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

Water Department

WATER COMMISSION

Regular Meeting

October 07, 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 - 4.3) 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 - 1.3)

   Accept the City Council actions Affecting the Water Department.

2. Water Commission Minutes from August 26, 2019 (Pages 2.1 - 2.5)

   Approve the August 26, 2019 Water Commission Minutes.

3. FY2020-2021 Work Plan (Pages 3.1 - 3.5)

   Receive information about a work plan for the current and next fiscal years for cyclical and special work items.

4. Water Department Large Project CEQA Review Outlook (Pages 4.1 - 4.3)

   Receive information about future projects to be reviewed and recommended by the Water Commission.

Items Removed from the Consent Agenda

General Business (Pages 5.1 - 7.24) 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.

5. Coast Pump Station 20-Inch Raw Water Pipeline Replacement Project, Initial Study/Mitigated Negative Declaration, Water Commission Consideration and Recommendation (Page 5.1 - 5.29)

   Receive information on the Coast Pump Station Raw Water Pipeline Replacement Project.

   Take action to support staff's recommendation to City Council to adopt the Mitigated Negative Declaration for the Coast Pump Station Raw Water Pipeline Replacement Project; adopt the Mitigation Monitoring and

Reporting Program; and approve the Coast Pump Station Raw Water Pipeline Replacement Project.

6. WSAS Quarterly Report (Pages 6.1 – 6.15)

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

7. Draft Staff Report for the November 12th Joint Meeting with City Council (Pages 7.1 - 7.24)

Receive information about the planned agenda and informational materials and provide feedback to staff related to the agenda and informational presentation.

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

8. Ad Hoc Committee on City of Santa Cruz- Soquel Creek Water District Contracting Related to the Pure Water Soquel Project

9. Santa Cruz Mid-County Groundwater Agency

10. Santa Margarita Groundwater Agency

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

Information Items

Adjournment

This Page Intentionally Left Blank

WATER COMMISSION
INFORMATION REPORT

DATE: 10/1/2019

AGENDA OF: October 7, 2019

TO: Water Commission

FROM: Rosemary Menard, Water Director

SUBJECT: City Council Actions Affecting the Water Department

RECOMMENDATION: That the Water Commission accept the City Council actions affecting the Water Department.

BACKGROUND/DISCUSSION:

August 27, 2019

Grant Funding Application to California Department of Water Resources Integrated Regional Water Management Grant Program for Beltz Well Recharge/Saltwater Intrusion Barrier Well Project (WT)

Motion carried authorizing the Water Director to submit a grant application, and accept and appropriate funds if awarded, to the California Department of Water Resources (DWR) Integrated Regional Water Management (IRWM) Grant Program for a pilot test at the Beltz Well Recharge/Saltwater Intrusion Barrier Well Project.

Graham Hill Water Treatment Plant Tube Settler Replacement Project – Change Order No. 2 (WT)

Motion carried authorizing the City Manager to execute Change Order No. 2 in the amount of $1,338,337 with W.M. Lyles Co. (Fresno, CA) to furnish and install new flocculators at the Graham Hill Water Treatment Plant in a form approved by the City Attorney and to authorize the Water Director to execute future change orders within the approved budget.

San Lorenzo River Diversion Upgrade Project – Award of Professional Services Agreement (WT)

Motion carried authorizing the City Manager to execute an agreement in a form approved by the City Attorney with Black & Veatch (Rancho Cordova, CA) in the amount of $149,000 for design services.

September 10, 2019

Loch Lomond Recreation Area Upper Loch View Accessibility Improvements – Change No. 1 (WT)

Motion carried authorizing the City Manager to execute Contract Change Order No. 1 in the amount of $38,484.91 for the Loch Lomond Recreation Area Upper Loch View Accessibility Improvements construction contract with HD Builders (Soquel, CA).

September 24, 2019

Award of Contract for Master Services Agreement for California Environmental Quality Act Compliance and Environmental Permitting Services (WT)

Motion carried authorizing the City Manager to execute a Master Services Agreement with Dudek of Santa Cruz, CA for California Environmental Quality Act Compliance and Environmental Permitting Services in the form accepted by the City Attorney.

Motion carried authorizing the City Manager to execute Contract Amendment Laguna-1 under the Master Services Agreement with Dudek for the Laguna Creek Diversion Retrofit Project Environmental Review and Permitting Services in a form accepted by the City Attorney and to authorize the Water Director to execute future contract amendments within the approved budget.

Emergency Water Main Replacement in 7th Avenue –Approval of Plans and Specifications and Authorization to Award (WT)

Motion carried to ratify the plans and specifications for the Emergency Water Main Replacement in 7th Avenue, authorize the City Manager to execute a construction contract with KJ Woods Construction, Inc. in a form acceptable to the City Attorney, and authorize the Water Director to execute change orders within the approved project budget.

Loch Lomond Recreation Area Upper Loch View Accessibility Improvements – Notice of Completion (WT)

Motion carried to accept the work of HD Builders, Inc. (Santa Cruz, CA) as complete per plans and specifications and authorize the filing of a Notice of Completion for the Loch Lomond Recreation Area Upper Loch View Accessibility Improvements Project.

Ordinances Adding Chapter 6.13 and 16.26, "Enterprise Revenue Bond Law," of Title 6, "Health and Sanitation" and of Title 16, "Water, Sewers, and other Public Services" to the Santa Cruz Municipal Code (CA)

Ordinance No. 2019-15 was introduced for publication adding Chapter 6.13 "Refuse Enterprise Revenue Bond Law" of Title 6 "Health and Sanitation" and Ordinance No. 2019-16 was introduced for publication adding Chapter 16.26 "Water and Wastewater Enterprise Revenue Bond Law" to Title 16 "Water, Sewers, and other Public Services" to the Santa Cruz Municipal Code concerning the authorization, issuance and sale of bonds.

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

ATTACHMENTS: None.

This Page Intentionally Left Blank

CITY OF SANTA CRUZ
Water Department

Water Commission
7:00 p.m. – August 26, 2019
Council Chambers
809 Center Street, Santa Cruz

Summary of a Water Commission Meeting

Call to Order: 7:00 PM

Roll Call

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

Absent: None

Staff: R. Menard, Water Director; J. Becker, Finance Manager; C. Coburn, Deputy Director/Operations Manager; T. Goddard, Water Conservation Manager; H. Luckenbach, Deputy Director/Engineering Manager; S. Easley Perez, Associate Planner II; T. Wise-West, Climate Action Manager, Shawn Chartrand, Consultant; Bob Raucher, Consultant; K. Fitzgerald, Administrative Assistant III

Others: 8 members of the public.

Presentation: None.

Statement of Disqualification: None.

Oral Communications: One member of the public spoke.

Announcements: None

Consent Agenda

1. City Council Items Affecting the Water Department
2. Water Commission Minutes from August 26, 2019

Commissioner Engfer pulled Items 3 and 4 for further discussion.

Commissioners suggested amending the Consent Agenda motion on page 3.6 to reflect that Commissioner Baskin "abstained from the May 6, 2019 Minutes due to absence."

Commissioner Baskin moved the Consent Agenda as amended. Commissioner Wilshusen seconded.

VOICE VOTE: MOTION CARRIED
AYES: All
NOES: None
ABSTAIN: D. Schwarm and W. Wadlow abstained from the June 3, 2019 Minutes due to absence.

Items removed from the Consent Agenda

3. Recycled Water Study – Phase 2

Will one of the categories of the Recycled Water study assess augmenting ASR to meet the City's demand during extreme climate scenarios?

- Yes and that will discussed further during Items 5 and 6 of tonight's agenda.

Commissioners suggested that the Kennedy Jenks scope of work include a workshop at the end of work task 3.1 to review the alternatives development and regulatory framework findings.

Will the current pipeline routing in the Beltz well area require further development to be utilized for the City's groundwater recharge so as not to interfere with the Pure Water Soquel project?

- Yes.

When is Kennedy Jenks scheduled to begin this study?

- The work is set to begin this year upon final approval of the scope of work, and will then be completed twelve months from the start date, which will be in 2020.

What is the realistic number of alternatives that staff expects to receive from the study?

- Realistically, there will likely be six of the ten alternatives listed in the scope of work after factors such as regulatory requirements and costs are examined.

Does Kennedy Jenks have a record of staying within budget for these types of studies?

- Yes.

Can staff clarify whether Kennedy Jenks will be performing groundwater modeling work themselves, as mentioned in the second paragraph under Task 4 on page 3.10?

- Kennedy Jenks will not be doing the modeling themselves, but will be working with Gary Fiske for Confluence modeling and Pueblo Water Resources and Montgomery & Associates for groundwater modeling.

Three members of the public spoke.

Commissioner Wilshusen moved Item 3 as amended. Commissioner Baskin seconded.

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

4. Water Department Energy Master Plan

Why are emissions from transportation excluded in the Water Department Master Energy Plan scope of work as indicated on page 4.4?

Tiffany Wise-West addressed the Water Commission:

- The intent is for all transportation emissions for Santa Cruz to be included as a whole in the City's Climate Energy Action Plan.

Does City look at transportation emissions on a regional scale?

- Currently, there is no regional climate action energy plan in place. There are targets set for reducing emissions. Goals can also be assessed on a broader scale such as meeting the state's targets.

Does switching to Monterey Bay Power simplify the process for meeting our climate action goals?

- It does can help us meet our greenhouse gas goals of becoming carbon neutral earlier, but it does not simplify those processes.

Are total life cycle emissions of facilities included in the current scope?

- There are methodologies that can provide a deeper analysis of life cycle emissions, but it is not included at this time due to significantly higher costs and complexity.

Commissioners suggested that the scope of work provide more detail on energy conservation and efficiency.

Two members of the public spoke.

Commissioner Wilshusen moved Item 4 as amended. Commissioner Baskin seconded.

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

General Business

The full presentation and discussion of the General Business Items 5 and 6 can be accessed on the City of Santa Cruz website and at the City of Santa Cruz YouTube links provided below:

http://scsire.cityofsantacruz.com/sirepub_watercom/mtgviewer.aspx?meetid=1286&doctype=AGENDA

https://www.youtube.com/watch?v=aqsAnp3vz8o&list=PLo9N9AsVOVvRHxhItEBaP3eI7Rmz8ywBT

5. Climate Change Workshop

Ms. Luckenbach introduced Dr. Shawn Chartrand, Dr. Robert (Bob) Raucher, and Tiffany Wise-West for the presentation of the Climate Change Workshop. The goals of the presentation and discussion were to provide an in depth look at updated modeling projections of the impacts of climate change on the City's water supply and how these projections are being integrated into the Water Supply Augmentation Strategy.

The first presentation "Water Supply, In-stream Flows, and Climate Change: Understanding the Past and Projecting the Future" by Dr. Chartrand begins at minute 43:30 of the video recording.

The second presentation "Water Supply and Climate Change: Prudent Planning Under Large Uncertainty" by Dr. Raucher begins hour 1:23 at of the video recording.

Commissioner Engfer recessed the meeting at 9:04 pm.

Commissioner Engfer resumed the meeting at 9:09 pm.

The third presentation "Climate Change and Climate Adaptation" by Tiffany Wise-West begins at hour 2:07 of the recording.

Three members of the public spoke during the public comment period at hour 2:30 of the video recording

There was no action taken on this item.

6. WSAC Plan Adaptation

Ms. Menard introduced the adaptation to the Water Supply Advisory Committee (WSAC) work plan. The adaption to the work plan includes revisions that reflects new information and updated assumptions. The discussion on this item begins at hour 2:46 of the video recording.

Three members of the public spoke during the public comment period at hour 3:19 of the video recording.

There was no action taken on this item.

Subcommittee/Advisory Body Oral Reports

7. Ad Hoc Committee on City of Santa Cruz– Soquel Creek Water District Contracting Related to the Pure Water Soquel Project

The Ad Hoc Committee will continue to work on additional elements of Phase 2 of the Pure Water Soquel operating agreement with Soquel Creek Water District.

8. Santa Cruz Mid-County Groundwater Agency

There will be a brief presentation to the City Council at their August 27th meeting. The will be a question and answer session at the Simpkins Swim Center on August 28th at 7:00pm. The City will meet with Darcy Pruitt on September 4th for the required consultation between land use

agencies. The public hearing on the plan will be held on September 17th for public comment and will come back for finalization in November.

9. Santa Margarita Groundwater Agency

Public outreach has begun in an effort to educate the public on the work of the Santa Margarita Groundwater Agency. The workshop held in July focused on "undesirable outcomes" and the work shop in August focused surface groundwater interaction. The topic of next meeting is tentatively going to focus on hydrogeological models. A tour of several groundwater and surface water sites, such as the Olympia Quarry, the intertie between Scotts Valley Water District and San Lorenzo Valley Water District at the San Lorenzo River and the Felton Diversion, took place last Friday. The tour included several members of the public and provided an opportunity to look at the surface water and groundwater interactions and systems. This tour will continue to be offered from time to time, to both Board members and members of the public.

Director's Oral Report: None.

Adjournment Meeting adjourned at 10:41 PM.

Respectfully submitted,

Katy Fitzgerald
Staff

This Page Intentionally Left Blank

CITY OF SANTA CRUZ

WATER COMMISSION
INFORMATION REPORT

DATE: 10/2/2019

AGENDA OF: October 7, 2019

TO: Water Commission

FROM: Rosemary Menard

SUBJECT: Water Department FY 19-20 and FY 20-21 Work Plan Non-CIP, Non-Ongoing for Cyclical and Special Work Items

RECOMMENDATION: That the Water Commission receive information about a work plan for the current and next fiscal years for cyclical and special work items.

BACKGROUND: The Water Department is required by various state laws and other practices to prepare and submit various work items on a five-year cycle. A specific example of such a requirement is an updated Urban Water Management Plan. In addition, recent practice has placed the Water Department on a five-year cycle for reviewing its System Development Charges and completing a comprehensive water rate study. Finally, the 2018 American Water Infrastructure Act established a new requirement for water utilities to conduct a Risk and Resiliency Assessment and to update it every five years. The initial requirement for a utility of our size is to complete this assessment by the end of calendar year 2020 and to complete an update to the Department's Emergency Plan that is responsive to the results of the assessment by the end of June in 2021.

The staff and consulting resources required to complete these cyclical and non-cyclical tasks are significant and require careful planning and coordination to ensure that the work can be completed in time to meet federal and state deadlines as well as Departmental deadlines such as having new water rates in place by July 1, 2021.

DISCUSSION: To facilitate planning the workload, creating and making assignments to various staff teams, and completing consultant selection processes, detailed schedules for the various work items were prepared over this last summer. There are three pages: page one includes the American Water Infrastructure and Emergency Plan document developments, along with some details about a proposed Charter Amendment to authorize the City to utilize various forms of alternate project delivery (e.g., design-build rather than design-bid-build); page two covers all things related to the update of the Urban Water Management Plan; and page three includes actions related to rates, fees, charges, and financial planning.

Water Commissioners will notice that the working draft of these work plans includes specific dates for first and second reviews by the Water Commission prior to work products going to the City Council for action. In some cases, the schedules were developed by working backward from required due dates for work products, for example, the updated Urban Water Management Plan or Council action on rates for the next five year period. In the case of the update to the Urban Water Management Plan, several of the work items identified, for example, a new long term demand forecast, or an updated Water shortage Contingency Plan are needed inputs to the plan so the schedule provides for their preparation to meet those requirements.

In addition to scheduled reviews indicated, staff will be bringing progress updates and relevant information to the Water Commission so that Commissioners can hear the progress along the way.

FISCAL IMPACT: Resources needed to complete this work have been integrated into the Department's current operating budget and future costs will be included in future budgets.

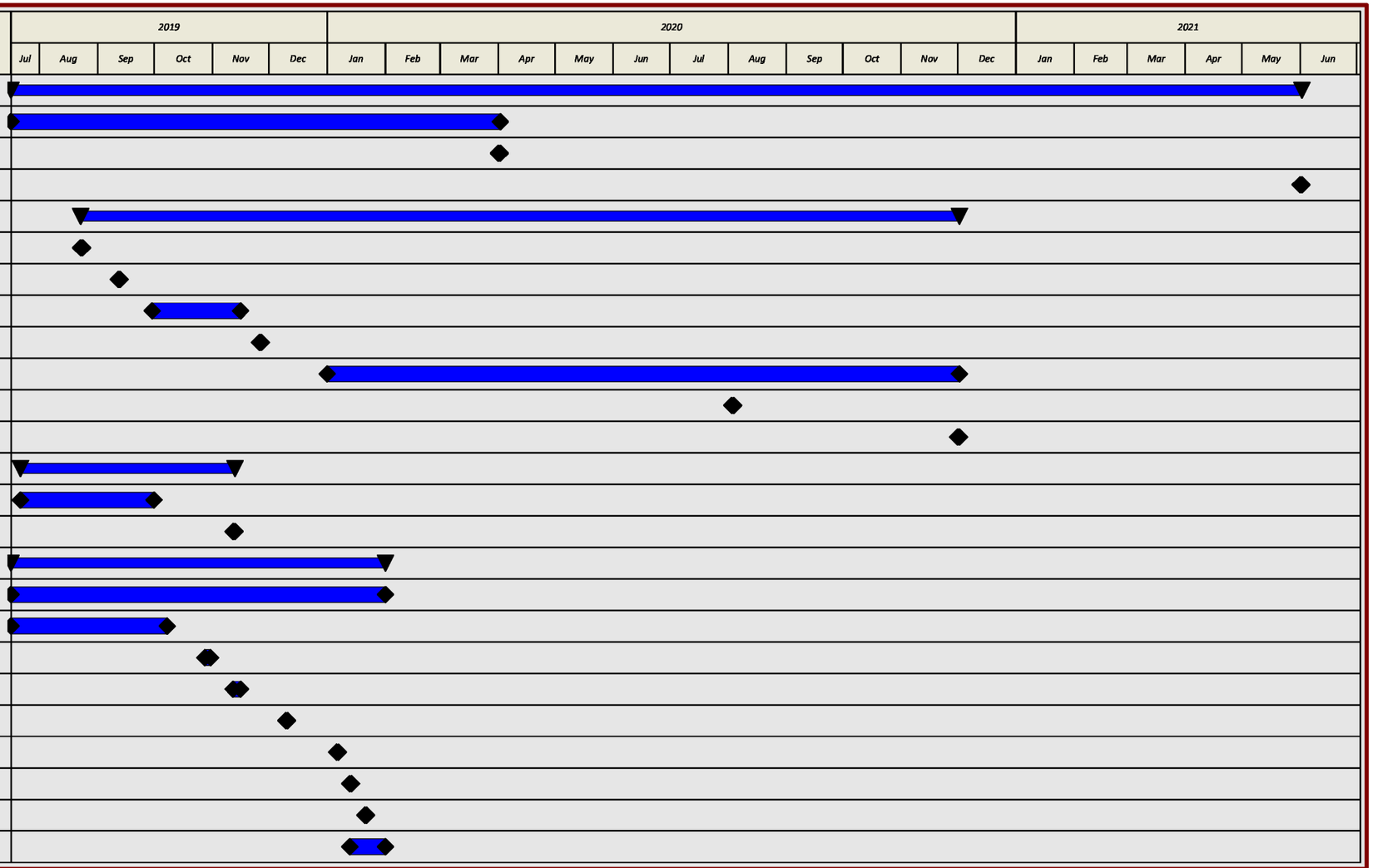
PROPOSED MOTION: Motion to receive information about a work plan for the current and next fiscal years for cyclical and special work items.

