

Attachment 4: Work Summary

Tait Wells Replacement

Below is a summary of the tasks necessary to complete the Tait Wells Replacement Project.

Direct Project Administration

Specific tasks related to Direct Project Administration will include Administration, Labor Compliance, and Reporting.

- 1. Administration** – The City of Santa Cruz (City) will prepare and submit invoices to the Regional Water Management Foundation (RWMF). RWMF will act as the grant administrator and submit invoices on behalf of project proponents to DWR. The City will perform overall project management, including invoicing, coordination of project team, vendors, and contractors. Administration cannot begin until the grant is awarded and is therefore currently 0% complete.
- 2. Labor Compliance** – The City will perform labor compliance in accordance with the requirements of California Labor Code §1771.5(b). Upon award of the grant, the City's staff will ensure that contractors for the project comply with the requirements. Labor compliance will be performed during construction and is therefore 0% complete.
- 3. Reporting** – RWMF will be responsible for compiling quarterly progress reports and invoices for submittal to DWR. RWMF will coordinate with the City staff to obtain information as needed to prepare and submit reports. Several of the Reporting activities (such as preparing a detailed budget and work plan) have been completed, but the majority of the work cannot occur until grant agreement execution. The Reporting task is approximately 5% complete.

Deliverables – Materials needed to execute the grant agreement, quarterly invoices, quarterly progress reports, final project completion report, copies of agency staff work orders, consultant contacts/task orders, and/or construction contracts, and documentation of labor compliance activities (if requested). Included within these reports will be site pictures of progress, applicable construction review logs, and/or project team meeting agendas and minutes.

Land Purchase/Easement

The project consists of the replacement of two wells and includes surveying, right-of-way (ROW) costs, and land purchase costs. The new Tait Well No. 5 will be drilled at a site immediately adjacent to the existing Tait Well No. 1 and will be located within the County's ROW. The City will negotiate with the County, once a survey is performed and an appraiser sets the value of the land, to acquire land necessary for obtaining the ROW. The replacement of Tait Well No. 3 entails drilling the new Tait Well No. 6 on the same parcel as Tait Well No. 3. This task is 0% complete.

Deliverables – Proof of title transfer or other ROW documents.

Planning/Design/Engineering/Environmental Documentation

Specific tasks related to Planning/Design/Engineering/Environmental Documentation will include Assessment and Evaluation, Design, Environmental Documentation, and Permitting.

- 1. Assessment and Evaluation** – The Project Assessment and Monitoring Plan (PAMP) will be developed and submitted to DWR prior to disbursement of grant funds for construction activities. The PAMP will be prepared once design documents are completed and will contain information about planning studies, CEQA costs, and design costs. Substantive planning work on the Tait Wells was performed from 2006 to 2009. The Alternative Evaluation Report Tait Street Diversion completed by Wood Rogers in May 2009 recommended the replacement of the existing two wells. Planning for this project was accelerated in 2014 as well conditions indicated the possibility of failure. This task is approximately 20% complete.

2. **Design** – A draft technical memorandum was developed as the Basis of Design (BOD) in May 2014 for the replacement of the Tait Well No. 1 and presents the basis for the well construction specifications and bid documents. A Purchase Order funding design and preparation of construction bid documents was approved and commenced in April 2014. Final Bid documents will be prepared prior to issuing the contractor a Notice to Proceed. The replacement Tait Well No. 6 has not yet been designed. A site survey will be performed to obtain easements, prior to designing the wells. The City Engineers will review draft well specifications prior to finalization of well documents. Design work is approximately 20% complete.
3. **Environmental Documentation** – The City prepared CEQA documents to begin the replacement of Tait Well No. 1 in the summer of 2014 and issued a Notice of Exemption. Tait Well No. 5 will be located in the County’s ROW. Environmental documents for the new Tait Well No. 6 will be developed for CEQA. During well drilling, nearby residences would be temporarily relocated because of the disruption from 24-hour/day drilling for one week. All applicable City and County noise ordinances and all other applicable regulations will be adhered to during construction and operation of the well. This task is approximately 20% complete.
4. **Permitting** –The City will need to obtain a Santa Cruz County Environmental Health Services Well Drilling Permit and a CDPH Water Supply Permit Amendment. It is possible that a General National Pollutant Discharge Elimination System (NPDES) Permit may be needed for discharges with low threat to water quality resulting from well development and test pumping; however, the City’s existing permit may be sufficient. The same permits will be needed for Tait Well No. 6. Permitting is 0% complete.

Deliverables –Project Assessment and Monitoring Plan, final BOD for Tait Wells No. 5 and No. 6 and final contract documents, CEQA documentation, final permitting documents for well drilling, NPDES permit, and CDPH Water Supply Permit Amendment.

