



City of Morro Bay  
Water Reclamation Facility Project

## QUARTERLY REPORT SEPTEMBER 2019

FINAL | October 2019







City of Morro Bay  
Water Reclamation Facility Project

## QUARTERLY REPORT SEPTEMBER 2019

FINAL | October 2019

This document is released for the  
purpose of information exchange review  
and planning only under the authority of  
Eric T. Casares,  
October 2019,  
State of California, P.E. 73351



## Contents

Section 1 - PROJECT OVERVIEW	1
1.1 General Project Status Update	1
1.2 Quarterly Budget Revision	4
Section 2 - PROJECT COSTS	5
2.1 Performance Measures	5
Section 3 - PROJECT COSTS	9
3.1 Project Budget	9
3.2 Project Cash Flow	9
3.3 Project Cost Summary	12
3.4 Detailed Project Costs	12
3.5 Change Orders	13
3.6 Reimbursement from Funding Agencies	14
Section 4 - PROJECT SCHEDULE	15
4.1 Project Milestones	15
Section 5 - DESIGN AND PROCUREMENT	21
5.1 Design Status	21
5.2 Procurement	21
Section 6 - CONSTRUCTION STATUS	23
6.1 Construction Summary	23
6.2 Upcoming Traffic Control	23
6.2.1 Planned Impacted Areas	23
6.2.2 Hours of Planned Lane/Road Closures	23
6.3 Construction Safety	23
Section 7 - OTHER PROGRAM ACTIVITIES	25
7.1 Public Outreach	25
7.2 Permitting Activities	25
7.3 Funding Status	26
7.4 City Operations Activity	26

Section 8 - PROJECT DETAILS	27
8.1 Water Reclamation Facility	27
8.1.1 Design/Build	27
8.1.2 Project Scope	27
8.1.3 Current Progress	27
8.1.4 Upcoming Activities	27
8.1.5 Project Challenges	27
8.2 Conveyance Facilities	28
8.2.1 Designer	28
8.2.2 Contractor	29
8.2.3 Project Scope	29
8.2.4 Current Progress	29
8.2.5 Upcoming Activities	29
8.2.6 Project Challenges	29
8.3 Recycled Water Facilities	30
8.3.1 Designer	30
8.3.2 Contractor	31
8.3.3 Project Scope	31
8.3.4 Current Progress	31
8.3.5 Upcoming Activities	31
8.3.6 Project Challenges	31

## Tables

Table 1	Project Accomplishments and Challenges	3
Table 2	Budget Revision Summary	4
Table 3	WRF Project Performance Measures	7
Table 4	WRF Project Overall Budget Status (thru September 2019)	9
Table 5	WRF Project Cost Fiscal Year Projections	11
Table 6	WRF Project Cost Summary (through September 2019)	12
Table 7	General Project Activities Cost Summary (through September 2019)	12
Table 8	WRF Cost Summary (through September 2019)	13
Table 9	Conveyance Facilities Cost Summary (through September 2019)	13
Table 10	Recycled Water Facilities Cost Summary (through September 2019)	13

Table 11	Summary of Approved Change Orders	14
Table 12	Summary of Reimbursement Requests	14
Table 13	Time Schedule Order Milestone Summary	15
Table 14	Expanded Milestone Schedule	19
Table 15	Procurement Status (through September 2019)	21
Table 16	Procurement Status (through September 2019)	21
Table 17	Project Construction Costs	23
Table 18	WRF Performance Measures	27
Table 19	WRF Construction Summary	28
Table 20	Conveyance Facilities Performance Measures	29
Table 21	Conveyance Facilities Summary	30
Table 22	Recycled Water Facilities Performance Measures	32
Table 23	Recycled Water Facilities Summary	32

## Figures

Figure 1	Project Cash Flow Projections and Actual Expenditures	10
Figure 2	Project Summary Schedule	17





## 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
CPUC	California Public Utilities Commission
CWSRF	Clean Water State Revolving Fund
DDW	Division of Drinking Water
Design Build Team	Filanc and Black & Veatch
EPA	Environmental Protection Agency
ESCP	Enhanced Source Control Program
ESDC	engineering service during construction
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
NOI	Notice of Intent
NPDES	National Pollution Discharge Elimination System
NTP	notice to proceed
PA	Programmatic Agreement
PCO	Potential Change Order
PPP	Pollution Prevention Program
Program Manager	Carollo Engineers
Project	Water Reclamation Facility Project
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
Vistra	Vistra Energy
WIFIA	Water Infrastructure Finance and Innovation Act
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.

