



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Kerrie Romanow

SUBJECT: PURCHASE OF CALIFORNIA
CARBON ALLOWANCES

DATE: August 24, 2017

Approved

D. D. S. L.

Date

9/7/17

RECOMMENDATION

Approve the Agreement between the City of San José and Vitol, Inc., which is approved by the California Air Resources Board for the purchase of California Carbon Allowances for the San José-Santa Clara Regional Wastewater Facility, as part of the California Cap-and-Trade Program, for an amount of \$303,437.60.

OUTCOME

Purchase California Carbon Allowances for the San José-Santa Clara Regional Wastewater Facility¹ (RWF) as part of the California Cap-and-Trade Program to remain in compliance with Assembly Bill (AB) 32.

BACKGROUND

The Global Warming Solutions Act of 2006, or Assembly Bill (AB) 32, is a California State Law that fights climate change by establishing a comprehensive program to reduce greenhouse gas emissions from all sources throughout the state. AB 32 requires the California Air Resources Board (CARB) to develop regulations and market mechanisms to reduce California's greenhouse gas (GHG) emissions to 1990 levels by the year 2020. The target reduction represents a 25% reduction statewide. The market mechanism for reducing GHG emissions is California's Cap-and-Trade program (CATP) which includes an emissions cap for significant emissions sources beginning in 2012. GHGs include methane, nitrous oxide, and carbon dioxide. Emissions are presented in carbon dioxide equivalents (CO₂e), a standardized measure that allows the effect of

¹ The legal, official name of the facility remains San Jose-Santa Clara Water Pollution Control Plant, but beginning in early 2013, the facility was approved to use a new common name, the San José-Santa Clara Regional Wastewater Facility.

different greenhouse gases to be compared using carbon dioxide as a standard unit for reference. The CO₂e measurement is given in metric tons per year for greenhouse gas reporting.

Facilities that emit more than 10,000 metric tons are subject to mandatory reporting. Facilities that emit 25,000 metric tons of CO₂e are required to participate in California's CATP.

CATP is a market based regulation that is designed to reduce GHGs from multiple sources by creating a market to trade GHG emission credits among those facilities that are part of the program.

Once a facility enters the CATP, it is responsible for the purchase of California Carbon Allowances (CCA) for the emissions for all years within the compliance period in which it exceeded the threshold plus emissions during the following compliance period, regardless of total emissions. The CATP is divided into three compliance periods between now and 2020:

1st Compliance Period: 2013-2014

2nd Compliance Period: 2015-2017

3rd Compliance Period: 2018-2020

In 2013, Regional Wastewater Facility (RWF) emitted 25,029 metric tons of CO₂e and entered the CATP. Prior to 2013, the RWF ran its engines on a blend of digester gas produced as part of the RWF's processes, landfill gas purchased from Republic Services' nearby landfill, and natural gas purchased from PG&E. Biomass fuel such as digester and landfill gas are exempt from the CATP. In 2013, the RWF increased its purchase of natural gas due to interruptions in the digester gas and landfill gas supplies. These disruptions increased the demand for natural gas and caused RWF emissions to exceed 25,000 metric tons of CO₂e. To comply with the CATP, the City entered into an agreement with Vitol Inc. to purchase CCAs for emissions from calendar years 2013 through 2015 as presented in the following table.

Emissions Year	Emissions (metric tons CO ₂ e)	Allowance Price	Total Allowance Cost
2013	25,029	12.25	\$306,605.25
2014	24,752	12.75	\$315,460.50
2015	24,433	12.93	\$303,692.00

ANALYSIS

Once a facility enters the CATP, the requirement to purchase CCAs is eliminated after two compliance periods if the facility remains beneath the cap during the second compliance period. Thus, the RWF will not be relieved of its obligation to purchase CCAs until after the 2017 emissions year, as CCAs are surrendered irrespective of whether the emissions for each subsequent year through 2017 are below the 25,000 metric ton CO₂e threshold.

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RWF emitted an estimated 19,693 metric tons of CO₂e in 2016. This number has been reported to CARB, as required, and was verified by a Third-Party Verification Audit conducted by Rincon Associates.

CCAs are sold on the open market through mechanisms established by the California Air Resources Board. The RWF is working with an emissions broker and has again identified Vitol, Inc., as a seller of 2016 credits. Vitol, Inc. will contract with the City \$15.20 per CCA, which would be an increase compared to previous years, and is a result of increased market demand. The final purchase agreement will be for \$303,437.60, which is slightly lower than last year's expenditure, due to a continued decrease in emissions from the RWF. The anticipated total cost to purchase CCAs for years 2015 through 2017 is approximately \$910,000 assuming current rate of emissions and current price per metric ton of emissions. However, this total could increase if the price of CCAs increases for 2017 allowances.

The RWF has implemented a GHG emissions management program to stay under the 25,000 metric tons of CO₂e threshold, and has successfully done so since 2013, with 2016 being the lowest emissions total so far. The intent is to continue to manage emissions from the RWF to remain under the threshold through the end of 2017, and exit the CATP after surrendering allowances for 2017 emissions. The upgraded Digester and Thickener Facilities and Cogeneration Facility projects are anticipated to come online in 2019 and will enable increased production and more efficient use of biogas. The effect of these upgrades on emissions and the provisions of the extended CATP, set to begin in 2021, are currently being evaluated to determine how to manage GHG emissions after 2019.

EVALUATION AND FOLLOW-UP

The RWF currently anticipates the ability to stay under the 25,000 metric ton threshold in 2017 and would therefore exit the cap and trade after surrendering allowances for 2017 emissions. If the RWF is unable to remain under the threshold, staff would need to return to Council for authority to purchase CCA for 2018 and beyond.

PUBLIC OUTREACH

This memorandum will be posted on the City's Council Agenda website for the September 26, 2017 City Council Meeting.

COORDINATION

The memorandum has been coordinated with the Treatment Plant Advisory Committee, City Manager's Budget Office, and the City Attorney's Office.

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COMMISSION RECOMMENDATION/INPUT

This memorandum will be heard at the September 14, 2017 Treatment Plant Advisory Committee. A supplemental memorandum with the Committee's recommendation will be included in the amended September 26, 2017 City Council meeting agenda.

COST SUMMARY/IMPLICATIONS

1. AMOUNT OF RECOMMENDATION/AGREEMENT: \$ 303,437.60
2. SOURCE OF FUNDING: San José-Santa Clara Treatment Plant Operating Fund (513)
3. FISCAL IMPACT: No additional funding is necessary to approve this purchase.

BUDGET REFERENCE

The table below identifies the fund and appropriation proposed to fund the agreement recommended as part of this memorandum.

Fund #	Appn. #	Appn. Name	Total Appn.	Amount Requested	2017-2018 Proposed Operating Budget Page*	Last Budget Action (Date, Ord. No.)
513	0762	Non-Personal / Equipment	\$34,173,019	\$303,437.60	879	6/20/2017, Ord. No. 29962

* The 2017-2018 Operating Budget was adopted on June 20, 2017.

CEQA

Not a Project, File No. PP17-003, Agreements/Contracts (New or Amended) resulting in no physical changes to the environment.

/s/ Ashwini Kantak for
KERRIE ROMANOW
Director, Environmental Services

For questions, please contact Ken Davies, Sustainability and Compliance Manager at (408) 975-2587.