



City of Morro Bay  
Water Reclamation Facility Project

## MONTHLY REPORT MAY 2020

FINAL | September 2020







City of Morro Bay  
Water Reclamation Facility Project

## MONTHLY REPORT OF PROJECT STATUS AND EXPENDITURES THROUGH MAY 2020

FINAL | September 2020

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July 2020  
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## Abbreviations

Bartle Wells	Bartle Wells Associates
BOD	Biochemical Oxygen Demand
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CPUC	California Public Utilities Commission
CWSRF	Clean Water State Revolving Fund
DBEs	disadvantaged business enterprises
DDW	Division of Drinking Water
EACs	Estimate at Completion
ESCP	Enhanced Source Control Program
GFE	good faith effort
GMP	Guaranteed Maximum Price
IFC	Issued for Construction
KPI	Key Performance Indicator
NTP	notice to proceed
PA	Programmatic Agreement
PCO	Potential Change Order
PPP	Pollution Prevention Program
PROJECT	Water Reclamation Facility Project
RO	Reverse Osmosis
RWQCB	Regional Water Quality Control Board
SAA	Stream Bed Alteration Agreement
SHPO	State Historic Preservation Office
SPI	Schedule Performance Index
TM	Technical Memorandum
TSO	Time Schedule Order
TSS	Total Suspended Solids
VISTRA	Vistra Energy
WRF	Water Reclamation Facility
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.

#### 1.1.1 Water Reclamation Facility

##### 1.1.1.1 Design

The design for the Water Reclamation Facility (WRF) was completed with the City Engineer's approval of the Issued for Construction (IFC) drawings and specifications for the WRF on May 22, 2020.

##### 1.1.1.2 Construction

Construction at the WRF site began shortly after the construction notice to proceed (NTP) was issued on March 20, 2020 by the City. Earthwork on the site continued since that time. The City and Program Manager have also continued to work with the California Department of Fish and Wildlife (CDFW) to obtain a Stream Bed Alteration Agreement (SAA) for an erosional feature on the site. The notification was submitted to CDFW in late March 2020. CDFW has committed to providing the City the Draft SAA by Monday, July 13, 2020. Once the City has obtained the Final SAA, the contractor can access the erosional feature area and commence with filling this area and advancing mass earthwork without any restrictions. The contractor plans to begin filling in the erosional feature area as early as Tuesday, July 14, 2020. The inability for the contractor to access the erosional feature area was unanticipated and has delayed earthwork and created inefficiencies (i.e., moving material multiple times). These delays and inefficiencies will result in the need for a potential change order (PCO) to extend the schedule and increase the guaranteed maximum price (GMP). Now that the date for Draft SAA is known, the contractor is preparing the PCO. Once the draft PCO is submitted, the City and Program Manager will review it, and begin negotiations before it is presented to City Council.

The City reported on the crack or separation on the southern tip of the slope being excavated that occurred on May 05, 2020 in the April 2020 Monthly Report. Since that time, the design-build team has completed the revised grading design. The revised grading design is currently being reviewed by the Program Manager, and once the design is finalized, it will be sent to the California Coastal Commission (CCC). The design-build team is currently developing a cost estimate for the impacts of the soil slip. The construction cost to remove the soil slip material and stockpile it alone has been estimated at \$300,000. The cost for the work done by the design-build team's geotechnical engineer and the re-design costs are currently being estimated by the design-build team. It is anticipated that the overall cost of the soil slip will be in the \$500,000 range. However, who bears the responsibility for the costs (i.e., City vs. design-build team) has not yet been determined. The City maintains that the design-build team is responsible for these costs and is still awaiting a memorandum outlining the design-build team's position.

## 1.1.2 Conveyance Facilities

### 1.1.2.1 Design

The design was completed in late May 2020 with the delivery of the final drawings and technical specifications to the City.

### 1.1.2.2 Construction

The Conveyance Facilities component of the Project was advertised for bidding on June 16, 2020. The pre-bid meeting was held virtually on July 07, 2020. Originally, bids were to be opened on July 28, 2020. However, following the pre-bid meeting, the decision was made to extend the bidding period to ensure all contractors have ample time to complete the good faith efforts (GFEs) for disadvantaged business enterprises (DBEs). This requirement is one of the Federal cross-cutters and failing to meet this requirement could make a bid non-responsive. The City still anticipates awarding this component of the Project on September 22, 2020.

