



# Town of Discovery Bay

*"A Community Services District"*

## AGENDA REPORT

Meeting Date

October 5, 2016

**Prepared By:** Catherine Kutsuris, Interim General Manager

**Submitted By:** Catherine Kutsuris, Interim General Manager

**Agenda Title:**

Evaluation of whether capital should be invested in Plant 1 or whether Plant 1 should be repurposed and facilities moved to Plant 2

**Recommended Actions**

Accept the report from the Interim General Manager and:

- Affirm the staff recommendation that Plant 1 should not be abandoned and/or repurposed and, instead, should remain as part of the District's wastewater facilities for additional reserve capacity for at least the next several years as more data is developed and as the denitrification project is planned;
- Concur with the recommendation that the 4M expenditure in the Stantec "Proposed Master Plan 3 Update" dated March 2016 is not necessary and, instead, Plant 1 should be upgraded as needed to provide "backup" capacity" at this time; and
- Accept the report that the retention of the oxidation ditch at Plant 1 provides the District with an alternative to achieving the denitrification at a substantially reduced cost which should be further evaluated;
- Accept the report that the wastewater flows that have been experienced by the District deviate from the historical flows and that since capacity is based on wastewater flows, the District should annually evaluate wastewater flows to determine whether planned facilities are needed and at what time period; and
- Accept the recommendation that the District should continue to track and evaluate flow levels for the next 1 to 2 years and should prepare a revised Wastewater Master Plan based on the data collected so that planned capital improvements match the actual capacity needs.

**Executive Summary:**

The existing Wastewater Master Plan was completed and accepted by the Board in February 2013. Subsequently, the Board approved two amendments to the Plan (January 2015 and April 2015) to address the impact of nitrification and denitrification required by the new NPDES permit for the wastewater facilities.

During the development of the capital improvement budget for the 2016/17 fiscal year, Plant 1 upgrades were identified at approximately 1.5 million. Given the age of the equipment and the indication that several million may be required for long term repairs, the Board requested an evaluation as to whether it is better to repair and upgrade Plant No. 1 or to construct the Plant No. 1 facilities new at Plant No. 2. Associated with this question was whether a portion or all of Plant 1 lands could be reused or sold for another use.

The District authorized an evaluation to be prepared by Stantec Inc., who prepared the District's Master Plan and both Amendments to the Plan. Stantec completed their analysis of three alternatives with costs ranging from four million for repairs to Plant 1 to 13.8 million for the relocation of Plant 1 facilities at Plant 2. The focus of the Stantec report was to evaluate alternatives for the rehabilitation or reconstruction of Plant 1 facilities rather than whether Plant 1 facilities would continue to be required and, if so, for what purpose.

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Staff engaged a peer review engineering firm to review the District's Master Plans, the current construction project and the need for Plant 1 facilities. Following the conclusion of this review, the District staff brought together all related parties (both on contract and staff) to discuss the findings.

As background, all influent flows are currently conveyed to and treated at Plant No 2, leaving the influent pump station in service at Plant 1. Plant No 1 has not been used to process flows since January of 2015. All flows have been managed at Plant No. 2 since that time.

According to the District's Master Plan, the "firm" capacity (capacity – 1 clarifier) of the upgraded Plant 2 is 2.4 MGD average annual flow during summer months and 1.58 MGD during winter months. The District's average annual flow since 2012 has been 1.3 MGD.

Key to the discussion was the marked difference between the flow rates planned for in the Master plan and the flow rates that the District has been experiencing over the past four years. Of note is that the District's permit allows flows up to 2.37MGD. The District's interest is to assure that there is sufficient capacity throughout the system including providing for appropriate redundancy.

Although Plant 2 has sufficient capacity for the existing flow rates, Plant 1 has existing facilities that can be used to provide an additional "insurance" capacity, particularly as the District gathers more data on flows rates in the upcoming years. Retaining Plant 1 has a secondary benefit which has been highlighted by Herwit Engineering – that is the achievement of denitrification requirements at a substantially lower cost by building within the oxidation ditches. Although this approach would reduce each ditch's capacity by approximately 25%, the retention of the oxidation ditch at Plant 1 provides the District with this option. The expected cost would be reduced from the original estimate of 8 million to as low as 2 million dollars.

With Plant 1 being used as an emergency backup, the level of improvements has been reduced from a recommendation of 4 million dollars to less than 1 million. The specific improvements to Plant 1 will be further evaluated and forwarded to the Water and Wastewater Committee for review and discussion. According to the District's Finance Manager, the District has sufficient revenues within the Wastewater Infrastructure Reserve Account to accommodate improvements to Plant 1 at a \$500,000 to \$1,000,000 over the next two years.

**Fiscal Impact:**

**Amount Requested None.**

**Sufficient Budgeted Funds Available?: (If no, see attached fiscal analysis)**

**Prog/Fund # Category: Pers. Optg. Cap. -or- CIP# Fund#**

**Previous Relevant Board Actions for This Item**

Acceptance of the Wastewater Master Plan and subsequent Nitrate Update.  
Award of contract to Stantec to complete Master Plan Amendment No .3

**Attachments**

**AGENDA ITEM: G-6**