



City of Morro Bay
Water Reclamation Facility Project

QUARTERLY REPORT SEPTEMBER 2020

FINAL | November 2020





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Eric T. Casares,
November 2020,
State of California, P.E. 73351

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Abbreviations

AFY	acre -feet per year
BNR	biological nutrient removal
BOD	Biochemical Oxygen Demand
Carollo	Carollo Engineers, Inc.
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CPT	Cone Penetration Test
CWSRF	Clean Water State Revolving Fund
DDW	Division of Drinking Water
EACs	estimates and completion
EPA	Environmental Protection Agency
ESCP	Enhanced Source Control Program
EACs	estimates at completion
GMP	Guaranteed Maximum Price
GSI	GSI Water Solutions
IFC	issued for construction
IPR	Indirect Potable Reuse
KPI	Key Performance Indicator
MBMWC	Morro Bay Mutual Water Company
MBR	Membrane Bioreactor
Narrows	Eastern
NPDES	National Pollution Discharge Elimination System
NTP	notice to proceed
PA	Programmatic Agreement
PCO	Potential Change Order
PPP	Pollution Prevention Plan
Project	Water Reclamation Facility Project
PWAB	Public Works Advisory Board
RFP	request for proposal
ROW	right of way
RWQCB	Regional Water Quality Control Board
SAA	Stream Bed Alteration Agreement
SHPO	State Historic Preservation Office
SLO	San Luis Obispo
SPI	Schedule Performance Index
TM	Technical Memorandum
TSO	Time Schedule Order

TSS	Total Suspended Solids
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. The general progress update and schedule information presented in this report is current as of October 30, 2020. The financial information including the spent to date and budget remaining amounts are presented as of September 30, 2020.

1.1.1 Water Reclamation Facility

1.1.1.1 Design

The design for the Water Reclamation Facility (WRF) was completed with the delivery 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 on March 20, 2020. Activities to date include near completion of the major site work, construction of the foundation and walls of the sludge holding tanks and biological nutrient removal (BNR) basins, and installation of the 78-inch steel pipe serving as the chlorine contact chamber (CCC).

The City and Program Manager have worked with the design-build team to negotiate Amendment No. 4 that will settle the vast majority of all existing potential change orders (PCOs) including the soil slip, delay claims as a result of the California Department of Fish and Wildlife (CDFW), and various design clarifications. The City and Program Manager will bring Amendment No. 4 to City Council for review and approval on November 17, 2020.

1.1.2 Conveyance Facilities

1.1.2.1 Design

Water Works Engineers (WWE) submitted the bid set plans and specifications in May 2020 and the City advertised this component of the Project on June 15, 2020.

1.1.2.2 Construction

The City opened bids for the Conveyance Facilities component of the Project on August 14, 2020. The City received a total of five bids. A summary of the bids is provided in Table 1 below.

Table 1 Estimates at Completion

Bidder ⁽¹⁾	Base Bid
W.A. Rasic Construction	\$38,425,000.00
OHL USA, Inc.	\$39,671,778.00
Nicholas Construction	\$42,664,745.00
Anvil Builders, Inc.	\$31,493,675.00
John Madonna Construction Company, Inc.	\$33,083,108.75

Notes:

(1) The bids are presented in the order they were read at the bid opening held at the WRF site on August 14, 2020.

City staff is bringing a recommendation to award for Anvil Builders, Inc. to City Council on November 10, 2020.

1.1.3 Recycled Water Facilities

1.1.3.1 Design

The Project's hydrogeologist (GSI Water Solutions [GSI]) delivered the Final Phase 2 (Characterization) Technical Memorandum (TM) in June 2020. GSI and the Program Manager presented the findings from the Characterization TM to the Public Works Advisory Board (PWAB) on August 19, 2020. The City and Program Manager will be presenting the findings of the Characterization TM to the City Council on November 10, 2020 along with the next budget authorization for GSI to cover Phase 3 of the hydrogeological work.

Table 2 summarizes some of the key accomplishments and critical challenges identified for the Project through October 30, 2020.

Table 2 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 to support permitting for the Project with the Regional Water Quality Control Board (RWQCB) and Division of Drinking Water (DDW).			
	Held a City Council tour and media event at the WRF on October 12, 2020.			
Water Reclamation Facility	Continued advancing construction on the South Bay Boulevard site (construction 20.2 percent complete)			
	Negotiated an amendment (Amendment No. 4) with the design-build team for all outstanding PCOs.			
Conveyance Facilities	Advertised a request for proposals (RFP) for both biological and archeological/paleontological/tribal monitoring.			
	Received pre-judgement possession of the Vistra Energy (Vistra) and PG&E property along the bike path and for the Lift Station No. 2 force main alignment necessary to complete construction.			
	Submitted the Final Phase 2 Mitigation and Monitoring Plan to the EPA and State Historic Preservation Office (SHPO)			
	Received the encroachment permit from Caltrans necessary for construction of the pipelines.			
		The low bid received is approximately \$7 million over the engineer's estimate.	While current rates without funding from the CWSRF will support the increased Project costs, all effort needs to be made to secure CWSRF funding.	With the increased cost of the Project and without receiving CWSRF funding, it could be challenging to reduce the amount currently being collected from rate payers. However, it does not impact funding for OneWater Morro Bay capital projects.
Recycled Water Facilities	Completed the Phase 2 hydrogeological work and selected the West injection area.			
	Received pre-judgement possession of the Vistra property necessary to construct the injection wells and continue the hydrogeological work.			