## 1.1.3 Recycled Water Facilities

### 1.1.3.1 Design

The Project's hydrogeologist (GSI Water Solutions [GSI]) delivered the Draft Phase 2 (Characterization) Technical Memorandum (TM) in March 2020. The City received the Final TM on June 17, 2020. The City and Program Manager will present the results to PWAB at their regularly-scheduled August meeting.

Following delivery of the Final TM, GSI began developing alternative modeling scenarios focused on reducing the amount of water initially injected and extracted to maximize groundwater travel times and make initial permitting of the Project with the Division of Drinking Water (DDW) easier. GSI should have the results of these additional modeling scenarios for presentation to PWAB in August 2020.

Table 1 summarizes some of the key accomplishments and critical challenges identified for the Project through July 07, 2020.

Table 1 Project Accomplishments and Challenges

Project Component	Key Accomplishments	Critical Challenges	Actions to Overcome Challenges	Likely Outcomes
General Project	Continued to support the review of the City's construction loan application by the Clean Water State Revolving Fund (CWSRF) staff.			
	Continued advancing construction on the South Bay Boulevard site.			
Water Reclamation Facility		A soil slip on the site occurred with a volume of approximately 15,000 cubic yards that has resulted in additional work for the design-build team	Negotiate with the design-build team to determine responsibility and minimize the financial impacts from dealing with the soil slip.	Pending the result of the negotiations with the design-build team, the soil slip could result in a future PCO.
		Complete the permitting process with CDFW.	Continue to coordinate with CDFW staff to facilitate review. CDFW has committed to delivering the Draft SAA by July 13, 2020.	Avoidance of certain areas on the WRF site is causing construction inefficiencies that will result in a future PCO. The sooner the City receives the Draft SAA, the smaller the magnitude of the PCO.
Conveyance Facilities	Held the pre-bid meeting on July 07, 2020.			
		Receipt of easements necessary to construct the pipelines in the City's existing bike path.	Work closely with Vistra (Vistra Energy), 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.
Recycled Water Facilities	Received the Final TM (Characterization) from GSI confirming selection of the West injection area.			
		Receipt of property necessary to construct the injection wells.	Work with Vistra to obtain the property for the injection wells.	Without expediting the schedule, the completion of the injection wells will be delayed (does not impact compliance with the Time Schedule Order (TSO)).



## 1.2 Quarterly Budget Revision

The original \$126 million baseline budget was developed in June 2018 (Q4 Fiscal Year 2017/2018). 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 Q4 Fiscal Year 2019/2020 (June 30, 2020). 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.

Changes to the Project budget since the completion of the fiscal year budget reconciliation in Q1 Fiscal Year 2018/2019 can be attributed to the following:

- Addition of \$2.9 million in construction contingency for the WRF needed to cover additional PCOs that were approved by the City Council in May 2020.
- Addition of pre-construction archeological investigations outlined in the Programmatic Agreement (PA) negotiated with the State Historic Preservation Office (SHPO) for the Conveyance Facilities and Recycled Water Facilities components of the Project.
- Addition of archeological and tribal representative monitoring for the Conveyance Facilities and Recycled Water Facilities components of the Project.

Table 2 Budget Revision Summary

Project Component	Baseline (Q4 FY 17/18)	Quarterly Reconciliation (Q3 FY 18/19)	Previous Fiscal Year (Q4 FY 18/19)	Quarterly Reconciliation (Q1 FY 19/20)	Quarterly Reconciliation (Q2 FY 19/20)	Quarterly Reconciliation (Q3 FY 19/20)
Water Reclamation Facility	\$62,414,000	\$74,059,000	\$72,891,000	\$72,598,000	\$72,231,000	\$71,856,000
Conveyance Facilities	\$21,087,000	\$27,108,000	\$28,864,000	\$28,524,000	\$29,224,000	\$29,989,000
Recycled Water Facilities	\$8,593,000	\$5,366,000	\$5,250,000	\$5,212,000	\$5,353,000	\$5,526,000
General Program	\$24,403,000	\$11,614,000	\$11,801,000	\$11,625,000	\$11,701,000	\$12,964,000
Construction Contingency	\$9,444,000	\$6,450,000	\$7,132,000	\$7,131,000	\$7,364,000	\$10,264,000 <sup>(1)</sup>
<b>Total</b>	<b>\$125,941,000</b>	<b>124,597,000</b>	<b>\$125,938,000</b>	<b>\$125,090,000</b>	<b>\$125,873,000</b>	<b>\$130,599,000</b>

