



TECHNICAL MEMORANDUM

DATE: November 22, 2017 Project No.: 693-20-16-01
SENT VIA: EMAIL

TO: SRWA Technical Advisory Committee

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SUBJECT: Addendum to November 2016 TM *Basis and Comparison of SRWA Surface Water Supply Project Costs*

INTRODUCTION

The Stanislaus Regional Water Authority (SRWA) is developing a regional Surface Water Supply Project (Project) to provide a new surface water supply to the Cities of Ceres and Turlock (Cities). West Yost Associates (West Yost) was retained by SRWA in April 2016 to provide Program Management (PM) services during the development and implementation of the Project. Since April 2016, the PM team has worked with SRWA's Technical Advisory Committee (TAC) and Board of Directors (Board) to develop and refine the size and scope of facilities necessary to implement the Project. In November 2016, the PM team prepared a Technical Memorandum (TM) titled *Basis and Comparison of SRWA Surface Water Supply Project Costs* to document conceptual capital costs for the Project.

Purpose

The purpose of this addendum is to document the most recent Project cost estimate information (referred to as the October 2017¹ costs herein), reflecting ongoing Project definition and refinement that has occurred since November 2016.

Organization

This TM is organized as follows:

- Introduction
- Summary of October 2017 Estimated Project Costs

¹ As of November 8th, 2017, the latest available ENR 20-cities construction cost index (CCI) is December 2016 (CCI = 10530).

SUMMARY OF OCTOBER 2017 ESTIMATED PROJECT COSTS

The latest estimated Project design, construction, and construction management costs are presented in Table 1. Table 2 presents overall Project capital costs, including projections of “soft costs” (SRWA administration, program management, predesign and procurement, water rights permits, environmental and permitting services, land and right-of-way acquisition, construction quality assurance and contract compliance, and capital contingency). The costs presented in Tables 1 and 2 are consistent with information presented to the Board on August 3, 2017, with the exception of a subsequent reduction in estimated costs for Turlock local facilities (as described in Table 3).

A brief summary of the significant changes to estimated costs since the publication of the November 2016 *Basis and Comparison of SRWA Surface Water Supply Project Costs* TM is included in Table 3.

As the Project is further defined, estimated Project costs will continue to be updated by the PM Team.

Table 1. Summary of Project Design & Construction Cost Estimates, in Millions of Dollars	
Project Element	Estimated Cost
Regional Facilities	
Wet Well ^(a)	8.55
Raw Water Pump Station ^(a)	10.11
Raw Water Transmission Main ^(a)	7.95
Regional Water Treatment Plant ^(a)	101.64
Ceres Finished Water Transmission Main ^(a)	22.90
Turlock Finished Water Transmission Main ^(a)	40.35
Subtotal ^(b)	191.50
Inflation to Construction Midpoint ^(c)	13.15
Subtotal ^(d)	204.65
Construction Contingency ^(e)	10.23
Total Regional Facility Design and Construction Costs^(d)	214.88
Local Facilities	
Construction of Ceres Local Facilities ^(f)	11.41
Construction of Turlock Local Facilities ^(f)	14.62
Subtotal ^(b)	26.03
Inflation to Construction Midpoint ^(c)	1.79
Subtotal ^(d)	27.82
Construction Contingency ^(e)	1.39
Construction Subtotal ^(d)	29.21
Design of Ceres Local Facilities ^(g)	0.98
Design of Turlock Local Facilities ^(g)	1.25
CM of Ceres Local Facilities ^(e)	0.61
CM of Turlock Local Facilities ^(e)	0.78
Total Local Facility Design, Construction, and CM Costs	32.83
Total Design, Construction, and CM Costs	247.71
<p>(a) Includes estimating contingencies identified below:</p> <ul style="list-style-type: none"> • Wet well: 5% • Water treatment plant: 25% • All other regional facilities: 10% <p>(b) February 2017 dollars.</p> <p>(c) Assumes 2% annual inflation from February 2017 to assumed construction midpoint of June 2020.</p> <p>(d) June 2020 dollars (assumed construction midpoint).</p> <p>(e) Assumes 5% of estimated construction costs at construction midpoint.</p> <p>(f) Includes 25% estimating contingency</p> <p>(g) Assumes 8% of estimated construction costs at construction midpoint.</p>	