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 Q2 Fiscal Year 2020/2021 (December 31, 2020). A summary of the baseline, reconciled quarterly, and fiscal year budgets are summarized in Table 3. Subsequent budget reconciliations (quarterly) and fiscal year budgets (annual) will also be presented in this table for reference.

Table 4 summarizes the positions and estimates at completion (EACs) for the major elements of the Project through the end of Q1 FY 20/21 when the last budget reconciliation was completed. Major changes to the Project cost categories are as summarized below:

- General Program
 - Increase in the projected long-term budget for legal services.
 - Reclassification of land acquisition costs from separate Project components.
- Water Reclamation Facility
 - Reduction in the projected long-term budget for construction management for the WRF (i.e., Carollo)
- Conveyance Facilities
 - Increase in the construction cost for the pipelines and pump stations (i.e., current low bidder) compared to the final Engineer's Estimate.
 - Increase in projected budget for installation of new fiber optic cabling.
- Recycled Water Facilities
 - Increase in the cost for hydrogeological work that needs to be performed by GSI.

Table 3 Budget Revision Summary

Project Component	Baseline (Q4 FY 17/18)	Quarterly Reconciliation (Q3 FY 18/19)	Past Fiscal Year (Q4 FY 18/19)	Quarterly Reconciliation (Q1 FY 19/20)	Quarterly Reconciliation (Q2 FY 19/20)	Quarterly Reconciliation (Q3 FY 19/20)	Current Fiscal Year (Q4 FY 19/20)	Quarterly Reconciliation (Q1 FY 20/21)
Water Reclamation Facility ⁽¹⁾	\$62,414,000	\$74,059,000	\$72,891,000	\$72,598,000	\$72,231,000	\$71,856,000	\$77,828,000	\$77,082,000
Conveyance Facilities	\$21,087,000	\$27,108,000	\$28,864,000	\$28,524,000	\$29,224,000	\$29,989,000	\$29,840,000	\$37,355,000
Recycled Water Facilities	\$8,593,000	\$5,366,000	\$5,250,000	\$5,212,000	\$5,353,000	\$5,526,000	\$5,526,000	\$5,740,000
General Program	\$24,403,000	\$11,614,000	\$11,801,000	\$11,625,000	\$11,701,000	\$12,964,000	\$13,260,000	\$14,255,000
Construction Contingency ⁽²⁾	\$9,444,000	\$6,450,000	\$7,132,000	\$7,131,000	\$7,364,000	\$10,264,000	\$4,207,000	\$4,250,000
Total	\$125,941,000	124,597,000	\$125,938,000	\$125,090,000	\$125,873,000	\$130,599,000	\$130,661,000	\$138,682,000

Notes:

(1) Costs include the design-build agreement with Filanc/Black & Veatch, Carollo, and other consultants.

(2) Breakdown of the current contingency (\$4,207,000) is as follows: WRF = \$1,449,000; Conveyance Facilities = \$2,458,000; and Recycled Water Facilities = \$300,000

Table 4 Estimates at Completion

Project Component	Original Estimates	Initial Contract Value	Current Contract Value	Expenditures to Date	Estimate at Completion
City and Program Management	\$24,403,000			\$5,578,410	\$13,399,000
City Costs ⁽²⁾				\$2,381,697	\$3,929,000
Program Management ⁽³⁾ (Carollo Engineers)		\$293,000	\$6,360,378	\$3,196,713	\$9,470,000
Design/Build WRF	\$62,414,000			\$16,667,333	\$74,927,000
Design/Build (Filanc/Black & Veatch)		\$67,234,512	\$74,926,725	\$16,667,333	\$74,927,000
Conveyance Facilities	\$21,087,000			\$1,807,054	\$33,596,000
Design (Water Works Engineers)		\$1,360,565	\$2,052,387	\$1,807,054	\$2,102,000
Construction				-	\$31,494,000
Recycled Water Facilities	\$8,593,000			-	\$3,575,000
Design				-	\$450,000
Construction				-	\$3,125,000
Contingency	\$9,444,000				\$4,249,000
Water Reclamation Facility					\$1,449,000
Conveyance Facilities					\$2,500,000
Recycled Water Facilities					\$300,000
Other Contracts⁽⁴⁾				\$6,137,764	\$8,936,000
Total	\$125,941,000			\$30,190,562	\$138,682,000

Notes:

- (1) Total expenditures and EAC are based on the budget reconciliation completed for Q4 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 (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 5. The Project's performance is also illustrated graphically in Figures 1 and Figure 2.