## Notes:

- (1) Breakdown of the current contingency (\$10,264,000) is as follows: WRF = \$7,506,000; Conveyance Facilities = \$2,458,000; and Recycled Water Facilities = \$300,000
- (2) At the time of preparation of the Q3 FY 19/20 quarterly budget reconciliation, the twenty six PCOs recently approved in May 2020 had not been formally approved by City Council. The anticipated costs for these PCOs is reflected in the Construction Contingency that was increased between Q2 and Q3 FY 19/20.

Table 3 summarizes the positions and estimates at completion (EACs) for the major elements of the Project through the end of Q3 FY 19/20 when the last budget reconciliation was completed.

Table 3 Estimates at Completion

Project Component	Original Estimates	Initial Contract Value	Current Contract Value	Expenditures to Date	Estimate at Completion
<b>General Project</b>	<b>\$24,403,000</b>			<b>\$4,574,362</b>	<b>\$13,917,000</b>
City Costs <sup>(2)</sup>				\$1,901,654	\$4,078,000
Program Management <sup>(3)</sup> (Carollo Engineers)		\$293,000	\$6,360,378	\$2,672,708	\$9,839,000
<b>Water Reclamation Facility</b>	<b>\$62,414,000</b>			<b>\$10,372,783</b>	<b>\$74,927,000</b>
Design/Build (Filanc/Black & Veatch)		\$67,234,512	\$74,926,725	\$10,372,783	\$74,927,000
<b>Conveyance Facilities</b>	<b>\$21,087,000</b>			<b>\$1,807,054</b>	<b>\$26,386,000</b>
Design Water Works Engineers (WWE).		\$1,360,565	\$2,052,387	\$1,807,054	\$2,152,000
Construction				-	\$24,234,000
<b>Recycled Water Facilities</b>	<b>\$8,593,000</b>			-	<b>\$3,575,000</b>
Design				-	\$450,000
Construction				-	\$3,125,000
<b>Contingency</b>	<b>\$9,444,000</b>				<b>\$4,271,000</b>
Water Reclamation Facility					\$1,513,000
Conveyance Facilities					\$2,458,000
Recycled Water Facilities					\$300,000
<b>Other Contracts<sup>(4)</sup></b>				<b>\$5,739,672</b>	<b>\$7,523,000</b>
<b>Total</b>	<b>\$125,941,000</b>			<b>\$22,493,871</b>	<b>\$130,599,000</b>

Notes:

- (1) Total expenditures and EAC are based on the budget reconciliation completed for Q3 FY 19/20.
- (2) City costs include staff salaries and benefits, legal services, land acquisition, supplies and equipment, etc.
- (3) Includes total program management costs including public outreach and construction oversight/management.
- (4) Other Contracts includes previous consultants including MKN and Black & Veatch and current consultants including Far Western, ESA, Kestrel, GSI, Bartle Wells Associates, etc.





## Section 2

# KEY PERFORMANCE MEASURES

### 2.1 Performance Measures

A set of five 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 4. The Project's performance is also illustrated graphically in Figures 1 and Figure 2.