Construction/Implementation

Specific tasks will include Construction/Implementation, Environmental Compliance/Mitigation/Enhancement, and Construction Administration.

1. **Construction/Implementation** – Construction activities will include mobilization and site preparation, construction of the two wells, performance testing and demobilization, commissioning of the wells, taking water quality samples, and examining results of first quarterly water quality tests. Construction work has not begun and this task is 0% complete.
2. **Environmental Compliance/Mitigation/Enhancement** – The project will be constructed and operated in compliance with all regulatory requirements including CEQA mitigation for Tait Well No. 6, as appropriate. Tait Well No. 5 does not meet any of the exceptions for taking a Categorical Exemption (14 Cal Code Regs §15300.2) and is exempt under CEQA Guidelines §15302 and §15303. Construction work has not begun and this task is 0% complete.
3. **Construction Administration** – Contract administration will consist of tasks related to managing the contract with the contractor. Prior to construction, the City staff will work with the contractor to verify that the material and equipment proposed to be used in the construction of the wells is consistent with applicable contract document requirements and that material suppliers are identified and approved. It is expected that the City staff will inspect the project each day construction occurs, and that field reports would be generated for each visit. Construction work has not begun and this task is 0% complete.

Deliverables – Site photos, Notice of Completion, pre-construction and progress meeting minutes, change orders, partial and final pay requests, construction inspection reports, copy of as-built set of plans, and other similar items requested by the State.

Improve Potable Water Quality and Water Supply Reliability to Address Drought Impacts

Below is a summary of the tasks necessary to complete the Improve Potable Water Quality and Water Supply Reliability to Address Drought Impacts Project.

Direct Project Administration

Specific tasks related to Direct Project Administration will include Administration, Labor Compliance, and Reporting.

- 1. Administration** – The City will prepare and submit invoices to the RWMF. RWMF will act as the grant administrator and submit invoices on behalf of the project proponents to DWR. The City will perform overall project management, including coordination of project team, vendors, and contractors. Administration cannot begin until the grant is awarded and is therefore currently 0% complete.
- 2. Labor Compliance** – The City will perform labor compliance in accordance with the requirements of California Labor Code §1771.5(b). Upon award of the grant, the City's staff will ensure that contractors for the project comply with the requirements. Labor compliance will be performed during construction and is therefore currently 0% complete.
- 3. Reporting** – RWMF will be responsible for compiling quarterly progress reports and invoices for submittal to DWR. RWMF will coordinate with the City staff to obtain information as needed to prepare and submit reports. Several of the Reporting activities (such as preparing a detailed budget and work plan) have been completed, but the majority of the work cannot occur until grant agreement execution. The Reporting task is approximately 5% complete.

Deliverables – Materials needed to execute the grant agreement, quarterly invoices, quarterly progress reports, final project completion report, copies of agency staff work orders, consultant contacts/task-orders, and/or construction contracts, , and documentation of labor compliance activities (if requested). Included within the reports will be site pictures of progress, applicable construction review logs, and project meeting agendas and minutes.

Land Purchase/Easement

This is not applicable. Most of the project elements are located in existing City-owned facilities. The site for the new antenna tower, is also owned by the City.

Deliverables – If requested by DWR, a letter can be written stating that the City's Public Works Department will allow the City to use the site of the antenna tower at the Resource Recovery Facility at Dimeo Lane.

Planning/Design/Engineering/Environmental Documentation

Specific tasks related to Planning/Design/Engineering/Environmental Documentation will include Assessment and Evaluation, and Design. Environmental Documentation and Permitting are not applicable.

- 1. Assessment and Evaluation** – The City has performed a substantial amount of work to study the methods that are proposed to be used to mitigate drought impacts by improving potable water quality with total trihalomethane (TTHM) removal units in water storage tanks and water reliability with irrigation meter management both of which will improve the flexibility of water supply source management to minimize diversions benefiting anadromous fish habitat. Two towers were installed in Santa Cruz for the FlexNet pilot study, which successfully demonstrated the radio read metering equipment will be of use to the City. A radio read drive-by unit was purchased in 2013 for the pilot study (no costs from the FlexNet pilot study have been included in the grant budget). Drive-by read meter transceivers were installed in the spring of 2014. This is the first step in a multi-phase automatic meter reader system initiative underway to improve the accuracy and efficiency of meter

