



Engineering & Operations Committee

Upper Feeder Expansion Joint Replacement

Item 7-1

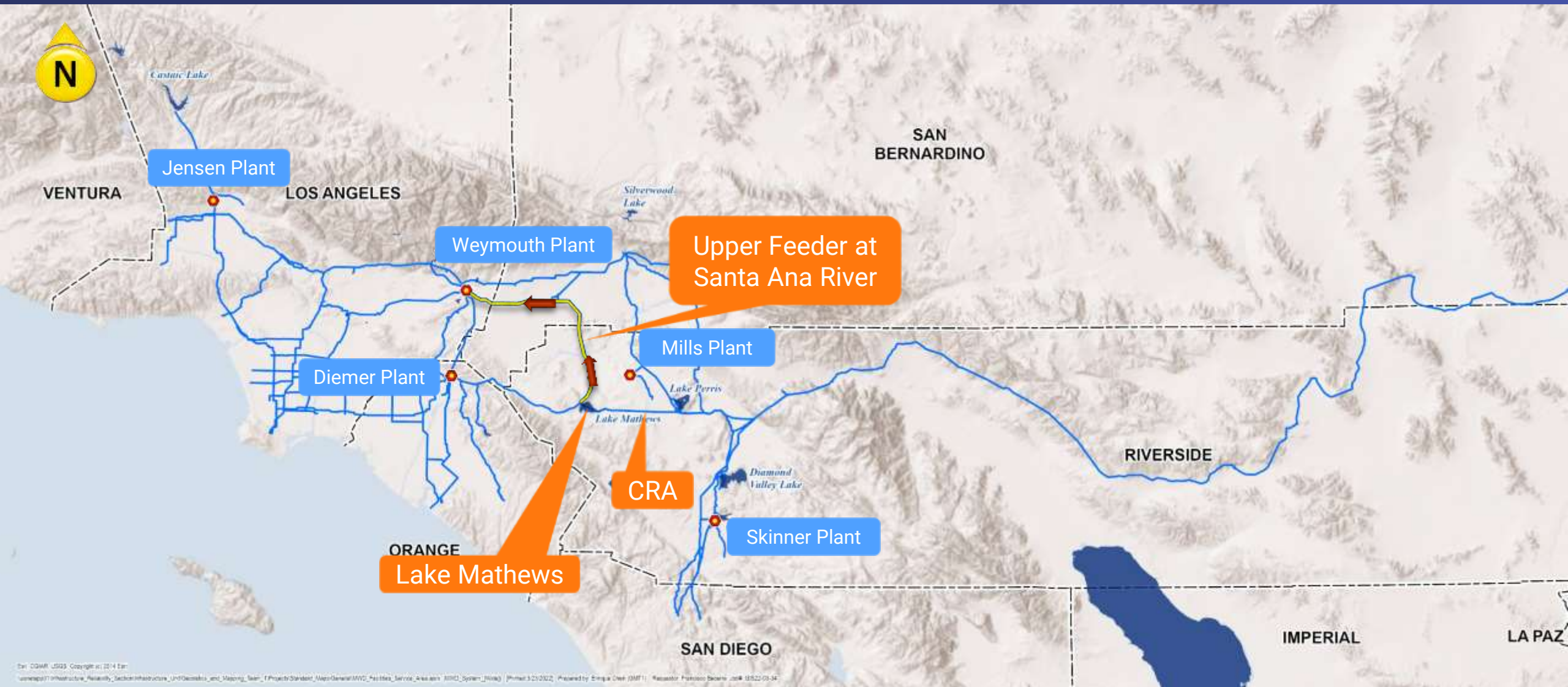
September 12, 2022

Upper Feeder Expansion Joint Replacement

Current Action

- Authorize the continuation of an emergency contract executed by the General Manager
(Requires four-fifths vote of the Board)

Distribution System



Upper Feeder – Santa Ana River Crossing

- Multi-span bridge with steel trusses & concrete piers
- 9'-8" ID steel pipe
- Pipeline design flow: 750 cfs
- Pipeline internal pressure: 200 psi
- Bellows expansion joint installed in 2018



Upper Feeder Expansion Joint Replacement

Bellows Expansion Joint Leak

- Discovered April 13, 2022
- Flow reduced
- Leak temporarily repaired April 21, 2022



Upper Feeder Expansion Joint Replacement



Bellows Expansion Joint Inspection

- Bellows joint compromised; to be replaced with slip-type expansion joint
- Monitored crack growth weekly since mid-May

Expansion Joint Replacement Urgency

- Flow limited to 525 cfs prior to shutdown
- Upper Feeder supports drought actions & operational shifts to save SPW
- Bellows joint is being replaced by Metropolitan-fabricated slip joint

Upper Feeder Expansion Joint Replacement

Emergency Contract

- PCL Construction is currently under an emergency time and materials contract to perform the work
 - Board authorized continuation of the emergency action to execute a no-bid contract for the expansion joint replacement on July 12, 2022, & August 15, 2022
- Executed per Admin Code section 8122(b)
 - Monthly reporting to the Board required & continuation of contract activities determined by four-fifths vote
 - Board to ratify construction contract upon completion of construction activities