ATTACHMENTS:
FY 20 – 21 Work Plan

WORKING DRAFT -- Water Department Major Work Items for FY 2020 and 2021

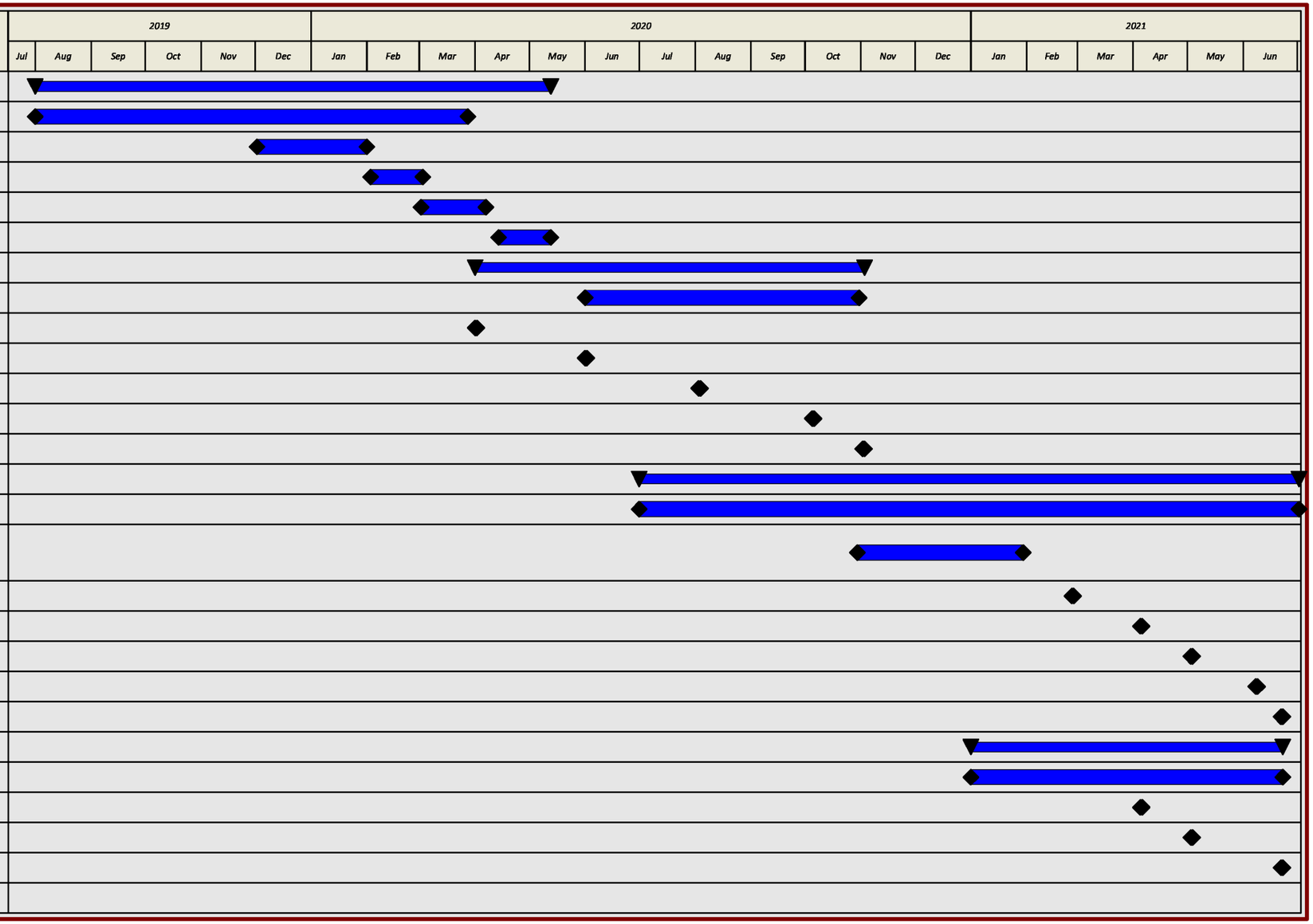
Page 1 of 3 – Emergency Plan, AWIA Risk and Resileincy and Miscellaneous Other

ID	Task Name	Start	Finish
1	**Emergency Plan Update**	**7/17/2019**	**6/1/2021**
2	Complete Action Plan Sets	7/17/2019	4/1/2020
3	Acknowledge completion in 2019 EAR	4/1/2020	4/1/2020
4	Certify to EPA for AWIA Risk and Resiliency Assessment	6/1/2021	6/1/2021
5	**Complete AWIA Risk and Reliability Assessment**	**8/23/2019**	**12/1/2020**
6	Issue Request for Qualifications	8/23/2019	8/23/2019
7	Receive Consultant Proposals	9/12/2019	9/12/2019
8	Select Consultant and Negotiate Contract	9/30/2019	11/15/2019
9	City Council Action on Consultant Contract	11/26/2019	11/26/2019
10	Prepare Plan	1/1/2020	12/1/2020
11	Review Draft Plan	8/3/2020	8/3/2020
12	Certify Complete to EPA	12/1/2020	12/1/2020
13	**Charter Amendment for Alternate Project Delivery**	**7/22/2019**	**11/12/2019**
14	Work with City Attorney on Language	7/22/2019	9/30/2019
15	Council action to put Charter Amendment on the March Ballot	11/12/2019	11/12/2019
16	**FY 2020 Bond Sale**	**7/17/2019**	**1/31/2020**
17	Complete Bond Sale	7/17/2019	1/31/2020
18	Complete Preliminary Official Statement and legal documents	7/17/2019	10/7/2019
19	Rating Agency Briefings	10/28/2019	10/30/2019
20	Receive Ratings	11/12/2019	11/15/2019
21	Council Action to approve financial and bond documents	12/10/2019	12/10/2019
22	Post Preliminary Official Statement	1/6/2020	1/6/2020
23	Competitive sale	1/13/2020	1/13/2020
24	Post final Official Statement	1/21/2020	1/21/2020
25	Complete sale and finalize all documents	1/13/2020	1/31/2020



WORKING DRAFT -- Water Department Major Work Items for FY 2020 and 2021
Page 2 of 3 – Urban Water Management Plan and Related

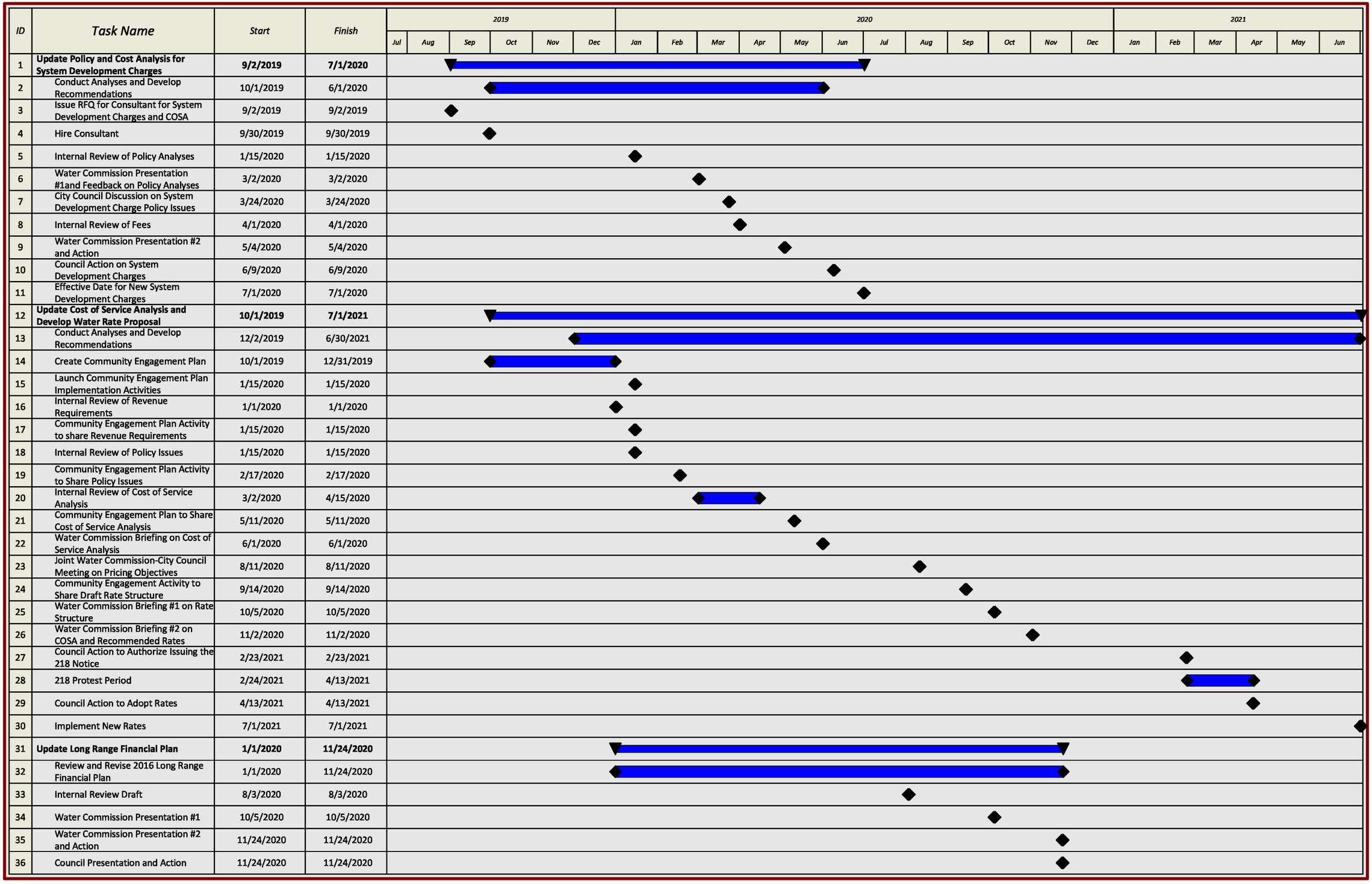
ID	Task Name	Start	Finish
1	**Update Water Shortage Contingency Plan**	**8/1/2019**	**5/12/2020**
2	Develop the plan	8/1/2019	3/27/2020
3	Internal Review Draft	12/2/2019	1/31/2020
4	Water Commission Presentation #1	2/3/2020	3/2/2020
5	Water Commission Presentation #2 and action	3/2/2020	4/6/2020
6	Council presentation and action	4/14/2020	5/12/2020
7	**Update Long Term Demand Forecast**	**4/1/2020**	**11/2/2020**
8	Develop and finalize the forecast	6/1/2020	10/30/2020
9	Contract for Work	4/1/2020	4/1/2020
10	Initiate Consultant work	6/1/2020	6/1/2020
11	Review Draft Forecast	8/3/2020	8/3/2020
12	Water Commission Presentation #1	10/5/2020	10/5/2020
13	Water Commission Presentation #2 and Action	11/2/2020	11/2/2020
14	**Update Urban Water Management Plan**	**7/1/2020**	**7/1/2021**
15	Develop Plan	7/1/2020	7/1/2021
16	Integration of Climate Change Analysis from WSAS into 5 Year Drought Scenario	10/30/2020	1/29/2021
17	Internal Review Draft	2/26/2021	2/26/2021
18	Water Commission Presentation #1	4/5/2021	4/5/2021
19	Water Commission Presentation #2 and Action	5/3/2021	5/3/2021
20	City Council Presentation and Public Hearing	6/8/2021	6/8/2021
21	City Council Action	6/22/2021	6/22/2021
22	**Update General Plan Section on Water Policies**	**1/1/2021**	**6/22/2021**
23	Review and Update GP Water Policies	1/1/2021	6/22/2021
24	Water Commission Presentation #1	4/5/2021	4/5/2021
25	Water Commission Presentation #2 and action	5/3/2021	5/3/2021
26	Council Presetnation and Action	6/22/2021	6/22/2021
27			



WORKING DRAFT -- Water Department Major Work Items for FY 2020 and 2021

Page 3 of 3 – Financial Related

ID	Task Name	Start	Finish
1	**Update Policy and Cost Analysis for System Development Charges**	**9/2/2019**	**7/1/2020**
2	Conduct Analyses and Develop Recommendations	10/1/2019	6/1/2020
3	Issue RFQ for Consultant for System Development Charges and COSA	9/2/2019	9/2/2019
4	Hire Consultant	9/30/2019	9/30/2019
5	Internal Review of Policy Analyses	1/15/2020	1/15/2020
6	Water Commission Presentation #1and Feedback on Policy Analyses	3/2/2020	3/2/2020
7	City Council Discussion on System Development Charge Policy Issues	3/24/2020	3/24/2020
8	Internal Review of Fees	4/1/2020	4/1/2020
9	Water Commission Presentation #2 and Action	5/4/2020	5/4/2020
10	Council Action on System Development Charges	6/9/2020	6/9/2020
11	Effective Date for New System Development Charges	7/1/2020	7/1/2020
12	**Update Cost of Service Analysis and Develop Water Rate Proposal**	**10/1/2019**	**7/1/2021**
13	Conduct Analyses and Develop Recommendations	12/2/2019	6/30/2021
14	Create Community Engagement Plan	10/1/2019	12/31/2019
15	Launch Community Engagement Plan Implementation Activities	1/15/2020	1/15/2020
16	Internal Review of Revenue Requirements	1/1/2020	1/1/2020
17	Community Engagement Plan Activity to share Revenue Requirements	1/15/2020	1/15/2020
18	Internal Review of Policy Issues	1/15/2020	1/15/2020
19	Community Engagement Plan Activity to Share Policy Issues	2/17/2020	2/17/2020
20	Internal Review of Cost of Service Analysis	3/2/2020	4/15/2020
21	Community Engagement Plan to Share Cost of Service Analysis	5/11/2020	5/11/2020
22	Water Commission Briefing on Cost of Service Analysis	6/1/2020	6/1/2020
23	Joint Water Commission-City Council Meeting on Pricing Objectives	8/11/2020	8/11/2020
24	Community Engagement Activity to Share Draft Rate Structure	9/14/2020	9/14/2020
25	Water Commission Briefing #1 on Rate Structure	10/5/2020	10/5/2020
26	Water Commission Briefing #2 on COSA and Recommended Rates	11/2/2020	11/2/2020
27	Council Action to Authorize Issuing the 218 Notice	2/23/2021	2/23/2021
28	218 Protest Period	2/24/2021	4/13/2021
29	Council Action to Adopt Rates	4/13/2021	4/13/2021
30	Implement New Rates	7/1/2021	7/1/2021
31	**Update Long Range Financial Plan**	**1/1/2020**	**11/24/2020**
32	Review and Revise 2016 Long Range Financial Plan	1/1/2020	11/24/2020
33	Internal Review Draft	8/3/2020	8/3/2020
34	Water Commission Presentation #1	10/5/2020	10/5/2020
35	Water Commission Presentation #2 and Action	11/24/2020	11/24/2020
36	Council Presentation and Action	11/24/2020	11/24/2020



September 4, 2019

CITY OF SANTA CRUZ

WATER COMMISSION
INFORMATION REPORT

DATE: 10/2/2019

AGENDA OF: October 7, 2019

TO: Water Commission

FROM: Heidi Luckenbach

SUBJECT: Water Department Large Project Outlook

RECOMMENDATION: That the Water Commission receive information about future projects to be reviewed and recommended by the Water Commission.

BACKGROUND: At its March 4, 2019 meeting, the Water Commission supported staff's recommended approach to providing, as appropriate, recommendations on project elements prior to subsequent action by City Council. Staff's recommendation was focused on establishing a process that would provide Commissioners with summary level information and access to more-detailed technical resources needed to take action. Commission members have a broad set of complementary skills and experience that will support a comprehensive review of project-related information as they consider staff's recommendation of the various items put before them; and, this level of engagement by the Commission will likely be viewed favorably during subsequent Council deliberations.

Following discussions in from the April, May, and June Water Commission meetings on the Newell Creek Dam Inlet/Outlet (NCD I/O) and Concrete Tanks projects, standard language has been drafted and used in Council Reports will be similar to that used for the Newell Creek Dam Inlet/Outlet Project, certification of the Final Environmental Impact Report in May 2019.

"The Water Commission has received information on the purpose, need, cost, scope, schedule, and environmental impacts of the project and has found the analyses to be sound. The project should proceed as scheduled, the next step of which would be for City Council to certify the Final EIR and approve the project. It is therefore recommended that City Council, by resolution, (1) certify the Final EIR for the Newell Creek Dam Inlet/Outlet Replacement Project and (2) adopt Findings of Fact and a Mitigation Monitoring and Reporting Program and approve the Newell Creek Dam Inlet/Outlet Replacement Project. The project would be bid following a future action by City Council to approve the plans and specifications in winter 2020."

DISCUSSION: Attached is a list of projects staff currently believes would be reviewed by the use of this process. As can be seen, the points of review by the Water Commission are:

1. ~30% design. At this point, sufficient detail is known about the project to be able to convey meaningful information, and the CEQA/permitting approach and issues have been at least preliminarily developed.
2. Final CEQA document is ready for Council action. Note that this does not always coincide with the approval of plans and specifications and authorization by Council to bid and award the project; that would be a separate Council action and could be another point at which the Water Commission reviews a project.

Less formal discussions will be held during the annual presentation of the Capital Investment Program and the Quarterly Update of the Water Supply Augmentation Strategy, as applicable.

Content of the materials presented to the Commission will include:

1. General. Describes elements such as scope, drivers, purpose and need, 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.

FISCAL IMPACT: There is no fiscal impact associated with this item and the requested action.

PROPOSED MOTION: Motion to receive information about future projects to be reviewed and recommended by the Water Commission.

ATTACHMENTS:
Project List

Future Items for Water Commission Review

Project Name	30% design	Final CEQA Doc
Laguna Diversion Retrofit	Dec-20	Dec-20
North Coast System Majors Diversion Rehab	Jun-26	Jul-27
Tait Diversion Rehab/Replacement	Oct-26	Dec-27
Coast Pump Station Rehab/Replacement	Sep-26	Dec-27
Felton Diversion and Pump Station Assessment	Jan-26	Jun-26
North Coast System Repair and Replacement Project	Jun-25	Dec-25
Newell Creek Pipeline Rehab/Replacement	TBD	TBD
Coast Pump Station 20-inch Raw Water Pipeline Replacement	Complete	Oct-19
Recycled Water Feasibility Study	TBD	TBD
Aquifer Storage & Recovery Mid County Groundwater	TBD	TBD
Aquifer Storage & Recovery Santa Margarita Groundwater	TBD	TBD
In-Lieu Transfers and Exchanges	TBD	TBD
Graham Hill WTP Concrete Tanks Project	Complete	Done
Graham Hill WTP Facility Improvement Plan	Jun-20	Jun-21
River Bank Filtration Study	Dec-22	May-23
University Tank No. 4 Rehab/Replacement	Feb-27	Nov-28
Water Rights Amendments	NA	Aug-20
Ocean St Extension Main Replacement	Nov-19	Dec-19

Revised: October 2, 2019

This Page Intentionally Left Blank

CITY OF SANTA CRUZ

WATER COMMISSION
INFORMATION REPORT

DATE: 10/02/19

AGENDA OF: 10/07/2019

TO: Water Commission

FROM: Heidi Luckenbach, Deputy Director/Engineering Manager

SUBJECT: Coast Pump Station Raw Water Pipeline Replacement Project, Water Commission Consideration and Recommendation

---

RECOMMENDATION: Receive information on the Coast Pump Station Raw Water Pipeline Replacement Project.

Take action to support staff's recommendation to City Council to adopt the Mitigated Negative Declaration for the Coast Pump Station Raw Water Pipeline Replacement Project; adopt the Mitigation Monitoring and Reporting Program; and approve the Coast Pump Station Raw Water Pipeline Replacement Project.

BACKGROUND: Staff have been working with the Water Commission on an approach whereby the Water Commission would provide, as appropriate, recommendations to the City Council on project elements prior to subsequent action by City Council. The Coast Pump Station Raw Water Pipeline Replacement Project (Project) is now being presented for Water Commission recommendation in advance of scheduled City Council consideration of adoption of the Mitigated Negative Declaration; Adoption of the Mitigation, Monitoring, and Reporting Program; and Project approval at their October 22, 2019 meeting.