reading. In the near future, the data will be transmitted via a radio frequency to an antenna, which would relay the usage data to a computer to record the reading. With improved meter reading capability, the City staff will have more information, including more frequent readings, to manage the flows in the North Coast pipeline at levels that will sustain the pumps, which will help to maximize the efficiency of coast sources and avoid the loss of high quality water from leakage. Assessment of the aerators, blowers and mixers was conducted in the TTHM Removal Feasibility Study (TTHM Study). With the results from the Reclaim Aeration Study, which was conducted from January 2012 to August 2012, equipment was purchased and installed at Santa Cruz Gardens to test the performance of the mixer alone versus the mixer and blower. Data were collected from September 2012 to April 2013 and a final report was produced. The final phase of the TTHM Study was performed in a temporary 1.5 million gallon (MG) tank at the Bay Street Reservoir. Future assessment tasks of TTHM removal will include up to 180 water quality samples within the first three days after the reservoirs are commissioned. In the future, water quality will be monitored when the aerators and mixers are in use. Monitoring and reporting of water quality will be performed on a quarterly basis and reported to DWR in the quarterly and final reports. This task is approximately 20% complete.

2. **Design** – The remaining tasks for design of the FlexNet meter antenna installation are electrical drawings for the power drop and preparation of as-builts once everything is installed to note the location of power conduits. The design issues were largely addressed in the feasibility study of TTHM removal equipment; however, the aeration system company would submit drawings of tanks to the City for approval prior to installation of the systems. The aeration system company will perform field design while installing the TTHM removal units. Design work is approximately 20% complete.
3. **Environmental Documentation.** – Not applicable.
4. **Permitting** – Not applicable.

Deliverables – Project Assessment and Monitoring Plan, TTHM Removal Feasibility Study reports and presentations and results of the removal of TTHM in the 6 MG reservoir. Upon request, the City will submit additional information such as equipment specifications pertaining to the design of this project.

Construction/Implementation

Specific tasks will include Construction/Implementation and Construction Administration. Environmental Compliance/Mitigation/Enhancement is not applicable.

1. **Construction/Implementation** – This task involves contracting to implement elements of the metering system upgrades and the TTHM removal systems. The elements of the project that will not go out to bid are the TTHM removal equipment and the radio meter reading equipment and antenna which have been and/or will be installed by City staff. Any other elements requiring contracts will follow the City's Municipal Code with the purchasing process. Written specifications will be prepared in the bidding process to describe the required level of quality, quantity, delivery and scope of work. Specifications prepared by the City's departments are carefully reviewed by the Purchasing Division to eliminate undue restrictions and other limitations which unnecessarily reduce competition. Administration supervision will be required to review the purchase orders, the City Council staff report, and approval of the budget transfer for the project. Some construction work (e.g. meter installs) has begun and this task is 20% complete.
2. **Environmental Compliance/Mitigation/Enhancement** – Not applicable.
3. **Construction Administration** – Contract administration will consist of issuing purchase orders, paying invoices, plan review on electrical power drop, and minor inspection work on the installations. Limited construction work has begun and this task is 20% complete.

Deliverables – Site photos and Notice of Completion.

Conjunctive Use and Enhanced Groundwater Recharge Project at Hanson Quarry

Below is a summary of the tasks necessary to complete the Conjunctive Use and Enhanced Groundwater Recharge Project at Hanson Quarry. The project includes these three stages:

Stage 1: Site-Specific Geologic/Recharge Investigation and Injection/ASR Well

Stage 2: Advanced Treated Recycled Water Study and Coordination with CDPH

Stage 3: Water Rights Confirmation for Groundwater Recharge

Direct Project Administration

Specific tasks related to Direct Project Administration will include Administration, Labor Compliance, and Reporting.

- 1. Administration** – SVWD will prepare and submit project-specific invoices to the RWMF. RWMF will act as the grant administrator and submit invoices to DWR on behalf of project proponents. SVWD will retain the primary responsibility for overseeing general project administration and reporting the project. Administration cannot begin until the grant is awarded and is therefore currently 0% complete.
- 2. Labor Compliance** – SVWD will use a consultant to perform labor compliance in accordance with the requirements of California Labor Code §1771.5(b), as necessary. Upon award of the grant, SVWD staff will ensure that contractors for the project comply with the requirements. Labor compliance will be performed during construction and is therefore currently 0% complete.
- 3. Reporting** – SVWD will provide all the documentation necessary for RWMF to execute a grant agreement with DWR consisting of a detailed work plan, a detailed budget, documentation to support project justification claims, CEQA documentation, and audited financial statements. RWMF will be responsible for compiling and submitting quarterly progress and a final project report to DWR, describing the project and its outcomes. Several of the Reporting activities (such as preparing a detailed budget and work plan) have been completed, but the majority of the work cannot occur until grant agreement execution. The Reporting task is 5% complete.

