, the EPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the Ldn should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated Federal agencies, allowing more individualized control for specific issues by designated Federal, State, and local government agencies.

UNITED STATES DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

Noise Abatement and Control - Introduction "HUD's noise standards may be found in CFR Part 51, Subpart B. For proposed new construction in high noise areas, the project must incorporate noise mitigation features. Consideration of noise applies to the acquisition of undeveloped land and existing development as well. Noise standards set by HUD are intended to protect residential land uses from excessive environmental noise. HUD has not established specific standards for construction related noise. Construction noise thresholds established by San Diego County are used to assess construction noise impacts to potentially affected receptors.

STATE REGULATIONS

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires lead agencies to consider noise impacts. Under CEQA, lead agencies are directed to assess conformance to locally established noise standards or other agencies' noise standards; measure and identify the potentially significant exposure of people to or generation of excessive ground borne vibration or noise levels; measure and identify potentially significant permanent or temporary increases in ambient noise levels; and measure and identify potentially significant impacts associated with air traffic.

California Noise Control Act

This section of the California Health and Safety Code finds that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare. Though not adopted by law, the State of California General Plan Guidelines 2017, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provides guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of construction relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document (EPA 1974) influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., Ldn or CNEL) and in the upper limits for the normally acceptable outdoor exposure of noise-sensitive uses.

Local Regulations

San Diego County General Plan Noise Element

The County General Plan Noise Element includes land use planning tools to reduce future noise related land use incompatibilities. These include criteria that specify acceptable limits of noise for various land uses throughout the County. These criteria are designed to integrate noise considerations into land use planning to prevent noise/land use conflicts. The County has adopted their own version of the State Land Use Compatibility Guidelines.

The County of San Diego General Plan includes goals regarding noise within the community. Goals applicable to the proposed project are listed below.

Goal N-1 **Land Use Compatibility.** A noise environment throughout the unincorporated County that is compatible with the land uses.

Goal N-2 **Protection of Noise Sensitive Uses.** A noise environment that minimizes exposure of noise sensitive land uses to excessive, unsafe, or otherwise disruptive noise levels.

Goal N-3 **Groundborne Vibration.** An environment that minimizes exposure of sensitive land uses to the harmful effects of excessive groundborne vibration.

Goal N-5 **Non-transportation-Related Noise Sources.** A noise environment that provides minimal noise spillovers from industrial, commercial, agricultural, extractive, and similar facilities to adjacent residential neighborhoods.

Goal N-6 **Temporary and/or Nuisance Noise.** Minimal effects of intermittent, short-term, or other nuisance noise sources to noise sensitive land uses.

San Diego County Code of Ordinances

Section 36.408 Hours of Operation of Construction Equipment

Except for emergency work, it shall be unlawful for any person to operate or cause to be operated, construction equipment"

- *Between 7:00 PM and 7:00 AM*
- *On a Sunday or a holiday. Fort purposes of this section, a holiday means January 1st, the last Monday in May, July 4th, the first Monday in September, the fourth Thursday in November and December 25th. A person may, however, operate construction equipment on a Sunday or holiday between the hours of 10:00 AM and 5:00 PM at the person's residence or for the purpose of constructing a residence for himself or herself, provided that the operation of construction equipment is not carried out for financial consideration or other consideration of any kind and does violate the limitations in sections 36.409 and 36.410.*

Section 36.409 Sound Level Limitations on Construction Equipment

Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 decibels for an eight-hour period, between 7:00 AM and 7:00 PM, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

Section 36.410 Sound Level Limitations on Impulsive Noise

In addition to the general limitations on sound levels in section 36.404 and the limitations on construction equipment in section 36.409, the following additional sound level limitations shall apply"

a) Except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25 percent of the minutes in the measurement period. The minimum measurement period for any measurement conducted shall be one hour with one-minute intervals at a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise exceeds the maximum sound level for any portion of any minute, it will be deemed that the maximum sound level was exceeded during that minute. The maximum sound level depends on the use being made of the occupied property. The uses in Table 2 are as described in the County Zoning Ordinance.

Handling and Transport of Construction Material

Handling, and/or transport of any container or any construction material in a public place, such a way as to create a disturbing, excessive, or offensive noise that either endangers the health or safety of any person and/or causes discomfort or annoyance to a person of normal sensitivity is prohibited in Section 36.411 of County Code.

Variances

The County allows variances to the above discussed code and noise criteria under certain circumstances (County Code Section 36.423). Specifically, a person who proposes to perform non- emergency work on a public right-of-way, public utility facility, public transportation facility or some other project for the benefit of the general public, who is unable to conform to the requirements of this chapter may apply to the County for a variance authorizing the person to temporarily deviate from the requirements of this chapter. The noise control officer shall only grant a variance if the officer makes findings that the applicant's proposed activity

cannot feasibly be done in a manner that would comply with this chapter and the applicant has no other reasonable alternative available. When evaluating a request for a variance the noise control officer shall determine the impact any noise that does not comply with the limits of this chapter will have on each property likely to be affected by the noise. The evaluation must consider the uses on each property on which the non-complying noise will be received, what activities will be impacted on the property and the duration of each impact. The evaluation shall also include the value to the community of the work being done by the applicant, the cost to the community if the applicant is unable to perform the work, the cost to the applicant for mitigating the non-complying noise and any cost to the occupant of the impacted property during the time the period of the impacted property will be subject to the non-complying noise. If the noise control officer grants a variance under this section the variance may impose time limitations on the non-complying activity and may include mitigation measures that the applicant is required to adopt.

County of San Diego Guidelines for Determining Significance for Noise

The County of San Diego Guidelines for Determining Significance for Noise (2009) refers to the above discussions of the Federal, State and County guidelines, policies and ordinances (as applicable to this project). For impacts related to groundborne vibration, these guidelines refer to FTA methodology and criteria (FTA 2018). Groundborne Vibration Criteria is presented in Table 3.

County of San Diego Guidelines for Determining Significance for Biological Resources

The County has established 60 dBA L_{eq} as the noise impact threshold for potential impacts to the least Bell's vireo during their nesting season (San Diego County 2010).

Table 2
Maximum Sound Level (Impulsive) Measured at Occupied Property

Occupied Property Use	Decibels
Residential, village zoning, or civic use	82
Agricultural, commercial or industrial use	85

Table 3
Construction Vibration Damage Criteria

Building/Structural Category	PPV, in/sec	Approximate L_v[1]
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremelly susceptible to vibration damage	0.1	90

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment Manual (September 2018).
(1) RMS velocity in decibels, VdB re 1 micro-in/sec.

5. ANALYTICAL METHODOLOGY AND MODEL PARAMETERS

This section discusses the analysis methodologies used to assess noise impacts.

CONSTRUCTION NOISE MODELING

On-Site Construction Noise

Construction noise will vary depending on the construction process, type of equipment involved, location of the construction site with respect to sensitive receptors, the schedule proposed to carry out each task (e.g., hours and days of the week) and the duration of the construction work.

Construction noise associated with the proposed project was calculated at the sensitive receptor locations utilizing methodology presented in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2018) together with several key construction parameters, including: distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site.

The equipment used to calculate the construction noise levels for each phase were based on the assumptions provided in the Air Quality Study (CalEEMod modeling) conducted for a similar project. Sound emission levels associated with typical construction equipment as well as typical usage factors are provided in Table 4. Noise contours for each applicable standard, (75 dBA $L_{eq\ [8\text{-}hour]}$, 82 dBA L_{25}, 85 dBA L_{25} and 60 dBA L_{eq}) representative of each construction phase, were calculated for the entire pipeline route. Construction noise worksheets are provided in Appendix D.

GROUNDBORNE VIBRATION MODELING

Groundborne vibration modeling was performed using vibration propagation equations and construction equipment source levels obtained from the FTA *Transit Noise and Vibration Impact Assessment Manual* (2018). Table 5 shows typical vibration levels associated with commonly used construction equipment based on data from the FTA.

There are several types of construction equipment that can cause vibration levels high enough to annoy persons in the vicinity and/or result in architectural or structural damage to nearby structures and improvements. For example, as shown in Table 5, a vibratory roller could generate up to 0.21 in/sec PPV at and operation of a large bulldozer could generate up to 0.089 PPV at a distance of 25 feet (two of the most vibratory pieces of construction equipment). Groundborne vibration at sensitive receptors associated with this equipment would drop off as the equipment moves away. For example, as the vibratory roller moves further than 100 feet from the sensitive receptors, the vibration associated with it would drop below 0.0026 in/sec PPV. It should be noted that these vibration levels are reference levels and may vary slightly depending upon soil type and specific usage of each piece of equipment.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref} (25/D_{rec})^{n}$$

Where: PPV_{ref} = *reference PPV at 25ft.*
D_{rec} = *distance from equipment to receiver in ft.*
n = 1.5 (*the value related to the attenuation rate through ground*)

Table 4
CA/T Equipment Noise Emissions and Acoustical Usage Factor Database

Equipment Description	Impact Device?	Acoustical Use Factor (%)	Spec. Lmax @ 50ft (dBA, slow)	Actual Measured Lmax @ 50ft (dBA, slow)	No. of Actual Data Samples (Count)
All Other Equipment > 5 HP	No	50	85	-N/A-	0
Backhoe	No	40	80	78	372
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	-N/A-	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Forklift[2,3]	No	50	n/a	61	n/a
Front End Loader	No	40	80	79	96
Grader	No	40	85	-N/A-	0
Jackhammer	Yes	20	85	89	133
Pavement Scarafier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	50	85	77	9
Paving Equipment	No	50	85	77	9
Pneumatic Tools	No	50	85	85	90
Roller	No	20	85	80	16
Scraper	No	40	85	84	12
Tractor	No	40	84	-N/A-	0
Vibratory Concrete Mixer	No	20	80	80	1
Warning Horn	No	5	85	83	12
Welder/Torch	No	40	73	74	5

Notes:
(1) Source: FHWA Roadway Construction Noise Model User's Guide January 2006.
(2) Warehouse & Forklift Noise Exposure - NoiseTesting.info Carl Stautins, November 4, 2014
http://www.noisetesting.info/blog/carl-strautins/page-3/
(3) Data provided Leq as measured at the operator. Sound Level at 50 feet is calculated using Inverse Square Law.

Table 5
Construction Equipment Vibration Source Levels

Equipment		PPV at 25 ft, in/sec	Approximate Lv* at 25 ft
Pile Driver (impact)	upper range	1.518	112
	typical	0.644	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.170	93
clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: Federal Transit Administration: Transit Noise and Vibration Impact Assessment Manual, 2018.
*RMS velocity in decibels, VdB re 1 micro-in/sec

6. NOISE AND VIBRATION IMPACTS/ENVIRONMENTAL CONSEQUENCES

This section analyzes the significance of project-related noise and groundborne vibration impacts relative to standards established by the County of San Diego and other applicable agencies in the context of CEQA Appendix G of the California Environmental Quality Act Guidelines (Title 14, Division 6, Chapter 3 of the California Code of Regulations) includes an environmental checklist that identifies issues upon which findings of significance should be made. The CEQA Environmental Checklist Appendix G, XIII. Noise, requires determination if the project would result in:

a) *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

b) *Generation of excessive groundborne vibration or groundborne noise levels?*

c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?*

As discussed above in the Regulatory Setting Section of this report, the EPA determined that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. Furthermore, the Barona Band of Mission Indians have not published construction noise thresholds, and while HUD is a responsible agency, they defer to local policies and ordinances in regard to construction noise. If the Barona Band of Mission Indians agrees, the following analysis can be applied to both CEQA and NEPA analysis.

Noise Impacts

Would the project result in:

a) *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Construction noise is regulated by Sections 36.408 and 36.409 and 36.410 of the San Diego County Code as presented in Section 4 of this report. The threshold for determining an indirect impacts to the least Bell's vireo, a protected bird species, is 60 dBA L_{eq} during the nesting season.

Worst case construction noise contours were developed using the FTA methodology. Construction noise modeling worksheets for each phase are provided in Appendix D. Anticipated noise construction noise levels and noise contours are provided in Table 6 and Table 7. Noise contours are also shown on Figures 6-11. The noise contour maps are intended to show the extents of the worst-case hour construction scenario for the 60 dBA one-hour L_{eq} and 75 dBA $L_{eq\ (8\text{-}hour)}$ noise standards and a maximum noise level (L_{25}) scenario for the impulsive noise standards of 82 L_{25} and 85 dBA L_{25}. In practice, construction will likely occur along one segment of the pipeline at a time, so only receptors in the vicinity of that portion of alignment will be affected. Noise levels at any particular receptor will increase and then decrease as construction moves along the pipeline alignment.

Compliance with County Ordinance 36.408 Established Hours for Construction

Project construction is expected to occur during normal daytime hours and is not expected to violate the established hours of construction provided in Section 36.4.08 of the County Code. This impact would not be significant.

Project Compliance with County Ordinance 36.409 Sound Level Limitations on Construction Equipment

As shown on Figures 6-11 and in Table 7, project construction has the potential to exceed 75 dBA L_{eq} (eight-hour) noise standard at existing occupied properties, including residential, commercial and civic land uses. Although the nature of the linear construction means that the construction equipment will be moving from one segment to another, and when averaged over an 8-hour day, this verified. Impacts would be less than significant with implementation of Mitigation Measures 1-9, below.

Compliance with County Ordinance 36.410 Sound Level Limitations on Impulsive Noise - 82 dBA L_{25} Noise Standard

Due to the terrain, there may be a need to utilize construction equipment that emits impulsive noise, i.e. blasting, rock excavation, and hoe ram. As shown in Figures 6-11 and Table 6 and Table 7, project construction has the potential to exceed the 82 dBA L_{25} standard at existing residential, village and civic land at an agricultural, commercial or industrial land use. This impact would be significant without mitigation. Implementation of Mitigation Measures 2, 5, 9 and 10 will reduce potential impacts to less than significant

Compliance with County Ordinance 36.410 Sound Level Limitations on Impulsive Noise - 85 dBA L_{25} Noise Standard

Due to the terrain, there may be a need to utilize construction equipment that emits impulsive noise i.e. blasting, rock excavation, and hoe ram. As shown in Figures 6-11 and Table 6 and Table 7, project construction activities have the potential to exceed the 85 dBA L_{25} standard at an agricultural, commercial or industrial land use. This impact would be significant without mitigation. Implementation of Mitigation Measures 2, 5, 9 and 10 will reduce potential impacts to less than significant.

Mitigation Measure 1

All equipment, whether fixed or mobile, will be equipped with properly operating and maintained mufflers, consistent with manufacturer standards.

Mitigation Measure 2

As applicable, all equipment shall be shut off and not left to idle when not in use.

Mitigation Measure 3

To the degree possible, equipment staging will be located in areas that create the greatest distance between construction-related noise and vibration sources and existing sensitive receptors.

Mitigation Measure 4

Jackhammers, pneumatic equipment, and all other loud portable stationary noise sources will be directed away and shielded from existing residences in the vicinity of the project site. Either one-inch plywood or sound blankets can be utilized for this purpose. They should reach up from the ground and block the line of sight between equipment and existing residences. The shielding should be without holes and cracks.

Mitigation Measure 5

No amplified music and/or voice will be allowed on the project site.

Mitigation Measure 7

Haul truck deliveries will not occur between the hours of 7:00 PM and 7:00 AM.

Mitigation Measure 8

Delivery trucks shall not arrive in the vicinity before 7:00 AM and idle near sensitive receptors.

Mitigation Measure 9

Compliance with County Ordinance 36.409 - Sound Level Limitations on Construction Equipment
Noise monitoring shall be conducted by a qualified noise consultant at the property line of representative occupied land uses that are within the 75 dB L_{eq} noise contour as shown in Figures 6-11, during typical construction activities. Measurements shall be conducted over an 8-hour period in order to determine if the 75 dBA L_{eq} (8-hour) standard is violated. If after several noise measurements (3) have been conducted, and it is apparent that the mix of equipment and timing of usage will not exceed the County's 75 dBA L_{eq} (8-hour) noise standard, the noise consultant shall provide a letter report documenting the noise measurements and findings and recommendations as to whether or not continued noise monitoring is necessary.

If noise monitoring does show that construction noise levels exceed the 8-hour L_{eq} standard at occupied properties located within the 75 dBA noise contour, the contractor will implement measures to reduce construction noise levels to below 75 dBA Leq (8-hour) between 7:00 AM and 7:00 PM, on any occupied property located within the 75 dBA noise contour (as measured at the property line

- If needed, temporary noise barriers will be installed to block the line of sight between the noise source(s) and the occupied property. These barriers shall be of sufficient height to block the line of sight between the source(s) and receptor(s) based on recommendations of a competent noise professional.
- If needed, temporary barriers will be solid, with no holes or gaps, from the ground to the heigh determined by the on-site noise professional.
- For stationary equipment, temporary barriers will also be solid with no holes or gaps, except for openings that are necessary to access the equipment.

Mitigation Measure 10

Compliance with County Ordinance 36.410 - Sound Level Limitations on Impulsive Noise
Noise monitoring shall be conducted by a qualified noise consultant at the property line of representative occupied residential land uses that are within the 82 dB L_{25} noise contour as shown in Figures 6-11, during typical construction activities. Measurements shall be conducted over a 1-hour period in order to determine if the 82 dBA L_{25} standard is violated at occupied residential, village, or civic land uses. If after several noise measurements (3) have been conducted, and it is apparent that the mix of equipment and timing of usage will not exceed this standard, the noise consultant shall provide a letter report documenting the noise measurements and findings and recommendations as to whether or not continued noise monitoring is necessary.

If noise monitoring does show that construction noise levels exceed 82 dBA L_{25} standard at occupied residential, village, or civic land uses, the contractor will implement the following measures:

- If needed, temporary noise barriers will be installed to block the line of sight between the noise source(s) and the occupied property. These barriers shall be of sufficient height to block the line of sight between the source(s) and receptor(s) based on recommendations of a competent noise professional.
- If needed, temporary barriers will be solid, with no holes or gaps, from the ground to the heigh determined by the on-site noise professional.
- For stationary equipment, temporary barriers will also be solid with no holes or gaps, except for openings that are necessary to access the equipment.

Noise monitoring shall be conducted by a qualified noise consultant at the property line of representative occupied residential land uses that are within the 85 dB L_{25} noise contour as shown in Figures 6-11, during typical construction activities. Measurements shall be conducted over a 1-hour period in order to determine if the 85 dBA L_{25} standard is violated at occupied agricultural, commercial or industrial land uses. If after several noise measurements (3) have been conducted, and it is apparent that the mix of equipment and timing of usage will not exceed this standard, the noise consultant shall provide a letter report documenting the noise measurements and findings and recommendations as to whether or not continued noise monitoring is necessary.

If noise monitoring does show that construction noise levels exceed 85 dBA L_{25} standard at occupied residential, village, or civic land uses, the contractor will implement the following measures:

- If needed, temporary noise barriers will be installed to block the line of sight between the noise source(s) and the occupied property. These barriers shall be of sufficient height to block the line of sight between the source(s) and receptor(s) based on recommendations of a competent noise professional.
- If needed, temporary barriers will be solid, with no holes or gaps, from the ground to the heigh determined by the on-site noise professional.
- For stationary equipment, temporary barriers will also be solid with no holes or gaps, except for openings that are necessary to access the equipment.

For impulsive noise, the measurement period shall be one-hour. During the measurement period a measurement shall be conducted every minute from a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise exceeds the maximum sound level for any portion of any minute, it will be deemed that the maximum sound level was exceeded during that minute.

Impacts to Sensitive Species

As shown on Figure 11, construction equipment noise levels will exceed 60 dBA L_{eq} in least Bell's vireo habitat as mapped in the Biological Resource Study prepared for the proposed project (Alden Environmental, Inc.). This is considered to be a temporary "indirect impact" If least Bell's vireo are present and mitigation will be required.

Depending on the location and duration of construction activities and related noise levels, if unmitigated, construction noise could result in nest abandonment or avoidance of habitat. Any potential indirect noise impacts to sensitive bird species, breeding habitat and adjacent foraging habitat would be considered a significant impact requiring mitigation. If the least Bell's vireo is present within or in proximity to the project area, then the following conditions must be met in order to reduce impacts to less than significant.

Mitigation Measure 11

Avoid construction activities within the mapped 60 dBA L_{eq} construction noise contour (Figure 11) during the least Bell's vireo breeding season; OR

Mitigation Measure 12

If least Bell's vireo are not detected during the protocol survey, a qualified biologist shall submit substantial evidence to the City and applicable resource agencies which demonstrates whether or not mitigation measures such as noise walls are necessary as follows: 1) If this evidence indicates the potential is high for least Bell's vireo or southwestern willow flycatcher to be present based site conditions, then condition Mitigation 13 shall be implemented as specified below. 2) If this evidence concludes that no impacts to this species are anticipated, no mitigation measures will be necessary.

Mitigation Measure 13

If least Bell's vireo is detected during required pre-construction surveys, a qualified acoustical professional shall design mitigation to reduce construction noise levels to 60 dBA L_{eq} or to ambient noise levels (whichever is louder) at the edge of mapped least Bell's vireo nesting sites. Mitigation may include but is not limited to strategic placement of temporary noise barriers, berms, walls, sound blankets, or strategic placement of large trucks.

Noise monitoring shall be conducted concurrently with implementation of any necessary noise attenuation measures and throughout construction activities within the vicinity of mapped least Bell's vireo nesting sites, to ensure that noise levels from construction activities do not exceed 60 dBA hourly average or the dBA of ambient noise level should they be greater than 60 dBA hourly average (i.e., whichever is greater). If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved until the end of the breeding season or until the fledgling birds have left the nest, whichever occurs first.

Mitigation Measure 14

Where the placement of stationary equipment is necessary to perform construction activities and the equipment would result in noise levels exceeding ambient levels or 60 dBA L_{eq}, whichever is higher, in the vicinity of nest sites, noise shrouds, sound blankets or screening walls will be used to reduce sounds levels from the equipment to ambient conditions or 60 dBA, whichever is higher. A qualified noise consultant will be consulted in order to verify the effectiveness of said mitigation.

Groundborne Vibration Impacts

Would the project result in:

b) Generation of excessive groundborne vibration or groundborne noise levels?

In relation to the Environmental Checklist noise issue "b", the County of San Diego has not established thresholds of significance concerning groundborne vibration. In the absence of County-established thresholds, groundborne vibration impacts are based on guidance from the *Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual* (FTA, September 2018) (see Regulatory Setting section). Accordingly, the project would result in a significant impact if:

The most vibratory piece of equipment expected to be utilized on the project site is a large bulldozer. A large bulldozer can generate a groundborne vibration level of 0.210 at a distance of 25 feet. Potential damage caused by groundborne vibration is dependent upon the distance from the source and the affected structure. There are no existing buildings extremely susceptible to vibration damage near the proposed alignment. The

next most sensitive structure would be non-engineered timber and masonry buildings. The damage impact threshold for these structures is 0.2 PPV. If a large bulldozer is utilized within 25 feet of a such a structure, there is potential for structural damage. There are several pieces of construction equipment including a vibratory roller, and a large bulldozer that may be utilized to construct the project that could result in damage due to groundborne vibration if they are used too close to an existing structure (see Table 5). As shown in Table 3, potential damage caused by groundborne vibration is dependent upon the distance from the source and the affected structure. There are no existing buildings extremely susceptible to vibration damage near the proposed alignment. The next most sensitive structure would be non-engineered timber and masonry buildings. Implementation of Mitigation Measure 15 will reduce this impact to less than significant.

Mitigation Measure 15

The use of large bulldozers shall be avoided within 14 feet of existing structures and the use of vibratory rollers shall be avoided within 25 feet of existing structures. A small bulldozer is an acceptable alternative.

Air Traffic Impacts

Would the project result in:

c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?*

Finding: No Impact

The closest airport to the project site is the Ramona Airport. It is located approximately 4.5 miles northwest of the project site. Therefore, as the project is not within two miles of a public airport or in the vicinity of a private airstrip, the project would not expose people residing or working in the project area to excessive noise levels associated with airports.

Table 6
Construction Noise Levels

Phase	Noise Level (dBA Leq)		
	50 feet	100 feet	200 feet
Pipeline Installation			
Demolition	87.6	81.6	75.6
Pipe Installation	87.4	81.4	75.4
Backfill and Resurfacing	86.7	80.7	74.7
Striping/Restriping	85.1	79.1	73.1
Connection/Tie-In			
Site Preparation/Grading	87.4	81.4	75.4
Excavation	87.4	81.4	75.4
Existing Pipeline Cut-In	87.2	81.2	75.2
Backfill and Resurfacing	86.7	80.7	74.7
Striping/Restriping	85.1	79.1	73.1

Notes:
(1) Construction noise worksheets are provided in Appendix D.

Table 7
Construction Noise Contours

Phase	Distance to Noise Contour (dBA Leq) in feet		Distance to Contour (dBA, Lmax) in feet	
	60 dBA	75 dBA	82 dBA	85 dBA
Pipeline Installation				
Demolition	1,200	213	63	45
Pipe Installation	1,170	208	63	45
Backfill and Resurfacing	1,075	192	63	45
Striping/Restriping	899	160	63	45
Connection/Tie-In				
Site Preparation/Grading	1,169	209	63	45
Excavation	1,169	208	63	45
Existing Pipeline Cut-In	1,143	204	63	45
Backfill and Resurfacing	1,075	192	63	45
Striping/Restriping	899	160	63	45

Notes:
(1) Construction noise worksheets are provided in Appendix D.

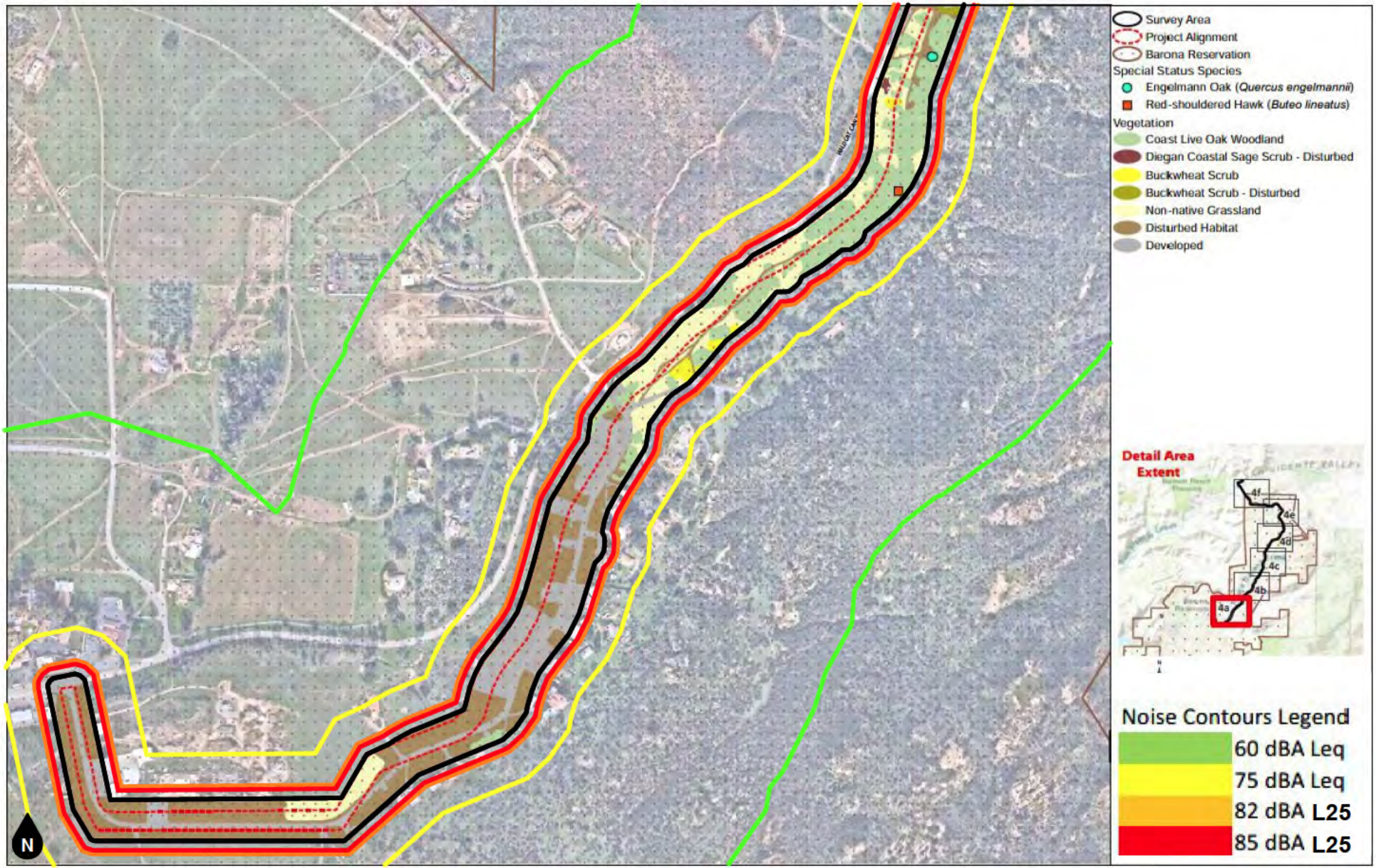


Figure 6
Construction Noise Contours - Bio Figure 4A

Source: Alden Environmental, Inc.

