CITY OF SANTA CRUZ
Water Department

Water Commission Agenda
Regular Meeting
7:00 p.m. – March 6, 2017
Council Chambers
809 Center Street, Santa Cruz

Agenda

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 1-12)

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 Water ☆ (accept info) (Pages 1-2)
2. Approve the February 6, 2017, Water Commission Minutes ☆ (Pages 3-12)

Items Removed from the Consent Agenda

General Business (Pages 13-60)

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.

3. Water Department Strategic Framework for Communications, 2017-2019 ☆ (Pages 13-16)

Recommendation: Accept the Strategic Framework for Communications

4. Presentation on FY 2018 – FY 2030 Draft Capital Improvement Plan (CIP) ☆ (Pages 17-38)

Recommendation: Receive information regarding the recommended FY 2018 – 2030 Capital Improvement Program and provide feedback.

5. March 14, 2017 Joint Meeting Presentation Overview.☆ (Pages 39-60)

Recommendation: Receive information and provide feedback to staff on the draft presentation for the March 14, 2017, joint meeting with City Council.

Subcommittee/Advisory Body Oral Reports

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

Adjournment The next meeting of the Water Commission is the Joint Study Session with the City Council at 7:00 p.m. on Tuesday, March 14, 2017, in the Council Chambers. The April Water Commission meeting is scheduled for 7:00 p.m. on Monday, April 3, 2017, in Council Chambers.

☆Denotes written materials included in packet

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 the 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.

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 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.

WATER COMMISSION
INFORMATION REPORT

DATE: 03/1/17

AGENDA OF: March 6, 2017

TO: Water Commission

FROM: Rosemary Menard, Water Director

SUBJECT: City Council Items Affecting Water

February 14, 2017

Tait Wells Replacement Project – Design and Construction Support Services – Contract Amendment No. 2 (WT)

Motion **carried** to ratify Contract Amendment No. 2 with Luhdorff and Scalmanini Consulting Engineers (Woodland, CA) for design and construction support services for the Tait Wells Replacement Project in a form approved by the City Attorney.

February 28, 2017

River Street and Potrero Street Water Main Replacement - Approval of Plans and Specifications and Authorization to Advertise for Bids and Award Contract (WT)

Motion **carried** to approve the Plans and Specifications for the River Street and Potrero Street Water Main Replacement Project, and authorize staff to advertise for bids and award the contract. The City Manager is hereby authorized and directed to execute the contract as authorized by Resolution No. NS-27,563 in a form approved by the City Attorney.

Update on Storm Response Activities, and Ratification of Purchase Order for Granite Construction (WT)

Motion **carried** to ratify a purchase order with Granite Construction Inc., (Watsonville, CA) in the amount of $330,000 for construction services related to the Liddell Pipeline Emergency Pipeline Replacement Project.

FY 2017 General Fund Mid-Year Financial Report, Budget Adjustments and Updated Multi-Year Forecast (FN)

Motion **carried** to accept the FY 2017 Mid-Year Report on the General Fund's financial status and preliminary forecast.

Motion **carried** to approve and authorize the recommended budgetary expenditure additions totaling $419,536 for the General Fund; $1,400,000 for Capital Improvement Projects; **$701,018 for Water Enterprise Fund**; $1,135,104 for the Workers' Compensation Fund; and $788,627 to 15 other funds as listed.

Motion **carried** authorizing the City Manager to allocate within the applicable Fund the budgetary changes to the appropriate accounting classifications and to approve related and applicable transfer in/out between funds.

CITY OF SANTA CRUZ
Water Department

Water Commission
7:00 p.m. –February 6, 2017
Council Chambers
809 Center Street, Santa Cruz

Minutes of a Water Commission Meeting

Call to Order Chair W. Wadlow called the meeting to order at 7:04 p.m. in the City Council Chambers.

Please be advised that the February 6, 2017, Water Commission meeting was videoed and can be viewed online here.

Roll Call
Present: W. Wadlow (Chair), L. Wilshusen (Vice-Chair), D. Baskin, D. Engfer, J. Mekis, A. Schiffrin.
Absent: D. Schwarm with notification

Staff Present: R. Menard, Water Director; H. Luckenbach, Deputy Director/Engineering Manager; David Kehn, Assistant Engineer; A. Poncato, Administrative Assistant III.

Others: 9 members of the public.

Commissioner Wadlow introduced and welcomed new Water Commissioner Jim Mekis.

1. Election of Officers

Chair Wadlow opened the floor for nominations for Water Commission Chair.

Commissioner Baskin nominated Commissioner Wilshusen.

Commissioner Schiffrin moved to close nominations and by acclamation elect Commissioner Wilshusen as Water Commission Chair for 2017. Commissioner Baskin seconded.

VOICE VOTE: MOTION CARRIED
AYES: All.
NOES: None.
ABSENT: D. Schwarm.

Chair Wilshusen opened the floor for nominations for Water Commission Vice-Chair.

Commissioner Baskin nominated Commissioner Engfer.

Commissioner Wadlow moved to close nominations and by acclamation elect Commissioner Engfer as Water Commission Vice-Chair for 2017. Commissioner Baskin seconded.