Table 5 WRF Project Performance Measures

Performance Measure	Data	Baseline (Q4FY 19/20)	Current (Q1 FY 20/21)	Delta	Status	Ⓞ	Ⓢ	Ⓡ
1: Total Project Costs	Total Project Projected Cost at Completion versus the Baseline Budget (budget as of 09/30/20)	\$130.7 M	\$138.7 M	6.1%	Ⓢ	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 09/30/20)	\$79.3 M	\$78.5 M	-0.9%	Ⓞ	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 06/30/20)	\$32.3 M	\$39.9 M	23.4%	Ⓡ	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 06/30/20)	\$5.8 M	\$6.0 M	3.7%	Ⓞ	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 06/30/20)	\$13.3 M	\$14.3 M	7.5%	Ⓢ	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 09/30/20)	1.00	0.97	-0.03	Ⓢ	>= 1.00	0.99 to 0.90	< 0.90
3: Schedule Performance Index ⁽¹⁾	Ratio of Planned Percent Complete to Actual Percent Complete (as of 06/30/20)	1.00	0.98	-0.02	Ⓢ	>=1.00	0.99 to 0.80	<0.80
4: Conveyance Pipeline Installed	Feet of conveyance pipeline installed (thru 06/30/20)	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 06/30/20)	881 days	715 days	166 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 6. 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 6 WRF Project Overall Budget Status (thru September 2020)

Summary of Total WRF Project Cost	
Original Baseline WRF Project Budget ⁽¹⁾	\$125,941,000
Current Fiscal Year WRF Project Budget (as of 9/30/20) ⁽²⁾	\$130,661,000
Current WRF Project Budget (as of 09/30/20) ⁽³⁾	\$138,682,000
Budget Percent Change (Current versus Fiscal Year)	6.1%
Total Expenditures for September 2020	\$3,152,000
Total Expenditures to Date (thru 09/30/20 invoices)	\$30,191,000
Percent of Current WRF Project Budget Expended	21.8%
Summary of Contracted Work	
Total Contracted Amount	\$88,448,000
Percent of Current WRF Project Budget Contracted	63.8%
Total Contracted Amount Expended	\$26,661,000
Percent of Contracted Amount Expended	30.1%
Remaining WRF Project Contracted Amount	\$61,787,000

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 September 2020 compared to the Fiscal Year 2020/2021 budget developed at the end of Q4 Fiscal Year 2019/2020. 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 June 2020. The milestone corresponds to the substantial completion of the WRF, which coincides with the City being in

compliance with the Time Schedule Order (TSO) issued by the Regional Water Quality Control Board (RWQCB) in June 2018. While the compliance with the TSO has been delayed several months due to consultation with the USFWS, completion of construction of the injection wells has been impacted more significantly due to property acquisition.