Table 4 WRF Project Performance Measures

Performance Measure	Data	Baseline (Q4FY 18/19)	Current (Q3 FY 19/20)	Delta	Status	Ⓞ	Ⓢ	Ⓡ
1: Total Project Costs	Total Project Projected Cost at Completion versus the Baseline Budget (budget as of 03/31/20)	\$125.9 M	\$130.6 M	3.7%	Ⓞ	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 03/31/20)	\$77.3 M	\$79.4 M	2.7%	Ⓞ	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
1.2: Conveyance Facilities Costs	Conveyance Facilities Projected Cost at Completion versus the Baseline Budget (budget as of 03/31/20)	\$31.3 M	\$32.5 M	3.6%	Ⓞ	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	Off Site Injection Facilities Projected Cost at Completion versus the Baseline Budget (budget as of 03/31/20)	\$5.6 M	\$5.8 M	4.4%	Ⓞ	Estimated cost within 5% of target budget	Estimated cost > 5% above target budget	Estimated cost > 10% above target budget
1.4: General Project Costs	General Project Projected Cost at Completion versus the Baseline Budget (budget as of 03/31/20)	\$11.7 M	\$12.9 M	10.7%	Ⓡ	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 07/06/20)	1.00	0.99	-0.01	Ⓢ	>= 1.00	0.99 to 0.90	< 0.90
3: Schedule Performance Index <sup>(1)</sup>	Ratio of Planned Percent Complete to Actual Percent Complete (as of 07/06/20)	1.00	0.99	-0.01	Ⓢ	>=1.00	0.99 to 0.80	<0.80
4: Conveyance Pipeline Installed	Feet of conveyance pipeline installed (thru 07/06/20)	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 07/06/20)	967 days	744 days	-223 days	Ⓢ	<= 365 days	364 days and 180 days	> 179 days



## Section 3

# PROJECT COSTS

### 3.1 Project Budget

The overall budget status for the Project is summarized in Table 5. 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 5 shows the total amount of work currently under contract and provides a summary of total charges.

Table 5 WRF Project Overall Budget Status (thru May 2020)

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>	\$125,938,000
Current WRF Project Budget (as of 03/31/20) <sup>(3)</sup>	\$130,599,000
Budget Percent Change (Current versus Fiscal Year)	3.7%
Total Expenditures for May 2020	\$1,689,000
Total Expenditures to Date (thru 05/31/20 invoices)	\$22,494,000
Percent of Current WRF Project Budget Expended	17.2%
Summary of Contracted Work	
Total Contracted Amount	\$88,427,000
Percent of Current WRF Project Budget Contracted	67.7%
Total Contracted Amount Expended	\$19,476,000
Percent of Contracted Amount Expended	22.0%
Remaining WRF Project Contracted Amount	\$68,951,000

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)

### 3.2 Project Cash Flow

Figure 1 presents the projected and actual expenditures for the Project through May 2020 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 March 2020. 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.

