

**ATTACHMENT 3**  
**(1 OF 2)**  
**WORK PLAN**

## **Water-Energy Grant Program Work Plan**

**Name of Project:** City of Santa Monica Water-Energy Project

**Project Objective/ Description:** The primary objective of the City of Santa Monica Water-Energy Project is to significantly and quantitatively reduce water-energy consumption associated with utilizing costly imported water and locally produced groundwater potable supply for irrigation, toilets and other typical recycled uses. The City proposes to achieve this objective via the innovative use of modular off-the-shelf solar energy and a modular brackish water RO unit deployed in a so called “distributed” or small scale/self-contained design. These elements will work in concert with the City’s existing Santa Monica Urban Runoff Recycling Facility (SMURRF) to advance treat and recycle up to 500KG/day of non-potable resources for beneficial reuse, including planned indirect potable reuse by aquifer reinjection/maintenance. The project will utilize a combination of urban/stormwater runoff and brackish groundwater extracted by an angle-bored well at the beach. Once completed, the project will allow the City to eliminate the use of imported water and locally sourced potable supply at SMURRF. In so doing, the City will generate project lifetime water savings of 2,463.6 MG and energy savings of 8.9MkWh. Advantages of this project include the use of off-the-shelf technologies and equipment and integration of existing City infrastructure. Together these advantages will allow for a streamlined design and construction process. The City has prepared a CEQA project exemption that will be submitted to the State Clearinghouse upon notification of funding. Because of the innovative use of commercially available advanced water treatment in a distributed, small scale array to recycle various non-potable sources, we believe this project could be a useful teaching or research platform for schools and universities and a model for use elsewhere in the State. The total estimated cost is \$2,647,955. The City’s local match is approximately \$667,185 (i.e. 25%). The grant funding need is \$1,980,770.

**Project Proponent:** City of Santa Monica, California

### **Task 1 Project Administration and Reporting (est. task duration 17-24 months):**

Management of the grant agreement will be conducted in compliance with all grant requirements, and with applicable law, including California Labor, Contract, CEQA and Health and Safety Code(s). The project administration process will be managed by the City’s Department of Public Works, with assistance from the City finance/contracts section and the contractor, as necessary. The City’s designated Project Manager will coordinate the request for proposal (RFP), bid review and award process. The RFP and bid award for the project will follow the City of Santa Monica established procurement and contracting process (also please see Task #7 below). The Project Manager will track/schedule material deliveries, requests for construction changes, if any, construction percent complete milestones, invoicing, and all reporting to the DWR as required by the grant agreement. This task will be conducted more or less concurrently with all Tasks through completion of post-construction monitoring.

Task activities include:

- Monitor bid/contract award process.
- Identify all required reports/invoicing processes/deadlines per the grant agreement (e.g. progress reports, invoicing formats, labor compliance, draft and final project reports, etc.).
- Identify all City required contractor construction management reports/deadlines, master schedule (e.g. contractor insurance, weekly progress reports, percent complete reports, project manpower reports by trade, invoicing construction changes, progress payments, inspection schedules, project closeout, etc.).

Task deliverables include:

- Executed contract (see also Task #7).
- Submit all materials and reports on schedule as identified in the approved grant agreement.
- Conduct weekly project progress meetings with the contractor to discuss projects status and/or potential issues.
- Project close out/completion reports.

**Task 2 Easements/Real Estate (est. task duration 3-4 months):** The real estate required for the proposed project is either City owned, or City controlled (i.e. SMURRF or current Pico-Kenter pump station, respectively). However, some coordination and concurrence will be required with the County of Los Angeles and the California Coastal Commission with regards to modifying the footprint of the existing Pico-Kenter pump station to accommodate the proposed beach extraction well and the planned brackish water stabilization tanks. This negotiation will be finalized upon notification of grant award. This task will be conducted concurrently with Tasks #3, #4 and #6 below. Task activities include:

- Identify/confirm all required easements and or access agreements.
- Confirm extent of work areas with contractor(s).