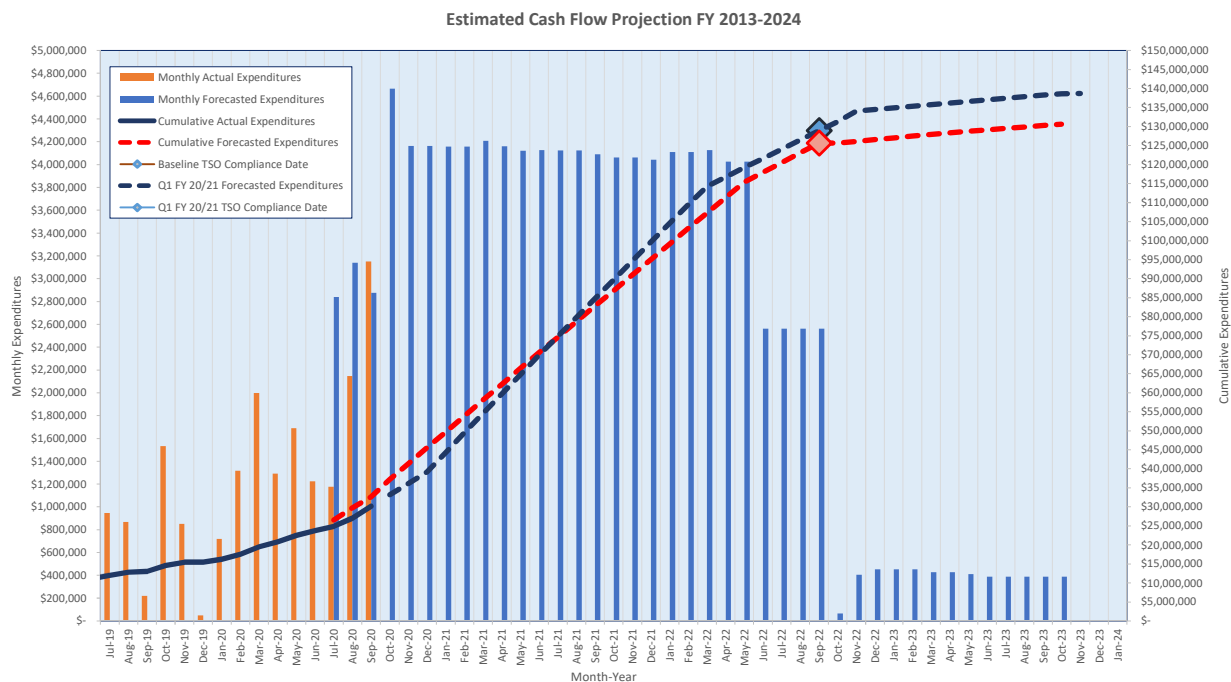


Figure 1 Project Cash Flow Projections and Actual Expenditures

A breakdown of the current Q1 Fiscal Year 2020/2021 budget by fiscal year is included in Table 7.

Table 7 WRF Project Cost Fiscal Year Projections

Project	Actual Expenditures to Date	FY 20/21	FY 21/22	FY 22/23	FY 23/24	Total Project
WRF	\$16,667,000	\$21,294,610	\$27,657,789	\$11,461,867	\$-	\$77,082,000
Conveyance Facilities	\$1,807,000	\$14,767,338	\$20,780,032	\$-	\$-	\$37,355,000
Recycled Water Facilities	\$435,000	\$904,991	\$283,333	\$2,781,667	\$1,335,000	\$5,740,000
General Project	\$11,281,000	\$1,192,549	\$916,798	\$610,146	\$254,227	\$14,255,000
Contingency	\$-	\$1,501,619	\$2,168,825	\$478,677	\$100,000	\$4,250,000
Total	\$30,190,000	\$39,661,106	\$51,806,778	\$15,332,356	\$1,689,227	\$138,682,000

Notes:

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

3.3 Project Cost Summary

Table 8 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 8 WRF Project Cost Summary (through September 2020)

Project	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)	Total Project Cost (Est.) ⁽¹⁾	Cost Expended to Date (%)
General PM	\$7,570,000	\$10,849,000	69.8%	\$14,255,000	53.1%
WRF	\$16,667,000	\$74,927,000	22.2%	\$78,532,000	21.2%
Conveyance Facilities	\$1,807,000	\$2,052,000	88.1%	\$39,855,000	4.5%
RW Facilities	\$616,000	\$621,000	99.2%	\$6,040,000	10.2%
Total	26,660,000	\$88,449,000	30.1%	\$138,682,000	19.2%

Notes:

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

(2) Actual total expenditures are equal to \$30,190,000 (Table 7), but includes \$3,530,000 of uncontracted costs including 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 9 General Project Activities Cost Summary (through September 2020)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
ESA	\$412,080	\$412,320	99.9
Far Western	\$265,152	\$282,014	94.0
Bartle Wells Associates	\$65,580	\$100,800	65.1
JoAnn Head Land Surveying	\$97,693	\$102,644	95.2
JSP Automation	\$21,778	\$63,500	34.3
Carollo Engineers, Inc. ⁽¹⁾	\$3,397,730	\$6,360,378	53.4
Total	\$4,260,013	\$7,321,656⁽²⁾	58.2

Notes:

(1) Total estimate at completion for Program Management/Construction Management is projected at \$9.0 million.

(2) Table only includes contracts that are currently active. The total contracted amount for General Project is \$11,281,000 and includes consultants including MKN, etc.

Table 10 WRF Cost Summary (through September 2020)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
Overland Contracting	\$16,667,278	\$74,926,725 ⁽¹⁾	22.2
Total	\$16,667,278	\$74,926,725	22.2

Notes:

(1) Cost includes final value for Amendment No. 1, Amendment No. 2, and Amendment No. 3 of \$1,636,060, \$63,937, and \$5,992,217, respectively and the original contract value of \$67,234,512.

Table 11 Conveyance Facilities Cost Summary (through September 2020)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
Water Works Engineers (WWE)	\$1,807,054	\$2,052,387	88.0
Total	\$1,807,054	\$2,052,387	88.0

Table 12 Recycled Water Facilities Cost Summary (through September 2020)

Consultant / Contractor	Actual Expenditures to Date	Total Contracted Cost	Contract Expended to Date (%)
GSI	\$504,766	\$508,947	99.2
Middle Earth	\$6,570	\$6,810	96.5
Total	\$496,434	\$515,757⁽²⁾	96.3

Notes:

(1) Table only includes contracts that are currently active. The total contracted amount for Recycled Water is \$621,000 and includes consultants including V&A.