**Table 2. Summary of Project Cost Estimates,
in Millions of Dollars, June 2020^(a) Dollars**

Cost Category	Total	Project Partner ^(f)		
		Turlock	Ceres	TID
Regional Facilities				
Legal/Administration ^(b)	4.12	2.06	2.06	-
Program Management	5.11	2.56	2.56	-
Pre-design and Procurement	2.30	1.15	1.15	-
Water Rights Permits	0.41	0.20	0.20	-
Environmental and Permitting ^(c)	1.43	0.71	0.71	-
Land/ROW Acquisition	1.84	0.92	0.92	-
Construction Quality Assurance and Contract Compliance ^(d)	8.20	4.10	4.10	-
Design and Construction of Regional Facilities	214.87	137.23	71.67	5.97
Capital Contingency ^(e)	5.96	3.72	2.08	0.15
Regional Facility Total	244.24	152.66	85.45	6.12
Local Facilities				
Design and Construction of Local Facilities	32.83	18.44	14.39	-
Capital Contingency ^(e)	0.82	0.46	0.36	-
Local Facility Total	33.65	18.90	14.75	-
Total Capital Costs	277.89	171.56	100.21	6.12

(a) Assumed construction midpoint. Includes estimating contingencies identified in Table 1.

(b) Assumes salaried General Manager and legal for specialty services (e.g., Service Contract development).

(c) Intended to reflect costs prior to handoff to facility designer / design-builder.

(d) Includes oversight of construction under design-build procurement method, environmental mitigation and other costs.

(e) Assumes 2.5% contingency of all capital costs.

(f) Cost allocations based on the TM *Methodology for Allocation of Surface Water Supply Project Costs*, Nov 1, 2016. Cost allocation to TID for "soft costs" associated with District Delivery Facilities will be modified for consistency with the Water Sales Agreement.

Table 3. Summary of Project Definition Changes since November 2016	
Facility Category	Project Definition Changes since November 2016 with Significant Impact on Estimated Costs
General	<ul style="list-style-type: none"> Phase 1 treatment capacity reduced from 30 mgd to 15 mgd
Wet Well	<ul style="list-style-type: none"> Advanced design of wet well to 100% level, including complex ground improvement approach Prepared updated construction cost estimates at 60% and 90% level and reduced estimating contingency
Raw Water Pump Station	<ul style="list-style-type: none"> Prepared detailed construction cost estimate based on 2009 contract documents and reduced estimating contingency
Regional Water Treatment Plant	<ul style="list-style-type: none"> Completed first year of source water characterization Completed bench testing evaluations Identified preferred treatment train Prepared planning-level construction cost estimate for preferred treatment train based on detailed cost information derived from multiple reference facilities
Ceres Finished Water Transmission Main	<ul style="list-style-type: none"> Prepared detailed construction cost estimates based on preliminary alignments Reduced estimating contingencies
Turlock Finished Water Transmission Main	
Ceres Local Facilities	<ul style="list-style-type: none"> Reduced new piping from 29,400 LF to 8,000 LF, to accommodate only Phase 1 & 2 Project capacities instead of ultimate Project capacity
Turlock Local Facilities	<ul style="list-style-type: none"> Reduced new piping from 26,300 LF to 8,900 LF, to accommodate only Phase 1 & 2 Project capacities instead of ultimate Project capacity Subsequent refinements to accommodate Phase 1 Project capacity only^(a)
^(a) Resulted in total Project costs approximately \$10M lower than costs presented to Board on August 3, 2017.	