



City of Morro Bay
Water Reclamation Facility Project

QUARTERLY REPORT JUNE 2019

FINAL | July 2019





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Eric T. Casares,
July 2019,
State of California, PE.73351

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Abbreviations

APE	Area of Potential Effect
BDR	Basis of Design Report
BOD	Biochemical Oxygen Demand
CCC	California Coastal Commission
CDP	Coastal Development Permit
CDR	Concept Design Report
CEQA	California Environmental Quality Act
CPT	Cone Penetration Test
CWSRF	Clean Water State Revolving Fund
DDW	Division of Drinking Water
EPA	Environmental Protection Agency
ESCP	Enhanced Source Control Program
FEIR	Final Environmental Impact Report
GMP	Guaranteed Maximum Price
IPR	Indirect Potable Reuse
IUP	Intended Use Plan
IWS	Industrial Waste Survey
KPI	Key Performance Indicator
MBPFC	Morro Bay Public Facilities Corporation
MBR	Membrane Bioreactor
NEPA	National Environmental Policy Act
NPDES	National Pollution Discharge Elimination System
PCO	Potential Change Order
PPP	Pollution Prevention Program
RWQCB	Regional Water Quality Control Board
SHPO	State Historic Preservation Office
SPI	Schedule Performance Index
TSO	Time Schedule Order
TSS	Total Suspended Solids
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
UVAOP	Ultraviolet Advanced Oxidation Process
WRF	Water Reclamation Facility
WRFCAC	Water Reclamation Facility Citizens Advisory Committee
WWE	Water Works Engineers

Section 1

PROJECT OVERVIEW

1.1 General Project Status Update

All components of the Water Reclamation Facility Project (Project) are currently in progress. City staff and Carollo (Program Manager) are actively working with the design-build team and the pipeline designer to advance the design of the Water Reclamation Facility (WRF) and Conveyance Facilities, respectively.

City staff and the Program Manager have been working closely with the Environmental Protection Agency's (EPA's) Water Infrastructure Finance and Innovation Act (WIFIA) and Clean Water State Revolving Fund (CWSRF) staff to meet the requirements necessary to begin construction of the WRF. For WIFIA, the City must have a signed loan agreement and purchase the Tri-W property prior to starting construction. In order to meet WIFIA's requirements, the City has been required to create a corporation that can manage the funding of the Project, finalize the loan terms, and facilitate completion of the environmental and technical reviews. To satisfy CWSRF, their environmental review must be completed. The City made great strides in reaching these milestones in June. Resolution No. 56-19 was adopted by the City Council on June 25th, which includes the articles of incorporation for the Morro Bay Public Facilities Corporation (MBPFC). The City received word from the State Historic Preservation Office (SHPO) that they concurred with the City's proposed approach to utilize a programmatic agreement. The City also received word from the United States Army Corps of Engineers (USACE) regarding impacts to jurisdictional waterways near the WRF site. The City will continue to coordinate with the SHPO to complete the programmatic agreement and is awaiting confirmation from the USACE that the construction methods being employed for the crossing of Morro Creek and Willow Camp Creek will not impact those jurisdictional waterways.

The City and Program Manager began reviewing the draft procurement documents from the design-build team for the membrane bioreactor (MBR), headworks, reverse osmosis (RO), and ultraviolet advanced oxidation process (UVAOP) equipment in June. Both the MBR and headworks equipment packages are currently being advertised, and proposals from the listed manufacturers will be received on July 22nd and July 31st, respectively. The design-build team will also be delivering the 60 percent design submittal to the City and Program Manager for review at the end of July.

This past month, the City's hydrogeological consultant, GSI Water Solutions, Inc. (GSI), constructed a piezometer and performed pump testing on an inactive well on Errol Street near the Silver City Resort. The pump test provided vital information on the Lower Morro Groundwater Basin, and is necessary for GSI to refine their model and determine the optimal injection location for indirect potable reuse (IPR). For the past several months, the City and Program Manager along with GSI have been working with Vistra Energy (Vistra) to conduct similar tests on the west side of Highway 1 on either an existing inactive Morro Bay Mutual Water Company well or construct a new test well near the City's bike path. The City delivered a work plan to Vistra in May, and will likely be able to begin performing this testing after it receives a Coastal Development Permit (CDP) for the Project.

On June 18th, the State Water Resources Control Board (State Board) adopted the Draft Intended Use Plan (IUP) for the CWSRF. This IUP included funding for the Project up to \$105 million including \$5 million in grants. With adoption of the IUP, the City anticipates it could be using a combination of cash on hand, WIFIA low-interest loans, and CWSRF low-interest loans and grants to fund the Project. In order to develop the most favorable combination of funding sources balancing funding availability, construction schedule, and the goal of minimizing the financial impacts on the community, the City is executing an amendment with Bartle Wells Associates (Bartle Wells). This amendment will extend their scope of work from development of the rate study (July 2018) to analyzing various funding scenarios to help the City finalize funding agreements with WIFIA and CWSRF.