Upper Feeder Expansion Joint Replacement

Contractor Scope of Work

- Removal of bridge structural members & restraining cage for pipe access
- Removal of bellows joint
- Installation of new slip-type joint
- Reinstallation of bridge structural members & restraining cage



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Upper Feeder Expansion Joint Replacement

Metropolitan Completed Activities

- ✓ Completed slip joint fabrication & installation design packages
- ✓ Installed 4-inch tap near expansion joint to facilitate construction
- ✓ Installed 6-inch dewatering valve
- ✓ Graded and cleared for crane pad
- ✓ Fabrication, coating, & assembly of new slip-type expansion joint
- ✓ Installed new 36-inch accessway

New Slip Joint Completed
@ La Verne Shops



Clearing & Grading for
Crane Pad



6-inch Valve
Installation



Upper Feeder Expansion Joint Replacement



Quagga Filters for
Dewatering

Upper Feeder Shutdown

- Started: 9/6/22; Planned duration: 15 days
- Preparation
 - Call to action to eliminate all outdoor watering in the affected areas during shutdown
 - Got the message out to conserve through numerous media outlets
 - Builds upon local conservation actions taken by Member Agencies
- Status
 - Dewatering completed
 - PCL has removed bellows joint & is installing slip joint
 - Weymouth using 100% SPW during the shutdown
 - Approximately 1,000 AF/day (varies by demand)

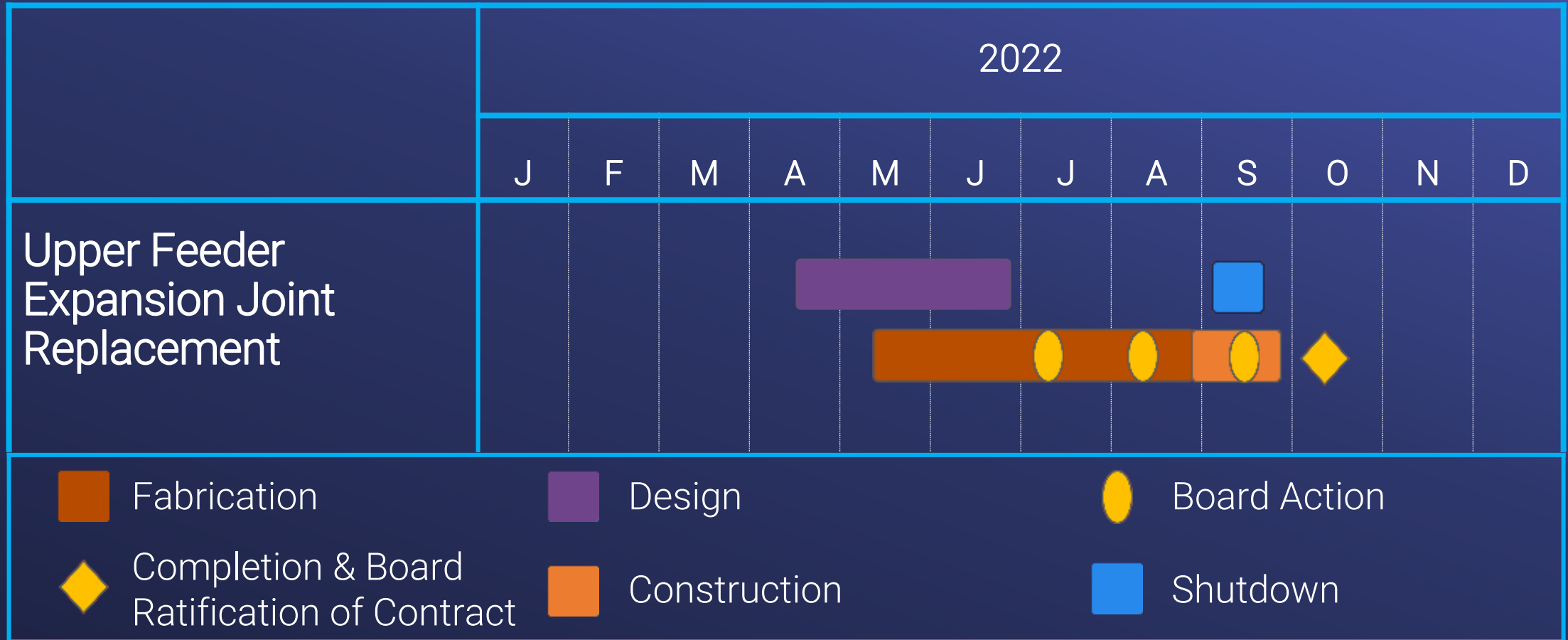
<https://www.mwdh2o.com/projects-in-your-community/>

Upper Feeder Expansion Joint Replacement

Alternatives Considered

- Board terminates emergency contract & Metropolitan forces complete installation of new slip joint
 - Delays end of shutdown
 - Costs already incurred
- Selected option
 - Continue emergency contract with PCL Construction

Project Schedule



Board Options

- Option #1

Determine that there is a need to continue the emergency action of executing a no-bid contract for construction of pipe joint repairs on the Upper Feeder. **(Requires four-fifths vote of the Board.)**

- Option #2

Do not determine that there is a need to continue the emergency action.

Staff Recommendation

- Option #1

