



EXHIBIT 14-A
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MPWMD

PUBLIC WORKS DEPARTMENT
CITY OF PACIFIC GROVE

2100 Sunset Drive
Pacific Grove, CA 93950
Telephone: (831)648-5722 / Facsimile: (831)375-0627

September 19, 2014

David Stoldt
Monterey Peninsula Water Management District
PO Box 85
Monterey CA, 93942

RE: Pacific Grove Local Water Project Grant Application

Dear Mr. Stoldt,

The City of Pacific Grove is pleased to submit the attached application for funding from the Monterey Peninsula Water Management District for the Local Water Project (PGLWP). The City is requesting \$100,000 in funding from MPWMD this fiscal year, matched by a city contribution of \$100,000. The PGLWP will produce a non-potable water supply as an offset to the existing use of 125-600 acre feet a year of potable water use that is historically been supplied by Cal Am Water.

We look forward to your consideration of our request and to continue to work together collaboratively to address water issues facing the Monterey Peninsula region.

Regards,

Daniel Gho,
Public Works Superintendent
(831)648-5722 ex.203
Email: dgho@ci.pg.ca.us



City of Pacific Grove Local Water Project Grant Application Form

DATE: September 16, 2014

Eligibility Summary

- Project Geographic Eligibility:** The City of Pacific Grove and the Pacific Grove Local Water Project (PGLWP) are within the geographic boundaries of the Monterey Peninsula Water Management District ("District"). Benefits of the PGLWP accrue to all California American Water Company (Cal Am) water users within the territory of the District, including but not limited to water users within the City of Pacific Grove, the Pebble Beach Community Services District/Carmel Area Wastewater District, the Presidio of Monterey, the City of Monterey, and unincorporated portions of the County of Monterey.
- Project Sponsor:** The City of Pacific Grove ("City") is the Project Sponsor and is a public entity located within District boundaries.
- Project Purpose Eligibility:** The PGLWP will produce a non-potable water supply as an offset to the existing use of 125 to 600 AFY of potable water use that has historically been supplied by Cal Am. The PGLWP provides direct benefits to Cal Am water service ratepayers who reside within the District by providing a new replacement water supply that strengthens the water supply portfolio available to the community; this project will increase and diversify water supply sources by providing a drought resistant, sustainable replacement source, thereby freeing the increment of water previously dedicated for use. The PGLWP will assist Cal Am in meeting requirements of the State Water Resources Control Board (SWRCB) Cease and Desist Order (CDO).
- As an ancillary benefit, the PGLWP will assist the City in meeting SWRCB requirements to protect water quality and habitat from degradation in the Pacific Grove Area of Special Biological Significance (PGASBS) and also



assist meeting regulatory compliance requirements of the California Ocean Plan.

Matching Requirement:

The City of Pacific Grove has thus far committed \$486,004.24 to the ongoing development of the PGLWP and has budgeted an additional \$203,000.

The City will commit to provide matching funds of \$100,000, equivalent to 50% of the requested grant funds.

Requirements

- 1) Project Sponsor: City of Pacific Grove
- 2) Type of entity: Public entity
- 3) Project Title: Pacific Grove Local Water Project (PGLWP)
- 4) Project Sponsor Contact Information: Mr. Daniel Gho
Public Works Superintendent
City of Pacific Grove
2100 Sunset Drive
Pacific Grove, CA 93950
(831) 648 5722 ext. 203
dgho@ci.pg.ca.us
- 5) Amount of Funding Requested \$100,000.00
- 6) Project Geographic Location: City of Pacific Grove (Phases I & II)
PBCSD Service Area in Pebble Beach
- 7) Project Purpose and Description.
 - a. Description of the project – facilities, operations, direct water supply benefits, and ancillary benefits.

Facilities:

The PGLWP project consists of the design, construction, and operation of facilities to divert and treat raw sewage at the retired Pt. Pinos Wastewater Treatment Plant and to use this local reclamation source to replace Cal Am water supplies historically used for irrigation purposes.

