



# MEMORANDUM

FC 14 (01-02-07)

**TO:** Board of Directors

**SUBJECT:** Santa Clara Valley Water Commission  
Meeting Summary for April 11, 2018

**FROM:** Santa Clara Valley Water  
Commission

**DATE:** May 8, 2018

This memorandum summarizes agenda items from the meeting of the Santa Clara Valley Water Commission held on April 11, 2018.

## **ACTION ITEMS:**

### **4.1 REVIEW AND COMMENT TO THE BOARD ON THE FISCAL YEAR 2018-2019 PROPOSED GROUNDWATER PRODUCTION CHARGES**

Mr. Darin Taylor reviewed the materials as per the agenda item from the following:

#### **SUMMARY:**

Staff proposes a 9.7% increase in the North County (Zone W-2) Municipal and Industrial groundwater production charge from \$1,175/AF to \$1,289/AF. The proposal equates to a monthly bill increase for the average household of \$3.92 or about 13 cents a day.

In the South County (Zone W-5), staff proposes a 7.7% increase in the M&I groundwater production charge from \$418/AF to \$450/AF. The proposal equates to a monthly bill increase for the average household of \$1.10 or about 4 cents per day.

Customers in both areas of North and South County may also experience additional charge increases enacted by their retail water providers.

The proposed increases in water charges are necessary to pay for critical investments in water supply infrastructure rehabilitation and upgrades, and the development of future drought-proof supplies, most notably purified water. The Anderson Dam Seismic Retrofit will help ensure public safety and bolster future water supply reliability. The cost projection for the Anderson Dam Seismic Retrofit project has increased to \$550 million since last year due to the discovery of additional vulnerabilities, which will require a near complete removal of the existing dam, and the determination that the dam's spillway needs to be fully replaced as it has some of the same weaknesses that Oroville Dam's spillway had. Additionally, the \$290 million Rinconada Water Treatment Plant upgrade is more than halfway complete, and will extend the plant's service life for the next 50 years as well as increase production capacity up to 25%. Roughly \$229 million is planned to be spent on the state's proposed plan for the California Water Fix, which is anticipated to improve the reliability of the infrastructure through which 40% of the county's water supply is delivered. Lastly, the District is moving forward to forge its first public-private partnership (P3) on a \$1 billion investment for recycled and purified water expansion that would bring up to 45,000 AF of new water supply to the county each year.

The Board is seeking input with regard to staff's groundwater production charge recommendation for FY 2018–19.

#### **BACKGROUND:**

Executive Limitation 7.4: A BAO shall "marshal for the Board as many staff and external points of view, issues and options as needed for fully informed Board choices."

***The Commission wanted the Board to be apprised of their comments concerning the proposed groundwater production charges as noted below:***

- 1. How are rates publicized to the community? There needs to be some outreach explaining why the rates are being increased.***
- 2. Need to show a long-term trend of the cumulative effect of rates over 10 to 20 years (reviewing projections of total costs).***
- 3. Suggest having a steady increase as opposed to a dramatic increase in the rates. Keeping the rates low as possible being the ultimate goal. Look at the rationale of returning funds or placing them in a "holding" fund (reserves) for later use if possible so a request for an increase will be unnecessary or minimal.***
- 4. Since construction costs are high does the District consider delaying capital improvement projects until costs are more cost effective?***
- 5. Does the District receive development monies? If not, there needs to be a mechanism in place for the District to collect fees/funds when developers come to the County and cause impacts to the infrastructure. Suggest the District have discussions with those that could provide the funding needed (City, State and Federal officials).***
- 6. Rates being more sustainable.***

#### **4.2 CLIMATE CHANGE MITIGATION – CARBON NEUTRALITY BY 2020 PROGRAM UPDATE**

Mr. Kurt Arends reviewed the materials as per the agenda item from the following:

##### **SUMMARY:**

This is the update of District efforts to achieve carbon neutrality by 2020. Using the methodology adopted by the Board in 2013, staff estimates that the District can offset 22,360 of its 23,000 metric tons (MT) of carbon dioxide equivalent (CO<sub>2</sub>e) emissions in 2020. Staff will continue to refine this estimate on an annual basis, and will also continue to explore opportunities to reduce its carbon footprint over the next five years to meet this goal.

##### **BACKGROUND:**

As the primary water resources agency for Santa Clara County, the District manages an integrated water resources system that includes the supply of clean, safe water, natural flood protection, and stewardship of streams on behalf of Santa Clara County's 1.9 million residents.

The District's ability to provide those services is challenged by the potential of warmer temperatures, changing precipitation and runoff patterns, reduced snow pack, and rising sea levels. Managing climate change related uncertainties, vulnerabilities, and risks to local water resource management is critical to fulfill the District's mission.