Following is a list of prior presentations made to the Water Commission that included information on the Project:

- May 7, 2018 – Water Department's FY 2019 Recommended Operating and Capital Investment Program (CIP) Budgets;
- August 27, 2018 – Santa Cruz Water Program Update;
- January 1, 2019 - Presentation of Capital Investment Projects; and,
- May 6, 2019 – Water Department's Proposed Fiscal Year (FY) 2020 Operating and FY 2020-24 Capital Investment Program (CIP) Budgets.

As discussed in a previous agenda item, future projects are planned to be presented at the following stages: at 30% Design when CEQA approach is known, final CEQA document, and

less formally during the annual presentation of the Capital Investment Program and the Quarterly Update of the Water Supply Augmentation Strategy, as applicable.

DISCUSSION:

Project Summary
The Project would replace a portion of the Coast Pump Station raw water pipeline aligned under the San Lorenzo River. The Coast Pump Station raw water pipeline is the only transmission line that conveys raw water collected at the Coast Pump Station from the North Coast System, the Tait Wells and the San Lorenzo River at Tait (via the Tait Diversion) to the Graham Hill Water Treatment Plant (GHWTP) for treatment. This section of pipeline was constructed in the 1950s and is a different size and material than the majority of the pipeline leading to the GHWTP. The project is located next to Coast Pump Station at River Street, at Ocean Street Extension, and at Crossing Street in Santa Cruz and is sited on City-owned and publicly owned land.

In 2016, a portion of the pipeline was found to be leaking due to age-related corrosion. Following repairs, the Department decided to replace this vital piece of infrastructure. In 2018 Kleinfelder was selected to provide engineering and design services. The project team includes:

1. City staff – providing project management support, contract management, design review, and construction management;
2. HDR – providing overall project management, design review, environmental review and permitting; and constructability review; and
3. Kleinfelder – providing design of the infrastructure.

Technical Summary
The Project would replace approximately 525 feet of Coast Pump Station raw water pipeline. Approximately 225 feet of the replacement pipeline would be aligned under the San Lorenzo River and installed within a 36-inch-diameter carrier steel casing using microtunnel technology. The remaining 300 feet of pipeline would be installed via open trenching on the east and west sides (approximately 150 feet on each side) of the river and would connect the microtunnel segment to the existing endpoints.

Microtunneling is a trenchless technology that allows the raw water pipeline segment to be installed while avoiding disruption to the river bed, bank, and riparian areas. The microtunnel would be aligned approximately 80 feet north of the existing pipeline to avoid existing utilities that are also aligned under the San Lorenzo River. The microtunnel requires two pits on each side of the San Lorenzo River. These pits allow the microtunnel to be bored horizontally, at a depth below the river. The proposed microtunnel would be launched from the west side of the river from an approximately 20 foot by 45-foot jacking pit, excavated to an estimated depth of 72 feet. The microtunnel would reemerge from a receiving pit on the east side of the river. The receiving pit would be smaller than the jacking pit and would be excavated to an estimated depth of 51 feet. The depth of the receiving pit would be less than that of the jacking pit since the surface elevation on the east side of the river is approximately 20 feet lower than the launch location to the west.

A construction period of approximately 8 to 9 months is planned, beginning in the spring of 2020, and will include both daytime and nighttime work. Limited nighttime construction

activities could occur over a matter of days to reduce the risk of the equipment becoming stuck or tunnel collapse if a temporary shutdown of the microtunnel operation were required at night. Nighttime work would be limited to what is minimally required to complete the project within the proposed schedule. The project schedule is included as Attachment 2.

Environmental Summary

To facilitate a planned construction start of spring 2020, California Environmental Quality Act (CEQA) compliance and environmental permitting activities started in winter 2018. In accordance with CEQA, HDR prepared an Initial Study (IS) and Proposed Mitigated Negative Declaration (MND) which was issued for a 30-day public review period from August 4, 2019 through September 5, 2019. A Notice of Intent to Adopt a Mitigated Negative Declaration was directly mailed to owners and occupants within 1,000 feet of the project area, to the State Clearinghouse, local and state agencies, organizations, and interested citizens, including the Water Commission and select City Department Heads; was posted as a legal ad in the Santa Cruz Sentinel on August 3, 2019; and was posted at Santa Cruz City Hall communications bulletin board, and the Santa Cruz County Clerk's office.

The City made the IS/MND available for public review at the Water Department Engineering Counter, the Downtown Branch Public Library and on the City's website on the Water Department's Environmental Documents webpage. A public meeting for the proposed project was held during the public review period on August 15, 2019 at the Santa Cruz Police Department Community room.

No significant unavoidable impacts were identified in the IS/MND, and mitigations were proposed for all potentially significant impacts to reduce those impacts to a level of less than significant. Three comments were received during the 30-day public comment period. None of these comments warranted revisions to the Proposed Mitigated Negative Declaration.

- Email from a community member inquiring about the timeline of the Project.
- Letter from Caltrans regarding coordination of any work that would occur in the State's right-of-way.
- Letter from Monterey Bay Air Resources District indicating approval of included measures to reduce air pollution.

The City of Santa Cruz entered into formal consultation for the Project with the Amah Mutsun Tribal Band on July 31, 2019 upon their request under the provisions of Assembly Bill 52. City staff met with representatives from the Amah Mutsun Tribal Band on August 7, 2019. The consultation was formally closed by mutual agreement on September 19, 2019.

A Final Mitigated Negative Declaration documenting the public review process and a Mitigation, Monitoring, and Reporting Program have been prepared. City Council consideration of adoption of the Mitigated Negative Declaration, Adoption of the Mitigation, Monitoring, and Reporting Program, and Project approval is scheduled for October 22, 2019. The draft City Council staff report is included as Attachment 2.

Two permit applications for the project are being prepared and will be submitted to the California Department of Fish and Wildlife and the Regional Water Quality Control Board.

California Department of Fish and Wildlife

A Section 1602 Lake or Streambed Alteration Agreement (LSA Agreement) from the California Department of Fish and Wildlife (CDFW) is required for the project due to microtunneling, under the San Lorenzo River and removal of riparian vegetation. CDFW will include measures in the LSA Agreement to protect fish and wildlife resources during project activities including administrative measures, avoidance and minimization measures, and reporting measures.

Regional Water Quality Control Board

Enrollment under the Regional Water Quality Control Board's Construction General Permit and development of a Stormwater Pollution Prevention Plan (SWPPP) required for all projects with a disturbance footprint greater than one acre. The SWPPP will include required measures to protect stormwater quality during Project construction.

Financial Summary

The Project is included in the Water Department's existing capital investment plan.

FISCAL IMPACT: There is no fiscal impact associated with this item and the requested action. The cost of the Project is incorporated into the Water Department's existing capital investment plan approved by City Council on June 11, 2019.

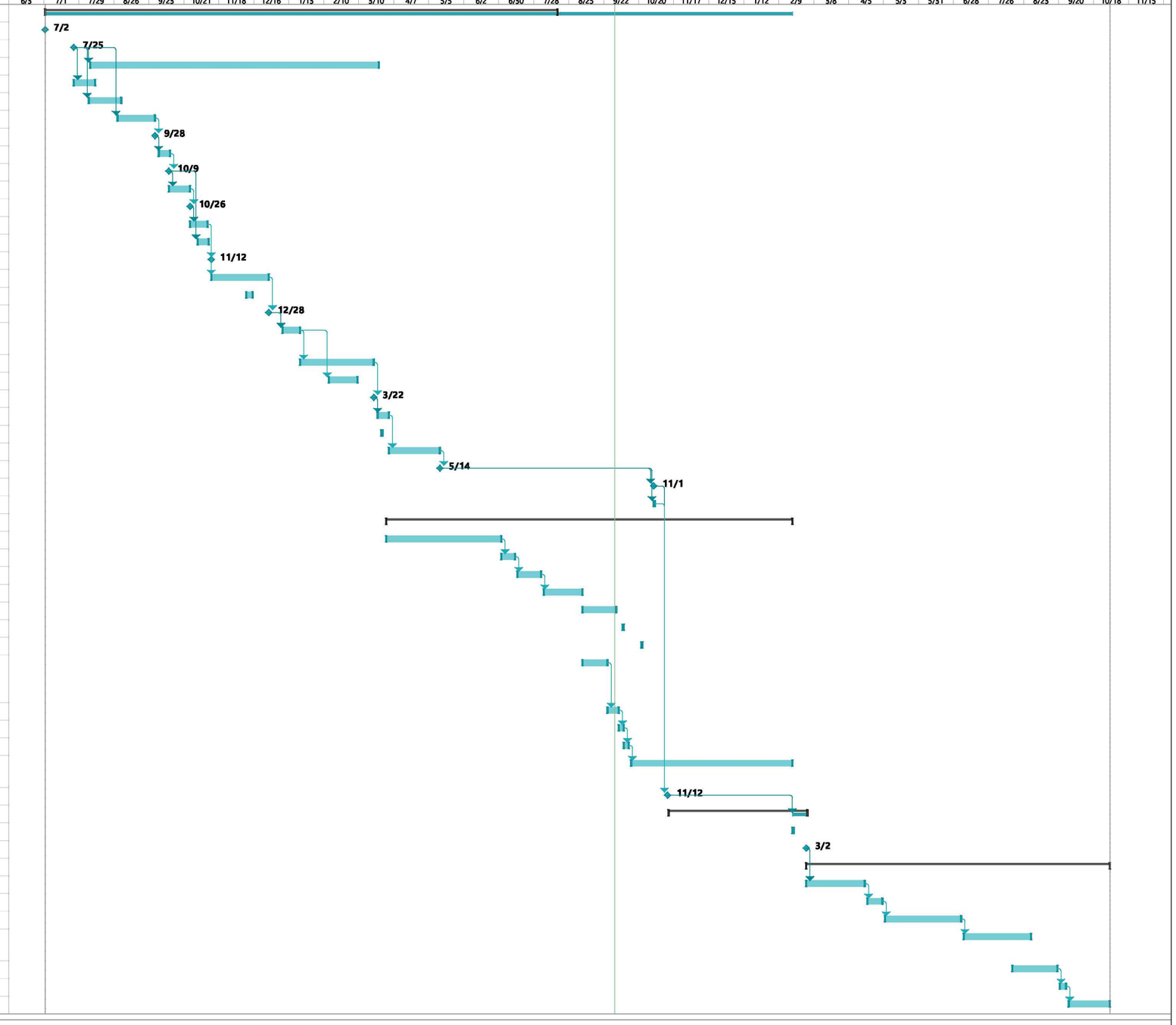
PROPOSED MOTION: Take action to support staff's recommendation to City Council to adopt the Mitigated Negative Declaration for the Coast Pump Station Raw Water Pipeline Replacement Project; adopt the Mitigation Monitoring and Reporting Program; and approve the Coast Pump Station Raw Water Pipeline Replacement Project.

ATTACHMENT(S):

1. Project Schedule
2. Working Draft City Council Staff Report, Coast Pump Station Raw Water Pipeline Replacement Project – Adoption of a Mitigated Negative Declaration, Adoption of a Mitigation Monitoring and Reporting Program, and Project Approval
    a) Initial Study and Mitigated Negative Declaration for the Coast Pump Station Raw Water Pipeline Replacement Project (available for review online www.cityofsantacruz.com/waterenvdocs and at the Water Department Engineering Counter).
    b) Resolution adopting the Mitigated Negative Declaration for the Coast Pump Station Raw Water Pipeline Replacement Project, adopting the Mitigation Monitoring and Reporting Program, and approving the Coast Pump Station Raw Water Pipeline Replacement Project
        i) Exhibit A - Mitigation and Monitoring Reporting Program for the Coast Pump Station Raw Water Pipeline Replacement Project

CPS Raw Water Pipeline Project
City of Santa Cruz
Estimated Project Schedule

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		**Design Services - Trenchless River Crossing**	**294 days**	**Mon 7/2/18**	**Thu 8/15/19**	
2		Kickoff Meeting	0 days	Mon 7/2/18	Mon 7/2/18	
3		Notice to Proceed	0 days	Wed 7/25/18	Wed 7/25/18	
4		Bi-weekly Project Status Meetings	165 days	Tue 8/7/18	Mon 3/25/19	3
5		Review of Existing Pipeline and Geotechnical Documents	13 days	Wed 7/25/18	Fri 8/10/18	3
6		Subsurface Investigation	20 days	Mon 8/6/18	Fri 8/31/18	3
7		Formulate Alternatives	22 days	Wed 8/29/18	Thu 9/27/18	3
8		**Submit Formulated Alternatives and Cost Estimate**	**0 days**	**Fri 9/28/18**	**Fri 9/28/18**	**7**
9		City Review of Formulated Alternatives	7 days	Mon 10/1/18	Tue 10/9/18	8
10		Preferred Alternative Selection Meeting	0 days	Tue 10/9/18	Tue 10/9/18	9
11		Conceptual Design (10% Level)	13 days	Tue 10/9/18	Thu 10/25/18	10
12		**Submit Conceptual Design (10% Level) and Cost Estimate**	**0 days**	**Fri 10/26/18**	**Fri 10/26/18**	**11**
13		City Review of Conceptual Design (10% Level)	10 days	Fri 10/26/18	Thu 11/8/18	12
14		Wetlands Delineation and Biological Survey	7 days	Thu 11/1/18	Fri 11/9/18	10
15		Conceptual Design (10% Level) Meeting	0 days	Mon 11/12/18	Mon 11/12/18	13
16		Preliminary Design (30% Level)	34 days	Mon 11/12/18	Thu 12/27/18	13
17		Verify Permitting Approach	5 days	Mon 12/10/18	Fri 12/14/18	
18		**Submit Preliminary Design (30% Level) and Cost Estimate**	**0 days**	**Fri 12/28/18**	**Fri 12/28/18**	**16**
19		City Review of Conceptual Design (30% Level) and Meetings	10 days	Tue 1/8/19	Mon 1/21/19	18
20		Final Design (90% Level)	43 days	Tue 1/22/19	Thu 3/21/19	19
21		Draft 1602 LSAA application	17 days	Thu 2/14/19	Fri 3/8/19	19
22		**Submit Pre-Final (90% Design) and Cost Estimate**	**0 days**	**Fri 3/22/19**	**Fri 3/22/19**	**20**
23		City Review of Pre-Final Design (90% Level)	7 days	Mon 3/25/19	Tue 4/2/19	22
24		90% Design Meeting	1 day	Thu 3/28/19	Thu 3/28/19	
25		Final Design (100% Level)	29 days	Wed 4/3/19	Mon 5/13/19	23
26		**Submit Final Design (100% Level) and Cost Estimate**	**0 days**	**Tue 5/14/19**	**Tue 5/14/19**	**25**
27		**Submit Bid-Ready 100% Drawings**	**0 days**	**Fri 11/1/19**	**Fri 11/1/19**	**26**
28		**Submit Bid-Ready 100% Specs**	**1 day**	**Fri 11/1/19**	**Fri 11/1/19**	**26**
29		Environmental Permitting Schedule	233 days	Mon 4/1/19	Wed 2/19/20	
30		Submit IS/MND for City Review	66 days	Mon 4/1/19	Mon 7/1/19	
31		City Review IS/MND	9 days	Tue 7/2/19	Fri 7/12/19	30
32		Revise for Public Review Period	15 days	Mon 7/15/19	Fri 8/2/19	31
33		IS/MND Public Review Period	23 days	Mon 8/5/19	Wed 9/4/19	32
34		Final IS/MND	19 days	Thu 9/5/19	Tue 10/1/19	
35		Water Commission Meeting	1 day	Mon 10/7/19	Mon 10/7/19	
36		City Council Meeting and Adoption of IS/MND	1 day	Tue 10/22/19	Tue 10/22/19	
37		Finalize Darft 1602 Permit LSAA Application (incl a period of project decision making re: dewatering approach)	14 days	Thu 9/5/19	Tue 9/24/19	
38		City Review 1602 Permit LSAA application	7 days	Wed 9/25/19	Thu 10/3/19	37
39		Finalize 1602 LSAA application	2 days	Fri 10/4/19	Mon 10/7/19	38
40		Submit 1602 Permit Package to CDFW	4 days	Tue 10/8/19	Fri 10/11/19	39
41		CDFW reviews 1602 permit package and issues SAA (Includes some buffer)	93 days	Mon 10/14/19	Wed 2/19/20	40
42		**Plans and Specs Approved by City Council**	**0 days**	**Tue 11/12/19**	**Tue 11/12/19**	**27,28**
43		**Bid, Award, and Contracting**	**79 days**	**Wed 11/13/19**	**Mon 3/2/20**	**42**
44		Bid Award	1 day	Thu 2/20/20	Thu 2/20/20	
45		Contractor NTP	0 days	Mon 3/2/20	Mon 3/2/20	
46		**Construction**	**175 days**	**Mon 3/2/20**	**Fri 10/30/20**	
47		Mobilization	35 days	Mon 3/2/20	Fri 4/17/20	45
48		Shoring and Excavation	10 days	Mon 4/20/20	Fri 5/1/20	47
49		Microtunneling Casing Installation	45 days	Mon 5/4/20	Fri 7/3/20	48
50		Raw Water Pipe Installation (Microtunnel and Open-Trench)	40 days	Mon 7/6/20	Fri 8/28/20	49
51		Trenching and Backfill	26 days	Fri 8/14/20	Fri 9/18/20	
52		Start-up and Testing	5 days	Mon 9/21/20	Fri 9/25/20	51
53		Demobilization	25 days	Mon 9/28/20	Fri 10/30/20	52



Project: Integrated Schedule - R
Date: Tue 10/1/19

Task · Split · Milestone · Summary · Project Summary · Inactive Task · Inactive Milestone · Inactive Summary · Manual Task · Duration-only · Manual Summary Rollup · Manual Summary · Start-only · Finish-only · External Tasks · External Milestone · Deadline · Progress · Manual Progress

DRAFT CITY COUNCIL AGENDA REPORT

DATE: 10/10/19

AGENDA OF: 10/22/19

DEPARTMENT: Water

SUBJECT: Coast Pump Station Raw Water Pipeline Replacement Project – Adoption of a Mitigated Negative Declaration, Adoption of a Mitigation Monitoring and Reporting Program, and Project Approval (WT)

RECOMMENDATION: Resolution adopting the Mitigated Negative Declaration for the Coast Pump Station Raw Water Pipeline Replacement Project, adopting the Mitigation Monitoring and Reporting Program, and approving the Coast Pump Station Raw Water Pipeline Replacement Project.

BACKGROUND:
The Coast Pump Station raw water pipeline is the primary transmission line that conveys raw water from the North Coast System and the San Lorenzo River to the Graham Hill Water Treatment Plant (GHWTP) for treatment. In 2016 a portion of the pipeline was found to be leaking due to corrosion. The Coast Pump Station Raw Water Pipeline Replacement Project (Project) has been developed to address this deficiency.

DISCUSSION:
The Project would replace a portion of the Coast Pump Station raw water pipeline aligned under the San Lorenzo River. The Coast Pump Station raw water pipeline is the only transmission line that conveys raw water collected at the Coast Pump Station from the North Coast System, the Tait Wells, and the San Lorenzo River via the Tait Diversion to the Graham Hill Water Treatment Plant (GHWTP) for treatment. The project is located next to Coast Pump Station at River Street, at Ocean Street Extension, and at Crossing Street in Santa Cruz and is sited on City owned and publicly owned land. This section of pipeline was constructed in the 1950s and has a different size and material than the majority of the pipeline to the GHWTP. In 2016, a portion of the pipeline was found to be leaking due to age-related corrosion.

The Project would replace approximately 525 feet of Coast Pump Station raw water pipeline. Approximately 225 feet of the replacement pipeline would be aligned under the San Lorenzo River and installed within a 36-inch-diameter carrier steel casing using microtunnel technology. The remaining 300 feet of pipeline would be installed via open trenching on the east and west sides (approximately 150 feet on each side) of the river and would connect the microtunnel segment to the existing end points.