The first phase of the PGLWP project consists of the following major facilities:

- Sewer diversion structure in Asilomar Avenue;
- Approximately 1,300 feet of sewer diversion pipeline;



- Restoration of the retired Pt. Pinos Wastewater Treatment Plant 1-acre site;
- New 0.2 mgd membrane bioreactor (MBR) package treatment plant consisting of the following general components:
 - Headworks
 - MBR Treatment Tanks
 - Disinfection
 - Waste pump and pipeline back to MRWPCA collection system
- Conversion/refurbishment of 620,000 gallons of storage capacity in retired sludge digester and clarifier.
- A new distribution pump station and approximately 1,300 feet of recycled water delivery pipelines.
- Onsite improvements to existing irrigation equipment for Title 22 compliance at the Pacific Grove Municipal Golf Links and El Carmelo Cemetery.
- Relocation of the existing sewage pipeline at Ocean View/17th Tee restrooms to new treatment plant.

Future phases of the PGLWP project will incorporate additional facilities for the interception and redirection of dry and wet weather storm flows, as well as their capture and storage for reclamation.

Operations:

The City of Pacific Grove will select a professional service operations contractor to maintain the daily operations, testing and management of the PGLWP. The City will maintain responsibility for oversight of all PGLWP project operations. Additionally, the City will maintain its role as the site manager for all City lands irrigated with the PGLWP product water.

Direct Water Supply Benefits:

The PGLWP will produce a direct water supply of 125 to 600 AFY. This non-potable recycled water will be used to irrigate City-owned property and other non-potable irrigation sites within the City and other nearby vicinities (e.g., Pacific Grove Unified School District properties, Presidio of Monterey sites, and lands within the PBCSD service area). This new water supply will also offset Cal Am's existing unlawful diversions from the Carmel River, and assist the community's efforts to comply with the SWRCB Cease and Desist Order, Order 2009-060. Water created by the PGLWP will be a new water supply for the Monterey Peninsula that will strengthen the overall water supply portfolio for Cal Am, and increase and diversify locally available water supply sources.

In the first phase, water produced by the PGLWP will derive from raw sewage as its source of supply; it will accordingly be drought resilient. Later phases of the PGLWP project will incorporate dry and wet weather storm water flows, and further diversify and strengthen its supply reliability.



Ancillary Project Benefits:

- **Potable Water Offset:** The PGLWP will reduce the volume of water Cal Am will need to produce to meet potable water needs throughout its Monterey District. Specifically, the PGLWP will create a potable water offset of 125 to 600 AFY that can be devoted to other uses in the Cal Am system.
- **Reduce Desalination Plant Operations:** The PGLWP will reduce the daily operational volume of product water required from Cal Am's proposed seawater desalination project. This will reduce energy consumption, reduce greenhouse gas emissions, reduce operating expenses, and reduce operational costs for chemicals and equipment used to operate Cal Am's seawater desalination plant. Energy required for the PGLWP, per unit of water produced, is less than that anticipated for the Cal Am seawater desalination process.
- **Water supply reliability, conservation, and efficiency of use:** By replacing potable water with non-potable water for irrigation use, the City shall continue to closely manage and improve its irrigation water demand efficiencies. This will include appropriate irrigation zoning; conversion to ET based irrigation controllers, nozzle replacement to matched precipitation technology and other measures to conserve water.
- **Ocean water quality improvements:** Diversion, capture, treatment and recycling of dry and wet weather storm water flows will eliminate their discharge into the Ocean. Flows captured, diverted and recycled by this project derive both from the City, and also from the New Monterey area of the City of Monterey. This will to improve and protect the receiving water quality and habitat of the Pacific Grove Area of Special Biological Significance (ASBS). Diverted dry and wet weather storm water flows will be incorporated into the source water for the proposed PGLWP Project.
- **Recycling or reuse of wastewater consistent with SWRCB Recycled Water Policy:** The PGLWP proposes to recycle raw City wastewater for the production, distribution and reuse consistent with the SWRCB Recycled Water Policy. The project will increase the use of recycled water from municipal wastewater sources that meets the definition in Water Code Section 13050(n), in a manner that implements state and federal water quality laws. The PGLWP will strictly adhere to the state's water recycling criteria in Title 22 of the California Code of Regulations, and all applicable state and federal water quality laws.
- **Reduction of non-point source pollution and point source discharges, consistent with the California Ocean Plan:** The PGLWP



will eliminate the discharge of dry weather flows and reduce wet weather flows that currently collect in and are discharged from the City's storm water system. Additionally, a portion of the dry weather flows from the New Monterey area of the City of Monterey will similarly be captured, diverted and recycled. The PGLWP shall reduce non-point and point source pollution that would otherwise flow into the PGASBS.