Greenhouse Gas (GHG) emission mitigation or reduction refers to District activities that reduce greenhouse gas emissions generated by District activities towards achieving carbon neutrality. District's strategies towards carbon neutrality include:

1. Establishing a District-wide internal carbon offset methodology to facilitate emission reduction
2. including properly crediting emission reductions from water conservation programs, habitat restoration or enhancements or renewable energy production and contributions to countywide emission reduction efforts;
3. Increasing fleet fuel use efficiency;
4. Maintaining a portfolio of alternative renewable energy supplies;
5. Increasing energy use efficiency;
6. Identifying and developing opportunities to employ sources of alternative energy that reduce greenhouse gas emissions;
7. Conducting periodic greenhouse gas emission inventories;
8. Reviewing energy usage and options for reducing greenhouse gas emissions for District facilities; and
9. Funding management of the County Green Business Program.

This agenda item describes GHG reduction efforts, and progress towards achieving carbon neutrality. It is divided into 4 sections: 1) Methodology for Calculating GHG Emissions and Reduction; 2) Updated Carbon Emission and Reduction Calculations; 3) Energy Optimization Plan; 4) Continuing Efforts towards Carbon Neutrality by 2020.

## 1. Methodology for Calculating GHG Emissions and Reduction

While District operations generate GHG emissions, it also provides opportunities to avoid, reduce and sequester GHG. Therefore, the Board established Policy No. E- 4.3.1: "Reduce greenhouse gas emissions to achieve carbon neutrality by 2020", which directs the District's efforts in reducing GHG emissions.

On March 26, 2013, the Board adopted a methodology for calculating the District's GHG emission or carbon footprint and offsets. Attachment 2 provides details on this methodology. The District's carbon footprint includes emissions from fleet, from onsite energy uses, and from emission related to imported water. District's carbon offsets come from conservation and green practices or activities, such as its water conservation, water recycling, green business programs, and carbon sequestration from wetland and riparian restoration.

## 2. Updated Carbon Emission and Reduction Calculations

Table 1 provides estimates of projected carbon footprint and offsets for the years 2010 thru 2015 and an estimate for Year 2020. The Year 2020 estimated emissions are 23,000 metric tons (MT) and the total offsets are 22,360 MT.

Table 1. Summary of Estimated and Projected Carbon Footprint and Offset in MT Co2e/Year

Calendar Year	2010	2011	2012	2013	2014	2015	2020
<b>Emissions</b>	22,100	21,800	29,800	29,700	18,500	22,200	23,000
1. Direct Emissions from District Operations	2,200 <sup>1</sup>	2,300 <sup>1</sup>	2,500	2,800	3,000	2,100	2,200
2. Emissions from Purchased Electricity	2,200 <sup>1</sup>	500 <sup>1</sup>	3,400	4,000	6,000	6,300	4,400
3. Other Emissions	17,700	19,000	23,900	22,900	9,500	13,800	16,400
a. State Water Project	14,800	16,100	21,000	20,000	6,600 <sup>2</sup>	10,900 <sup>2</sup>	13,500 <sup>3</sup>
b. Central Valley Project	0	0	0	0	0	0	0
c. Import from SFPUC	0	0	0	0	0	0	0
d. Employee Commute	1,500	1,500	1,500	1,500	1,500	1,500	1,500
e. Business Travel	1,400	1,400	1,400	1,400	1,400	1,400	1,400
<b>Reduction/Sequestration</b>	22,370	23,060	24,400	23,110	24,080	24,235	22,480
1. Water Conservation Program (WCP)	17,100	17,800	18,400 <sup>4</sup>	16,700 <sup>4</sup>	17,600 <sup>4</sup>	17,800 <sup>4</sup>	14,800 <sup>5</sup>
2. Recycled water	2,500	2,500	3,000	3,500	3,700	3,400	3,900
3. Carbon sequestration	500	500	500	500	500	500	500
4. Green Business Program	2,200	2,200	2,200	2,200	2,200	2,200	2,200
5. Energy Optimization Measures (EOMs)	70 <sup>6</sup>	60 <sup>6</sup>	300 <sup>6</sup>	210 <sup>6</sup>	80 <sup>6</sup>	335 <sup>7</sup>	1,080 <sup>8</sup>
<b>C. Difference</b>	270	1,260	-5,400	-6,590	5,580	2035	-520

<sup>1</sup> Verification completed;

<sup>2</sup> District specific emission factor (EF) based on reported EF for CY 2014 and 2015 for the State Water Project;

<sup>3</sup> Projection based on DWR's projected emission reduction of 33% by CY 2020 and updated water supply projection for 2020;

<sup>4</sup> Adjusted based on decreases in Pacific Gas and Electric's (PG&E) emission factors as compared to the 3-year averages of CY 2005 to 2007;

<sup>5</sup> Projection based on a 45% reduction in PG&E's CY 2020 EF compared to the 3-year average of CY 2005 to 2007.

