

CITY OF SANTA CRUZ
City Hall
809 Center Street
Santa Cruz, California 95060



Water Department

WATER COMMISSION

Regular Meeting

March 04, 2019

**7:00 P.M. GENERAL BUSINESS AND MATTERS OF PUBLIC INTEREST, COUNCIL
CHAMBERS**

*Denotes written materials included in packet.

The City of Santa Cruz does not discriminate against persons with disabilities. Out of consideration for people with chemical sensitivities, please attend the meeting fragrance free. Upon request, the agenda can be provided in a format to accommodate special needs. Additionally, if you wish to attend this public meeting and will require assistance such as an interpreter for American Sign Language, Spanish, or other special equipment, please call Water Administration at 831-420-5200 at least five days in advance so that arrangements can be made. The Cal-Relay system number: 1-800-735-2922.

APPEALS: Any person who believes that a final action of this advisory body has been taken in error may appeal that decision to the City Council. Appeals must be in writing, setting forth the nature of the action and the basis upon which the action is considered to be in error, and addressed to the City Council in care of the City Clerk.

Other - Appeals must be received by the City Clerk within ten (10) calendar days following the date of the action from which such appeal is being taken. An appeal must be accompanied by a fifty dollar (\$50) filing fee.

Call to Order

Roll Call

Statements of Disqualification - Section 607 of the City Charter states that ...All members present at any meeting must vote unless disqualified, in which case the disqualification shall be publicly declared and a record thereof made. The City of Santa Cruz has adopted a Conflict of Interest Code, and Section 8 of that Code states that no person shall make or participate in a governmental decision which he or she knows or has reason to know will have a reasonably foreseeable material financial effect distinguishable from its effect on the public generally.

Oral Communications - No action shall be taken on this item.

Announcements - No action shall be taken on this item.

Consent Agenda (Pages 1.1 - 3.2) Items on the consent agenda are considered to be routine in nature and will be acted upon in one motion. Specific items may be removed by members of the advisory body or public for separate consideration and discussion. Routine items that will be found on the consent agenda are City Council Items Affecting Water, Water Commission Minutes, Information Items, Documents for Future Meetings, and Items initiated by members for Future Agendas. If one of these categories is not listed on the Consent Agenda then those items are not available for action.

1. City Council Actions Affecting the Water Department (Pages 1.1 - 1.2)
Accept the City Council actions affecting the Water Department.
2. Water Commission Minutes from February 4, 2019 (Pages 2.1 - 2.3)
Approve the February 4, 2019 Water Commission Minutes.
3. Updated Water Commission Work Plan for 2019 (Pages 3.1 - 3.2)
Receive and accept the Working Draft - Calendar Year 2019 Water Commission Work Plan (revised 2/26/19).

Items Removed from the Consent Agenda

General Business (Pages 4.1 - 6.2) Any document related to an agenda item for the General Business of this meeting distributed to the Water Commission less than 72 hours before this meeting is available for inspection at the Water Administration Office, 212 Locust Street, Suite A, Santa Cruz, California. These documents will also be available for review at the Water Commission meeting with the display copy at the rear of the Council Chambers.

4. Briefing on CIP Projects for FY 2020-2030 (Pages 4.1 - 4.4)
Receive the information and presentation on the validation and current status of the 10 year Capital Investment Program and provide feedback.
5. WSAS Quarterly Work Plan Update (Pages 5.1 - 5.12)
Receive information regarding the status of the various components of the Water Supply Augmentation Strategy and provide feedback.
6. Approval Process for Capital Investment Program Projects (Pages 6.1 - 6.2)
Receive information on a staff proposal related to large project approval processes and provide feedback.

Subcommittee/Advisory Body Oral Reports - No action shall be taken on this item.

Director's Oral Report - No action shall be taken on this item.

Information Items

Adjournment

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WATER COMMISSION
INFORMATION REPORT

DATE: 2/27/2019

AGENDA OF: March 4, 2019
TO: Water Commission
FROM: Rosemary Menard, Water Director
SUBJECT: City Council Actions Affecting the Water Department

RECOMMENDATION: Accept the City Council actions affecting the Water Department.

BACKGROUND/DISCUSSION:

February 12, 2019

Loch Lomond Recreation Area Upper Loch View Accessibility Improvements – Approval of Plans and Specifications and Authorization to Advertise for Bids and Awards of Contract (WT)

Motion carried to approve the Plans, Specifications and Contract Documents for the Loch Lomond Recreation Area Upper Loch View Accessibility Improvements, and authorize staff to advertise for bids and award the contract in a form to be approved by the City Attorney. The City Manager is hereby authorized and directed to execute the contract as authorized by Resolution No. NS-27,563.

February 26, 2019

University Tank No. 5 Replacement Project – Inlet/Outlet Pipeline NOC

Motion carried to accept the work of Monterey Peninsula Engineering Inc. (Marina, CA) as complete per the plans and specifications and authorize the filing of a Notice of Completion for the U5 Inlet/Outlet Pipeline Replacement, Related Piping and Sitework.

Approval of Contract Amendment No. 1- Water Street Water Main Replacement with MNS Engineers for Construction Management Services

Motion carried to approve Contract Amendment No. 1 - Water Street Water Main Replacement with MNS Engineers, Inc. for construction management services for the Water Street Water Main Replacement Project in a form approved by the City Attorney.

PROPOSED MOTION: Motion to accept the City Council actions affecting the Water Department.

ATTACHMENTS: None.



Water Department

Water Commission
7:00 p.m. – February 4, 2019
Council Chambers
809 Center Street, Santa Cruz

Summary of a Water Commission Meeting

Call to Order: 7:01 PM

Roll Call

Present: L. Wilshusen (Chair), D. Engfer (Vice-Chair), D. Baskin, J. Mekis, S. Ryan, D. Schwarm, W. Wadlow

Absent: None

Staff: R. Menard, Water Director; J. Becker, Finance Manager; C. Coburn, Deputy Director/Operations Manager; H. Luckenbach, Deputy Director/Engineering Manager; K. Fitzgerald, Administrative Assistant III

Others: 5 members of the public.

Introduction of Commissioner Sierra Ryan

Election of Officers - Commissioner Engfer was elected as Chair of the Water Commission for the year 2019. Commissioner Wadlow was elected as Vice Chair of the Water Commission for the year 2019.

Presentation: None.

Statement of Disqualification: None.

Oral Communications: Mr. Daniels, Vice President of Soquel Creek Water District presented information and modeling data of groundwater conditions within the region.

Bruce Jaffe of Soquel Creek Water District spoke.

Announcements: Ms. Menard announced that the Loch Lomond Reservoir began spilling yesterday, February 3.