3.5 Change Orders

In May 2019, City staff and the Program Manager presented seventeen (17) 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). Since that time, the City and Program Manager have worked with the design-build team to value engineer Change Order No. 10 and reduce the cost by more than \$200,000. The City therefore amended the value for Amendment No. 1 to \$1,636,060 that was executed by the City in January 2020.

During Q3 FY 2019/2020 the City Manager authorized PCO No. 65, which was required to bring the design-build agreement in compliance with the appropriate prevailing wage rates (i.e., Davis-Bacon) required by the WIFIA and CSWRF programs.

In May 2020, the City staff and Program Manager presented an additional twenty six (26) PCOs to the PWAB and the City Council with a total cost of \$5,992,217. These PCOs were also

approved by City Council. The forty four (44) approved change orders are summarized in Tables 13, 14, and 15.

Table 13 Summary of Approved Change Orders (Amendment No. 1)

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 membrane bioreactor (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	\$516,583
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	Indirect Potable Reuse (IPR) Product Water Tank Bypass	\$(26,087)
Total			\$1,636,060

Table 14 Summary of Approved Change Orders (Amendment No. 2)

Contract	Change Order No.	Description	Value
WRF	65	Davis-Bacon Wage Increases	\$63,937
Total			\$63,937

Table 15 Summary of Approved Change Orders (Amendment No. 3)

Contract	Change Order No.	Description	Value
WRF	16	Modify Outfall Pump Station	\$367,632
WRF	19	Reduce Size of the Product Water Tank	\$(129,681)
WRF	32	Sulfuric Acid System	\$315,652
WRF	37	PLC/SCADA Software Uniformity (MBR, RO, and Headworks Only)	\$201,577
WRF	39	notice to proceed (NTP) Delay	\$1,220,532
WRF	40	Headworks Valve Automation	\$249,946
WRF	41	Perimeter Barbed Wire Fence	\$79,935
WRF	42	UV/AOP System Modifications	\$(33,481)
WRF	44	Tank Access Improvements	\$210,327
WRF	45	Maintenance Ceiling Revisions and Automated Roll-Up Door	\$21,009
WRF	46	Curbed Washdown Areas	\$76,250
WRF	47	Changes to Furnishings and Residential Equipment	\$85,194
WRF	50	Revisions to Water/Sewer Supply Storage Sheds	\$13,142
WRF	52	Analyzer Relocation and Enclosures	\$76,555
WRF	55	Notice of Dispute - PG&E Temporary Power	\$13,163
WRF	56	Impacts of Water Quality Changes	\$282,420
WRF	57	Soil Lateral Earth Pressure	\$116,329
WRF	58	Permanent Exclusion Fencing	\$855,991
WRF	59	Increased Escalation Costs	\$1,232,677
WRF	61	PCO Design Impacts	\$158,172
WRF	62	Conduit Alternative Design	\$(268,400)
WRF	64	Reduce Performance Period	\$(35,450)
WRF	66	Caltrans Intersection Improvements	\$(21,893)
WRF	67	BNR System Modifications	\$742,405
WRF	68	SAFE Equalization Settle Tank Drain Piping	\$62,215
WRF	69	Third Party Inspection and Testing	\$100,000
Total			\$5,992,217

3.6 Reimbursement from Funding Agencies

In 2017, the City was awarded a \$10.3 million planning loan from the Clean Water State Revolving Fund (CWSRF) program. To date, the City has made three reimbursement requests for the planning loan. An additional reimbursement request is anticipated to fully exhaust the entire loan amount. In February 2020, the City executed a \$61.7 loan with the Environmental Protection Agency's (EPA's) Water Infrastructure and Innovation Act (WIFIA) program. To date, a total of eight (8) reimbursement requests have been made. A summary of these requests is presented in Table 16.

Table 16 Summary of Reimbursement Requests

Agency	Description	Type	Number	Date	Requested Amount	Approved Amount
State Water Board	CWSRF Planning Loan	Loan	01	December 2018	\$289,595	\$217,441
State Water Board	CWSRF Planning Loan	Loan	02	November 2019	\$6,431,925	\$5,312,748
State Water Board	CWSRF Planning Loan	Loan	03	October 2020(1)	\$4,783,797 ⁽¹⁾	TBD
EPA	WIFIA	Loan	01	May 2020	\$1,100,944	\$1,100,944
EPA	WIFIA	Loan	02	June 2020	\$61,014	\$61,014
EPA	WIFIA	Loan	03	June 2020	\$3,489,409	\$3,489,409
EPA	WIFIA	Loan	04	July 2020	\$2,461,121	\$2,461,121
EPA	WIFIA	Loan	05	August 2020	\$161,636	\$161,636
Total					\$18,779,441	\$12,804,313

Notes:

(1) Reimbursement No. 3 for the SRF Planning Loan was originally submitted in December 2019 and was resubmitted in October 2020.