<sup>6</sup> This has been updated using reported energy productions and emission factors for each corresponding year.

<sup>7</sup> The update includes energy conservation measure completed in FY 2015 in addition to zero-emission energy production through on campus solar and Anderson Hydro.

<sup>8</sup> The update used an estimated emission factor for CY 2020 provided by the Power and Water Resources Pooling Authority (PWRPA). This offset assumes that all measures are fully operational in CY 2020

In February 2017, staff completed a Green Business Recertification. The process involved staff from fleet, energy, facilities management, procurement, office supply management, and watershed stewardship programs. Since 2000, the District has contributed between \$67k to \$100K annually or between 30% to 50% annual administration cost to the countywide green business program, and developed for the associated GHG reduction benefits in the methodology.

### **3. Emission Reduction through Energy Management**

This section outlines the status of the energy optimization effort, which includes the development of renewable energy projects, Power and Water Resources Pooling Authority (PWRPA) renewable energy projects, and energy efficiency and conservation efforts.

#### **Overview of Renewable Energy Projects**

The District is a member of PWRPA, a joint powers authority (JPA) to collectively manage electrical loads and generation assets. PWRPA is subject to the State of California "Renewable Portfolio Standard" (RPS) mandate, whereby electric utilities must serve a RPS percentage of retail sales with renewable resources within a given Compliance Period. In addition to supporting the board governance policy to achieve carbon neutrality, the local renewable energy projects being pursued by the District will also contribute to PWRPA's requirement to meet the RPS mandate. The status of these efforts is described below.

#### **A. Local Renewable Projects - Water Treatment Plant Solar Projects**

The solar developer, GL Renewables, LLC (Green Light), completed construction of the 260 kilowatt (KW) and 248 KW PV solar installations at Santa Teresa and Penitencia water treatment plants, respectively, in October 2016. The projects will combine to generate approximately 850 megawatt-hours (MWh) of energy annually over the 20-year duration of the project.

The energy generated from the systems is intended for direct use at the water treatment plants and will offset utility power and contribute to the district goal to achieve carbon neutrality

#### **B. Utility-Scale Renewable Projects through PWRPA**

In 2014, PWRPA procured for the District a 400 KW share of the 75 megawatt (MW) utility-scale Astoria 2 Solar project located in Kern County, California. This project became commercially operational in December 2016.

Through PWRPA, the District also secured a 750 KW allocation in the Whitney Point Solar Project (Whitney Point), which is a 20 MW utility-scale solar project in Fresno County. The project commercial operation date (COD) was May 1, 2017.

Participation in utility-scale solar projects through PWRPA increases the renewable energy in the District's electricity portfolio and provides renewable energy to the District with the same environmental benefits as the solar projects located at the District's water treatment plants, and at a lower cost.

Staff continues to evaluate upcoming utility-scale renewable projects through PWRPA to reduce the carbon intensity of the energy the District purchases from PWRPA.

Staff will continue to evaluate energy recovery and other emerging energy-efficient technologies that may be compatible with District conditions.

#### **C. Silicon Valley Clean Energy**

The District has approximately 140 minor facilities and remote turnouts that have PG&E electric services. PG&E recently partnered with Silicon Valley Clean Energy (SVCE), which is a new public, locally controlled electric generation service provider that offers high-percentage carbon-free electricity at a competitive price. SVCE is a local community choice aggregation program that provides residents and businesses with a choice of electric providers and sources of electricity. SVCE offers two options for carbon-free power: a 100% carbon-free (50% renewable) energy option for approximately 1% less than average PG&E costs; and a 100% renewable energy option for approximately 3% more than average PG&E costs.

The initial enrollment started in April 2017 and is available in twelve Silicon Valley communities, including Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Los Gatos, Monte Sereno, Morgan Hill, Mountain View, Saratoga, Sunnyvale, and unincorporated County of Santa Clara. Starting in April 2017, 76 of the District's 140 minor PG&E electric services enrolled in SVCE to increase the percentage of carbon-free electricity in the District's portfolio.

#### **D. Energy Optimization Plan**

Staff continues to implement the energy optimization measures (EOMs) recommended by the Energy Optimization Plan, a comprehensive energy audit conducted by Black & Veatch in 2013. Of the original 49 EOMs recommended by the Energy Optimization Plan, staff has completed 35 EOMs as shown in Attachment 3. In FY16, staff completed 15 EOMs, including investigation of the following measures: treatment plant ozone generator maintenance and efficiency testing, treatment plant backwash efficiency settings, lighting upgrades and HVAC settings at various facilities. There are currently eight (8) EOMs in progress and six (6) EOMs were deferred until after the Rinconada Water Treatment Plant (RWTP) seismic retrofit and Reliability Improvement Project (RIP). Implementation of the Energy Optimization Plan continues to depend on competing priorities in other District projects and programs, and project validation and prioritization.

