

BMP A2: Water Conservation Coordinator and Contact Information

Date	April 22, 2021
District Name	Santa Clara Valley Water District (Valley Water)
District Address	5750 Almaden Expressway, San Jose, CA 95118
District Website	www.valleywater.org

Reporting Year	January 2020
Data Year	December 2020

Water Conservation Coordinator

First Name	Metra
Last Name	Richert
Title	Unit Manager
Phone	408-630-2978
Email	mrichert@valleywater.org

General Manager

First Name	Rick
Last Name	Callender
Title	Chief Executive Officer
Phone	408-265-2600
Email	rcallender@valleywater.org

Other Contacts

First Name	Sunny
Last Name	Williams
Title	Associate Water Resources Specialist
Phone	408-630-2344
Email	sunnywilliams@valleywater.org

First Name	Jing
Last Name	Wu
Title	Senior Water Resources Specialist
Phone	408-630-2330
Email	jwu@valleywater.org

Water Supplies

Amount (in acre-feet) of Federal water supplied during this reporting period.	99,338 AF
Amount (in acre-feet) of non-Federal water used during this reporting period.	88,657 AF

Federal supply was determined by taking total 2020 federal supplies (including allocation, 2019 carryover into 2020, transfers/exchanges, and Semitropic deliveries) and subtracting the federal carryover to 2021.

Non-federal water used was determined by taking total 2020 state supplies (including allocation, 2019 carryover into 2020, transfers/exchanges, and Semitropic deliveries), subtracting state carryover into 2021, adding net natural inflows into the reservoirs, adding flows released from storage, adding the intertie, and subtracting release to bay.

The following is a revision to water supply for **CY 2019**:

Amount (in acre-feet) of Federal water supplied during this reporting period.	129,569 AF
Amount (in acre-feet) of non-Federal water used during this reporting period.	128,742 AF

Federal water supply was determined by taking total 2019 federal supplies (including allocation, 2018 carryover into 2019, transfers/exchanges, and Delta flood flows) and subtracting both federal carryover into 2020 and State Water Project water delivered through the San Felipe system. The CY2019 reported federal number previously reported included the State Water Project delivery. Valley Water is adjusting the 2019 reported values to remove this water and include it with non-federal water instead. Please note there was no State Water Project delivered through the San Felipe system in 2020 so that adjustment was not needed above.

Non-federal water supply was determined by taking total 2019 state supplies (including allocation, 2018 carryover into 2019, and Delta flood flows), subtracting state carryover into 2020, adding net natural inflows into the reservoirs, subtracting flows added to storage, adding the intertie, and subtracting release to bay. Valley Water is adjusting the 2019 non-federal previously reported value to account for release to the San Francisco and Monterey Bays.

BMP A1: Water Measurement

How many measurement devices do not measure within a +/- 6 percent by volume?	0
What is the percentage of delivery points that are measured?	100%
How many measurement devices did you install this year?	0
How many measurement devices will be installed in the following year?	0
How many measurement devices were upgraded this year?	3
How many measurement devices will be upgraded in the following year?	0

The original table had a duplication of rows and excluded two rows that were in last years' report. In an effort to be more complete, the two rows from last year's form were added.

Brief Comments/Narrative

Valley Water has meters on every turnout to agricultural uses, although some of these turnouts serve more than one customer. Meters have an accuracy of +/- 2 %.
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BMP A3: Water Conservation Education and Outreach Programs

In the table below, describe your water conservation education and outreach programs.

Valley Water sponsors an Agriculture Mobile Irrigation Lab (MIL) within its service area. The MIL performs agricultural irrigation systems evaluations, seasonal irrigation and soil moisture monitoring, seasonal crop canopy monitoring, irrigation system design consultation, and irrigation scheduling decision support. The MIL also works to connect growers to network of agency resources including the University of California Cooperative Extension ([UCCE](#)), California Department of Food & Agriculture ([CDFA](#)), and Natural Resources Conservation Service ([NRCS](#)).

Valley Water provides calculators to estimate the irrigation water used by crop the previous few days (“in arrears”) and to forecast crop’s water use in the coming few days (“in advance”). This includes a drip irrigation scheduling calculator and a sprinkler irrigation scheduling calculator. These calculators make it easy to calculate crop's irrigation requirements based on local CIMIS weather station data and the percentage of the field that is shaded by the crop around high noon. <https://www.valleywater.org/saving-water/agriculture>

BMP A4: Pricing Structure

Has your District adopted a water pricing structure for District water users based, at least in part, on quantity delivered?	Yes
If not, are you meeting the milestones to adopt such a structure?	