Table 1 summarizes some of the key accomplishments and critical challenges identified for the Project in June 2019.

Table 1 Project Accomplishments and Challenges

Project Component	Key Accomplishments	Critical Challenges	Actions to Overcome Challenges	Likely Outcomes
General Project	Nearing completion of the Draft Final Environmental Impact Report (FEIR) Addendum for circulation			
	Continued working with California Coastal Commission (CCC) staff to complete the CDP application			
	Added to the fundable list in the adopted IUP for CWSRF			
Water Reclamation Facility	Continued development of the 60 Percent Design Submittal			
	Continued development of the Grading Design Submittal			
		Meeting WIFIA and CWSRF requirements in order to start construction	Expedite the development of necessary materials for consultation with the SHPO	Delivery of documentation to WIFIA and CWSRF in early July 2019 should allow construction to start in September 2019
Conveyance Facilities	Continued development of the 60 Percent Design Submittal			
		Schedule recovery due to issues access Vistra and PG&E property	Work with WWE to expedite the final design schedule (options could include eliminating some intermediate deliverables)	Without expediting the schedule, delayed construction completion could impact the schedule for start-up of the WRF
Recycled Water Facilities		Schedule recovery due to issues access Vistra and PG&E property	Work with GSI to expedite the completion of the Phase 2 hydrogeology work	The completion of the injection wells could be delayed (does not impact compliance with the time schedule order [TSO])

1.2 Quarterly Budget Revision

The budget for the Project is reconciled on a quarterly basis and is re-baselined on an annual basis. The original \$126 million baseline budget was developed in June 2018 and was used as the basis for the rate study prepared by Bartle Wells. The annual re-baselined budget will become the new baseline budget used during the upcoming fiscal year 2019/2020. A summary of the baseline, quarterly reconciled, and annual re-baselined budgets are summarized in Table 2. Subsequent budget reconciliations (quarterly) and re-baselined budgets (annual) will also be presented in this table.

Table 2 **Budget Revision Summary**

Project Component	Baseline (Q4 FY 17/18)	Quarterly Reconciliation (Q3 FY 18/19)	Annual Re-Baselined (Q4 FY 18/19)
Water Reclamation Facility	\$62,414,000	\$74,059,000	\$72,891,000
Conveyance Facilities	\$21,087,000	\$27,108,000	\$28,864,000
Recycled Water Facilities	\$8,593,000	\$5,366,000	\$5,250,000
General Program	\$24,403,000	\$11,614,000	\$11,801,000
Construction Contingency(1)	\$9,444,000	\$6,450,000	\$7,132,000
Total	\$125,941,000	\$124,597,000	\$125,938,000

Notes:

(1) Increase in construction contingency due to use of only \$1.9 million of the budgeted \$2.5 million (budgeted in the Q3 FY 18/19 budget reconciliation) intended to be used for the initial round of potential changes orders (PCOs) for the WRF.

Increases to the Project budget since the budget reconciliation in Q3 Fiscal Year 2018/2019 can be attributed to the following:

- Addition of a trenchless crossing to the design of the Conveyance Facilities along the bike path at Willow Camp Creek following completion of the wetland delineation as part of the supplementary biological report prepared by Kevin Merk (approximately \$1 million)
- Additional potholing for design of the Conveyance Facilities necessary to identify utility locations and avoid construction change orders (approximately \$150,000)
- Additional land acquisition costs for purchase of the Tri-W property following initial estimates from the appraiser (approximately \$300,000).

Section 2

PROJECT COSTS

2.1 Performance Measures

A set of five (5) Key Performance Indicators (KPIs) were established to readily measure the progress of the Project. These KPIs represent various success factors associated with the WRF project management and delivery that were established by the Program Manager and City staff and are summarized as Table 3. The Project's performance is also illustrated graphically in Figures 1 and Figure 2.

Table 3 WRF Project Performance Measures

Performance Measure	Data	Baseline (Q4FY 17/18)	Current (Q4 FY 18/19)	Delta	Status	Ⓜ	Ⓨ	Ⓡ
1: Total Project Costs	Total Project Projected Cost at Completion versus the Baseline Budget (budget as of 6/30/19)	\$125.9 M	\$125.9 M	0.0%	Ⓜ	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
1.1: WRF Costs	On Site WRF Projected Cost at Completion versus the Baseline Budget (budget as of 6/30/19)	\$77.1 M	\$77.3 M	0.0%	Ⓜ	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
1.2: Conveyance Facilities Costs ^{(1), (2)}	Conveyance Facilities Projected Cost at Completion versus the Baseline Budget (budget as of 6/30/19)	\$26.3 M	\$31.3 M	19.0%	Ⓡ	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
1.3: Recycled Water Facilities Costs ⁽¹⁾	Off Site Injection Facilities Projected Cost at Completion versus the Baseline Budget (budget as of 6/30/19)	\$12.1 M	\$5.6 M	-116%	Ⓜ	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
1.4: General Project Costs ⁽²⁾	General Project Projected Cost at Completion versus the Baseline Budget (budget as of 6/30/19)	\$10.5 M	\$11.8 M	12.4%	Ⓡ	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
2: Program Manager Earned Value	Ratio of Program Manager Earned Value to Actual Invoiced Cost-to-Date (as of 6/30/19)	1.00	1.01	0.01	Ⓜ	>= 1.00	0.99 to 0.90	< 0.90
3: Schedule Performance Index ⁽³⁾	Ratio of Planned Percent Complete to Actual Percent Complete (as of 6/30/19)	1.00	0.86	-0.14	Ⓨ	>=1.00	0.99 to 0.80	<0.80
4: Conveyance Pipeline Installed	Feet of conveyance pipeline installed (thru 6/30/19)	18,500 LF	0.0 LF	0.0%	Ⓜ	<= 5%	> 5% and <=7.5%	> 7.5%
5: Compliance Date Countdown	Days Remaining to Compliance Date (as of 6/30/19)	1,339 days	884 days	-455 days	Ⓜ	<= 365 days	364 days and 180 days	> 179 days