Microtunneling is a trenchless technology that allows the raw water pipeline segment to be installed while avoiding disruption to the river bed, bank, and riparian areas. The microtunnel would be aligned approximately 80 feet north of the existing pipeline to avoid existing utilities that are also aligned under the San Lorenzo River. The microtunnel requires two pits on each side of the San Lorenzo River. These pits allow the microtunnel to be bored horizontally, at a depth below the river. The proposed microtunnel would be launched from the west side of the river from an approximately 20 foot by 45 foot jacking pit, excavated to an estimated depth of 72 feet. The microtunnel would reemerge from a receiving on the east side of the river. The receiving pit would be smaller than the jacking pit and would be excavated to an estimated depth of 51 feet. The depth of the receiving pit would be substantially less than that of the jacking pit since the surface elevation on the east side of the river is approximately 20 feet lower than the launch location to the west.

A construction period of approximately 8 to 9 months is planned, beginning in the spring of 2020, and will include both daytime and nighttime work. Limited nighttime construction activities could occur over a matter of days; this would be limited to courses of continual daytime and nighttime work during microtunneling operations to reduce the risk of the equipment becoming stuck or tunnel collapse if temporary shutdown of the microtunnel operation were required at night. Nighttime work would be limited to what is minimally required to complete the project within the proposed schedule.

Environmental Review Process

In accordance with CEQA, an Initial Study (IS) and Mitigated Negative Declaration (MND) was prepared for the Project. An MND was determined as the appropriate level of environmental review based on the Initial Study, which determined that the project's impacts could be avoided or reduced to less than significant levels when mitigation measures were applied.

The City issued a Notice of Intent to Adopt a Proposed Mitigated Negative Declaration and circulated the IS/ MND for a 30-day public review from August 4, 2019 through September 5, 2019. Staff followed the required procedures to distribute and make available the appropriate notices and IS/MND and went beyond minimum noticing requirements. The following list summarizes the noticing and distribution effort for the IS/MND:

- Posting of the Notice of Intent for 30 days at the Santa Cruz County Clerk's office;
- Distribution of the Notice of Intent to local and state agencies, organizations, and interested citizens that have requested notification;
- Direct mailing of the Notice of Intent to owners and occupants of property contiguous to the proposed project and to properties within 1,000 feet of the project area;
- Posting of legal ads of the Notice of Intent in the Santa Cruz Sentinel on August 3, 2019;
- Posting of the NOI at the Santa Cruz City Hall communications bulletin board during the public review period; and
- Transmittal of the Proposed MND to the State Clearinghouse which made the information available to interested agencies for review and comment.
- Availability of the Initial Study and Proposed MND for public review at the Water Department Engineering Counter, the Downtown Branch Public Library, and on the City's website on the Water Department's Environmental Documents webpage.

Additionally, an informational meeting for the Project was held during the public review period on August 15, 2019 at the Santa Cruz Police Department Community room to provide information about the proposed project and to solicit comments from interested parties on the Proposed MND.

The IS/MND found that implementing the proposed project may result in potentially significant environmental impacts to biological resources, cultural resources, geology/soils, noise, and tribal cultural resources, each of which would be reduced to less than significant with mitigation measures identified in the IS/MND. No significant unavoidable impacts were identified, and mitigations were proposed for all potentially significant impacts to reduce those impacts to a level of less than significant. Project construction Best Management Practices were also included within the project description to minimize project impacts to the environment.

Three comments were received during the 30-day public comment period. None of these comments warranted revision to the Proposed MND.

- Email from a community member inquiring about the timeline of the Project.
- Letter from Caltrans regarding coordination of any work that would occur in the State's right-of-way.
- Letter from Monterey Bay Air Resources District indicating approval of included measures to reduce air pollution.

Upon a request from the Amah Mutsun Tribal Band, the City of Santa Cruz entered into formal consultation under the provisions of Assembly Bill 52 for the Project on July 31, 2019. City staff met with representatives from the Amah Mutsun Tribal Band on August 7, 2019. The consultation was formally closed by mutual agreement on September 19, 2019.

A final Mitigated Negative Declaration and Mitigation documenting the public review process and a Monitoring, and Reporting Program have been prepared. At its October 7, 2019 meeting, the Water Commission received information on the purpose, need, cost, scope, schedule, and environmental impacts of the project and took action to support the staff's recommendation that the City Council adopt the MND and approve the project.

RECOMMENDATION:
It is recommended that City Council, by resolution (Attachment 2), adopt the Mitigated Negative Declaration for the Coast Pump Station Raw Water Pipeline Replacement Project; adopt the Mitigation Monitoring and Reporting Program; and approve the Coast Pump Station Raw Water Pipeline Replacement Project. The project would be bid following a future action by City Council to approve the plans and specifications in winter 2020.

FISCAL IMPACT:
Adoption of the MND and Mitigation, Monitoring, and Reporting Program and approval of the Project have no direct fiscal implications. However, future contracts related to project construction would be required to be approved by the City for project implementation. The cost of the Project is incorporated into the Water Department's existing capital investment plan approved by City Council on June 11, 2019.

Prepared by:	Submitted by:	Approved by:
Sarah E. Perez Associate Planner	Rosemary Menard Water Director	Martín Bernal City Manager

ATTACHMENTS:

1. Initial Study and Mitigated Negative Declaration for the Coast Pump Station Raw Water Pipeline Replacement Project (available for review online www.cityofsantacruz.com/waterenvdocs and at the Water Department Engineering Counter).
2. Resolution adopting the Mitigated Negative Declaration for the Coast Pump Station Raw Water Pipeline Replacement Project, adopting the Mitigation Monitoring and Reporting Program, and approving the Coast Pump Station Raw Water Pipeline Replacement Project
    a. Exhibit A - Mitigation and Monitoring Reporting Program for the Coast Pump Station Raw Water Pipeline Replacement Project

RESOLUTION NO. ___

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SANTA CRUZ ADOPTING THE MITIGATED NEGATIVE DECLARATION, ADOPTING THE MITIGATION MONITORING AND REPORTING PROGRAM, AND APPROVING THE COAST PUMP STATION RAW WATER PIPELINE REPLACEMENT PROJECT.

WHEREAS, the City of Santa Cruz ("City") proposes to implement the Coast Pump Station Raw Water Pipeline Replacement Project (the "Project"); and

WHEREAS, pursuant to Public Resources Code section 21067 of the California Environmental Quality Act (Pub. Res. Code §§ 21000 et seq.) ("CEQA") and section 15367 of the State CEQA Guidelines (Cal. Code Regs, tit. 14, § 15000 et seq.), the City is the lead agency for the proposed Project; and

WHEREAS, CEQA and the CEQA Guidelines, require a lead agency to prepare a Mitigated Negative Declaration for projects that could have a significant impact on the environment, but where revisions to the Project would mitigate such effects; and

WHEREAS, a Notice of Intent ("NOI") to adopt a Mitigated Negative Declaration for the Coast Pump Station Raw Water Pipeline Replacement Project was issued by the Water Department of the City of Santa Cruz on August 5, 2019; and

WHEREAS, an Initial Study and Mitigated Negative Declaration was prepared and issued for agency and public review and comment on August 5, 2019, for a 30-day review period that ended on September 4, 2019; and

WHEREAS, the Mitigated Negative Declaration considered the potential environmental impact of the Project, including specific impacts to biological resources, geology/soils, noise, cultural resources, and tribal cultural resources; and

WHEREAS, the Initial Study and Mitigated Negative Declaration outlined various mitigation measures that would avoid or mitigate (i.e., render less than significant) the Project's significant effects on the environment, which are proposed as part of the Project and through implementation of the Mitigation Monitoring and Reporting Program; and

WHEREAS, the City of Santa Cruz hosted a public meeting at 5:30 pm on August 15, 2019 at the Santa Cruz Police Department Community Room, 155 Center Street, Santa Cruz, CA; and

WHEREAS, during the public review period, the City of Santa Cruz received two (2) comment letters on the Initial Study and Mitigated Negative Declaration from public agencies; and

WHEREAS, the City of Santa Cruz entered into formal consultation for the Project with the Amah Mutsun Tribal Band on July 31, 2019 upon their request under the provisions of

Assembly Bill 52. City staff met with representatives from the Amah Mutsun Tribal Band on August 7, 2019. Pursuant to Assembly Bill 52, the consultation was formally closed by mutual agreement on September 19 2019.

WHEREAS, a Mitigated Negative Declaration has been prepared consisting of the Initial Study, all comments received during the public review period, and a Mitigation Monitoring and Reporting Program. This Mitigated Negative Declaration was prepared on or about October 2, 2019; and

WHEREAS, the Mitigated Negative Declaration included minor revisions but no changes to significance findings of any impact determinations to environmental resources, and did not result in the addition of mitigation to offset project impacts on the environment; and

WHEREAS, Exhibit "A" to this Resolution is the Mitigation Monitoring and Reporting Program prepared in order to comply with Public Resources Code Section 21081.6, subdivision (a); and

WHEREAS, the City Council recognizes the City's obligation, pursuant to Public Resources Code section 21081.6, subdivision (a), to ensure compliance during Project implementation with the changes made to the Project, adopted in order to mitigate significant effects on the environment; and

WHEREAS, the Initial Study and Mitigated Negative Declaration has been completed in compliance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq, the Guidelines for Implementation of the California Environmental Quality Act (14 Cal. Code Regs. Section 15000 et seq.) (the "State CEQA Guidelines") and local procedures adopted pursuant thereto; and

WHEREAS, the City of Santa Cruz Water Commission considered the Project at a meeting on October 7, 2019 and has received information on the purpose, need, cost, scope, schedule, and environmental impacts of the Project, and believes the Project should proceed as scheduled; the next step would be for City Council to adopt the Mitigated Negative Declaration and approve the Project; and

WHEREAS, the City Council has reviewed and considered the Mitigated Negative Declaration; public comments; and Mitigation and Monitoring Reporting Program and intends to take actions on the Project in compliance with CEQA and the State of California Guidelines for the Implementation of the California Environmental Quality Act; and

WHEREAS, the Mitigated Negative Declaration, Initial Study, and Mitigation and Monitoring Reporting Program are, by this reference, incorporated into this Resolution as if fully set forth herein.

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

- The foregoing recitals are true and correct.

- The City Council has independently reviewed and analyzed, the Mitigated Negative Declaration together with the Initial Study and supporting documents, as well as the comments, written and oral, received prior to approving this resolution.

- The City Council hereby finds that the Mitigated Negative Declaration, the Initial Study and supporting documents, have been completed in compliance with CEQA, the State CEQA Guidelines, and local procedures adopted pursuant thereto.

- The City Council hereby finds that the Mitigated Negative Declaration reflects the City's independent review, judgment and analysis, as required by Public Resources Code Section 21082.1.

- The City Council finds that the Mitigated Negative Declaration identified all potentially significant impacts to the environment, which can and will be avoided or mitigated to less than significant levels through adoption and implementation of the mitigation measures proposed as part of the Project and through implementation of the Mitigation and Monitoring Reporting Program.

- The City Council finds on the basis of the whole record before it and all information received that there is no substantial evidence that the Project, as mitigated, will have a significant effect on the environment.

- The City Council hereby adopts the Mitigation Monitoring and Reporting Program attached hereto as Exhibit "A".

- The City Council hereby adopts the Mitigated Negative Declaration for the Project posted to the City of Santa Cruz website at www.cityofsantacruz.com/waterenvnotices.

- The City Council hereby approves the Project and directs City Staff to file within five (5) working days after approval of the Project a Notice of Determination commencing the 30-day statute of limitations for any legal challenge to the Project based on alleged non-compliance with CEQA.

- All environmental documents and other materials that constitute the record of proceedings upon which this decision is based, are made available at the City of Santa Cruz Water Department Office, 212 Locust Street, Suite C, Santa Cruz, California 95060.

PASSED AND ADOPTED this ____ day of _____, 2019 by the following vote:

AYES:

NOES:

RESOLUTION NO.

ABSENT:
DISQUALIFIED:

APPROVED:_____
Mayor

ATTEST:_____
City Clerk

Mitigation Monitoring and Reporting Plan

This Mitigation Monitoring and Reporting Plan (MMRP) for the Coast Pump Station Raw Water Pipeline Replacement Project has been prepared pursuant to the California Environmental Quality Act (CEQA – Public Resources Code, Section 21000 *et seq*.), the CEQA Guidelines (Cal. Code Regs., Title 14, Chapter 3, Sections 15074 and 15097). A master copy of this MMRP shall be kept in the office of the City of Santa Cruz Water Department (SCWD) and shall be available for viewing upon request.

Mitigation measures and Best Management Practices (BMPs) are shown in Table 1. This program corresponds to the Initial Study/Mitigated Negative Declaration (ISMND) for the project. For each mitigation measure and BMP, the frequency of monitoring and the responsible monitoring entity is identified. Mitigation measures and BMPs may be shown in submittals and may be checked only once, or they may require monitoring periodically during and/or after construction. Once a mitigation measure or BMP is complete, the responsible monitoring entity shall date and initial the corresponding cell, and indicate how effective the mitigation measure was.

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
Biological Resources			
MM-BIO-1: At project-appropriate intervals, a qualified biologist(s) would monitor construction activities that could potentially affect sensitive biological resources. The amount and duration of monitoring would depend on the project specifics and would be determined by the qualified biologist. In addition, a qualified biologist would conduct mandatory contractor/worker awareness training for construction personnel. The awareness training would be provided prior to project start to all construction personnel to brief them on the locations of sensitive biological resources, the need to avoid impacts on biological resources (e.g., plants, wildlife, and aquatic resources), and to brief them on the penalties for not complying with biological mitigation requirements. If new construction personnel are added to the project, the contractor would require them to receive the mandatory training before starting work.	SCWD	Prior to construction start (training) and during construction (additional training, as needed, and monitoring)	
MM-BIO-2: A qualified biologist would conduct preconstruction clearance surveys following established survey protocols for special-status species, including western pond turtle, Santa Cruz black salamander, California giant salamander,	SCWD	Prior to the start of construction	

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
coast range newt, and San Francisco dusky-footed woodrat, and for special-status bats prior to the start of construction activities on or before the first scheduled day of work. If individuals are found within or directly adjacent to the project area, the area would be left unaffected until the individual(s) have left the area or a relocation decision has been made in consultation with California Department of Fish and Wildlife (CDFW). If woodrat nests or bat roosts are found within or directly adjacent to the project area, appropriate no-disturbance buffers would be implemented to minimize impacts to woodrats or roosting bats during construction of the project. This no disturbance buffer would identify a zone in which project-related activities (i.e., vegetation removal, earth moving, and construction) would not be allowed to occur unless the area becomes vacated. The size of no-disturbance buffers would be determined by a qualified biologist based on the species, activities proposed in the vicinity of the nest or roost, and topographic and other visual barriers.			
MM-BIO-3: If a trench or pit must be left open at the end of a day's construction activities, the open areas would be either covered or fenced, or the end of any open walls would be ramped at an approximate 2:1 slope to allow any wildlife that	SCWD	During construction	

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
enters the excavation to escape. A qualified biologist may approve the use of an alternative method to prevent ingress or entrapment.			
MM-BIO-4: If feasible, tree and vegetation clearing would be conducted outside the migratory bird (February 1 to August 31) nesting season. However, if clearing and/or construction activities will occur during the nesting season , then preconstruction surveys for special-status birds and other migratory bird and/or raptor species would take place no more than 7 days prior to the beginning of construction within 250 feet of suitable nesting habitat, if feasible. If the preconstruction surveys do not identify any nests within areas potentially affected by construction activities, no further mitigation would be required. If the preconstruction surveys do identify nesting bird species within areas that could be affected by site construction, MM-BIO-5 would be implemented.	SCWD	No more than 7 days prior to the beginning of construction within 250 feet of suitable nesting habitat	
MM-BIO-5: If active nest sites are identified within the survey areas, to avoid construction or access-related disturbances to migratory bird nesting activities, a no-disturbance buffer would be established for all active nest sites before any project construction activities begin. This no disturbance buffer would identify a zone in which project-related activities (i.e., vegetation removal, earth moving, and construction) would not be allowed to occur. The size of no-disturbance	SCWD	Prior to commencement of any project construction activities near active migratory bird nesting areas. If no active nests are identified during bird surveys (MM-BIO-4), this measure would not be implemented.	

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
buffers would be determined by a qualified biologist based on the species, activities proposed in the vicinity of the nest, and topographic and other visual barriers.			
MM-BIO-6: No net loss of riparian canopy will be achieved through impact avoidance, minimization, and/or compensatory mitigation. Mitigation for permanent impacts on riparian canopy shall be provided at a minimum 1:1 ratio. Mitigation can include on-site restoration, in-lieu fee payment, or purchase of mitigation credits at a CDFW-approved mitigation bank. Mitigation as required in regulatory permits issued through CDFW may be applied to satisfy this measure.	SCWD	Prior to project completion	
MM-BIO-7: Existing riparian vegetation, oaks, and other native tree species shall be retained to the extent feasible. A Tree Protection Zone (TPZ) shall be established around any tree or group of trees to be avoided. The TPZ shall be delineated by an ISA Certified Arborist. The TPZ shall be defined by the radius of the dripline of the tree(s) plus one foot. The TPZ of any protected trees shall be demarcated using fencing that shall remain in place for the duration of construction activities. Construction-related activities shall be limited within the TPZ to those activities that can be done by hand. No heavy equipment or machinery shall be operated within the TPZ. Grading shall be	SCWD	During construction	

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
prohibited within the TPZ. No construction materials, equipment, or heavy machinery shall be stored within the TPZ.			
MM-BIO-8: If trenching or other ground disturbance must occur in the TPZ, it will be done with the approval and under the supervision of an ISA Certified Arborist. If roots need to be prunes, roots over two inches in diameter shall be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. When completed, exposed roots shall be kept moist with burlap or backfilled within one hour.	SCWD	During Construction	
Cultural Resources			
MM-CUL-1: An archaeologist meeting the Secretary of the Interior's Professional Qualification Standards shall be retained to oversee and carry out the archaeological mitigation measures. The archaeologist shall conduct a pre-excavation meeting with construction personnel who would be briefed regarding the proper procedures if in the event that buried cultural materials are encountered. The archaeologist shall also develop an appropriate monitoring program and schedule and select a qualified archaeological monitor to be approved by the City.	SCWD	Prior to start of any excavation and during construction, as needed, if buried cultural materials are encountered.	

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
MM-CUL-2: A qualified archaeological monitor, as assigned and directed by the project archaeologist, shall monitor excavation activities on the project site within Holocene-epoch (11,700 years before present) sediments that have not been previously disturbed. These sediments are likely to be encountered during excavation for the microtunneling pits on either side of the river and the open trenching for the waterline connectors. Pre-Holocene sediment, disturbed sediments, and microtunneling slurry spoils do not need to be monitored. Per the request of the Amah Mutsun Tribal Band, a qualified Native American monitor will also be onsite for the same duration as the archaeological monitor. If archaeological or cultural resources are unearthed during ground-disturbing activities, the archaeological monitor, in coordination with the Native American monitor, shall halt or redirect such activities away from the area of the find to allow evaluation. Work may continue outside the vicinity of the find, at a sufficient distance to be determined by the archaeological monitor and Native American monitor as necessary to provide compliance with these mitigation measures and the archaeological monitoring program. Deposits shall be treated in accordance with applicable federal, state, and local guidelines, including those set forth in California Public Resources Code	SCWD	During excavation activities on the project site within Holocene-epoch (11,700 years before present) sediments that have not been previously disturbed. Excavation at locations with Pre-Holocene or disturbed sediments, or when handling the microtunneling slurry spoils, does not need to be monitored.	