- **Reduction of carbon-based emissions consistent with California AB32 goals:** The PGLWP will recycle 125 to 600 AFY of wastewater as a substitute for the current use of potable water. Cal Am has proposed to replace its illegal diversion from the Carmel River with a new seawater desalination plant. The PGLWP will reduce the daily operational volume of product water required to be produced by Cal Am's seawater desalination project. The seawater desalination project would need to produce the 125 to 600 AFY of potable water through a more energy intensive reverse osmosis process plus regional distribution pumping that would produce significantly more carbon-based emissions than the MBR process of the PGLWP. The PGLWP therefore results in a reduction of carbon-based emissions consistent with CA AB32 goals.
- **Storm Water capture and reuse consistent with California ASBS policy goals:** The PGLWP will capture, divert, treat and recycle dry weather, non-storm water discharges and the 85th percentile wet weather flows (design storm requirement for ASBS). The PGLWP will therefore comply with the state ASBS policy goals by ensuring that these flows do not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in the PGASBS.
- **Groundwater recharge:** The PGLWP will reduce the demand of potable water from Cal Am by 125 to 600 AFY and create a new supply of equal volume. This reduction in potable water demand and creation of recycled water supplies will contribute directly to a reduction of the groundwater withdrawals that would otherwise be necessary by Cal Am from the planned MRWPCA Groundwater Replenishment Project (GWR). Therefore, the PGLWP will have a positive effect on the GWR Project and will contribute to the management, recharge and replenishment of the Seaside Aquifer. Additionally, the PGLWP will seek to optimize its management and use of dry and wet weather storm flows by contributing to the source water for irrigation reuse or diversion to the RTP for inclusion in the source water supply to the GWR.
- **Environmental mitigation, fisheries protection, or habitat restoration:** The PGLWP will reduce the demand of potable water from Cal Am by 125 to 600 AFY and create a new water supply of equal



volume. This reduction in potable demand and creation of recycled water supplies will directly contribute a reduction of Cal Am's illegal diversions from the Carmel River. The PGLWP is scheduled to be fully functioning before December of 2016 and will therefore effectively reduce Cal Am's Carmel River diversions several years before the proposed seawater desalination facility is operational.

b. Describe capacity (acre-feet and/or MGD) in annual, seasonal, or monthly terms.

- Phase I = 125 AFY/0.1 MGD
- Phase II = 225 AFY/0.2 MGD
- Phase III = 600 AFY/0.45

c. Describe all project participants and roles for successful execution.

- Phase I = City of Pacific Grove
- MPWMD to coordinate with Cal Am on the recycled water distribution system expansion from the initial demands in Phase I to future phases.
- MPWMD to coordinate with MRWPCA for the incorporation of dry and wet weather storm system flows into the GWR.
- Phase II = City of Pacific Grove; Cal Am for distribution system expansion to serve non-municipal demands within the City of Pacific Grove.
- Phase III = City of Pacific Grove; MPWMD; PBCSD/CAWD for purchase of additional recycled water; City of Monterey or construction of pipelines; Presidio of Monterey (POM); Cal Am for distribution system expansion to serve non-residential irrigation demands.

d. Project Phase:

The PGLWP has completing its Facility Planning and Facilities Plan report. The preparation of the Draft Environmental Impact Report has been completed and the report has been circulated for review.

The City has approached the EIR through CEQA plus as this makes the City eligible for a low interest loan from the California Clean Water State Revolving Fund program. The City of Pacific Grove has thus far committed \$486,004.24 to the ongoing development of the PGLWP and has budgeted an additional \$203,000 for fiscal year 2014/15.

This grant request is for additional funds required for the initial and final design; finalizing the CEQA plus documentation; regulatory permitting & solicitation/procurement of a Design-Build-Operate (D-B-O) Contractor and application for CA CWSRF low interest loan for construction funding.

8) District Goals:



- *Can the Project provide water supply to the District for drought/rationing reserve (i.e. water that is not supplied to a beneficial use immediately upon project completion) and if so, how much?*

Yes, the PGLWP could provide non-potable water for irrigation and other non-potable purposes. Recycled water could be provided by truck-fill delivery and a connection to Phase II and Phase III irrigation sites.

