

#### **Engineering & Operations Committee**

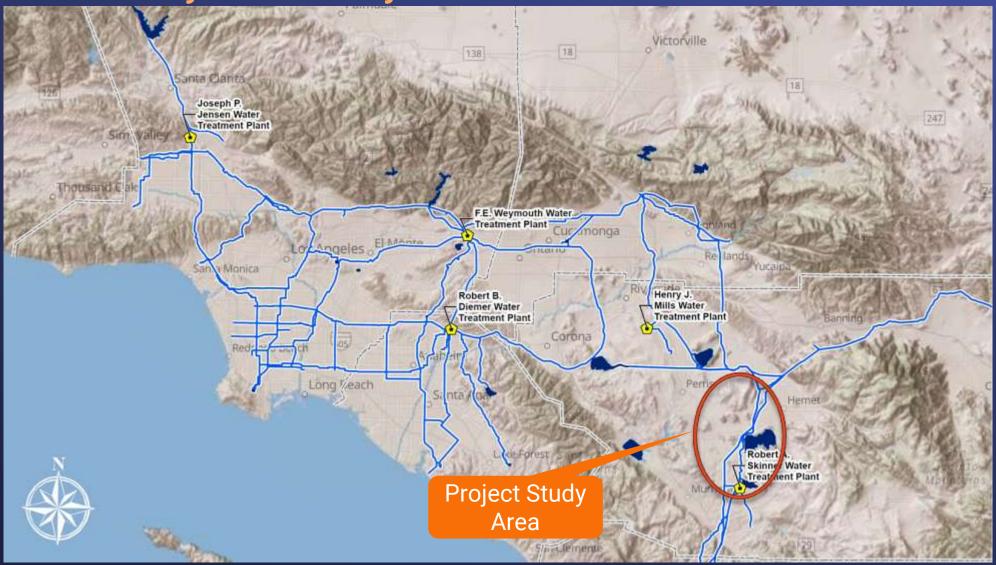
### Eastern MWD's Lake Skinner Water Transmission System and EM-Il Connection Project

Item 7a May 8, 2023

#### **Presentation Outline**

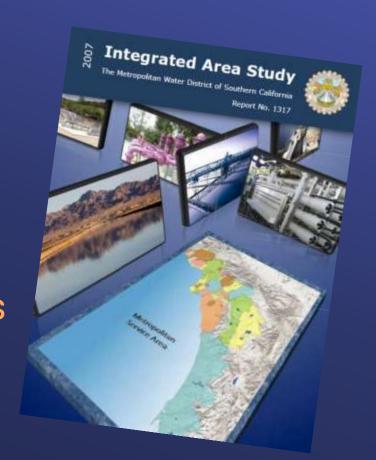
- Background
  - Integrated Area Study
  - Planned Regional Water Supply in Riverside
  - Existing Metropolitan Infrastructure
- Eastern MWD's Lake Skinner Water Transmission System and EM-11 Connection Project
  - Project Drivers
  - Project Components
  - Goals of Project
  - Benefits of Project
-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

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



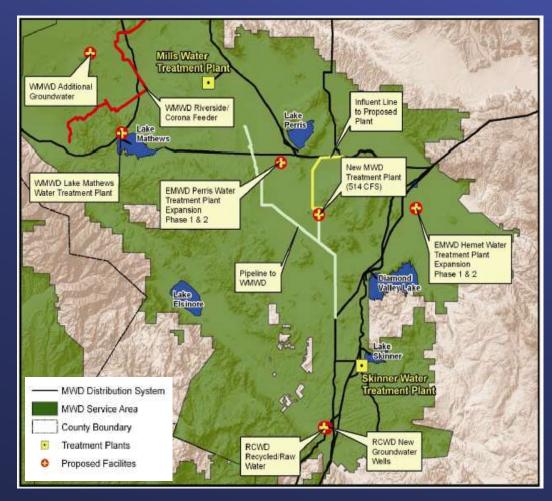
#### History of Planned Regional Water Supply