Consent Agenda

1. City Council Items Affecting Water
2. Water Commission Minutes from January 7, 2019.
3. 2nd Quarter FY 2019 Financial Report

Items removed from the Consent Agenda – None

Commissioners requested that the abbreviation “WTP” be changed to Graham Hill Water Treatment Plant on page 3.4 of 2nd Quarter FY 2019 Financial Report.

No public comment was made.

Commissioner Baskin moved the Consent Agenda. Commissioner Wilshusen seconded.

VOICE VOTE: MOTION CARRIED
AYES: All
NOES: None
ABSTAIN: Commissioner Ryan

General Business

4. 2019 Water Supply Outlook – First Look

Mr. Goddard presented the initial 2019 Water Supply Outlook. The presentation provided an overview of the previous year’s water supply and the initial outlook of the water supply for Water Year 2019.

What reporting requirements and water loss standards will the Department have to meet to comply with the new state laws on water conservation?

- The new laws go into effect in 2022 and will mandate:
 - implementation of new urban water use targets and water loss control standards;
 - new criteria for developing a water shortage management plan; and
 - develop an annual water supply demand assessment.

Can staff provide an update on the water produced from the North Coast sources?

- Last year, Liddell Spring produced consistent, quality water throughout the year and most of the flows in Laguna Creek were dedicated to flows for maintaining natural habitats.

What does the high cumulative runoff from the San Lorenzo River indicate?

- It is an indicator of the level of supply throughout the entire water system. It is also an indication of the level of groundwater base flows from the Santa Margarita basin into the tributary streams, including the San Lorenzo River.

Is there an increase in stream flow of the San Lorenzo River when Loch Lomond is spilling over?

- There is likely an increase, but it is not significant enough to be detectable.

Will staff’s approach to regulations regarding the elimination of water waste be discussed in a future Water Commission meeting?

- Yes, staff can provide more information at a later meeting. (Note, a briefing on new state regulations will be agendized for a future meeting.)

Have there been any major damages as a result of the recent storms?

- Mr. Coburn, Deputy Water Director for Operations, reported that there have been no incidents of major infrastructure damage or geological hazards that have affected the Water Department.

No public comment was made.

Subcommittee/Advisory Body Oral Reports

5. Santa Cruz Mid-County Groundwater Agency

There was not a board meeting in January, but the primary focus is on groundwater modeling and submitting a plan to the state. In February, there will a report on the interconnections between groundwater and surface water.

6. Santa Margarita Groundwater Agency

The primary focus has been on continuing the groundwater education series. The second of the three sessions will be held this Saturday at the Felton Community Hall from 9:00 am to 1:00 pm. The remaining sessions will cover the following topics:

February 9th: Water Budgets: How Do We Balance All Needs?

March 9th: Managing Groundwater: How Can We Prepare for an Uncertain Future?

New officers were elected to the board; Chris Perri from Scotts Valley Water District was elected as Chair and Lois Henry from San Lorenzo Water District was elected as Vice Chair, and Angela Franklin retained the position as Secretary.

Director's Oral Report: Ms. Menard announced that the April 1st Water Commission meeting will be a joint meeting with the former members of the WSAC. The joint meeting with the City Council will be on April 23, 2019.

Adjournment Meeting adjourned at 7:47 PM.

Respectfully submitted,

Katy Fitzgerald
Staff

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WATER COMMISSION
INFORMATION REPORT

DATE: 02/27/19

AGENDA OF: March 4, 2019
TO: Water Commission
FROM: Rosemary Menard, Water Director
SUBJECT: Working Draft – Calendar Year 2019 Water Commission Work Plan

RECOMMENDATION: Receive and accept the Working Draft – Calendar Year 2019 Water Commission Work Plan (revised 2/26/19).

BACKGROUND/DISCUSSION:

Staff provides periodic updates to the Water Commission work plan to show major items to be received by the Water Commission. The previous update was in November 2018. This item provides updated information to the calendar through July 2019 as well as the pending item list provided at the bottom of the work plan.

FISCAL IMPACT: None

PROPOSED MOTION: Accept the Working Draft - Calendar Year 2019 Water Commission Work Plan (revised 2/26/19).

ATTACHMENT: Working Draft - Calendar Year 2019 Water Commission Work Plan (revised 2/26/19)

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Working Draft – Calendar 2019 Water Commission Work Plan (rev 02/26/2019)

Major Water Commission Work Plan Item	Anticipated City Council Action on Water Commission Recommendations
January 7, 2019	
➤ CY 2018 Capital Projects Status and Updates	
➤ 1 st Quarter FY2019 Financial Report (July – Sept 2018)	
February 4, 2019	
➤ First Look – Annual Water Supply Forecast	
➤ 2 nd Quarter FY2019 Financial Report (Oct – Dec 2018)	
March 4, 2019	
➤ Briefing on Projects for FY 2020 – 2030 CIP	
➤ Quarterly Update on WSAS	
➤ Discussion on Large Project Approval Processes	
April 1, 2019	
➤ Annual Water Supply Forecast	April 9: Annual Water Supply Forecast
➤ Joint workshop with members of the former Water Supply Advisory Committee. Comprehensive update on status of work on supply options, including decision making, timeline, overall work plan, modeling, changed conditions, etc.	April 23: Annual joint meeting with Water Commission & City Council
➤ Support staff recommendation to the City Council to approve the Newell Creek Dam Inlet/Outlet Project	April 9 or 23: Certification of Final EIR for the NCD I/O project and approval of the project
May 6, 2019	
➤ Draft FY 2020 Operating and Capital budgets and Pro Forma	
➤ 3 rd Quarter FY2019 Financial Report (Jan – Mar 2019)	
➤ Support staff recommendation to the City Council to approve the Concrete Tanks Replacement Project	May 14 or 28: Adopt the environmental document for the Concrete Tanks project
June 3, 2019	
➤ Final Action on FY 2020 Operating and Capital Budgets and Water Commission recommendation to Council	City Council Action on FY 2020 Budget June 11 or 25, 2019
➤ Quarterly Update on WSAS	
July 1, 2019	
➤ Likely Cancelled due to July 4 th Holiday	
August 5, 2019	
➤ Update on Winter 2018-2019 in lieu and ASR projects	
September 2, 2019	
➤ Quarterly Update on WSAS	
October 2, 2019	
➤ 4 th Quarter FY2019 Financial Report (incl debt coverage ratio)	
November 4, 2019	
➤ 4 th Quarter FY2019 Financial Report (alternative date)	
December 2, 2019	
➤ Quarterly Update on WSAS	

Notes:

- 1st, 2nd, and 3rd quarterly financial reports will likely follow reporting quarter by 2 months
- 4th Quarter financial report will likely follow reporting quarter by 3-5 months

Pending List:

- Affordability Issues/Integrated Regional Water Management Disadvantaged Communities Planning Grant
- Water System Development Charges – scope of upcoming review and possible revisions
- Potential enrichment session on climate change modeling for water supply, HCP, City planning
- FYI on Alternative Delivery Models
- FYI on ADA for Loch Lomond – Dec 2019
- Briefing on “Making Conservation a Way of Life” Regulations



WATER COMMISSION
INFORMATION REPORT

DATE:

02/27/19

AGENDA OF: March 4, 2019
TO: Water Commission
FROM: Heidi Luckenbach, Deputy Director/Engineering Manager
SUBJECT: Presentation on Capital Investment Program, FY2020-2030

RECOMMENDATION: Receive the information and presentation on the validation and current status of the 10 year Capital Investment Program and provide feedback.