- *Can the Project provide water supply to the District for potential future reallocation to the jurisdictions (i.e. water that is not supplied to a beneficial use immediately upon project completion) and if so, how much?*

Yes, the PGLWP could provide non-potable water for irrigation and other non-potable purposes. In Phase I, at least 125 AF of current potable water use would be replaced, making this supply of potable water potentially available for reallocation. Additionally, the City could reconfigure its sewage collection facilities to divert additional sewage to the PGLWP. This additional recycled water could be reallocated to other recycled water demand sites, and served by the expansion of the proposed distribution system.

- *Can the project be run in a manner that would provide surplus production that could be “banked” into the Seaside Groundwater Basin utilizing the District’s Aquifer Storage and Recovery project?*

Yes, additional surplus capacity and production outside of the irrigation season could be allocated for banking into the District’s ASR Project. This can occur in one or both of the following ways: (1) diversion of dry and wet weather flows above those that would be recycled for irrigation needs would be conveyed to MRWPCA for inclusion in the GWR project, and (2) construction of additional facilities to provide advanced treatment of the PGLWP water could be constructed pursuant to the California Department of Public Health requirements for indirect potable reuse. The conveyance facilities between the PGLWP and the ASR project would also need to be constructed.

- *Are there multiple benefits to the region or the State as described in section 6, above?*

Yes, the PGLWP results in multiple benefits to the region and the state from the potential expansion of the project to:

- Provide a drought/rationing reserve,
- Provide a potential future reallocation to the MPWMD’s jurisdictions,
- Provide surplus water production that could be “banked” into the Seaside Groundwater Basin. Reduce desalination plant operations and costs.
- Ensure water supply reliability, conservation, and efficiency of use.
- Improve ocean water quality improvements.



- f. Recycle and reuse of wastewater consistent with SWRCB Recycled Water Policy.
 - g. Reduce non-point source pollution and point source discharges, consistent with the California Ocean Plan.
 - h. Reduce carbon-based emissions consistent with California AB32 goals.
 - i. Capture and re-use storm water reuse consistent with California ASBS policy goals.
 - j. Enable groundwater recharge by reducing the groundwater withdrawals otherwise needed by Cal Am. Enable environmental mitigation, fisheries protection, and habitat restoration
- 9) Technical Feasibility of Project. Information about the project and include as exhibits or define links to documents or websites for future reference.

The PGLWP is technically feasible. The project proposes to construct facilities that are now commonplace in their application for the treatment, distribution and use of recycled water. Examples of similar projects, using the same technology at the same and greater capacities occur throughout the region, the state, the nation and internationally.

Examples of similar projects operating locally and throughout the state include:

- a. **CAWD/PBCSD Wastewater Reclamation Project & Recycled Water Distribution System:** This system was constructed in 1994 to produce and distribute approximately 1,000 AFY of recycled water to irrigate the golf courses at Pebble Beach, Peter Hay, Cypress Point, Poppy Hills, Spyglass Hill, Monterey Peninsula Country Club, and Spanish Bay. Much in the same way that the PGLWP will create a new recycled water supply for local irrigation, the regional benefits extend to the water supply diversity throughout the Cal Am service area through the creation of a potable water offset. The safe and effective treatment and use of recycled water has been a model for similar projects throughout the world. For additional information see the following internet website:
<http://www.cawd.org/reclamation.html>
- b. **Castroville Seawater Intrusion Project (CSIP):** The MRWPCA began facilities planning to provide wastewater management services to northern Monterey County, California, in 1975. The CSIP was developed by MCWRA in conjunction with the MRWPCA. This project delivers up to 14,000 AFY of recycled municipal wastewater to approximately 12,000 acres of agricultural lands surrounding Castroville. It is the world's largest water recycling facility designed for raw food crop irrigation. The recycled water is blended with groundwater to provide a supply adequate to meet the irrigation needs of the CSIP service area. MRWPCA has a history of research on the safe and effective use of recycled water for agricultural, golf course and other irrigation practices. More information can be found at the following internet website:
<http://www.mrwPCA.org/recycling/index.php>