Brief Comments/Narrative

Valley Water’s rates are based on uniform, quantity charges for the various types of water (including groundwater, treated surface water, raw surface water, and recycled water), which recoup the cost to provide service. Agricultural rates are set lower than the cost of service to help preserve the open space benefits of agriculture. The lost agricultural water revenue is offset by a non-rate related revenue source.

BMP A5: Evaluate and Improve the Efficiency of the District’s Pumps

Do you have a pump (including wells and lifts) efficiency evaluation program?	Yes
If not, are you on schedule for meeting the milestones to implement such a program?	
How many pumps did you test for efficiency this year?	2
How many pumps will you test for efficiency next year?	2

Brief Comments/Narrative

Valley Water uses its Asset Management program to determine how to best manage its assets in order to reduce lifecycle operations and maintenance (O&M) costs while maintaining service

levels. To specifically evaluate pump assets, Valley Water is moving to a condition-based system. To that end, Valley Water is in the process of re-calibrating new and existing monitoring systems that measure pump health and operating efficiency in real time for 16 raw water pumps. With the assistance of existing quarterly equipment assessments, Valley Water is determining the accuracy and precision of the installed monitoring systems for all the raw water pumps that are operated by Valley Water.

Based on the performance and operational parameters, Valley Water will direct repairs and replacements of pumps and motors based on pump operating efficiency and trouble-free operation rather than just how long pumps have been in service since they were last rebuilt.

Condition based evaluations will also assist in determining the useful life of pumps and pump systems in order to plan seamless transitions from current to future system demands.

BMP B1: Facilitate Alternative Land Use

Are you exempt from this BMP?	No
Do you facilitate alternative uses for lands with exceptionally poor production potential or whose irrigation contributes to significant problems?	N/A
How many acres did you convert this year?	0
How many acres will you convert next year?	0

Brief Comments/Narrative

Valley Water is not aware of lands where irrigation leads to unmanageable problems such as high levels of selenium, saline drainage, or drainage difficulties in the county.

BMP B2: Facilitate Use of Available Recycled Water That Otherwise Would Not Be Used Beneficially

Are you exempt from this BMP?	No
Do you have a program that will promote the use of recycled water by agricultural customers?	Yes
If not, are you on schedule for meeting the milestones to implement such a program?	

Brief Comments/Narrative

The four wastewater treatment plants in Santa Clara County all produce water for reuse. These plants are not operated by Valley Water. However, the Silicon Valley Advanced Water Purification Center - owned and operated by Valley Water - produces up to 8 million gallons per day of purified water. The purified water produced is blended with the tertiary treated Title 22 recycled water produced at the San José/Santa Clara Regional Wastewater Facility (SJ/SC RWF) to enhance its quality. The recycled water is distributed to a large number of users via the South Bay Water Recycling (SBWR) system. By improving the quality of the recycled water served by SBWR, Valley Water promotes the increased usage of recycled water for irrigation and industrial applications (e.g., cooling towers).

As the Wholesale Supplier for Santa Clara County, Valley Water promotes recycled water through

collaborative cost-sharing agreements, such as the Wolfe Road Recycled Water Facilities Project, which expands recycled water distribution in the cities of Sunnyvale and Cupertino. Additional recycled water projects are underway near Gilroy in south Santa Clara County and near Palo Alto in northwest Santa Clara County. Valley Water is completing planning and engineering studies for potential potable reuse for groundwater recharge or direct potable reuse. A Countywide Water Reuse Master Plan (CoRe Plan) is being finalized to integrate and expand water reuse for potable and non-potable use as a local, reliable, environmentally sustainable, adaptive, drought-resistant water supply and to guide strategic investment of public funds over the next 25 years. Efforts are underway to deliver an indirect potable reuse project based on the CoRe Plan to recharge groundwater at approximately 10 Million Gallons per Day (MGD) production capacity.