BACKGROUND: In January 2019, the Water Commission received a report and presentation on projects in the Capital Investment Program (CIP) that had been completed or were ongoing during calendar year 2018 and making noteworthy progress. That presentation kicked off the first of several Water Commission items related to Capital Projects by looking more or less in to the past; this item covers two main topic areas: 1) a high level overview of the Santa Cruz Water Program, and 2) a more detailed discussion of the project-validation process as part of the Santa Cruz Water Program and its influence on the CIP in a forward-looking manner. The third of these items informs the Draft FY2020 operation and capital budgets, as well as the 10 year pro forma, and will be coming to the Water Commission at their May meeting.

Much of the major infrastructure in the Santa Cruz Water System is 50 or more years old. The dams, pipelines, and water treatment plant are all in need of significant repair or replacement, in addition to the implementation of the WSAC recommendations related to water supply reliability. In June 2016 the Department prepared the Long Range Financial Plan (LRFP). The LRFP estimated that CIP spending through Fiscal Year 2026 would total \$296 million-which represented a significant increase in spending relative to historic average annual spending levels.

To deliver the \$300 million CIP, in December 2017, the Department selected HDR Inc., to provide Program Management Services. To reiterate, a program management consultant integrates and supplements City staff, providing access to the right expertise at the right time it is needed to assist with the highly varied technical and managerial requirements and needs of delivering a complex, diverse infrastructure program. During the first half of calendar year 2018 staff and HDR focused heavily on the “program mobilization phase.”

Program Mobilization consisted of a number of critical activities and milestones that form the foundation for longer-term program success including assessment of current IT, financial, engineering, and operations systems and practices for delivery of projects; development of a standardized project delivery model; set-up of a web-based document-collaboration site and document management system; development of a program management plan detailing the processes and procedures to be used across all capital projects.

A particularly important task during the mobilization phase was to conduct a project validation process. Project validation was used to “validate” key information about project scopes, schedules, budget, and priority, which is the critical information needed to build a much needed resource loaded program schedule. That program schedule is a powerful tool that is used to understand project schedules, their interdependencies and linkages with other projects, and the anticipated staffing and fiscal resources required at various stages of the project life.

DISCUSSION: The conceptual steps of validation are shown in Attachment 1. One key element of validation is to normalize each project with respect to the following:

- Create consistent level of detail with project descriptions
- Understanding linkages and dependencies
- Consistent cost estimating including application of similar contingencies (design, bidding, construction, etc.)
- Costs include all soft costs (environmental, permitting, legal fees, etc.)
- Develop staff resource requirements

A major outcome of validation is a set of projects that are consistently developed and described. The outcome in terms of resource requirements (staff as well as funding) is key to taking the subsequent steps in assessing practicability of implementation, and potential modifications to the plan for success.

A summary of key findings of the validation process were:

- The revised estimated cost for the 10 year CIP was closer to \$400 million (2018 dollars).
 - The validated projects exceed the estimate in the 2016 Long Range Financial Plan (LRFP). The LRFP reflected the work that would be accomplished in the 10-year timeframe of 2017-2026; validation took those same set of projects (and some newly identified projects) and planned for completion within the 10 year timeframe.
 - This growth in cost was also attributed largely to the inclusion of higher levels of contingency, (money for unknowns) in project budgets. This is a more conservative method of budgeting projects-and consistent with industry cost estimating practices.
- Staggering projects is important. By spreading projects over a longer time frame, delaying the start of lower priority projects, and packaging projects, it is possible to dampen undesirable spikes and spending and staff resource/project management requirements.
- Completing the full scope of all the projects would require extremely aggressive schedules, in particular given the scope, schedule and budgets of supply augmentation,

the Newell Creek Dam Inlet/Outlet project, and improvements at the Graham Hill Water Treatment Plant.

Since the completion of the project validation process staff has been evaluating the revised CIP cost using the Department's financial model. Initial financial model results suggest completion of a \$400 million CIP in 10-years is not feasible, given financial limitations or goals, as well as other practical staffing limitations. Staff are currently working to reprioritize projects to refine certain project schedules, in order to reduce the 10-year CIP to somewhere between \$300-350 million spending total which is more in line with what was originally anticipated in the 2016 LRFP. An updated Pro forma which will capture the revised 10 year CIP estimates will be presented in May. Completion of current list of projects in the capital program will likely take between 15 – 20 years. At the March 4 meeting staff will provide additional information about the validation process and its outcomes.

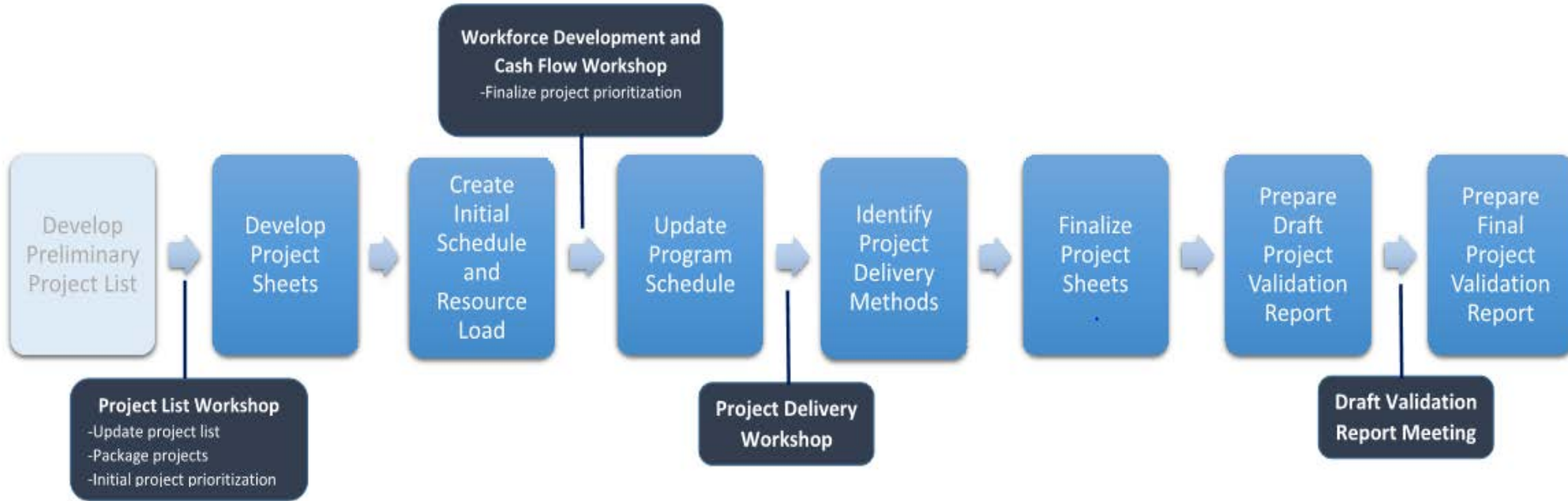
FISCAL IMPACT: None.