Notes:
(1) The cost of the potable reuse pipeline (assumed East injection location) was moved from the Recycled Water Facilities Project to the Conveyance Facilities Project following completion of the baseline cost estimate in May 2018.
(2) The cost for a new trenchless crossing to avoid a jurisdictional waterway (i.e., wetland) at Willow Camp Creek was added to this project component.
(3) Delays associated with access to Vistra and PG&E property have resulted in schedule delays impacting hydrogeology work and completion of the Conveyance Facilities final design.

Section 3

PROJECT COSTS

3.1 Project Budget

The overall budget status for the Project is summarized in Table 4. The top half of the table provides a summary of total estimated Project costs, including original and current estimated costs for the entire Project. The bottom half of Table 4 shows the total amount of work currently under contract and provides a summary of total charges.

Table 4 WRF Project Overall Budget Status (thru June 2019)

Summary of Total WRF Project Cost	
Baseline WRF Project Budget ⁽¹⁾	\$125,938,000
Current WRF Project Budget (as of 6/30/19)	\$125,900,000
Budget Percent Change (Current versus Re-Baseline)	0.0%
Total Expenditures for June 2019	\$962,742
Total Expenditures to Date (thru 6/30/19 invoices)	\$11,067,630
Percent of Current WRF Project Budget Expended	8.8%
Summary of Contracted Work	
Total Contracted Amount	\$77,239,207
Percent of Current WRF Project Budget Contracted	62.1%
Total Contracted Amount Expended	\$9,357,455
Percent of Contracted Amount Expended	12.1%
Remaining WRF Project Contracted Amount	\$67,881,751

Notes:

(1) Developed in the spring of 2018 as the basis of the approved rate surcharge that will take effect in July 2019.

3.2 Project Cash Flow

Figure 1 presents the projected and actual expenditures for the Project through June 2019 compared to the baseline budget developed in 2018 as the basis for the rate surcharge. The line graph shows the cumulative values for the Project and the bars show the discrete monthly values. Actual and budgeted expenditures from 2013 to the end of Fiscal Year 2017/2018 have been combined to improve readability. Milestones have been added to the cumulative baseline budget and cumulative forecasted expenditures to show changes in the Project schedule that have occurred between development of the baseline budget in May 2018 and the re-baselined budget developed at the end of March 2019. The milestone corresponds to the substantial completion of the WRF, which coincides with the City being in compliance with the TSO issued by the Regional Water Quality Control Board (RWQCB) in June 2018.

