



Engineering & Operations Committee

Eastern MWD's Lake Skinner Water Transmission System and EM-II Connection Project

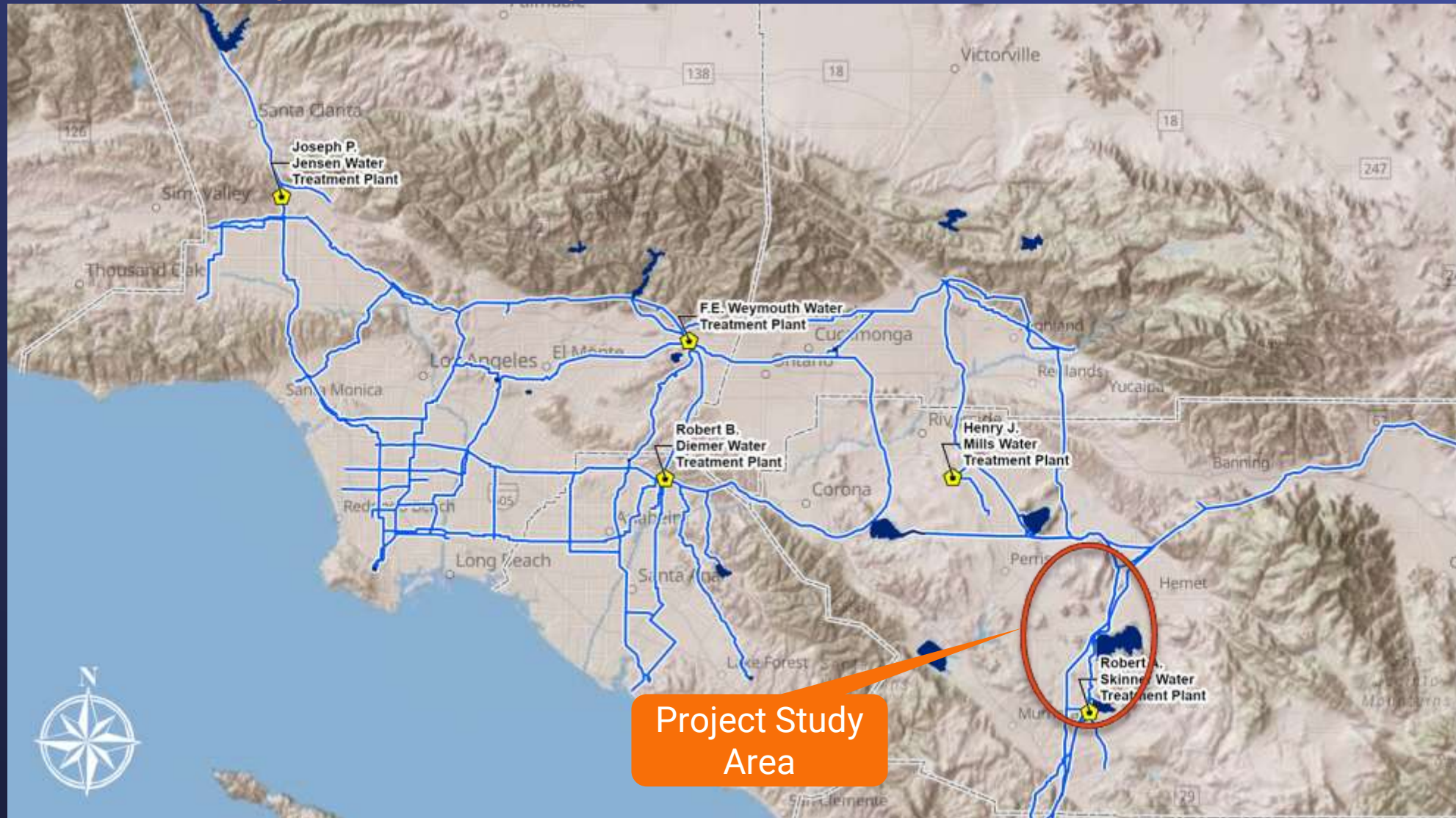
Item 7a

May 8, 2023

Presentation Outline

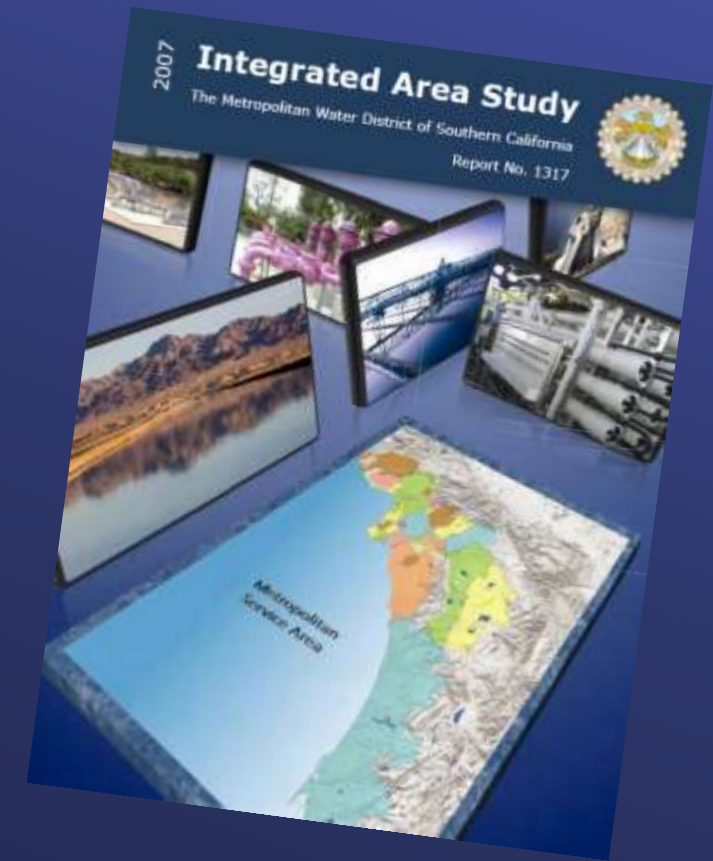
- Background
 - Integrated Area Study
 - Planned Regional Water Supply in Riverside
 - Existing Metropolitan Infrastructure