During the last quarter, the design-build team and the pipeline designer delivered the 60- percent design deliverable for the WRF and Conveyance Facilities, respectively. The design-build team is currently working on the 90-percent design deliverable and just completed the final grading package for the South Bay Boulevard site. The 90-percent deliverable for the WRF will be delivered in November 2019. It should be noted that since the WRF portion of the Project is being delivered via a design-build model, construction will start prior to receipt of final plans and specifications. Construction is anticipated to start for the WRF at the end October 2019.

The pipeline designer has all the field investigation information (i.e., surveying and geotechnical) to complete the design of the Conveyance Facilities. Delays in access to property owned by Vistra Energy (Vistra) and PG&E have caused delays in the design schedule for this portion of the Project. The pipeline designer will deliver the 90-percent design deliverable to the City by the end of 2019/early 2020, and construction of the pipelines and pump stations will begin in July 2020.

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) staff and Clean Water State Revolving Fund (CWSRF) staff to meet the requirements necessary to begin construction of the WRF. All of these items are progressing to allow the City to begin construction before the end of October 2019. Of particular importance is the Section 106 consultation with the State Historic Preservation Office (SHPO). The City has delivered the programmatic agreement (PA) to SHPO and received comments back from them. The City will be meeting with SHPO in the next few weeks to discuss these comments with the goal of expediting the approval of the PA before the end of the month.

The City also anticipates receipt of the coastal development permit (CDP) from the California Coastal Commission (CCC) around mid-October 2019. On July 19, 2019, the City received the Notice of Intent (NOI) for the CDP, which contains sixteen special conditions. Four special conditions must be met prior to issuance of the CDP or prior to construction of the WRF including:

- Special Condition No. 1 - Final Plans and Specifications.
- Special Condition No. 2 - Construction Plan.

- Special Condition No. 6 - Recycled Water Management Plan.
- Special Condition No. 13 - Other Authorizations.

In the past month, the City has delivered drafts of the Final Plans and Specifications, Construction Plan, and Recycled Water Management Plan to CCC staff for review. Comments on those drafts have been received, and the City is now finalizing those plans for delivery to the CCC Executive Director for review and approval. The City is also working on Special Condition No. 13 at this time.

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

Table 1 Project Accomplishments and Challenges

Project Component	Key Accomplishments	Critical Challenges	Actions to Overcome Challenges	Likely Outcomes
<b>General Project</b>	Delivery of the Draft PA to SHPO			
<b>Water Reclamation Facility</b>	Delivery of the Draft Special Condition No. 1, 2, and 6 for the City's CDP to CCC staff	Issuing a construction notice to proceed (NTP) in late October 2019 for the WRF	Meeting the requirements from WIFIA and CWSRF to allow construction to begin	Failure to issue a NTP in October 2019 could result in increases to the design-build team's guaranteed maximum price (GMP)
<b>Conveyance Facilities</b>		Expediting completion of the final design for the Conveyance Facilities	Possible elimination of intermediate design deliverables	Further delays in the start of construction could impact the start-up of the WRF and delay compliance with the time schedule order (TSO)
		Receipt of easements necessary to construct the pipelines in the City's existing bike path	Work closely with Vistra, PG&E, and California Public Utilities Commission (CPUC) to obtain the easements	Delayed receipt of the easements could complicate or delay construction of the Conveyance Facilities
<b>Recycled Water Facilities</b>	Tabl	Schedule recovery due to issues access Vistra and PG&E property	Work with GSI to expedite the completion of the Phase 2 hydrogeology work	Without expediting the schedule, the completion of the injection wells will be delayed (does not impact compliance with the TSO)

## 1.2 Quarterly Budget Revision

The original \$126 million baseline budget was developed in June 2018 (Q4 Fiscal Year 2017/2018) and was used as the basis for the rate study prepared by Bartle Wells. At the beginning of each fiscal year, the budget is updated and used as the measure of performance for the Project during that upcoming fiscal year. The budget is then reviewed and reconciled on a quarterly basis so it can be compared to both the current fiscal year and baseline budgets. The next budget reconciliation will occur at the end of Q2 Fiscal Year 2019/2020 (December 31, 2019). A summary of the baseline, reconciled quarterly, and fiscal year budgets are summarized in Table 2. Subsequent budget reconciliations (quarterly) and fiscal year budgets (annual) will also be presented in this table for reference.