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
Section 21083.2. In addition, if it is determined that an archaeological site is a historic resource, the provisions of Public Resources Code Section 21084.1, CEQA Guidelines Section 15064.5, and Santa Cruz Municipal Code Section 24.12.430.9 shall be implemented. The archaeologist shall evaluate the discovered resource(s) and, if they are significant, notify the City of Santa Cruz Water Department and then develop an appropriate treatment plan. Treatment plans shall consider preservation of the resource(s) in place as a preferred option. The archaeologist, in coordination with any participating Native American tribes, shall then prepare a report to be reviewed and approved by the Water Department. The report shall describe any resource(s) unearthed, the treatment of such resource(s), and the evaluation of the resource(s) with respect to the California Register of Historic Resources. If the resource(s) are found to be significant, a separate report detailing the results of the recovery and evaluation process shall be prepared. The Water Department shall designate one or more appropriate repositories for any cultural resources that are uncovered.			
MM-CUL-3: If human remains are discovered during ground-disturbing activities or project construction, work shall be halted within at least 150 feet of the discovery location, and at a greater	SCWD	During construction, if human remains are discovered.	

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
distance if determined necessary by the Archaeologist meeting the Secretary of the Interior's Professional Qualification Standards, and within any nearby area reasonably suspected to overlie human remains (Public Resources Code, Section 7050.5). The Santa Cruz County Coroner shall be notified immediately to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws regarding the disposition of Native American burials, which fall within the jurisdiction of the California NAHC (Public Resources Code, Section 5097). In this case, the coroner will contact NAHC. The descendants or most likely descendants (MLD) of the deceased will be contacted, and work will not resume until the MLD has made a recommendation to the City regarding appropriate means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98.			
Geology and Soils			
MM-GEO-1: Before the start of construction activities, construction personnel involved with earth-moving activities would be informed of the proper notification procedures if fossils are	SCWD	Before construction start (personnel training) and during construction if paleontological resources are encountered.	

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
encountered. If paleontological resources are encountered during earthmoving activities, the construction crew would immediately cease work and a qualified paleontologist would evaluate the resource and prepare a proposed mitigation plan based on the situation.			
Noise			
MM-NOI-1: All on-site machinery shall be maintained in good working order and lubricated as necessary to minimize unnecessary squeals, groans, and other noise. All cabinets, panels, covers, shrouds, and similar components shall be securely fastened to ensure that they do not create excessive noise due to vibration. All machinery to be used on-site shall be equipped with the best available exhaust mufflers and any applicable "hush kits."	SCWD	During construction	
MM-NOI-2: During nighttime work, all unnecessary machinery shall be turned off, any delivery and hauling trucks shall not sit with their engines idling for periods exceeding 5 minutes, and the use of noise producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only.	SCWD	During nighttime construction work	
MM-NOI-3: Notify residents within 500 feet of any planned nighttime activities within two weeks of planned activities. A "Construction Noise	SCWD	During construction	

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
Coordinator" will be identified. The contact number for the Construction Noise Coordinator will be included on notices distributed to neighbors regarding planned nighttime construction activities. The Construction Noise Coordinator will be responsible for responding to any local concerns or complaints about construction noise. When a concern or complaint is received, the Construction Noise Coordinator shall notify the City, determine the cause of the noise complaint, and implement measures to resolve the complaint, as deemed acceptable by the City.			
Best Management Practices			
BMP-1: Construction stormwater best management practices (BMPs) would be used on site to prevent erosion of soil and to control the transport of sediment.	Contractor	Prior to the start of construction through final stabilization.	
BMP-2: Before starting work, the limits of the construction zone would be fully fenced by the contractor using a combination of silt fence, orange construction fence, or other exclusionary measures as appropriate to exclude wildlife from entering the work area, to prevent sediment from entering nearby aquatic resources, and to confine construction activity to the defined work space. The fences would be inspected by the construction crew daily, and any holes or damage would be patched immediately.	Contractor	Prior to the start of construction through final stabilization.	

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
BMP-3: Three construction entrances are proposed and would be constructed to access the eastern parcel, western parcel, and staging area along River Street and the Ocean Street Extension. The dimensions of the constructed entrances would be, at a minimum, 10 feet wide by 50 feet long. Per the California Stormwater Quality Association BMP Handbook, the stabilized construction entrances would be underlain by filter fabric, with at least 12 inches of clean, crushed aggregate placed on top to match the grade of the existing paved roadway. A portion of the construction entrances would have corrugated steel panels placed on top of the aggregate to provide additional stabilization for incoming trucks. In addition, sediment barriers would be installed perpendicular to the entrances in order to channelize runoff and trap sediment, thereby preventing runoff from flowing off site toward River Street.	Contractor	Prior to the start of construction through final stabilization.	
BMP-4: As part of the project Stormwater Pollution Prevention Plan (SWPPP), if rain is expected, additional protection would be installed before the storm. The exact methods would be determined by the contractor, but some examples might be sandbag barriers, silt fence lined with fiber rolls at the base, or a temporary drainage swale. This additional protection would reduce the potential for runoff from the site to affect adjacent residences.	Contractor	During construction.	

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
BMP-5: All ground breaking, as well as all temporary disturbance that would result from the movement of construction equipment and personnel, would be confined to the temporary construction zone. No tree or shrub removal is anticipated as a result of the proposed project, and all riparian vegetation would be fully avoided	Contractor	Prior to the start of construction through final stabilization.	
BMP-6: All lighting used at construction site, either for nighttime construction activities or at staging of equipment, would be directed toward the active construction area and away from residences.	Contractor	During construction.	
BMP-7: To reduce the generation of fugitive dust throughout project implementation, the construction contractor will be required to prepare and implement dust control measures at the construction and staging areas, which will include: water all active construction areas as needed based on the type of construction activity, soil, and wind exposure; maintain at least 2-feet of freeboard, or cover dirt and loose materials, in haul trucks throughout transportation; cover inactive storage piles and stock piles of dirt; and sweep any roadways/paths if loose soil material remains at the end of the work day.	Contractor	During construction.	
BMP-8: As necessary, the project will comply with MBARD Rule 424, National Emissions Standards for Hazardous Air Pollutants. Rule 424 defines the investigation and reporting requirements for asbestos which include surveys and advanced notification on structures being renovated or	Contractor	During construction.	

5.26

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
demolished. Air District notification will be required at least ten days prior to renovation or demolition activities. If old underground piping or other asbestos containing construction materials are encountered during trenching activities, Rule 424 may also apply.			
BMP-9: Given the close proximity of residences, the City will comply with the MBARD's recommendation to use cleaner construction equipment that conforms to the Environmental Protection Agency's Tier 3 or Tier 4 emission standards. Wherever feasible, construction equipment will use alternative fuels such as compressed natural gas, propane, electricity or biodiesel.	Contractor	During construction.	
BMP-10: The work areas on each side of the river would include a stockpile area for excavated material. These stockpile areas would be surrounded by exclusionary fences to contain the excavated material.	Contractor	During construction.	
BMP-11: The jacking and receiving pits would be outfitted with water inflow controls and with watertight shoring to reduce the potential for the pits to collapse during construction. The shoring likely would be installed using a pile driver (vibratory or impact) or an auger with a drill rig.	Contractor	During construction.	
BMP-12: Water encountered during pit excavation would be placed into a settling tank before being trucked to a nearby sewer main for discharge.	Contractor	During construction.	

5.27

Table 1. Mitigation Monitoring and Reporting Plan Coast Pump Station Raw Water Pipeline Replacement Project			
Mitigation Measure	Monitoring Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
BMP-13: Both the jacking and receiving pits would be placed beyond the riparian edge, thereby fully avoiding all vegetation associated with the riparian corridor of the San Lorenzo River.	Contractor	During construction.	
BMP-14: Detailed planning and management measures, as well as corrective actions to be documented and taken in the event of a release of drilling fluid, would be included in an Inadvertent Release Contingency Plan, to be submitted to CDFW for review at least 60 days before microtunneling begins. The Inadvertent Release Contingency Plan will include the following components: project description, drilling design, drilling fluids, monitoring, notification procedures, and containment and remediation. The plan would be implemented during microtunneling to detect and respond to a potential release of drilling fluid.	Contractor	Prior to and during construction.	
BMP-15: All exposed and/or disturbed areas resulting from construction activities would be returned to their original contour and grade, and vegetated areas would be restored using locally appropriate native grass and forb seeds. Seeded areas would be covered with broadcast straw and/or jute-netted.	Contractor	During construction through final stabilization.	
BMP-16: If portable construction equipment that is used for project implementation includes engines 50 horsepower (Hp) in size or greater, the contractor will comply with required permits issued by MBARD, in compliance with the California Air Resources Board regulations.	Contractor	During construction.	

5.29

WATER COMMISSION
INFORMATION REPORT

DATE: 10/2/2019

AGENDA OF October 7, 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 and DISCUSSION: 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 fifteenth quarterly update.

The content and format of this report will continue to be modified to reflect in a comprehensive way the progress and findings of the various elements of work. Commissioner requests are shown throughout this document; new items will be shown in italics, ongoing items will be in normal font, completed items will be struck for one quarterly report and then removed.

- Develop a spreadsheet that shows all the supply projects and portfolios of projects with all the metrics. The WSAS work plan will be modified in the coming months once more meaningful data is available.
- 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. This is an ongoing effort. Narratives are added to each section below as appropriate. As the work plan is modified over the coming months, the process of capturing the nexus will be developed more fully.

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.

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: Overall system water demand remains low, tracking close to the pattern seen over the past few years. Total water production for the year to date amounts to 2.0 billion gallons, almost identical to this time one year ago. A chart of gross daily water consumption (synonymous with system production) is provided in Attachment 1. The 2019 Water Year ended September 30 with Loch Lomond Reservoir at 93.3 percent of capacity, pretty much in line with what was forecast in April following a wet year (Attachment 2).

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

No. 1 System Water Loss Reduction. The 2018 distribution system water audit has been submitted to the state following the required validation process. Real losses (water lost to background leakage and system breaks) amounted to 165 million gallons or 0.5 mgd in 2018, while apparent losses (mainly meter inaccuracies) were estimated to be 66 million gallons, just under 0.2 mgd. The annual cost of meter under-registration alone, valued at the average 2018 retail rate of $10.88/HCF (hundred cubic feet), is now approaching $1.0 million. The Conservation section continues to work with Customer Service and the Meter Shop to better characterize the overall accuracy of our aging meter population. Staff has partnered with Water Systems Optimization (WSO) for non-revenue water management assistance over the last five years, and recently completed negotiating a scope of work and budget for continued technical assistance in FY 2020.

No. 4 General Public Information. Conservation staff, working with the Water Conservation Coalition of Santa Cruz County and the Times Publishing Group, produced an attractive new water conservation guidebook this fall. It is equal parts 1) business directory for the landscape trades and allied businesses, 2) general water conservation information and education, and 3) utility program promotion. This is a great example of water agencies and businesses collaborating to promote efficient water use and sustainable water supplies throughout Santa Cruz County. Staff also provided general public outreach and education at the Santa Cruz Police Department open house in August and the Santa Cruz County Fair in September.

No. 5 Home Water Use Reports. The pilot program with WaterSmart Software (WaterSmart) is nearing completion. The program, organized at the start of the year with first reports going out in

late March, will continue through November covering the October billing period. The project involves sending home water reports to approximately 5,300 single-family residential accounts that are among the higher using customers. These customers make up the treatment group for evaluation purposes; another "control" group of 2,600 customers will be used for comparison in the efficiency study that WaterSmart will be conducting soon. The efficiency study, which will be available in late October, will examine if there are actual measurable water savings as a result of customers receiving the reports. In addition, the Water Conservation section is contracting with an independent statistician for its own analysis of the WaterSmart data in order to make an impartial evaluation of the program and water savings results. In addition to the water reports themselves, customers in the treatment group also had an option to register for an online portal through WaterSmart to view their usage history. As of the end of September, nearly 900 accounts or 17% of the customers in the treatment group have registered for the online portal.

The results of the efficiency study and the independent analysis of the program will be used to determine the next steps following the pilot. Several options will be considered including continuing the program in its current form, ending the program, modifying the program with expansion of the customer portal, or modifying the program with respect to the number of customers receiving reports. It is anticipated that a decision will be made sometime over the winter and the program, if continued, would resume in the springtime.

No. 6 Residential Leak Assistance. In July, the City contracted with Richard Health & Associates (RHA) to expand upon an existing low-income Energy Savings Assistance Program offered by PG&E in order to provide qualifying customers access to additional water conservation services. RHA now has two contractors trained and up to speed to perform the fixture assessment and toilet replacement services for up to 260 multi-family dwelling units this fiscal year. About 80 homes are scheduled to be served this October.

No. 32 Hot Water Recirculation Systems. The Hot Water Recirculation incentive program is now active. A bill insert announcing the program is scheduled to be mailed out to all customers with the October utility bills.

Finally, staff has developed a work plan and has begun the process of updating the City's Water Shortage Contingency Plan (WSCP), as required by state law. Although not due until July 1, 2021, we want to complete the job ahead of when a related process to update the City's Urban Water Management Plan begins next year. Although guidelines from the state for preparing a WSCP are not yet available, the scope of work is clearly laid out in CA Water Code Section 10632, and consists of ten elements that all need to be thoroughly addressed (Attachment 3). Significant changes have occurred in the ten years since the last WSCP was prepared with respect to population, water demand, and the direction of water supply augmentation, thus the timing is good to assess these changes to better understand what measures the City can take to manage water demand the next time a water shortage arises.

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). In-Lieu is now described as follows.

- Water Transfers: Selling water to neighboring agencies for the purpose of augmenting their supplies and possibly (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: Collecting water quality information after the active water transfer period continued to be a major focus of the work over the last couple of months with sampling for the monitoring program running through August 30, 2019. Additionally, over the last couple of months City and Soquel Creek Water District (SqCWD) staff have been working with Black & Veatch to generate a Technical Memorandum (TM) documenting the results of the water quality monitoring program along with some of the operational challenges and limitations noted during the water transfers.

Next Steps: Finalize the Water Quality TM for the Water Transfers and present at the District Board Meeting (October 15) and future Water Commission meeting. Due to favorable water quality results from the initial pilot of water transfers, City and SqCWD staff are preparing for a second round of piloting this upcoming winter. This additional pilot will expand the area within SqCWD's service area that will receive the City's water and is currently anticipated to begin on or around November 1, 2019 and lasting through April 30, 2020. As with the initial pilot, the volume of water to be transferred and the length of time in which transfers are to occur will be dependent on the City's excess water supply and SqCWD's system demand in the expanded service area. The volume of water that SqCWD has currently budgeted for purchase for the next round of piloting is 98 MG (300acre feet); the demand in the expanded service area will exceed this budgeted amount. In addition, as with the initial pilot, water quality monitoring is recommended prior to the transfers, through the active transfer period, and after the transfers conclude.

Contract Update(s)

Purchase Order Agreement with SqCWD for cost sharing of Water Quality Sampling and Development of Water Quality Results TM

- PO Opened: January 2017
- Project Partner(s): Soquel Creek Water District
- Engaged Stakeholders: None at this time.
- Original PO Amount: $60,000
- Amount Spent: $31,186
- Amount Remaining: $28,814

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 includes the Mid-County Groundwater Basin (MCGB) and the Santa Margarita Groundwater Basin (SMGB).

Summary: As previously mentioned, while a large portion of the Phase I work (which includes groundwater modeling) in the MCGB is complete, the groundwater modeling will continue through the completion of Phase II as part of the iterative process to ensuring project success. Additional groundwater modeling scenarios aimed at determining how much can be injected and recovered from the Beltz area have been developed and are currently being run through the groundwater model. It is expected that results for this next iteration of groundwater model scenarios will be available by December 2019. Once successful modeling results are obtained and the injection capacity into the Beltz area is known, additional Confluence modeling will be performed to help determine how much of the water supply shortfall (the "gap") is met with ASR under this Beltz area scenario. As previously requested by the Commission, a summary table of groundwater model scenarios developed is included as Attachment 4. This table includes demands, climatic period, and injection and extraction capacities along with the resulting number of wells for each scenario.

Active injection under Phase II work at Beltz 12 began in the MCGB on January 18, 2019, following approval from the Central Coast Regional Water Quality Control Board. Field work for pilot testing of ASR at Beltz 12 finished on July 31, 2019 when active recovery of Cycle 3 ended. Since then, staff from the City and Pueblo Water Resources have been evaluating the data that was collected during the pilot, and will work to generate a TM documenting results of the pilot. It is anticipated that a DRAFT of this TM will be prepared by the end of December 2019. However, preliminary results appear to be favorable regarding the long term viability of ASR at the Beltz 12 well site.

Sustainable Groundwater Management Act

Planning efforts over the last two years by the MCGA (Mid-County Groundwater Agency) and the Advisory Committee resulted in a draft GSP (Groundwater Sustainability Plan) for the MCGB released for public comment in mid-July 2019. Section 4 of the report describes a series of Projects and Management Actions needed to achieve the basin sustainability goal. In addition to ongoing actions like conservation, and future projects like recycled water and/or desalination, the report describes the Pure Water Soquel (PWS) project as well the City's Aquifer Storage and Recovery project (using existing infrastructure) as two near-term projects to reach Basin sustainability. The report makes several summary comments including:

1. Expected benefits of the PWS project include raising of the groundwater at the coast to prevent seawater intrusion and improve groundwater levels in the shallow aquifers along Soquel Creek to prevent additional surface water depletion.
2. As with the PWS Project, expected benefits for sustainability from the City's ASR project include raising average groundwater levels at the coast to prevent the risk of seawater intrusion.
3. The two projects have little influence on each other in the western portion of the basin where the PWS project does not substantially raise groundwater levels in much of the City's service area. (A next step will be for the City to understand a larger ASR project, with new infrastructure, that can work in conjunction with PWS.

It should be noted that the ASR project described in Section 4 is modeled as:

1. All four existing Beltz wells (8, 9, 10 and 12) are used as ASR wells.

2. Demands are as were realized in 2016/2018.
3. The Climate Catalog future climate condition was applied.
4. Corresponds to the work described in the Department's Supply Augmentation Work Plan through 2023/2024 of approximately $20,000,000. (Ref. Attachment 5.)

More details of the work done to date can be found on the MGA's website: www.midcountygroundwater.org.

Work on the SMGWB's plan is just getting underway and interested parties can keep abreast of the details by accessing its website at www.smgwa.org.

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

- Working with Pueblo Water Resources to develop a Technical Memorandum that discusses results (water quality and water levels) of the ASR pilot test at Beltz 12 and provides a recommendation as to the long term viability at the site with sustainable injection and extraction rates.
- Continue working with Pueblo to develop a test plan for pilot testing of ASR at the City's Beltz 8 well; a draft work plan is anticipated sometime in October 2019.
- Continue with 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 both the Santa Cruz Mid-County Groundwater Agency and the Santa Margarita Groundwater Basin.

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: $678,424
- Amount Remaining: $180,560
- Status: On schedule for work in MCGB and delayed approximately 18 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: $382,511
- Amount Remaining: $75,573.90
- Status: On Schedule.

ELEMENT 3: ADVANCED TREATED RECYCLED WATER AND 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: In November 2018, City Council took action to prioritize recycled water over desalination. The Water Commission provided comments on a draft Phase 2 scope of work with Kennedy/Jenks Consultants Inc. to perform additional analyses of recycled water alternatives. The scope of work includes alternatives that consider Scotts Valley Water District (SVWD) as a partner or a customer. Kennedy/Jenks assisted staff with these discussions with SVWD staff.

Next Steps: The City Council will consider the Agreement at their November 12 meeting.

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

- Contract Signed: February 2016
- Amount Spent: $569,174
- Amount Remaining: $18,133Schedule: The RWFPS is complete. Staff has been working with Kennedy/Jenks to develop Phase 2 work plan.