- Eastern MWD's Lake Skinner Water Transmission System and EM-11 Connection Project
 - Project Drivers
 - Project Components
 - Goals of Project
 - Benefits of Project
- Next Steps

Metropolitan's Service Area and EMWD's Lake Skinner Water Transmission System Study Area



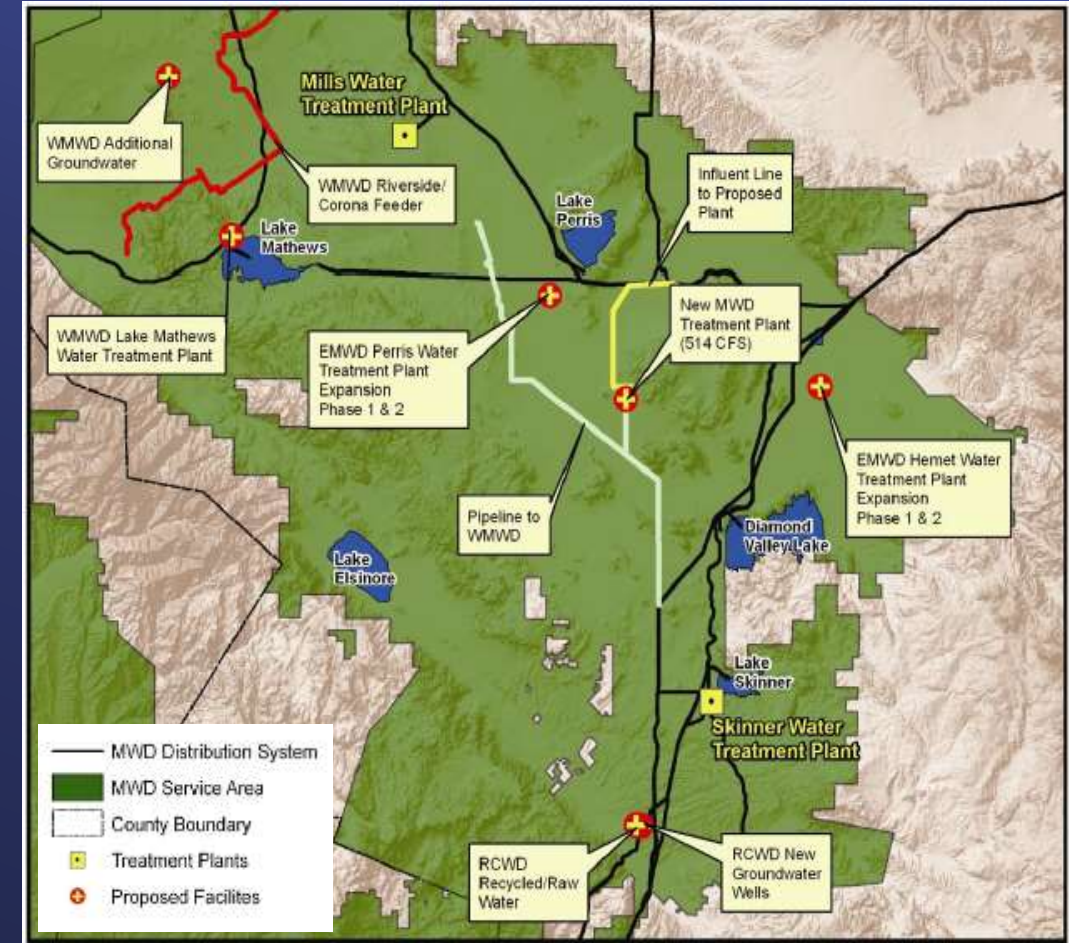
History of Planned Regional Water Supply