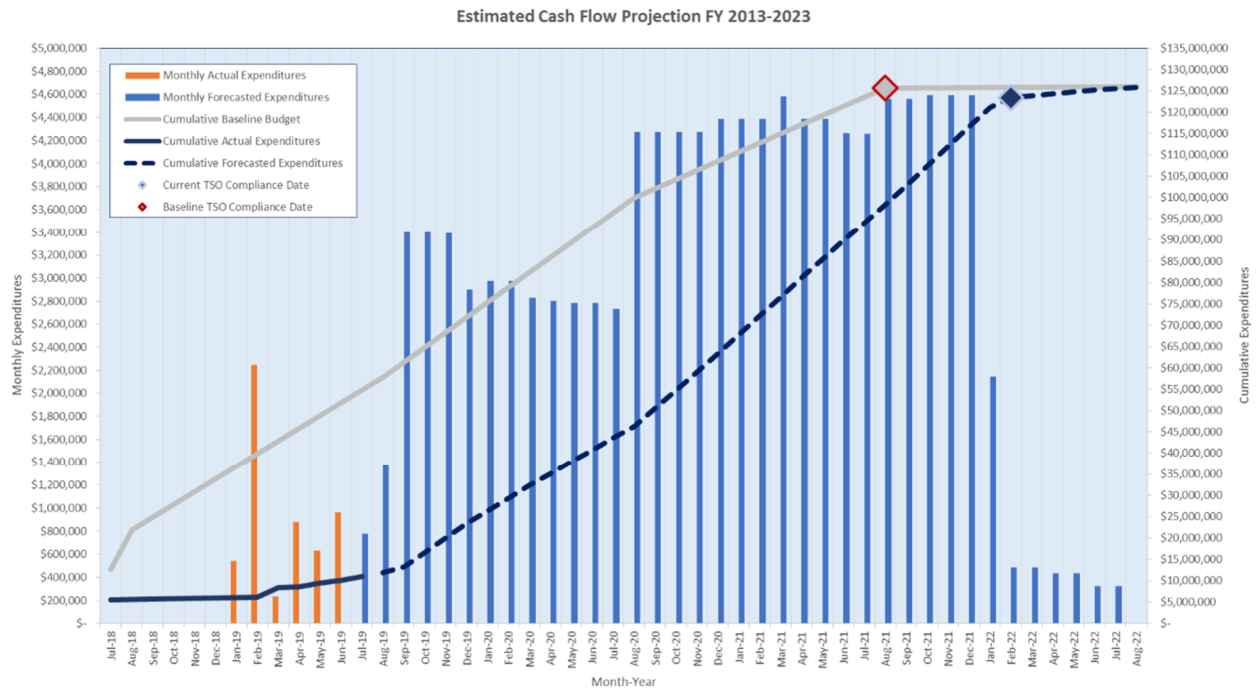


Figure 1 Project Cash Flow Projections and Actual Expenditures

3.3 Project Cost Summary

Table 5 summarizes the cost-to-date and contracted amounts for each of the elements of the Project. This table also provides the current cost estimate for each project. Detailed information on the individual elements of the Project is provided in Section 7 of this Report.

Table 5 WRF Project Cost Summary (through June 2019)

Project	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)	Total Project Cost (Est.) ⁽¹⁾	Cost Expended to Date (%)
General Project	\$5,274,586	\$6,425,172	82.1%	\$11,800,000	44.7%
WRF	\$3,163,060	\$69,102,470	4.5%	\$77,300,000	4.1%
Conveyance Facilities	\$744,502	\$1,360,564	54.7%	\$31,300,000	2.4%
Recycled Water Facilities	\$175,307	\$351,000	50.0%	\$5,500,000	3.2%
Total	\$9,357,455	\$77,239,207	12.1%	\$125,900,000	7.4%

Notes:

(1) Cost includes the total anticipated cost for each element of the Project.

3.4 Detailed Project Costs

The following tables show the detailed costs to date for active contracts for each element of the Project.

Table 6 General Project Activities Cost Summary (through June 2019)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
ESA	\$383,260	\$408,858	93.7%
Far Western	\$100,220	\$124,644	80.4%
Kestrel	\$181,497	\$219,872	82.5%
JoAnn Head Land Surveying	\$96,568	\$102,644	94.1%
JSP Automation	\$21,777	\$63,500	34.3%
Carollo Engineers, Inc.	\$1,127,157	\$1,898,844	59.4%
Total	\$1,910,479	\$2,818,362	67.8%

Notes:

(1) Cost includes planned or anticipated amendments to active consultant agreements.

Table 7 WRF Cost Summary (through June 2019)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
Overland Contracting	\$3,163,060	\$69,102,470	4.6%
Total	\$3,163,060	\$69,102,470	4.6%

Notes:

(1) Cost includes planned or anticipated amendments to active consultant agreements.

Table 8 Conveyance Facilities Cost Summary (through June 2019)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
Water Works Engineers (WWE)	\$744,502	\$1,360,565	54.7%
Total	\$744,502	\$1,360,565	54.7%

Notes:

(1) Cost includes planned or anticipated amendments to active consultant agreements.

Table 9 Recycled Water Facilities Cost Summary (through June 2019)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
GSI	\$175,307	\$351,000	49.9%
Total	\$175,307	\$351,000	49.9%

Notes:

(1) Cost includes planned or anticipated amendments to active consultant agreements.

3.5 Change Orders

In May 2019, City staff and the Program Manager presented seventeen (17) potential change orders (PCOs) with a total value of \$1.9 million for the WRF to the Water Reclamation Facility Citizens Advisory Committee (WRFCAC) and the City Council. The City Council approved these PCOs and authorized City staff to update the design-build team's contract and associated guaranteed maximum price (GMP). The seventeen (17) change orders are summarized in Table 10.