PROPOSED MOTION: Accept the information and presentation on the validation and current status of the 10 year Capital Investment Program.

ATTACHMENT(S): Steps in Validation

Validation: Major Steps

4.4





WATER COMMISSION
INFORMATION REPORT

DATE: 02/28/19

AGENDA OF March 4, 2019

TO: Water Commission

FROM: Heidi Luckenbach, Deputy Director/Engineering Manager

SUBJECT: Water Supply Augmentation Strategy, Quarterly Work Plan Update

RECOMMENDATION: Receive information regarding the status of the various components of the Water Supply Augmentation Strategy and provide feedback.

BACKGROUND: Following the completion of the Water Supply Advisory Committee (WSAC) process, the City Council accepted the Final Report on Agreements and Recommendations that included a detailed Implementation Plan and Adaptive Management Strategy. The WSAC work was adopted as part of the 2015 Urban Water Management Plan and is currently referred to as the Water Supply Augmentation Strategy (WSAS) that includes an Implementation Work Plan (Work Plan).

As per the Final Agreements and Recommendations of the Water Supply Advisory Committee (WSAC), the Water Commission shall receive quarterly updates on the status of the various elements of the recommended plan. This is the thirteenth quarterly update. Because the Water Commission will be holding joint sessions with the members of the former Water Supply Advisory Committee on April 1, and the City Council on April 23, the following report is fairly brief, as much more detail will be provided in April.

As a reminder, the content and format of this report have been modified based on feedback from the Water Commission. Commissioner comments that are reflected herein or are a work in progress are included. These bullets will continue to appear in the quarterly report until all items have been accounted for within the report.

- Organize by “Element” as defined by the WSAC. Reflected herein.
- Develop a spreadsheet that shows all the supply projects and portfolios of projects with all the metrics. Included as Attachment 1. This is not included in this quarterly report but will be updated in the next quarterly report, following feedback and direction from the April meetings.
- Include an update on Santa Cruz Water Rights. Reflected herein.
- Develop a narrative and/or spreadsheet that shows the nexus between water supply projects specifically spelled out in the WSAC report and other projects and studies being

performed by the Water Department. Work in progress. This is not included in this quarterly report but will be in the June quarterly report, being informed by the April meetings as well as by completion of the validation process of the Santa Cruz Water Program.

- For context, include an update on work being performed under the Sustainable Groundwater Management Act. This continues to be a work in progress and will be included in the June quarterly update.

The Water Supply Augmentation Strategy (WSAS) consists of the following elements as defined by the WSAC:

- Element 0: Demand Management. Implementation of the Long Term Water Conservation Master Plan is foundational to the WSAS.
- Element 1: In Lieu. This alternative could include the sale of water to other agencies with or without the assumption of additional water back to the City during droughts.
- Element 2: Aquifer Storage and Recovery. Evaluations of both the Mid-County and Santa Margarita Groundwater Basins are being conducted.
- Element 3: Advanced Treated Recycled Water or Seawater Desalination

Progress and status of the various WSAS-related work are described in detail below as well as that of other projects related to but not specifically articulated in the WSAS.

DISCUSSION:

ELEMENT 0: DEMAND MANAGEMENT

Overview: Element 0 of the City’s Water Supply Augmentation Strategy consists of ongoing demand management activities. The primary goal of this element is to generate an additional 200 to 250 million gallons per year in demand reduction by year 2035 from expanded water conservation.

Summary: The following is a summary of the status of the selected measures in the water conservation plan.

No. 2 Advanced Metering Infrastructure (AMI). The AMI Business Case Study is complete, as is the evaluation of the AMI Irrigation Meter Pilot Project.

No. 4 General Public Information. We have purchased and are now distributing updated and redesigned copies of the *Practical Plumbing Handbook* published by the [California Water Efficiency Partnership](#) and [Alliance for Water Efficiency](#). From leaking toilets and faucets to bathtubs and irrigation systems, the handbook is an excellent resource on how to repair and perform preventative maintenance on the fixtures in a home.

No. 5 Home Water Use Report. The Home Water Use Report program was launched to the public in February. Letters were sent (or emails, where the email address was available) to approximately 5,500 single family accounts introducing the program and encouraging visiting the online portal and signing up for email Water Use Reports (Attachment 1). First reports will be sent out following March utility bills.

No. 10 High Efficiency Clothes Washer Rebates. The City reached a milestone in late 2018 of more than 10,000 clothes washer rebates provided to customers since the program began in 2000.

At the beginning of each year, staff takes the time to collect annual information on water production and consumption and to analyze trends that influence demand, such as number and type of new connections added during the year. Of particular note is the total annual water production in 2018, which measured 2.65 billion gallons, that represents the fifth year in which annual production is more than 20 percent below the level of 3.35 billion gallons produced in 2013 before the onset of water rationing (Attachment 2). To understand this trend further, the Water Department is working with David Mitchell (M. Cubed) who prepared the water demand forecast for the Water Supply Advisory Committee. He is in the process of comparing and analyzing projected and actual water demands to identify the causes of continuing low production. The City continues to register extremely low residential per capita water use measuring approximately **48 gallons per capita per day** (Attachment 3).

In addition to the foregoing, the Water Conservation Office over the last three months has:

- Recruited for and selected a new Water Conservation Representative;
- Held two Rain Barrel distribution events;
- Presented at the annual meeting with the University on the Comprehensive Settlement Agreement, as well as attended a planning meeting with the LRDP Infrastructure Workgroup;
- Prepared and presented the Initial Water Supply Outlook for Water Year 2019;
- Attended a stakeholder meeting at the State Water Resources Control Board on the development of water loss performance standards;
- Presented at the first educational workshop for the Santa Margarita Groundwater Agency on linking land use and water supply;
- Participated in a variety of internal Water Department initiatives.

ELEMENT 1: WATER TRANSFERS AND/OR WATER EXCHANGES

Overview: This work is considering the feasibility of sending excess City surface water to neighboring agencies for the purpose of passively recharging the groundwater basin(s). As a reminder, the phrase “in lieu” is being dropped in formal communications and being replaced by the following more descriptive concepts the term “in lieu” intended to capture.