BMP B3: Facilitate the Financing of Capital Improvements for On-Farm Irrigation Systems

Are you exempt from this BMP?	No
Do you have programs to facilitate and/or provide financial incentives for improved on-farm water management?	No
If not, are you on schedule for meeting the milestones to implement such a program?	See below

Brief Comments/Narrative

Since agricultural production is a small fraction of water usage in the county compared to commercial and residential use, facilitating financing of capital improvements for on farm irrigation systems has not been a focus of Valley Water's work. However, Valley Water's agricultural mobile irrigation lab provides free technical services for growers to help improve irrigation efficiency in seasonal row crops, tree crops, greenhouse crops, nurseries, and vineyards. This service includes irrigation system evaluations, seasonal irrigation and soil moisture monitoring, irrigation system design consultation, irrigation scheduling support, and more.

Valley Water is also developing a Baseline Study of Agricultural Water Use in Santa Clara County to help further understand conservation potential in the agriculture sector and how best to develop conservation programs that will be effective and useful. Furthermore, Valley Water works with partners to share information on funding sources for irrigation system improvements (e.g., UCCE Farm Advisors, CDFA, NRCS, etc.).

BMP B4: Incentive Pricing

Are you exempt from this BMP?	No
Do you have a pricing structure that promotes one or more of the following goals? <ul style="list-style-type: none"> Encourages more efficient water use at the farm level, Supports planned conjunctive use of groundwater, Increases groundwater recharge, Reduces problem drainage, 	Yes

<ul style="list-style-type: none"> Improves management of environmental resources, or Adjusts seasonal rates based on current conditions 	
If not, are you on schedule for meeting the milestones to implement such a program?	

Brief Comments/Narrative

Valley Water complies with this incentive pricing BMP by charging customers based on the quantity of water used. As a wholesale water supplier, Valley Water does not utilize tiered water pricing or other water conserving rate mechanisms. The pricing of agricultural water is reduced by a public policy goal of retaining agricultural lands in the county for open space.

Valley Water can control the financial incentive of its Municipal and Industrial (M&I) retailers to take treated water versus groundwater or vice versa via the treated water price, which helps facilitate Valley Water's ability to manage water supplies conjunctively.

Valley Water's enabling Act contains a provision that allows for charging increased fees for excessive groundwater pumping. This provision is intended to be used only during periods of water supply shortage as an incentive to reduce demands.

BMP B5A: Line Pipe Ditches and Canals

Are you exempt from this BMP?	No
Does the District have an on-going canal lining or piping program?	N/A
If not, are you on schedule for meeting the milestones to implement such a program?	N/A

Brief Comments/Narrative

Valley Water has a well-established network of pressurized pipelines and lined canals to transport imported raw (untreated) water and local raw water captured in its 10 reservoirs to various locations. Imported and local raw water is distributed to three water treatment plants for treatment, creeks, and recharge ponds for managed groundwater recharge, and surface water customers for M&I, agricultural, or domestic use.

BMP B5B: Regulatory Reservoirs

Are you exempt from this BMP?	No
Have you constructed regulatory reservoirs, within this reporting period, to improve your distribution system's delivery flexibility?	No
If not, are you on schedule for meeting the milestones to construct such reservoirs?	Yes

Brief Comments/Narrative

Valley Water owns and operates 10 surface water reservoirs that provide system delivery flexibility for water supply purposes. These reservoirs have a total capacity of 166,140 acre-feet. However, five

of these reservoirs have seismic restrictions on them, limiting their capacity to 62,362 acre-feet. Only two of these reservoirs can receive and store CVP water: Anderson and Calero reservoirs.

Anderson Reservoir is Valley Water's largest reservoir and its capacity exceeds all other nine reservoirs combined. Valley Water has started the first phase of the Anderson Dam Seismic Retrofit Project, which will ultimately allow for lifting of the Federal Energy Regulatory Commission (FERC)-imposed restriction that has limited the reservoir storage to its deadpool (or 3% of its total capacity).

In addition, Valley Water is in the planning process for acquiring the Pacheco Reservoir and enlarging it from its current capacity of 6,000 acre-feet, so it can store up to 140,000 acre-feet of water. This will ensure greater flexibility in delivering CVP supplies and provide additional emergency storage.

