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December 10, 2019

Attention: David Stoldt
General Manager
Monterey Peninsula Water Management District
5 Harris Court – Bldg G
Monterey, CA 93940

Project Name: MPWMD Operations Plan

Subject: Scope of Services

Dear David,

Jacobs is pleased to provide this proposal to support the Monterey Peninsula Water Management District in developing an Operations Plan for the potential ownership, management and contracted operation of the water utility currently owned and operated by California American Water.

As one of the largest contract operators in the United States, and the only one with the experience and bench strength of a Fortune 500 engineering firm behind it, we can provide MPWMD with an analysis that is based on our own day to day experience with water utilities, plus best practices observed from our many consulting clients around the world. This will provide you with practical advice in the form of an Operations Plan, which can serve as a framework for building the program.

We have assembled a team of subject matter experts in water quality and treatment, utility asset management, and contract administration, all supported by our local Jacobs office.

- Howard Brewen will serve as the local project manager for this effort. Howard is located in Paso Robles, CA and is already very familiar with MPWMD. He is a top certified operator, having served in both consulting engineering and daily plant management for utilities, with over 18 years of industry experience.
- Chris Catlin, PE is a water quality expert and top certified water operator (treatment and distribution), having served in both consulting engineering and daily plant management roles for large utilities, with over 30 years of industry experience.



December 10, 2019

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- Matt Crowley is an engineer and asset/maintenance management expert, who leads a team of experts in asset condition assessments, CMMS implementation and due diligence for Jacobs and our clients and has over 20 years of experience.
- John Rickermann, PE will be the internal quality control on this project, having conducted numerous O&M consulting studies like this for clients across the country. He is a vice president over the Jacobs O&M division and will supervise the technical and reporting aspects of this project.

The attached scope outlines the approach we recommend, based on our understanding of your needs, but we are of course open to adjusting the scope as appropriate. This team is prepared to get started upon your approval of this proposal.

Thank you for this opportunity to serve the MPWMD. If you should have any questions, please do not hesitate to contact me directly at 805-286-2687.

Sincerely,

[Howard Brewen](#) | [Jacobs](#) | O & M Market Growth Leader – West Region | +1.805.286.2687 cell | howard.brewen@jacobs.com |

Monterey Peninsula Water Management District Operations Plan Scope of Services

The following provides a detailed description of the scope of Jacobs to support the Monterey Peninsula Water Management District (MPWMD) in developing an Operations Plan for the potential ownership, management and contracted operation of the water utility currently owned and operated by California American Water.

Project Objectives

This project seeks to evaluate and outline an Operating Plan for management of the water utility infrastructure, which includes reservoirs and dams, groundwater wellfields, raw water transmission and booster stations, groundwater treatment plants, desalination treatment plant(s), finished water storage, pressure zone pump stations, hydrants, valves, meters, and distribution system.

For the purposes of this project, it is assumed that only current utility assets within the existing service boundary of MPWMD will be evaluated – the project excludes future desalination or Pure Water facilities and excludes satellite communities outside the MPWDM service area that are currently operated and owned by California American Water.

Jacobs will deploy a team of O&M subject matter experts to evaluate the facilities. We will utilize many of the tools that we use to effectively operate and maintain our own facilities and that we also apply for O&M consulting services for facilities like those to be evaluated under this Scope of Services.

The evaluation will be broken into the following components for each of the major assets and facilities in the service area, as described further herein:

- Management/Staffing Levels
- Operating Practices and Permit Compliance
- Maintenance and Asset Management Practices
- Safety
- Contract Operations Management and Coordination

The project will be executed in a series of tasks designed to capture information, analyse and synthesize options, and present Jacobs' findings and recommendations.

Task 1 Data Collection

Jacobs will evaluate the available data related to the service area facilities and conduct an on-site evaluation to understand O&M practices and duties specific to this utility. Ideally, Jacobs will conduct informal interviews with staff of the facilities to gather insight into operating procedures and potential risks, but we are prepared to conduct this study without that input if necessary.