c. **Central Contra Costa Sanitary District (CCCSD):** Wastewater from more than 448,000 residents and 3,000 businesses in central Contra Costa County is treated at CCCSD’s facility in Martinez, CA. They distribute over 600 AFY to landscape irrigators, corporation yards, private soil farms and concrete recycling and batch plants. In 1998, CCCSD expanded the recycled water system to Pleasant Hill and added golf courses, parks, and city and college campuses as recycled water customers. In May 2005, CCCSD began providing recycled water to the new Contra Costa County Animal Shelter. This is the first dual-plumbed facility in Contra Costa County, using recycled water inside the building to wash down dog kennels. CCCSD uses almost 400 MG per year of recycled water for process water at their wastewater treatment plant and for landscape irrigation. More information on CCCSD’s recycled water program can be found at the following interned website <http://www.centalsan.org/index.cfm?navId=159>

d. **The Sanitation Districts of Los Angeles County (LACSD):** LACSD owns and operates one of the largest wastewater recycling programs in the world meeting the water supply needs for more than five million people. The total volume of recycled water currently supplied by LACSD for reuse is 76.25 MGD (85,448 AFY) on 14,387 acres in 30 cities plus Los Angeles County Unincorporated Areas. Since inception they have produced 2,497,638 AF (813.6 billion gallons) of recycled water.

A total of 602 of the individual reuse sites used use 13.659 MGD (15,306 AFY) of recycled water for landscape irrigation. Reuse sites include 23 golf courses, 104 parks, 101 schools, 195 commercial and office buildings 107 roadway greenbelts, 27 public facilities, 21 nurseries, 17 residential developments, 11 churches, and 7 cemeteries.

LACSD’s annual recycled water report can be found at the following Internet address:

<http://www.lacsd.org/civica/filebank/blobdload.asp?BlobID=7644>

10) Project Schedule. Describe basic project schedule milestones including, but not limited to feasibility study, conceptual design, CEQA/NEPA Process, other permits required, etc. Major milestones included in the schedule are as follow:

• CEQA Documentation	- Sept 14 - March 2015
• Regulatory Permitting	- June 2015
• Procure Design-Build-Operate-Construct Contractor	- Jan 15 - June 16
• Project Commissioning	- August 2016

11) Project Financing. Describe project capital costs and construction schedule, even if the project is currently applying only for “planning phase” projects. For “planning phase” projects, also describe costs for solely that phase and sources of funding.



- Capital costs for the PGLWP Phase I are currently anticipated to be \$4,900,000.00. The current vision for the construction schedule is to fast track completion of the project design engineering and construction by the selection of a Design-Build Contractor. The D-B Contractor would be selected by in the first quarter of 2015. Full construction including start-up would be completed within one year. Funding source: California CWSRF Loan Funds,
- Approximately \$486,004 has been expended to date for project planning. An additional \$203,000 is planned for expenditure this year for project planning and design. Funding source: City General Fund, State Water Resources Control Board Facilities Planning Grant, MPWMD water project funding

Describe expected method of financing the capital costs of the project. If debt financing is envisioned, what is the source of debt repayment and security for the debt?

- The City currently anticipates obtaining a California Clean Water SRF low-interest loan and has already started the process.

Demonstrate applicant's matching share.

To date the City has committed \$486,004 to the project. On June 25, 2014, the City Council approved an amendment to the contract for consultant services for the amount of \$203,000 of which the City anticipates \$100,000 would serve as its matching share to the grant from the MPWMD.

If the District does not provide a grant, how will the Applicant fund that amount and proceed with the project?

The City's General fund would continue to fund the project. Once the EIR has been certified then the City will be applying for the SRF loan to fund the design, engineering and construction of the LWP.

12) Annual Cost of Water. Describe the operating costs and capital cost recovery on an annual basis. Also describe on a cost per acre-foot of water produced per year. Provide detail. Describe annual and periodic renewal and replacement requirements.

Costs presented in this grant application are preliminary and therefore subject to revision. Costs are for the Phase I project to produce and deliver 125 AFY. Additionally, all cost estimates are based on the current preliminary nature of the engineering design completion and therefore include a +50% to -30% contingency.

Table 1 presents the current estimated capital costs for the PGLWP. It includes the costs for both the capital and operations and maintenance costs. The only major annual / periodic renewal and replacement requirements are for power, membrane replacement, staffing and regulatory compliance and are included in the estimates.