BMP B6: Increase Flexibility in Water Ordering by, and Delivery to, Water Users

Are you exempt from this BMP?	No
In the table below, describe any improvements in delivery flexibility completed or under investigation.	
If you did not make any such improvements, are you on schedule for meeting the milestones to implement such a program?	Yes
If not, are you on schedule for meeting the milestones to implement such a program?	Yes

Brief Comments/Narrative

No improvements were completed in the calendar year 2020.

Valley Water has identified several projects that may increase the flexibility of water supply operations and are worthy of further study. These include additional in-county surface storage such as Pacheco Reservoir, enlargement of existing water treatment facilities, assessment of distribution system assets for capacity and renewal schedule, and other programs still being developed. Studies are in progress to determine the feasibility, potential costs, and benefits, of increasing surface water storage, as well as the cost effectiveness of treatment plant expansion and distribution system rehabilitation and renewal.

BMP B7: Construct and Operate District Spill and Tailwater Recovery Systems

Are you exempt from this BMP?	No
Do you have any spills or tailwater leaving the District?	No
Have you constructed facilities to capture and reuse district operation spills?	N/A
If not, are you on schedule for meeting the milestones to implement such a program?	N/A

Brief Comments/Narrative

Valley Water utilizes a high-pressure distribution system to transport imported raw water as well as local water.

BMP B8: Measure Outflow

Are you exempt from this BMP?	No
Do you measure the volume outflow with methods or devices that are operated and maintained to a reasonable degree of accuracy, under most conditions, to +/- 20% by volume?	N/A
Do you identify spill locations, prioritize spill locations by quantity of spill, and determine best measurement methods/costs?	N/A
If not, are you on schedule for meeting the milestones to implement such a program?	N/A

Brief Comments/Narrative

No spill or tailwater leaves Valley Water facilities.

BMP B9: Optimize Conjunctive Use of Surface and Groundwater

Are you exempt from this BMP?	No
Are you implementing a plan for conjunctive use of surface and groundwater within the District?	Yes
Does your District have conjunctive use options?	Yes
If not, are you on schedule for meeting the milestones to implement such a program?	

Brief Comments/Narrative

<p>Valley Water's efforts to maintain reliable water supplies for Santa Clara County rely on the conjunctive management of groundwater and surface water. Valley Water's commitment to conjunctive water management is reflected in its 2016 Groundwater Management Plan (GWMP), which was submitted and approved for SGMA (Sustainable Groundwater Management Act) compliance. The GWMP contains as the first recommendation: "Maintain existing conjunctive water management programs and evaluate opportunities for enhancement or increased efficiency." Ongoing operations consider available water supplies and projected demands in determining the source and volume of surface water to be delivered for managed groundwater recharge, drinking water treatment, or other use. To support operations planning and long-term water supply sustainability, Valley Water uses various tools, including three numerical groundwater flow models. These models are used to evaluate and forecast groundwater storage and water levels under different operational and hydrological conditions to maximize conjunctive use.</p> <p>As part of its Water Supply Master Plan 2040, Valley Water is evaluating various conjunctive use projects, including stormwater reuse, new groundwater recharge facilities, and expanded recycled and purified water use.</p>

BMP B10: Automate Distribution and/or Drainage System Structures

Are you exempted from this BMP?	No
Is your distribution system completely automated?	N/A
If not, are you investigating system automation?	N/A
In the table below, describe how you reduced spills or increased flexibility.	N/A
If not, are you on schedule for meeting the milestones to implement such a program?	N/A

Brief Comments/Narrative

Valley Water utilizes a high-pressure distribution system to transport imported raw water as well as local water.

BMP B11: Pump Testing and Evaluation

Are you exempt from this BMP?	No
Do you have a program to facilitate or promote customer pump testing and evaluation?	Yes
If not, are you on schedule for meeting the milestones to implement such a program?	

Brief Comments/Narrative

Valley Water promotes water user pump testing and evaluation through various educational measures, including distribution of the publication “Handbook for Agriculture Water Use Efficiency” which includes a section on pump efficiency. This publication is available on our website (https://www.valleywater.org/saving-water/agriculture) and is distributed at various outreach events.

BMP B12: Geographic Information System Mapping

Are you exempt from this BMP?	No
Have you developed GIS maps of your distribution system and drainage system?	Yes
If not, are you on schedule for meeting the milestones to implement such a program?	

Brief Comments/Narrative

Valley Water maintains a GIS program that maps all distribution facilities.