- Metropolitan's 2007 Integrated Area Study
 - Proposed project portfolios
 - Many portfolios included a regional WTP
 - To meet the capacity need by 2050
 - Envisioned a linkage of Mills WTP & Skinner WTP to create regional flexibility
 - Proposed the utilization of San Diego Pipelines 1 & 2 R/W for a new transmission pipeline



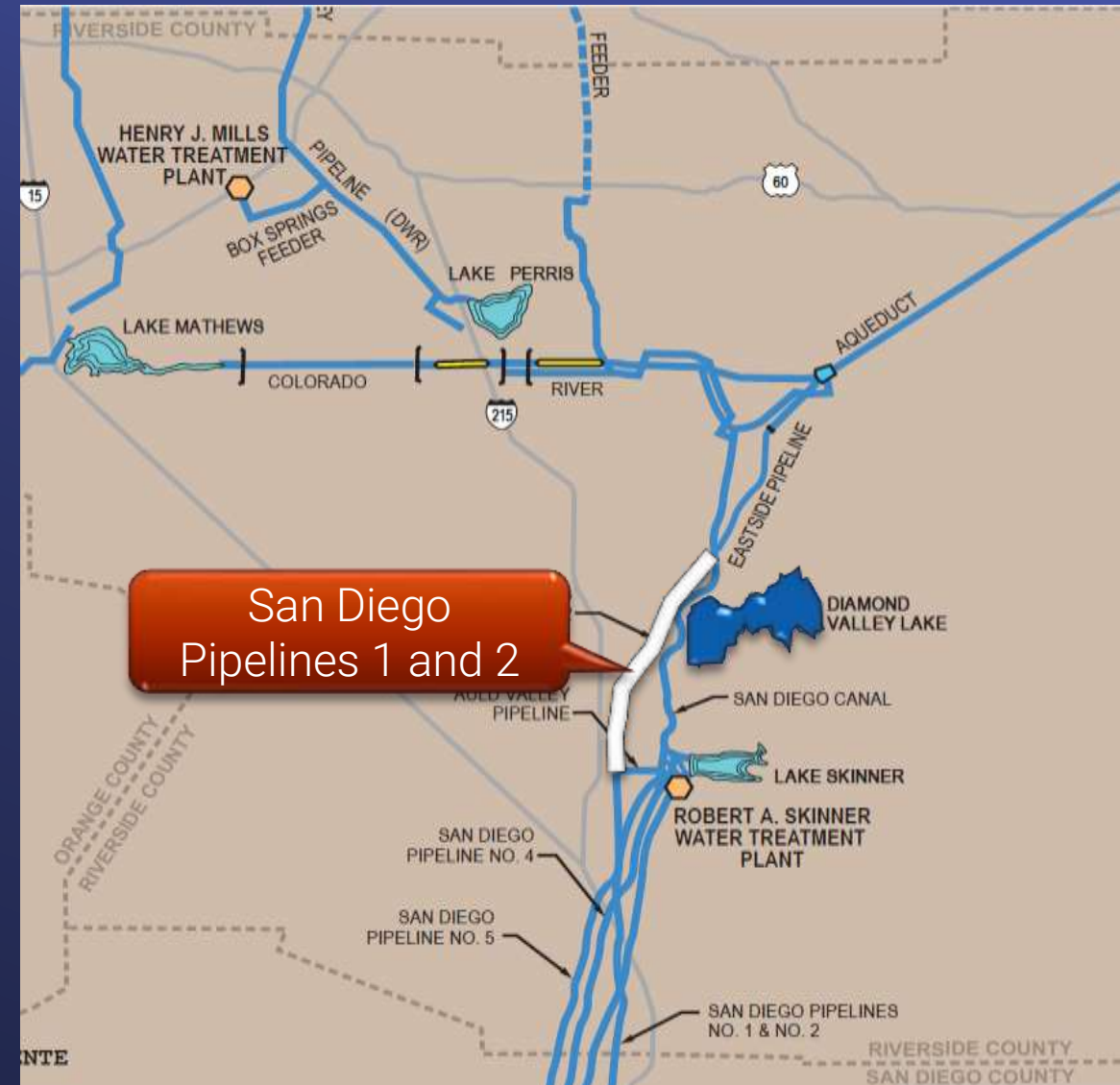
History of Planned Regional Water Supply