- **Water Transfers:** Selling water to neighboring agencies for the purpose of augmenting their supplies and possible passively recharging the groundwater basin.
- **Water Exchanges:** Negotiating an agreement whereby water provided to neighboring agencies would, by allowing the groundwater basins to recharge, provide additional groundwater back to the City during water supply shortages.

Summary: The water transfer pilot began on December 3, 2018, using the existing interconnection located at Soquel Creek Water District’s (SqCWD) O’Neill Ranch facility. Water from the City’s distribution system has been transferred to SqCWD’s system with a total

of approximately 23.5 MG (0.3 MGD) transferred to date. Water is not transferred constantly, rather intermittently to meet SqCWD demand. Collecting water quality information during this water transfer period has been a major focus, in addition to understanding operational constraints and challenges within both systems, and understanding and changes to groundwater conditions. With the City's Aquifer Storage and Recovery (ASR) project taking place at the same time, it has been slightly more challenging to assess, for example, whether or not recovery of water levels in wells is related to the wells being turned off for the Water Transfer pilot or the injection portion of the ASR project. Staff will continue to evaluate this condition and report out at a future date.

Next Steps: Continue transferring water and collecting water quality samples in the distribution system per the monitoring plan approved by the Division of Drinking Water. Make operational changes to water transfer rate based on operational needs and limitations of the individual systems; i.e., reduce flows being transferred if water from the north coast is not available. Plan for a joint agency meeting to discuss the benefits, limitations, issues, concerns, etc., of the pilot project.

Contract Update(s)

Purchase Order Agreement with SqCWD for cost share of Water Quality Sampling

- PO Opened: January 2017
- Project Partner(s): Soquel Creek Water District
- Engaged Stakeholders: None at this time.
- Original PO Amount: \$60,000
- Amount Spent: \$8,879
- Amount Remaining: \$51,121

ELEMENT 2: AQUIFER STORAGE AND RECOVERY

Overview: Aquifer Storage and Recovery is being evaluated as a form of actively recharging the groundwater basin(s). Work in this area will include the Mid-County Groundwater Basin (MCGB) and the Santa Margarita Groundwater Basin (SMGB).

Summary: Evaluation of this element is divided into three phases of work: feasibility, pilot, and implementation. These phases overlap with one another, particularly the feasibility and piloting phases, and the work is iterative in nature. While a large portion of the Phase I work is complete, the groundwater modeling is ongoing and will continue through completion of Phase II. No work has been conducted on Phase I in the last quarter, although additional groundwater modeling scenarios are being developed.

Phase II work began in the MCGB at Beltz 12 on January 18, 2019, following approval from the Central Coast Regional Water Quality Control Board.

The table from the ASR Pilot Test Work Plan for Beltz 12 is repeated below.

Table 1. Summary of ASR Cycles

ASR Cycle No.	Injection					Storage Period (days)	Recovery				
	Period (days)	Rate (gpm)	Total Volume		Radius (ft)		Period (days)	Rate (gpm)	Volume		Discharge Location
			(mg)	(af)		(mg)			(af)		
1	1	400	0.58	1.77	18	2	1	700	1.01	3.09	Storm Drain
2	7	400	4.03	12.4	46	14	6	700	6.05	18.6	Storm Drain
3	30	400	17.3	53.0	96	60	30	400	17.3	53.0	Distribution

Total Duration (days): 151
 Total Injection Volume (mg): 21.9
 Total Recovery Volume (mg): 24.3

The test program is being conducted in three testing cycles: Cycle 1 occurred between January 18 and January 22; Cycle 2 occurred between January 23 and February 25; and Cycle 3 will begin the first full week of March and continue through the end of June.

No changes to the injection and extraction rates from those shown on the table above were made during Cycles 1 and 2. Based on results from Cycles 1 and 2, it appears that an injection rate of 400 GPM is feasible for Beltz 12. Staff from the City and Pueblo Water Resources will continue to interpret the data, and be able to make additional statements about feasibility at a future date.

Next Steps: Work over the next few months will include:

- Continue with piloting of ASR at Beltz 12; Cycle 3 will run through the end of June.
- Continue the evaluation of impacts to injection and extraction (recovery) at neighboring production wells and monitoring wells; modify Cycle 3 as needed.
- Consider incorporating findings from piloting work to Initial Groundwater Modeling Results; particularly pumping impacts on neighboring production wells and monitoring wells.
- Review and Finalize DRAFT Site Access Agreement that would allow the City to install a test well and monitoring wells in the Hanson Quarry Property.
- Continue discussions on climate change modeling efforts that are used in the HCP (Habitat Conservation Plan) process, ASR groundwater modeling and the work being done for the Santa Cruz Mid-County Groundwater Agency.
- At a future meeting staff will summarize and provide to the Commission a list of groundwater scenarios being evaluated. (This item is continued from the previous Water Commission meeting and still outstanding.)
- At a future meeting staff will summarize and provide to the Commission assumptions that are used in the groundwater model. (This item is continued from the previous Water Commission meeting and still outstanding.)

Contract Update(s):

Consultant: Pueblo Water Resources (PWR) – Phase I

- Contract Signed: February 2016
- Project Partners: None at this time.

- Engaged Stakeholders: SqCWD, County of Santa Cruz, Scotts Valley Water District, San Lorenzo Valley Water District
- Original Contract Amount: \$446,370
- Contract Amendment No. 1: \$377,615
- Contract Amendment No. 2: \$35,000
- Amount Spent: \$620,236
- Amount Remaining: \$238,748
- Status: On schedule for work in MCGB and delayed approximately 12 months for work in the SMGB.

Consultant: Pueblo Water Resources (PWR) – ASR Phase II – Beltz 12 ASR Pilot Test

- Contract Signed: October 2018
- Project Partners: None at this time.
- Engaged Stakeholders: SqCWD, County of Santa Cruz
- Original Contract Amount: \$458,085
- Amount Spent: \$91,129
- Amount Remaining: \$366,955
- Status: On Schedule.

ELEMENT 3: ADVANCED TREATED RECYCLED WATER OR DESALINATION

Overview: Advanced Treated Recycled Water and Desalination were included within the same Element with the intention that, following feasibility-level work, just one would proceed for further evaluation and preliminary design.

Summary: At their October 1 and November 5 meetings, the Water Commission heard updates from staff on the findings of the recycled water and desalination studies, as well as staff’s recommendation to prioritize recycled water over desalination. With concurrence from the Water Commission, staff took an item to the City Council on November 27, 2018, recommending a motion to support staff’s and Water Commission’s recommendation to prioritize the further evaluation of recycled water at this time, pending outcomes of work on the other supply alternatives. City Council supported this recommendation. Council’s motion was as follows:

1. Continue to evaluate the opportunities and benefits of replacement and expansion of the existing tertiary treatment facility at the Wastewater Treatment Facility (WWTF).
2. Continue to evaluate treating wastewater to advanced treatment standards for potential groundwater replenishment and/or as surface water augmentation by sending to Loch Lomond Reservoir.
3. Cease work on desalination for the foreseeable future, pending outcomes of work on the other supply options, understanding that if the other alternative water supply augmentation strategies being considered aren’t able to meet the plan goal, then desalination would be reconsidered.