Table 2      **Budget Revision Summary**

Project Component	Baseline (Q4 FY 17/18)	Quarterly Reconciliation (Q3 FY 18/19)	Current Fiscal Year (Q4 FY 18/19)	Quarterly Reconciliation (Q1 FY 19/20)
Water Reclamation Facility	\$62,414,000	\$74,059,000	\$72,891,000	\$72,598,000
Conveyance Facilities	\$21,087,000	\$27,108,000	\$28,864,000	\$28,524,000
Recycled Water Facilities	\$8,593,000	\$5,366,000	\$5,250,000	\$5,212,000
General Program	\$24,403,000	\$11,614,000	\$11,801,000	\$11,625,000
Construction Contingency	\$9,444,000	\$6,450,000	\$7,132,000	\$7,131,000
<b>Total</b>	<b>\$125,941,000</b>	<b>124,597,000</b>	<b>\$125,938,000</b>	<b>\$125,090,000</b>

Changes to the Project budget since the completion of the fiscal year budget reconciliation in Q4 Fiscal Year 2018/2019 can be attributed to the following:

- Updated costs for the Conveyance Facilities component of the Project developed as part of the 60-percent design deliverable.

## 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 18/19)	Current (Q1 FY 19/20)	Delta	Status	🟢	🟡	🔴
<b>1: Total Project Costs</b>	Total Project Projected Cost at Completion versus the Baseline Budget (budget as of 9/30/19)	\$125.9 M	\$125.1 M	0.0%	🟢	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
<b>1.1: WRF Costs</b>	On Site WRF Projected Cost at Completion versus the Baseline Budget (budget as of 9/30/19)	\$77.3 M	\$77.0 M	0.0%	🟢	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
<b>1.2: Conveyance Facilities Costs</b>	Conveyance Facilities Projected Cost at Completion versus the Baseline Budget (budget as of 9/30/19)	\$31.3 M	\$31.0 M	-1.0%	🟢	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
<b>1.3: Recycled Water Facilities Costs</b>	Off Site Injection Facilities Projected Cost at Completion versus the Baseline Budget (budget as of 9/30/19)	\$5.6 M	\$5.5 M	-1.8%	🟢	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
<b>1.4: General Project Costs</b>	General Project Projected Cost at Completion versus the Baseline Budget (budget as of 9/30/19)	\$11.7 M	\$11.6 M	-0.9%	🟢	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
<b>2: Program Manager Earned Value</b>	Ratio of Program Manager Earned Value to Actual Invoiced Cost-to-Date (as of 9/30/19)	1.00	0.97	-0.03	🟡	>= 1.00	0.99 to 0.90	< 0.90
<b>3: Schedule Performance Index<sup>(1)</sup></b>	Ratio of Planned Percent Complete to Actual Percent Complete (as of 9/30/19)	1.00	0.90	-0.10	🟡	>=1.00	0.99 to 0.80	<0.80
<b>4: Conveyance Pipeline Installed</b>	Feet of conveyance pipeline installed (thru 9/30/19)	18,500 LF	0.0 LF	0.0%	🟢	<= 5%	> 5% and <=7.5%	> 7.5%
<b>5: Compliance Date Countdown</b>	Days Remaining to Compliance Date (as of 9/30/19)	1,247 days	821 days	-426 days	🟢	<= 365 days	364 days and 180 days	> 179 days

Notes:

(1) 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 September 2019)

Summary of Total WRF Project Cost	
Original Baseline WRF Project Budget <sup>(1)</sup>	\$125,941,000
Current Fiscal Year WRF Project Budget (as of 6/30/19) <sup>(2)</sup>	\$125,884,000
Current WRF Project Budget (as of 9/30/19) <sup>(3)</sup>	\$125,090,000
Budget Percent Change (Current versus Fiscal Year)	-0.6%
Total Expenditures for September 2019 <sup>(4)</sup>	\$218,251
Total Expenditures to Date (thru 9/30/19 invoices)	\$13,047,249
Percent of Current WRF Project Budget Expended	10.43%
Summary of Contracted Work	
Total Contracted Amount	\$77,941,901
Percent of Current WRF Project Budget Contracted	62.3%
Total Contracted Amount Expended	\$11,358,230
Percent of Contracted Amount Expended	14.6%
Remaining WRF Project Contracted Amount	\$66,583,671