#### **4. Continuing Efforts towards Carbon Neutrality by 2020**

District's GHG emission reduction framework provides an effective mechanism towards achieving carbon neutrality. District's GHG reduction strategies support key drivers for achieving carbon neutrality as outlined below:

1. Diversified water supply portfolio: About two thirds of imported water comes from zero-emission sources; the federal Central Valley Project and the gravity-fed Hetch Hetchy system. In 2010, about three-fifths of the energy for the State Water Project was zero-emission hydroelectricity.
2. Continue to support statewide GHG emission reduction initiatives: The District continues to support DWR's target for emission reduction. Staff also initiated discussion on the feasibility of DWR purchasing renewable energy on the District's behalf for imported water the District receives from the State Water Project. According to DWR, as of 2015, energy sources used by the State Water Project is 65% carbon free, a 5% rise in carbon free energy compared to CY 2010. DWR is accelerating its path towards achieving a 33% total GHG emission reduction in 2020, by participating in an 85-MW and other utility-scale solar energy project in 2016. Staff anticipates further reduction in GHG emission related to Importing water from DWR's State Water Project.
3. Cost effective and renewable energy sources: With the addition of the newly completed 400 kW utility-scale Astoria II solar project in Kern County reaching its Commercial Operation Date on December 9, 2016 and the 750 kW solar allocation from the utility-scale Whitney Point solar project in Fresno County which became operational in April 2017, the District energy portfolio includes 2,263 kW of solar generation. Staff continues to evaluate additional utility-scale renewable projects through PWRPA to increase the District's renewable energy portfolio.
4. Conservation/Efficiency Program: Over two thirds of the carbon offsets come from the District's water conservation program. Energy efficiency and conservation continues to be the most cost effective way of achieving emission reduction. The water conservation program, along with the energy optimization plan, will continue to play an important role in future GHG emission reduction.
5. Water Recycling: Increasing production of purified water will increase energy consumption at the Silicon Valley Advanced Water Purification Center, potentially increasing the energy related emissions. However, accelerated purified water production also provides carbon offsets. Any changes to the projections of purified water production will need to be incorporated in future updates.
6. Other efforts: Staff continues to implement energy conservation measures identified in the Energy Optimization Plan and green business practices throughout District facilities. Staff supports the District's Green Team Employee Resources Group to promote green practices through the way we work and live.

No action was taken.

#### **4.3 STUDY OF THE DISTRICT'S GROUNDWATER SERVICES AREAS ("ZONES OF BENEFIT")**

Mr. Garth Hall reviewed the materials as per the agenda item from the following:

##### **SUMMARY:**

The County's groundwater subbasins are managed by the Santa Clara Valley Water District (District) and constitute a critical element of the County's water supply. District activities to ensure reliable groundwater supplies are funded mostly by groundwater charges. Well owners who pump groundwater pay a charge to the District if they are located in areas benefitting from District activities, such as groundwater recharge. These groundwater services areas, previously referred to as zones of benefit, were created more than forty years ago. The District is reviewing the extent of these areas to reflect changes in District activities and an updated understanding of areas that benefit. This will ensure that well owners are charged according to benefits received. Some wells may be removed, while others may be added to a groundwater services area. The District's overall revenue will not change.

The preliminary technical study is complete, and the District is seeking input from interested stakeholders and the community. Based on the technical analysis described in the preliminary study report, six groundwater services areas are proposed as compared to the existing two. The proposed changes would not result in major changes to the physical extent of the two existing areas. Rather, the proposed changes are primarily focused along the margins of the valley floor.

The District will continue to engage interested stakeholders and solicit their feedback on the preliminary study, which is posted on the District website at [www.valleywater.org/zone-of-benefit-study](http://www.valleywater.org/zone-of-benefit-study). Opportunities for input from interested stakeholders and the community prior to Board action include various meetings to discuss the findings, and direct input to staff. Based on input, the District's technical consultant will consider any revisions needed to the study report.

Staff expects to present the preliminary study report to the Board in May 2018 with recommendations for changes to the groundwater services areas. If the Board approves changes, a legal survey description of the new areas will be developed for Board consideration in accordance with District Act requirements. It is expected that the legal survey description would be brought to the Board in November 2018, if needed. If new or modified groundwater services areas are established, the rate to be applied within each modified area would then need to be evaluated in accordance with the District Act.

No action was taken.

If you have any questions or concerns, you may contact me at, [gbrambill@valleywater.org](mailto:gbrambill@valleywater.org) or 1.408.630.2408.

Thank you.

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