Task deliverables include:

- Finalize negotiations and acquire all necessary access agreements/easements.
- Meet with legal advisors to discuss/remedy any special access/operating requirement or limitations.
- Meet with construction contractors to relay any special access or work requirements related to site location(s).

**Task 3 Project Evaluation/Design/Engineering (est. task duration 3-4 months):**

The City shall work with appropriate engineering experts to evaluate and finalize all necessary plans and specifications. Because many of the key project components are modular or containerized, and will

basically “plug” into existing City infrastructure for which approved as-built plans and specifications already exist, the design process can be significantly streamlined. The City’s final plans/specifications for the project will be incorporated in the City’s RFP/bid process. The RFP/bid process may allow for alternative approaches to certain construction steps. Therefore, final project construction plans and specifications (e.g. selection of specific manufacturer of RO membranes) may be completed in consultation/contract negotiation with the successful contractor. This task would be conducted more or less concurrently with Task #2 above, and Tasks #4 and #5 below. Example activities include:

- Confirmation of project design water-energy savings and efficiencies.
- Review all approved as-built plans/specifications for existing infrastructure or systems. that will be incorporated into the project (e.g. set specific desired energy efficiencies on solar panels and pumps).
- Finalize plans/specifications for construction.

Examples of deliverables include:

- Preliminary plans/specifications for internal review.
- Prepare 75% construction design drawings based on a review of preliminary plans and submit them for review by the project team as required by the grant agreement.
- Issue 100% construction design drawings/specifications in conjunction with input from contractor, if any, and per any grant agreement requirements.

#### **Task 4 Project Environmental Documentation (est. task duration 3-4 months):**

The California Environmental Quality Act (CEQA) evaluation for the project was completed for submittal by the City’s urban planning department. Based on this review it was determined that the project qualified for an exemption. The subject CEQA documentation will be updated as necessary and submitted to the State Clearinghouse once funding is approved and the project engineering/design is finalized. CEQA approval will be received before any construction related to the project is implemented. A contractor generated stormwater pollution prevention plan (SWPPP) will also be required for this project. No NEPA documents are necessary. Note: the contractor SWPPP will be approved and in place after CEQA, but only once the contractor is selected and Notice to Proceed (NTP) has been given. With the exception of the SWPPP, these activities will be conducted concurrently with Tasks #2 and #3 above, and Task #5 below. Task activities include:

- Submit existing CEQA exemption documentation to the State Clearinghouse.
- Meet with the construction contractor to provide City input to the construction contractor’s SWPPP.

Task deliverables include:

- Public notifications per CEQA.
- Approved CEQA documentation.

- Approved contractor SWPPP (per project master schedule).

**Task 5 Community Outreach (estimated task duration 2-3 months):** The City will conduct community outreach and education activities to inform local stakeholders, interested non-governmental organizations (NGOs), and affected elected officials about the project elements, schedule, and most importantly, its long-term benefits. Outreach activities will be conducted in advance of construction kick-off and may include presentations, mailings and web-based educational materials. Some of the materials may be developed by outside contractors or engineering experts. This task will be conducted more or less concurrently with Tasks #2, #3 and #4 above. Task activities include:

- Identify key and interested stakeholders.
- Identify potential community interests/concerns.
- Develop responsive outreach materials

Task deliverables include:

- Community survey to ascertain community interests/concerns.
- Project charrettes/briefings with interested community members, NGOs, business owners and key elected officials.
- Update City website to discuss project purpose and schedule.

Because of the innovative use of non-potable resources and modular advanced brackish water reverse osmosis (BWRO) treatment technologies to conserve potable supply and reduce energy consumption, the City also foresees this project as a valuable teaching platform for local schools and universities. Outreach for this purpose will also be conducted.

**Task 6 Permitting (est. task duration 1-2 months):** The City's Public Works Department (Building & Safety) will help facilitate and expedite any contractor submittals for City permits required for the project. As is typical, a majority if not all, required permit approvals will be sought concurrently with the exception of those not needed for construction start. Those permits will be acquired per the project master schedule. The groundwater well sub-contractor will work with the LA County Department of Public Health to obtain the necessary well permit, with assistance by the City, if needed. Task activities include:

- Identify/confirm all permits required (e.g. a list of key permits includes construction, temporary power pole, temporary traffic/street closure, phased trade inspections, water well permit, etc.).