Notes:

- (1) Developed in June 2018 as the basis of the approved rate surcharge that took effect in July 2019.
- (2) The budget for the Project is reviewed on an annual basis at the end of each fiscal year (June 30th) and is used as the basis of performance for the Project for the upcoming fiscal year.
- (3) The Project budget is reconciled on a quarterly basis and compared to the current fiscal year budget (i.e., September 30th, December 31st, and March 31st)
- (4) Monthly expenditure is significantly less than expected due to the timing of the preparation of this report. Monthly expenditures do not include invoices from the design-build team (Overland Contracting) or Program Manager (i.e., Carollo).

### 3.2 Project Cash Flow

Figure 1 presents the projected and actual expenditures for the Project through October 2019 compared to the Fiscal Year 2019/2020 budget developed at the end of Q4 Fiscal Year 2018/2019. 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 2018/2019 have been combined to improve readability. Milestones have been added to the cumulative fiscal year budget and cumulative forecasted expenditures to show changes in the Project schedule that have occurred between development of the fiscal year budget from June

2019 and the current, reconciled budget developed at the end of September 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. It should be noted that the cash flow in Figure 1 reflects the latest schedule revisions as a result of delays in completion of the hydrogeological work due to issues with access to the Vistra property and delays in receipt of the CDP. While compliance with the TSO has not changed since last quarter, completion of construction of the injection wells has been delayed.