- Eastern MWD Studies
 - 2015 EMWD Water Supply Strategic Plan
 - 2015 EMWD Water Facilities Master Plan Update
- Metropolitan Studies
 - 2022 Metropolitan's IRP was approved
 - A subsequent study of the region concluded that there is no need for additional water treatment capacity in the planning horizon



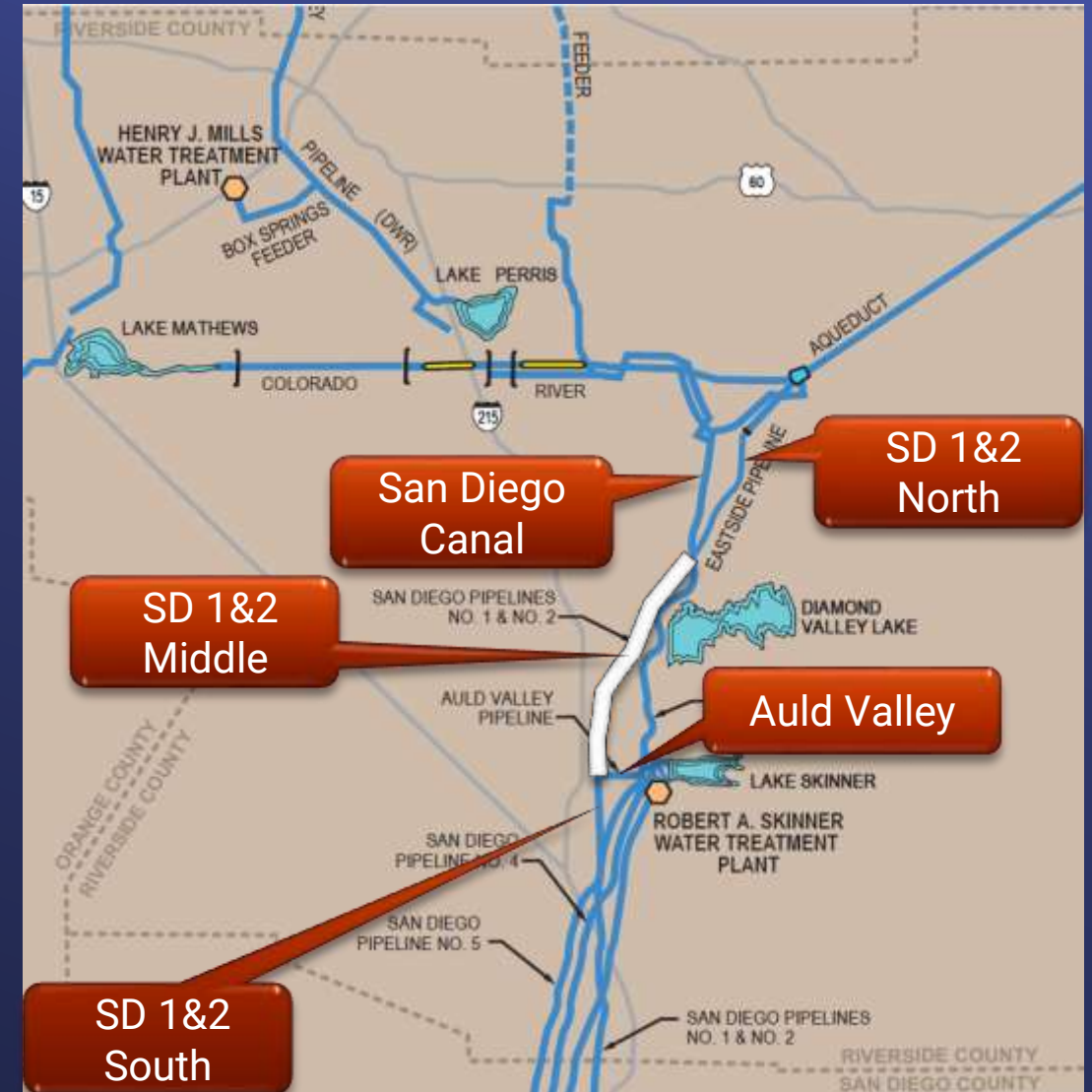
San Diego Pipelines 1 and 2

- Originally designed to deliver CRA water to San Diego
- Pipelines constructed in 1947 and 1954
- Pipe sizes from 48 to 54 inches
- Easement width varies from 100 to 150 feet



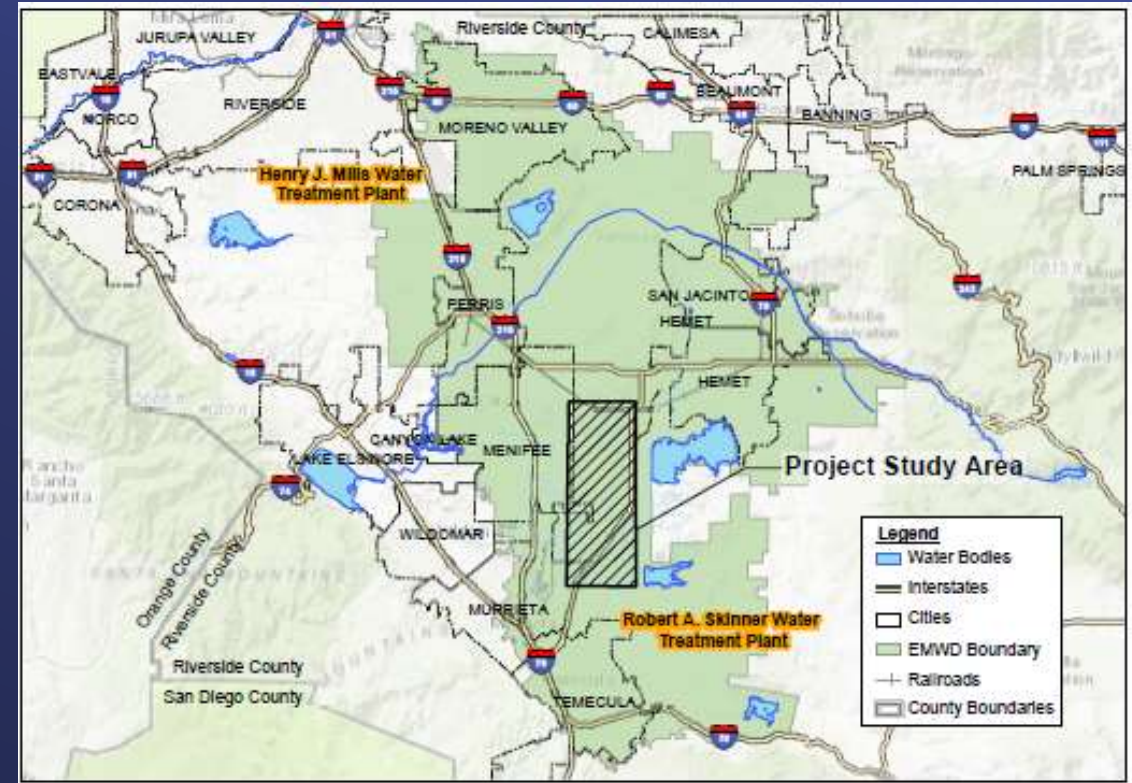
San Diego Pipelines 1 and 2

- Portion south of Skinner converted to treated water after the construction of the Auld Valley Pipeline
- Northern portion connected to the San Diego Canal
- Middle portion placed out of service
- During the construction of the DVL an 18" drain line was constructed in a portion of the R/W



Lake Skinner Water Transmission System and EM-11 Connection Project – Project Drivers

- Expands regional water system to meet future demands
- Delivers new treated water supply from Skinner WTP
- Increases supply reliability during outages
 - Mills WTP
 - Skinner WTP