EXHIBIT 12-C

MPWMD Operations Plan Scope of Services Summary

Task 1.1—Data Acquisition and Analysis

Prior to commencing with our evaluation, we will request the data we determine necessary to understand the current operation of the water facilities. The following information is of primary importance and other information may be requested to supplement this list based on findings in the field.

We recognize that much of this information may be difficult to obtain in short order, so we are prepared to accommodate gaps with assumptions from our own O&M benchmarks and other industry best practices, although this tends to degrade the quality of our findings somewhat:

- Three years of regulatory reports (water quality, annual and monthly reports, etc)
- All current state or federal regulatory compliance orders, including staffing orders
- Relevant and current engineering studies related to all water utility assets
- Process control reports/models
- Three years of laboratory reports
- Three years of operations logs
- Energy records (electricity, natural gas)/invoices
- Chemical use records/ invoices
- Residuals hauling records/invoices
- O&M manuals (but not equipment O&M manuals) or existing operating plans
- Flow schematics (P&IDs)
- Sizes and types of each individual unit processes
- Complete equipment list (asset registry) for each facility
- Models or inspection data of the transmission and distribution system and related assets
- Maintenance history for all associated equipment
- Customer billing information (three years of revenue and expense reports for the service area)
- Utility agreements (water, fuel, power, etc)
- Line break and customer callouts records (past 3 years), including taste and odor issues, etc.
- Current staffing plans or information if available

Upon receiving the information identified in this Task 1.1, our team will immediately begin the review process and disseminate the information to the team members. It is assumed that this information will be available within the first two weeks of the notice to proceed and will be of maximum value prior to site visits.

Task 1.2—On-site Evaluation

The Jacobs review team will conduct 3-4 days of site tours at the facilities, and conduct interviews if possible, with field staff in order to supplement the data collected previously. These interviews will also question the staff about certain aspects of the information received. Subjects discussed may include, but are not limited to:

- Regulatory compliance issues
 - Current control philosophy
 - Operating strategies
 - Decision making process
 - Emergency and failure response plans/procedures
 - Asset management approach
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EXHIBIT 12-C

MPWMD Operations Plan Scope of Services Summary

It is important to understand how the utility is currently operating. During the site evaluation, the project team will gather information on current operational practices, the mode of operation of the system, and any problems/issues operators and mechanics may face. We may also work to develop preliminary estimates of capital needs based on flows, loads, condition, and future expansion if that scope option is desired.

Each subject matter expert will compose trip reports and summarize their analysis for eventual coordination into a unified approach and report. The team will align recommendations and balance often conflicting priorities to make the action plans as realistic as possible to execute. Water quality regulatory compliance and safety actions typically govern, however.

Task 2 – Operations Plan

Task 2.1—O&M Strategy

Data gathered as part of the Onsite Evaluation (Task 1.2) will be used by experienced Operations Specialists to develop O&M strategies using the same approach used when we evaluate sites for full contract operations and management of the utility by MPWMD. For the purposes of this study, the focus will be on:

- Level of service to meet MPWMD objectives
- Safety and regulatory compliance standards
- Asset management goals (repair and replacement strategy)

High quality water that meets or exceeds regulatory standards is the goal of any water utility team. Therefore, a review of how the team is meeting this goal is vital to determine how functional it is and where the gaps may be. Knowledge of the regulatory requirements and documented procedures is a key indicator along with a brief review of process data, lab bench sheets and standards, and staff interviews. A cursory review of the operator log book is often instructive along with a look at past reported non-compliance and monthly regulatory reports.

The safety program currently in place will be reviewed along with obvious safety hazards, but an in-depth safety audit will not be performed for the purposes of this evaluation. The objective will be to assess the general risk level and potential impact on plant staff in conducting their day-to-day duties. We will employ similar evaluation tools that we use for our own contract operations sites to suggest areas for improvement.

