

**COUNTY OF SAN LUIS OBISPO BOARD OF SUPERVISORS  
AGENDA ITEM TRANSMITTAL**

(1) DEPARTMENT Public Works	(2) MEETING DATE 3/22/2016	(3) CONTACT/PHONE Wade Horton, Director of Public Works (805) 781-5291	
(4) SUBJECT Update of the Diablo Canyon Desalination Project with direction to staff to proceed with project development and coordination work, and request authorization of a corresponding budget adjustment in the amount of \$900,000 from San Luis Obispo County Flood Control and Water Conservation District Reserves. Districts 3 and 4.			
(5) RECOMMENDED ACTION It is recommended that the Board, acting as the Board of Supervisors for the San Luis Obispo County Flood Control and Water Conservation District (District): <ol style="list-style-type: none"> <li>1. Receive and file the Diablo Canyon Power Plant Desalination Hydraulic Feasibility Analysis (attached); and</li> <li>2. Direct staff to engage the Pacific Gas and Electric Company (PG&amp;E) to establish a Water Supply Agreement for a term not less than 30 years, or the financing period of project financing sources, whichever is less; and</li> <li>3. Direct staff to continue to engage stakeholders in Flood Control District Zone 3 (Five Cities and Avila Beach areas) regarding all phases of project development, including time lines, costs, financing considerations, and water supply amounts and conditions; and to establish a Conditional Reimbursement Agreement; and</li> <li>4. Direct staff to initiate the scoping and consultant selection portions of the Environmental Review and Permitting phase of the project by initiating the California Environmental Quality Act (CEQA) process, including ongoing consultation with the California Coastal Commission, State Water Resources Control Board, and the Regional Water Quality Control Board; and</li> <li>5. Direct staff to return to the Board with an executed Water Supply Agreement, Conditional Reimbursement Agreements, and CEQA Consultant Agreements before proceeding further with project development; and</li> <li>6. Authorize a budget adjustment in the amount of \$900,000 from San Luis Obispo County Flood Control and Water Conservation Reserves by 4/5 vote.</li> </ol>			
(6) FUNDING SOURCE(S) San Luis Flood Control and Water Conservation District, Fund 1300000000	(7) CURRENT YEAR FINANCIAL IMPACT \$900,000.00	(8) ANNUAL FINANCIAL IMPACT Not known	(9) BUDGETED? No
(10) AGENDA PLACEMENT { } Consent { } Presentation { } Hearing (Time Est. ___) <b>{X}</b> Board Business (Time Est. <u>90 min</u> )			
(11) EXECUTED DOCUMENTS { } Resolutions { } Contracts { } Ordinances <b>{X}</b> N/A			
(12) OUTLINE AGREEMENT REQUISITION NUMBER (OAR) N/A		(13) BUDGET ADJUSTMENT REQUIRED? BAR ID Number: 1516089 <b>{X}</b> 4/5 Vote Required { } N/A	
(14) LOCATION MAP N/A	(15) BUSINESS IMPACT STATEMENT? No	(16) AGENDA ITEM HISTORY { } N/A Date: 8/25/15,#16; 5/19/15,#3	
(17) ADMINISTRATIVE OFFICE REVIEW <i>Nikki J. Schmidt</i>			
(18) SUPERVISOR DISTRICT(S) District 3 , District 4			

Reference: 16MAR22-C-13

## County of San Luis Obispo



TO: Board of Supervisors

FROM: Public Works  
Wade Horton, Director of Public Works

VIA: Mark Hutchinson, Deputy Director of Public Works

DATE: 3/22/2016

SUBJECT: Update of the Diablo Canyon Desalination Project with direction to staff to proceed with project development and coordination work, and request authorization of a corresponding budget adjustment in the amount of \$900,000 from San Luis Obispo County Flood Control and Water Conservation District Reserves. Districts 3 and 4.

### **RECOMMENDATION**

It is recommended that the Board, acting as the Board of Supervisors for the San Luis Obispo County Flood Control and Water Conservation District (District):

1. Receive and file the Diablo Canyon Power Plant Desalination Hydraulic Feasibility Analysis (attached); and
2. Direct staff to engage the Pacific Gas and Electric Company (PG&E) to establish a Water Supply Agreement for a term not less than 30 years, or the financing period of project financing sources, whichever is less; and
3. Direct staff to continue to engage stakeholders in Flood Control District Zone 3 (Five Cities and Avila Beach areas) regarding all phases of project development, including time lines, costs, financing considerations, and water supply amounts and conditions; and to establish a Conditional Reimbursement Agreement; and
4. Direct staff to initiate the scoping and consultant selection portions of the Environmental Review and Permitting phase of the project by initiating the California Environmental Quality Act (CEQA) process, including ongoing consultation with the California Coastal Commission, State Water Resources Control Board, and the Regional Water Quality Control Board; and
5. Direct staff to return to the Board with an executed Water Supply Agreement, Conditional Reimbursement Agreements, and CEQA Consultant Agreements before proceeding further with project development; and
6. Authorize a budget adjustment in the amount of \$900,000 from San Luis Obispo County Flood Control and Water Conservation Reserves by 4/5 vote.