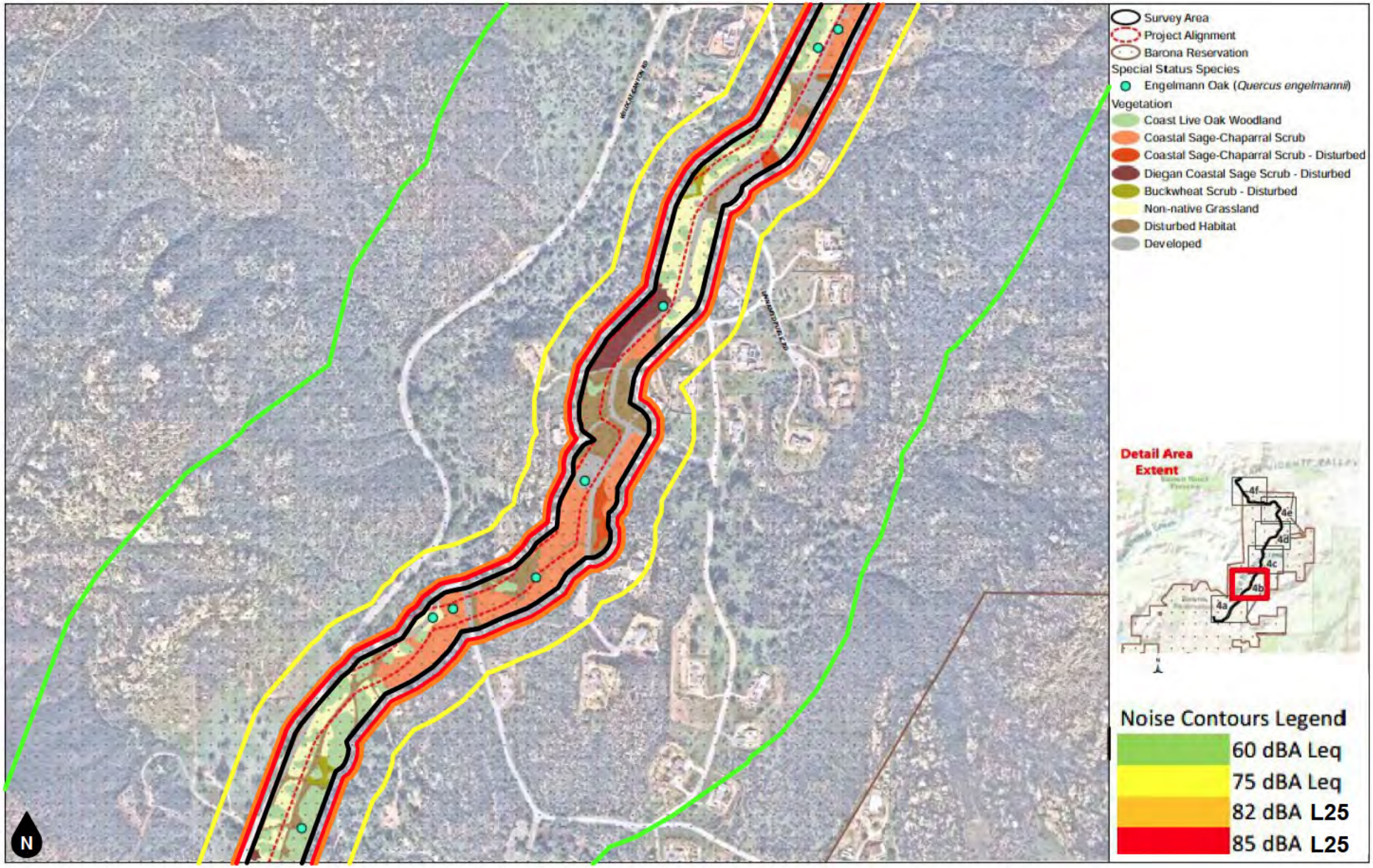


Figure 7
Construction Noise Contours - Bio Figure 4B

Source: Alden Environmental, Inc.

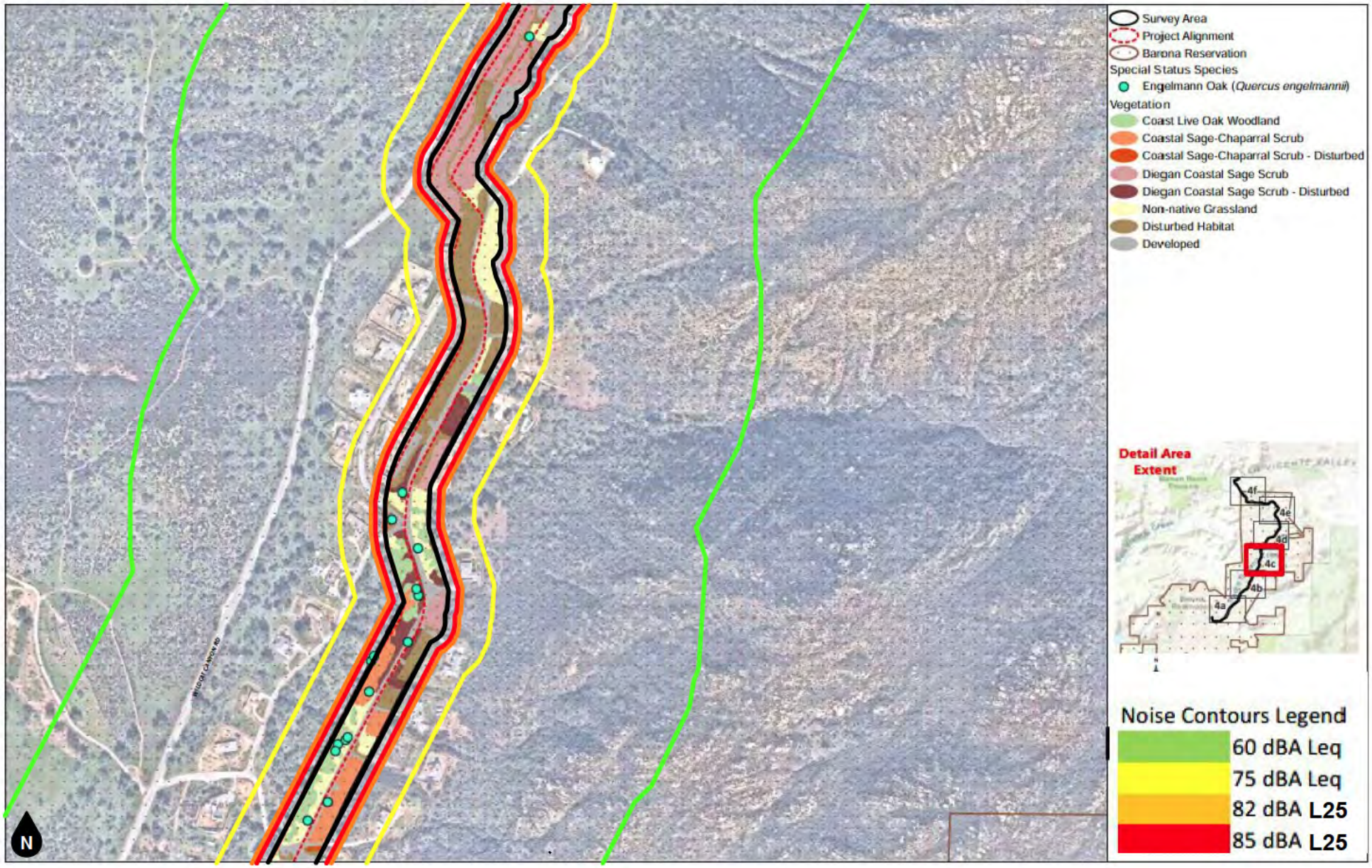


Figure 8
Construction Noise Contours - Bio Figure 4C

Source: Alden Environmental, Inc.

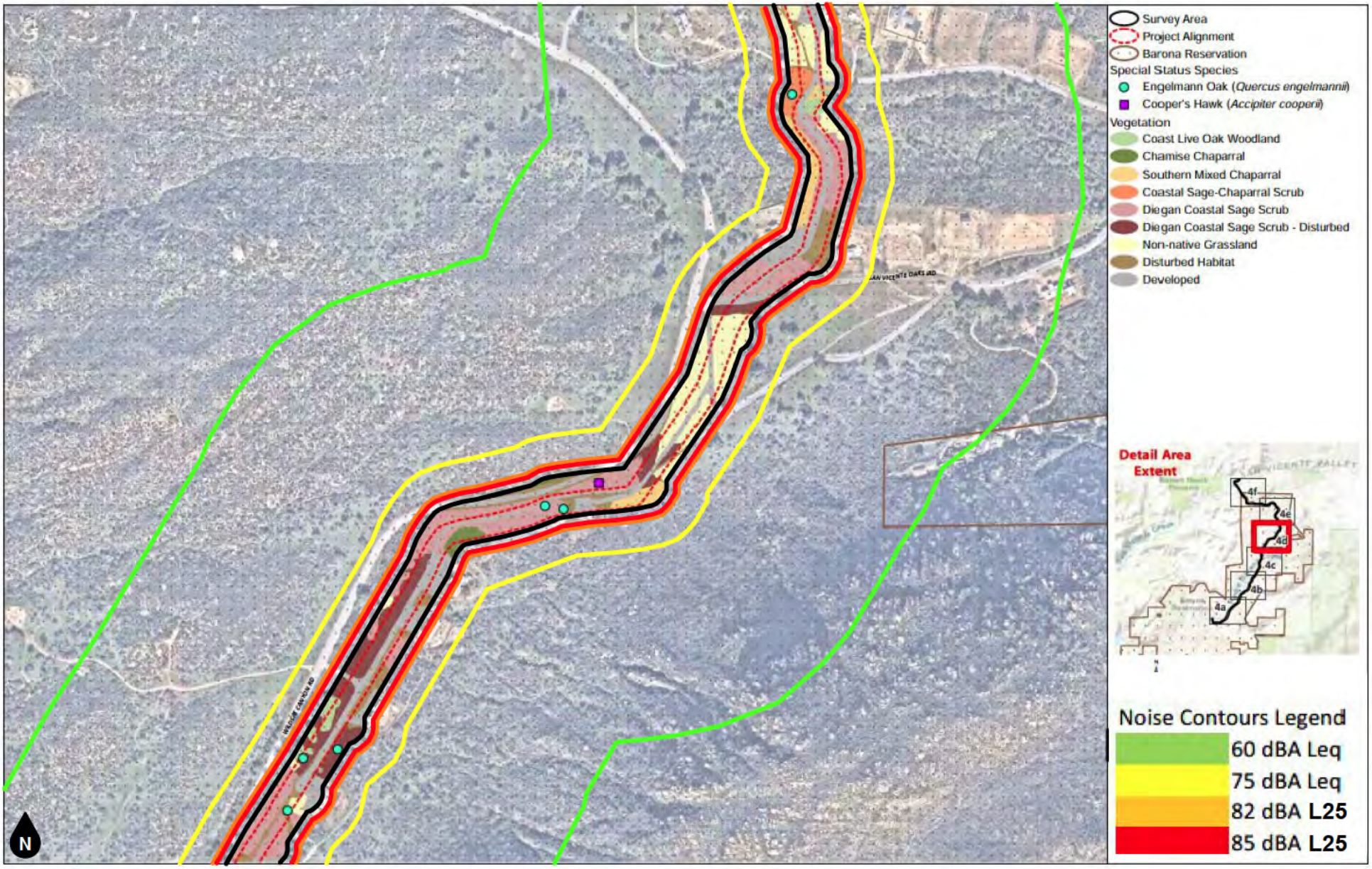


Figure 9
Construction Noise Contours - Bio Figure 4D

Source: Alden Environmental, Inc.

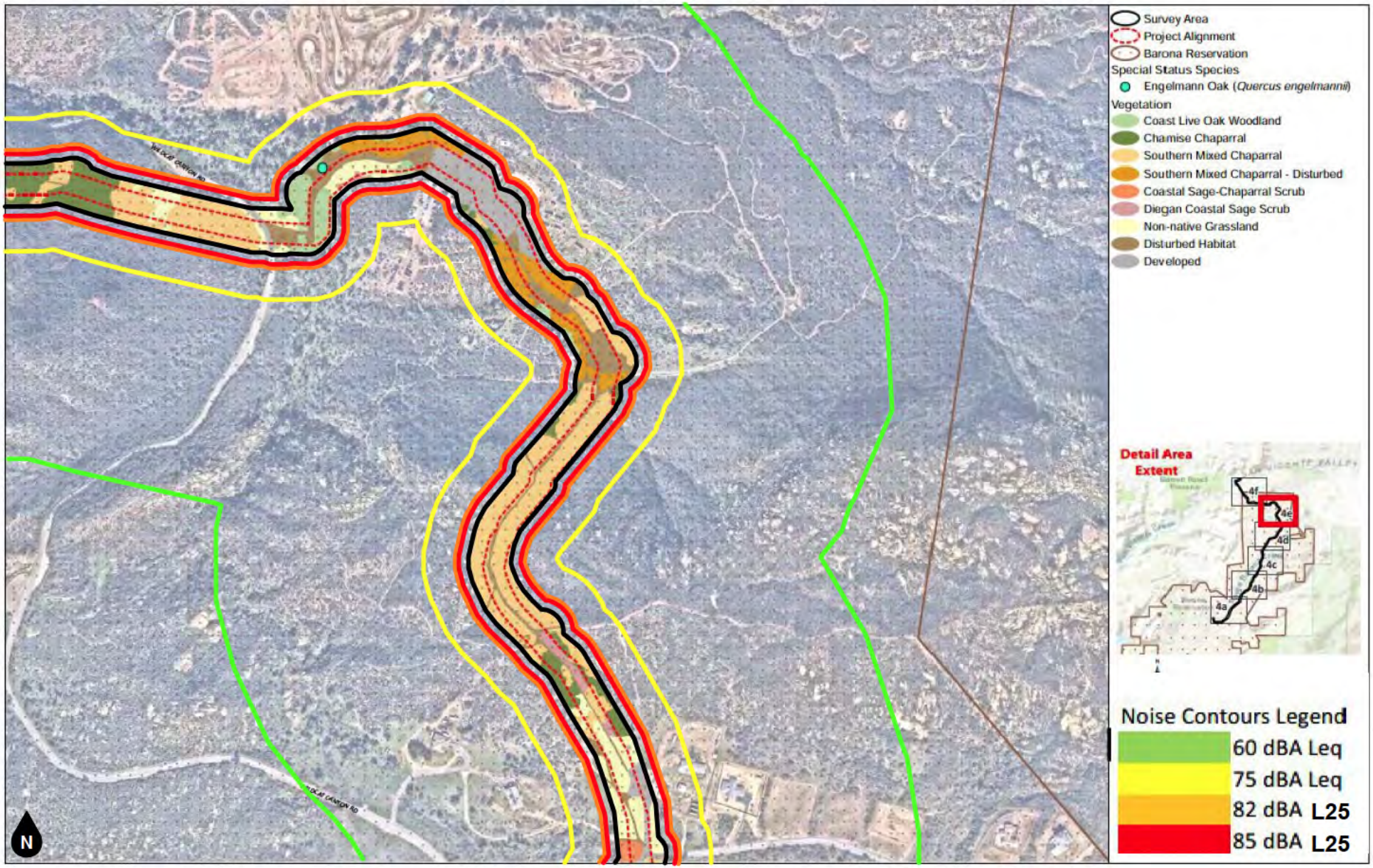


Figure 10
Construction Noise Contours - Bio Figure 4E

Source: Alden Environmental, Inc.

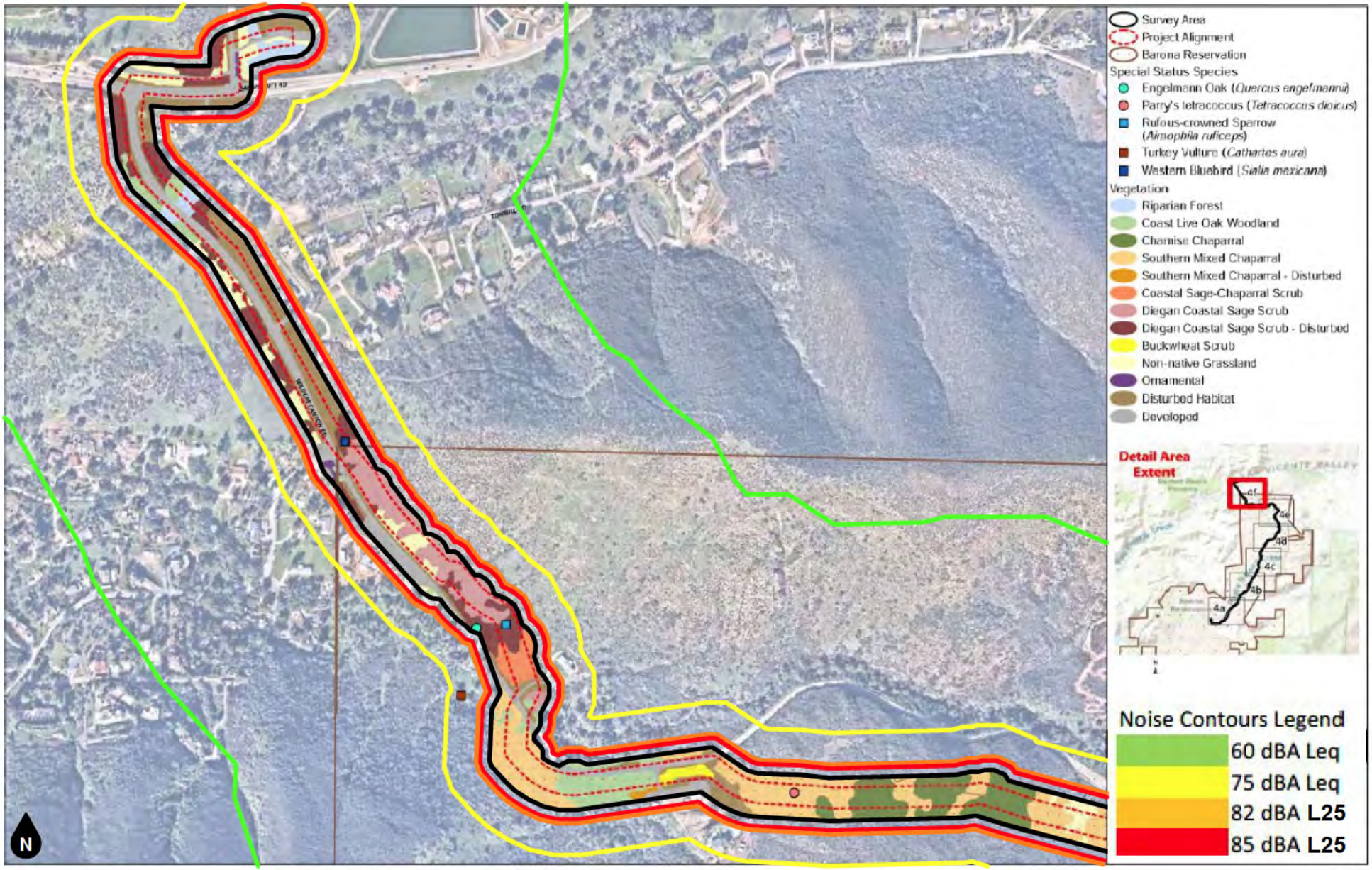


Figure 11
Construction Noise Contours - Bio Figure 4F

Source: Alden Environmental, Inc.

7. REFERENCES

California, State of, Department of Transportation
2020 Transportation and Construction Vibration Guidance Manual. April.

Environmental Protection Agency
1974 "Information on Levels of Environmental Noise Requisite to Protect Public Health And Welfare with an Adequate Margin of Safety," EPA/ONAC 550/9-74-004, March 1974.

Federal Transit Administration
2018 Transit Noise and Vibration Impact Assessment. Typical Construction Equipment Vibration Emissions.

Office of Planning and Research
2017 State of California General Plan Guidelines

San Diego, County of
2011 County of San Diego General Plan
2024 County of San Diego Municipal Code

U.S. Department of Transportation
2006 FHWA Roadway Construction Noise Model User's Guide. January.

U.S. Department of Transportation Federal Aviation Administration
2019 Finding of No Significant Impact and Record of Decision Proposed Eastgate Cargo Facility San Diego International Airport. December 23.

APPENDICES

Appendix A List of Acronyms
Appendix B Glossary
Appendix C Noise Measurement Field Worksheets
Appendix D Construction Noise Modeling

APPENDIX A

LIST OF ACRONYMS

Term	Definition
ADT	Average Daily Traffic
ANSI	American National Standard Institute
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
D/E/N	Day / Evening / Night
dB	Decibel
dBA or dB(A)	Decibel "A-Weighted"
dBA/DD	Decibel per Double Distance
dBA L_{eq}	Average Noise Level over a Period of Time
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
L_{02},L_{08},L_{50},L_{90}	A-weighted Noise Levels at 2 percent, 8 percent, 50 percent, and 90 percent, respectively, of the time period
DNL	Day-Night Average Noise Level
$L_{eq(x)}$	Equivalent Noise Level for '"x" period of time
L_{eq}	Equivalent Noise Level
L_{max}	Maximum Level of Noise (measured using a sound level meter)
L_{min}	Minimum Level of Noise (measured using a sound level meter)
LOS C	Level of Service C
OPR	California Governor's Office of Planning and Research
PPV	Peak Particle Velocities
RCNM	Road Construction Noise Model
REMEL	Reference Energy Mean Emission Level
RMS	Root Mean Square

APPENDIX B

GLOSSARY

Term	Definition
Ambient Noise Level	The all-encompassing noise environment associated with a given environment, at a specified time, usually a composite of sound from many sources, at many directions, near and far, in which usually no particular sound is dominant.
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear.
CNEL	Community Noise Equivalent Level. CNEL is a weighted 24-hour noise level that is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours.
Decibel, dB	A logarithmic unit of noise level measurement that relates the energy of a noise source to that of a constant reference level; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
DNL, Ldn	Day Night Level. The DNL, or Ldn is a weighted 24-hour noise level that is obtained by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the nighttime hours.
Equivalent Continuous Noise Level, L_{eq}	A level of steady state sound that in a stated time period, and a stated location, has the same A-weighted sound energy as the time-varying sound.
Fast/Slow Meter Response	The fast and slow meter responses are different settings on a sound level meter. The fast response setting takes a measurement every 100 milliseconds, while a slow setting takes one every second.
Frequency, Hertz	In a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., the number of cycles per second).
L_{02}, L_{08}, L_{50}, L_{90}	The A-weighted noise levels that are equaled or exceeded by a fluctuating sound level, 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period, respectively.
L_{max}, L_{min}	Lmax is the RMS (root mean squared) maximum level of a noise source or environment measured on a sound level meter, during a designated time interval, using fast meter response. Lmin is the minimum level.
Offensive/ Offending/Intrusive Noise	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of sound depends on its amplitude, duration, frequency, and time of occurrence, and tonal information content as well as the prevailing ambient noise level.
Root Mean Square (RMS)	A measure of the magnitude of a varying noise source quantity. The name derives from the calculation of the square root of the mean of the squares of the values. It can be calculated from either a series of lone values or a continuous varying function.

APPENDIX C

NOISE MEASUREMENT FIELD WORKSHEETS

Noise Measurement
Field Data

Project Name: Barona Water Pipeline **Date:** May 24, 2024

Project #: 19726

Noise Measurement #: NM1 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: Vicente Meadow Drive & San Vicente Road

Site Description (Type of Existing Land Use and any other notable features): Project Site: Open area with vegetation & small trees, marshy in places.

Adjacent: Reclaimed water pump house ~170' NE of NM1, San Vicente Rd ~120' S & Vicente Meadow Dr ~150' W of NM1. Three water reservoirs ~200' to 1,500' NE of NM1.

Weather: <5% cloud, sunshine. Sunset 7:54 PM **Settings:** SLOW FAST

Temperature: 68 deg F **Wind:** 8 mph **Humidity:** 55% **Terrain:** Flat

Start Time: 1:38 PM **End Time:** 1:53 PM **Run Time:**

Leq:	51.2	dB
Lmax	61	dB
L2	57.4	dB
L8	54.7	dB
L25	52.0	dB
L50	49.7	dB

Primary Noise Source: 292 vehicles passing microphone, traveling along San Vicente Rd, S of NM1 during measurement.

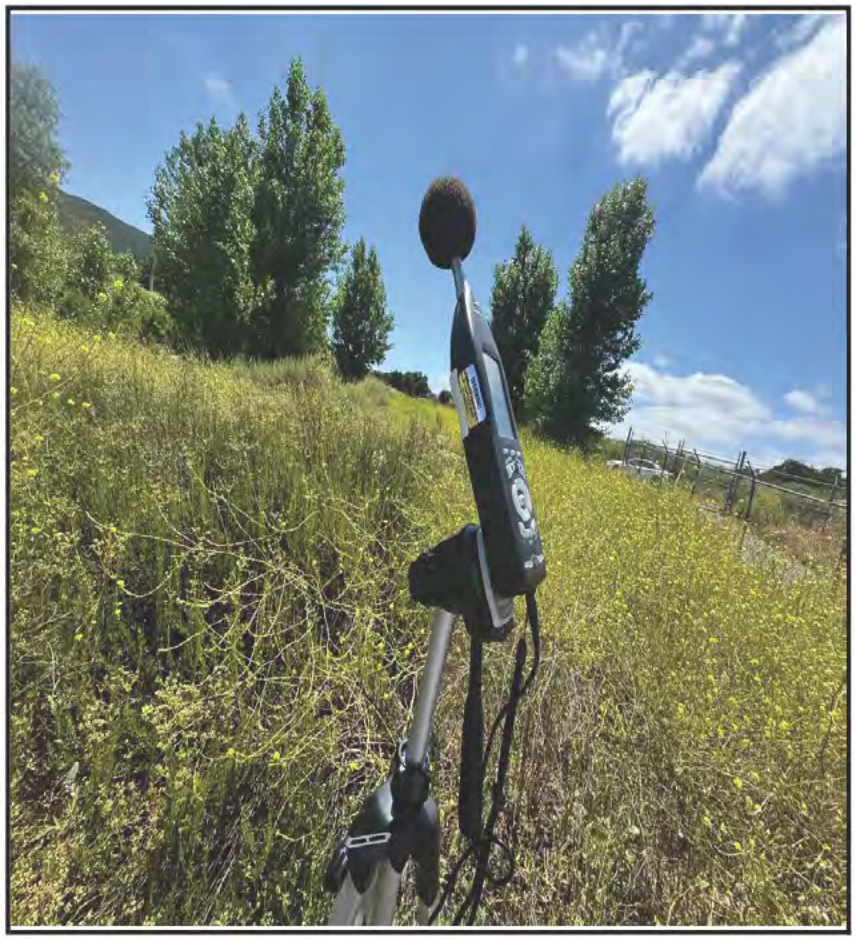
Secondary Noise Sources: Some bird song. Occasional distant air traffic. Machinery noise from pump house ~170' NE of NM1. Leaf rustle from 8 mph breeze through vegetation.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 200
SERIAL NUMBER:	3855	**SERIAL NUMBER:**	11178
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	5/24/2024		

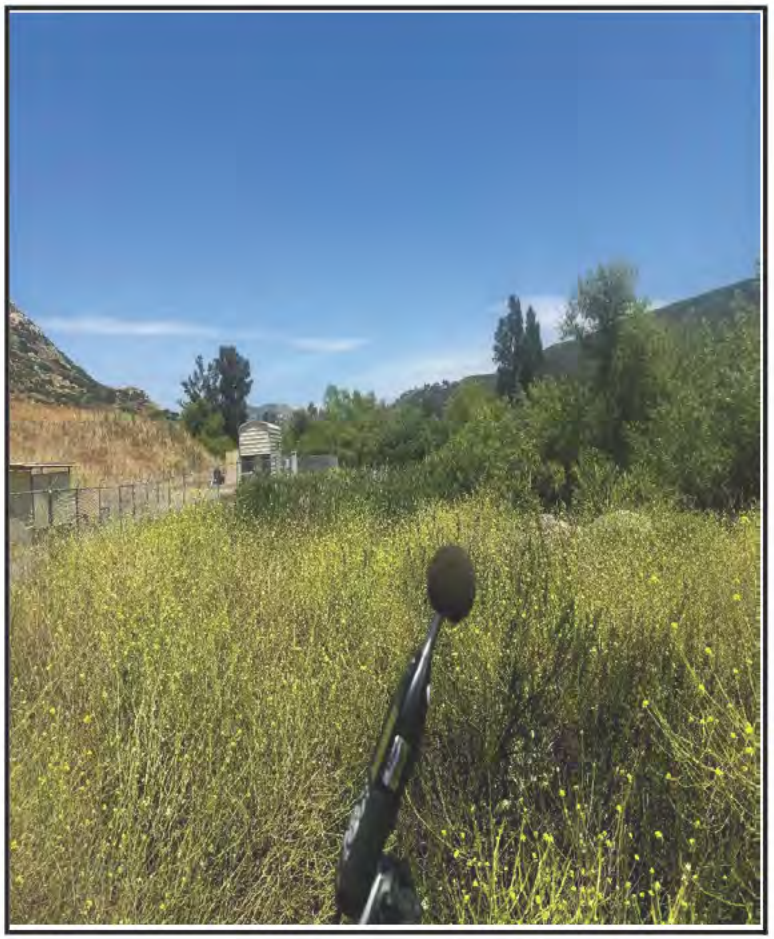
ganddini

Noise Measurement
Field Data

PHOTOS:



NM1 looking W towards Vicente Meadows Dr (~150' W, parked car). Vicente Meadows Dr intersecting with San Vicente Rd~ 220' SW of NM1.



NM1 looking NE towards reservoir reclaimed water pump house, ~170' NE of NM1.