Our project team will also collect process data for review and will look for operational problems and their relationship to the process control strategy and communication among plant staff, as well as skill set gaps given the level of sophistication of the water system, available capacity and degree of automation. For this project, only a rudimentary process analysis will be conducted to uncover these issues using basic modelling techniques to be checked against our benchmarking database.

As with process and operations issues, maintenance practices play a key role in the functionality of the utility. The complexity and quantity of equipment maintenance needs, and current performance indicators (PM/CM ratio, backlog, etc.) will be reviewed to determine an appropriate staffing level and proficiency needs. The CMMS system will be reviewed to obtain much of this information, and the

extent to which it is utilized is often instructive regarding the overall efficiency of maintenance practices. Visual field inspections, coupled with staff interviews, will be enough to provide a high-level picture of the current level of service and gaps if any.

Task 2.2—Staffing Plan

Following the onsite assessments and interviews, we will benchmark the staffing levels and structure against the hundreds of other facilities we operate or have consulted with. This step in the analysis will utilize our benchmarking resources (WERF, AWWA, NACWA, internal databases, etc.) to show the relative placement of this utility with other agencies in this regard for staffing levels.

We will also provide observations on organizational alignments. There is usually more than one good way to set up a utility organization, but there are some poor approaches to be avoided. Of particular interest for this study will be coordination between MPWMD and contract operators.

Finally, based on what we observe and learn from the data review, we will make suggestions on training and certification requirements to meet the desired level of service. This may include more than just operator and lab technician certification and extend to recommended training and credentials for maintenance staff, field crews, and management.

Task 2.3—Contract Administration

Jacobs will offer recommendations for successful contract management approaches and coordination with the MPWMD. As a general rule, we promote partnership arrangements with trusted contractors that share the values of the owning utility where both parties have a stake and shared risk in the performance of the water system. To that end, we will recommend ways to allocate risk to the entity most prepared to manage it the most efficiently while supporting your level of service goals. These principles could serve as the basis for any future contract terms and conditions, assuming the MPWMD contract operates the utility. This part of the study will be supported with our Jacobs O&M contracts attorney, as well as the field evaluation team.

Task 3. Recommendations and Reporting

Jacobs will prepare a summary report of findings and recommendations. Our recommendations will be based on our review of the information provided, on-site evaluations, and the results obtained in our evaluation of the facilities.

Deliverables

- Draft and Final Reports with the following chapters:
 - Executive Summary
 - Level of Service
 - Regulatory Review/Laboratory
 - Safety
 - Process Control
 - Maintenance

EXHIBIT 12-C

MPWMD Operations Plan Scope of Services Summary

- Staffing Plan
- Contract Management

Project Management

Jacobs will provide on-going project management of the budget, schedule, quality, and staffing coordination for the expected duration of the work. Our local office will support management of the project, including progress reports and monthly invoicing. We have assumed a brief kickoff meeting at the start of the project to discuss projects, needs, objectives and other business.

Schedule and Fee

The project duration will be approximately four months for the draft report from the notice to proceed, and assuming timely delivery of adequate system data as requested in this scope. Our team is available to conduct this study immediately. Key resumes are attached.

Jacobs will perform the services as described herein for a lump sum of \$87,000 for the base scope items, and up to an additional \$12,700 for optional scope items. The optional scope items would add approximately 3 weeks to the delivery schedule for the draft report.

Base Scope		
1	Project Management, Data Request, Site Visits	\$ 38,810
2	O&M Strategy (level of service, safety & compliance standards, R&R, responsibilities assigned)	\$ 22,338
3	Staffing Plan (organization, head counts, training, certification)	\$ 6,012
4	Contract Operations Administration	\$ 10,149
5	Reporting	\$ 9,675
Total Labor Cost (Base Scope)		\$ 87,000
Optional Study Add-Ons		
O1	New MPWSP desal plant O&M Plan	\$ 4,224
O2	New PureWater recycling O&M Plan	\$ 4,224
O3	Future capital needs to achieve long term cost optimization	\$ 4,224
Total Labor Cost (Add-Ons)		\$ 12,700