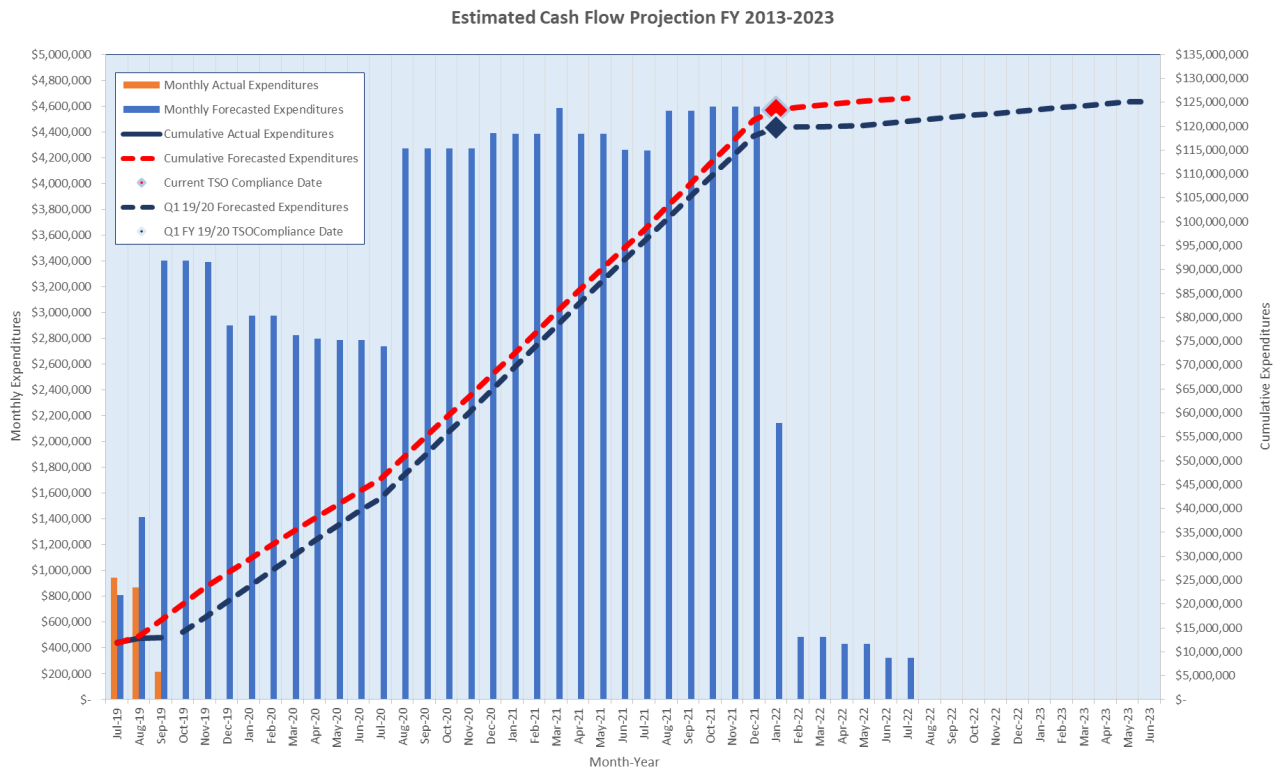


Figure 1 Project Cash Flow Projections and Actual Expenditures

A breakdown of the current Q1 Fiscal Year 2019/2020 budget by fiscal year is included in Table 5.

Table 5 WRF Project Cost Fiscal Year Projections

Project	Actual Expenditures to Date	Remainder FY 19/20	FY 20/21	FY 21/22	FY 22/23	Total Project
General Project	\$5,767,000	\$1,838,000	\$933,000	\$882,000	\$809,000	\$11,625,000
WRF	\$4,558,000	\$22,949,000	\$33,160,000	\$16,305,000	\$-	\$76,972,000
Conveyance Facilities	\$1,018,000	\$1,016,000	\$17,803,000	\$11,144,000	\$-	\$30,981,000
Recycled Water Facilities	\$308,000	\$449,000	\$380,000	\$633,000	\$3,742,000	\$5,512,000
<b>Total</b>	<b>\$11,651,000</b>	<b>\$26,252,000</b>	<b>\$52,276,000</b>	<b>\$28,965,000</b>	<b>\$4,550,000</b>	<b>\$125,090,000</b>

Notes:

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

### 3.3 Project Cost Summary

Table 6 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 6 WRF Project Cost Summary (through September 2019)

Project	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)	Total Project Cost (Est.) <sup>(1)</sup>	Cost Expended to Date (%)
General Project	\$5,767,000	\$6,429,000	89.7%	\$11,625,000	61.6%
WRF	\$4,558,000	\$69,102,000	6.6%	\$76,972,000	5.9%
Conveyance Facilities	\$1,018,000	\$2,052,000	49.6%	\$30,981,000	3.3%
Recycled Water Facilities	\$308,000	\$358,000	86.0%	\$5,512,000	5.6%
<b>Total<sup>(2)</sup></b>	<b>\$11,651,000</b>	<b>\$77,942,000</b>	<b>14.9%</b>	<b>\$125,090,000</b>	<b>10.4%</b>

Notes:

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

(2) Actual total expenditures are equal to \$13,047,000 (Table 4), but includes \$1,396,000 of City costs (i.e., labor, expenses, etc.)

### 3.4 Detailed Project Costs

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

Table 7 General Project Activities Cost Summary (through September 2019)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
ESA	\$412,080	\$412,920	99.8%
Far Western	\$110,383	\$124,644	88.6%
Kestrel	\$187,488	\$219,872	85.3%
JoAnn Head Land Surveying	\$96,568	\$102,644	94.1%
JSP Automation	\$21,778	\$63,500	34.3%
Carollo Engineers, Inc.	\$1,381,041	\$1,898,844	72.7%
<b>Total</b>	<b>\$2,209,336</b>	<b>\$2,822,424</b>	<b>78.3%</b>

Notes:

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

Table 8 WRF Cost Summary (through September 2019)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
Overland Contracting	\$4,557,743	\$69,102,470	6.6%
<b>Total</b>	<b>\$4,557,743</b>	<b>\$69,102,470</b>	<b>6.6%</b>

Notes:

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

Table 9 Conveyance Facilities Cost Summary (through September 2019)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
Water Works Engineers (WWE)	\$1,018,474	\$2,052,387 <sup>(2)</sup>	49.6%
<b>Total</b>	<b>\$1,018,474</b>	<b>\$2,052,387</b>	<b>49.6%</b>

Notes:

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

(2) Contracted amount includes the recent amendment with a value of \$691,822 approved by City Council during Q1 Fiscal Year 2019/2020

Table 10 Recycled Water Facilities Cost Summary (through September 2019)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
GSI	\$202,002	\$351,000	57.6%
Middle Earth	\$6,570	\$6,810	96.5%
<b>Total</b>	<b>\$208,572</b>	<b>\$357,810</b>	<b>58.3%</b>

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). No new change orders were approved in Q1 FY 2019/2020. The seventeen (17) approved change orders are summarized in Table 11.