Task deliverables include:

- Joint meeting between the City Project Manager/contractor/Building & Safety to identify and discuss all required permits.

- Contractor written certification that all permits have been acquired, or will be acquired, per the project master schedule.

**Task 7 Construction/Implementation (est. task duration 8-13 months):** As planned, the City will begin pre-construction activities associated with this task more or less concurrent with the completion of Tasks #1-#5. Task #6 will be conducted concurrent with this task and just after contract award. Actual construction implementation will commence upon contractor contract execution, and all State and local approvals. A CEQA review by the City's Planning Division has determined that the project would be exempt, but County of Los Angeles and California Coastal Commission concurrence for the project would be necessary. Design is simplified because the project incorporates a substantial amount of existing City infrastructure and ready-built or modular "off-the-shelf" components. Because of this, the durations for site preparation and construction will be streamlined and all work activities will be run in parallel to the extent feasible. The estimated construction duration from the City Notice to Proceed (NTP) to the contractor is eight months.

There are three separate primary project work activities and as many work areas related to the project. These are:

- Installation of the ready-made solar panel arrays, to be located at the SMURRF, an adjacent parking lot and at the existing Pico-Kenter pump station,
- Installation of the containerized BWRO at the existing prepared location at the SMURRF compound, and
- Drilling and completion of the shallow beach extraction well and the installation of the ready-made equalization tanks at the City's Pico-Kenter pump station.

Task activities include:

- Issuance of Project RFP/bid solicitation (follows established City procurement procedures for advertisement, review, and selection).
- Selection of contractor and final contract negotiations.
- Awarding of contract.
- Confirmation of completion of Tasks #2-#6 above.
- Confirmation of final project master schedule critical path items and milestones.
- Confirmation/coordination of all project control and reporting requirements and software.
- Issuance of formal Notice to Proceed.
- Implementation of construction.
- Completions of project punch lists (all trades) and inspections.

Task deliverables include:

- Executed contract with final cost, specifications, and reporting requirements.

- Issuance of project master schedule.
- Issuance of final project specific management plan.
- Project kick off meeting with the City, contractor, and DWR representatives.
- Weekly project progress meetings.
- Project Closeout Verification Report.

**Task 8 Project Monitoring/Reporting Plan (est. task duration 12- 18 months):**

Post-construction reporting of quantified parameters (e.g. water/energy savings/reductions) will be conducted quarterly, or as finalized through the grant agreement development process. A Monitoring/Reporting Plan will be developed for approval in close consultation with the DWR. At a minimum, the subject project reports will contain relevant CASGEM data, a comparison of current and historic energy use and greenhouse gas emission data, a discussion of quantified water savings, a discussion of any identified trends and findings, and a discussion of recommendations to further enhance project water-energy savings, if any. Some of the reporting activities (e.g. data acquisition/interpretation) will be prepared for the City by outside engineering experts. The duration of this project assumes the Monitoring workplan will be reviewed and approved by DWR prior to completion of construction and that the actual monitoring period is 12 continuous months, with up to six month totals allocated for Final Monitoring Report preparation, DWR review, and final agency approval. Task activities include:

- Develop table of contents and underlying technical approach for the required Draft Monitoring Plan in close consultation with DWR.
- Identify any potential monitoring data gaps for correction or project adjustments/improvements to ensure defensible quantification of water-energy savings generated by the completed project.
- Collect and interpret the necessary data.

Task deliverables include:

- Draft Monitoring/Reporting Plan for review by DWR.
- Monitoring/Reporting Plan approval for implementation by DWR.
- Submittal of required interim Monitoring Report(s) for review and approval by DWR.
- Submittal and DWR approval of Final Monitoring Report.

# City of Santa Monica Water-Energy Preliminary Project Schedule