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 through September 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 3 (Compliance Schedule) of the TSO. Presented in Table 17 are the milestones in the TSO.

Table 17 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 ⁽¹⁾	-
Award of Contract for Construction of Conveyance Facilities	November 30, 2019	November 10, 2020	-
Completion of WRF Improvements with Completion Report	December 30, 2022	September 15, 2022	-
Full compliance with final effluent limitations	February 29, 2023	September 15, 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 (EHSP) 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 18 Expanded Milestone Schedule

Milestone	Baseline Schedule due Date	Planned Completion Date
<u>General Project</u>		
Compliance with the TSO ⁽¹⁾	November 11, 2021	September 15, 2022
<u>Water Reclamation Facility</u>		
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	September 15, 2022
Final Completion	June 09, 2022	November 10, 2022
<u>Conveyance Facilities</u>		
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	November 10, 2020
Substantial Completion	September 17, 2021	January 19, 2022
Final Completion	November 19, 2021	March 05, 2022
<u>Recycled Water Facilities</u>		
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 17, 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.

Section 5

DESIGN AND PROCUREMENT

5.1 Design Status

No new design contracts for the Project were executed in Q1 Fiscal Year 2020/2021. A summary of the existing design contracts is included in Table 19 below.

Table 19 Procurement Status (through September 2020)

Project Name	Current Contract Amount	Amount Expended	30%	60%	90%	100%	Final
WRF	\$74,926,725	\$16,667,278	✓	✓	✓	✓	NA
Conveyance Facilities	\$2,050,387 ⁽¹⁾	\$1,807,054	✓	✓	✓	✓	✓
Recycled Water Facilities	\$0	\$0					

Notes:

(1) The total value of the Water Works Engineers is \$2,052,387, but includes \$182,680 for engineering services during construction (\$1,867,707 for design)

5.2 Procurement

No design or design-build contract procurements were performed in Q1 FY 2020/2021. Table 20 presents a summary of the procurement activity for the Project.

Table 20 Procurement Status (through September 2020)

Project Name	Circulate Request for Proposals	Proposal Opening Date	Council Award Date	Notice to Proceed Date	Consultant
WRF	January 24, 2018	May 8, 2018	October 23, 2018	November 01, 2018	Overland Contracting (Filanc-Black & Veatch)
Conveyance Facilities	January 31, 2017	March 8, 2017	November 14, 2017	November 15, 2017	Water Works Engineers
Recycled Water Facilities	Design Engineer to be Selected in 2021				

Section 6

CONSTRUCTION STATUS

6.1 Construction Summary

During Q1 Fiscal Year 20202021, construction continued for the WRF. Table 21 presents a summary of project construction progress and costs through September 2020.

Table 21 Project Construction Costs

Project Name	Amount Expended	Initial Contract Amount	Current Contract Amount	% Change in Contract Amount
WRF	\$16,667,278	\$67,234,512	\$74,926,725	22.2
Conveyance Facilities	\$0	\$0	\$0	0
Recycled Water Facilities	\$0	\$0	\$0	0
Construction Total	\$16,667,278	\$67,234,512	\$74,926,725	22.2

6.2 Upcoming Traffic Control

6.2.1 Planned Impacted Areas

As the Conveyance Facilities component of the Project has not yet started construction, no traffic control activities are planned at this time.

6.2.2 Hours of Planned Lane/Road Closures

As the Conveyance Facilities component of the Project has not yet started construction, no lane or road closures are planned at this time.

6.3 Construction Safety

The Project safety goal is zero reportable incidents. There has been a total of zero reported incidents through September 2020.

Section 7

OTHER PROGRAM ACTIVITIES

7.1 Public Outreach

On October 12, 2020, the City held a small City Council tour and media event to present the progress that has been made at the WRF. Typically, a larger, more formal groundbreaking event would be held for a project of this size with a number of key stakeholders in attendance. However, because of COVID-19, a formal groundbreaking event has been postponed until later in 2021. The event was a success and the City received media attention from the New Times SLO, The Tribune, and KSBY.