## **DISCUSSION**

On April 7, 2015, the Board directed staff to prepare and present a discussion on desalination project opportunities. On May 19, 2015, the Board further directed staff to explore the challenges and opportunities associated with delivering water from the existing desalination facility located next to the Diablo Canyon Nuclear Power Plant (Diablo Canyon) to areas of need in the county. On August 25, 2015, the Board directed staff to move forward on two parallel tracks to develop, in concert with PG&E, both a permanent desalination project and an emergency project. Both approaches would make desalinated water available to South County communities in the long term as well as in the event of continued drought conditions

### *Feasibility*

The attached Diablo Canyon Power Plant Desalination Hydraulic Feasibility Analysis concludes that connecting the Diablo Canyon desalination facility to the existing Lopez Water Project to deliver drinking water is technically feasible. The analysis examined three project scenarios: scenario 1 would provide 500 acre-feet<sup>1</sup> with the lowest capital cost; scenarios 2A and 2B both provide 1,300 acre-feet. 2A uses a lower capital – higher operating cost scenario while 2B does the reverse as shown below. Costs are based on 20 year financing at an interest rate of 1.6% (current State Revolving Fund rate).

<b>Scenario</b>	<b>Capital Cost</b>	<b>Annual O&amp;M Cost</b>	<b>Cost of Water (\$/Acre foot)</b>	<b>Annual Acre Feet</b>
1	\$21,735,000	\$281,000	\$4,100 - 4,600	500
2A	\$29,856,000	\$591,000	\$2,800 – 3,300	1,300
2B	\$36,368,000	\$556,000	\$3,100 – 3,600	1,300

### **Table Notes:**

1. Cost of water includes PG&E costs of between \$1,000 – 1,500 per acre foot
2. There is the potential that the Disadvantaged community status of some of the Zone 3 member agencies could allow for financing over a 30 year term, reducing the annual cost by approximately \$400 per acre foot.

The lowest cost per acre-foot scenario (2A), at a capital cost of \$29,856,000 and annual operating costs of \$591,000 dollars includes approximately 7 miles of new pipeline to move water from Diablo to the Zone 3 system, 7.6 miles of upgraded pipelines within the Zone 3 system, a pump station/post treatment facility at Diablo Canyon, and associated pipe fittings and equipment. Annual water costs are estimated at \$2,800 - \$3,300 dollars per acre-foot including PG&E's cost of producing the water, which at this time is roughly estimated at between \$1,000 and \$1,500 per acre-foot. Assuming an acceptable price point, when compared to other alternatives evaluated by the City of Pismo Beach in their Recycled Water Facilities Planning Study (April 2015), is between \$2,500 and \$3,000 per acre-foot, \$2,800 to \$3,300 appears feasible. Other options addressed in the analysis are less costly overall, but more costly on a per-acre foot basis. The least capital cost option provides 500 acre-feet per year at a cost of \$4,100 - \$4,600 per acre-foot. It is important to note that all costs assume an operating scenario where the desalination plant is delivering water 95% of the time. Therefore, "emergency-only" operational scenarios would result in substantially higher costs per acre foot.

<sup>1</sup> One acre-foot of water is equal to 325,851 gallons. The entire Lopez municipal entitlement is 4,530 acre feet per year.

### *Water Supply Agreement*

As the Board is aware, PG&E has been working collaboratively with the County to develop the desalinated water supply opportunities that exist at the power plant. PG&E is working to integrate the communities' needs into the desalinated water requirements at the power plant, and to coordinate any needed facility changes with County staff. PG&E is ready to move forward with developing a water supply agreement which will necessarily set forth the conditions under which a desalinated water supply will be made available. All parties are aware that the needs of the power plant are paramount, but at the same time the end users (customers in the Zone 3 area) will be making a substantial long-term investment in the project. Consequently, it is important that the water supply agreement not only provide water for at least the length of the project financing, but it also understood that community financial investments in this project will constrain the ability to invest in an alternate supply, should the Diablo Canyon water not be available at some point in the future.

### *Project Partners*

The City of Pismo Beach, City of Arroyo Grande, City of Grover Beach, Oceano Community Services District, and the Avila Beach Community Services District have submitted letters of interest in the project (attached). In response to the interests of these agencies, and because the project would utilize the existing Lopez/Zone 3 distribution system, it is vital that these partner agencies be fully informed as the project moves forward. Key items of importance include time lines, costs, financing considerations, and water supply amounts and conditions. As illustrated during the Board's February 23rd Study Session for Extended Drought Emergency Water Supply Options for Zone 3, additional water may be needed within two years. Therefore, all aspects of this project will need to be expedited if it is to be a part of the immediate solution. The local agencies will also need to be kept apprised of costs, and especially when those costs will affect water rates, and to what degree, so that full community involvement and the necessary fiscal planning can be accomplished. At the same time, and in order to ensure that all funds expended on the project are judiciously spent, it is recommended that a Conditional Reimbursement Agreement with the project partners be sought. The basis of such an agreement are that if all other project efforts are successful the initial partners would agree to reimbursement District (that is, Countywide taxpayers) appropriate costs, whether or not the partner agencies choose to participate further in the project.