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

The Source Water Monitoring project addresses the City's interest in learning more about water quality in the San Lorenzo River, especially during high-flow, winter months. The second-year annual report and appendices are complete. The third year of sampling has been completed; an update will be provided next quarter. CEC (contaminants of emerging concern) monitoring is ongoing and will be incorporated into the annual Source Water Monitoring report in the future.

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 April 17, the State Water Resources Control Board sent a letter in response to our filing of Petitions for Change and Petitions for Extension of Time detailing additional information and

clarifications necessary for the State Water Resource Control Board to act upon the petitions. Staff developed and submitted a response letter on June 25 providing responses and indicating that updated petitions are under development and will be submitted once necessary project hydrologic modeling has been completed in the coming months.

On August 21, city staff hosted a conference call between staff of State Water Resources Control Board, California Department of Fish and Wildlife, and National Marine Fisheries Service. The purpose of the meeting was to provide background to the State Water Resources Control Board on the development and status of the Habitat Conservation Plan (HCP) for anadromous species and, specifically, the Agreed Flows, which were developed through the HCP process and are included in the Water Rights Project. California Department of Fish and Wildlife and National Marine Fisheries Service staff communicated clear support of the Agreed Flows and Water Rights Project to State Water Resources Control Board staff during the meeting and in follow up emails.

Work is continuing on the development of the Draft EIR, with current work still focusing on refining the scope and extent of the project and associated impact modeling. An update presentation to the Water Commission is planned for December. The Draft EIR is now expected to be circulated for public review in spring 2020, and the Final EIR is expected to be completed in fall/winter of 2020.

Outreach and Communication

Outreach during this quarter has included the following:

- Monthly email newsletters to WSAC email list.
- Presentation to Santa Cruz County Business Council, August 15.

FISCAL IMPACT: None.

PROPOSED MOTION: Receive information on the Water Supply Augmentation Strategy, Quarterly Work Plan Update.

ATTACHMENT(S):
Attachment 1. Gross Daily Water Consumption 2008_2018
Attachment 2. 2019 Water Supply Forecast and Reservoir Drawdown
Attachment 3. Water Code Section 10632
Attachment 4. Groundwater Modeling Scenario Summary
Attachment 5. WSAS High-Level Summary of Tasks and Budget

Gross Daily Water Consumption

2017, 2018, and 2019 compared to 2013

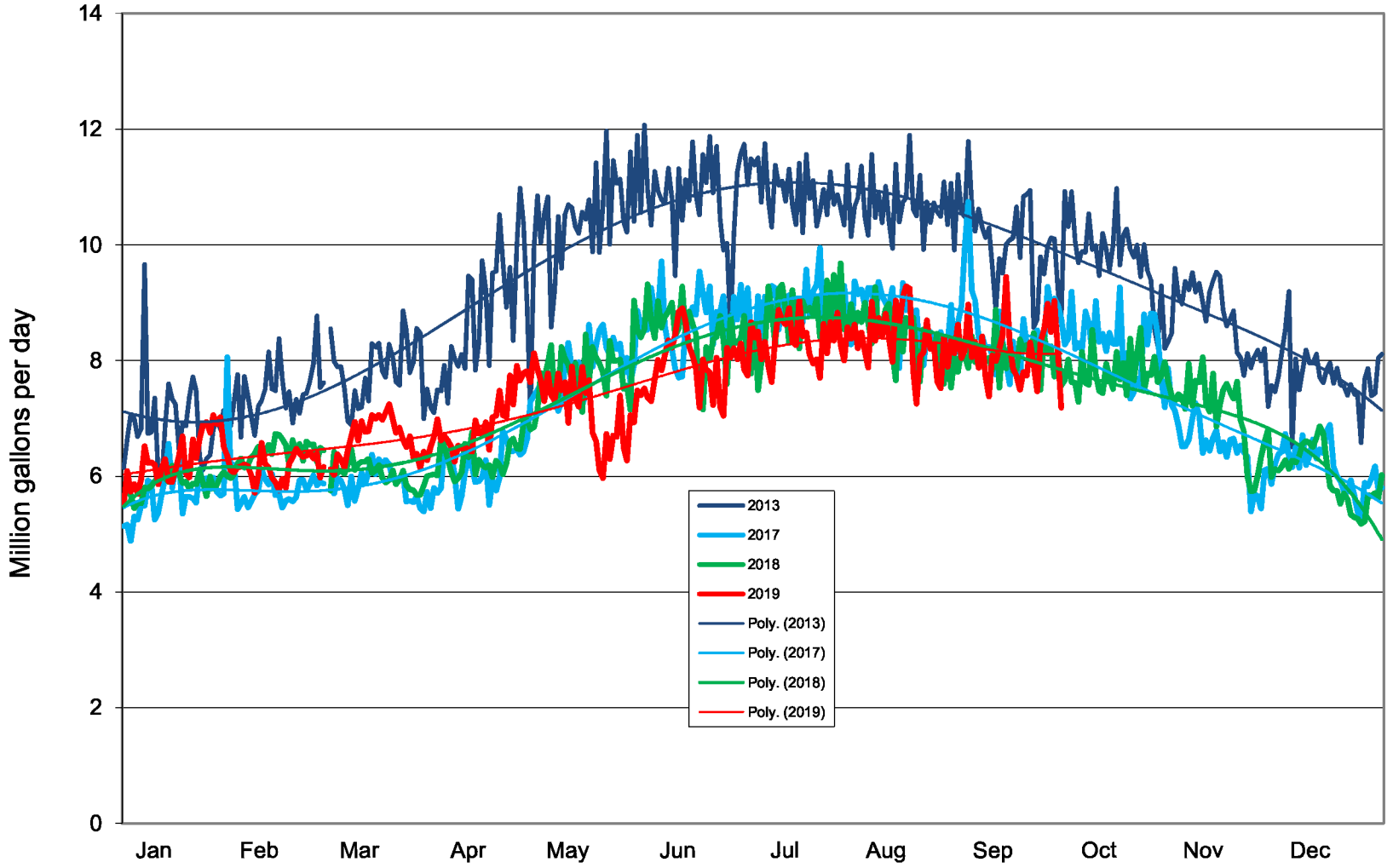
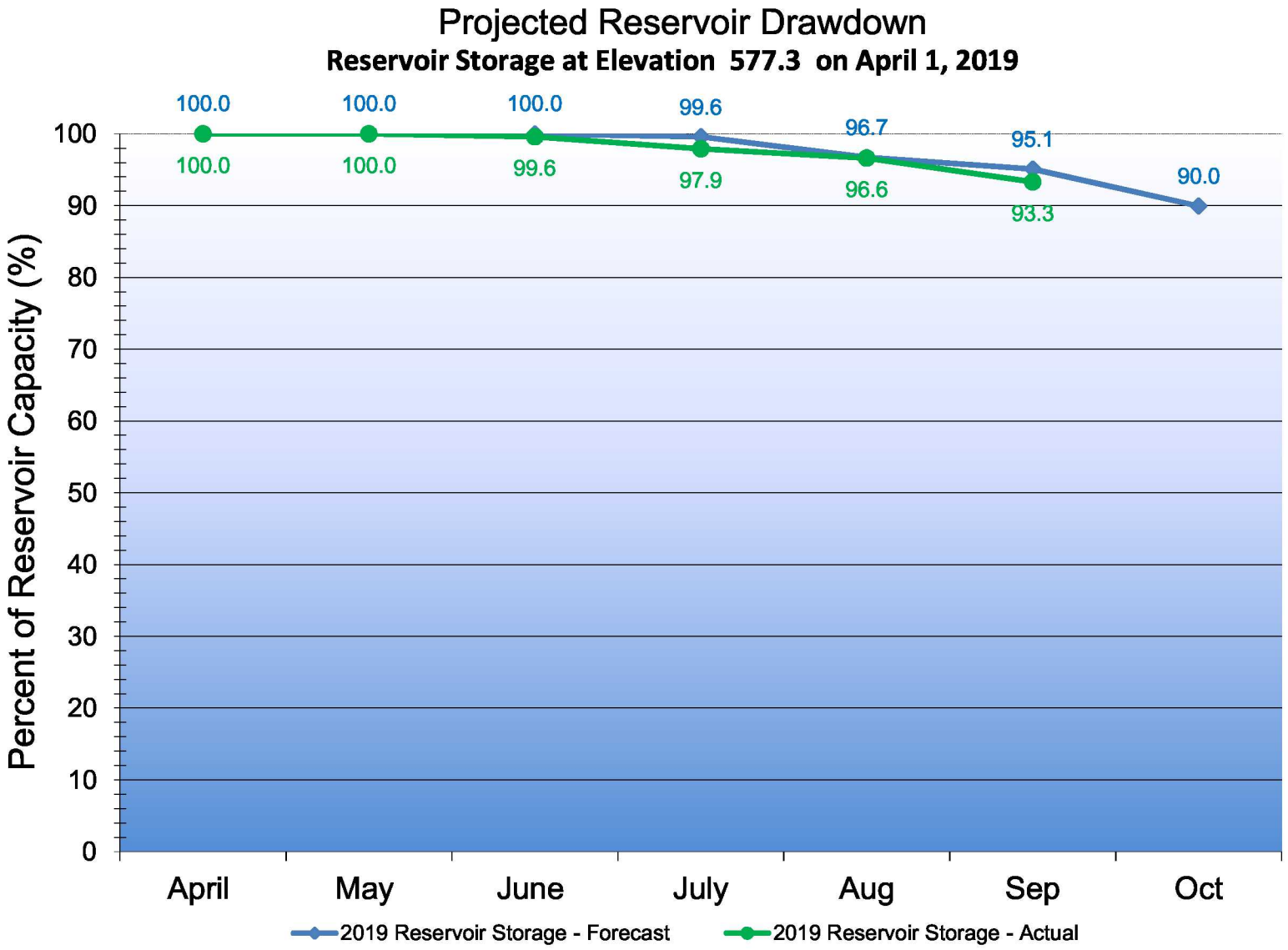


Figure 7.


Projected Reservoir Drawdown
Reservoir Storage at Elevation 577.3 on April 1, 2019
Percent of Reservoir Capacity (%)
100
90
80
70
60
50
40
30
20
10
0
100.0
100.0
100.0
99.6
96.7
95.1
90.0
100.0
100.0
99.6
97.9
96.6
93.3
April
May
June
July
Aug
Sep
Oct
2019 Reservoir Storage - Forecast
2019 Reservoir Storage - Actual

WATER CODE - WAT

DIVISION 6. CONSERVATION, DEVELOPMENT, AND UTILIZATION OF STATE WATER RESOURCES [10000 - 12999]

(Heading of Division 6 amended by Stats. 1957, Ch. 1932.)

PART 2.6. URBAN WATER MANAGEMENT PLANNING [10610 - 10657]

(Part 2.6 added by Stats. 1983, Ch. 1009, Sec. 1.)

CHAPTER 3. Urban Water Management Plans [10620 - 10645]

(Chapter 3 added by Stats. 1983, Ch. 1009, Sec. 1.)

ARTICLE 2. Contents of Plans [10630 - 10634]

(Article 2 added by Stats. 1983, Ch. 1009, Sec. 1.)

10632.

(a) Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan that consists of each of the following elements:

(1) The analysis of water supply reliability conducted pursuant to Section 10635.

(2) The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:

(A) The written decisionmaking process that an urban water supplier will use each year to determine its water supply reliability.

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.

(v) A description and quantification of each source of water supply.

(3) (A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence,

or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.

(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(B) Locally appropriate demand reduction actions to adequately respond to shortages.

(C) Locally appropriate operational changes.

(D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

(5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.

(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.

(C) Any other relevant communications.

(6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.

(7) (A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.

(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.

(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

(8) A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:

(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.

(9) For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

(10) Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

(b) For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

(c) The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.

(Repealed and added by Stats. 2018, Ch. 14, Sec. 32. (SB 606) Effective January 1, 2019.)

15-0111
City of Santa Cruz
ASR Feasibility - Phase 1 Investigation

Groundwater Modeling Scenario Summary

Scenario No.	Assumed City Demands	Climatic Period	Project Type	GW Basin	Infrastructural Capacity (mgd)		Number of Wells		Project Description / Comments
					Inj	Ext	Inj	Ext	
1.0	WSAC Developed	1985 - 2015 (historical)	In-Lieu Only	SMGB	NA	2.0	NA	2	Recharge flows maximized for ea basin based on the In-Lieu demands of each District (i.e., essentially simulates ea basin being utilized in isolation, not conjunctively).
				MCGB	NA	2.0	NA	2	
				Combined	NA	4.0	NA	4	
2.0			ASR Only	SMGB	2.75	2.0	9	9	Recharge and recovery flows split 50/50 between basins.
				MCGB	2.75	2.0	6	6	
				Combined	5.5	4.0	15	15	
3.0			In-Lieu plus ASR	SMGB	1.0	2.0	3	3	Recharge and recovery flows split 50/50 between basins.
				MCGB	0.5	2.0	2	2	
				Combined	1.5	4.0	5	5	
4.0		1973 - 1984 (historical)	In-Lieu Only	SMGB	NA	1.9	NA	2	Recharge and recovery flows apportioned to ea basin proportionally based on relative District demands.
				MCGB	NA	2.1	NA	2	
				Combined	NA	4.0	NA	4	
5.0			ASR Only	SMGB	2.75	2.0	9	9	Recharge and recovery flows split 50/50 between basins.
				MCGB	2.75	2.0	6	6	
				Combined	5.5	4.0	15	15	
6.0			In-Lieu plus ASR	SMGB	0.75	1.89	3	3	In-Lieu recharge and recovery flows apportioned to ea basin proportionally based on relative District demands. ASR flows split 50/50
				MCGB	0.75	2.11	2	2	
				Combined	1.5	4.0	5	5	
7.0		2020 - 2070 (GFDL2.1 A2 Climate Change scenario)	In-Lieu Only	SMGB	NA	1.9	NA	2	Recharge and recovery flows apportioned to ea basin proportionally based on relative District demands.
				MCGB	NA	2.1	NA	2	
				Combined	NA	4.0	NA	4	
8.0			ASR Only	SMGB	3.0	3.0	9	9	Recharge and recovery flows split 50/50 between basins.
				MCGB	3.0	3.0	6	6	
				Combined	6.0	6.0	15	15	
8.1				*MCGB*	*3.0*	*3.0*	*6*	*6*	*Combo run of Scenario 8.0 w/PWS*
8.2					*3.0*	*4.1*	*7*	*7*	*Beltz wellfield only. Combination of converted existing 4 wells and 3 new wells.*
8.3					*3.0*	*4.1*	*7*	*7*	*Combo run of Scenario 8.2 w/PWS*
9.0			In-Lieu plus ASR	SMGB	1.0	3.1	3	3	In-Lieu recharge and recovery flows apportioned to ea basin proportionally based on relative District demands. ASR flows split 50/50.
				MCGB	1.0	3.4	3	3	
				Combined	2.0	6.5	6	6	
10.0	'16 - '18 Demands Projection	2020 - 2070 (Catalog Climate Change scenario)	ASR Only	MCGB	1.5	2.5	4	4	Existing Beltz wells only, converted to ASR.
10.1					1.0	1.5	4	4	*Reduced per-well injection/extraction capacities based on results of Scenario 10.0.*
10.2					1.0	1.5	4	4	*Combo run of Scenario 10.1 w/PWS*

Notes:

WSAS High Level Summary of Tasks and Budget

2019					2020											2021												2022				2023				2024				2025				2026				2027				2028				2029				2030			
A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

Linked Projects & Programs

- Original WSAC Schedule, ~2015 - ~2025
- Modified WSAC Schedule, ~2015 - ~2030 to 2035
- Santa Cruz Water Rights Project, End of CY2020
- GHWTP Improvements, End of CY 2025
- Mid-County GWB GSP Implementation
- 5-year Review of Mid-County GWB GSP
- Santa Margarita GWB GSP Planning
- Santa Margarita GWB GSP Implementation

Water Transfers

- Round 2 SqCWD: Expanded Service Area
- Develop and Implement Long Term Agreements with Neighboring Agencies

Aquifer Storage and Recovery, Mid-County Groundwater Basin (MCGB)

- Round 2 Pilot Work Plan Development
- Round 2 Pilot Beltz 8 (& possibly Beltz 12)
- Round 3 Pilot Work Plan Development
- Round 3 Pilot Beltz 9
- EIR: ASR Existing Infrastructure
- Permitting: ASR Exisitng Infrastructure
- Design: ASR New Infrastructure
- Design: ASR Existing Infrastructure
- EIR/Permitting: ASR New Infrastructure
- Construction: ASR Existing Infrastructure
- Construction: ASR New Infrastructure

Aquifer Storage and Recovery, Santa Margarita Groundwater Basin (SMGB)

- Pilot Testing Work Plan Dev, Property, Construction, Permitting
- Pilot: Phase 1, Extraction Only
- Pilot: Phase 2, Inj & Ext
- Design: ASR Pipeline to SMGB
- Design
- EIR/Permitting: ASR PL to SMGB
- CEQA & Permitting
- Construction: ASR Pipeline
- Construction, 2030 - 2035

Recycled Water

- Phase 2 Study to Advance Feasiblity Analysis and Design of Select Phase 1 Alternatives and any others
- Ongoing Comparative Analysis with Surface Water Supply Alternatives
- Implementation of additional supplemental supply project(s) (RW not included in Annual Budget)

Annual Budget

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
		$2,451,692	$3,355,000	$4,480,800	$7,154,000	$6,554,000	$2,650,000	$2,237,400	$0	$10,362,000	$10,362,000	$1,650,000
Cumulative Budget		$2,451,692	$5,806,692	$10,287,492	$17,441,492	$23,995,492	$26,645,492	$28,882,892	$28,882,892	$39,244,892	$49,606,892	$51,256,892

WATER COMMISSION
INFORMATION REPORT

DATE: 10/2/2019

AGENDA OF: October 7, 2019

TO: Water Commission

FROM: Rosemary Menard

SUBJECT: Draft Staff Report and Agenda for the Planned November 12, 2019 Joint Meeting of the Water Commission and Santa Cruz City Council

---

RECOMMENDATION: That the Water Commission receive information about the planned agenda and informational materials and provide feedback to staff related to the agenda and informational presentation.

BACKGROUND: In preparation for the planned November 12, 2019 joint meeting between the Santa Cruz City Council and the Water Commission, I've prepared a draft of a staff report (Attachment I) and a draft agenda for the meeting (Attachment II) for discussion at the Water Commission's October 7th meeting.

DISCUSSION: Staff would like to hear feedback from Water Commissioners on these materials so that they can be revised and finalized prior to the October 31st deadline for submission of materials for the Council's November 12th meeting. Staff will also be preparing a presentation for this meeting. The draft of the presentation will be included on the Water Commission's November 4th agenda so that we can receive your feedback on it as well.

ATTACHMENTS:

I. Draft Staff Report for November 12th Joint Meeting
   A) April 1st Water Commission Staff Report Cover Memo
      1. Climate Change
      2. Updated Demands
      3. Water Treatment
      4. Surface Water Augmentation
      5. Recycled Water and Desalination
      6. Infrastructure and Water Rights
      7. Financial Challenges and Opportunities
      8. Synthesis and Possible Next Steps

(Attachments 1-8 were previously provided to the Commission and the public at the April 1st meeting and can be accessed at the following link: http://scsire.cityofsantacruz.com/sirepub_watercom/mtgviewer.aspx?meetid=1242&doctype=AGENDA)

B) June 3rd Water Commission Staff Report

C) August 26th Water Commission Staff Report

D) Revised WSAS Schedule

II. Draft November 12th Joint Meeting Agenda

ATTACHMENT I

DRAFT STAFF REPORT FOR NOVEMBER 12, 2019 JOINT MEETING

CITY OF SANTA CRUZ

CITY COUNCIL AGENDA REPORT

DATE: October 31, 2019

AGENDA OF: November 12, 2019

DEPARTMENT: Water

SUBJECT: *Project Title* (WT)

RECOMMENDATION: *Motion to approve an adaptation to and adopt a revised work plan for the November 24, 2015 City Council approved Agreements and Recommendations of the Santa Cruz Water Supply Advisory Committee*

BACKGROUND: Since the City Council approved the recommendations of the Water Supply Advisory Committee in November 2015, Water Department staff, with the active engagement of the City Council appointed Water Commission, has been diligently implementing the Water Supply Augmentation Strategy (WSAS) that was a major product of the Water Supply Advisory Committee's (WSAC) effort.