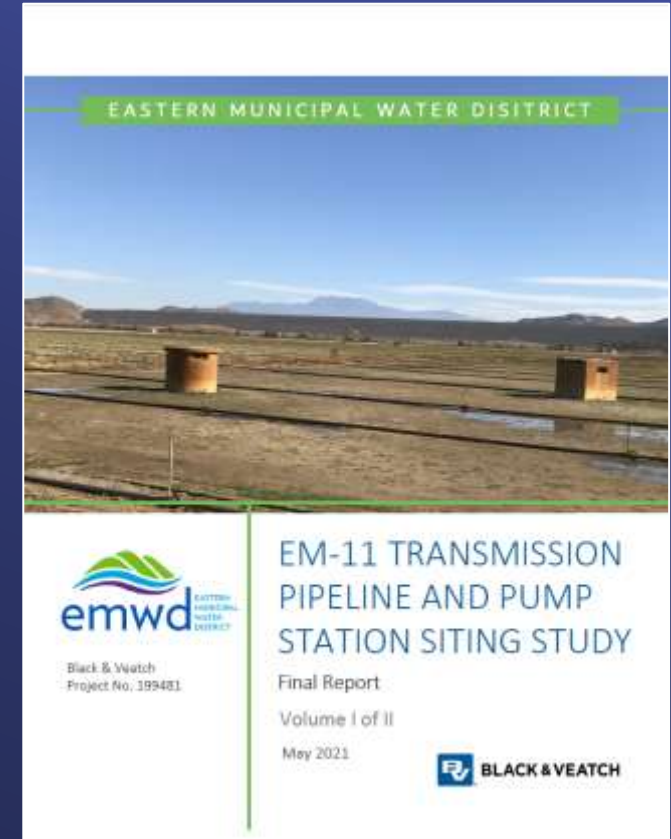
Lake Skinner Water Transmission System and EM-11 Connection Project – Project Attributes

- Components
 - 10 miles of transmission pipeline
 - 48-72-inch in diameter
 - 140 cfs Pump Station
 - 140 cfs Service Connection
- Location
 - Starting at the Skinner WTP
 - Utilizes out-of-service portion of San Diego Pipelines 1 & 2 easement



Lake Skinner Water Transmission System and EM-11 Connection Project – Study Goals and Objectives

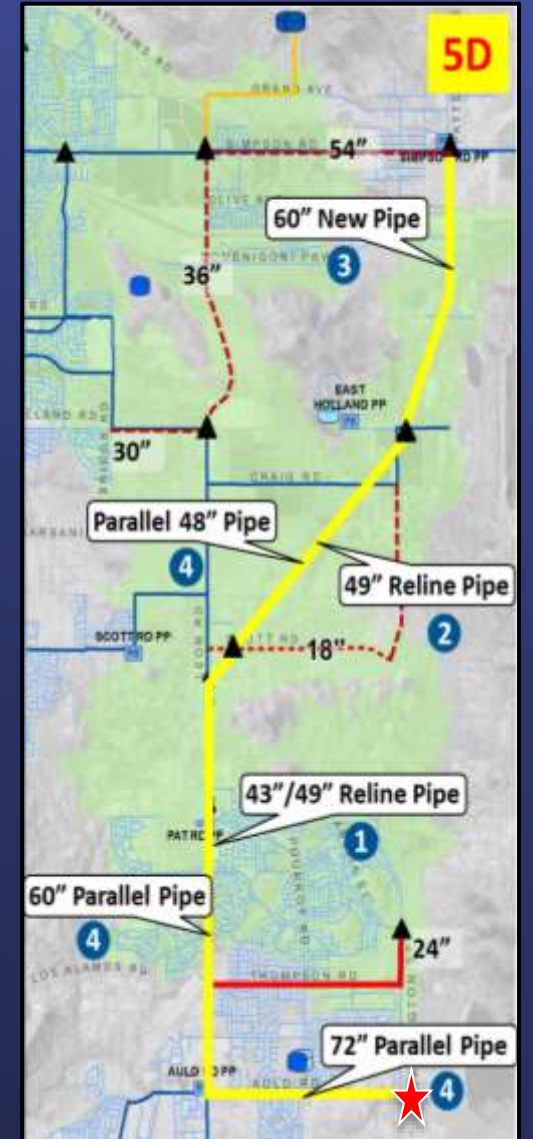
- Evaluate the feasibility of conveyance facilities
 - Consider the use of San Diego Pipelines 1 and 2
 - Phased implementation
- Identify easement and fee property requirements
- Prepare an environmental constraints report
- Select preferred alternatives