Deliverables – Materials needed to execute the grant agreement, quarterly invoices, quarterly progress reports, final project completion report, consultant contacts/task-orders, and/or construction contracts, and documentation of labor compliance activities (if requested).

Land Purchase/Easement

Stage 1 proposes to drill an injection/aquifer storage and recovery (ASR) well and a new monitoring well, and rehabilitate an existing monitoring well MW-3A on a property commonly referred to as the Hanson Quarry Site. The injection/ASR well would be used to inject advanced treated water or for surface water injection and recovery. SVWD has obtained confirmation that the property is available for conducting the geologic investigation and injection studies. SVWD will work with Lehigh Hanson to prepare right of access agreement necessary for well construction and field testing activities, including the well locations, and access routes to the well locations. This task is approximately 5% complete.

Deliverables – Right of access agreement.

Planning/Design/Engineering/Environmental Documentation

Specific tasks related to Planning/Design/Engineering/Environmental Documentation will include Assessment and Evaluation, Design, Environmental Documentation, and Permitting.

- 1. Assessment and Evaluation** – Several studies of have been conducted to support implementation of this project. Stage 1 will test injection rates into the aquifer and demonstrate the underground residence time for injected water before it would reach nearby existing or future production wells. Potable water would be injected in the injection/ASR well using tanker trucks or temporary above

grade piping. Stage 2 will evaluate source water and treated water quality for advanced treated recycled water recharge at the Hanson Quarry Site. The proposed study will demonstrate the advanced treated water quality will meet the CDPH requirements for recharge and avoid the need for costly site-specific pilot testing. Stage 3 will evaluate San Lorenzo Valley Water District (SLVWD) water rights/contract options for Loch Lomond water and facilities need to deliver Loch Lomond water to Hanson Quarry under three surface water diversion/ conveyance/treatment alternatives. Prior to construction, SVWD will prepare a Project Assessment and Monitoring Plan. Following construction, SVWD will evaluate project performance. The overall project concept has been identified and studied in several prior efforts. This task is approximately 5% complete.

2. **Design** – Stage 1 builds on extensive prior planning work and includes design of the injection/ASR well and a monitoring well. Design activities will include the construction documents for the injection/ASR well, well testing equipment, monitoring well installation, monitoring well rehabilitation (MW-3A), and injection test. Stage 2 includes designing and conducting extensive water quality analysis and using data from the Monterey Water Pollution Control Agency’s Groundwater Replenishment advanced treatment pilot study to demonstrate that advanced treated water quality will meet CDPH requirements for recharge. Design work has not begun, and is therefore 0% complete.
3. **Environmental Documentation** – Stage 1 includes construction of the injection/ASR well and requires fulfilling the CEQA requirements. It is expected that a Mitigated Negative Declaration will be issued for the project, precluding the effort required to produce a full Environmental Impact Report (EIR). Stage 3 will evaluate preliminary CEQA needs for three surface water diversion/conveyance/treatment alternatives. This task is 0% complete.
4. **Permitting** – For Stage 1, SVWD will obtain a well drilling permit from the County before construction of injection/ASR and monitoring wells. Stage 2 will include coordination with CDPH for developing the Advanced Treated Recycled Water Study as a first step toward a groundwater replenishment project using advanced treated recycled water. Stage 3 will evaluate preliminary environmental permitting (e.g., CDFW, RB 401) needs for the three surface water diversion alternatives. Permitting for the overall project is 0% complete.

Deliverables – Project Assessment and Monitoring Plan, CEQA documentation, final plans and specifications, permits, and wells siting study.

Construction/Implementation

Specific tasks will include Construction/Implementation, Environmental Compliance/Mitigation/Enhancement, and Construction Administration.

1. **Construction/Implementation** – Stage 1 includes activities related to the physical construction and equipping of the injection/ASR well and monitoring well and the rehabilitation of monitoring well MW-3A. Record drawings will be prepared upon construction completion. This task cannot begin until after grant execution and is 0% complete.
2. **Environmental Compliance/Mitigation/Enhancement** – This item includes assistance with environmental compliance requirements under Stage 1 of the project, such as preparation of permits, coordination with enforcement agencies. This task cannot begin until after grant execution and is 0% complete.
3. **Construction Administration** – During Stage 1 construction activities, SVWD staff and/or qualified construction management consultants will provide the necessary inspection and oversight during well construction operations, including on-site inspection, material testing, project coordination, meetings, and verification of overall compliance with the contract plans and specifications. This task cannot begin until after grant execution and is 0% complete.

Deliverables – Notice to Proceed issued to the contractor, construction photos, and record drawings.