Table 11 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)
<b>Total</b>			<b>\$1,867,907</b>

### 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 12.

Table 12 Summary of Reimbursement Requests

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



## 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 baseline schedule. The dark blue bars represent the current actual progress as of September 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 13 are the milestones in the TSO.

Table 13 Time Schedule Order Milestone Summary

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 <sup>(1)</sup>	-
Award of Contract for Construction of Conveyance Facilities	November 30, 2019	July 31, 2020	-
Completion of WRF Improvements with Completion Report	December 30, 2022	December 29, 2021	-
Full compliance with final effluent limitations	February 29, 2023	December 29, 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.



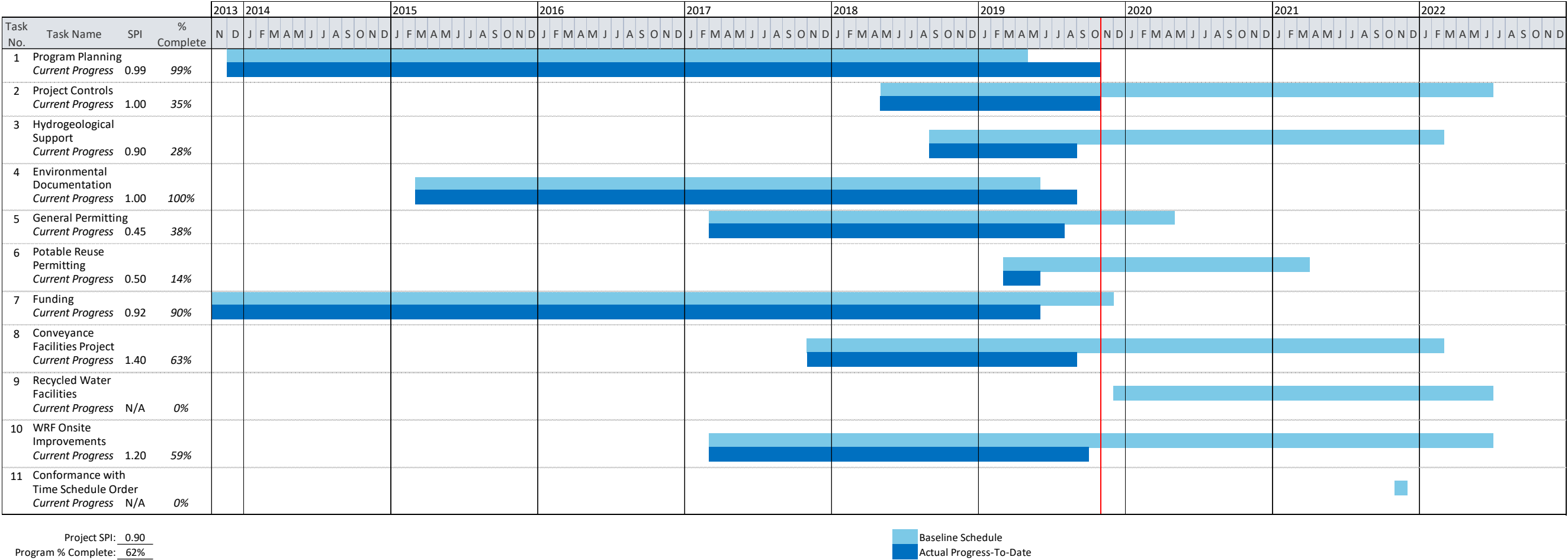


Figure 2 Project Summary Schedule



An expanded milestone schedule has also been developed for outstanding Project activities.

