

**Mission Creek – South Coast Conduit Crossing  
(2013-C-56)****Project Ranking**

90%

**Total Estimated Cost:** \$2,600,000**Background**

The South Coast Conduit (SCC) crosses Mission Creek at approximate pipeline Station 74+00, 25 feet downstream of the County road Highway 192 Bridge. The SCC suffered damage in the 1970s when a large boulder tumbled on top of the pipe creating a hole in the pipe. Through an emergency retrofit project, a concrete cap was placed over the pipeline at the current flow line to prevent channel bed scour beneath the bridge footings and the SCC. The concrete cap acts as a grade control structure and is now undermined due to stream scour on the downstream side of the pipeline and concrete apron. The exposed pipe is subject to further damage from boulder impacts during stormflow events as well as material deterioration from exposure to oxygen and water. Although temporary repairs to the crossing were completed in Fiscal Year 2015-16, a more permanent solution will be necessary in the near future. As part of the U.S. Bureau of Reclamation (USBR) Phase 2 Reliability Study for the SCC conducted in 2006 and a subsequent site inspection during 2014, this site was identified as a priority due to the potential for failure of the SCC.

The existing concrete apron is intended to protect the pipeline and the Highway 192 Bridge footings but has resulted in a barrier to migrating juvenile and adult endangered southern steelhead (*Oncorhynchus mykiss*, *O. mykiss*) within the creek. Mission Creek has been identified as a Core 1 watershed for steelhead recovery by the National Marine Fisheries Service (NMFS) in their Southern California Steelhead Recovery Plan (NMFS, 2012). As a result, this project will be required to meet fish passage considerations and therefore constructed in conjunction with a fish passage project. The City of Santa Barbara has now completed three fish passage projects on Mission Creek downstream of the Hwy 192 Bridge. The subject project is the next significant fish passage impediment upstream. Questa Engineering was contracted by the City of Santa Barbara to evaluate fish passage options and provided a report in 2008. Several design workshops have been held since then with the regulatory agencies and a riffle and step-pool sequence has been determined to be the preferred alternative (Questa Engineering, 2012); design specifics will depend on the horizontal and vertical placement of the SCC below the streambed.

**Need for Project**

The SCC at Mission Creek is the primary water supply for the cities of Carpinteria, Montecito and a large portion of Santa Barbara. The vulnerability of the pipeline to failure resulting from further structural damage and/or corrosion poses an operational risk. The project would remove a section of the SCC and construct a new section encased in concrete at a lower elevation well below the streambed to protect it from damage by scour. At the same time, the concrete apron and channel downstream would be altered to provide fish passage while protecting the Highway 192 Bridge footings. Project designs would be reviewed and approved by the City of Santa Barbara, County of Santa Barbara, NMFS and California Department of Fish and Wildlife to meet road, pipe and fish passage design standards.

**Description**

COMB retained engineering services to conduct an evaluation of the site and develop and implement a temporary repair. Over the next few years, a permanent solution will be designed, reviewed and approved by local, state and federal regulatory agencies. Once an acceptable design has been developed, COMB would then determine funding options for construction of the project.

Phase I (Fiscal Year 2015-16): Temporary Repair

Phase II (Fiscal Years 2016-17 & 2018-19): Permanent Solution – Engineering and Design

Phase III (Fiscal Year 2019-20): Planning, Grant Writing, etc.

Phase IV (Fiscal Year 2020-21): Construction

**Regulatory Compliance**

EIR/EIS and full environmental review and compliance will be a required project component.

**Budget & Schedule**

**Internal Staff Estimate**

<b>Fiscal Year</b>	<b>Cost</b>
2015-16 (Phase I)	\$ 50,000
2016-17 (Phase II)	\$ 50,000
2017-18	\$ 0
2018-19 (Phase II – cont.)	\$ 50,000
2019-20 (Phase III)	\$ 400,000
2020-21 (Phase IV)	\$2,100,000
<b>Total</b>	<b>\$2,650,000</b>

**References**

“Phase 2 Reliability Study for South Coast Conduit Upper Reach Tecolote Tunnel to Corona Del Mar Water Treatment Plant and Carpinteria Reach South Coast Conduit Pump Station to Ortega Reservoir” Boyle April 2008 Page 100 and Table 8-1.

September 2006 Boyle “Phase 2 Reliability Study for South Coast Conduit Upper Reach Tecolote Tunnel to Corona Del Mar Water Treatment Plant and Carpinteria Reach South Coast Conduit Booster Pump Station to Ortega Reservoir” Page 100 and Table 8-1.

NMFS, 2012. Final Southern California Steelhead Recovery Plan, National Marine Fisheries Service (NMFS-NOAA), Long Beach, CA.

Questa Engineering, 2008. Highway 192 at Mission Creek South Coast Conduit Rehabilitation and Fish Passage Improvement Project. Questa Engineering Corporation. Prepared for the City of Santa Barbara, November.

Questa Engineering, 2012. Highway 192 at Mission Creek South Coast Conduit Rehabilitation and Fish Passage Improvement Project Design Review. Prepared for the Cachuma Operation and Maintenance Board.