The WSAS laid out the work plan for 10 years of work for the evaluation of several water supply alternatives, provided for a decision about what projects or portfolio of projects to pursue in 2020, followed by construction or other actions needed to achieve water security by 2025. The alternatives being explored included conservation, utilization of additional surface water for groundwater storage, water transfers/exchanges, and some form of recycled water or desalination project as an alternate supplemental supply should development of more surface water resources prove infeasible.

During the first three years a significant amount of information has been gathered, modeling completed, and feasibility and pilot studies under way. Staff has reported out the water commission on a quarterly basis at a minimum. Following these efforts, among other outcomes, staff has developed a series of recommendations to adapt the WSAS based on the results of work to date. Beginning in the spring of 2019, the Water Commission has received a comprehensive briefing on WSAS work completed to date followed by subsequent discussions at the Water Commission's June, August and October meetings to further develop and refine the recommendations that are presented in this staff report. The key points and outcomes resulting from these discussions are summarized in the DISCUSSION section below.

DISCUSSION: On April 1, 2019, Water Department staff presented a comprehensive update on the outcomes of work on the WSAS work plan between 2015 and the end of 2018. The update included revisiting the WSAC's key assumptions about water demand, and added new information about the Department's CIP program and its costs and implications related to supplemental supply development and broader system priorities for improving infrastructure resiliency as well as adapting to climate change. The final section of the staff report and presentation that provided the staff's synthesis included the following key points:

- Acknowledge that, in the near term, water demand is likely going to be lower than we projected, which means that there are great reliability benefits of developing a smaller groundwater storage project;
- Take advantage of opportunities to improve supply reliability in a way that takes advantage of City's existing infrastructure, as a first step, focusing groundwater storage strategies in the Beltz system;
- Take advantage of the opportunities to improve supply and system reliability through the planned water treatment plant improvements; and
- Continue working to develop our understanding of the potential for future climate change to impact the availability of surface and groundwater resources in the region.

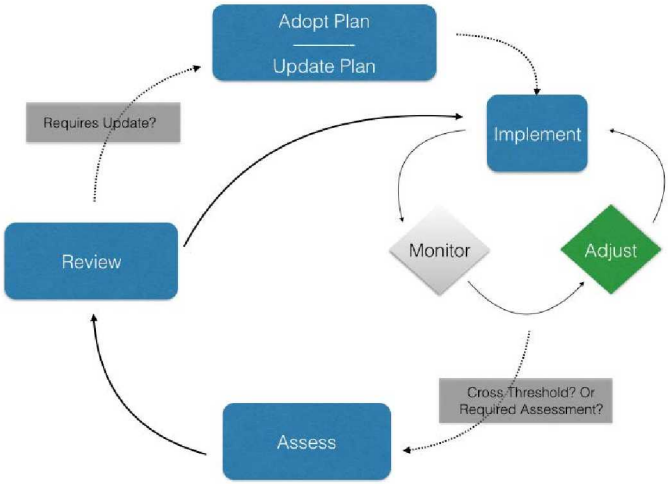
The Water Commission staff report for this item is included as Attachment A-1.

On June 3, 2019, staff prepared a Water Commission agenda item summarizing the analytical work completed to date and the proposed next steps as initially presented in April. Staff's analysis of the proposed next steps is that the changes to the WSAC recommended and Council approved WSAS work plan that are contemplated as part of the proposed next steps are significant enough that they require a formal Adaptation of the plan, a specific action contemplated by the WSAC and included in its recommendations.

WSAC members were wise and realistic about the potential need for modifying or adapting the work plan they developed. They knew that developing new information could lead to a need to adapt the plan and they created a mechanism to support that process, ensuring that any efforts to change the agreed-upon strategy and approach would be done in a transparent way and would be criteria based. The goal of the agreed upon change management strategy was to avoid trying to address each possible eventuality, and to focus on overall program goals rather than implementation specifics. Once a threshold issue has prompted an assessment, other considerations captured in the Guiding Principles, such as regional collaborations or the collateral benefits of an approach, may be taken into consideration.

The figure below was included in the WSAC's Final Report on Agreements and Recommendations[1]. The figure is an elaboration on the standard "Plan, Do, Check, Act" approach to project or program development and implementation.

[1] See Section 3.24 of the WSAC report, which you can find at:
http://www.santacruzwatersupply.com/meeting/wsac-final-reportrecommendation-appendices



The model contemplated two kinds of change: an **Adjustment**, which was defined as is a change in implementation that helps the Plan stay on track. In a continuous feedback loop, the Water Department will make adjustments to help achieve (or exceed) performance targets for the various Plan Elements. Adjustments were contemplated as being part of the small circle shown on the right-hand side of the figure. An example of an Adjustment would be changing the size of the potential worst year water shortage based on new climate change analyses.

An **Adaptation**, on the other hand, was defined as a shift from an Element or a set of Elements to another Element or set of Elements within the Plan's Adaptive Pathway. An adaptation may be recommended when certain thresholds are reached. **Thresholds** were defined as the set of information that leads to an Assessment of the Plan and possible adaptation. An example of an Adaptation would be adding or removing a key threshold or decision criterion.

The Committee identified thresholds for the key issues that need to be considered during decision-making about a possible Adaptation. The thresholds are:

- Cost
- Yield
- Timeliness

The WSAC Final Report on Agreements and Recommendations identified specific steps for adjusting the Plan. It includes three components: Assessments, Reviews and Update to Plan

1. An **Assessment** is performed by the Water Department and includes updated information and a recommendation about whether a change to the Plan is needed.
2. The Water Department submits a report to the Water Commission for its **Review, including development of recommendations to the Council**. Following Water Commission action, the recommendation is forwarded to the Council for its consideration.
3. If the Council so chooses, the Plan will be **updated**.

The Water Commission staff report for the June 3, 2019 agenda item is included as Attachment A-2.

On August 26, 2019, staff prepared and presented an Assessment and specific recommendations for adapting the Water Supply Augmentation Strategy including the proposal for a revised work plan for continuing work on additional supplement water supply options. The proposed revised work plan included the following:

a. Retain the elements of the current WSAS relating to in-lieu water transfers to support ongoing regional discussions about the potential for working with regional entities on in-lieu water transfers or exchanges;
b. Continue exploring additional opportunities for developing ASR in the Santa Margarita Basin as well as additional opportunities for further development of ASR facilities and infrastructure in the Mid-County Groundwater Basin;
c. Design and implement an approach to evaluating the sensitivity of the City's surface water resources to the impacts of climate change with a goal of providing the information necessary to appropriately compare the long-term viability of additional surface water development with other available alternative strategies identified by the WSAC;
d. Given the results of the climate change analyses, develop feasible supplemental water supply projects using surface water as the source of supply to be used in the WSAC recommended comparative analysis methodology;
e. Complete the planned Phase II Recycled Water Study, including developing feasible supplemental water supply projects using recycled water as the source of supply; and
f. Plan to make decisions about any additional supplemental supply project based on all the information developed in items a through e above, and by using the WSAC recommended comparative analysis methodology.

In staff's analysis, the actions being recommended represent a set of "low-regrets" or "no-regrets" actions that are entirely aligned with the WSAC's goals and priorities and can be readily implemented in the coming months and years.

In addition, in August, the Water Commission agenda included a workshop on climate change that involved a detailed presentation about the climate change models that have been developed and used in various Water Department and Mid-County Groundwater Agency modeling efforts. The presentation also covered additional work that staff is recommending be conducted to help further explore the vulnerability of our local surface water resources to the anticipated impacts of climate change, especially longer, multi-year droughts.

Following staff's presentation of its analysis and recommendations in August, the Water Commission provided feedback for additional information it wanted to see developed as part of future work, some of which related specifically to the proposed adaptation of the Water Supply Augmentation Strategy and some of which related to work plan items for additional work plan analysis assuming the adaption is approved by the Council. The lists below summarize these items:

- Items related to an Adaption to the Water Supply Augmentation Strategy:
  - Provide a more detailed work plan and schedule for the revised strategy, including specific decision points for the revised work plan; and

- Provide more details about the costs of "low regrets" actions, particularly the Beltz only ASR;

- Items related to the Revised Work Plan:
  - Results of groundwater modeling that will further document both the potential for a Beltz ASR project to increase drought supply as well as maintain protective groundwater elevations at coastal monitoring wells that will support achieving Sustainable Groundwater Management Act objectives; and
  - Resolution of the question, likely through groundwater modeling, of whether or under what conditions the City could count on generating drought supply as a result of potential future water transfers with the Soquel Creek Water District.

The Water Commission staff report for August 26, 2019 agenda item is included as Attachment A-3.

The October 7, 2019 Water Commission Agenda included a more detailed schedules for the revised work plan as well as more detailed information about the costs and yields of "low regrets" actions, particularly the Beltz only ASR program that would be developed to leverage existing infrastructure. (NOTE: additional detail would be added here as needed following the Water Commission's October 7th discussion.)

Attachment A-4 is a Draft of the new WSAS schedule with a new mid-2022 decision-point for a comparative analysis of additional water supply alternatives followed by implementation actions for the selected project or projects.

FISCAL IMPACT: There is no fiscal impact of this action. Funding for all work has already been included in the Department's budget and CIP.

Prepared by:	Submitted by:	Approved by:
Rosemary Menard Water Director	Rosemary Menard Water Director	Martín Bernal City Manager

ATTACHMENTS:

A-1. April 1st Water Commission Staff Report Cover Memo
- i) Attachment 1 - Climate Change
- ii) Attachment 2 - Updated Demands
- iii) Attachment 3 - Water Treatment
- iv) Attachment 4 - Surface Water Augmentation
- v) Attachment 5 - Recycled Water and Desalination
- vi) Attachment 6 - Infrastructure and Water Rights
- vii) Attachment 7 - Financial Challenges and Opportunities

viii) Attachment 8 - Synthesis and Possible Next Steps

A-2. June 3rd Water Commission Staff Report

A-3. August 26th Water Commission Staff Report

A-4. Revised WSAS Schedule

WATER COMMISSION
INFORMATION REPORT

DATE:

AGENDA OF: April 1, 2019

TO: Water Commission

FROM: Rosemary Menard

SUBJECT: Joint Workshop with Former Water Supply Advisory Committee

---

RECOMMENDATION: That the Water Commission receive a comprehensive informational briefing on current progress and status in implementing the Water Supply Augmentation Strategy recommended by the Water Supply Advisory Committee and unanimously accepted by the Santa Cruz City Council in November 2015 and provide feedback to staff on issues and questions related to the materials presented.

BACKGROUND: Between April 2014 and October 2015, the City Council-appointed Water Supply Advisory Committee (WSAC) met to develop agreements and recommendations to the City Council about what actions the City should take to improve the reliability of the Santa Cruz water supply. The WSAC's recommendations were presented to and unanimously accepted by the Santa Cruz City Council in November 2015.

Since that time, the Water Department has been implementing the Water Supply Augmentation Strategy (WSAS) Work Plan developed during the WSAC process and approved as part of the City Council action. A companion effort to establish the financial sustainability strategy necessary to support implementation of both the WSAS work plan and necessary capital investments in critical water system infrastructure was completed in 2016.

A high level summary of progress to date both in accomplishing the WSAS work plan and moving forward with the capital program is provided below.

WSAS Work Plan[1]

- Pilot testing of both water transfers and aquifer storage and recovery in the mid county basin

[1] For additional information, the WSAS March 2019 Quarterly Update can be found at this link under Item 5. http://www.cityofsantacruz.com/Home/ShowDocument?id=75237

- Groundwater modeling that is informing the scope and size of groundwater storage alternatives
- Improved understanding of the opportunities and limitations of recycled water and desalination

Capital Investments Infrastructure Improvements

- Treatment/Graham Hill Water Treatment Plant
  - evaluating treatment plant improvements for current capacity and water quality regulations as well as potential future demands, conjunctive use, water quality regulatory changes
  - completed rehabilitation of granular media filters
  - under contract to replace tube settlers
  - in 75% design for replacement of concrete tanks (construction begins 2020)

- Raw water diversions
  - evaluating diversion capacities for current and potential future needs
  - condition assessment of both Laguna and Majors diversions complete
  - replaced bladder dam at Felton Diversion

- Raw water pipeline
  - evaluating capacity requirements for current and potential future needs and uses
  - condition assessment of Newell Creek Pipeline underway
  - replacement of raw water pipeline under river at Tait Street under construction fall 2019

- Other
  - U5 tank demolished and being replace – complete end of 2019
  - 90% plans for Newell Creek Dam Inlet/Outlet Replacement project under review

Similarly, the Department's analytical work has evolved considerably using a greater range of parameters that help produce results to better inform decision-making. For example, our modeling work includes a large range of potential conditions as summarized in the table on the following page. Those in bold are newer considerations.

Parameter	Value
Demands	• WSAC 3.2BG • **2016-2018 2.6 BG**
Climate Change	• Historical • GFDL2.1 A2 • **CMIP5** • **Catalog**
GHWTP Treatment Water Quality	• **Ability to treat more turbid water at GHWTP**
GHWTP Treatment Capacity	• 16.5mgd • **18mgd**
Infrastructure Sizing for Drought Supply Created by In-Lieu, ASR or a Combination	• **Infrastructure required to meet historic and climate change scenarios for 3.2 BG demand, with and without treatment plant improvements** • **Infrastructure required to meet historic and climate change scenarios for 2.6 BG demand, with and without treatment plant improvements**
Supplemental Water Supply for Soquel Creek Water District (In-Lieu)	• **300mgy (off-peak season)** • **500mgy (off-peak season)** • **1,500mgy (year round)**
ASR Scope	• WSAC Project • **Beltz – Existing infrastructure** • **Beltz – New infrastructure**
In Lieu & ASR Operations	• Year Round • **Seasonal (Nov – April Inject; May – Oct Withdraw)**
Project Alternatives	• In-Lieu • ASR • In-Lieu plus ASR • **ASR plus PureWaterSoquel**

DISCUSSION: The goal of this Water Commission agenda item is to provide a comprehensive update on the status of the work to date, laying out and integrating information directly produced as a result of implementing the WSAS work plan and the Department's ongoing financial and capital improvement planning and connect this work with other analyses being conducted as part of ongoing work of regional bodies working to comply with the Sustainable Groundwater Management Act, and develop Groundwater Sustainability Plans for both the Santa Cruz Mid-County and the Santa Margarita Groundwater basins.

The written materials prepared for this agenda item are specifically designed to take the readers through the evolution of the information that staff is familiar with and how staff has viewed this material when taken as a whole. Our purpose in sharing these details is to be transparent about

the various inputs and analytical results that are informing our thinking. Our purpose is also to "paint a picture" of where the information that has developed takes us, including how those of us who are actively engaged in both the City's own work as well as the work of other regional partners are seeing some opportunities for early "no-regrets" actions that could substantially improve supply reliability in the near term and ahead of the scheduled WSAC decision process in 2020. In addition, staff has identified a need to take more time to consider the implications of climate change and any trends in local water demand prior to pursuing strategies that could be needed in a second phase of work to ensure long term supply reliability. We want to share these perspectives, explain our thinking, and hear your questions, concerns and alternate views that may further inform recommendations that would be developed and brought forward for Water Commission action at a future meeting on recommendations to the City Council.

To support this discussion, we've prepared a series of topic-specific summary technical memos and provided relevant back-up documentation for each topic as appropriate. The topics covered include the following:

1. Climate Change
2. Water Demand
3. Water Treatment
4. Surface Water Augmentation
5. Recycled Water and Desalination
6. Infrastructure and Water Rights
7. Financial Challenges and Opportunities
8. Synthesis and Possible Next Steps.

FISCAL IMPACT: None at this time.

PROPOSED MOTION: Motion to accept the information on current progress and status in implementing the Water Supply Augmentation Strategy recommended by the Water Supply Advisory Committee and unanimously accepted by the Santa Cruz City Council in November 2015 and provide feedback to staff on issues and questions related to the materials presented.

ATTACHMENTS:

1. Climate Change – how projections are evolving and what it means
2. Water Demand – how it's changing
3. Water Treatment
4. Improving Supply Reliability through Surface Water Augmentation
5. Recycled Water and Desalination
6. Infrastructure and Water Rights
7. Financial Challenges and Opportunities
8. Synthesis and Possible Next Steps

CITY OF SANTA CRUZ

WATER COMMISSION
INFORMATION REPORT

DATE:

AGENDA OF: June 3, 2019

TO: Water Commission

FROM: Rosemary Menard, Water Director

SUBJECT: WSAS Strategy and Work Plan

RECOMMENDATION: That the Water Commission receive information about potential next steps for revising the Water Supply Augmentation Strategy and WSAC Work Plan and Time Line to reflect potential opportunities for early action to improve water supply reliability, potential needs to potential changes in the WSAC recommended decision schedule, and provide feedback to staff to assist with further development of an updated strategy and work plan.

BACKGROUND: At the Water Commission's April 1, 2019 meeting, staff presented a detailed status report on its work to date in implementing the Water Supply Augmentation Strategy that was developed by the 2014-2015 Water Supply Advisory Committee (WSAC) and accepted by the City Council in November 2015. The Department's report covered content in eight topic areas:

1. Climate Change
2. Water Demand
3. Water Treatment
4. Surface Water Augmentation
5. Recycled Water and Desalination
6. Infrastructure and Water Rights
7. Financial Challenges and Opportunities
8. Synthesis and Possible Next Steps.

The full set of meeting materials provided to Commissioners and the public, including the agenda packet and a presentation with a linked audio file can be accessed at http://scsire.cityofsantacruz.com/sirepub_watercom/mtgviewer.aspx?meetid=1254&doctype=AGENDA and: https://drive.google.com/file/d/13QH9BKSqi0svTJT4QlvBMR1WWUTcAYH8/view?usp=sharing, respectively.

At the end of the presentation, staff's synthesis of the work to date and some ideas about possible next steps were described. The goal at that time was not to have the Water Commission take action, but rather to provide Commissioners and the public with a preview of the staff's thinking and ideas for moving forward as a prelude to planned further discussion in subsequent Commission meetings.

DISCUSSION: The WSAC's Water Supply Augmentation Strategy Work Plan describes a series of actions through a fairly discrete 5-year planning phase, followed by 5-years of implementation of a project or series of projects. This plan was focused on making a major decision on a water supply augmentation project or portfolio of projects during calendar year 2020.

As summarized in the overview of all the WSAS implementation work at the April 1st Commission meeting, substantial progress has been made in completing the work the WSAC contemplated would need to be completed in order to make a supplemental supply decision in 2020. However, the WSAC work did not have the benefit of being informed by the more comprehensive assessment of the size or scope of the infrastructure rehabilitation and replacement initiative that has been developed to identify and begin implementing projects to address the condition of critical infrastructure and reinvest in the system in a manner that will improve overall resilience and prepare the system to adapt to climate change. The section of the April 1st agenda that described the capital intensive system reinvestment initiative ahead also outlined the financial challenges that the utility and its customers face in the years ahead. These financial challenges unavoidably impact the earlier thinking about supplemental supply and have informed staff's current thinking about next steps.