Table 10 Summary of Approved Change Orders

Contract	Change Order No.	Description	Value
WRF	01	New Sodium Hypochlorite Feed for Plant Water	\$78,576
WRF	02	Change Architecture of Operations Building	\$(21,623)
WRF	03	Headworks Odor Control	\$18,422
WRF	04	Remove Canopy and Monorail at MBR	\$(185,434)
WRF	05	Consolidate Chemical Facilities	\$218,978
WRF	06	Modify Chemical Piping	\$(15,856)
WRF	07	Remove Solids Dumpster Lid	\$14,543
WRF	08	Add SAFE Equalization Tank	\$504,116
WRF	09	Instrumentation and Control Changes	\$75,266
WRF	10	Revise Maintenance Building Layout and Size	\$748,431
WRF	11	Influent Piping and Metering	\$411,766
WRF	12	Install Outdoor-Rated Positive Displacement Blowers at BNR Facility	\$(58,210)
WRF	13	Remove Bypass of Coarse Screens	\$(37,137)
WRF	14	SAFE Diversion Box Additions	\$58,304
WRF	15	Size Dewatering as a Building in the Future	\$30,983
WRF	16	Stairs for the Coarse Screens and Grit Basins (total of 4)	\$52,870
WRF	17	IPR Product Water Tank Bypass	\$(26,087)
Total			\$1,867,907

3.6 Reimbursement from Funding Agencies

In 2017, the City was awarded a \$10.3 million planning loan from the CWSRF. To date, the City has only applied for a single reimbursement request. A summary of these requests are summarized in Table 11.

Table 11 Summary of Reimbursement Requests

Agency	Description	Date	Value
State	CWSRF Planning Loan	December 2018	\$217,441
Total			\$217,441

Section 4

PROJECT SCHEDULE

A summary of the Project schedule is presented in Figure 2. The light blue bars for each major task represent the planned progress based on the re-baselined schedule developed at the end of March 2019. The dark blue bars represent the current actual progress as of June 2019. For each major line item, the schedule performance index (SPI) has been provided as well as an overall SPI for the entire Project. The SPI is a ratio of the planned percent complete versus the current actual percent complete. A SPI of greater than 1.00 indicates that the Project is on or ahead of schedule and a SPI of less than 1.00 indicates the Project is running behind the planned schedule.

4.1 Project Milestones

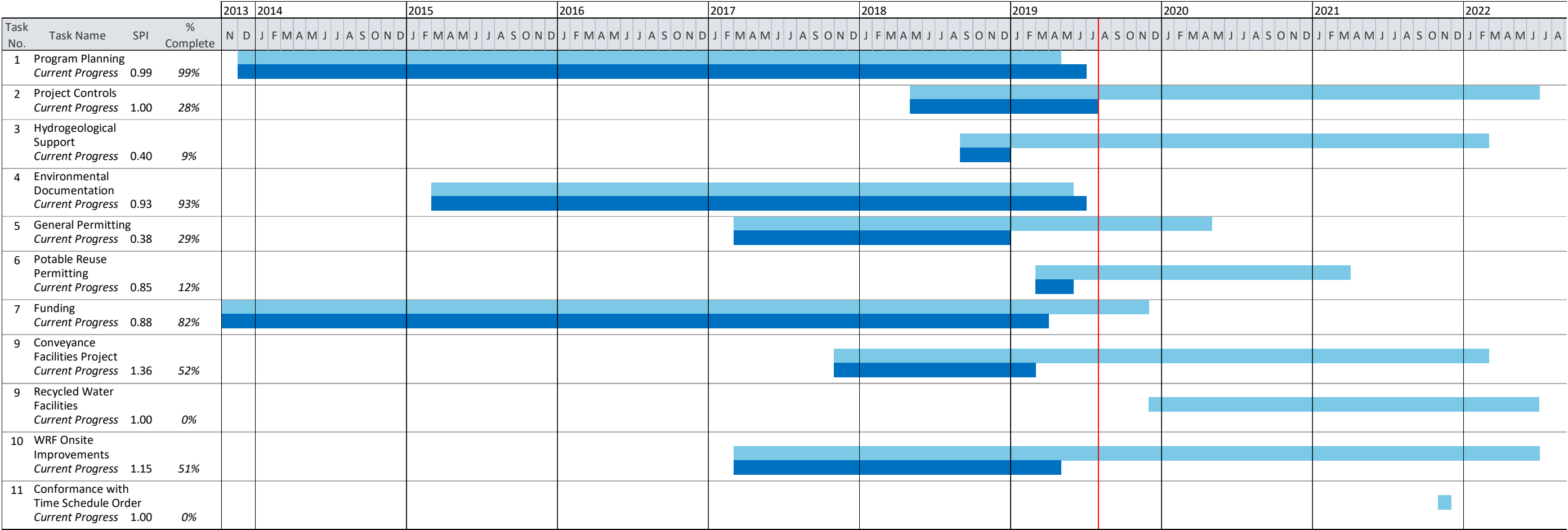
In June 2018, the City received a TSO from the RWQCB. The TSO requires the City to comply with a time schedule that will, within five years of adoption, allow the City to achieve full compliance with biochemical oxygen demand (BOD) and total suspended solids (TSS) final effluent limitations established in Order No. R3-2017-0050. In addition to the final compliance date, a number of intermediate milestones are provided in Table 3 (Compliance Schedule) of the TSO. Presented in Table 12 are the milestones in the TSO.