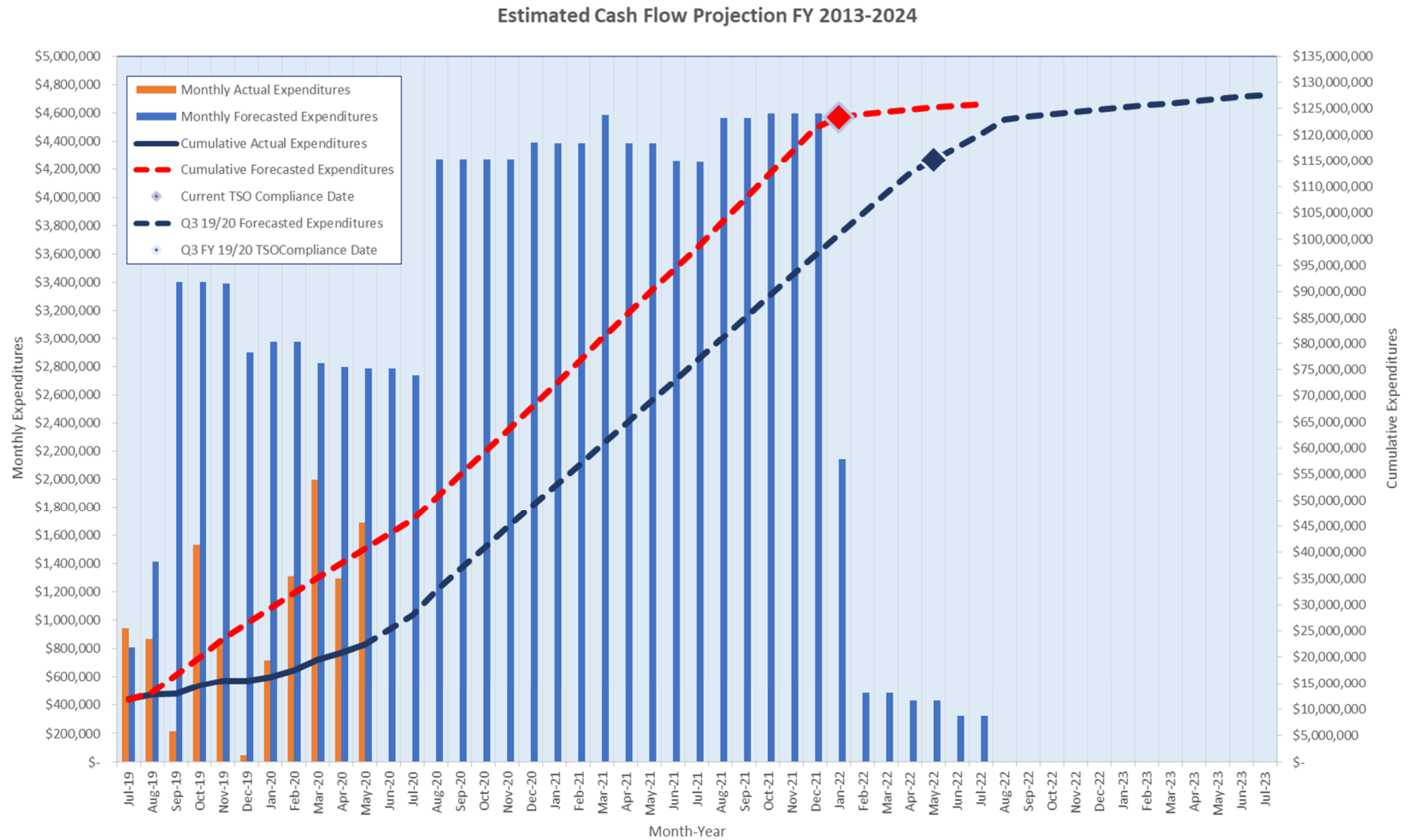


Figure 1 Project Cash Flow Projections and Actual Expenditures

## 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 June 2020. 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 4 (Compliance Schedule) of the TSO. Table 6 below provides a summary of the milestones in the TSO.

Table 6 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 <sup>(1)</sup>	-
Award of Contract for Construction of Conveyance Facilities	November 30, 2019	September 15, 2020	-
Completion of WRF Improvements with Completion Report	December 30, 2022	July 20, 2022	-
Full compliance with final effluent limitations	February 29, 2023	July 20, 2022	-

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 (ESCP) 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.









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

Table 7 Expanded Milestone Schedule

Milestone	Baseline Schedule due Date	Planned/Actual Completion Date
<b><u>General Project</u></b>		
Compliance with the TSO <sup>(1)</sup>	November 11, 2021	July 20, 2022
<b><u>Water Reclamation Facility</u></b>		
Begin Construction	August 08, 2019	March 20, 2020 (Actual)
Deliver 90 Percent Design	October 24, 2019	March 31, 2020 (Actual)
Substantial Completion	November 11, 2021	July 20, 2022
Final Completion	June 09, 2022	September 15, 2022
<b><u>Conveyance Facilities</u></b>		
Deliver 90 Percent Design	October 15, 2019	February 10, 2020 (Actual)
Deliver 100 Percent Design	December 17, 2019	June 15, 2020 (Actual)
Bid Advertisement	February 21, 2020	June 16, 2020 (Actual)
Award Construction Contract	May 08, 2020	September 15, 2020
Substantial Completion	September 17, 2021	March 23, 2022
Final Completion	November 19, 2021	May 25, 2022
<b><u>Recycled Water Facilities</u></b>		
Select Preferred Injection Area	May 28, 2019	June 17, 2020 (Actual)
Deliver 30 Percent Design	August 04, 2020	December 01, 2021
Deliver 60 Percent Design	November 10, 2020	March 09, 2022
Deliver 90 Percent Design	February 16, 2021	June 15, 2022
Deliver 100 Percent Design	April 27, 2021	August 24, 2022
Award Construction Contract	July 21, 2021	November 16, 2022
Substantial Completion	April 21, 2022	September 20, 2023
Final Completion	June 21, 2022	November 15, 2023

Notes:

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