Summary	
File Name on Meter	LxT_Data.083.s
File Name on PC	LxT_0003855-20240524 133841-LxT_Data.083.ldbin
Serial Number	3855
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	NM1 32°59'54.20"N 116°50'32.80"W
Job Description	15 minute noise measurement
Note	Ganddini Project # 19726 Barona Water Pipeline

Measurement	
Start	2024-05-24 13:38:41
Stop	2024-05-24 13:53:41
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2024-05-24 13:38:01
Post-Calibration	None

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	145.2 dB

Results			
LAeq	51.2		
LAE	80.8		
EA	13.25503	µPa²h	
EA8	424.161	µPa²h	
EA40	2.120805	mPa²h	
LApeak (max)	2024-05-24 13:50:13	85.8	dB
LASmax	2024-05-24 13:46:49	61.0	dB
LASmin	2024-05-24 13:50:32	42.7	dB

		Statistics	
LCeq	62.6 dB	**LA2.00**	57.4 dB
LAeq	51.2 dB	**LA8.00**	54.7 dB
LCeq - LAeq	11.4 dB	**LA25.00**	52.0 dB
LAIeq	52.9 dB	**LA50.00**	49.7 dB
LAeq	51.2 dB	**LA66.60**	48.4 dB
LAIeq - LAeq	1.7 dB	**LA90.00**	45.7 dB
Overload Count	0		
Overload Duration	0.0 s		

Measurement Report

Report Summary

Meter's File Name	LxT_Data.083.s	Computer's File Name	LxT_0003855-20240524 133841-LxT_Data.083.ldbin
Meter	LxT1 0003855		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM1 32°59'54.20"N 116°50'32.80"W
Job Description	15 minute noise measurement		
Note	Ganddini Project # 19726 Barona Water Pipeline		
Start Time	2024-05-24 13:38:41	Duration	0:15:00.0
End Time	2024-05-24 13:53:41	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	51.2 dB		
LAE	80.8 dB	SEA	--- dB
EA	13.3 µPa²h	LAFTM5	54.6 dB
EA8	424.2 µPa²h		
EA40	2.1 mPa²h		
LA_{peak}	85.8 dB	2024-05-24 13:50:13	
LAS_{max}	61.0 dB	2024-05-24 13:46:49	
LAS_{min}	42.7 dB	2024-05-24 13:50:32	
LA_{eq}	51.2 dB		
LC_{eq}	62.6 dB	LC_{eq} - LA_{eq}	11.4 dB
LAI_{eq}	52.9 dB	LAI_{eq} - LA_{eq}	1.7 dB

Exceedances	Count	Duration
LAS > 65.0 dB	0	0:00:00.0
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

	LDEN	LDay	LEve	LNight
	--- dB	--- dB	--- dB	--- dB

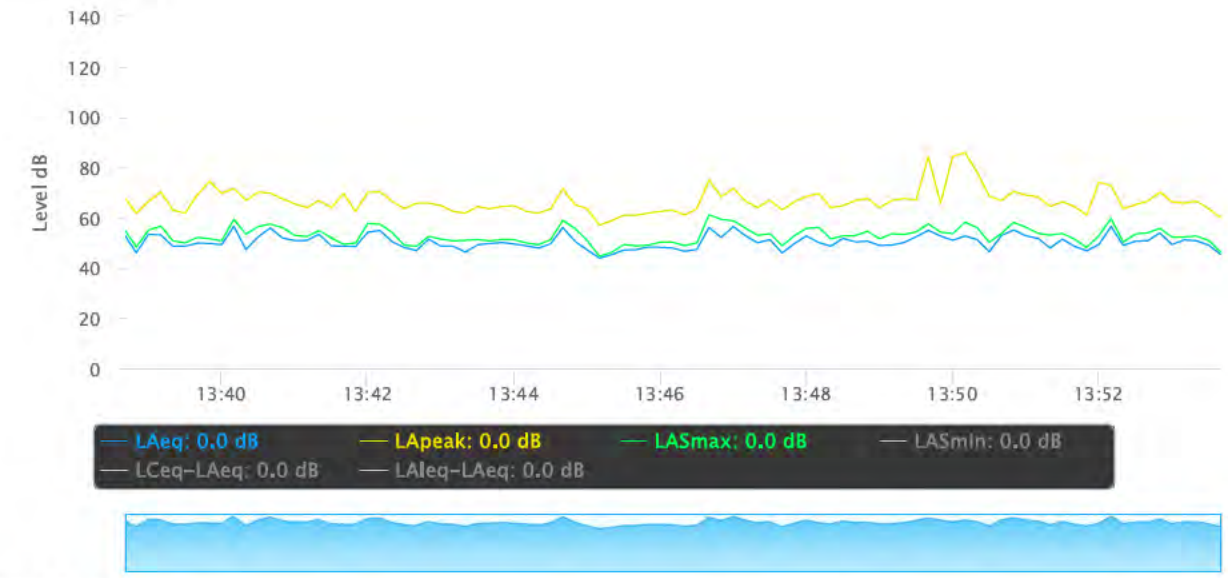
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	51.2 dB		62.6 dB		--- dB	
$L_{S(max)}$	61.0 dB	2024-05-24 13:46:49	--- dB		--- dB	
$L_{S(min)}$	42.7 dB	2024-05-24 13:50:32	--- dB		--- dB	
$L_{Peak(max)}$	85.8 dB	2024-05-24 13:50:13	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

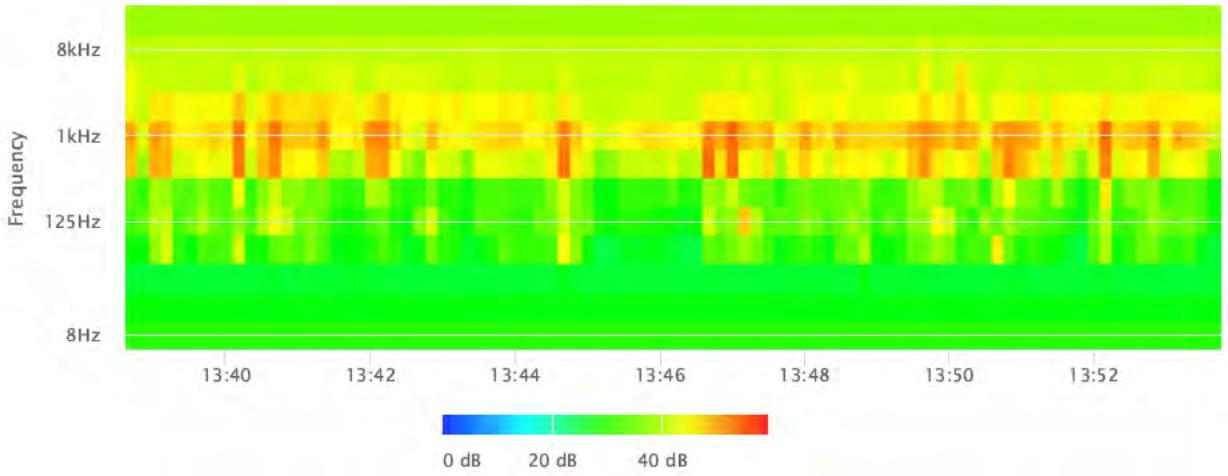
Statistics

LAS 2.0	57.4 dB
LAS 8.0	54.7 dB
LAS 25.0	52.0 dB
LAS 50.0	49.7 dB
LAS 66.6	48.4 dB
LAS 90.0	45.7 dB

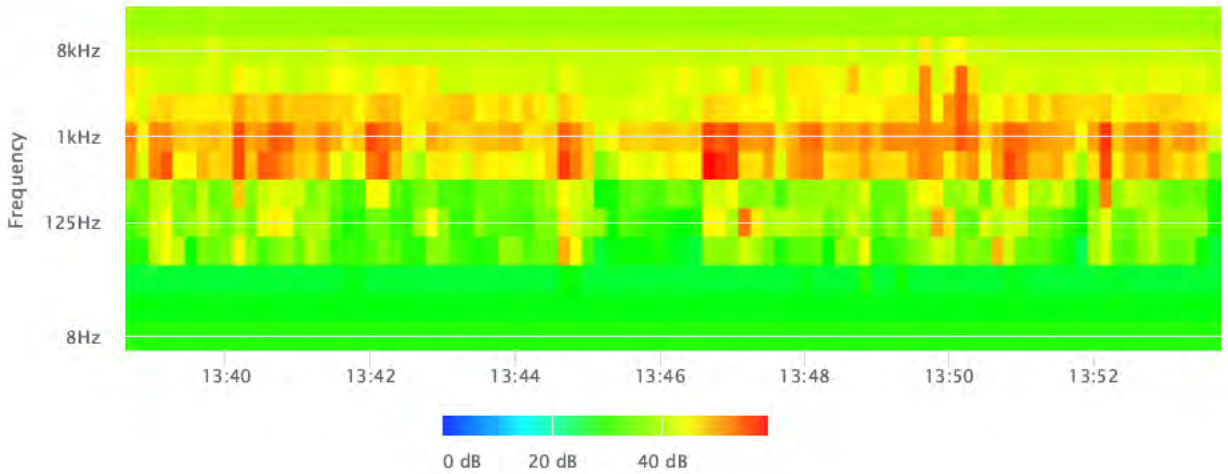
Time History



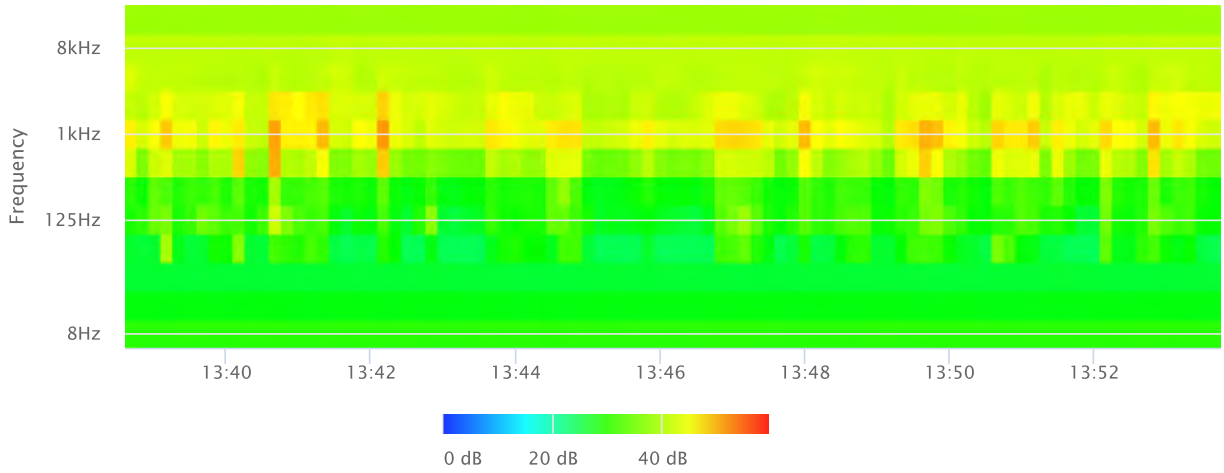
OBA 1/1 Leq



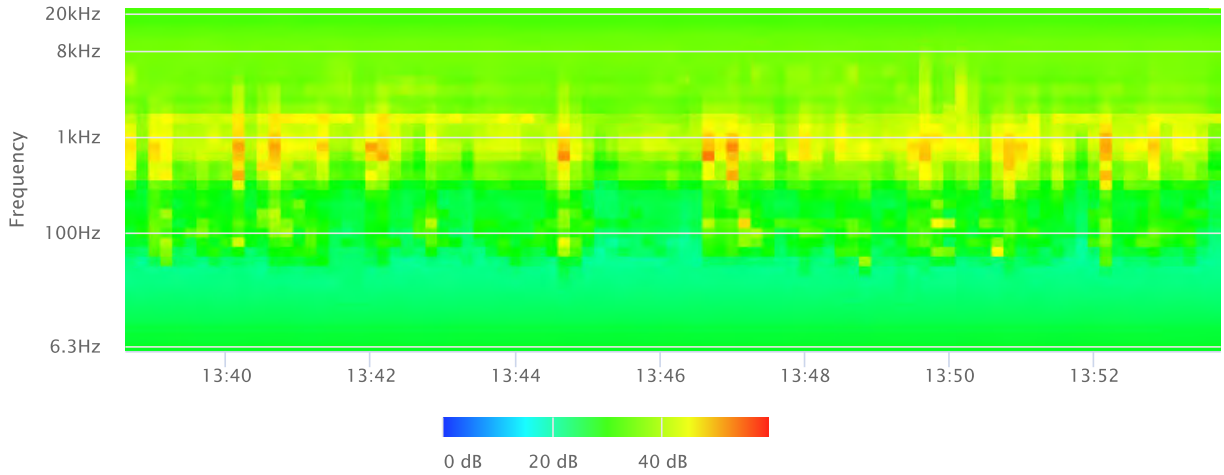
OBA 1/1 Lmax



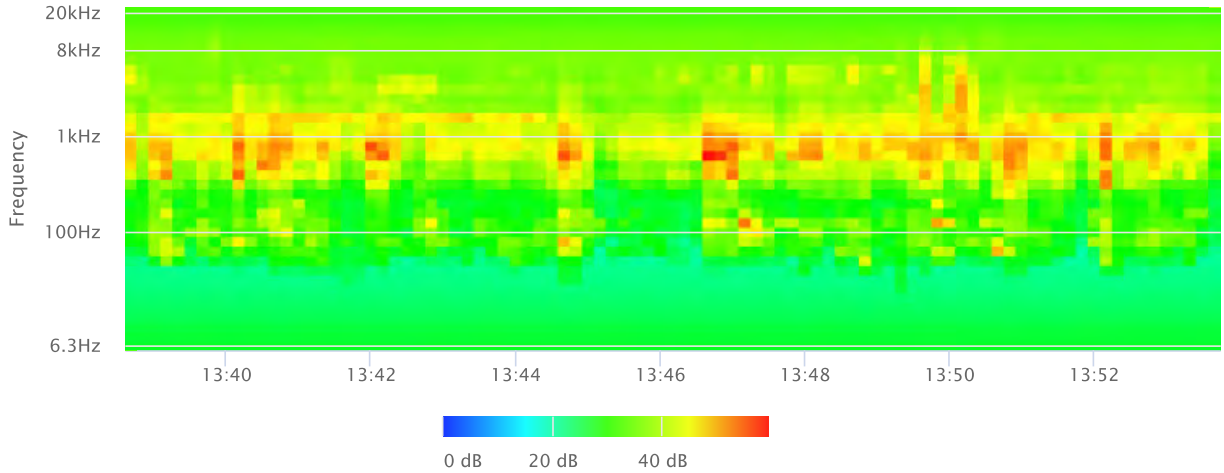
OBA 1/1 Lmin



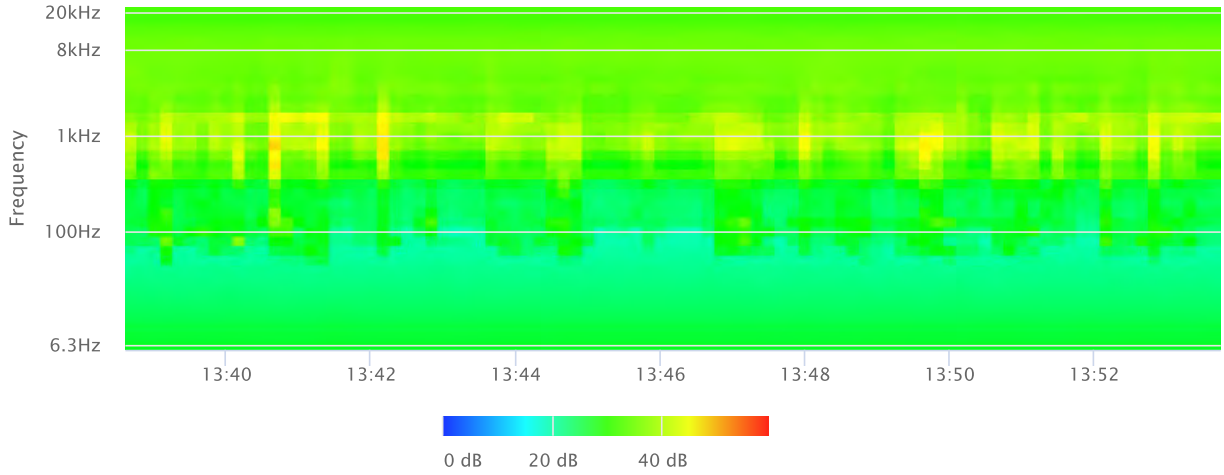
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
13:40
13:42
13:44
13:46
13:48
13:50
13:52
0 dB
20 dB
40 dB

Noise Measurement
Field Data

Project Name: Barona Water Pipeline **Date:** May 24, 2024

Project #: 19726

Noise Measurement #: NM2 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 22433 San Vicente Rd, San Diego Country Estates, CA 92065

Site Description (Type of Existing Land Use and any other notable features): Project Site: Open area with vegetation & small trees, marshy in places.

Long time unused asphalt access road E of NM2. Adjacent: San Vicente Rd ~270' N & Wildcat Canyon Rd ~420' SW of NM2.

Weather: <5% cloud, sunshine. Sunset 7:54 PM **Settings:** SLOW FAST

Temperature: 68 deg F **Wind:** 8 mph **Humidity:** 55% **Terrain:** Flat

Start Time: 2:14 PM **End Time:** 2:29 PM **Run Time:**

Leq:	49	dB
Lmax	59.1	dB
L2	55.5	dB
L8	52.4	dB
L25	49.7	dB
L50	47.2	dB

Primary Noise Source: 305 vehicles passing microphone, traveling along San Vicente Rd N of NM2 during measurement.

Secondary Noise Sources: Some bird song. Occasional distant air traffic. Leaf rustle from 8 mph breeze through trees and vegetation.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 200
SERIAL NUMBER:	3855	**SERIAL NUMBER:**	11178
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	5/24/2024		



Noise Measurement
Field Data

PHOTOS:



NM2 looking N across overgrown vegetation towards San Vicente Road (~270' N of NM2).



NM2 looking E towards long unused asphalt access road (overgrown with vegetation).

Summary	
File Name on Meter	LxT_Data.084.s
File Name on PC	LxT_0003855-20240524 141448-LxT_Data.084.ldbin
Serial Number	3855
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	NM2 32°59'49.67"N 116°50'33.53"W
Job Description	15 minute noise measurement
Note	Ganddini Project # 19726 Barona Water Pipeline

Measurement	
Start	2024-05-24 14:14:48
Stop	2024-05-24 14:29:48
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2024-05-24 14:14:14
Post-Calibration	None

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	145.4 dB

Results		
LA_{eq}	49.0	
LAE	78.5	
EA	7.913964	µPa²h
EA8	253.2469	µPa²h
EA40	1.266234	mPa²h
$LA_{peak\ (max)}$	2024-05-24 14:24:56	84.8 dB
LAS_{max}	2024-05-24 14:15:42	59.1 dB
LAS_{min}	2024-05-24 14:17:05	39.7 dB

		Statistics	
LC_{eq}	60.5 dB	**LA2.00**	55.5 dB
LA_{eq}	49.0 dB	**LA8.00**	52.4 dB
LC_{eq} - LA_{eq}	11.5 dB	**LA25.00**	49.7 dB
LAI_{eq}	50.8 dB	**LA50.00**	47.2 dB
LA_{eq}	49.0 dB	**LA66.60**	45.8 dB
LAI_{eq} - LA_{eq}	1.8 dB	**LA90.00**	43.5 dB
Overload Count	0		
Overload Duration	0.0 s		

Measurement Report

Report Summary

Meter's File Name	LxT_Data.084.s	Computer's File Name	LxT_0003855-20240524 141448-LxT_Data.084.ldbin
Meter	LxT1 0003855		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM2 32°59'49.67"N 116°50'33.53"W
Job Description	15 minute noise measurement		
Note	Ganddini Project # 19726 Barona Water Pipeline		
Start Time	2024-05-24 14:14:48	Duration	0:15:00.0
End Time	2024-05-24 14:29:48	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	49.0 dB		
LAE	78.5 dB	SEA	--- dB
EA	7.9 µPa²h	LAFTM5	52.5 dB
EA8	253.2 µPa²h		
EA40	1.3 mPa²h		
LA_{peak}	84.8 dB	2024-05-24 14:24:56	
LAS_{max}	59.1 dB	2024-05-24 14:15:42	
LAS_{min}	39.7 dB	2024-05-24 14:17:05	
LA_{eq}	49.0 dB		
LC_{eq}	60.5 dB	LC_{eq} - LA_{eq}	11.5 dB
LAI_{eq}	50.8 dB	LAI_{eq} - LA_{eq}	1.8 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	0	0:00:00.0
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
--- dB	--- dB	0.0 dB

LDEN	LDay	LEve	LNight
--- dB	--- dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	49.0 dB		60.5 dB		--- dB	
$L_{S(max)}$	59.1 dB	2024-05-24 14:15:42	--- dB		--- dB	
$L_{S(min)}$	39.7 dB	2024-05-24 14:17:05	--- dB		--- dB	
$L_{Peak(max)}$	84.8 dB	2024-05-24 14:24:56	--- dB		--- dB	

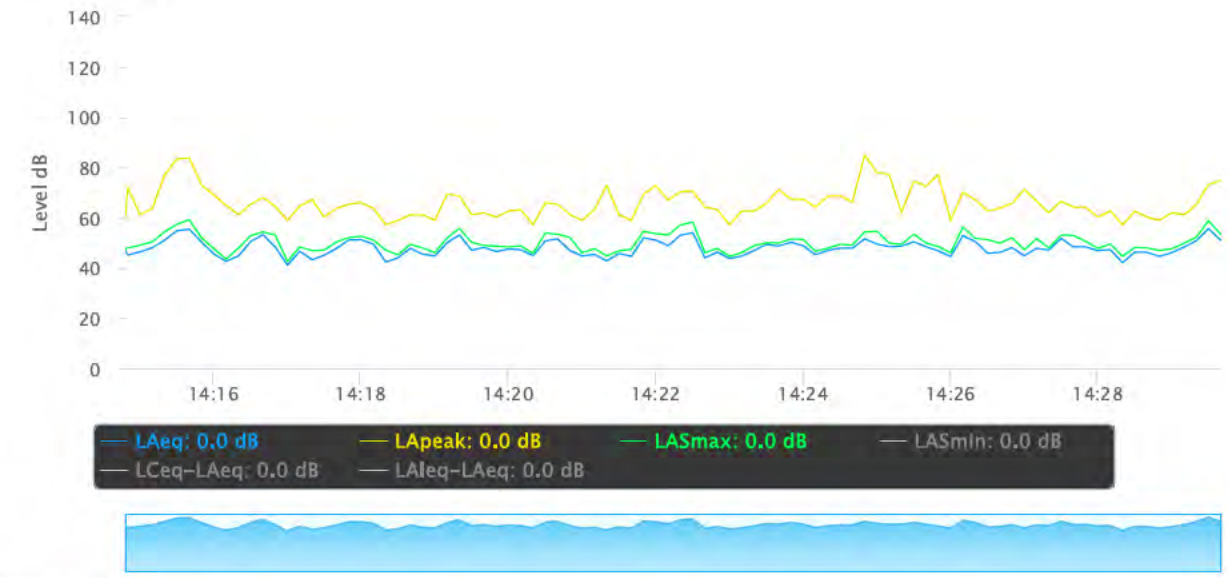
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

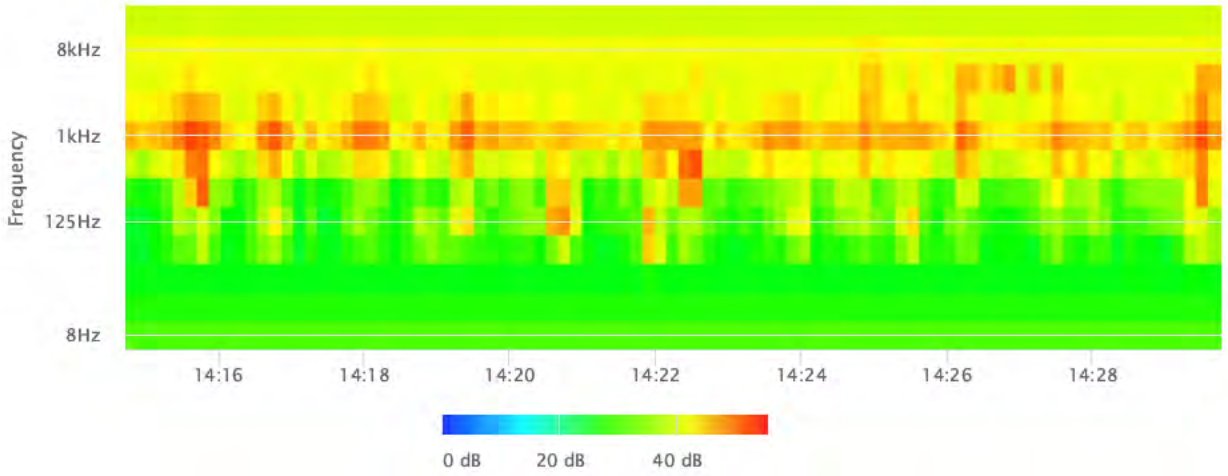
Statistics

LAS 2.0	55.5 dB
LAS 8.0	52.4 dB
LAS 25.0	49.7 dB
LAS 50.0	47.2 dB
LAS 66.6	45.8 dB
LAS 90.0	43.5 dB

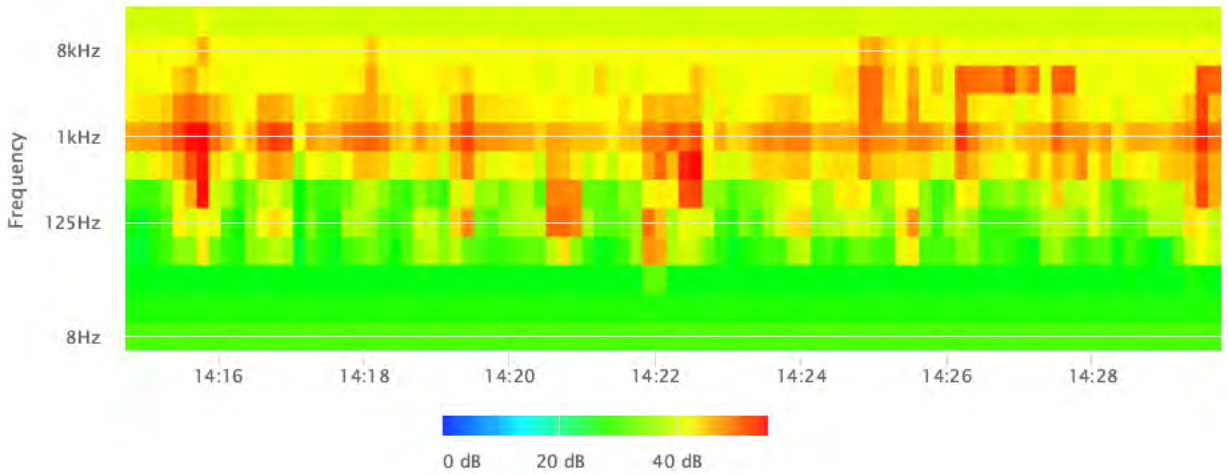
Time History



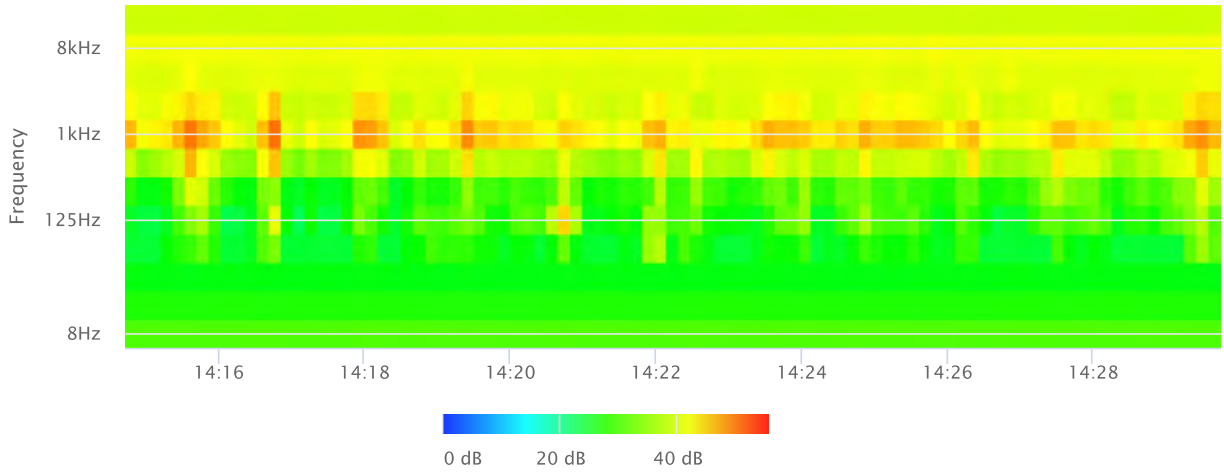
OBA 1/1 Leq



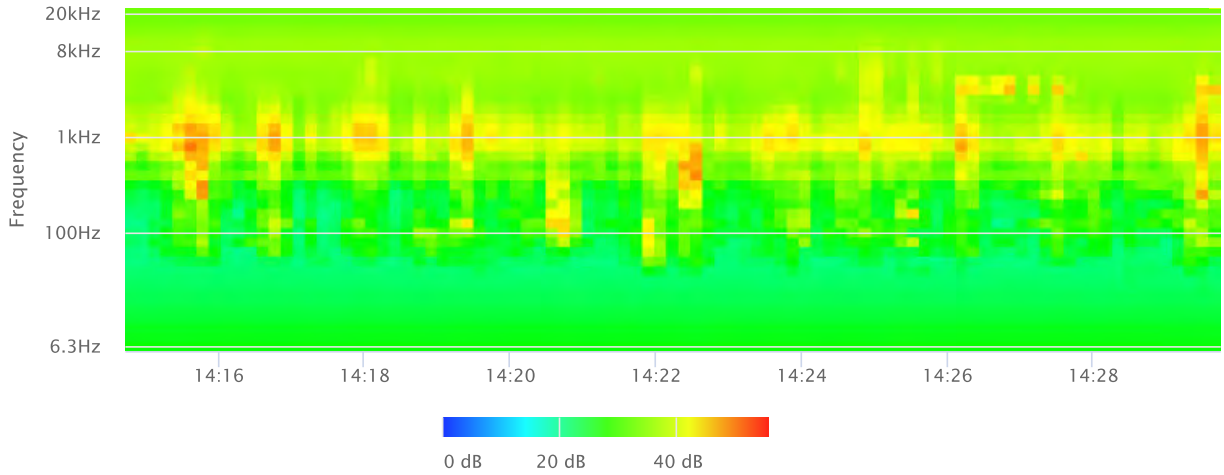
OBA 1/1 Lmax



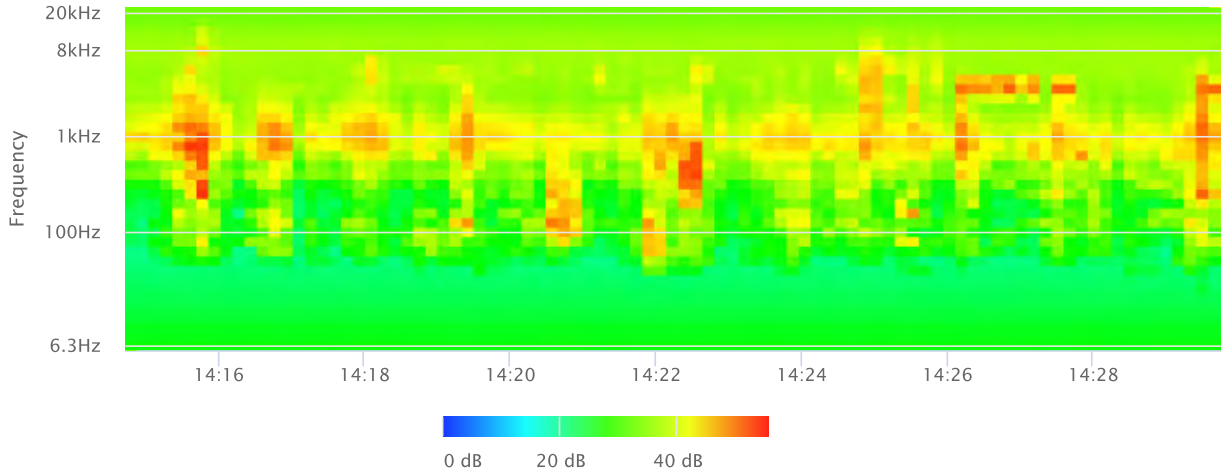
OBA 1/1 Lmin



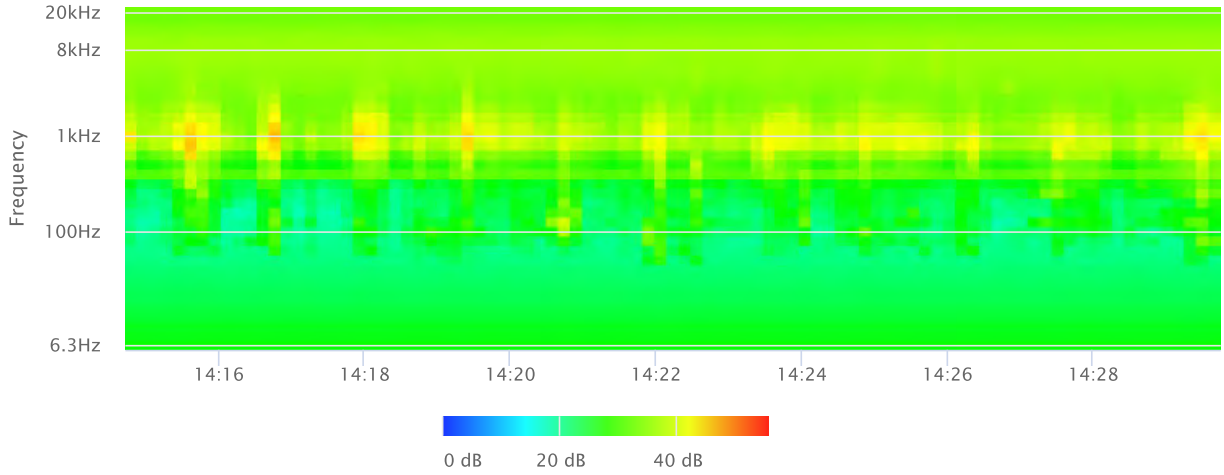
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
14:16
14:18
14:20
14:22
14:24
14:26
14:28
0 dB
20 dB
40 dB