VOICE VOTE: MOTION CARRIED
AYES: All.
NOES: None.
ABSENT: D. Schwarm.

Presentation: There was one presentation by Scott McGilvray.

Statements of Disqualification: There were no statements of disqualification.

Oral Communications: Oral Communications provided by 1 member of the public.

Announcements: There were no announcements.

Consent Agenda

2. City Council Actions Affecting Water
4. 2017 Water Supply Outlook

Commissioner Schiffrin moved the Consent Agenda as amended. Commissioner Engfer seconded.

VOICE VOTE: MOTION CARRIED
AYES: All.
NOES: None.
ABSENT: D. Schwarm.

Items Removed from the Consent Agenda

3. Approve the January 9, 2017, Water Commission Minutes
    - Update vote to show that both D. Baskin and D. Schwarm abstained from voting on consent agenda item 2. Approve the December 5, 2017, Water Commission Minutes.
    - Correct Call to Order to reflect that the meeting was held at the Police Department Community Room.
    - Add that under Announcements, Ms. Menard indicated that D. Baskin will be serving on behalf of the City of Santa Cruz on the Santa Cruz Mid-County Groundwater Agency board.
    - Remove 2. Approve the December 5, 2016, Water Commission Minutes from Consent Agenda portion because they were removed from the Consent Agenda.

Commissioner Schiffrin moved approval of the January 9, 2017 minutes. Commissioner Baskin seconded.

VOICE VOTE: MOTION CARRIED
AYES: All.
NOES: None.
ABSTAIN: J. Mekis was not a Commissioner at the time.

ABSENT: D. Schwarm.

6. 2nd Quarter FY2017 Financial Report

Please explain why the last time we saw the CIP Projects Overview, the Gravity Trunk Main Valve Replacement project was in Project Wrap-Up with an estimated total project cost of $250,000 and now it is back in Construction with an estimated total project cost of $640,000.

- It is back in Construction because we are beginning the second phase the project. The first part of the Gravity Trunk Main Valve Replacement project was to replace the valves, which was completed in September 2015. The second part involves a condition assessment of the inside of the pipe. It is probably clearer to say Phase One is in Wrap Up and Phase Two is in Construction.

Commissioner Schiffrin moved the Consent Agenda. Commissioner Baskin seconded.
VOICE VOTE: MOTION CARRIED
AYES: All.
NOES: None.
ABSENT: D. Schwarm.

General Business

7. Recycled Water Workshop

Ms. Menard explained that the following workshop is the second forum on a major element of the City's Water Supply Advisory Committee (WSAC) recommendations, the first being the Aquifer Storage and Recovery workshop on November 7, 2016. Ms. Menard then introduced Ms. Luckenbach who introduced the workshop presenters as follows. Presentations can be found on the Water Department website here[1][2][3].

1. Mr. David Kehn, Assistant Engineer, City of Santa Cruz Water Department.
2. Ms. Dawn Taffler, P.E., LEED® AP Kennedy/Jenks Consultants
3. Mr. Brian Pecson, Ph.D., P.E. Trussell Technologies Inc.

Prior to turning things over to Mr. Kehn, Ms. Luckenbach was asked whether, the analysis of recycled water alternatives will include providing information on various metrics of each alternative that highlight similarities and differences. E.g., energy consumption, yield, etc.?

- Yes, we will use the metrics developed in the WSAC process as a starting point to evaluate the alternatives, and add others if necessary.

David Kehn, Assistant Engineer, City of Santa Cruz Water Department Presentation

Mr. Kehn is the Project Engineer for the City of Santa Cruz Recycled Water Feasibility Planning Study (RWFPS). He provided an overview of the study's scope of work, the process of developing and evaluating the recycled water alternatives, and the collaborative efforts with other agencies that are helping to inform the study.

[1] Mr. Kehn's presentation is on pages 1-27.
[2] Ms. Taffler's presentation is on pages 28-57.
[3] Mr. Pecson's presentation is on pages 58-115.

Commissioners had the following comments and questions.

The County is not responsible for the collection of wastewater. A separate district, called the County Sanitation District, is responsible for collecting wastewater.

- Comment noted.

Who are the stakeholders?

- Stakeholders are anybody who has a part of either the supply or potential demand infrastructure, service area, and those are financially contributing.

So the stakeholders are representatives of these agencies?

- Yes, the City of Santa Cruz Water Department, City of Santa Cruz Public Works, County of Santa Cruz, Santa Cruz County Sanitation District, Soquel Creek Water District, and Scotts Valley Water District.

Does the Wastewater Treatment Facility need to be expanded to provide a recycled water building and if so, has there been any discussion with the Coastal Commission about the potential impact to Neary Lagoon?

- Some of the alternatives would involve facility changes or new structures. However these modifications would occur within the footprint of the existing facility. There has been no discussion of a potential project with the Coastal Commission but again at this time we do not anticipate extending beyond the existing facility footprint.

Does your analysis indicate that there would be a sufficient amount of wastewater to meet the City's needs as well as the needs of Soquel Creek Water District?

