

IRVINE RANCH WATER DISTRICT POLICY POSITION
SECOND LOWER CROSS FEEDER

As adopted on October 7, 2011

Issue Summary:

Providing for a reliable and safe water supply is the primary mission of the Irvine Ranch Water District (IRWD). IRWD must be able to provide sufficient water to its service area in order to meet customer water demands under all reasonably foreseeable hydrological and system outage conditions. The reliability of the imported water system operated by the Metropolitan Water District of Southern California (MWD) is integral to the ability of IRWD to meet this objective. Like most other water agencies in Orange County, IRWD depends on MWD's Diemer Treatment Plant in Yorba Linda as the primary source of supply for potable (treated) imported water. The MWD system currently lacks sufficient redundancy to deliver water to Orange County from other treatment plants in the event of an outage at the Diemer Plant.

The Second Lower Cross Feeder (SLCF) is a pipeline project that would allow additional water from MWD to be delivered into Orange County from the MWD Los Angeles County system in the event of an outage of the Diemer Plant thus increasing the reliability of the IRWD water supply. IRWD supports and encourages the construction of this pipeline to provide, among other benefits, improved water system reliability for Orange County.

Background:

MWD primarily supplies Orange County with imported treated water from the Diemer Treatment Plant through the East Orange County Feeder No. 2 (EOCF2) and Allen McColloch Pipeline (AMP). Small amounts of treated water are supplied from the Weymouth Water Treatment Plant through the Orange County Feeder (OCF), although most of the water delivered through the OCF is also supplied from the Diemer Plant. The AMP and OCF are both owned and operated by MWD. The EOCF2 is jointly owned by local agencies (including IRWD) and MWD. The EOCF2 is operated and maintained by MWD.

Several water agencies in Orange County, including IRWD, have raised concerns related to their heavy dependence on the Diemer Plant as the primary source of imported water. The Diemer Plant is subject to significant seismic risks that could render it incapable of meeting Orange County demands for an extended period. This concern has already led to several local, regional, and joint-agency projects to improve water system reliability. Nonetheless, the threat of an extended Diemer outage following a large earthquake on the Whittier or Peralta Hills fault remains a concern.

The SLCF concept has been discussed for a number of years. It was originally considered as an accelerated component of the Central Pool Augmentation (CPA) project that would have allowed for the routing of water from a new treatment plant in Riverside County to two delivery points in Orange County, and ultimately to Los Angeles County. Limited amounts of treated water from the Jensen Water Treatment Plant (WTP) can supply Orange County via the Sepulveda Feeder to the Lower Feeder (LF) and Second Lower Feeder (SLF), to the EOCF2 near the Diemer Treatment Plant. It was proposed that a SLCF could increase the amount of Jensen water that could be moved to south Orange County during emergencies. The SLCF was sized at 84-inch diameter to deliver 400 cfs west to the Central Pool. At this size, preliminary evaluations

indicated that under optimal conditions in 2010 the SLCF could also deliver a maximum of 100 cfs of Jensen water east to the EOCF2 during emergency outages of the Diemer Plant. Subsequent studies led to the deferment of the CPA project, clarification of Metropolitan reliability policies, and revised construction estimates for the SLCF that ultimately, led to the SLCF project being placed on hold where it remains.

A number of concepts and alignments have been proposed for the SLCF pipeline project. There also have been various physical configurations that include a smaller pipeline diameter coupled with a pump station. Initially, there were four alignments that would connect the SLF to the EOCF2. Another concept connects all three Orange County feeders: the SLF, EOCF2, and AMP. The AMP connection concept is an extension of the previously studied alignments that connect the SLF and EOCF2, and a variation of the IRWD and Anaheim's proposed Joint Well Field Study.

In addition to its emergency reliability benefits, the SLCF would potentially improve the efficiency and flexibility of the Orange County groundwater conveyance and management. A connection to the AMP would allow direct access of groundwater further east and further south to retailers like IRWD, Anaheim, Orange, and possibly others with service connections along the AMP (the AMP is typically in these retailer's higher elevation zones), as well as providing emergency water from Jensen to south Orange County.

Policy Principles:

Staff has developed the following principles that will define the District's policy with respect to the Second Lower Cross Feeder Project:

- The Diemer Treatment Plant is subject to extended outages following certain large seismic events or other disasters.
- MWD is responsible for mitigating potential outages of its water system in Orange County, including but not limited to both planned and unplanned outages of the Diemer Treatment Plant, by designing, constructing and operating the SLCF.
- The addition of the SLCF is necessary to increase the reliability of the Orange County imported water conveyance system to reduce the impacts from a sustained water outage due to a single point of failure.
- Enhancements and extensions of the SLCF concept have potential benefits in the conveyance of groundwater and should be explored further with affected agencies including Orange County Water District (OCWD).
- Another benefit of the SLCF includes, under certain circumstances, facilitating the movement of water from Northern California, which typically has lower total dissolved solids (TDS), into the Orange County portion of MWD's conveyance system.

- MWD and other beneficiaries of the SLCF should be responsible for the cost of designing, constructing, and operating the base SLCF as a regional reliability enhancement project.
- Selected project design should incorporate features that will maximize opportunities for benefits beyond improved water system reliability for Orange County.
- The cost of enhancements to the SLCF that could potentially facilitate the conveyance of groundwater in the MWD system should be shared by OCWD, local groundwater producers, and other local beneficiaries.
- MWD should be strongly encouraged to prioritize the installation of the Second Lower Cross Feeder in order to better meet the water system reliability objectives of Orange County.