Table 14 Expanded Milestone Schedule

Milestone	Baseline Schedule due Date	Planned Completion Date
<b><u>General Project</u></b>		
Compliance with the TSO <sup>(1)</sup>	November 11, 2021	December 29, 2021
<b><u>Water Reclamation Facility</u></b>		
Begin Construction	August 08, 2019	October 22, 2019
Deliver 90 Percent Design	October 24, 2019	November 12, 2019
Substantial Completion	November 11, 2021	December 29, 2021
Final Completion	June 09, 2022	July 12, 2022
<b><u>Conveyance Facilities</u></b>		
Deliver 90 Percent Design	October 15, 2019	December 31, 2019
Deliver 100 Percent Design	December 17, 2019	March 10, 2020
Bid Advertisement	February 21, 2020	May 15, 2020
Award Construction Contract	May 08, 2020	July 31, 2020
Substantial Completion	September 17, 2021	December 07, 2021
Final Completion	November 19, 2021	February 08, 2022
<b><u>Recycled Water Facilities</u></b>		
Select Preferred Injection Area	May 28, 2019	December 20, 2019
Deliver 30 Percent Design	August 04, 2020	June 11, 2021
Deliver 60 Percent Design	November 10, 2020	September 07, 2021
Deliver 90 Percent Design	February 16, 2021	December 24, 2021
Deliver 100 Percent Design	April 27, 2021	March 04, 2022
Award Construction Contract	July 21, 2021	May 30, 2022
Substantial Completion	April 21, 2022	February 28, 2023
Final Completion	June 21, 2022	April 28, 2023

Notes:

(1) The TSO requires compliance with full secondary treatment by February 28, 2023.



## Section 5

# DESIGN AND PROCUREMENT

### 5.1 Design Status

No new design contracts for the Project were executed in Q1 Fiscal Year 2019/2020. A summary of the existing design contracts is included in Table 15 below.

Table 15 Procurement Status (through September 2019)

Project Name	Current Contract Amount	Amount Expended	30%	60%	90%	100%	Final
WRF	\$4,821,229	\$4,557,744	✓	✓		NA	
Conveyance Facilities <sup>(1)</sup>	\$1,869,707	\$1,018,475	✓	✓			
Recycled Water Facilities	\$0	\$0					

Notes:

(1) As stated previously, the total value of the Water Works Engineers contract is \$2,052,387, but includes \$182,680 for engineering services during construction (ESDC).

### 5.2 Procurement

No design or design-build contract procurements were performed in Q1 FY 2019/2020. Table 16 presents a summary of the procurement activity for the Project.

Table 16 Procurement Status (through September 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 2020





## Section 6

# CONSTRUCTION STATUS

### 6.1 Construction Summary

During Q1 Fiscal Year 2019/2020, design activities continued for the WRF component of the Project. However, construction for the WRF is not anticipated until late October 2019. Table 17 presents a summary of project construction progress and costs through October 2019.

Table 17 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%
<b>Construction Total</b>	<b>\$0</b>	<b>\$62,413,335</b>	<b>\$64,281,242</b>	<b>3.0%</b>

### 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 September 2019.



## Section 7

# OTHER PROGRAM ACTIVITIES

### 7.1 Public Outreach

In late summer, an information line was set up for the Project to field community inquiries and is monitored daily. To date, 20 inquiries have been received, and most have been requests for information about the new rates. New outreach materials, including a project map and fact sheet, have also been developed to support communication efforts.

To coincide with the completion of the 60-percent design deliverable for the Conveyance Facilities, businesses along the pipelines alignment were contacted by phone to schedule one-on-one meetings with members of the Program Management team (Conveyance Facilities Project Manager and Public Outreach Lead). The purpose of the one-on-one meetings was to give businesses a status update and gather business access and operations information that can help inform the development of construction work restrictions and traffic control guidelines.

To date, nearly 40 meetings with Quintana businesses have been conducted. Important information gathered includes parking information, driveway access and off-street circulation, large delivery/pick-up vehicle scheduling, hours of operation and peak business times, types of customer traffic (i.e., appointments and walk-ins, vehicle and pedestrian) and point of contact verification. So far, the discussions have been constructive and positive. Many businesses were thankful for a Project status update and want to work with the Project team on this up-front information gathering effort and during construction. Many businesses requested more regular communication. To date, all businesses had heard about the Project.

The City and Program Manager will continue to meet with businesses and the Chamber of Commerce representatives to gather information through October 2019. The information gathered will be incorporated into the Conveyance Facilities final design submittal that will be completed by the end of 2019. In January 2020, the Conveyance Facilities Project Manager and Public Outreach Lead will report back to businesses and the Chamber of Commerce about the established construction work restrictions, traffic control configurations and final design elements.