TABLE 1 CAPITAL COST ESTIMATES	
FACILITY	ESTIMATED CAPITAL COST
TOTAL FACILITY CAPITAL COST	\$4,900,00.00
ANNUALIZED CAPITAL COST ⁽²⁾	\$300,200.00
ANNUALIZED O&M ⁽³⁾	\$244,510.00
(1) Treatment Plant includes Admin/Laboratory, Headworks, MBR System, Disinfection, Solids Handling and Disposal.	
(2) Annualized Capital Cost based upon a 2%, 30 Year loan	
(3) O&M estimated at 5% of total capital includes power, membrane replacement, staffing, regulatory compliance	

Table 2 presents the current unit costs of the recycled water for the PFGLW.

TABLE 2 UNIT COST OF RECYCLED WATER	
Capital Cost per AFY	\$2,400.00
O&M Cost per AFY	\$2,000.00
Total Cost per AFY	\$4,400.00
(1) Assumes retrofit of existing administration building	
(2) Assumes retrofit of existing headworks	
(3) Assumes MBR cost provided by Ovivo & includes headworks through disinfection	
(4) Assumes retrofit of existing clarifier & sludge digester tanks for onsite operational storage.	
(5) Equipment is defined as mechanical equipment or pipeline	
(6) Cost Estimating Factors pursuant to Table 4-6 of Watereuse Research Foundation, Decision Support System for Selection of Satellite vs. Regional Treatment for Reuse Systems, 2009.	

13) Land. Describe the site and/or right-of-way requirements and status. Identify any approvals to date.

The PGLWP recycled water treatment plant would be constructed at the 2.23 acre site of the retired Pt. Pinos wastewater treatment plant. The plant was retired from service in 1980, when the City became a member of the MRWPCA. The site has preserved the original structures, which will be integrated into use for the PGLWP to the maximum extent practical. Most notable is the existing wastewater clarifier and sludge digester that may be repurposed to provide storage or finished recycled water.

The site is fenced, and visually screened from the public view with a heavy growth of cypress trees and other vegetation along its entire perimeter. The following reconnaissance level field investigations have been completed to identify significant issues related to the PGLPW’s ability to obtain relevant permits and to identify significant mitigation costs:

- Condition assessment of clarifier and sludge digester,
- Topographic Survey & deed restrictions,
- Wildlife Biology & Vegetation,



- Cultural Resources,
- Historical Resources.

No new approvals or rights-of-way are required for the PGLWP:

Treatment Plan Site: The City acquired the lands associated with the retired Pt. Pinos wastewater treatment plan in 1951 from the U. S. Government.

Distribution Pipelines: Recycled water pipeline will be constructed on City property, and in existing City rights-of-way.

14) Permits. Describe permits required, scheduled for approval, and already acquired.

- California Coastal Commission – Coastal Development Permit (pending). Approval anticipated by July, 2015.
- MRWPCA – Special Discharge Permit for the disposal of waste residuals back to the regional collection system (pending). Approval anticipated by July, 2015.
- Central Coast RWQCB - Wastewater Discharge Requirements (WDR) permit for the use of recycled water (pending). It is assumed for the purposes of this Facility Plan that the PGLWP is eligible to file for the State’s General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water (General Permit). Approval anticipated by July, 2015.
- Monterey Bay Unified Air Pollution Control District (MBUAPCD) – Authority to Construct and Permit to Operate (pending). Approval anticipated by September, 2015.

15) Consultants, Plans, and Bids. Describe the status of the proposed project as it relates to the hiring of key consultants, development of plans and drawings, and any bids that the Project Sponsor has already received.

Brezack & Associates Planning, LLC (B&AP) – Ongoing for Project Planning (funding assistance, planning, CEQA compliance, regulatory permit acquisition & DBO Contractor solicitation assistance).

D-B-O Contractor – A solicitation-procurement process will be conducted to select the best qualified/low bidder for the PGLWP. Work will include completion of project design engineering, contribution to CEQA analysis, construction and operations.

To date B&AP have coordinated the input of specialty contractors and vendors / representatives of key equipment manufacturers. B&AP has received initial estimates for inclusion in capital and O&M costs.