Noise Measurement Field Data

Project Name: Barona Water Pipeline **Date:** May 24, 2024

Project #: 19726

Noise Measurement #: NM3 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: Wildcat Canyon Road & Tombill Road

Site Description (Type of Existing Land Use and any other notable features): Project Site: Intersection between Wildcat Canyon Rd & Tombill Rd. Residential E of NM3 along Tombill Rd. Open, heavily vegetated land W of NM3. Adjacent: Wildcat Canyon Rd running N-S W of NM3 & Tombill Rd running E-W S of NM3.

Weather: <5% cloud, sunshine. Sunset 7:54 PM **Settings:** SLOW FAST

Temperature: 68 deg F **Wind:** 8 mph **Humidity:** 55% **Terrain:** Flat

Start Time: 3:03 PM **End Time:** 3:18 PM **Run Time:**

Leq:	70	dB
Lmax	86.9	dB
L2	79.8	dB
L8	73.6	dB
L25	69.4	dB
L50	58.4	dB

Primary Noise Source: 149 vehicles passing microphone, traveling along Wildcat Canyon Rd, immediately W of NM3. Noisy F18 aircraft passes overhead 4.5 to 5.5 minutes into sample.

Secondary Noise Sources: Some bird song. Occasional distant air traffic. Leaf rustle from 8 mph breeze through trees and vegetation.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 200
SERIAL NUMBER:	3855	**SERIAL NUMBER:**	11178
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	5/24/2024		

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Noise Measurement
Field Data

PHOTOS:



NM3 looking W across Wildcat Canyon Rd & Tombill Rd intersection.



NM3 looking E down Tombill Rd & entry/exit way to Greekside Estates.

Summary	
File Name on Meter	LxT_Data.085.s
File Name on PC	LxT_0003855-20240524 150307-LxT_Data.085.ldbin
Serial Number	3855
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	NM3 32°59'41.87"N 116°50'32.04"W
Job Description	15 minute noise measurement
Note	Ganddini Project # 19726 Barona Water Pipeline

Measurement	
Start	2024-05-24 15:03:07
Stop	2024-05-24 15:18:07
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2024-05-24 15:02:45
Post-Calibration	None

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	145.4 dB

Results			
LAeq	70.0		
LAE	99.5		
EA	996.3636	µPa²h	
EA8	31.88363	mPa²h	
EA40	159.4182	mPa²h	
LApeak (max)	2024-05-24 15:07:27	101.9	dB
LASmax	2024-05-24 15:05:04	86.9	dB
LASmin	2024-05-24 15:10:34	41.4	dB

		Statistics	
LCeq	77.8 dB	**LA2.00**	79.8 dB
LAeq	70.0 dB	**LA8.00**	73.6 dB
LCeq - LAeq	7.8 dB	**LA25.00**	69.4 dB
LAIeq	72.3 dB	**LA50.00**	58.4 dB
LAeq	70.0 dB	**LA66.60**	52.4 dB
LAIeq - LAeq	2.4 dB	**LA90.00**	45.5 dB
Overload Count	0		
Overload Duration	0.0 s		

Measurement Report

Report Summary

Meter's File Name	LxT_Data.085.s	Computer's File Name	LxT_0003855-20240524 150307-LxT_Data.085.ldbin
Meter	LxT1 0003855		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM3 32°59'41.87"N 116°50'32.04"W
Job Description	15 minute noise measurement		
Note	Ganddini Project # 19726 Barona Water Pipeline		
Start Time	2024-05-24 15:03:07	Duration	0:15:00.0
End Time	2024-05-24 15:18:07	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	70.0 dB		
LAE	99.5 dB	SEA	--- dB
EA	996.4 µPa²h	LAFTM5	75.3 dB
EA8	31.9 mPa²h		
EA40	159.4 mPa²h		
LA_{peak}	101.9 dB	2024-05-24 15:07:27	
LAS_{max}	86.9 dB	2024-05-24 15:05:04	
LAS_{min}	41.4 dB	2024-05-24 15:10:34	
LA_{eq}	70.0 dB		
LC_{eq}	77.8 dB	LC_{eq} - LA_{eq}	7.8 dB
LAI_{eq}	72.3 dB	LAI_{eq} - LA_{eq}	2.4 dB

Exceedances	Count	Duration
LAS > 65.0 dB	32	0:06:10.1
LAS > 85.0 dB	2	0:00:06.6
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

	LDEN	LDay	LEve	LNight
	--- dB	--- dB	--- dB	--- dB

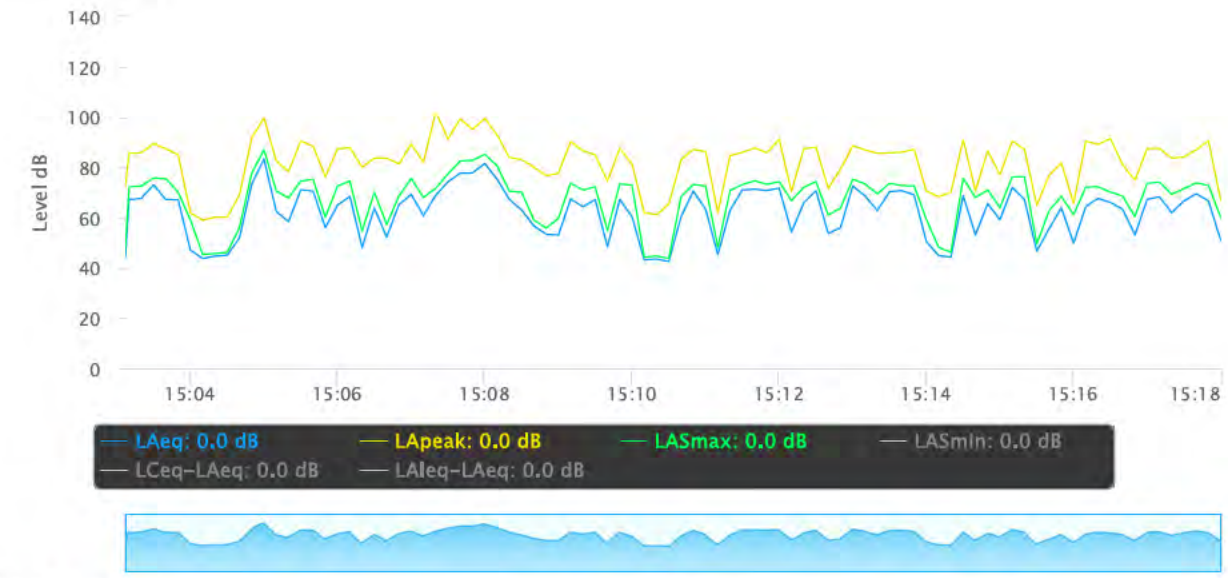
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	70.0 dB		77.8 dB		--- dB	
$L_{S(max)}$	86.9 dB	2024-05-24 15:05:04	--- dB		--- dB	
$L_{S(min)}$	41.4 dB	2024-05-24 15:10:34	--- dB		--- dB	
$L_{Peak(max)}$	101.9 dB	2024-05-24 15:07:27	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

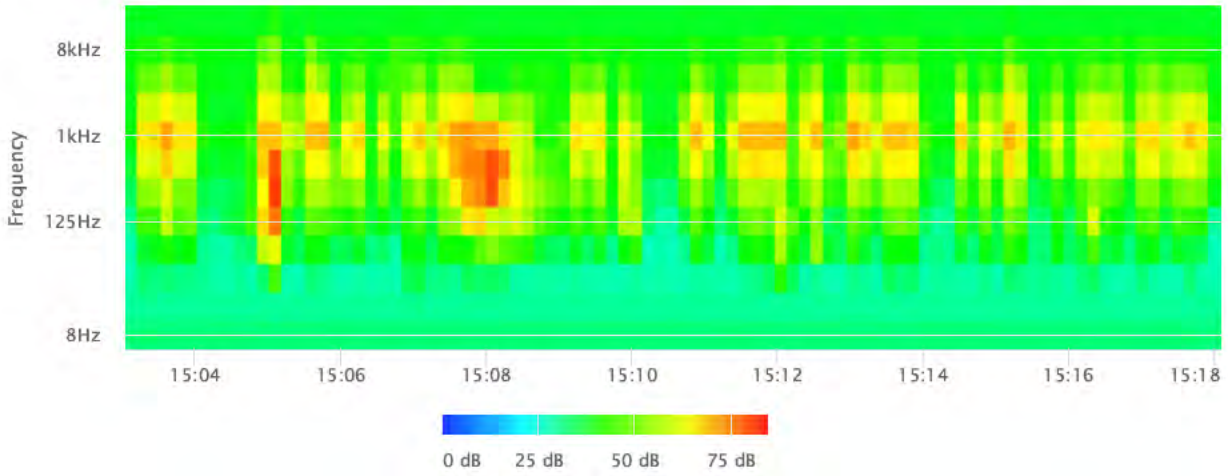
Statistics

LAS 2.0	79.8 dB
LAS 8.0	73.6 dB
LAS 25.0	69.4 dB
LAS 50.0	58.4 dB
LAS 66.6	52.4 dB
LAS 90.0	45.5 dB

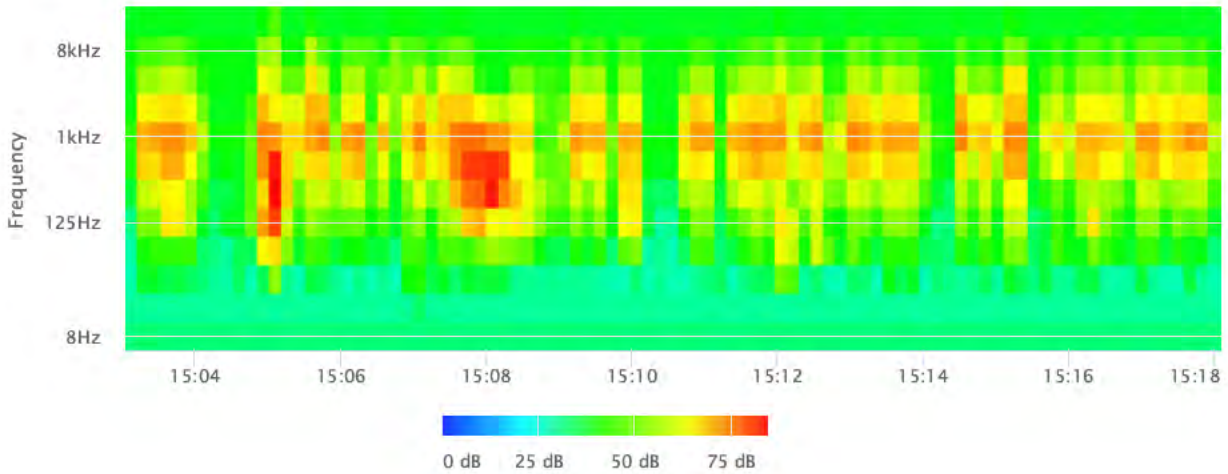
Time History



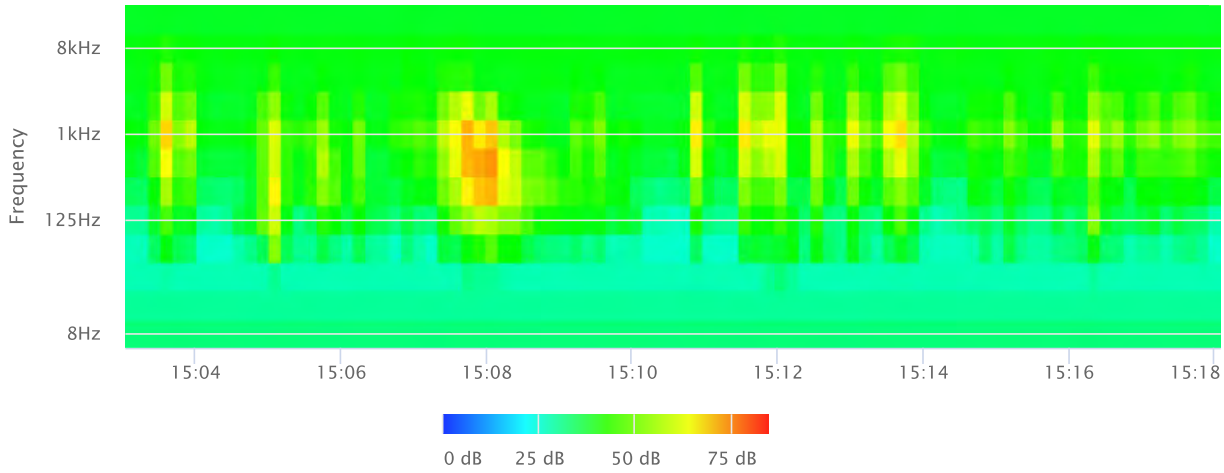
OBA 1/1 Leq



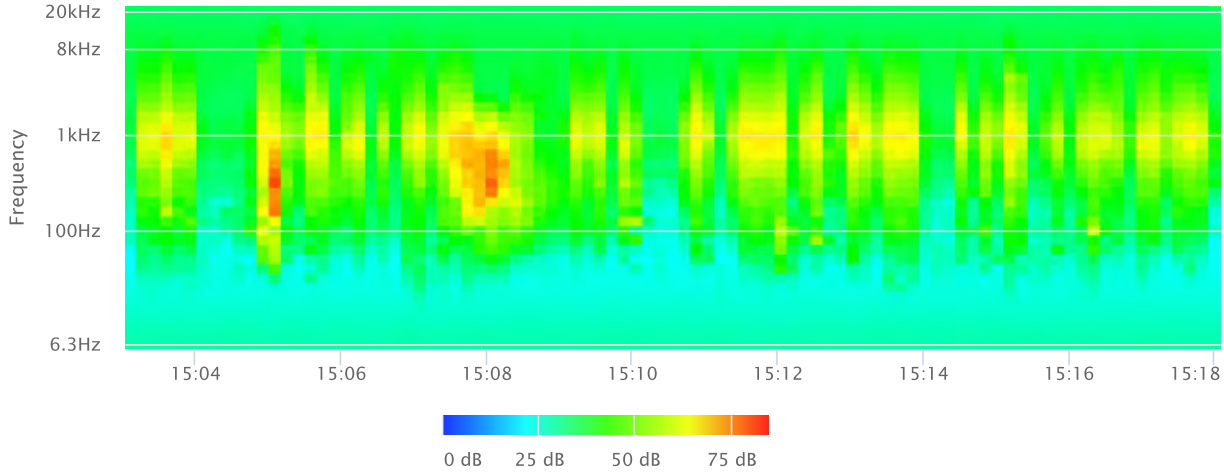
OBA 1/1 Lmax



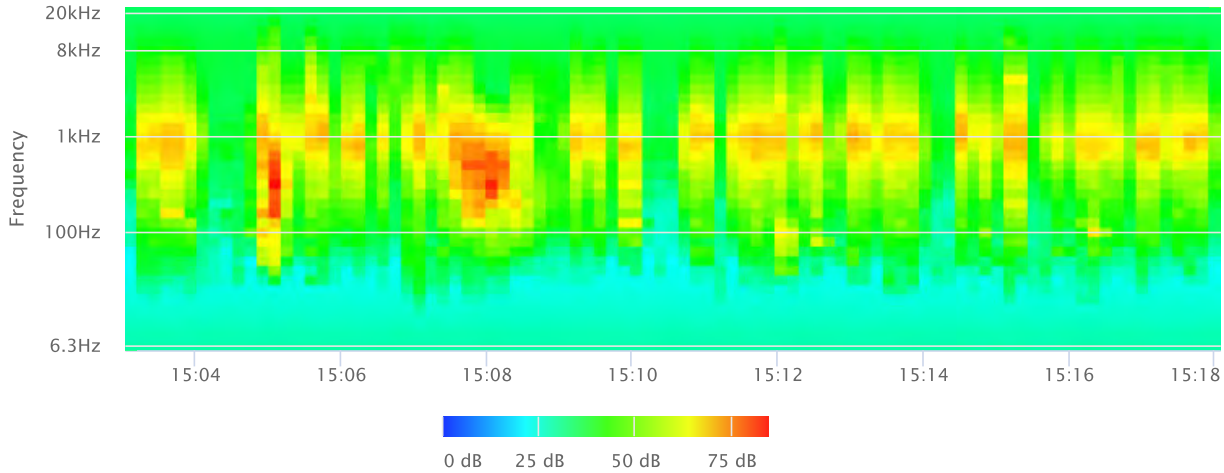
OBA 1/1 Lmin



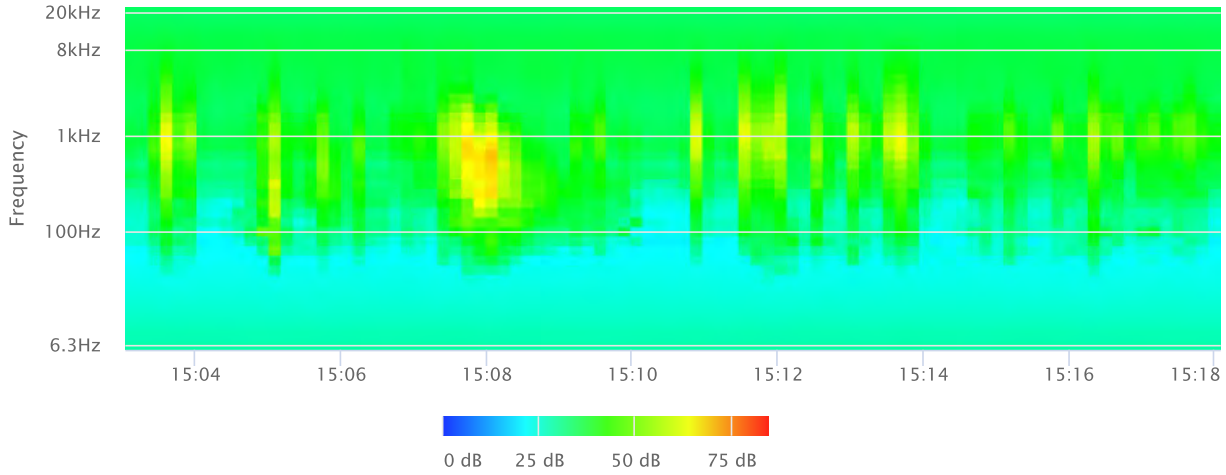
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
15:04
15:06
15:08
15:10
15:12
15:14
15:16
15:18
0 dB
25 dB
50 dB
75 dB

Noise Measurement
Field Data

Project Name: Barona Water Pipeline **Date:** May 24, 2024

Project #: 19726

Noise Measurement #: NM4 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 16060 Wildcat Canyon Road, Ramona, CA 92065

Site Description (Type of Existing Land Use and any other notable features): Project Site: Wildcat Canyon Rd traveling NW-SE

Adjacent: Residential to the W and open, heavily vegetated land E & S of NM4.

Weather: <5% cloud, sunshine. Sunset 7:54 PM **Settings:** SLOW FAST

Temperature: 68 deg F **Wind:** 8 mph **Humidity:** 55% **Terrain:** Flat

Start Time: 3:55 PM **End Time:** 4:10 PM **Run Time:**

Leq:	72.9	dB
Lmax	86.8	dB
L2	80.5	dB
L8	78.1	dB
L25	74.7	dB
L50	64.9	dB

Primary Noise Source: 141 vehicles passing microphone, traveling along Wildcat Canyon Rd, immediately NE of NM4.

Secondary Noise Sources: Some bird song. Occasional distant air traffic. Leaf rustle from 8 mph breeze through trees and vegetation.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 200
SERIAL NUMBER:	3855	**SERIAL NUMBER:**	11178
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	5/24/2024		

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Noise Measurement
Field Data

PHOTOS:



NM4 looking SE down Wildcat Canyon Road, entry/exit way to residence 16060 Wildcat Canyon Road on the right.



NM4 looking NW along Wildcat Canyon Road, residence 16060 Wildcat Canyon Road on the left.

Summary	
File Name on Meter	LxT_Data.086.s
File Name on PC	LxT_0003855-20240524 155544-LxT_Data.086.ldbin
Serial Number	3855
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	NM4 32°59'29.99"N 116°50'24.35"W
Job Description	15 minute noise measurement
Note	Ganddini Project # 19726 Barona Water Pipeline

Measurement	
Start	2024-05-24 15:55:44
Stop	2024-05-24 16:10:44
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2024-05-24 15:55:28
Post-Calibration	None

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	145.3 dB

Results				
L_{Aeq}	72.9			
LAE	102.5			
EA	1.96268	mPa²h		
EA8	62.80576	mPa²h		
EA40	314.0288	mPa²h		
$L_{Apeak\ (max)}$	2024-05-24 16:05:00	104.5	dB	
L_{ASmax}	2024-05-24 16:05:01	86.8	dB	
L_{ASmin}	2024-05-24 16:09:08	37.8	dB	

			Statistics	
L_{Ceq}	78.1	dB	**LA2.00**	80.5 dB
L_{Aeq}	72.9	dB	**LA8.00**	78.1 dB
L_{Ceq} - L_{Aeq}	5.2	dB	**LA25.00**	74.7 dB
L_{AIeq}	76.8	dB	**LA50.00**	64.9 dB
L_{Aeq}	72.9	dB	**LA66.60**	55.6 dB
L_{AIeq} - L_{Aeq}	3.9	dB	**LA90.00**	42.9 dB
Overload Count	0			
Overload Duration	0.0	s		

Measurement Report

Report Summary

Meter's File Name	LxT_Data.086.s	Computer's File Name	LxT_0003855-20240524 155544-LxT_Data.086.ldbin
Meter	LxT1 0003855		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM4 32°59'29.99"N 116°50'24.35"W
Job Description	15 minute noise measurement		
Note	Ganddini Project # 19726 Barona Water Pipeline		
Start Time	2024-05-24 15:55:44	Duration	0:15:00.0
End Time	2024-05-24 16:10:44	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	72.9 dB		
LAE	102.5 dB	SEA	--- dB
EA	2.0 mPa²h	LAFTM5	80.1 dB
EA8	62.8 mPa²h		
EA40	314.0 mPa²h		
LA_{peak}	104.5 dB	2024-05-24 16:05:00	
LAS_{max}	86.8 dB	2024-05-24 16:05:01	
LAS_{min}	37.8 dB	2024-05-24 16:09:08	
LA_{eq}	72.9 dB		
LC_{eq}	78.1 dB	LC_{eq} - LA_{eq}	5.2 dB
LAI_{eq}	76.8 dB	LAI_{eq} - LA_{eq}	3.9 dB

Exceedances	Count	Duration
LAS > 65.0 dB	36	0:07:52.2
LAS > 85.0 dB	1	0:00:01.5
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

	LDEN	LDay	LEve	LNight
	--- dB	--- dB	--- dB	--- dB

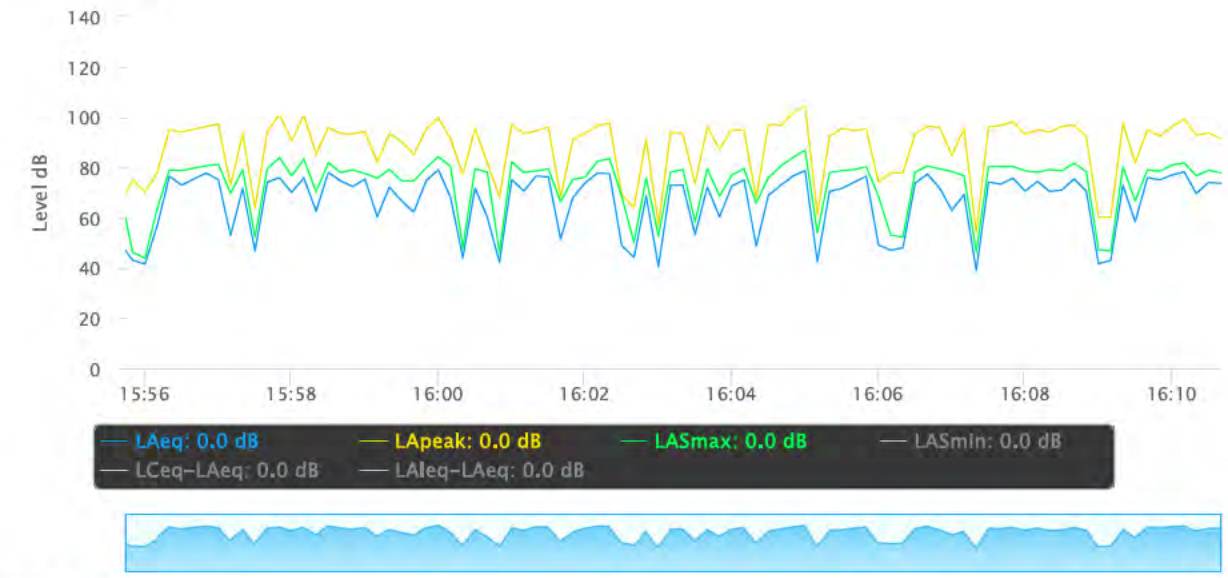
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	72.9 dB		78.1 dB		--- dB	
$L_{S(max)}$	86.8 dB	2024-05-24 16:05:01	--- dB		--- dB	
$L_{S(min)}$	37.8 dB	2024-05-24 16:09:08	--- dB		--- dB	
$L_{Peak(max)}$	104.5 dB	2024-05-24 16:05:00	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