Table 12 Project Construction Milestones

Required Actions	Compliance Due Date	Planned Compliance Date	Actual Compliance Date
Release of Public Draft EIR	March 30, 2018	-	March 30, 2018
Release of Updated Rate Study	June 30, 2018	-	July 05, 2018
Proposition 218 Hearing	August 30, 2018	-	September 11, 2018
Certification of Final EIR	June 30, 2018	-	August 14, 2018
Award of Contract for WRF	September 30, 2018	-	October 23, 2018
Develop, Implement, and Submit Pollution Prevention Plan (PPP) for BOD and TSS	December 01, 2018	TBD ⁽¹⁾	-
Award of Contract for Construction of Conveyance Facilities	November 30, 2019	July 22, 2020	-
Completion of WRF Improvements with Completion Report	December 30, 2022	November 30, 2021	-
Full compliance with final effluent limitations	February 29, 2023	November 30, 2021	-

Notes:

- (1) The City and Program Manager have noted this requirement in the previous quarterly progress reports sent to the RWQCB (as required by the TSO). The City has requested that the Enhanced Source Control Program required as part of the Title 22 Engineer's Report be considered acceptable for this requirement in lieu of the PPP identified in the TSO.



Project SPI: 0.86
Program % Complete: 56%

Figure 2 Project Milestone Summary

Section 5

DESIGN AND PROCUREMENT

5.1 Design Status

No new design contracts for the Project were executed in Q4 Fiscal Year 2018/2019. A summary of the existing design contracts is included in Table 13 below.

Table 13 Procurement Status (through June 2019)

Project Name	Initial Contract Amount	Amount Expended	30%	60%	90%	Final
WRF	\$4,821,229	\$3,163,060	✓			
Conveyance Facilities	\$1,170,894	\$744,502	✓			
Recycled Water Facilities	\$0	\$0				

5.2 Procurement

No design or design-build contract procurements were performed in Q4 FY 18/19. Table 14 presents a summary of the procurement activity for the Project.

Table 14 Procurement Status (through June 2019)

Project Name	Circulate Request for Proposals	Proposal Opening Date	Council Award Date	Notice to Proceed Date	Consultant
WRF	January 24, 2018	May 08, 2018	October 23, 2018	November 01, 2018	Overland Contracting (Filanc-Black & Veatch)
Conveyance Facilities	January 31, 2017	March 08, 2017	November 14, 2017	November 15, 2017	Water Works Engineers
Recycled Water Facilities	Design Engineer to be Selected in Winter 2019				

Section 6

CONSTRUCTION STATUS

6.1 Construction Summary

During Q4 Fiscal Year 2018/2019, design activities were started for the design-build component of the Project. However, construction for the WR is not anticipated until August/September 2019. Table 15 presents a summary of project construction progress and costs through June 2019.

Table 15 Project Construction Costs

Project Name	Amount Expended	Initial Contract Amount	Current Contract Amount	% Change in Contract Amount
WRF	\$0	\$62,413,335	\$64,281,242	3.0%
Conveyance Facilities	\$0	\$0	\$0	0%
Recycled Water Facilities	\$0	\$0	\$0	0%
Construction Total	\$0	\$62,413,335	\$64,281,242	3.0%

6.2 Upcoming Traffic Control

6.2.1 Planned Impacted Areas

6.2.2 Hours of Planned Lane/Road Closures

6.3 Construction Safety

The Project safety goal is zero reportable incidents. There have been a total of zero reported incidents through June 2019.

Section 7

OTHER PROGRAM ACTIVITIES

7.1 Public Outreach

Current public outreach activities include:

- Continued re-branding activities.
- Prepared material to accompany the June and July water and wastewater utilities bills prior to the rate increases taking affect for July usage (receipt in early August).
- Developed a rate calculator to allow both residential and commercial customers to evaluate their new water and wastewater rates.
- Completed miscellaneous updates to the Project website.

7.2 Permitting Activities

Permit compliance is an important aspect of the Project. The current permitting activities include:

- Began developing the Enhanced Source Control Program (ESCP) required by the Division of Drinking Water (DDW) for potable reuse projects.
 - Completed the Industrial Waste Survey (IWS) and sent it to approximately 200 local businesses.
- Consultation with SHPO is needed for compliance with the National Environmental Policy Act (NEPA) required to secure WIFIA and CWSRF funding.
 - Completed the necessary additional architectural and archeological field work within the area of potential effect (APE) are currently being planned.
- In order to capture changes to the project identified since the certification of the FEIR, ESA continued development of the addendum.
 - While not required by the California Environmental Quality Act (CEQA), the FEIR Addendum will be circulated, per direction from CWSRF staff, and will go to City Council in August 2019.
- The Project CDP is on the July 11, 2019 CCC meeting agenda in San Luis Obispo.

7.3 Funding Status

- Coordination with WIFIA staff to facilitate the environmental review and finalize loan terms.
- Continued coordination with Kestrel and the United States Bureau of Reclamation (USBR) regarding the draft crosswalk document for the Title XVI Grant Program previously delivered in early 2018.