At their December 18, 2018 meeting, the Soquel Creek Water District certified the Environmental Impact Report for the Pure Water Soquel (PWS): Groundwater Replenishment and Seawater Intrusion Prevention Project and approved the project. The PWS project consists of a treatment facility, pipelines, and groundwater injection wells. The EIR evaluated multiple sites for all the project components to “allow for flexibility in responding to the interests of local jurisdictions, technical uncertainties, and environmental and economic considerations.” (Ref. Item 2.52, SqCWD Board Packet, 12/18/18). With regards to the treatment facility, District staff recommended “tertiary treatment at the Santa Cruz Wastewater Treatment Facility (SCWWTF) and the advanced water purification (AWP) treatment at the Chanticleer Site.” The Soquel Board of Directors encouraged District staff to discuss the opportunities and limitations with the City of Santa Cruz to locate the full advance water purification (AWP) treatment facility at the City’s Wastewater Treatment Facility (WWTF), while not delaying the project. Otherwise, falling back on staff’s recommendation to provide the tertiary treatment at the WWTF.

Staffs from both agencies are meeting on a regular basis to evaluate the various options. The WWTF currently operates a small tertiary facility. Increased capacity, to serve the PWS project and replace the existing small tertiary, would be beneficial to the City in the near term by funding a modern system, and would potentially position the city well for future modifications should recycled water become part of a water supply solution, as part of a groundwater sustainability solution for additional seawater barrier wells, or should the state require reductions in ocean discharges.

Next Steps: Staff from both agencies will continue to discuss the opportunities of having a tertiary facility at the WWTF for PWS and replacement to the existing system.

Contract Update(s):

Consultant: Kennedy/Jenks Consultants, Regional Recycled Water Facilities Planning Study (RWFPS)

- Contract Signed: February 2016
- Amount Spent: \$561,663.
- Amount Remaining: \$25,645
- Schedule: The RWFPS is complete. Staff has been working with Kennedy/Jenks to develop Phase 2 work plan.

Consultant: DUDEK, Desalination Feasibility Update Study

- Contract Signed: May 2017
- Amount Spent: \$135,880
- Amount Remaining: \$3,789
- Schedule: Complete.

OTHER

The projects and programs reported below were not specifically identified in the WSAC work plan but are related in various ways. Staff is in the process of organizing this quarterly report in

a manner that clearly describes the relationship, or nexus, between these items with those above. This is a work in progress and the format of this quarterly report will continue to evolve.

Source Water Monitoring

Through the Source Water Monitoring project, the City strives to learn more about water quality in the San Lorenzo River, especially during high-flow, winter months. This understanding could facilitate the treatment of more water during the winter, increasing the feasibility of water transfer/exchange and/or ASR projects. The second year of this project has concluded with the finalization of the Graham Hill Water Treatment Plant Source Water Quality Monitoring Study final report. The report includes the results from the two years (water year 2017 and water year 2018) of monitoring conducted with assistance from Trussell Technologies. As mentioned previously, staff will continue with this program for future water years with the intention to manage and analyze the data in house.

Santa Cruz Water Rights Project

This project involves the modification of existing City water rights to increase the flexibility of the water system by improving the City's ability to utilize surface water within existing allocations. In addition to improved flexibility, the success of this project is necessary to facilitate future regional water supply projects.

On January 29, Petitions for Change and Petitions for Extension of Time on the City's existing appropriative water rights were submitted to the State Water Resources Control Board formally initiating the water rights modification process with the State. Additionally, Dudek has now been contracted to assist with the completion of the EIR. Work with Dudek was kicked off in January, and work on the Draft Environmental Impact Report (EIR) is underway. The Draft EIR is expected to be circulated for public review in fall 2019, and the Final EIR is expected to be completed in spring of 2020.

Outreach and Communication

Our Water, Our Future progress reports were distributed by email following Water Commission meetings. These monthly email newsletters are evolving into more of an overall Water Department update, with an emphasis on the infrastructure that is supportive of the recommendations of the Water Supply Advisory Committee.

FISCAL IMPACT: None.

ATTACHMENT(S):

Attachment 1: Home Water Use Welcome Letter

Attachment 2: Annual Water Savings

Attachment 3: Residential Per Capita Water Use

Welcome Letters



WaterSmart Program
212 Locust St. Suite B
Santa Cruz, CA 95060

SERVICE ADDRESS: 401 Ocean View Ave
ACCOUNT NUMBER: 053-00170-013

 [VIEW YOUR WATER USE
santacruz.watersmart.com](http://santacruz.watersmart.com)

 831.420.5230  conservation@cityofsantacruz.com



WELCOME TO THE WATERSMART PROGRAM

Dear Carole,

City of Santa Cruz (Water Department) is excited to introduce you to the WaterSmart Program. This free service is part of our commitment to provide you with the best tools to manage your water use and your bill. I encourage you to get started today by viewing your use on the WaterSmart Portal and signing up for email Water Reports.

Sincerely,

Rosemary Menard
Water Director

<RecipientID>santacruz-1</RecipientID>

VIEW YOUR USE ONLINE

santacruz.watersmart.com

Account Number: 053-00170-013

Zip Code: 95062

Your average water use from Nov 8 – Dec 10:

136 gallons per day

WHAT YOU'LL GET

You'll receive Water Reports and access to the WaterSmart Portal.



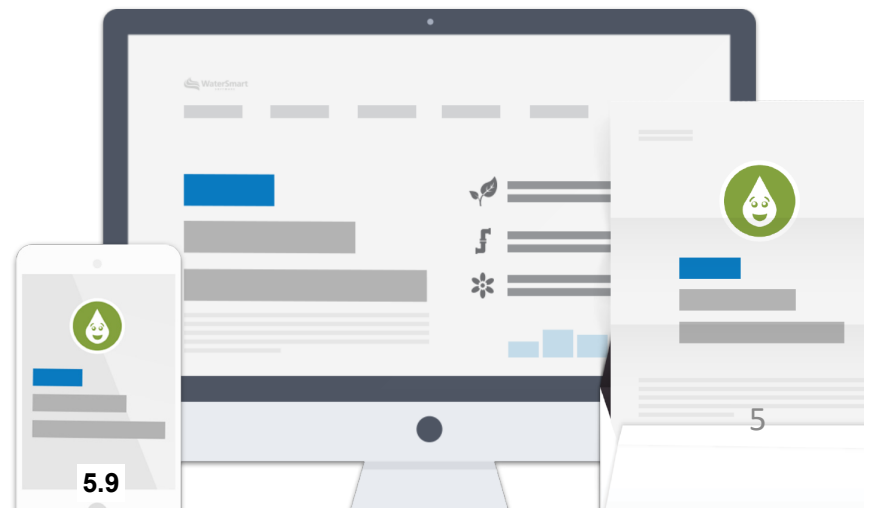
How you compare See how your water use compares to similar homes.