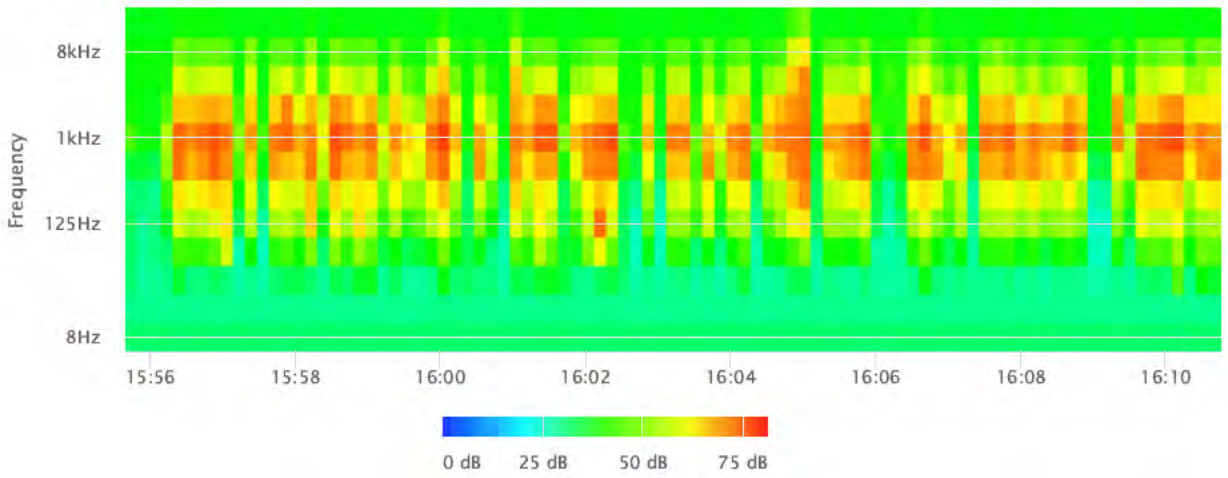
Statistics

LAS 2.0	80.5 dB
LAS 8.0	78.1 dB
LAS 25.0	74.7 dB
LAS 50.0	64.9 dB
LAS 66.6	55.6 dB
LAS 90.0	42.9 dB

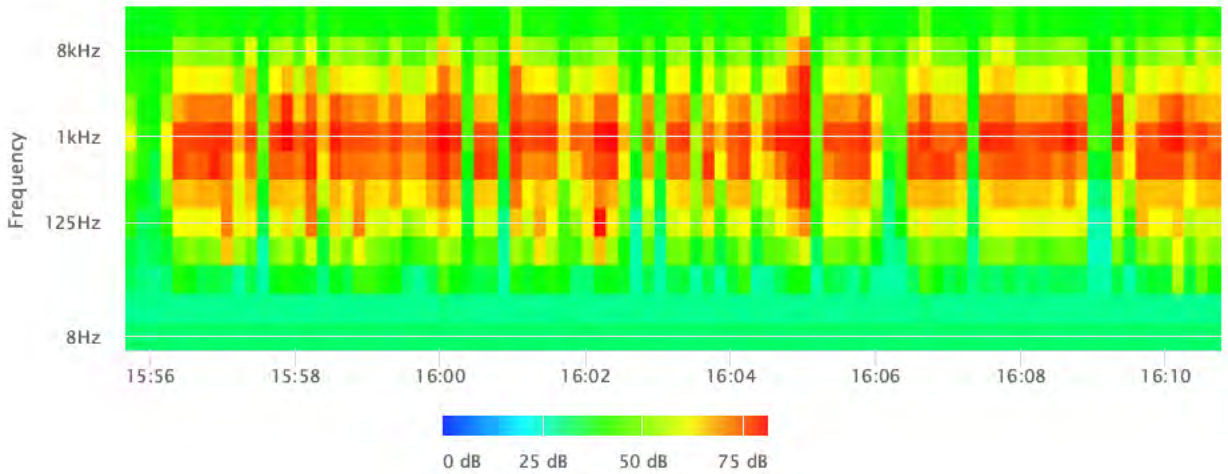
Time History



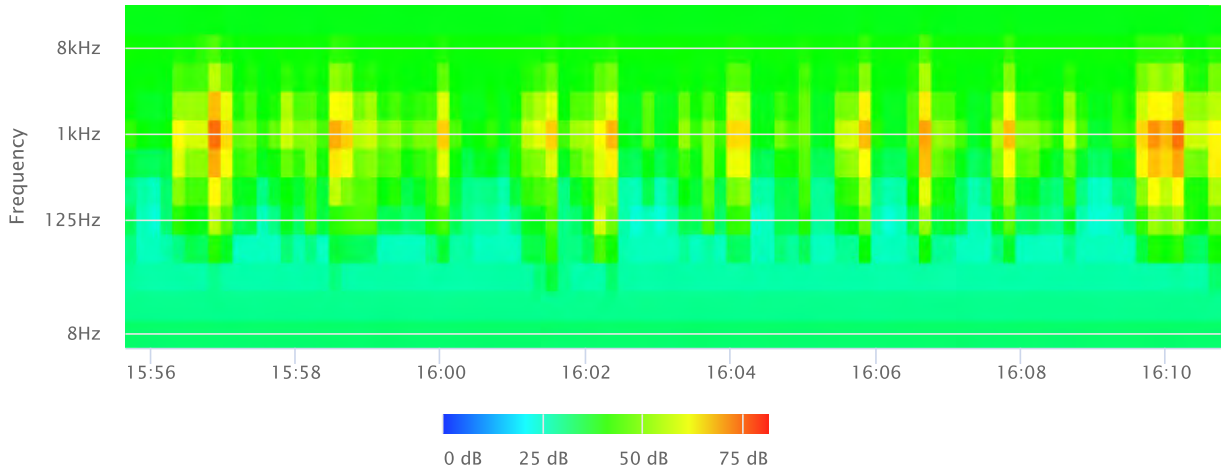
OBA 1/1 Leq



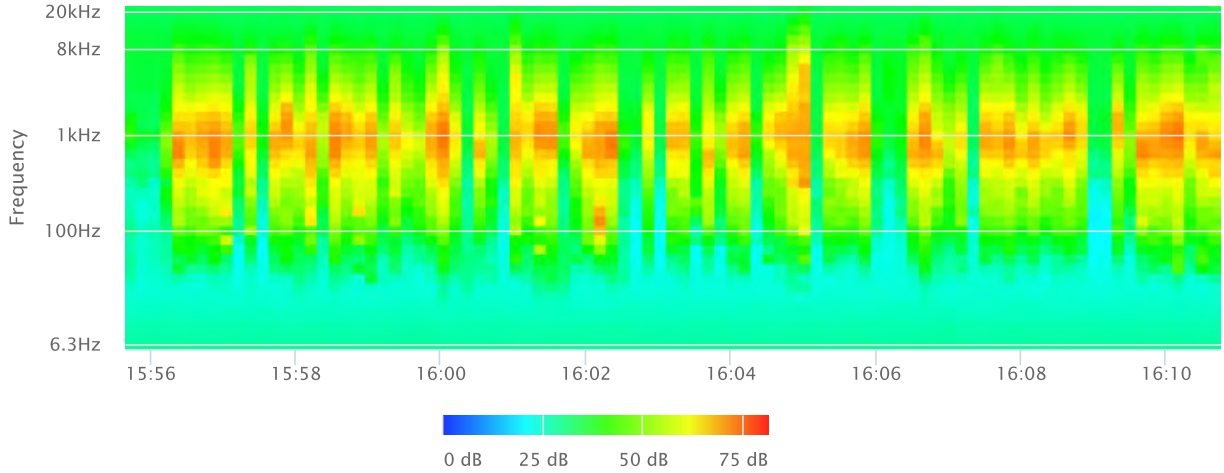
OBA 1/1 Lmax



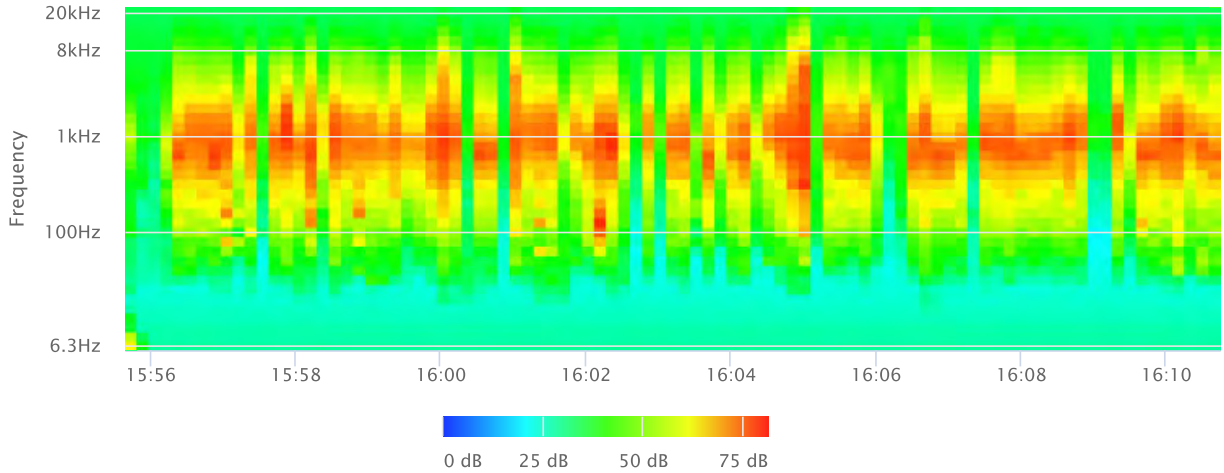
OBA 1/1 Lmin



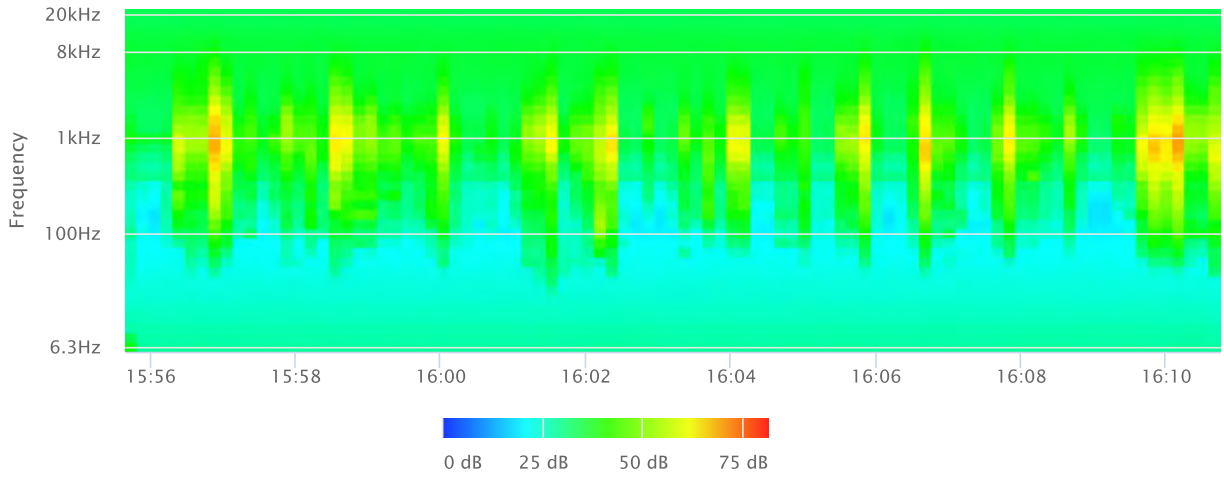
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
15:56
15:58
16:00
16:02
16:04
16:06
16:08
16:10
0 dB
25 dB
50 dB
75 dB

Noise Measurement
Field Data

Project Name: Barona Water Pipeline **Date:** May 24, 2024

Project #: 19726

Noise Measurement #: NM5 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 4011 Captain Grande Road, Lakeside, CA 92040

Site Description (Type of Existing Land Use and any other notable features): Project Site: Indian reservation, residential area, homes spaced apart, open land.

Adjacent: Wildcat Canyon Road/ Barona Road running N-S, ~540' W of NM5. Otherwise, rugged, open land.

Weather: <5% cloud, sunshine. Sunset 7:54 PM **Settings:** SLOW FAST

Temperature: 68 deg F **Wind:** 8 mph **Humidity:** 55% **Terrain:** Flat

Start Time: 4:47 PM **End Time:** 5:02 PM **Run Time:**

Leq:	48.7	dB
Lmax	57.3	dB
L2	54.1	dB
L8	52.7	dB
L25	50.0	dB
L50	47.3	dB

Primary Noise Source: Traffic noise from vehicles traveling along Wildcat Canyon Rd, ~540' W of NM5.

Secondary Noise Sources: Some bird song. Occasional distant air traffic. Leaf rustle from 8 mph breeze through trees and vegetation.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 200
SERIAL NUMBER:	3855	**SERIAL NUMBER:**	11178
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	5/24/2024		

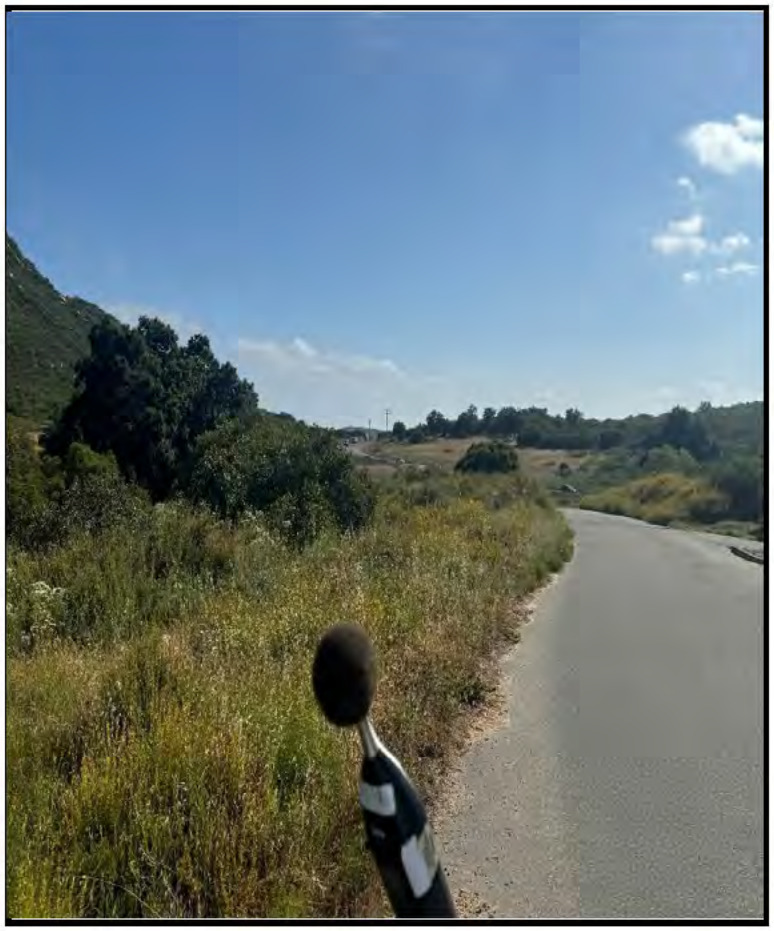
ganddini

Noise Measurement Field Data

PHOTOS:



NM5 looking W towards fence of residential property 4011 Captain Grande Road, Lakeside.



NM5 looking WSW down Captain Grande Road towads intersection with Wildcat Canyon Road/ Barona Road, ~540' WSW.

Summary	
File Name on Meter	LxT_Data.087.s
File Name on PC	LxT_0003855-20240524 164752-LxT_Data.087.ldbin
Serial Number	3855
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	NM5 32°58'39.96"N 116°49'21.18"W
Job Description	15 minute noise measurement
Note	Ganddini Project #19726 Barona Water Pipeline

Measurement	
Start	2024-05-24 16:47:52
Stop	2024-05-24 17:02:52
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2024-05-24 16:47:03
Post-Calibration	None

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	145.3 dB

Results				
LAeq	48.7			
LAE	78.3			
EA	7.46027	µPa²h		
EA8	238.7286	µPa²h		
EA40	1.193643	mPa²h		
LApeak (max)	2024-05-24 16:58:58	84.5	dB	
LASmax	2024-05-24 16:49:23	57.3	dB	
LASmin	2024-05-24 16:49:51	35.6	dB	

			Statistics		
LCeq	65.5	dB	**LA2.00**	54.1	dB
LAeq	48.7	dB	**LA8.00**	52.7	dB
LCeq - LAeq	16.7	dB	**LA25.00**	50.0	dB
LAIeq	51.2	dB	**LA50.00**	47.3	dB
LAeq	48.7	dB	**LA66.60**	45.3	dB
LAIeq - LAeq	2.5	dB	**LA90.00**	40.4	dB
Overload Count	0				
Overload Duration	0.0	s			

Measurement Report

Report Summary

Meter's File Name	LxT_Data.087.s	Computer's File Name	LxT_0003855-20240524 164752-LxT_Data.087.ldbin
Meter	LxT1 0003855		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM5 32°58'39.96"N 116°49'21.18"W
Job Description	15 minute noise measurement		
Note	Ganddini Project # 19726 Barona Water Pipeline		
Start Time	2024-05-24 16:47:52	Duration	0:15:00.0
End Time	2024-05-24 17:02:52	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	48.7 dB		
LAE	78.3 dB	SEA	--- dB
EA	7.5 µPa²h	LAFTM5	53.2 dB
EA8	238.7 µPa²h		
EA40	1.2 mPa²h		
LA_{peak}	84.5 dB	2024-05-24 16:58:58	
LAS_{max}	57.3 dB	2024-05-24 16:49:23	
LAS_{min}	35.6 dB	2024-05-24 16:49:51	
LA_{eq}	48.7 dB		
LC_{eq}	65.5 dB	LC_{eq} - LA_{eq}	16.7 dB
LAI_{eq}	51.2 dB	LAI_{eq} - LA_{eq}	2.5 dB

Exceedances	Count	Duration
LAS > 65.0 dB	0	0:00:00.0
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

	LDEN	LDay	LEve	LNight
	--- dB	--- dB	--- dB	--- dB

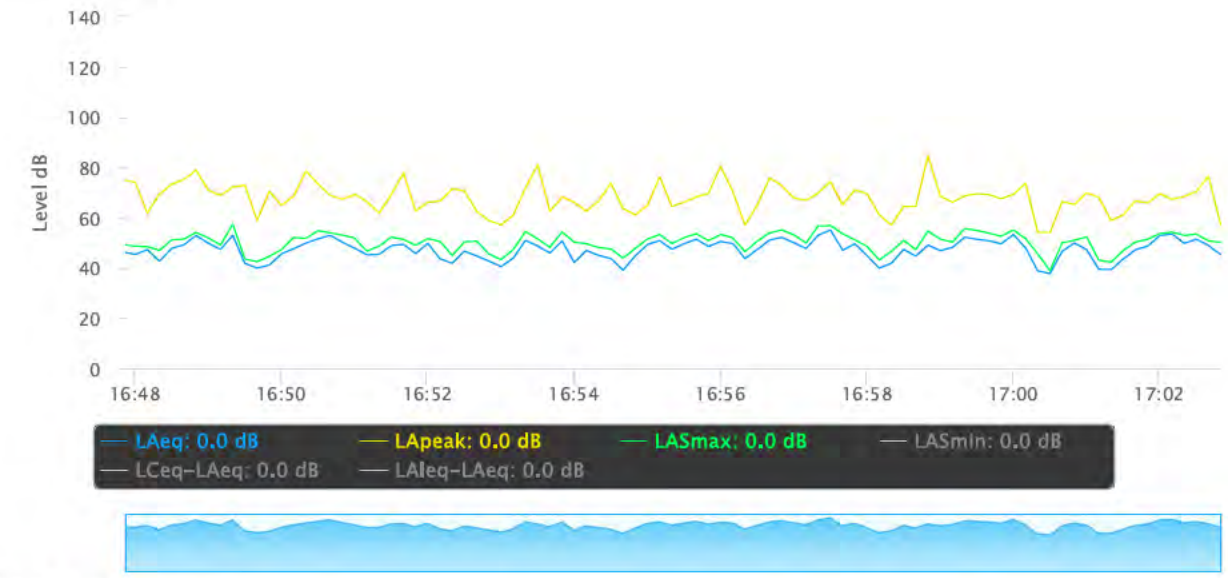
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	48.7 dB		65.5 dB		--- dB	
$L_{S(max)}$	57.3 dB	2024-05-24 16:49:23	--- dB		--- dB	
$L_{S(min)}$	35.6 dB	2024-05-24 16:49:51	--- dB		--- dB	
$L_{Peak(max)}$	84.5 dB	2024-05-24 16:58:58	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

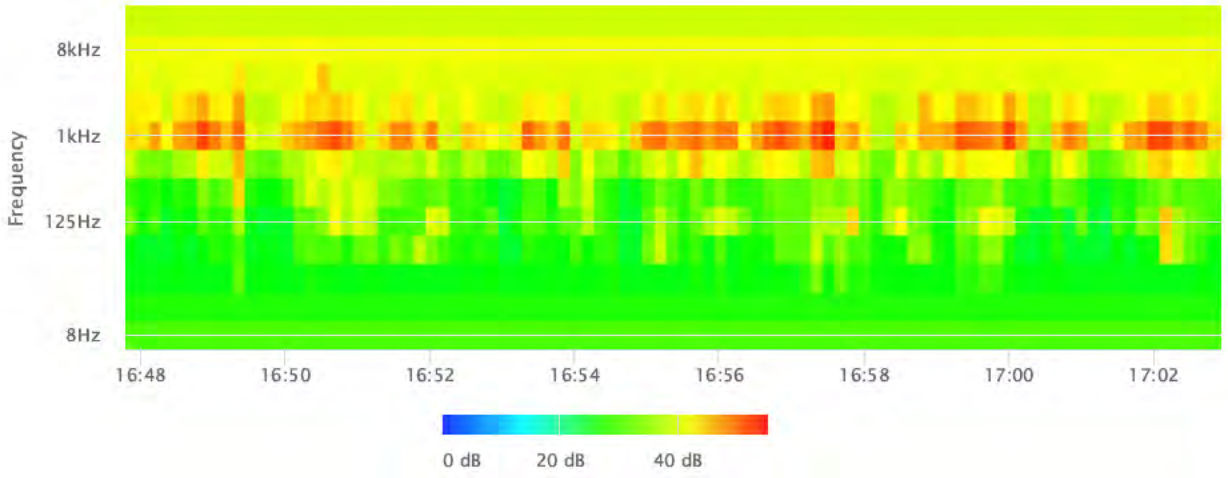
Statistics

LAS 2.0	54.1 dB
LAS 8.0	52.7 dB
LAS 25.0	50.0 dB
LAS 50.0	47.3 dB
LAS 66.6	45.3 dB
LAS 90.0	40.4 dB

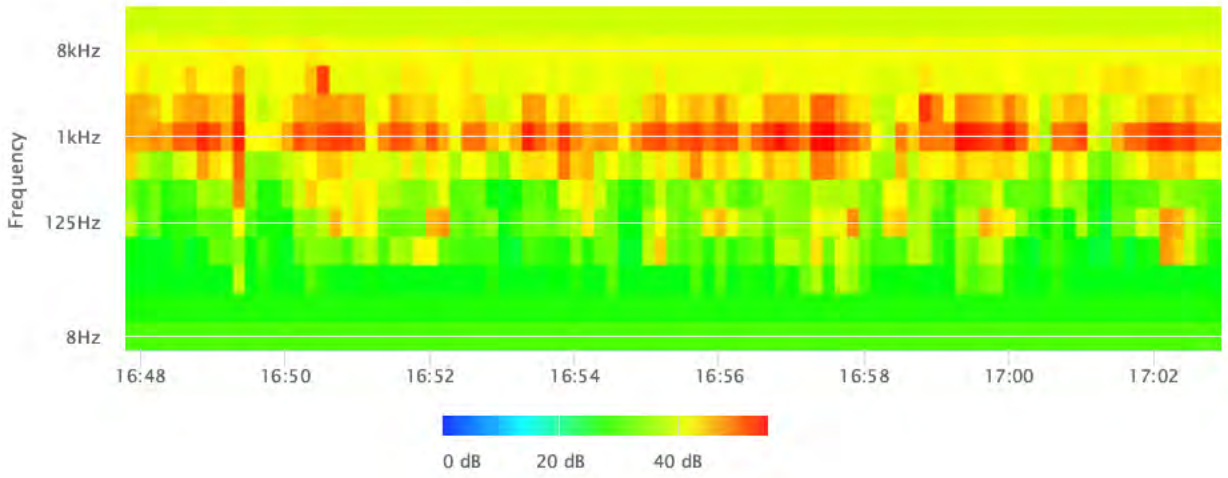
Time History



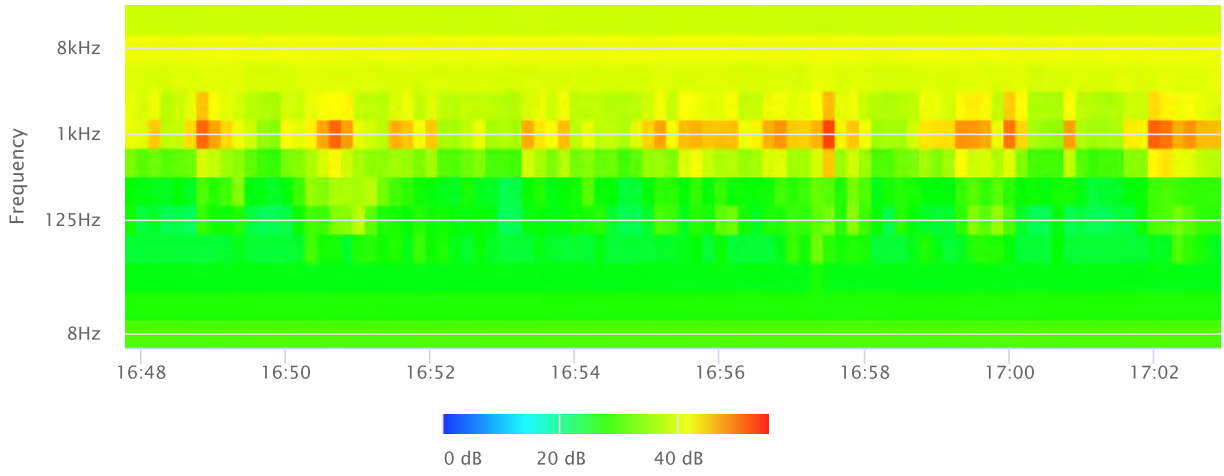
OBA 1/1 Leq



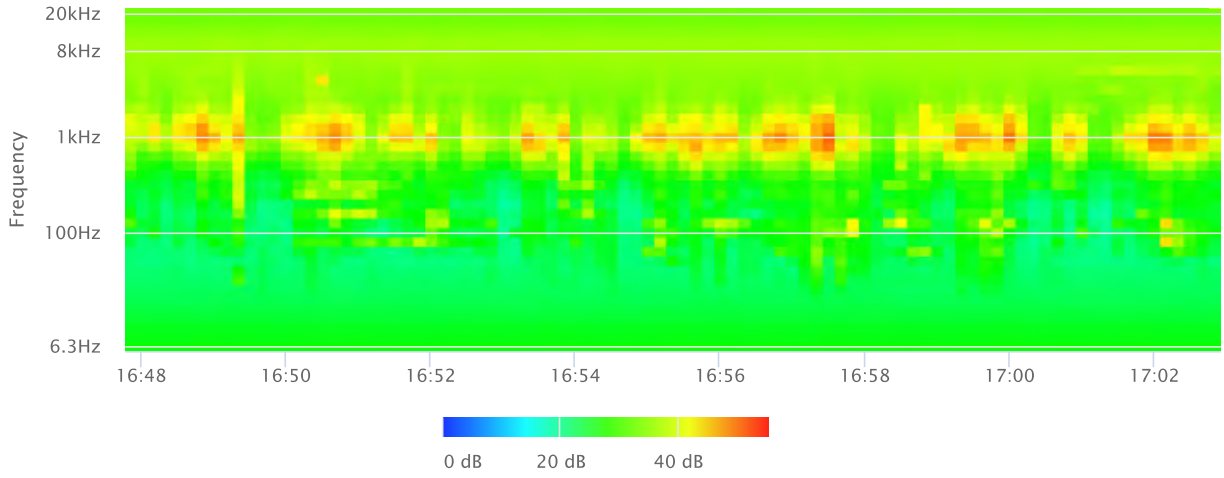
OBA 1/1 Lmax



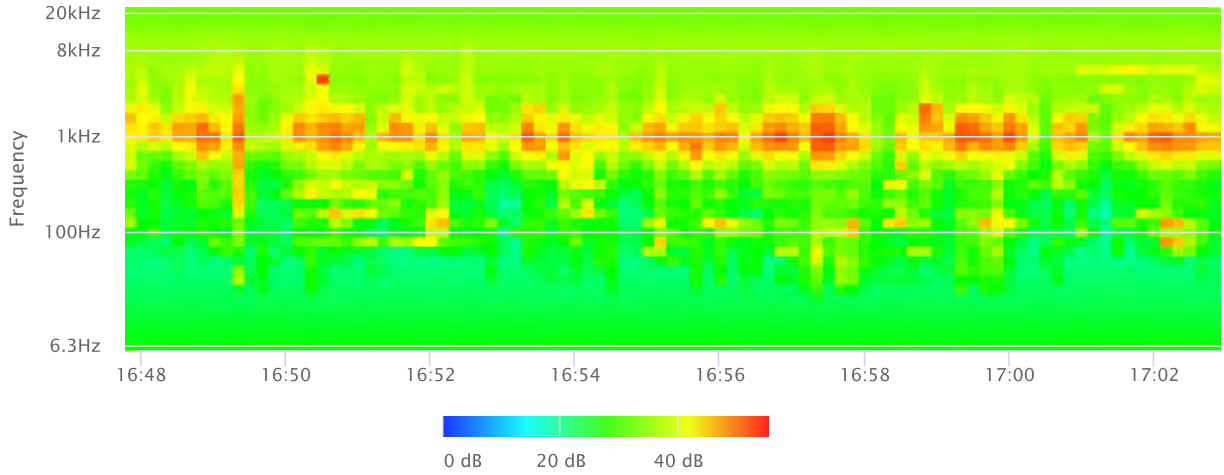
OBA 1/1 Lmin



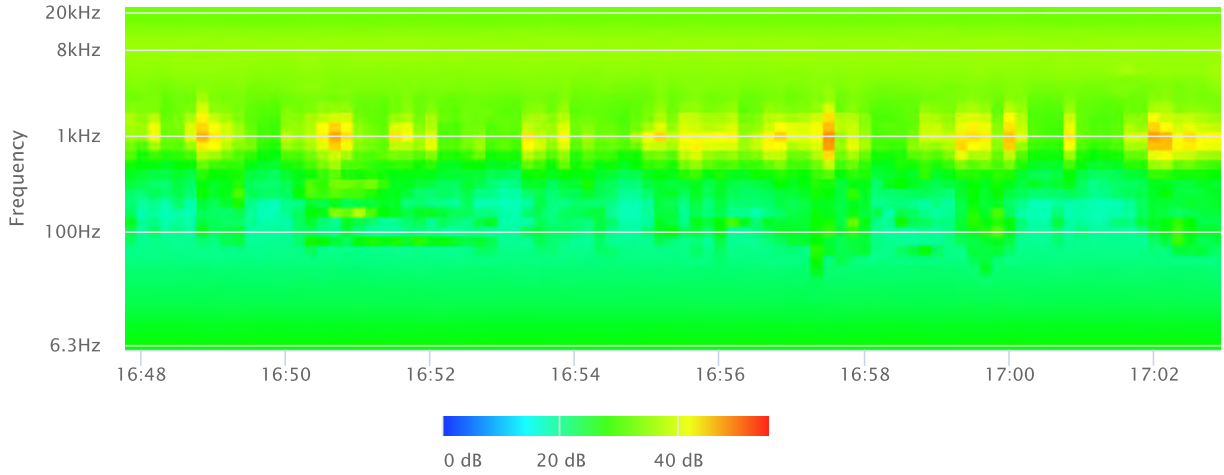
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
16:48
16:50
16:52
16:54
16:56
16:58
17:00
17:02
0 dB
20 dB
40 dB

Noise Measurement
Field Data

Project Name: Barona Water Pipeline **Date:** May 24, 2024

Project #: 19726

Noise Measurement #: NM6 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 3071 Ketuull Uunyaa Way, Lakeside, CA 92040

Site Description (Type of Existing Land Use and any other notable features): Project Site: Indian reservation, residential area, homes spaced apart, open land.