7.2 Permitting Activities

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

- Division of Drinking Water:
 - The Title 22 Engineering Report is required by the DDW before the City can receive a potable reuse permit. The Program Manager delivered an initial Draft of the Title 22 Engineering Report to the City for review in June 2020. The revised draft, including comments from City staff, was submitted to DDW in July 2020. Since that time, the City has held a meeting to present the information in the revised draft and is planning to meet again with DDW in November 2020.
 - The City is working with DDW to obtain a variance from their typical pipeline separation requirements due to the width of the trench for the Conveyance Facilities pipelines and the limited right of way (ROW) for much of the alignment. The City has been coordinating with DDW on this issue since early 2019 and submitted a formal application to DDW in August 2020. Since that time, the City has had a meeting to review the information provided, and has provided supplemental information to aid DDW's review. The City anticipates having a permit from DDW to cover this element of the work in November 2020.
- Caltrans:
 - The City obtained the encroachment permit from Caltrans for construction of the Conveyance Facilities pipelines in August 2020.
- California Department of Fish and Wildlife:
 - The City must have a SAA from the CDFW before work can begin on the bike path for the Conveyance Facilities component of the Project. The City submitted the notification in September 2020 and plans to obtain the SAA in December 2020.

- State Historic Preservation Office:
 - The Programmatic Agreement (PA) negotiated with the SHPO requires that a mitigation and monitoring plan be developed for each element of the project (i.e., WRF, pipelines, and injection wells). The City submitted the mitigation and monitoring plan to EPA for distribution to SHPO in October 2020. The City plans to obtain an approval from SHPO in December 2020.

7.3 Funding Status

- Continued to support CWSRF's technical, legal, and financial reviews. The City anticipates signing a loan agreement with CWSRF in spring 2021.

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 early 2022.

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 Ultraviolet Advanced Oxidation Process (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 IFC drawings and specifications in May 2020 and began construction at the South Bay Boulevard site began in late March 2020. Since that time, the design-build team has progressed the design and is nearly complete with mass earthwork activities. In addition, significant progress has been made on the two concrete water-bearing tanks onsite.

8.1.4 Project Challenges

The City has been working with the design-build team over the last several months to negotiate the costs associated with the schedule issues caused by the CDFW SAA process and determining responsibility for the cost of additional work associated with the soil slip. The City has come to a settlement and will be bringing Amendment No. 4 to City Council on November 17, 2020 for approval. The current projected budget of \$138.7 million includes approval of Amendment No. 4.

Table 22 WRF Performance Measures

Performance Measures	Target	Current	Status
Construction Cost ^{(1),(2)}	\$67.2M	\$74.9M	
Construction Contingency ^{(3),(4)}	\$9.2M	\$1.5M	

Notes:

- (1) Project budget and current contract amount ($\leq 5\%$ over target = Green, between 5% and 10% over target = Yellow, $>10\%$ over target = Red).
- (2) The GMP includes costs for both design and construction of the WRF.
- (3) Project budget and current amount ($\leq 50\%$ of target = Green, between 0% and 50% of target = Yellow, $\leq 0\%$ of target = Red).
- (4) The Program Manager initially allocated \$6.2 million for contingency for the WRF component of the project. During Q3 Fiscal Year 2019/2020, and additional \$2.9 million in contingency was added to the budget to cover Amendment No. 3. With execution of Amendment No. 1, 2, and 3, \$7.7 million has been moved from contingency to the GMP leaving \$1.5 million in contingency.

Table 23 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 (Design)	November 05, 2018		
Notice to Proceed (Construction)	March 20, 2020		
Original Final Completion Date	October 01, 2021		
Original Duration (Non-Working Days)	1,061		
Days Changed by Change Order	405		
Actual Final Completion Date (including Non-Working Days)	November 10, 2022		
Schedule Percent Complete	47.4%		
Budget			
Engineer's Estimate (Construction Cost + 10% Construction Contingency)	\$73,475,845		
Award Amount (including Design Cost)	\$67,234,512		
Change Order Total	\$7,692,213		
Current Contract Value	\$74,926,725		
Percent Change	11.4%		
Work Completed			
Actual Cost -to-Date	\$16,667,278		
Percent Complete (Percent Expended)	22.2%		
Construction Oversight Statistics			
	PCOs	COs	NOPCs
Total Received	74	N/A	5
Total Approved	N/A	44 ⁽¹⁾	0
Total Pending	24	19 ⁽²⁾	0
Average Turnaround (calendar days)	N/A	N/A	N/A

Acronym List:

PCO – Proposed Change Order; CO – Change Order; NOPC – Notice of Potential Claim

Notes:

- (1) 44 PCOs have been approved and are reflected in Amendment No. 1, 2, and 3 to the design-build agreement.
- (2) 19 PCOs will be brought to City Council on November 17, 2020 for review and approval as Amendment No. 4.

8.2 Conveyance Facilities

8.2.1 Designer

In November 2017, the City executed a contract with 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 design has been completed and this component of the Project is currently being advertised for bidding. The City opened bids on August 12, 2020. The City is bringing a recommendation to award for Anvil Builders, Inc. to City Council on November 10, 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 force mains and a wet weather/brine discharge force main. 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 transmission main to either the east or west injection site.

8.2.4 Current Progress

In May 2020, WWE delivered the 100 percent design submittal and bids for construction were opened.






