

City of Calistoga

Staff Report

TO: Honorable Mayor and City Council
FROM: Derek Rayner, Deputy Public Works Director
DATE: January 5, 2016
SUBJECT: Consideration of a Resolution Approving Purchase of Waste Water Treatment Plant Equipment to Remove THMs (Trihalomethanes) from Tertiary Treated Recycled Water Discharged to the Napa River

APPROVAL FOR FORWARDING:



Michael T. Kirn, Interim City Manager

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2 **ISSUE:** Consideration of a Resolution approving purchase of waste water treatment
3 plant equipment to remove THMs (Trihalomethanes) from tertiary treated recycled
4 water discharged to the Napa River.

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6 **RECOMMENDATION:** Adopt the Resolution.

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8 **BACKGROUND/DISCUSSION:** The City of Calistoga’s Wastewater Treatment
9 Plant (WWTP) operates under a revised NPDES Permit (No. CA0037966, Order 00-
10 1312) issued in November, 2010 by the San Francisco Bay Regional Water Quality
11 Control Board (RWQCB). Under this permit the City is authorized to discharge
12 treated effluent to the Napa River during the wet season (November 1 thru June 15),
13 as long as dilution ratios are met (10:1 Tertiary, 50:1 Secondary). During the
14 remainder of the year all effluent produced must be stored, spray irrigated, or
15 recycled.

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17 The City’s NPDES permit has a compliance limit on two types of THMs
18 (Dichlorobromomethane and Chlorodibromomethane) for both tertiary and
19 secondary discharges into the Napa River. THMs are disinfection byproducts formed
20 when chlorine disinfection reacts with organic material present in the treated effluent.
21 Due to exceedances of the THM’s the RWQCB issued Cease and Desist Order No.
22 R2-2010-107 (CDO) which allowed for higher THM’s. This CDO expired in August,

23 2015 and the City must comply with the adopted permit limits. WWTP processes
24 have been modified to reduce the amount of chlorine added during the intermediate
25 processes and this has helped to lower the THMs. However, it is desirable to
26 reduce the THMs even further to minimize permit exceedances.
27 In 2012 as part of our compliance with CDO R2-2010-107 the City purchased a
28 SolarBee mixer for the Riverside Pond 4. This mixer resulted in a 60% to 70%
29 reduction in THMs, near or below compliance levels (see attached graph). We
30 recently had two THMs exceedances of around 1 part per billion each; just
31 exceeding our compliance limits. This resulted in the RWQCB issuing mandatory
32 minimum penalties of \$3,000 for each violation.

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34 We are highly confident that by adding a second mixer at Riverside Pond 3 we will
35 meet our permit limits for THM reduction. SolarBee is made by Madora and is one
36 of only two companies that manufacture solar mixers. Because of the success of
37 the mixer purchased in 2012, and the fact we are familiar with its operation and
38 maintenance, staff recommends continued use of the Medora equipment. THM
39 removal from secondary treated effluent will require additional improvements at the
40 WWTP which we are evaluating and a follow-up recommendation will be brought to
41 Council at a later date.

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43 **ENVIRONMENTAL ANALYSIS:** The direction that staff is seeking is general policy
44 and procedure and is not a Project under CEQA. Section 15378(b) (2) of CEQA
45 provides that a "...Project does not include: Continuing administrative or
46 maintenance activities such as ...general policy and procedure making."

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48 **CONSISTENCY WITH CITY COUNCIL GOALS AND OBJECTIVES:** The
49 resolution would authorize the purchase of a second solar mixer and is consistent
50 with City Council Goal No. 3 – Establish, improve and maintain City infrastructure;
51 and the City Council Objectives (Maintain the high level of service and reliability of
52 the city's infrastructure systems and facilities; and Develop and implement a strategy
53 to address the issues with wastewater plant operations as identified in the cease and
54 desist orders (CDO) from the state).

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56 **FISCAL IMPACT:** The equipment purchase and installation costs are as follows

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- 58 1. SolarBee Mixer = \$34,128
59 2. Installation Costs = \$9,818 (installation and service)
60 3. Contingency 15% = \$6,600
61 **Total = \$58,546**

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63 The adopted Fiscal Year 15/16 Wastewater Enterprise Budget includes funding in
64 the amount of \$230,000 for CDO Compliance in the Wastewater Treatment Capital
65 Budget – Account Code 13-5534-4915 (WWTP Upgrades for CDO Compliance).

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- 67 **ATTACHMENTS:**
68 1. Resolution
69 2. THMs Timeline Graph

RESOLUTION NO. 2016-XXX**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CALISTOGA,
COUNTY OF NAPA, STATE OF CALIFORNIA, APPROVING THE
PURCHASE OF EQUIPMENT TO REMOVE THMs FROM
TERTIARY TREATED WASTEWATER TREATMENT PLANT
DISCHARGES TO THE NAPA RIVER**

WHEREAS, the City has been working closely with San Francisco Regional Water Quality Control Board to address issues contained in Cease and Desist Order No. R-02-2010-107 adopted by the Regional Board on September 9, 2010, including the mandate to meet the compliance limits on two types of THMs (Dichlorobromomethane and Chlorodibromomethane) for both tertiary and secondary discharges to the Napa River; and

WHEREAS, THMs are disinfection byproducts formed when chlorine disinfection reacts with organic material contained in the treated effluent; and

WHEREAS, in order to address tertiary treated THMs the City purchased a SolarBee mixer for the Riverside Pond 4 in 2012 and saw a 60% to 70% reduction in THMs, near or below compliance levels; and

WHEREAS, in order to continue efforts to meet compliance for the tertiary effluent staff recommends adding another mixer unit to Riverside Pond 3; and

WHEREAS, the Project is exempt from the provisions of the California Environmental Quality Act pursuant to Title 14, the California Code of Regulations, Section 15302(c); and.

WHEREAS, a sole source request for proposal was requested from SolarBee, one of only two solar mixing companies and the company we purchased the previous mixer from. A proposal was received in the amount of \$58,546 including installation and contingency; and

WHEREAS, there is \$230,000 in appropriations budgeted in FY 2015/16 CIP Budget – WWTP Upgrades for CDO Compliance (Account # 13-55344915) and is available for the recommended purchase; and

WHEREAS, Staff recommends that the proposal from SolarBee be approved in the amount of \$58,546 and the City Manager be authorized to execute a Purchase Order for the purchase of the SloarBee mixer.

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NOW, THEREFORE BE IT RESOLVED by the City Council of the City of Calistoga as follows:

- 1. Finds that a sole source proposal from SolarBee is accepted because SolarBee is only one of two solar mixing companies, the existing mixer has proven satisfactory and reliable, and it is desired to maintain consistency with similar equipment for operation and maintenance efficiency.
- 2. Approves the purchase of a SolarBee Mixer in the amount of \$58,546 (including installation, service and contingency).
- 3. The City Manager is hereby authorized to execute a Purchase Order on behalf of the City of Calistoga.

PASSED, APPROVED, AND ADOPTED by the City Council of the City of Calistoga at a regular meeting held this **5th day of January 2016**, by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

CHRIS CANNING, Mayor

ATTEST:

KATHY FLAMSON, City Clerk