Adjacent: Wildcat Canyon Road/ Barona Road running N-S, ~150' W of NM6. Otherwise, rugged, open land.

Weather: <5% cloud, sunshine. Sunset 7:54 PM **Settings:** SLOW FAST

Temperature: 68 deg F **Wind:** 8 mph **Humidity:** 55% **Terrain:** Flat

Start Time: 5:24 PM **End Time:** 5:39 PM **Run Time:**

Leq:	57.7	dB	**Primary Noise Source:** Traffic noise from vehicles traveling along Wildcat Canyon Rd, ~150' W of NM6.
Lmax	68	dB	
L2	64.3	dB	**Secondary Noise Sources:** Some bird song. Occasional distant air traffic. Leaf rustle from 8 mph breeze
L8	62.4	dB	through trees and vegetation.
L25	59.2	dB	
L50	54.5	dB	

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 200
SERIAL NUMBER:	3855	**SERIAL NUMBER:**	11178
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	5/24/2024		

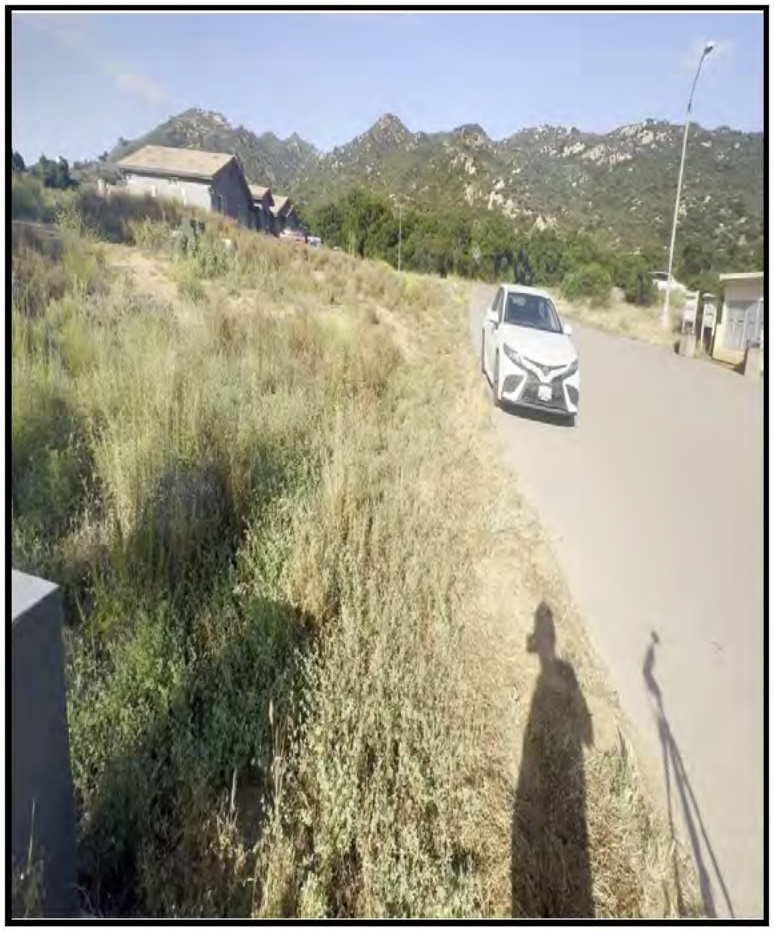
ganddini

Noise Measurement
Field Data

PHOTOS:



NM6 looking ESE down Ketuull Uunyaa Way towards Wildcat Canyon Road/ Barona Road intersection (~180' ESE).



NM6 looking NE towards front yard of residence 3071 Ketuull Uunyaa Way, Lakeside.

Summary				
File Name on Meter	LxT_Data.088.s			
File Name on PC	LxT_0003855-20240524 172429-LxT_Data.088.ldbin			
Serial Number	3855			
Model	SoundTrack LxT®			
Firmware Version	2.404			
User	Ian Edward Gallagher			
Location	NM6 32°57'39.11"N 116°50'7.87"W			
Job Description	15 minute noise measurement			
Note	Ganddini Project #19726 Barona Water Pipeline			
Measurement				
Start	2024-05-24 17:24:29			
Stop	2024-05-24 17:39:29			
Duration	00:15:00.0			
Run Time	00:15:00.0			
Pause	00:00:00.0			
Pre-Calibration	2024-05-24 17:23:54			
Post-Calibration	None			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamplifier	PRMLxT1			
Microphone Correction	Off			
Integration Method	Linear			
OBA Range	Normal			
OBA Bandwidth	1/1 and 1/3			
OBA Frequency Weighting	A Weighting			
OBA Max Spectrum	Bin Max			
Overload	145.3 dB			
Results				
LAeq	57.7			
LAE	87.2			
EA	58.38261 µPa²h			
EA8	1.868243 mPa²h			
EA40	9.341217 mPa²h			
LApeak (max)	2024-05-24 17:29:57	92.3 dB		
LASmax	2024-05-24 17:33:16	68.0 dB		
LASmin	2024-05-24 17:29:11	36.2 dB		
			Statistics	
LCeq	65.5 dB		**LA2.00**	64.3 dB
LAeq	57.7 dB		**LA8.00**	62.4 dB
LCeq - LAeq	7.8 dB		**LA25.00**	59.2 dB
LAIeq	60.8 dB		**LA50.00**	54.5 dB
LAeq	57.7 dB		**LA66.60**	51.4 dB
LAIeq - LAeq	3.2 dB		**LA90.00**	44.9 dB
Overload Count	0			
Overload Duration	0.0 s			

Measurement Report

Report Summary

Meter's File Name	LxT_Data.088.s	Computer's File Name	LxT_0003855-20240524 172429-LxT_Data.088.ldbin
Meter	LxT1 0003855		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM6 32°57'39.11"N 116°50'7.87"W
Job Description	15 minute noise measurement		
Note	Ganddini Project # 19726 Barona Water Pipeline		
Start Time	2024-05-24 17:24:29	Duration	0:15:00.0
End Time	2024-05-24 17:39:29	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	57.7 dB		
LAE	87.2 dB	SEA	--- dB
EA	58.4 µPa²h	LAFTM5	63.7 dB
EA8	1.9 mPa²h		
EA40	9.3 mPa²h		
LA_{peak}	92.3 dB	2024-05-24 17:29:57	
LAS_{max}	68.0 dB	2024-05-24 17:33:16	
LAS_{min}	36.2 dB	2024-05-24 17:29:11	
LA_{eq}	57.7 dB		
LC_{eq}	65.5 dB	LC_{eq} - LA_{eq}	7.8 dB
LAI_{eq}	60.8 dB	LAI_{eq} - LA_{eq}	3.2 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	13	0:00:22.2
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
--- dB	--- dB	0.0 dB

LDEN	LDay	LEve	LNight
--- dB	--- dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	57.7 dB		65.5 dB		--- dB	
$L_{S(max)}$	68.0 dB	2024-05-24 17:33:16	--- dB		--- dB	
$L_{S(min)}$	36.2 dB	2024-05-24 17:29:11	--- dB		--- dB	
$L_{Peak(max)}$	92.3 dB	2024-05-24 17:29:57	--- dB		--- dB	

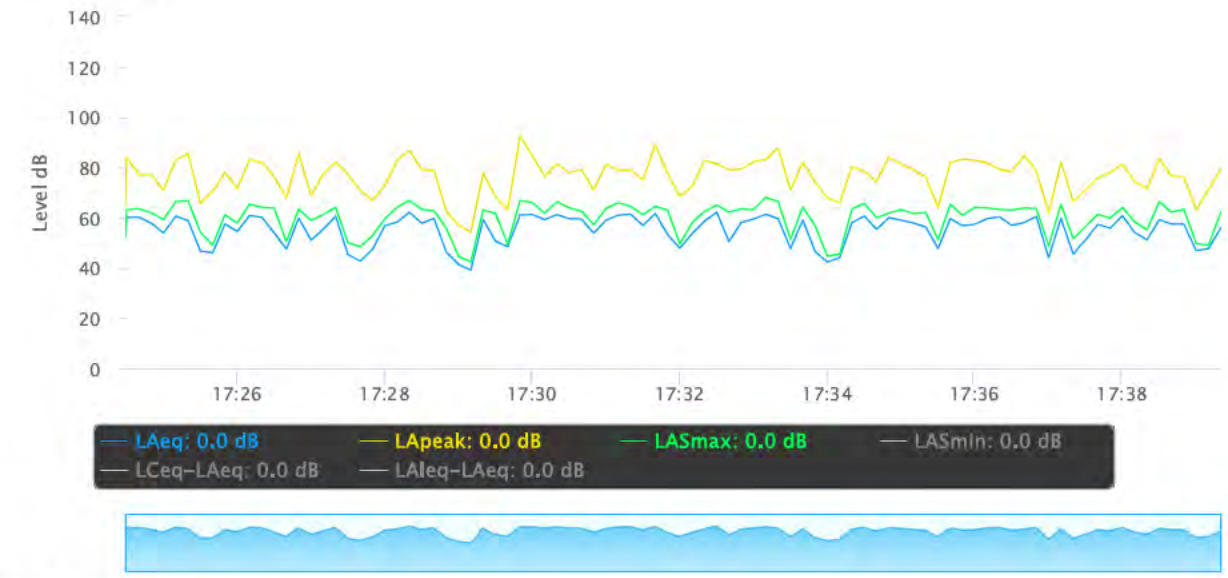
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

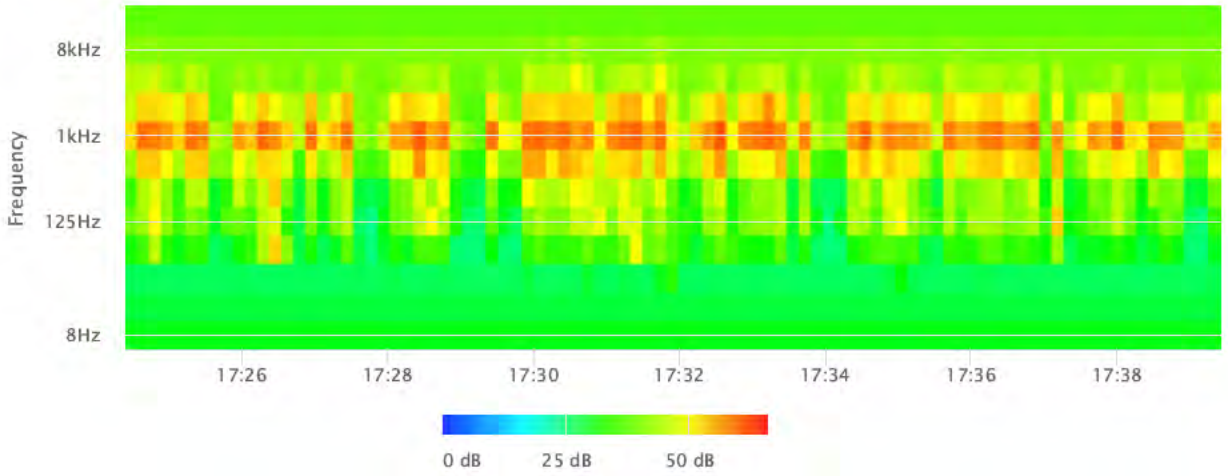
Statistics

LAS 2.0	64.3 dB
LAS 8.0	62.4 dB
LAS 25.0	59.2 dB
LAS 50.0	54.5 dB
LAS 66.6	51.4 dB
LAS 90.0	44.9 dB

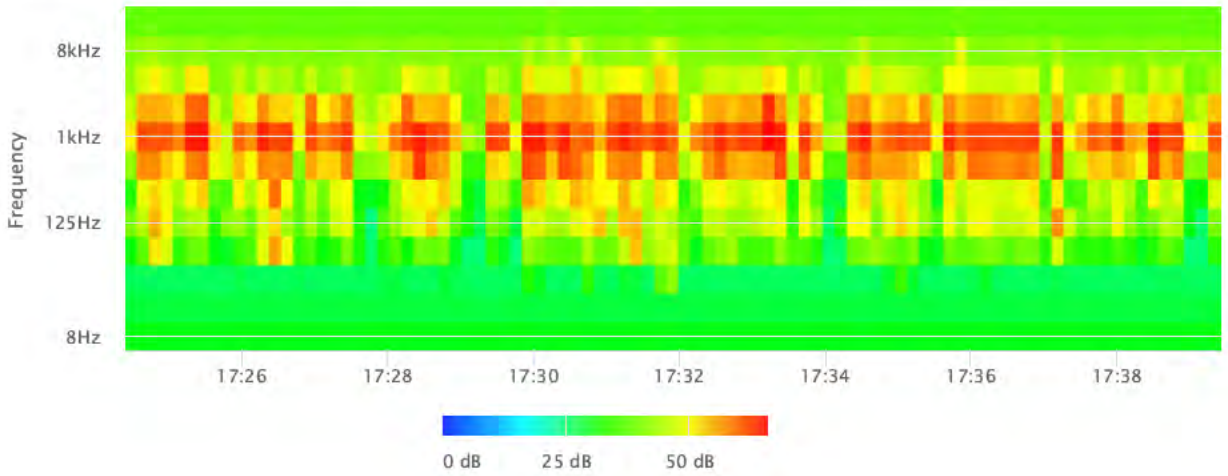
Time History



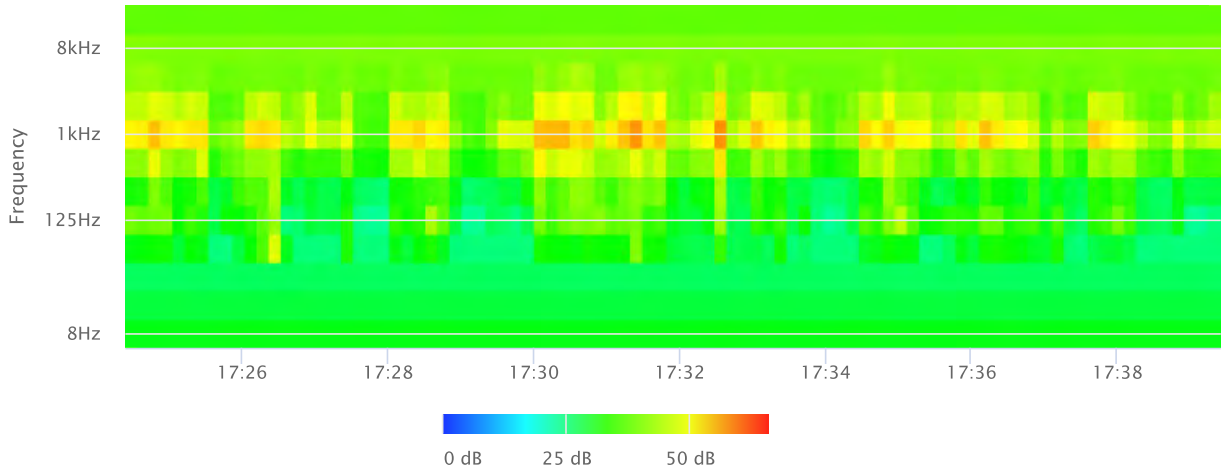
OBA 1/1 Leq



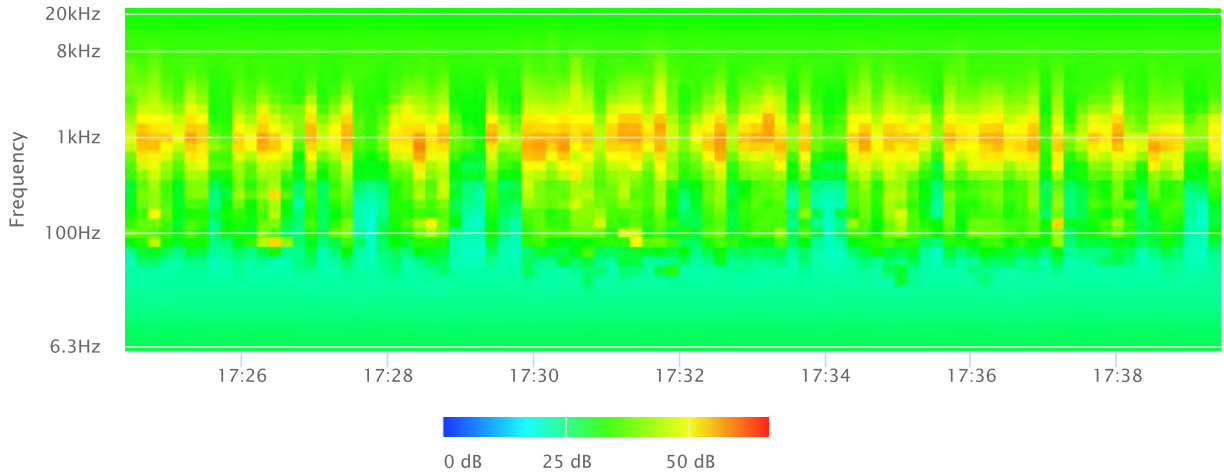
OBA 1/1 Lmax



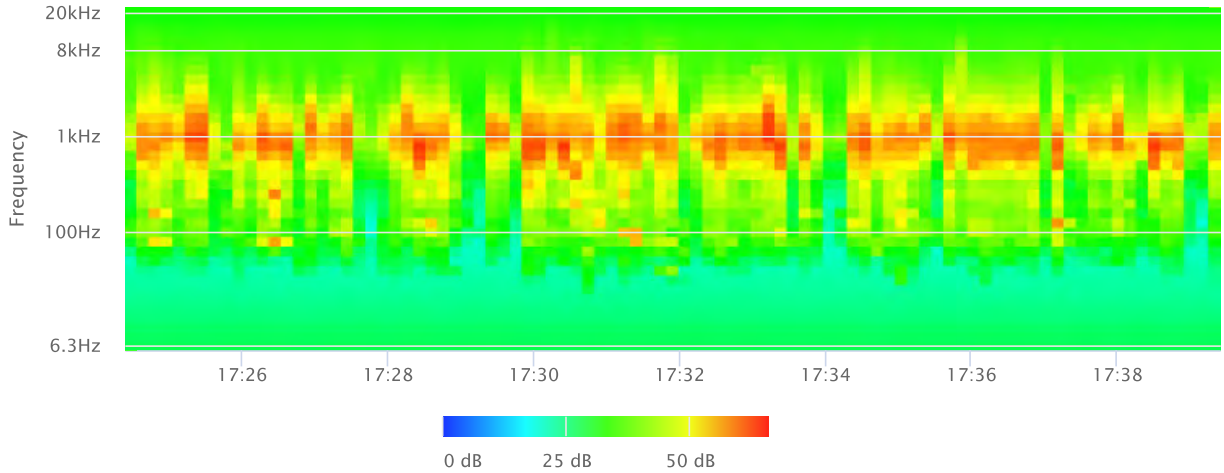
OBA 1/1 Lmin



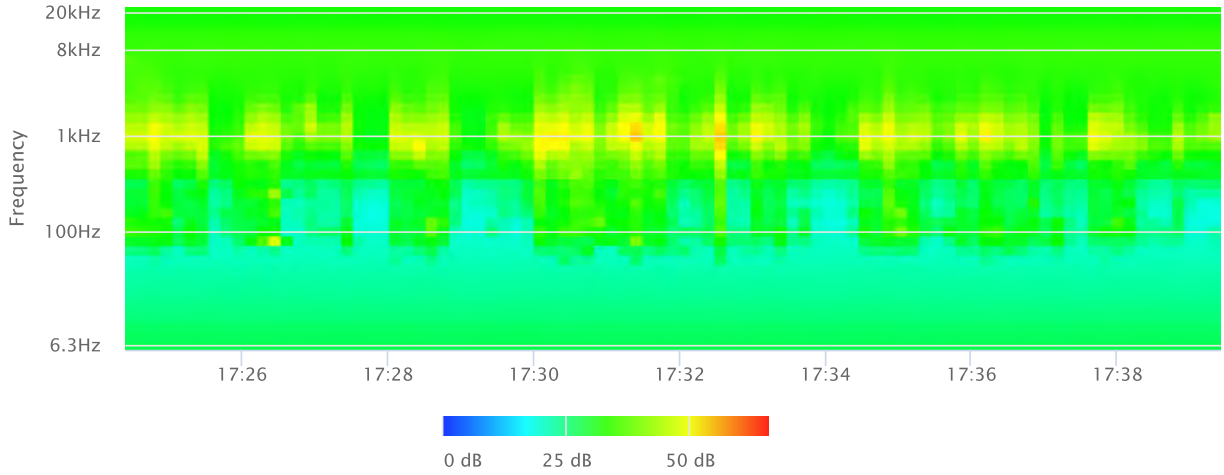
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
17:26
17:28
17:30
17:32
17:34
17:36
17:38
0 dB
25 dB
50 dB

Noise Measurement
Field Data

Project Name: Barona Water Pipeline **Date:** May 24, 2024

Project #: 19726

Noise Measurement #: NM7 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 1170 Barona road, Lakeside, CA 92040

Site Description (Type of Existing Land Use and any other notable features): Project Site: Indian reservation, residential area, homes spaced apart, open land.

Adjacent: Wildcat Canyon Road/ Barona Road running NE-SW, ~520' SE of NM7. Otherwise, rugged, open land.

Weather: <5% cloud, sunshine. Sunset 7:54 PM **Settings:** SLOW FAST

Temperature: 68 deg F **Wind:** 8 mph **Humidity:** 55% **Terrain:** Flat

Start Time: 6:10 PM **End Time:** 6:25 PM **Run Time:**

Leq:	48.1	dB
Lmax	61.6	dB
L2	54.4	dB
L8	52.2	dB
L25	48.7	dB
L50	54.4	dB

Primary Noise Source: Traffic noise from vehicles traveling along Wildcat Canyon Rd, ~530' SE of NM7.

Secondary Noise Sources: Some bird song. Occasional distant air traffic. Leaf rustle from 8 mph breeze through trees and vegetation.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 200
SERIAL NUMBER:	3855	**SERIAL NUMBER:**	11178
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	5/24/2024		

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Noise Measurement
Field Data

PHOTOS:



NM7 looking E down driveway to residence 1170 Barona Road, Lakeside.



NM7 looking SE down Akuunyaa Way towards Wildcat Canyon Road/ Barona Road intersection (~530' SE).

Summary	
File Name on Meter	LxT_Data.089.s
File Name on PC	LxT_0003855-20240524 181043-LxT_Data.089.ldbin
Serial Number	3855
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	NM7 32°56'49.14"N 116°50'51.57"W
Job Description	15 minute noise measurement
Note	Ganddini Project # 19726 Barona Water Pipeline

Measurement	
Start	2024-05-24 18:10:43
Stop	2024-05-24 18:25:43
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2024-05-24 18:10:17
Post-Calibration	None

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	145.3 dB

Results				
L_{Aeq}	48.1			
LAE	77.6			
EA	6.424451	µPa²h		
EA8	205.5824	µPa²h		
EA40	1.027912	mPa²h		
$L_{Apeak\ (max)}$	2024-05-24 18:14:34	90.1	dB	
L_{ASmax}	2024-05-24 18:14:15	61.6	dB	
L_{ASmin}	2024-05-24 18:13:09	35.1	dB	

			Statistics		
L_{Ceq}	62.6	dB	**LA2.00**	54.4	dB
L_{Aeq}	48.1	dB	**LA8.00**	52.2	dB
L_{Ceq} - L_{Aeq}	14.6	dB	**LA25.00**	48.7	dB
L_{AIeq}	53.2	dB	**LA50.00**	45.4	dB
L_{Aeq}	48.1	dB	**LA66.60**	43.3	dB
L_{AIeq} - L_{Aeq}	5.1	dB	**LA90.00**	40.4	dB
Overload Count	0				
Overload Duration	0.0	s			

Measurement Report

Report Summary

Meter's File Name	LxT_Data.089.s	Computer's File Name	LxT_0003855-20240524 181043-LxT_Data.089.ldbin
Meter	LxT1 0003855		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM7 32°56'49.14"N 116°50'51.57"W
Job Description	15 minute noise measurement		
Note	Ganddini Project # 19726 Barona Water Pipeline		
Start Time	2024-05-24 18:10:43	Duration	0:15:00.0
End Time	2024-05-24 18:25:43	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	48.1 dB		
LAE	77.6 dB	SEA	--- dB
EA	6.4 µPa²h	LAFTM5	53.8 dB
EA8	205.6 µPa²h		
EA40	1.0 mPa²h		
LA_{peak}	90.1 dB	2024-05-24 18:14:34	
LAS_{max}	61.6 dB	2024-05-24 18:14:15	
LAS_{min}	35.1 dB	2024-05-24 18:13:09	
LA_{eq}	48.1 dB		
LC_{eq}	62.6 dB	LC_{eq} - LA_{eq}	14.6 dB
LAI_{eq}	53.2 dB	LAI_{eq} - LA_{eq}	5.1 dB

Exceedances	Count	Duration
LAS > 65.0 dB	0	0:00:00.0
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

	LDEN	LDay	LEve	LNight
	--- dB	--- dB	--- dB	--- dB

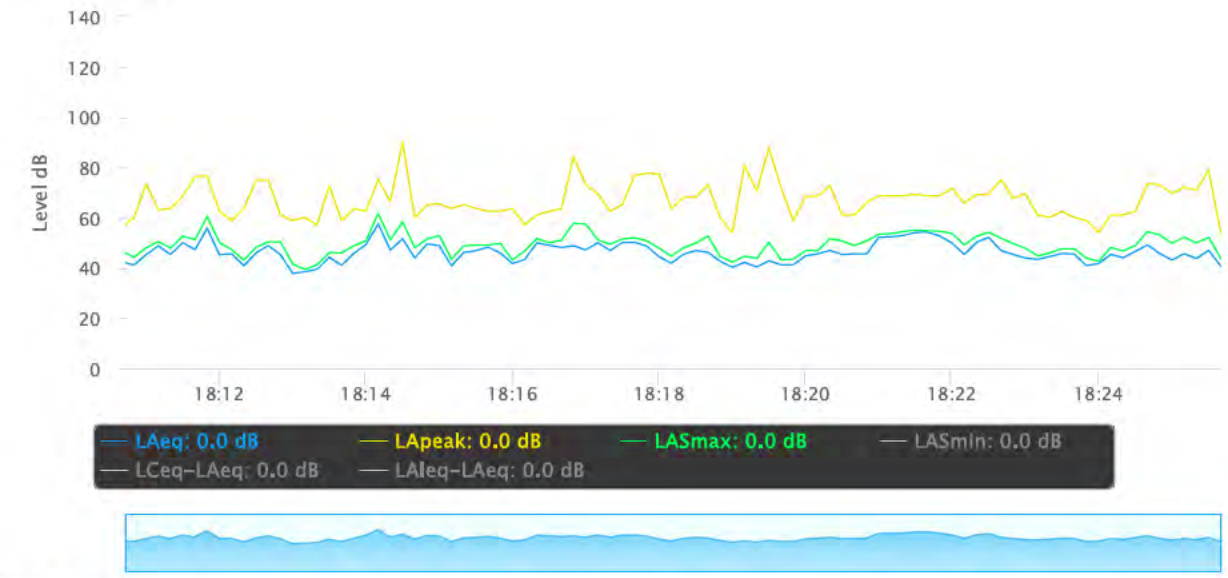
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	48.1 dB		62.6 dB		--- dB	
$L_{S(max)}$	61.6 dB	2024-05-24 18:14:15	--- dB		--- dB	
$L_{S(min)}$	35.1 dB	2024-05-24 18:13:09	--- dB		--- dB	
$L_{Peak(max)}$	90.1 dB	2024-05-24 18:14:34	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