### 7.2 Permitting Activities

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

- Continued developing the Enhanced Source Control Program (ESCP) required by the Division of Drinking Water (DDW) for potable reuse projects.
  - Received results of the Industrial Waste Survey (IWS) from approximately half of the 200 local businesses that were contacted.
- Consultation with SHPO is needed for compliance with the National Environmental Policy Act (NEPA) required to secure WIFIA and CWSRF funding.

- Delivered the draft PA to SHPO in September 2019 and meeting with them in October 2019 to expedite the start of construction for the WRF portion of the Project.
- In order to capture changes to the project identified since the certification of the FEIR, ESA completed the addendum in Q1 Fiscal Year 2019/2020.
  - While not required by the California Environmental Quality Act (CEQA), the FEIR Addendum was circulated, per direction from CWSRF staff, and was received by the City Council in September 2019.

### 7.3 Funding Status

- Coordination with WIFIA staff to facilitate the environmental review and finalize loan terms by fall 2019.
- Coordination with CWSRF staff to facilitate the environmental, technical and financial review. The City anticipates signing a loan with CWSRF in spring 2020.
- Began development of the project report for the United States Bureau of Reclamation (USBR) Title XVI Grant Program. The City plans to apply for the Title XVI Grant Program in 2020.

### 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 the 60-percent design deliverable in August 2019. The City also worked with the design-build team to select Suez as the preferred membrane bioreactor (MBR) for the Project.



#### 8.1.4 Upcoming Activities

The next step in the design-build process is the start of construction. In addition, the design-build team is continuing to advance the design and is planning to deliver the 90 percent submittal in November 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 October 2019) and completion of the SHPO consultation process (anticipated October 2019).

Table 18 WRF Performance Measures

Performance Measures	Target	Current	Status
Construction Cost <sup>(1)</sup>	\$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 19 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)				July 13, 2022	
Schedule Percent Complete				22.7%	
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	53	17	0
Total Responded To	0	0	17	17	0
Total Pending	0	0	23	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. In June 2019, WWE, City staff, and the Program Manager presented the Final-Draft CDR to both WRFCAC and City Council. WWE delivered the 60 percent design submittal in September 2019.




### 8.2.5 Upcoming Activities

WWE completed the field work necessary to complete the final design during Q1 Fiscal Year 2019/2020. These activities include surveying and geotechnical investigations.

### 8.2.6 Project Challenges

Access to private property has caused delays in this element of the property. Access to the PG&E and Vistra properties is no longer an issue and the field work needed to advance the design of the Conveyance Facilities has been completed. The City is now working to secure the easements necessary to construct the pipelines in the City's existing bike path.

Table 20 Conveyance Facilities Performance Measures

Performance Measures	Target	Current	Status
Construction Cost <sup>(1)</sup>	\$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 21 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)					\$26,475,000
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%
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:

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

## 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 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

Since beginning work in November 2018, GSI has completed several of the tasks necessary to recharge 800 to 825 acre-feet per year of recycled water with a series of injection wells in the Lower Morro Groundwater Basin. To this end, GSI has:

- Installed groundwater monitoring devices in all of the City's active production wells and seawater wells.
- Utilized the numerical groundwater model of the Lower Morro Groundwater Basin for particle tracking and solute transport modeling.
- Characterized the eastern (Narrows) area of the basin with cone penetration testing, characterized the hydrogeologic characteristics of the Narrows area with installation of a monitoring well and conducting aquifer testing.
- Began coordination with Vistra for the evaluation of the western injection site.




### 8.3.5 Upcoming Activities

In the coming months, GSI will complete the evaluation of the western injection site, including aquifer testing, conducting a pilot injection testing program in coordination with the RWQCB and DDW requirements. This injection testing will occur over a period of several weeks and will include tracer, travel time and clogging analyses. Based on results of the injection testing and travel time analyses, the groundwater model will be updated, the results of which will be incorporated into a summary report, documenting the findings, conclusions and recommendations for full-scale injection well system. We anticipate completing this work by the end of September 2020.

### 8.3.6 Project Challenges

As mentioned previously, access challenges for the Vistra property have prevented 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 in November 2019.

Table 22 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	December 20, 2019	NA	

Notes:

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

Table 23 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

Acronym List:

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