7.4 City Operations Activity

The current City Operations activities include:

- Significant City Operations activities are not anticipated until start-up of the WRF begins in June 2021.

Section 8

PROJECT DETAILS

8.1 Water Reclamation Facility

8.1.1 Design/Build

In October 2018, the City executed a contract with Overland Contracting consisting of a joint venture of Filanc and Black & Veatch (i.e., design-build team) for design and construction of the WRF located at the South Bay Boulevard site. The WRF will be delivered using the design-build process.

8.1.2 Project Scope

The scope of this element of the Project includes a preliminary, secondary, and advanced treatment facilities. The secondary treatment processes will consist of a MBR and have the ability to exceed the anticipated discharge requirements for the City's new National Pollution Discharge Elimination System (NPDES) permit. The advanced treatment facilities include RO and UVAOP. Purified water from the advanced treatment facilities will be injected into the Lower Morro Groundwater Basin.

8.1.3 Current Progress

The design-build team delivered an internal draft of the Basis of Design Report (BDR) in February 2019. The Draft BDR was presented to the WRFCAC and City Council in May 2019. In addition to the Draft BDR review, City staff and the Program Manager presented seventeen (17) PCOs to WRFCAC and City Council that increased the GMP by approximately \$1.9 million.



8.1.4 Upcoming Activities

The next step in the design-build process is procurement and the start of construction. In addition to these items, the design-build team is continuing to advance the design and is planning to deliver the 60 percent submittal in late July 2019.

8.1.5 Project Challenges

The goal is to move this element of the Project into construction as soon as possible. At this time, two items are on the critical path for WRF construction. These include issuance of a CDP by the CCC (anticipated July 2019) and completion of the SHPO consultation process.

Table 16 WRF Performance Measures

Performance Measures	Target	Current	Status
Construction Cost ⁽¹⁾	\$62.4M	\$64.3M	
Change Order Cost	\$6.2M	\$4.3M	

Notes:

(1) Project budget and current contract amount (≤5% over target = Yellow, >5% over target = Red).

Table 17 WRF Construction Summary

Schedule					
Request for Bid / Bid Advertisement	January 24, 2018				
Bid Opening Date	May 08, 2018				
Contract Award / Council Award Date	October 23, 2018				
Notice to Proceed for Construction	NA				
Original Final Completion Date	June 09, 2022				
Original Duration (Non-Working Days)	1,316				
Days Changed by Change Order	0				
Actual Final Completion Date (including Non-Working Days)	June 28, 2022				
Schedule Percent Complete	19%				
Budget					
Engineer's Estimate (Construction Cost + 10% Construction Contingency)	\$68,654,668				
Award Amount (excludes Design Cost)	\$62,413,335				
Change Order Total	\$1,867,907				
Current Contract Value	\$64,281,242				
Percent Change	3.0%				
Work Completed					
Actual Cost -to-Date	\$0				
Percent Complete (Percent Expended)	0%				
Construction Management Statistics					
	RFIs	Submittals	PCOs	COs	NOPCs
Total Received	0	0	30	17	0
Total Responded To	0	0	17	17	0
Total Pending	0	0	1	0	0
Average Turnaround (calendar days)	0	0	N/A	N/A	N/A

Acronym List:

- (1) RFI – Request for Information
- (2) PCO – Proposed Change Order
- (3) CO – Change Order
- (4) NOPC – Notice of Potential Claim

8.2 Conveyance Facilities

8.2.1 Designer

In November 2017, the City executed a contract with Water Works Engineers (WWE) for design and engineering support for the facilities necessary to connect the existing WWTP and the new WRF.

8.2.2 Contractor

This element of the Project is being delivered via a conventional design-bid-build procurement process. The Conveyance Facilities are currently under design and will begin construction in the summer of 2020.

8.2.3 Project Scope

The Conveyance Facilities originally included the design of approximately 3.5 miles of pipelines and a lift station located near the existing WWTP. The pipelines include two raw wastewater forcemains and a wet weather/brine discharge forcemain. Several changes to the Conveyance Facilities have occurred since the contract was executed with WWE including the addition of a second, smaller lift station near the intersection of Main Street and Highway 1 and the addition of the potable reuse forcemain to either the east or west injection site.

8.2.4 Current Progress

WWE, City staff, and Carollo presented the preferred lift station orientation (dual) and the recommended pipeline alignment (west of Highway 1 along Quintana Road) to WRFCAC and the City Council in December 2018 and January 2019, respectively. An internal draft of the Concept Design Report (CDR) was also delivered to staff in February 2019. In June 2019, WWE, City staff, and the Program Manager presented the Final-Draft CDR to both WRFCAC and City Council. WWE has started the development of the 60 percent design submittal at this time.






8.2.5 Upcoming Activities

WWE has been working to complete the field work necessary to complete the 60 percent design submittal over the last several months. These activities include surveying and geotechnical investigations. These activities must be completed before the 60 percent design submittal can be completed in late August 2019.