- 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



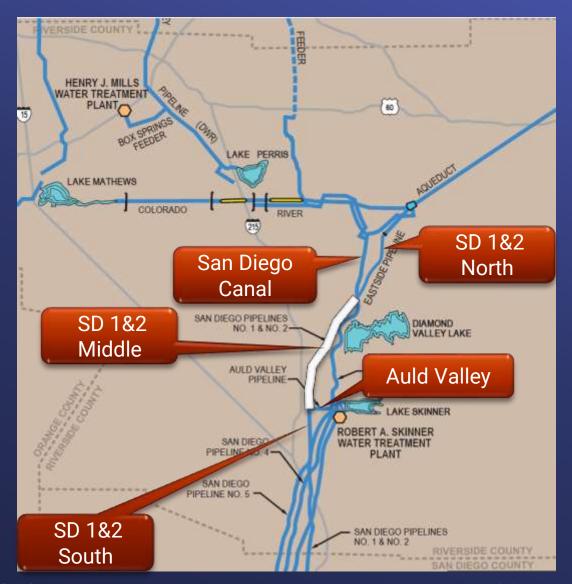
#### San Diego Pipelines 1 and 2

- 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



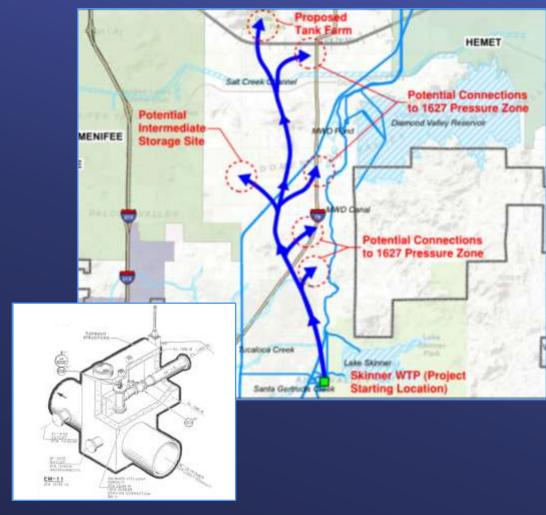
# Lake Skinner Water Transmission System and EM-11 Connection Project – Project Drivers

- 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



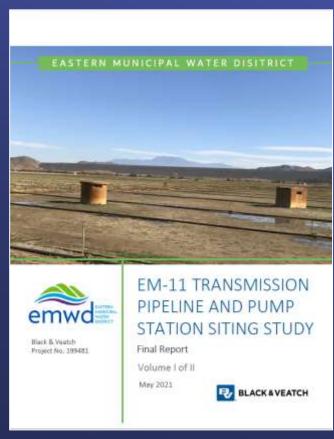
# Lake Skinner Water Transmission System and EM-11 Connection Project – Project Attributes

- 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

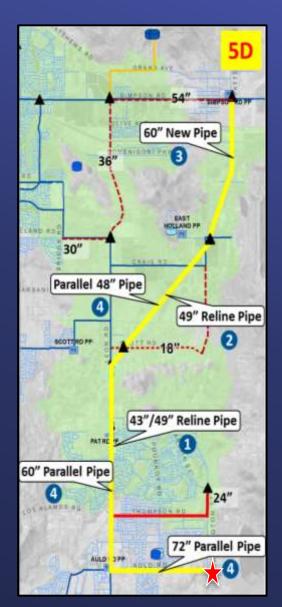
- Evaluate the feasibility of conveyance facilities
  - Consider the use of San Diego Pipelines 1 and 2
  - Phased implementation
- Identify easement and fee property requirements
- Prepare an environmental constraints report
- Select preferred alternatives



# 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

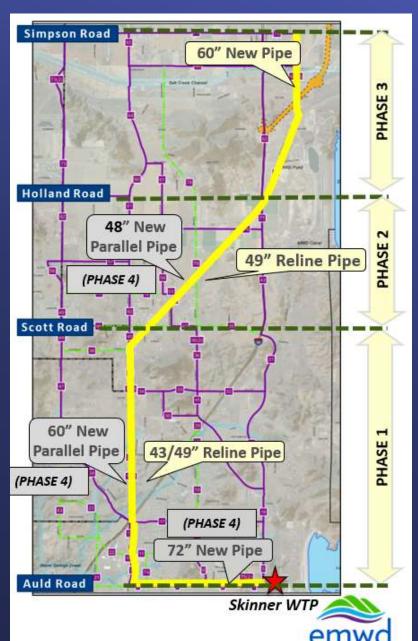
- Assessed the technical feasibility of repurposing the pipelines
  - Pipelines may be re-purposed for highpressure use
  - Structural rehabilitation required
  - Adequate easement width to accommodate new transmission pipeline
- Replacement drain line may be needed



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

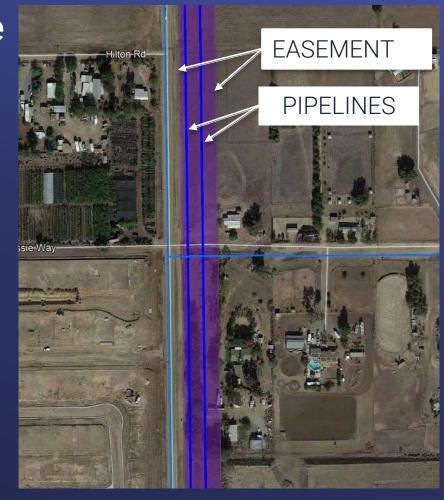
Phase	Supply	Service to Location
1	40 cfs	Scott Road
2	40 cfs	Craig Road / Holland Road
3	40 cfs	Simpson Road
4	80 cfs*	Simpson Road
5 (Buildout)	140 cfs*	No new infrastructure

<sup>\*</sup>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