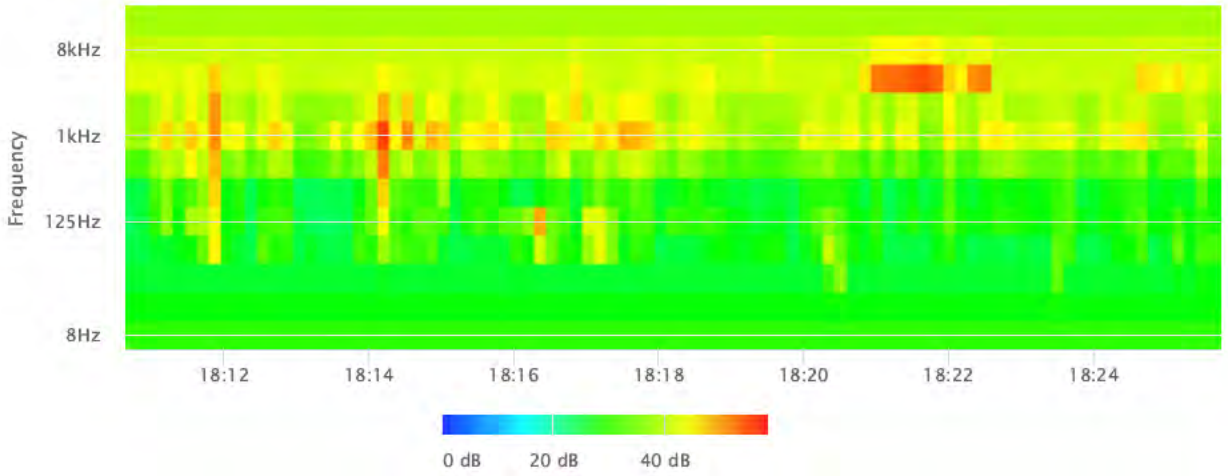
Statistics

LAS 2.0	54.4 dB
LAS 8.0	52.2 dB
LAS 25.0	48.7 dB
LAS 50.0	45.4 dB
LAS 66.6	43.3 dB
LAS 90.0	40.4 dB

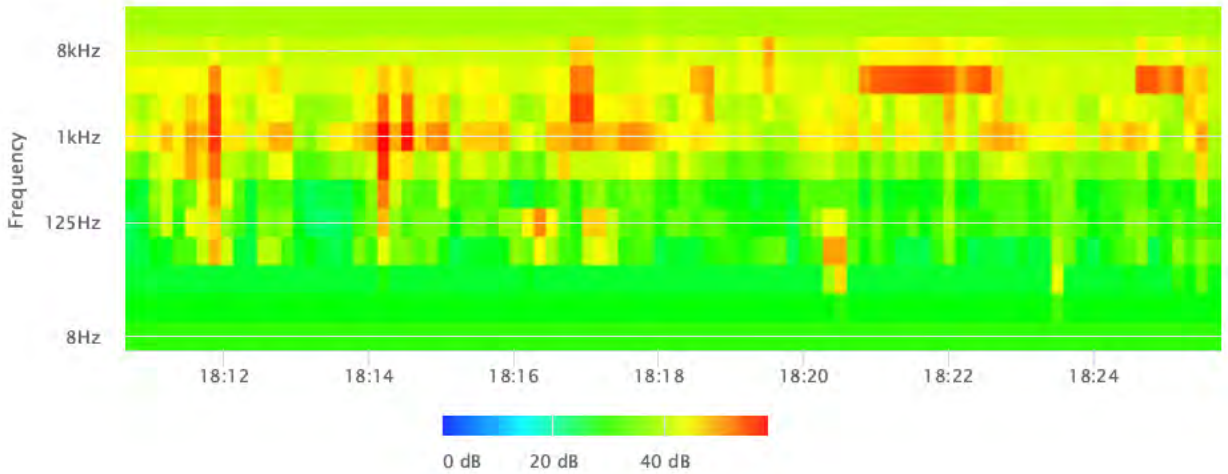
Time History



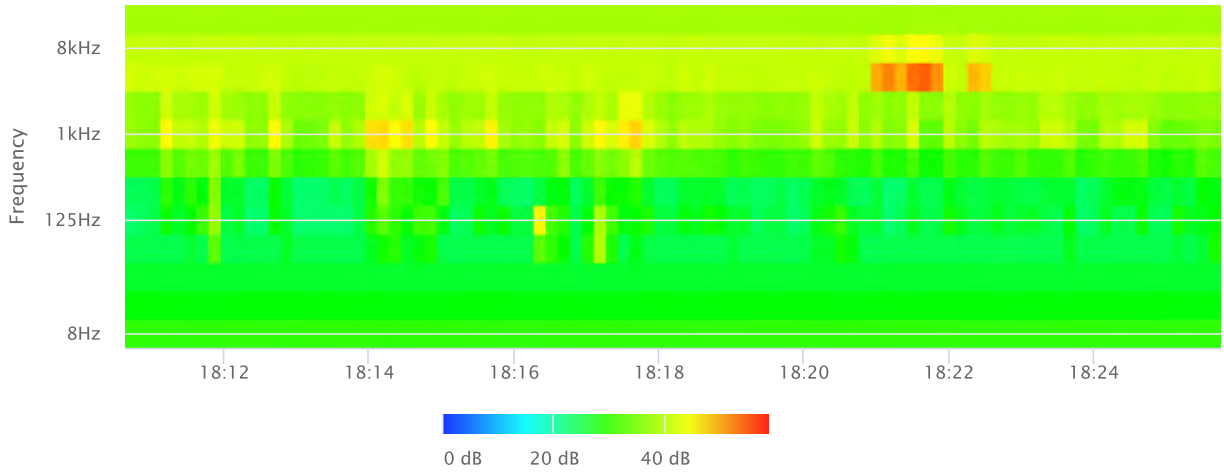
OBA 1/1 Leq



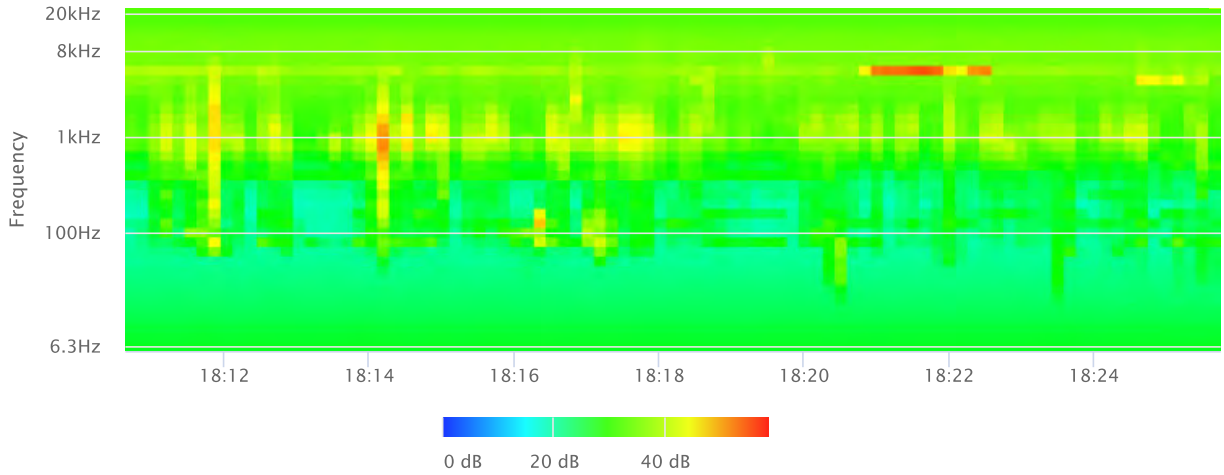
OBA 1/1 Lmax



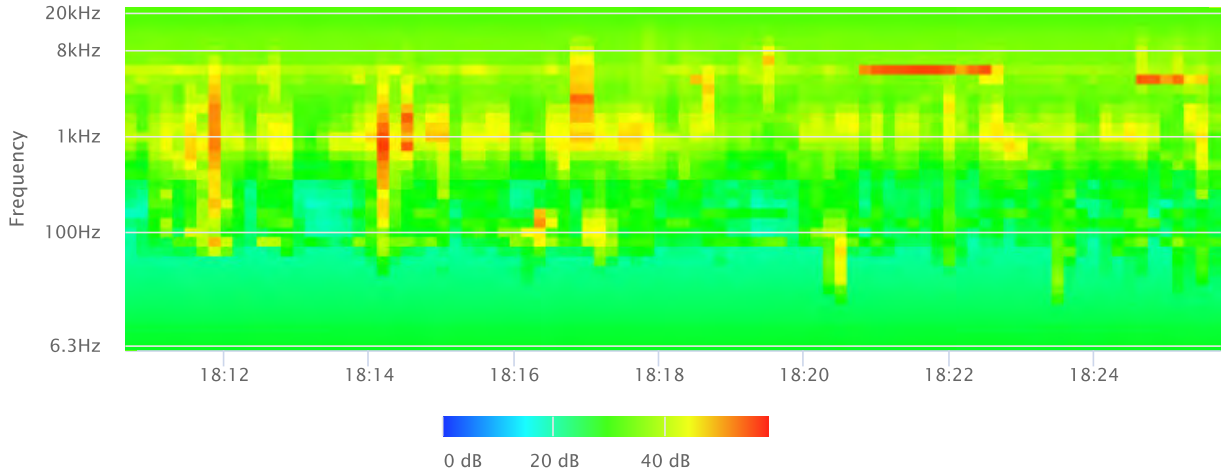
OBA 1/1 Lmin



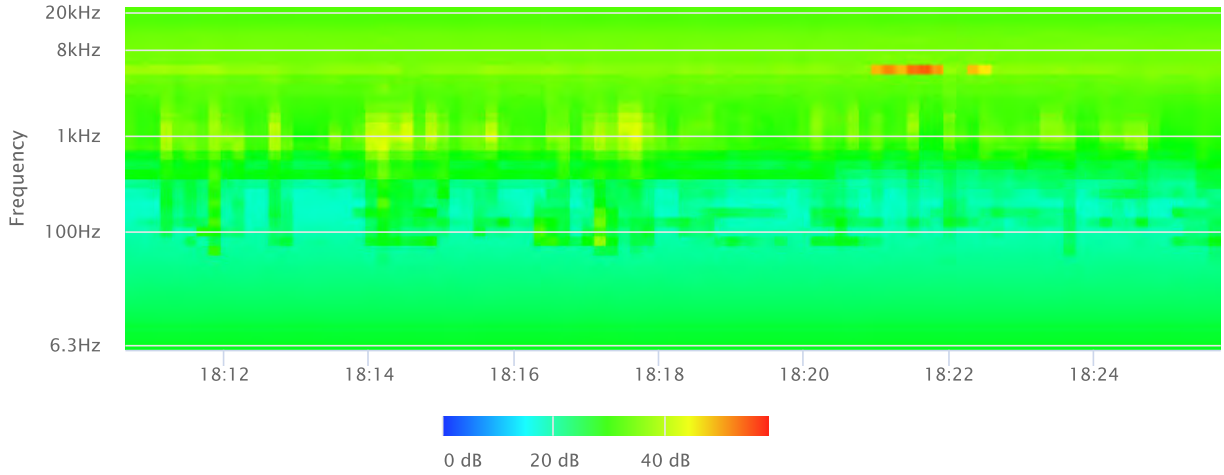
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
18:12
18:14
18:16
18:18
18:20
18:22
18:24
0 dB
20 dB
40 dB

Noise Measurement
Field Data

Project Name: Barona Water Pipeline **Date:** May 24, 2024

Project #: 19726

Noise Measurement #: NM8 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 1095Q Barona Road, Lakeside, CA 92040

Site Description (Type of Existing Land Use and any other notable features): Project Site: Indian reservation, central area, asphalt paved parking, various commercial buildings. Adjacent: Wildcat Canyon Road/ Barona Road traveling E-W just N of NM8.

Weather: <5% cloud, sunshine. Sunset 7:54 PM **Settings:** SLOW FAST

Temperature: 68 deg F **Wind:** 8 mph **Humidity:** 55% **Terrain:** Flat

Start Time: 6:47 PM **End Time:** 7:02 PM **Run Time:**

Leq:	67.9	dB
Lmax	79.5	dB
L2	75.4	dB
L8	73.4	dB
L25	69.6	dB
L50	60.2	dB

Primary Noise Source: Traffic noise from the 107 vehicles traveling along Wildcat Canyon Rd/ Barona Road ~20' N of NM8.

Secondary Noise Sources: Some bird song. Occasional distant air traffic. Leaf rustle from 8 mph breeze through trees and vegetation. Flag poles clanging in breeze.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CA 200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CA 200
SERIAL NUMBER:	3855	**SERIAL NUMBER:**	11178
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	11/18/2021
FIELD CALIBRATION DATE:	5/24/2024		

ganddini

Noise Measurement
Field Data

PHOTOS:



NM8 looking N across Barona Road/ Wildcat Canyon Road & parking lot towards building 1095 Barona Road, Lakeside.



NM8 looking SE towards building 1095Q Barona Road, Lakeside.

Summary				
File Name on Meter	LxT_Data.090.s			
File Name on PC	LxT_0003855-20240524 184742-LxT_Data.090.ldbin			
Serial Number	0003855			
Model	SoundTrack LxT®			
Firmware Version	2.404			
User	Ian Edward Gallagher			
Location	NM8 32°56'29.34"N 116°51'21.48"W			
Job Description	15 minute noise measurement			
Note	Ganddini Project # 19726 Barona Water Pipeline			
Measurement				
Start	2024-05-24 18:47:42			
Stop	2024-05-24 19:02:42			
Duration	00:15:00.0			
Run Time	00:15:00.0			
Pause	00:00:00.0			
Pre-Calibration	2024-05-24 18:47:16			
Post-Calibration	None			
Overall Settings				
RMS Weight	A Weighting			
Peak Weight	A Weighting			
Detector	Slow			
Preamplifier	PRMLxT1			
Microphone Correction	Off			
Integration Method	Linear			
OBA Range	Normal			
OBA Bandwidth	1/1 and 1/3			
OBA Frequency Weighting	A Weighting			
OBA Max Spectrum	Bin Max			
Overload	145.2 dB			
Results				
LA_{eq}	67.9			
LAE	97.5			
EA	618.759 µPa²h			
EA8	19.800 mPa²h			
EA40	99.001 mPa²h			
$LA_{peak\ (max)}$	2024-05-24 18:58:29	96.2 dB		
LAS_{max}	2024-05-24 18:50:34	79.5 dB		
LAS_{min}	2024-05-24 18:59:18	38.9 dB		
			Statistics	
LC_{eq}	73.9 dB		**LA2.00**	75.4 dB
LA_{eq}	67.9 dB		**LA8.00**	73.4 dB
LC_{eq} - LA_{eq}	6.0 dB		**LA25.00**	69.6 dB
LAI_{eq}	69.8 dB		**LA50.00**	60.2 dB
LA_{eq}	67.9 dB		**LA66.60**	52.7 dB
LAI_{eq} - LA_{eq}	1.9 dB		**LA90.00**	45.8 dB
Overload Count	0			
Overload Duration	0.0 s			

Measurement Report

Report Summary

Meter's File Name	LxT_Data.090.s	Computer's File Name	LxT_0003855-20240524 184742-LxT_Data.090.ldbin
Meter	LxT1 0003855		
Firmware	2.404		
User	Ian Edward Gallagher	Location	NM8 32°56'29.34"N 116°51'21.48"W
Job Description	15 minute noise measurement		
Note	Ganddini Project # 19726 Barona Water Pipeline		
Start Time	2024-05-24 18:47:42	Duration	0:15:00.0
End Time	2024-05-24 19:02:42	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	67.9 dB		
LAE	97.5 dB	SEA	--- dB
EA	618.8 µPa²h	LAFTM5	72.6 dB
EA8	19.8 mPa²h		
EA40	99.0 mPa²h		
LA_{peak}	96.2 dB	2024-05-24 18:58:29	
LAS_{max}	79.5 dB	2024-05-24 18:50:34	
LAS_{min}	38.9 dB	2024-05-24 18:59:18	
LA_{eq}	67.9 dB		
LC_{eq}	73.9 dB	LC_{eq} - LA_{eq}	6.0 dB
LAI_{eq}	69.8 dB	LAI_{eq} - LA_{eq}	1.9 dB

Exceedances	Count	Duration
LAS > 65.0 dB	34	0:06:25.3
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	--- dB	--- dB	0.0 dB

	LDEN	LDay	LEve	LNight
	--- dB	--- dB	--- dB	--- dB

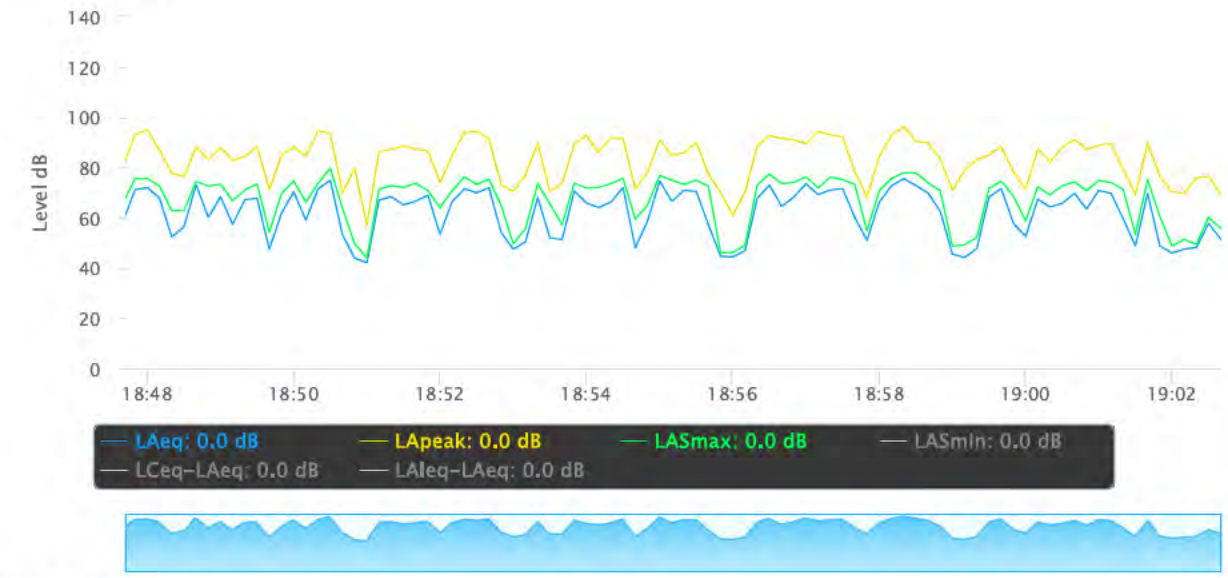
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	67.9 dB		73.9 dB		--- dB	
$L_{S(max)}$	79.5 dB	2024-05-24 18:50:34	--- dB		--- dB	
$L_{S(min)}$	38.9 dB	2024-05-24 18:59:18	--- dB		--- dB	
$L_{Peak(max)}$	96.2 dB	2024-05-24 18:58:29	--- dB		--- dB	

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

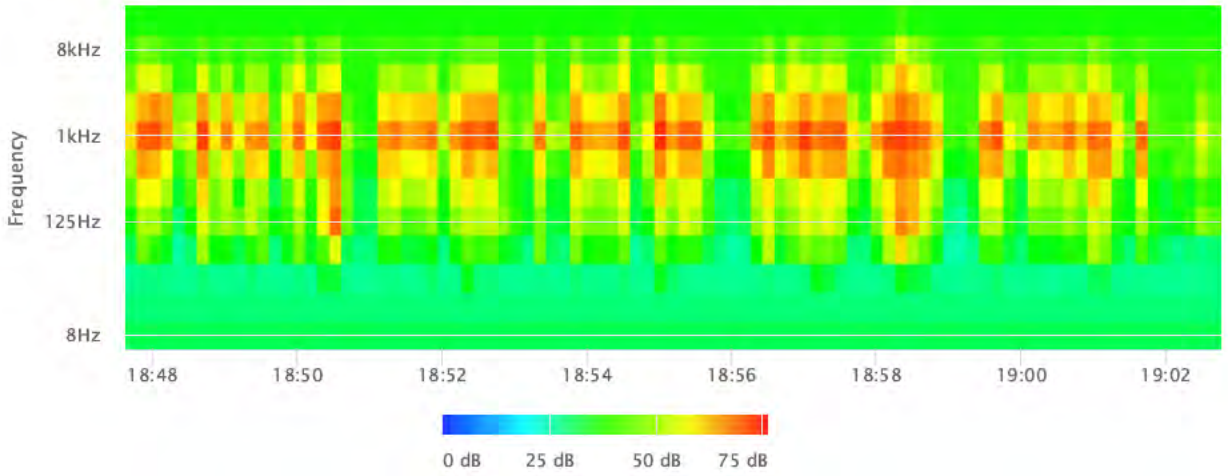
Statistics

LAS 2.0	75.4 dB
LAS 8.0	73.4 dB
LAS 25.0	69.6 dB
LAS 50.0	60.2 dB
LAS 66.6	52.7 dB
LAS 90.0	45.8 dB

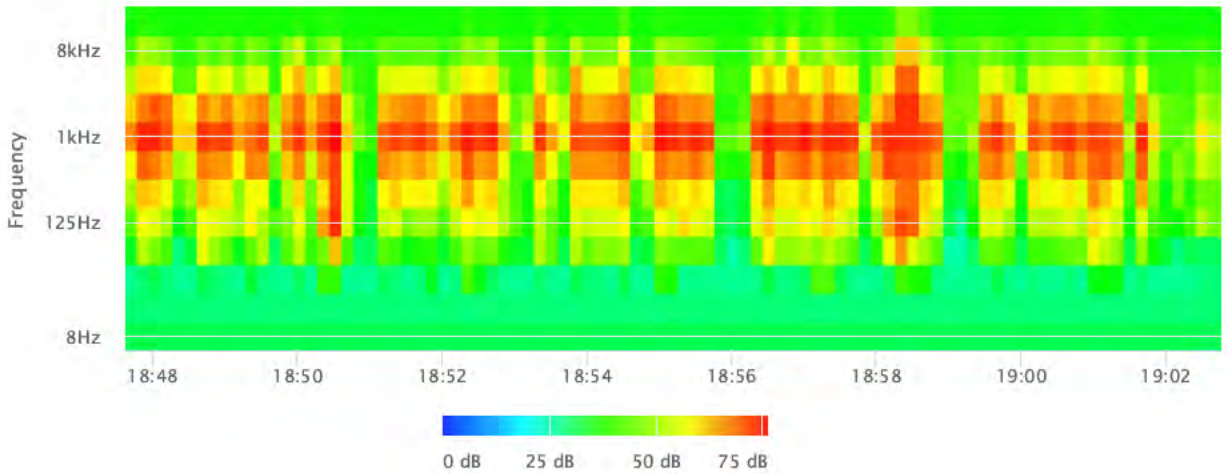
Time History



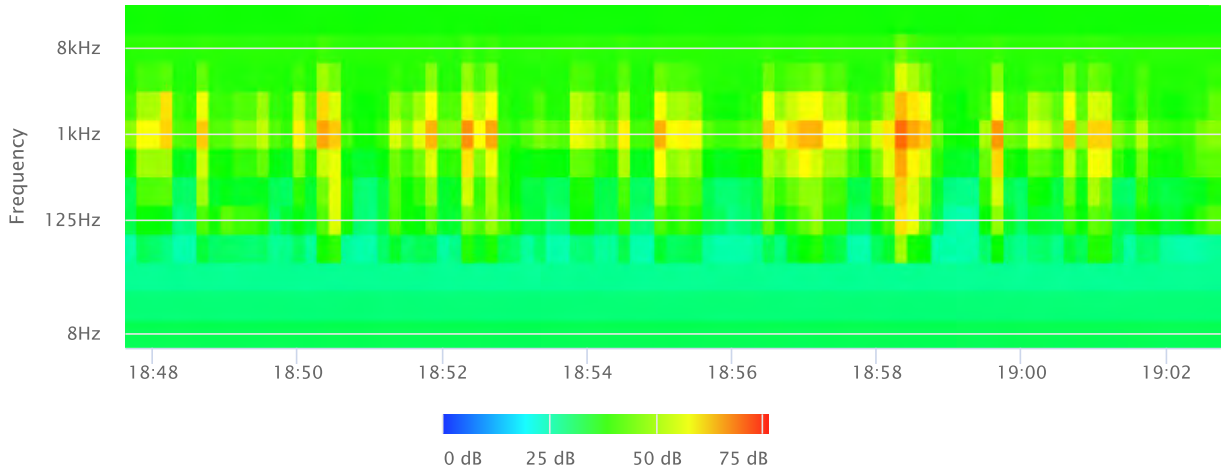
OBA 1/1 Leq



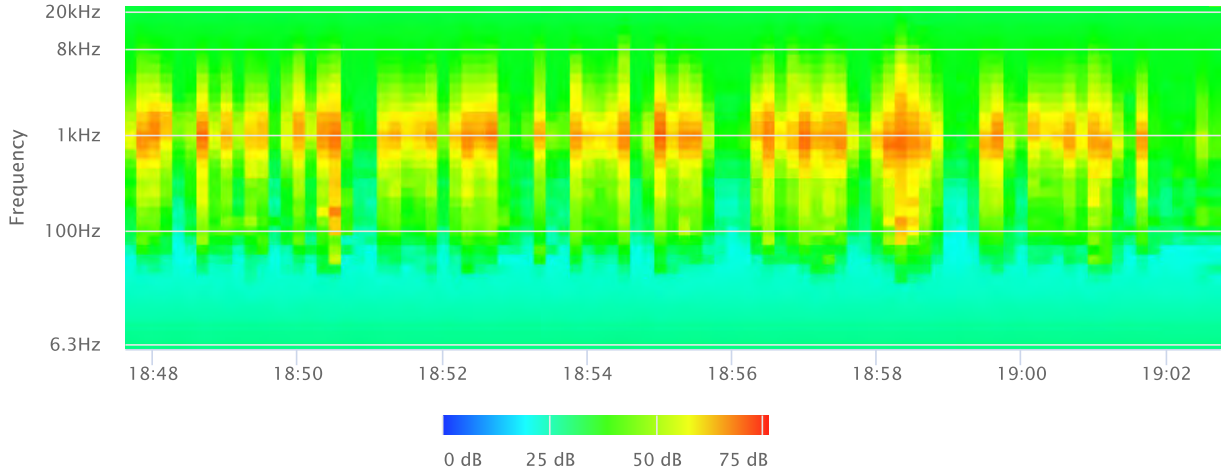
OBA 1/1 Lmax



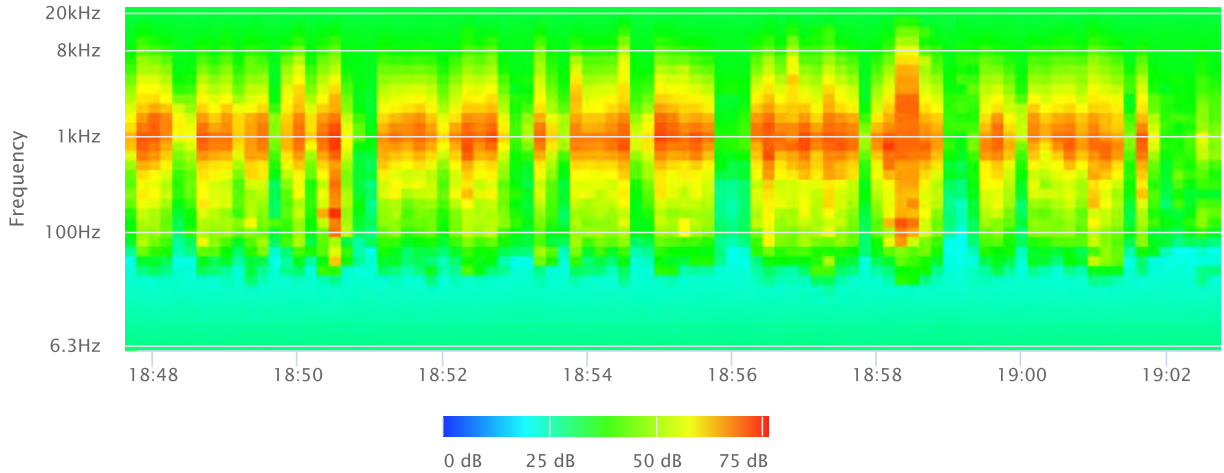
OBA 1/1 Lmin



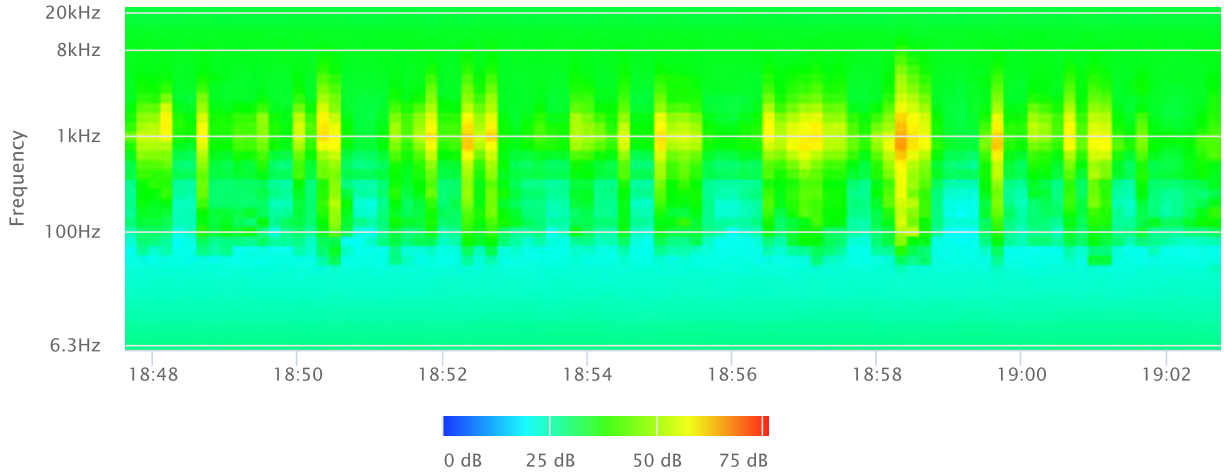
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
18:48
18:50
18:52
18:54
18:56
18:58
19:00
19:02
0 dB
25 dB
50 dB
75 dB