8.2.6 Project Challenges

Access to private property has caused delays in this element of the property. Over the past several months, access to the PG&E and Vistra properties has been possible and much of the field work needed to advance the design of the Conveyance Facilities has been completed.

Table 18 Conveyance Facilities Performance Measures

Performance Measures	Target	Current	Status
Construction Cost ⁽¹⁾	\$0.0M	\$0.0M	
Change Order Cost	\$0.0M	\$0.0M	
Number of Feet of Pipelines Constructed	18,500 LF	0 LF	
Number of Days of Full Road Closures	0 Days	0 Days	
Number of Hours of Night Work	0 Hours	0 Hours	

Notes:

(1) Project budget and current contract amount - (≤5% over target = Yellow, >5% over target = Red)

Table 19 Conveyance Facilities Summary

Schedule					
Request for Bid / Bid Advertisement				NA	
Bid Opening Date				NA	
Contract Award / Council Award Date				NA	
Notice to Proceed for Construction				NA	
Original Final Completion Date				NA	
Original Duration (Non-Working Days)				NA	
Days Changed by Change Order				0	
Actual Final Completion Date (including Non-Working Days)				NA	
Schedule Percent Complete				0%	
Budget					
Engineer's Estimate (Construction Cost + 10% Construction Contingency)				\$27,036,635	
Award Amount				\$0	
Change Order Total				\$0	
Current Contract Value				\$0	
Percent Change				0%	
Work Completed					
Actual Cost -to-Date				\$0	
Percent Complete (Percent Expended)				0%	
Length of Pipe Installed (actual to date / planned total)				0 LF / 18,500 LF	
Construction Management Statistics					
	RFIs	Submittals	PCOs	COs	NOPCs
Total Received	0	0	0	0	0
Total Responded To	0	0	0	0	0
Total Pending	0	0	0	0	0
Average Turnaround (calendar days)	0	0	N/A	N/A	N/A

Acronym List:

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8.3 Recycled Water Facilities

8.3.1 Designer

Procurement activities for the designer for the Recycled Water Facilities have not yet been started, but it is anticipated that design will begin in early 2020 following completion of the Phase 1, Phase 2, and Phase 3 hydrogeological work by GSI.

8.3.2 Contractor

This element of the Project is being delivered via a conventional design-bid-build procurement process. The Recycled Water Facilities are currently under design and will begin construction in the spring of 2020.

8.3.3 Project Scope

Since the potable reuse pipeline from the WRF to the selected injection site was moved into WWE's scope for design of the Conveyance Facilities, this element of the Project consists primarily of full-scale injection wells at either the west or east injection sites.

8.3.4 Current Progress

Phase 1 of GSI's hydrogeological was completed and presented to WRFCAC and City Council in May 2019. GSI is in the process of completing the Phase 2 work which consists of identifying the preferred injection location (west and/or east) and refining the groundwater travel time to the existing Morro wellfield. During the last several months, GSI completed the cone penetration tests (CPTs) at Silver City Resort and pump testing at an existing well on Errol Street in order to characterize the east injection location.




8.3.5 Upcoming Activities

GSI is currently working on Phase 2 and City staff and the Program Manager are working to provide access to the Vistra property to facilitate siting of the pilot injection wells or using the existing Morro Bay Mutual Water Company wells for pump testing.

8.3.6 Project Challenges

As mentioned previously, access challenges for the Vistra property are also preventing the Recycled Water Facilities from advancing through Phase 3. A work plan was submitted to Vistra in May 2019, and it is anticipated that characterization of the west injection area will begin shortly after receipt of the CDP for the Project.

Table 20 Recycled Water Facilities Performance Measures

Performance Measures	Target	Current	Status
Construction Cost (1)	\$0.0M	\$0.0M	
Change Order Cost	\$0.0M	\$0.0M	
Selection of the Injection Site	October 15, 2019	NA	

Notes:

(1) Project budget and current contract amount - ($\leq 5\%$ over target = Yellow, $> 5\%$ over target = Red)

Table 21 Recycled Water Facilities Summary

Schedule					
Request for Bid / Bid Advertisement					NA
Bid Opening Date					NA
Contract Award / Council Award Date					NA
Notice to Proceed for Construction					NA
Original Final Completion Date					NA
Original Duration (Non-Working Days)					NA
Days Changed by Change Order					0
Actual Final Completion Date (including Non-Working Days)					NA
Schedule Percent Complete					0%
Budget					
Engineer's Estimate (Construction Cost + 10% Construction Contingency)					\$3,300,000
Award Amount					\$0
Change Order Total					\$0
Current Contract Value					\$0
Percent Change					0%
Work Completed					
Actual Cost -to-Date					\$0
Percent Complete (Percent Expended)					0%
Work Completed					
	RFIs	Submittals	PCOs	COs	NOPCs
Total Received	0	0	0	0	0
Total Responded To	0	0	0	0	0
Total Pending	0	0	0	0	0
Average Turnaround (calendar days)	0	0	N/A	N/A	N/A

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