Sign up for alerts Take control of your water use and avoid surprises.



Ways to save Get personalized, step-by-step actions.



Water Reports



WaterSmart Program
212 Locust St. Suite B Santa Cruz CA 95060

831-420-5230 conservation@cityofsantacruz.com

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 20 CALIFORNIA ST, SUITE 200
ACCOUNT NUMBER: 123-4567-89

GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
santacruz.watersmart.com

<RecipientID>santacruz-1</RecipientID>

Your WaterScore

DEC 11 TO JAN 9, 2019

WaterScore



Smiley / frowny face, Water drop

Personalized messages

Way to go, WaterSaver!

You ranked in the top 20%.

Gallons Per Day (GPD)
4 CCF = 99 GPD

You	99 GPD
Most Efficient	103 GPD
Average Households	140 GPD

Average Households, Top 20%

Your water use is compared to homes in SCMU service area with 3 occupants and a similar yard size.

Your first Home Water Report!

Hi, Karen. Welcome to your new report.

- Learn how much water you use, in gallons per day (1 CCF = 748 gallons)
- See how that use compares, and where it goes
- Choose ways to use water more efficiently
- Log on to sign up for electronic delivery

Celebrate Fix a Leak Week

Check your toilet for leaks today:

1. Place a dye tablet in the toilet tank. Don't flush.
2. Wait 10-15 minutes.
3. Check the toilet bowl. If there is color, your toilet has a leak, most likely from a worn flapper valve.

Your personalized plan

Selected based on your household characteristics, yard size, and historical water use.

[Log on to update your profile](#)

Save money and protect your home with the following actions:

 Install faucet aerators	 Reduce shower to 5 minutes	 Save cold shower water
 19 GALLONS PER DAY  \$85 DOLLARS PER YEAR FREE!	 14 GALLONS PER DAY  \$67 DOLLARS PER YEAR	 9 GALLONS PER DAY  \$33 DOLLARS PER YEAR

Water-saving actions / Recommendations

Log on

Get your full list of recommended actions, and see:

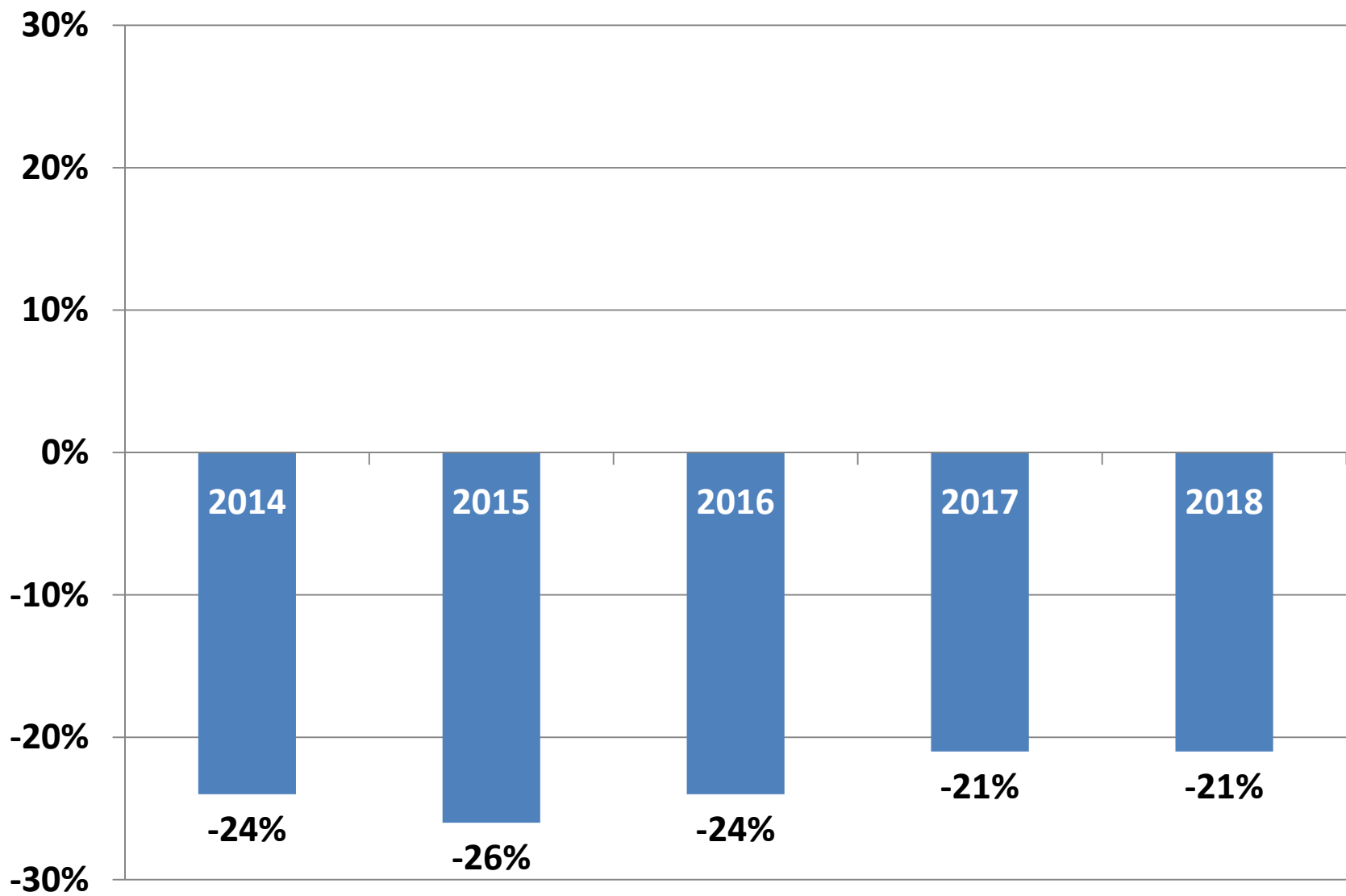
- Where you're using the most
- Your progress over time
- Efficient products for purchase