Lake Skinner Water Transmission System and EM-11 Connection Project – Alternative Alignments



- Five alignments evaluated
 - Multiple sub-alternatives within each alignment
- Selected an alignment that utilizes the San Diego Pipeline 1 & 2 easements



Lake Skinner Water Transmission System and EM-11 Connection Project – SD 1 & 2

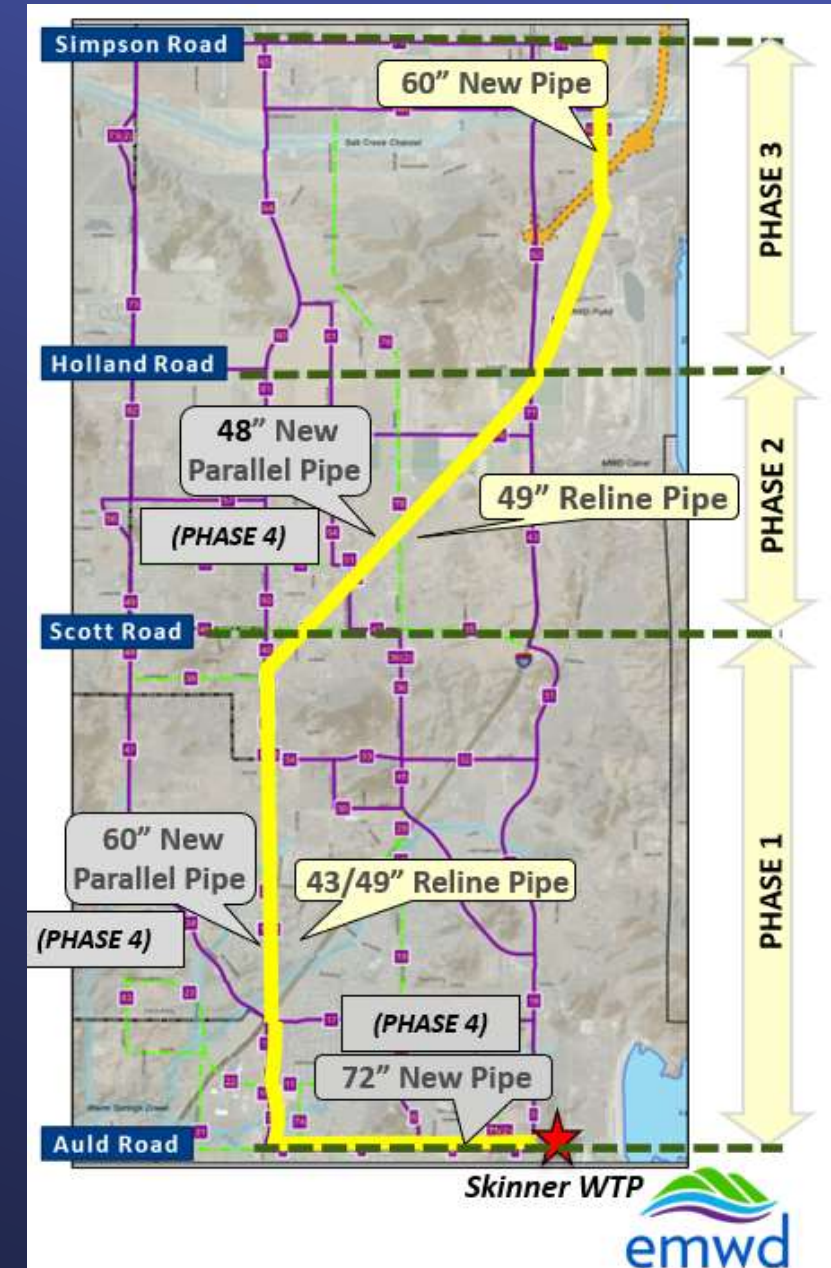
- Assessed the technical feasibility of re-purposing the pipelines
 - Pipelines may be re-purposed for high-pressure use
 - Structural rehabilitation required
 - Adequate easement width to accommodate new transmission pipeline
- Replacement drain line may be needed