APPENDIX D

CONSTRUCTION NOISE MODELING

Receptors along Pipe ine Installation - at 50 feet

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Tractors/Loaders/Backhoes	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Off-Highway Trucks	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Excavators	1	81	50	40	0.40	0.0	-4.0	81.0	77.0
Other Material Handling Equipment	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Other Construction Equipment	1	84	50	50	0.50	0.0	-3.0	84.0	81.0
Skid Steer Loaders	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
								Log Sum	87.6
Pipe Installation									
Tractors/Loaders/Backhoes	2	84	50	40	0.80	0.0	-1.0	84.0	83.0
Off-Highway Trucks	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Excavators	1	81	50	40	0.40	0.0	-4.0	81.0	77.0
Other Material Handling Equipment	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Other Construction Equipment (forklifts)	1	61	50	50	0.50	0.0	-3.0	61.0	58.0
Skid Steer Loaders	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
								Log Sum	87.4
Backfill and Resurfacing									
Tractors/Loaders/Backhoes	2	84	50	40	0.80	0.0	-1.0	84.0	83.0
Off-Highway Trucks	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Plate Compactors	1	83	50	20	0.20	0.0	-7.0	83.0	76.0
Paving Equipment	1	77	50	50	0.50	0.0	-3.0	77.0	74.0
Skid Steer Loaders	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
								Log Sum	86.7
Striping/Restriping									
Off-Highway Trucks	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Other Construction Equipment	1	84	50	50	0.50	0.0	-3.0	84.0	81.0
Striping Machine	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
								Log Sum	85.1

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Pipe ine Installation - at 100 feet

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Tractors/Loaders/Backhoes	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Off-Highway Trucks	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Excavators	1	81	100	40	0.40	-6.0	-4.0	75.0	71.0
Other Material Handling Equipment	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Other Construction Equipment	1	84	100	50	0.50	-6.0	-3.0	78.0	75.0
Skid Steer Loaders	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
								Log Sum	81.6
Pipe Installation									
Tractors/Loaders/Backhoes	2	84	100	40	0.80	-6.0	-1.0	78.0	77.0
Off-Highway Trucks	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Excavators	1	81	100	40	0.40	-6.0	-4.0	75.0	71.0
Other Material Handling Equipment	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Other Construction Equipment (forklifts)	1	61	100	50	0.50	-6.0	-3.0	55.0	52.0
Skid Steer Loaders	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
								Log Sum	81.4
Backfill and Resurfacing									
Tractors/Loaders/Backhoes	2	84	100	40	0.80	-6.0	-1.0	78.0	77.0
Off-Highway Trucks	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Plate Compactors	1	83	100	20	0.20	-6.0	-7.0	77.0	70.0
Paving Equipment	1	77	100	50	0.50	-6.0	-3.0	71.0	68.0
Skid Steer Loaders	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
								Log Sum	80.7
Striping/Restriping									
Off-Highway Trucks	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Other Construction Equipment	1	84	100	50	0.50	-6.0	-3.0	78.0	75.0
Striping Machine	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
								Log Sum	79.1

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Pipe ine Installation - at 200 feet

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Tractors/Loaders/Backhoes	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Off-Highway Trucks	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Excavators	1	81	200	40	0.40	-12.0	-4.0	69.0	65.0
Other Material Handling Equipment	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Other Construction Equipment	1	84	200	50	0.50	-12.0	-3.0	72.0	68.9
Skid Steer Loaders	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
								Log Sum	75.6
Pipe Installation									
Tractors/Loaders/Backhoes	2	84	200	40	0.80	-12.0	-1.0	72.0	71.0
Off-Highway Trucks	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Excavators	1	81	200	40	0.40	-12.0	-4.0	69.0	65.0
Other Material Handling Equipment	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Other Construction Equipment (forklifts)	1	61	200	50	0.50	-12.0	-3.0	49.0	45.9
Skid Steer Loaders	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
								Log Sum	75.4
Backfill and Resurfacing									
Tractors/Loaders/Backhoes	2	84	200	40	0.80	-12.0	-1.0	72.0	71.0
Off-Highway Trucks	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Plate Compactors	1	83	200	20	0.20	-12.0	-7.0	71.0	64.0
Paving Equipment	1	77	200	50	0.50	-12.0	-3.0	65.0	61.9
Skid Steer Loaders	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
								Log Sum	74.7
Striping/Restriping									
Off-Highway Trucks	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Other Construction Equipment	1	84	200	50	0.50	-12.0	-3.0	72.0	68.9
Striping Machine	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
								Log Sum	73.1

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connections - at 50 feet

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Prepartion/Grading									
Scraper	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Tractors/Loaders/Backhoes	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Off-Highway Trucks	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Excavators	1	81	50	40	0.40	0.0	-4.0	81.0	77.0
Other Material Handling Equipment	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Skid Steer Loaders	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
								Log Sum	87.4
Excavation									
Tractors/Loaders/Backhoes	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Off-Highway Trucks	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Excavators	1	81	50	40	0.40	0.0	-4.0	81.0	77.0
Other Material Handling Equipment	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Other Construction Equipment	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Skid Steer Loaders	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
								Log Sum	87.4
Existing Pipeline Cut-In									
Tractors/Loaders/Backhoes	2	84	50	40	0.80	0.0	-1.0	84.0	83.0
Off-Highway Trucks	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Other Material Handling Equipment	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Other Construction Equipment (forklifts)	1	61	50	50	0.50	0.0	-3.0	61.0	58.0
Pumps	2	81	50	50	1.00	0.0	0.0	81.0	81.0
								Log Sum	87.2
Backfill and Resurfacing									
Tractors/Loaders/Backhoes	2	84	50	40	0.80	0.0	-1.0	84.0	83.0
Off-Highway Trucks	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Plate Compactors	1	83	50	20	0.20	0.0	-7.0	83.0	76.0
Paving Equipment	1	77	50	50	0.50	0.0	-3.0	77.0	74.0
Skid Steer Loaders	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
								Log Sum	86.7
Striping/Restriping									
Off-Highway Trucks	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
Other Construction Equipment	1	84	50	50	0.50	0.0	-3.0	84.0	81.0
Striping Machine	1	84	50	40	0.40	0.0	-4.0	84.0	80.0
								Log Sum	85.1

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connections - at 100 feet

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Prepartion/Grading									
Scraper	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Tractors/Loaders/Backhoes	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Off-Highway Trucks	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Excavators	1	81	100	40	0.40	-6.0	-4.0	75.0	71.0
Other Material Handling Equipment	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Skid Steer Loaders	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
								Log Sum	81.4
Excavation									
Tractors/Loaders/Backhoes	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Off-Highway Trucks	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Excavators	1	81	100	40	0.40	-6.0	-4.0	75.0	71.0
Other Material Handling Equipment	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Other Construction Equipment	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Skid Steer Loaders	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
								Log Sum	81.4
Existing Pipeline Cut-In									
Tractors/Loaders/Backhoes	2	84	100	40	0.80	-6.0	-1.0	78.0	77.0
Off-Highway Trucks	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Other Material Handling Equipment	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Other Construction Equipment (forklifts)	1	61	100	50	0.50	-6.0	-3.0	55.0	52.0
Pumps	2	81	100	50	1.00	-6.0	0.0	75.0	75.0
								Log Sum	81.2
Backfill and Resurfacing									
Tractors/Loaders/Backhoes	2	84	100	40	0.80	-6.0	-1.0	78.0	77.0
Off-Highway Trucks	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Plate Compactors	1	83	100	20	0.20	-6.0	-7.0	77.0	70.0
Paving Equipment	1	77	100	50	0.50	-6.0	-3.0	71.0	68.0
Skid Steer Loaders	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
								Log Sum	80.7
Striping/Restriping									
Off-Highway Trucks	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
Other Construction Equipment	1	84	100	50	0.50	-6.0	-3.0	78.0	75.0
Striping Machine	1	84	100	40	0.40	-6.0	-4.0	78.0	74.0
								Log Sum	79.1

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connections - at 200 feet

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Prepartion/Grading									
Scraper	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Tractors/Loaders/Backhoes	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Off-Highway Trucks	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Excavators	1	81	200	40	0.40	-12.0	-4.0	69.0	65.0
Other Material Handling Equipment	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Skid Steer Loaders	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
								Log Sum	75.4
Excavation									
Tractors/Loaders/Backhoes	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Off-Highway Trucks	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Excavators	1	81	200	40	0.40	-12.0	-4.0	69.0	65.0
Other Material Handling Equipment	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Other Construction Equipment	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Skid Steer Loaders	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
								Log Sum	75.4
Existing Pipeline Cut-In									
Tractors/Loaders/Backhoes	2	84	200	40	0.80	-12.0	-1.0	72.0	71.0
Off-Highway Trucks	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Other Material Handling Equipment	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Other Construction Equipment (forklifts)	1	61	200	50	0.50	-12.0	-3.0	49.0	45.9
Pumps	2	81	200	50	1.00	-12.0	0.0	69.0	69.0
								Log Sum	75.2
Backfill and Resurfacing									
Tractors/Loaders/Backhoes	2	84	200	40	0.80	-12.0	-1.0	72.0	71.0
Off-Highway Trucks	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Plate Compactors	1	83	200	20	0.20	-12.0	-7.0	71.0	64.0
Paving Equipment	1	77	200	50	0.50	-12.0	-3.0	65.0	61.9
Skid Steer Loaders	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
								Log Sum	74.7
Striping/Restriping									
Off-Highway Trucks	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
Other Construction Equipment	1	84	200	50	0.50	-12.0	-3.0	72.0	68.9
Striping Machine	1	84	200	40	0.40	-12.0	-4.0	72.0	68.0
								Log Sum	73.1

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connection - 60 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Prepartion/Grading									
Scraper	1	84	1169	40	0.40	-27.4	-4.0	56.6	52.6
Tractors/Loaders/Backhoes	1	84	1169	40	0.40	-27.4	-4.0	56.6	52.6
Off-Highway Trucks	1	84	1169	40	0.40	-27.4	-4.0	56.6	52.6
Excavators	1	81	1169	40	0.40	-27.4	-4.0	53.6	49.6
Other Material Handling Equipment	1	84	1169	40	0.40	-27.4	-4.0	56.6	52.6
Skid Steer Loaders	1	84	1169	40	0.40	-27.4	-4.0	56.6	52.6
								Log Sum	60.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connection - 75 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Site Prepartion/Grading									
Scraper	1	84	209	40	0.40	-12.4	-4.0	71.6	67.6
Tractors/Loaders/Backhoes	1	84	209	40	0.40	-12.4	-4.0	71.6	67.6
Off-Highway Trucks	1	84	209	40	0.40	-12.4	-4.0	71.6	67.6
Excavators	1	81	209	40	0.40	-12.4	-4.0	68.6	64.6
Other Material Handling Equipment	1	84	209	40	0.40	-12.4	-4.0	71.6	67.6
Skid Steer Loaders	1	84	209	40	0.40	-12.4	-4.0	71.6	67.6
								Log Sum	75.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connection - 60 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Excavation									
Tractors/Loaders/Backhoes	1	84	1169	40	0.40	-27.4	-4.0	56.6	52.6
Off-Highway Trucks	1	84	1169	40	0.40	-27.4	-4.0	56.6	52.6
Excavators	1	81	1169	40	0.40	-27.4	-4.0	53.6	49.6
Other Material Handling Equipment	1	84	1169	40	0.40	-27.4	-4.0	56.6	52.6
Other Construction Equipment	1	84	1169	40	0.40	-27.4	-4.0	56.6	52.6
Skid Steer Loaders	1	84	1169	40	0.40	-27.4	-4.0	56.6	52.6
								Log Sum	60.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connection - 75 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Excavation									
Tractors/Loaders/Backhoes	1	84	208	40	0.40	-12.4	-4.0	71.6	67.6
Off-Highway Trucks	1	84	208	40	0.40	-12.4	-4.0	71.6	67.6
Excavators	1	81	208	40	0.40	-12.4	-4.0	68.6	64.6
Other Material Handling Equipment	1	84	208	40	0.40	-12.4	-4.0	71.6	67.6
Other Construction Equipment	1	84	208	40	0.40	-12.4	-4.0	71.6	67.6
Skid Steer Loaders	1	84	208	40	0.40	-12.4	-4.0	71.6	67.6
								Log Sum	75.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connection - 60 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Existing Pipeline Cut-In									
Tractors/Loaders/Backhoes	2	84	1143	40	0.80	-27.2	-1.0	56.8	55.8
Off-Highway Trucks	1	84	1143	40	0.40	-27.2	-4.0	56.8	52.8
Other Material Handling Equipment	1	84	1143	40	0.40	-27.2	-4.0	56.8	52.8
Other Construction Equipment (forklifts)	1	61	1143	50	0.50	-27.2	-3.0	33.8	30.8
Pumps	2	81	1143	50	1.00	-27.2	0.0	53.8	53.8
								Log Sum	60.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connection - 75 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Existing Pipeline Cut-In									
Tractors/Loaders/Backhoes	2	84	204	40	0.80	-12.2	-1.0	71.8	70.8
Off-Highway Trucks	1	84	204	40	0.40	-12.2	-4.0	71.8	67.8
Other Material Handling Equipment	1	84	204	40	0.40	-12.2	-4.0	71.8	67.8
Other Construction Equipment (forklifts)	1	61	204	50	0.50	-12.2	-3.0	48.8	45.8
Pumps	2	81	204	50	1.00	-12.2	0.0	68.8	68.8
								Log Sum	75.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connection - 60 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Backfill and Resurfacing									
Tractors/Loaders/Backhoes	2	84	1075	40	0.80	-26.6	-1.0	57.4	56.4
Off-Highway Trucks	1	84	1075	40	0.40	-26.6	-4.0	57.4	53.4
Plate Compactors	1	83	1075	20	0.20	-26.6	-7.0	56.4	49.4
Paving Equipment	1	77	1075	50	0.50	-26.6	-3.0	50.4	47.3
Skid Steer Loaders	1	84	1075	40	0.40	-26.6	-4.0	57.4	53.4
								Log Sum	60.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connection - 75 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Backfill and Resurfacing									
Tractors/Loaders/Backhoes	2	84	192	40	0.80	-11.7	-1.0	72.3	71.3
Off-Highway Trucks	1	84	192	40	0.40	-11.7	-4.0	72.3	68.3
Plate Compactors	1	83	192	20	0.20	-11.7	-7.0	71.3	64.3
Paving Equipment	1	77	192	50	0.50	-11.7	-3.0	65.3	62.3
Skid Steer Loaders	1	84	192	40	0.40	-11.7	-4.0	72.3	68.3
								Log Sum	75.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connection - 60 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Striping/Restriping									
Off-Highway Trucks	1	84	899	40	0.40	-25.1	-4.0	58.9	54.9
Other Construction Equipment	1	84	899	50	0.50	-25.1	-3.0	58.9	55.9
Striping Machine	1	84	899	40	0.40	-25.1	-4.0	58.9	54.9
								Log Sum	60.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Point of Connection - 75 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Striping/Restriping									
Off-Highway Trucks	1	84	160	40	0.40	-10.1	-4.0	73.9	69.9
Other Construction Equipment	1	84	160	50	0.50	-10.1	-3.0	73.9	70.9
Striping Machine	1	84	160	40	0.40	-10.1	-4.0	73.9	69.9
								Log Sum	75.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Pipeline Installation - 60 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Tractors/Loaders/Backhoes	1	84	1200	40	0.40	-27.6	-4.0	56.4	52.4
Off-Highway Trucks	1	84	1200	40	0.40	-27.6	-4.0	56.4	52.4
Excavators	1	81	1200	40	0.40	-27.6	-4.0	53.4	49.4
Other Material Handling Equipment	1	84	1200	40	0.40	-27.6	-4.0	56.4	52.4
Other Construction Equipment	1	84	1200	50	0.50	-27.6	-3.0	56.4	53.4
Skid Steer Loaders	1	84	1200	40	0.40	-27.6	-4.0	56.4	52.4
								Log Sum	60.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Pipeline Installation - 75 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Tractors/Loaders/Backhoes	1	84	213	40	0.40	-12.6	-4.0	71.4	67.4
Off-Highway Trucks	1	84	213	40	0.40	-12.6	-4.0	71.4	67.4
Excavators	1	81	213	40	0.40	-12.6	-4.0	68.4	64.4
Other Material Handling Equipment	1	84	213	40	0.40	-12.6	-4.0	71.4	67.4
Other Construction Equipment	1	84	213	50	0.50	-12.6	-3.0	71.4	68.4
Skid Steer Loaders	1	84	213	40	0.40	-12.6	-4.0	71.4	67.4
								Log Sum	75.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Pipeline Installation - 60 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Pipe Installation									
Tractors/Loaders/Backhoes	2	84	1170	40	0.80	-27.4	-1.0	56.6	55.6
Off-Highway Trucks	1	84	1170	40	0.40	-27.4	-4.0	56.6	52.6
Excavators	1	81	1170	40	0.40	-27.4	-4.0	53.6	49.6
Other Material Handling Equipment	1	84	1170	40	0.40	-27.4	-4.0	56.6	52.6
Other Construction Equipment (forklifts)	1	61	1170	50	0.50	-27.4	-3.0	33.6	30.6
Skid Steer Loaders	1	84	1170	40	0.40	-27.4	-4.0	56.6	52.6
								Log Sum	60.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Pipeline Installation - 75 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Pipe Installation									
Tractors/Loaders/Backhoes	2	84	208	40	0.80	-12.4	-1.0	71.6	70.6
Off-Highway Trucks	1	84	208	40	0.40	-12.4	-4.0	71.6	67.6
Excavators	1	81	208	40	0.40	-12.4	-4.0	68.6	64.6
Other Material Handling Equipment	1	84	208	40	0.40	-12.4	-4.0	71.6	67.6
Other Construction Equipment (forklifts)	1	61	208	50	0.50	-12.4	-3.0	48.6	45.6
Skid Steer Loaders	1	84	208	40	0.40	-12.4	-4.0	71.6	67.6
								Log Sum	75.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Pipeline Installation - 60 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Backfill and Resurfacing									
Tractors/Loaders/Backhoes	2	84	1075	40	0.80	-26.6	-1.0	57.4	56.4
Off-Highway Trucks	1	84	1075	40	0.40	-26.6	-4.0	57.4	53.4
Plate Compactors	1	83	1075	20	0.20	-26.6	-7.0	56.4	49.4
Paving Equipment	1	77	1075	50	0.50	-26.6	-3.0	50.4	47.3
Skid Steer Loaders	1	84	1075	40	0.40	-26.6	-4.0	57.4	53.4
								Log Sum	60.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Pipeline Installation - 75 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Backfill and Resurfacing									
Tractors/Loaders/Backhoes	2	84	192	40	0.80	-11.7	-1.0	72.3	71.3
Off-Highway Trucks	1	84	192	40	0.40	-11.7	-4.0	72.3	68.3
Plate Compactors	1	83	192	20	0.20	-11.7	-7.0	71.3	64.3
Paving Equipment	1	77	192	50	0.50	-11.7	-3.0	65.3	62.3
Skid Steer Loaders	1	84	192	40	0.40	-11.7	-4.0	72.3	68.3
								Log Sum	75.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Pipeline Installation - 60 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Striping/Restriping									
Off-Highway Trucks	1	84	899	40	0.40	-25.1	-4.0	58.9	54.9
Other Construction Equipment	1	84	899	50	0.50	-25.1	-3.0	58.9	55.9
Striping Machine	1	84	899	40	0.40	-25.1	-4.0	58.9	54.9
								Log Sum	60.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptors along Pipeline Installation - 75 dBA Leq Contour

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Striping/Restriping									
Off-Highway Trucks	1	84	160	40	0.40	-10.1	-4.0	73.9	69.9
Other Construction Equipment	1	84	160	50	0.50	-10.1	-3.0	73.9	70.9
Striping Machine	1	84	160	40	0.40	-10.1	-4.0	73.9	69.9
								Log Sum	75.0

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).



GANDDINI GROUP INC.

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Appendix F-1

February 2025

Sound Plan Noise Figures

by Ganddini Group, Inc.

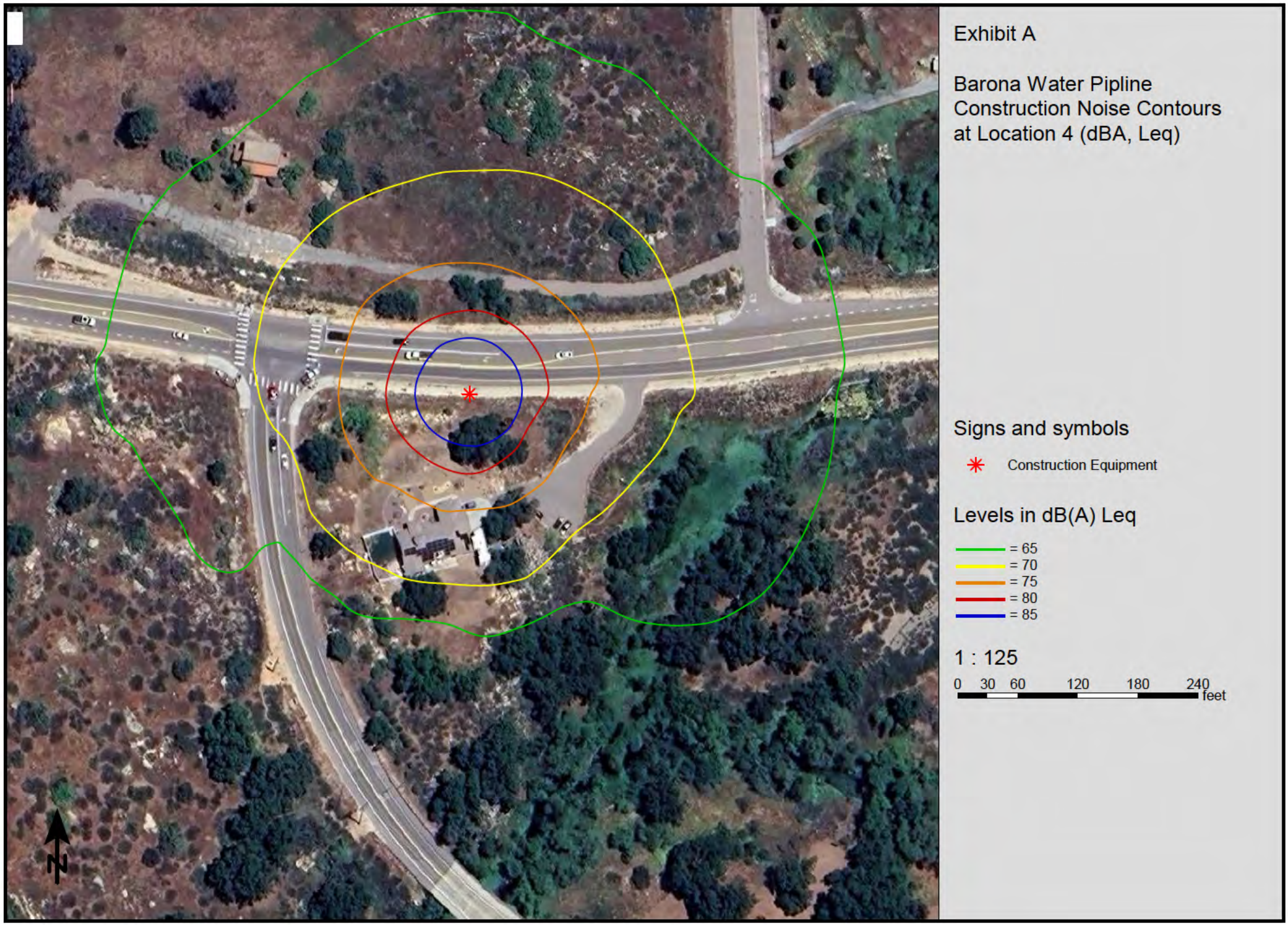
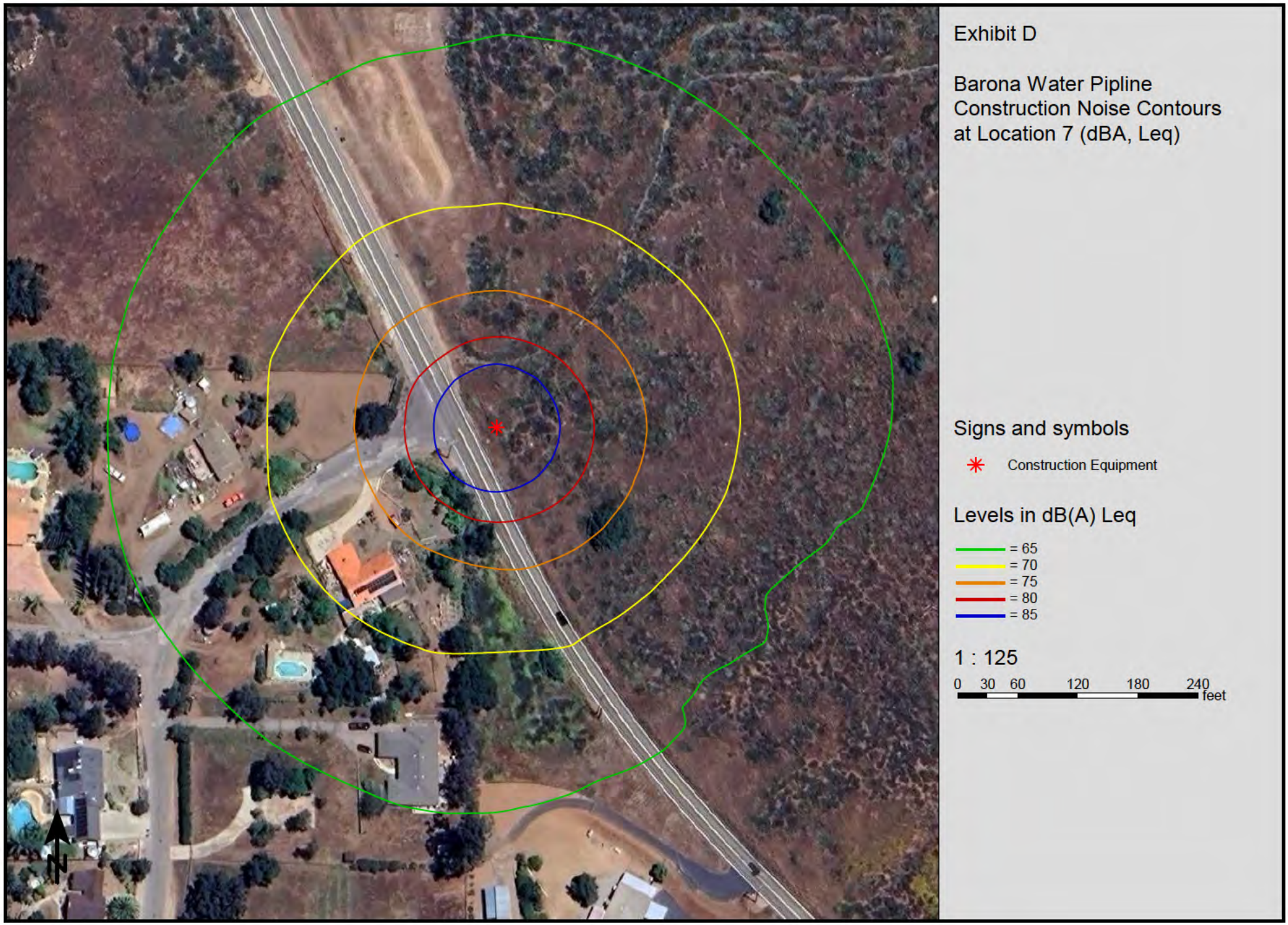

Exhibit A
Barona Water Pipline
Construction Noise Contours
at Location 4 (dBA, Leq)
Signs and symbols
Construction Equipment
Levels in dB(A) Leq
= 65
= 70
= 75
= 80
= 85
1 : 125
0 30 60 120 180 240
feet
N


Exhibit B
Barona Water Pipline
Construction Noise Contours
at Location 4 (dBA, Leq)
Signs and symbols
Construction Equipment
Levels in dB(A) Leq
= 65
= 70
= 75
= 80
= 85
1 : 125
0 30 60 120 180 240
feet
N


Exhibit C
Barona Water Pipline
Construction Noise Contours
at Location 6 (dBA, Leq)
Signs and symbols
Construction Equipment
Levels in dB(A) Leq
= 65
= 70
= 75
= 80
= 85
1 : 125
0 30 60 120 180 240
feet
N


Exhibit D
Barona Water Pipline
Construction Noise Contours
at Location 7 (dBA, Leq)
Signs and symbols
Construction Equipment
Levels in dB(A) Leq
= 65
= 70
= 75
= 80
= 85
1 : 125
0 30 60 120 180 240
feet
N