santacruz.watersmart.com

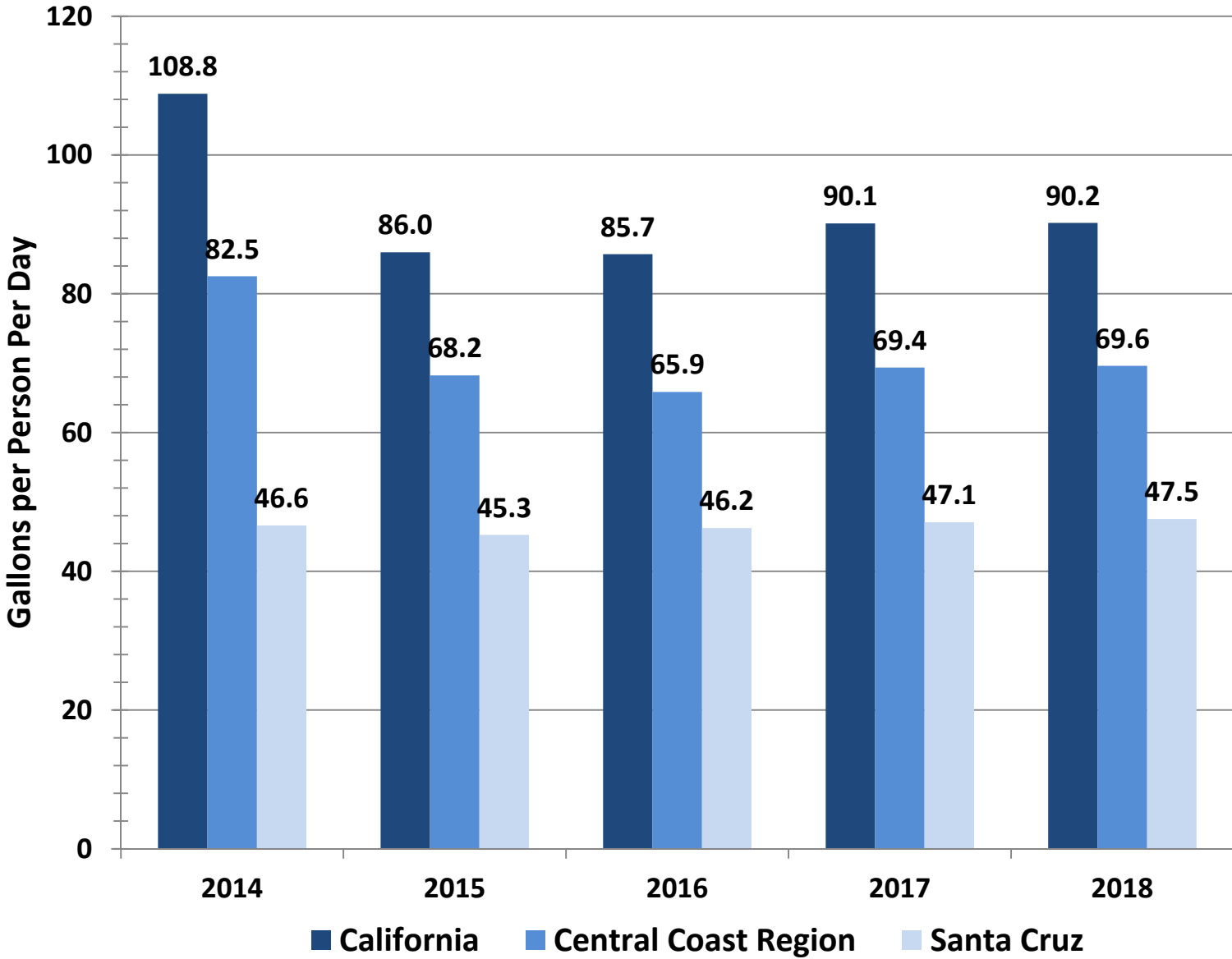
A free service offered by your water utility.

Customer Portal URL w/account number

Annual Water Savings Compared to 2013 (%)



Residential Per Capita Water Use



5.12



WATER COMMISSION
INFORMATION REPORT

DATE:

02/27/19

AGENDA OF: March 4, 2019

TO: Water Commission

FROM: Heidi Luckenbach, Deputy Director/Engineering Manager

SUBJECT: Approval Process for Capital Improvement Program Projects

RECOMMENDATION: Receive information on a staff proposal related to large project approval processes and provide feedback.

BACKGROUND: As the Water Commission is very aware, the Water Department has a large Capital Investment Program (CIP) that includes projects varying in terms of scope, implementation schedule, budget, complexity of permitting and environmental compliance, and approval processes. The number of projects to be implemented is greater than in the past, as is the annual budget required to accomplish the work. A number of these projects are uncommon for the Department and the City in terms of their scope, construction technique, financing mechanism(s) and/or approval processes.

The Newell Creek Dam Inlet/Outlet project is an example of a very large, technically complex project that is reaching the stage where several formal approvals will be required in the coming months. This project has an atypical scope and construction technique; has regulatory drivers and permit requirements, both playing a role in driving the schedule; has a high dollar value; has applications in to the state for low interest loan funding; and will have an Environmental Impact Report (EIR) that will need to be certified by City Council prior to approval of the project. Other uncommon projects or approval processes include the Santa Cruz Water Rights Project, the Habitat Conservation Plan, and EIRs associated with the planned rehabilitation and replacement of the remaining raw water pipelines.

In recognition of the various recommendations to be made to, and subsequent actions requested of City Council, staff has been exploring how to leverage the more intimate knowledge and familiarity the Water Commission has with the elements within the CIP to facilitate Council's review and action.

DISCUSSION: Staff does not wish to in any way limit Council's (or the Commission's) interest and ability in gaining as much information and understanding about a project as needed or desired. However, in the interest of timely and efficient processing and implementation of

projects and project approvals, staff believes it may be useful to the City Council if, in the recommendation, it was clear that the Water Commission was in support of staff's recommendation, as appropriate. This would be consistent with recognizing the advisory role played by the Water Commission and likely heighten the degree of familiarity and understanding of the work of staff.

Staff's approach towards projects in the CIP can be broadly described as consisting of four components, all of which need to be addressed in some fashion prior to formal project approval.

1. General. Describes elements such as scope, drivers, purpose and need, consistency with existing water policy, risks, and stakeholders.
2. Technical. Development of the technical plans and specifications of a project.
3. Environmental. Develops and implements the permitting and CEQA-compliance work plan that includes mitigation actions and any longer-term monitoring requirements.
4. Financial. Address the approach towards funding a project by evaluating options such as pay-as-you-go, low-interest loans, municipal bonds, grants.

Staff's recommendation is to develop an understanding of each project with the Commission that is consistent with the four categories described above, to a degree sufficient to allow the Commission to support a staff recommendation to the City Council for various formal approvals.

At the meeting, staff would like to discuss with the Water Commission their comfort level in this approach, including the information, materials, or support they would need in order to adopt this approach as appropriate moving forward. To this end, staff is prepared to agendize an item for the Water Commission's consideration at their April 1 meeting, prefacing a future City Council action on the Newell Creek Dam Inlet/Outlet Project: certification of the Final EIR and approval of the project. This will be a good opportunity to discuss this approach using an existing project with upcoming approval requests.

FISCAL IMPACT: None.

ATTACHMENT(S): None.