At a macro level, staff's thinking, as presented at the April 1st meeting included the following:

- We need to acknowledge that in the near term, water demand is likely going to be lower than we projected, which means that there are great reliability benefits of developing a smaller groundwater storage project;
- We need to look for ways to improve supply reliability in a way that takes advantage of City's existing infrastructure, as a first step, focusing groundwater storage strategies in the Beltz system;
- We need to leverage system reliability benefits of planned water treatment plant improvements; and
- We need to continue working to develop our understanding of the potential for future climate change to impact the availability of surface and groundwater resources in the region.

At a micro level, staff's recommendations for next steps include modifying the WSAC work plan to include near-term, no-regret actions described above, followed by long-term actions that would consider possible increases in demand, new implications of climate change, and the "unknown unknowns" that could influence decision-making and the timing of additional decisions.

With respect to the potential implications of climate change of the availability and reliability of local surface water resources, staff believes it will be important to continue working to increase its understanding of the trends, outcomes and implications of climate change. We know that we will not at any time be certain what the future holds; however, a key implication of the climate data sets is that they each reflect some aspect of what might be expected for future climate conditions. Our use of these projections to analyze the potential for significant climate stress to the water supply system provides a solid planning basis because we can identify commonalities to water supply strategies across the range of conditions, but also specific conditions that may require strategies not yet identified.

A conceptual level work plan, reiterated from the April Commission meeting, is included as Attachment 1. The actions generalized in the schedule are described below. Dates are approximate and will be refined over the next 2-3 months.

FY2020

- Design ASR using existing infrastructure in MCGB (2020-22)
- Convert Beltz 12 to permanent ASR or, more likely, prep for second year of piloting
- Prep Beltz 9 for ASR pilot and pilot
- Install monitoring well in Tu at the coast
- Develop a work plan for SMGB/Develop CEQA work plan for SMGB
- Continue work with
    - Fiske (supply modeling)
    - Balance (climate change modeling)
    - M-Cubed (updated demand forecast, in preparation for the 2020 Urban Water Management Plan)
    - Corona (system stress testing, risk analysis and portfolio development)
- Begin Energy Plan
- Ongoing ASR and In-lieu infrastructure planning work

FY2020/21

- Implement ASR using existing infrastructure (Beltz 12)
- Design ASR using existing and possible new infrastructure in MGB (2020-22)
- Ongoing CEQA for SMGB (2020-21)
- CEQA for ASR existing and new infrastructure in MBG
- Install test well in SMGB
- Pilot in SMGB
- Continue work with
    - Fiske (supply modeling)
    - Balance (climate change modeling)
    - M-Cubed (demand projections)
    - Corona (risk analysis and portfolio development

FY2022

- Implement ASR using existing infrastructure (Beltz 9)
- Potential purchase of well sites for ASR New Infrastructure (2022-24)
- Consider Purchasing Property(s) in SMGB for advanced planning/CEQA
- Design ASR using existing and new infrastructure in MCGB (2020-22)
- Design treatment for potential new ASR in MCGB (2020-2022)
- Treatment Improvements to GHWTP (2022-2025)

FY2023

- Construct potential new wells, treatment, pipelines in MCGB (2023-25)

FY2025/26

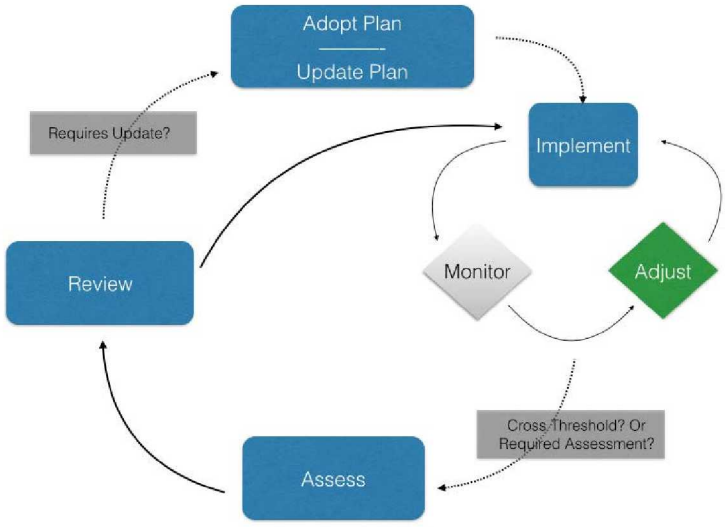
- Ongoing evaluation of recycled water opportunities/begin work in SMGB

Updating and Modifying the WSAC Work Plan

Staff's analysis of the proposed work plan summarized above is that it constitutes a change in the WSAC's recommended plan. WSAC members were wise and realistic about the potential need for modifying or adapting the work plan they developed. They knew that developing new information could lead to a need to adapt the plan and they created a mechanism to support that process, ensuring that any efforts to change the agreed-upon strategy and approach would be done in a transparent way and would be criteria based. The goal of the agreed upon change management strategy was to avoid trying to address each possible eventuality, and to focus on overall program goals rather than implementation specifics. Once a threshold issue has prompted an assessment, other considerations captured in the Guiding Principles, such as regional collaborations or the collateral benefits of an approach, may be taken into consideration.

The figure below was included in the WSAC's Final Report on Agreements and Recommendations[1]. The figure is an elaboration on the standard "Plan, Do, Check, Act" approach to project or program development and implementation.

[1] See Section 3.24 of the WSAC report, which you can find at:
http://www.santacruzwatersupply.com/meeting/wsac-final-reportrecommendation-appendices



The model contemplated two kinds of change: an **adjustment**, which was defined as is a change in implementation that helps the Plan stay on track. In a continuous feedback loop, the Water Department will make adjustments to help achieve (or exceed) performance targets for the various Plan Elements. Adjustments were contemplated as being part of the small circle shown on the right-hand side of the figure.

An **adaptation**, on the other hand, was defined as a shift from an Element or a set of Elements to another Element or set of Elements within the Plan's Adaptive Pathway. An adaptation may be recommended when certain thresholds are reached. **Thresholds** were defined as the set of information that leads to an Assessment of the Plan and possible adaptation.

The Committee identified thresholds for the key issues that need to be considered during decision-making about a possible Adaptation. The thresholds are:

- Cost
- Yield
- Timeliness

The WSAC Final Report on Agreements and Recommendations identified specific steps for adjusting the Plan. It includes three components: Assessments, Reviews and Update to Plan

1. An **Assessment** is performed by the Water Department and includes updated information and a recommendation about whether a change to the Plan is needed.
2. The Water Department submits a report to the Water Commission for its **Review, including development of recommendations to the Council**. Following Water Commission action, the recommendation is forwarded to the Council for its consideration.
3. If the Council so chooses, the Plan will be **updated**.

Staff considers this Water Commission Agenda Item to be an initial discussion of a range of potential changes to the WSAC recommended plan that would be followed by more specific analyses that would be developed to further inform any proposed revisions before any Water

Commission action to recommend an adjustment to the plan to the City Council for its considerations. Staff's goal for the Commission discussion on June 3rd is to hear your feedback about the ideas first presented on April 1st as part of the "Synthesis and Next Steps" report and reiterated as part of this agenda item and reach agreement about additional work to be completed in preparation for a potential discussion with Council about adapting the WSAC plan, which would be tentatively scheduled sometime in the fall of 2019.

FISCAL IMPACT: None. Funding for ongoing work on supplemental supply options has been included in the FY 2020 Operating and Capital Budgets.

PROPOSED MOTION: Motion to provide feedback to staff to assist with further development of an updated WSAS strategy and work plan.

ATTACHMENT(S):
Attachment 1 – Draft Conceptual Level Work Plan, March 2019

CITY OF SANTA CRUZ

WATER COMMISSION
INFORMATION REPORT

DATE:

AGENDA OF: August 26, 2019

TO: Water Commission

FROM: Rosemary Menard, Water Director

SUBJECT: WSAC Plan Adaptation

RECOMMENDATION: That the Water Commission provide feedback to staff on its draft recommendation to propose an Adaptation to the Council approved Recommendations developed by the Water Supply Advisory Committee.

BACKGROUND: At the Water Commission's April 1st Joint Study Session with the former members of the Water Supply Advisory Committee, and the June 3rd , 2019 Water Supply Augmentation Strategy quarterly report, staff presented detailed status reports on its work to date in implementing the Water Supply Augmentation Strategy that was developed by the 2014-2015 Water Supply Advisory Committee (WSAC) and accepted by the City Council in November 2015. At the end of the presentations, staff's synthesis of the work to date and some ideas about possible next steps were described. The goal for the discussion at both of the earlier meetings was not to have the Water Commission take action, but rather to provide Commissioners and the public with a preview of the staff's thinking and ideas for moving forward as a prelude to planned further discussion in subsequent Commission meetings.

The WSAC's Water Supply Augmentation Strategy Work Plan describes a series of actions through a fairly discrete 5-year planning phase, followed by 5 years of implementation of a project or series of projects. This plan was focused on making a major decision on a water supply augmentation project or portfolio of projects during calendar year 2020, and included provisions for adjusting or adapting the WSAC work plan, in the event that new information had been developed, as part of the planning process made it appropriate to do so.

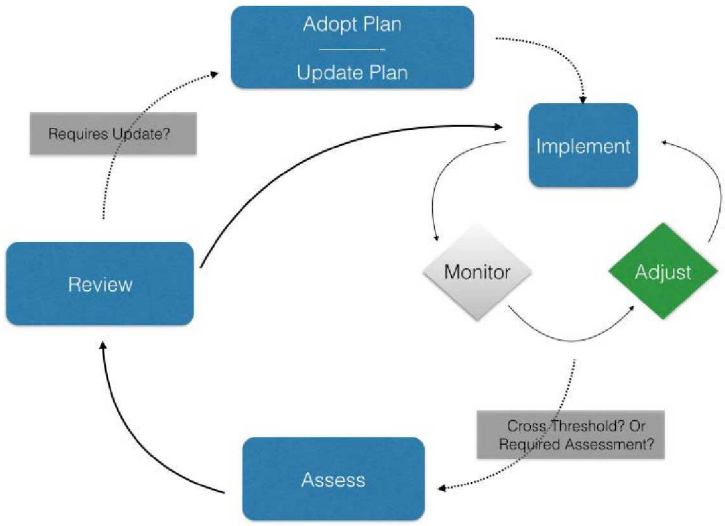
Updating and Modifying the WSAC Work Plan

WSAC members were wise and realistic about the potential need for modifying or adapting the work plan they had developed. They knew that developing new information could lead to a need to adapt the plan and they created a mechanism to support that process, ensuring that any efforts to change the agreed-upon strategy and approach would be done in a transparent way and would

be criteria based. Specifically, the WSAC recommended three threshold criteria be considered, cost, yield, and timeliness, and also identified other criteria to be considered in the WSAC recommended Guiding Principles. System robustness, resilience, redundancy and adaptive flexibility were specifically identified by the WSAC as important values when considering an Adaptation.

The goal of the agreed upon change management strategy was to avoid trying to address each possible eventuality, and to focus on overall program goals rather than implementation specifics. Once a threshold issue has prompted an assessment, other considerations captured in the Guiding Principles, such as regional collaborations or the collateral benefits of an approach, may be taken into consideration.

The figure below was included in the WSAC's Final Report on Agreements and Recommendations[1]. The figure is an elaboration on the standard "Plan, Do, Check, Act" approach to project or program development and implementation.



The model contemplated two kinds of change: an **adjustment**, which was defined as a change in implementation that helps the Plan stay on track. In a continuous feedback loop, the Water Department will make adjustments to help achieve (or exceed) performance targets for the various Plan Elements. Adjustments were contemplated as being part of the small circle shown on the right-hand side of the figure.

An **adaptation**, on the other hand, was defined as a shift from an Element or a set of Elements to another Element or set of Elements within the Plan's Adaptive Pathway. An adaptation may be recommended when certain thresholds are reached. **Thresholds** were defined as the set of information that leads to an Assessment of the Plan and possible adaptation.

[1] See Section 3.24 of the WSAC report, which you can find at:
http://www.santacruzwatersupply.com/meeting/wsac-final-reportrecommendation-appendices

The Committee identified thresholds for the key issues that need to be considered during decision-making about a possible Adaptation. The thresholds are:

- Cost
- Yield
- Timeliness

The WSAC Final Report on Agreements and Recommendations identified specific steps for an Adaptation of the Plan. It includes three components: Assessments, Reviews and Update to Plan

1. An **Assessment** is performed by the Water Department and includes updated information and a recommendation about whether a change to the Plan is needed.
2. The Water Department submits the Assessment to the Water Commission for its **Review** and action. The Assessment includes the proposed work plan revisions that are needed due to changed assumptions for one or more of the Threshold criteria. The Water Commission then develops its **Recommendation** to the City Council for an update to the Plan.
3. The City Council considers the Water Commission's recommendation and, if approved, takes action to **Update the Plan**.

DISCUSSION: Water Department staff is recommending that the Water Commission approve an Adaptation to the WSAC Work Plan (also known as the Water Supply Augmentation Strategy) for the following reasons:

1. Cost – as noted in the Water Commission materials for the April 1st and June 3rd meetings, costs for the work the Department is doing to improve the resiliency of the water system in the face of climate change as well as those associated with improving system reliability through improving the robustness of the City's surface water treatment process are reducing the Department's ability to fully fund all potential planned investments in supplemental water supply.
2. Yield – the reality of near term financial constraints make it unlikely that the full yield required to address worst year water shortages can be produced in the timeline provided. However, it is likely that an increment of supplemental supply can be developed in the very near term and that, due to leveraging existing facilities and systems, the additional supply that can be developed will be quite cost-effective.
3. Timeliness – a delay in completing all the supplemental supply projects necessary to address the projected shortage under the worst year hydrologic conditions represents a threshold condition for the Timeliness criteria.

As noted in the April 1st and June 3rd Water Commission meetings, the Department staff is recommending two changes to the WSAC work plan:

1. Move to immediate implementation of two "no regrets" actions that, given the lower near term demand that has been observed, will contribute to reducing the worst year water shortage and increase both water supply and water system reliability. The two actions are:
    a. Move forward with further pilot testing and implementation of aquifer storage and recovery in the City's portion of the Purisima basin, which is part of the Santa Cruz

Mid-County Groundwater Basin, by leveraging the existing infrastructure of the Beltz groundwater system and investing in further wells if and as needed to help close the worst year shortage gap; and

b. Move forward with planned investments in the Graham Hill Water Treatment Plant that will produce an enhanced ability to treat available resources under a larger range of both wet weather and dry weather conditions.

2. Develop a revised work plan for a continuing work on additional supplement water supply options for future development to include the following:
   a. Retain the elements of the current WSAS relating to in-lieu water transfers to support ongoing regional discussions about the potential for working with regional entities on in-lieu water transfers or exchanges;
   b. Continue exploring additional opportunities for developing ASR in the Santa Margarita Basin;
   c. Design and implement an approach to evaluating the sensitivity of the City's surface water resoures to the impacts of climate change with a goal of providing the information necessary to appropriately compare the long-term viability of additional surface water development with other available alternative strategies identified by the WSAC;
   d. Given the results of the climate change analyses, develop feasible supplemental water supply projects using surface water as the source of supply to be used in the WSAC recommended comparative analysis methodology;
   e. Complete the planned Phase II Recycled Water Study, including developing feasible supplemental water supply projects using recycled water as the source of supply; and
   f. Plan to make decisions about any additional supplemental supply project based on all the information developed in items a through e above, and by using the WSAC recommended comparative analysis methodology.

Should the Water Commission support staff's recommendation, the schedule for Council consideration would be as follows:

- Water Commission review of the proposed Adaptation: August 26th
- Final Water Commission action on its recommendation: October 7th
- Staff/Water Commission presentation of proposed Adaption to the Council and Joint Water Commission/City Council session: November 12th.

FISCAL IMPACT: None. Funding for ongoing work on supplemental supply options has been included in the FY 2020 Operating and Capital Budgets.

PROPOSED MOTION: Motion to provide feedback to staff on the Adaptation analysis and the draft updated WSAS work plan.

Water Supply Augmentation Strategy Revised Work Plan – October 2019

Related Planning Work

- Finalize Mid County GSP
- Implement Mid-County Groundwater Sustainability Plan through 2024
- Update Mid-County GSP update due January 2025
- Santa Margarita Groundwater Sustainability Plan Development final due to the state January 2022
- Implement Santa Margarita GSP through 2026
- Update Urban Water Management Plan New Long Term Demand Forecast 11/20
- Update Urban Water Management Plan Due 7/1/26
- Rehab GHWTP Tube Settlers and Flocculators through 8/20
- GHWTP Concrete Tank Construction Mid-202 through 2022
- Construction of GHWTP Facility Improvement Project 2023 through 2027
- Additional Supply Increment

Modeling and Climate Analyses

- Groundwater Modeling Beltz Wellfield, Existing Infrastructure
- Groundwater Modeling Santa Margarita ASR for SMGWB GSP and Santa Cruz Supplemental Supply
- Confluence Modeling – Beltz ASR Supplemental Supply
- Confluence Modeling – Santa Margarita ASR Supplemental Supply
- Climate Change Analyses/Surface Water Vulnerability/Inputs to Supply Scenario Planning

7.23 r Transfers

- Final Year of Soquel Water Transfer Pilot
- Explore Additional Water Transfers With Soquel Creek, Resolve Issue of Getting Water Back/Establish Price
- Possible Additional Supply Increment
- If Applicable, Implement Ongoing Water Transfers/Water Exchanges
- Water Rights EIR and State Board Water Rights Change Process; Place of Use Issues Resolved – mid 2021
- Work with Santa Margarita Basin Partners on Potential Water Transfers And Water Exchanges – this task would include any preliminary design of a project or projects and CEQA. Implementation likely in connection with any SMGWB ASR
- Possible Additional Supply Increment

Beltz ASR

- ASR in Beltz Wellfield Using Existing Infrastructure
- Additional Supply Increment
- Evaluate Opportunities for ASR Beltz Wellfield – New Infrastructure
- Additional Beltz ASR Alternative
- CEQA and Permitting for New ASR Infrastructure
- New Beltz ASR Facility and Infrastructue Construction 2026-2027
- Additional Supply Increment

Santa Margarita ASR

- Work Plan for Pilot Testing for ASR in the Santa Margarita Basin
- Pilot Testing ASR in the Santa Margarita Basin
- Santa Margarita ASR Alternative
- If Proceeding Santa Margarita Groundwater Basin ASR Infrastructure Development (wellfield, pipelines) CEQA, Design, Permitting
- Santa Margarita ASR Facility and Infrastructure Construction 2026-2027
- Additional Supply Increment

Recycled Water Options

- Phase 2, Recycled Water Study and Identification of Potable Reuse Recycled Water Alternatives
- Potable Reuse Alternative
- WSAC Comparative Analysis Additional Supply Alternatives
- Decision on additional supply project or projects
- If Proceeding with Potable Reuse Alternative Infrastructure Development (e.g., treatment, pipelines, wellfield) CEQA, Design, Permitting
- Potable Reuse Facility and Infrastructure Construction 2026-2027
- Additional Supply Increment

1/20 1/21 1/22 1/23 1/24 1/25 1/26 1/27

10/19 12/27

ATTACHMENT II

DRAFT JOINT MEETING AGENDA

7:30 PM

Call to Order	Mayor Martine Watkins Water Commission Chair, Doug Engfer
Roll Call	City Clerk, Bonnie Bush
Welcome, Opening Remarks, Meeting Goals	Mayor Martine Watkins Water Commission Chair, Doug Engfer
Presentation – Summary of WSAS Status	Water Director, Rosemary Menard

Comments and Questions for Clarification from Water Commissioners/City Council Members

Presentation of Recommendations — Water Director, Rosemary Menard/Staff

- Recommendation to make an Adaptation to the WSAC Recommended WSAS
- Recommendations on details of revised work plan and schedule

Comments, Questions, and Discussion, including Public Comment

Deliberation and Action — All

This Page Intentionally Left Blank