8.2.5 Upcoming Activities

The City intends to award this component of the Project on November 10, 2020.

8.2.6 Project Challenges

The City continues to work with PG&E and Vistra to secure the easements necessary to construct the pipelines in the City's existing bike path and replace the force main from Lift Station 2. The City is also working closely with CDFW and Caltrans to secure the necessary SAA and encroachment permit, respectively. In September 2020, the City learned that San Luis Obispo (SLO) Superior Court ruled in their favor and the City will receive pre-judgment possession for the Vistra property. The City had previously been informed by PG&E that they would not be challenging pre-judgment possession.

Table 24 Conveyance Facilities Performance Measures

Performance Measures	Target	Current	Status
Construction Cost ⁽¹⁾	\$24.2M	\$31.5M ⁽³⁾	
Construction Contingency ⁽²⁾	\$2.5M	\$0.0M	
Number of Feet of Pipelines Constructed ⁽²⁾	18,500 LF	0 LF	
Number of Days of Full Road Closures ⁽¹⁾	0 Days	0 Days	
Number of Hours of Night Work	0 Hours	0 Hours	

Notes:

- (1) Project budget and current contract amount ($\leq 5\%$ over target = Green, between 5% and 10% over target = Yellow, $> 10\%$ over target = Red).
- (2) Project budget and current amount ($\leq 50\%$ of target = Green, between 0% and 50% of target = Yellow, $\leq 0\%$ of target = Red).
- (3) The City will be bringing a recommendation to award the construction of the pipelines and pump stations to City Council on November 10, 2020.

Table 25 Conveyance Facilities Summary

Schedule	
Request for Bid / Bid Advertisement	June 15, 2020
Bid Opening Date	August 14, 2020
Contract Award / Council Award Date	November 10, 2020 (Planned)
Notice to Proceed for Construction	NA
Original Final Completion Date	NA
Original Duration (Non-Working Days)	435
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)	\$26,657,000
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

Notes:

Acronym List:

RFI – Request for Information; PCO – Proposed Change Order; CO – Change Order; 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 inject purified 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 (CPT), characterized the hydrogeological 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 through use of an injection well.
- Developed a draft report that recommends the Western injection area as the preferred injection location.
- Determined that the Morro Bay Mutual Water Company (MBMWC) well is not sufficient for use as a pilot injection well.

In June 2020, GSI delivered the Final TM summarizing the characterization of the Eastern and Western injection areas and confirming a preferred injection location. GSI's analysis indicates that the Western injection area is preferred for the following reasons:

- Higher transmissivity exists in the Western area compared to the Narrows area.
- Retention times are longer from the Western area than from the Narrows area.
- Injection wells located in the Western project area would provide greater mitigation against seawater intrusion during dry periods.
- Western area is undeveloped, potentially resulting in fewer constructability issues.
- The potable reuse pipeline alignment is immediately adjacent to the Western area.

The City is moving forward with pursuing the Western injection area exclusively.

8.3.5 Upcoming Activities

Following delivery of the Final TM, GSI began modeling a number of alternative scenarios aimed at maximizing the groundwater retention time by varying the volume of purified water injected and later extracted. Groundwater retention time is critical for permitting with DDW. While all the work done by GSI has shown that the total flow to the WRF can be injected into the aquifer (i.e., 825 acre-feet per year [AFY]), the ability to initially show longer retention times to DDW will aid the permitting process.



Following the additional modeling effort, GSI recommends a longer-term pumping test using City wells, pilot injection testing, and geophysical characterization of a bedrock ridge, and careful site-selection of potential injection well.

GSI is now ready to begin Phase 3 of the hydrogeological work that must be completed before the pre-design and final design of the injection wells can be completed. The City is bringing the next amendment for GSI to City Council for approval on November 10, 2020.

8.3.6 Project Challenges

The City is currently using the eminent domain process to acquire the land from Vistra necessary to construct the injection wells. In September 2020, the City learned that SLO Superior Court ruled in their favor and the City will receive pre-judgment possession for the Vistra property.

Table 26 Recycled Water Facilities Performance Measures

Performance Measures	Target	Current	Status
Construction Cost ⁽¹⁾	\$0.0M	\$0.0M	
Construction Contingency ⁽²⁾	\$0.3M	\$0.0M	

Notes:

- (1) Project budget and current contract amount ($\leq 5\%$ over target = Green, between 5% and 10% over target = Yellow, $> 10\%$ over target = Red).
- (2) Project budget and current amount ($\leq 50\%$ of target = Green, between 0% and 50% of target = Yellow, $\leq 0\%$ of target = Red).

Table 27 Recycled Water Facilities Summary

Schedule					
Selection of the Injection Site					NA
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:

RFI – Request for Information; PCO – Proposed Change Order; CO – Change Order; NOPC - Notice of Potential Claim