### *CEQA and the Permitting Phase*

The next major phase of work is the production of the required Environmental Impact Report together with permitting the project through the Coastal Development Permit process. There is also the potential that permits and/or modifications of PG&E's existing permits may be required by the State Water Resources Control Board and the Regional Water Quality Control Board. These processes are interwoven because the permits require specific and detailed environmental analysis focused on ocean impacts that result from both the sea water intakes as well as the discharge of brine (concentrated sea water) into the ocean. These issues are detailed in the attached excerpt from the California Ocean Plan (State Water Resources Control Board). Note also that the California Coastal Commission will refer to the Ocean Plan when assessing the project's compliance with the California Coastal Act. This phase also accounts for the next major expense in the project development process, followed closely by the engineering design and then the much larger construction costs.

### *Project Decision Points*

The three preceding topics (Water Supply Agreement, Project Partners, and CEQA and the Permitting Phase) include key project decision points, that is, each includes a go/no-go determination. If PG&E, which as noted must keep the needs of Diablo Canyon paramount, determines that a 20-30 year water supply agreement is not feasible, then the project cannot move forward. Likewise, if the project partners decide not to participate, be it time frames, costs, or other water supply opportunities, then the project would have no customers and would not go forward. And finally, if the project permits are not approved, or the required conditions impact operations or financing too greatly, then the project cannot move forward. Therefore, work efforts will focus in these areas both to move the project forward but also, in the event any no-go decision is reached, to get to that decision as efficiently as possible. To this end, and because the CEQA / Permitting Phase is by far the most costly process, it is important to secure both a Water Supply Agreement from PG&E and a conditional reimbursement agreement from the project partners before incurring the major portion of the CEQA / Permitting Phase costs.

### *Emergency Project Options*

As noted above, the Board's August 25, 2015 direction included both a permanent desalination project and an emergency project. Although it is preferable to expedite the permanent project such that it can be in place to mitigate a water supply emergency, the above processes contain pitfalls that could make that goal unreachable. Therefore, staff will work to both expedite the project as well as work closely with the Zone 3 agencies to identify contingency desalination approaches (if any are indeed feasible) that could be implemented in the interim.

### **OTHER AGENCY INVOLVEMENT/IMPACT**

As noted above, the implementation of the project will require participation by project partners. The Zone 3 entities have expressed interest in the project as both an emergency and long term water supply and will remain engaged in the project development process as it moves forward.

County Administration, the Department of Planning & Building, and the Department of Public Works continue to coordinate with PG&E. CEQA efforts will be led by the Department of Planning and Building supported by the Department of Public Works

County staff has met with staff of the California Coastal Commission to better understand that agency's perspective and approach, and will conduct similar outreach to the State Water Resources Control Board/Regional Water Quality Control Board.

### **FINANCIAL CONSIDERATIONS**

Based on past practice, County staff on behalf of the Flood Control District will continue to engage the project partners on project financial topics, with the expectation that project costs beyond the initial feasibility stage (that is, from this point forward) will become part of the overall project cost, thereby including environmental documents, regulatory permitting, engineering design, construction, environmental mitigation, etc.

The attached Feasibility Analysis estimates overall costs at \$21,735,000 to \$36,368,000, with a planning phase project development budget of \$900,000. The planning phase includes the preparation of an Environmental Impact Report, technical engineering support, consultation with regulatory agencies, and Coastal permitting. A key cost component is the required California Ocean Plan analysis, which, depending on the applicability of existing information, may be substantial. Direct costs to date are approximately \$50,000. Approval of the cancellation of District Reserves advance funding to address the above discussed three major work efforts is requested. These costs will be recovered from project partners should the project move forward to completion and implementation.

Ultimately a detailed financing plan for the capital and operation and maintenance costs of the project, including grant and loan procurement, will need to be negotiated between, and implemented with the project partners prior to initiation of project final design and construction.

## **RESULTS**

The Board's direction regarding this desalination project and the options and opportunities that it entails will better inform water managers, decision makers and the general public on desalination thereby contributing to a safe, healthy, livable, prosperous and well-governed community.

## **ATTACHMENTS**

1. Project Planning Level Budget
2. Final Draft - DCPD Desalination Pipeline Feasibility Study
3. Agency Letters of Interest
4. Desalination Amendments to the California Ocean Plan May 2015

File: CF 300564

Reference: 16MAR22-C-13

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