Lake Skinner Water Transmission System and EM-11 Connection Project – Phases

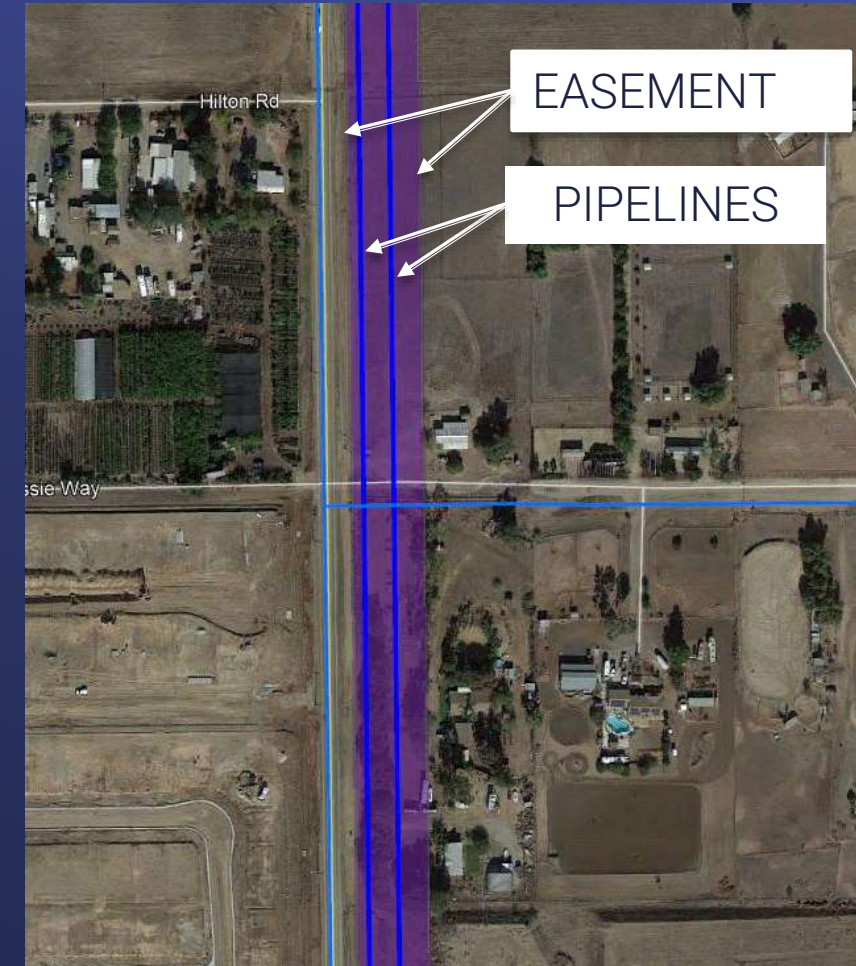
Phase	Supply	Service to Location
1	40 cfs	Scott Road
2	40 cfs	Craig Road / Holland Road
3	40 cfs	Simpson Road
4	80 cfs*	Simpson Road
5 (Buildout)	140 cfs*	<i>No new infrastructure</i>

*Supply increases at 80 cfs and 140 cfs dependent on development patterns. No additional infrastructure.



Lake Skinner Water Transmission System and EM-11 Connection Project – Coordination

- EMWD held project update meetings and site visits
- EMWD investigated easement rights
- Metropolitan confirmed San Diego Pipelines 1 & 2 have no plans to be used in the planning horizon
- EMWD submitted legal and plats along the easement corridor for Metropolitan's review
- On-going agency coordination through the CEQA process



Lake Skinner Water Transmission System and EM-11 Connection Project – Benefits

- Accommodates projected regional demands and operational flexibility
- Expands EMWD's ability to acquire treated supplies from Skinner
- Creates operational flexibility for region
- Re-purposes the out-of-service San Diego Pipelines 1 & 2 Segments
 - Minimizes construction impacts
 - Minimizes environmental impacts
 - Avoids duplicating existing infrastructure
 - Meets demands in cost-effective manner
 - Provides the opportunity for a phased approach

Next Steps

- Eastern MWD
 - Complete the CEQA process
 - Confirm timing based on the 2022 Water Supply Strategic Plan Update
 - Complete a Service Connection request
 - Confirm approach for 18-inch drain line replacement
- Metropolitan
 - Continue collaboration with Eastern MWD
 - Present results of assessment for recent trends for treated water supplies
 - Seek Board approval to transfer San Diego Pipelines 1 & 2 R/W to Eastern