- Yes. And this has been a critical element of our analysis and Dawn will cover this in more detail during her presentation.

What is the context of the second to last slide: NEXT STEPS Water Supply Advisory Committee Recommendations? Are you talking about this in the context of this being the WSAC's plan or that the WSAC actually being involved in making decisions?

- This slide relates to the implementation of the Final Agreements and Recommendations of the Water Supply Advisory Committee rather than the WSAC as a group. The WSAC has completed its work no longer exists as an active Council advisory body.

Final Comments and Requests for Follow Up

Update second to last slide title to state: NEXT STEPS Implementation Supply Advisory Committee Recommendations.

- Comment noted.

Dawn Taffler, P.E., LEED® AP Kennedy/Jenks Consultants Presentation

Ms. Taffler is the Consultant Team Leader for the RWFPS. She provided a brief background on recycled water treatment technologies, uses and nomenclature in order to establish some context for her presentation. She also discussed the recycled water alternatives being evaluated. Following a brief overview, Ms. Taffler introduced Mr. Dan Estranero, Assistant Engineer, City

of Santa Cruz Public Works Department (PWD), who discussed Alternative 1a – Centralized Non-Potable Reuse, Santa Cruz PWD Phase 2 Project.

Commissioners had the following comments and questions.

Is this alternative [as described on slides 7-10 of the presentation], including the pilot program, already underway?

- The City of Santa Cruz Public Works Department has a Request for Proposals out for this work. Proposals will be evaluated in February and March and a consultant will be hired to provide design options and cost estimates.

Is non-potable reuse also known as purple pipes?

- Yes, that is correct. Purple pipe refers to non-potable water.

In Alternative 1a, will there be purple pipes extended beyond the Wastewater Treatment Plant or will it be centralized within the plant?

- The treatment will be centralized within the Wastewater Treatment Facility but there will be some purple pipe required to extend to the irrigation of the park and the fill station.
- SCWD staff added: To clarify further, the alternative being described here, Alternative 1a, involves an expansion to an existing tertiary treatment facility at the WWTF. The current project would look into irrigation of the La Barranca Park and installation of a bulk water fill station using the recycled water.

Who owns the influent to the plant?

- Mr. Dan Seidel, Superintendent of Wastewater Collection and Treatment Facility, City of Santa Cruz Public Works, provided the following: Once the water is treated at our facility, the water becomes the property of the City of Santa Cruz.

Mr. Estranero turned the presentation back over to Ms. Taffler. Commissioners had the following comments and questions.

Alternative 1b is maximizing the treatment of wastewater to tertiary standard and distribute it throughout the City's water service area for irrigation. This can be seen on slide 11 of Ms. Taffler's presentation. How many miles of pipe are needed for this alternative?

- Approximately 18 miles of pipeline.

Why are we spending time and money analyzing alternatives that will not be completed by 2024?

- The Recycled Water Facilities Planning Study is looking at alternatives to 1) meet the objectives of the WSAC and 2) find additional beneficial uses of the existing treated wastewater.

During WSAC process we were told the absence of final regulations for Direct Potable Reuse (DPR) would not be a limitation to getting a project approved and that projects being proposed in Southern California would demonstrate this. Is that not the case?

- The current regulatory status of DPR is that it can be approved on a case by case basis. The focus in Southern California right now is on indirect potable reuse in the form of surface water augmentation. The regulations for surface water augmentation should be published in the next few months. An expert panel concluded that it is feasible to create uniform regulations for DPR; the schedule for these is unknown.

Some of these projects were studied and rejected by WSAC. How much are you researching what was studied during the WSAC process?

- The study is not duplicating WSAC efforts. It is providing more detailed analysis of some options that were considered by the WSAC but have evolved as a result of updated information and project concepts. For example, the surface water augmentation alternative has changed substantially since the WSAC process.

As we consider all of these alternatives, are we going to be updating all of the data for all the different alternatives? Are we going to be updated on desal? Are we going to be updated on recycled water so that we can make effective comparisons?

- Yes. By the end of the year, in addition to finalizing the Recycled Water study, we will have an updated concept to the alternative desalination project. We will be able to update the cost and other metrics previously discussed.

Brian Pecson, Ph.D., P.E. Trussell Technologies Inc. Presentation

Mr. Pecson is a subconsultant to Kennedy/Jenks for the RWFPS. He went in to greater detail on the regulatory framework of water reuse, treatment technologies and potential end-uses.

Commissioners had the following comments and questions.

You've made several references to DDW. What is DDW?

- Division of Drinking Water, which is a state agency under the State Water Resources Control Board.

What is the trend line in terms of effectiveness and the cost effectiveness of recycled water technologies over the last 5-10 years and where do you see the improvements coming in the next 5-10 years?

- The effectiveness of these technologies is improving constantly to achieve greater water quality and removal effectiveness at a lower cost.

In terms of cost, is the treatment of recycled water cheaper than seawater desalination?

- Yes. The salinity concentration is much greater in seawater than wastewater: ~37ppt (parts per thousand) as compared with 0.5ppt. The removal of salinity and other dissolved minerals is what drives the energy requirement up.

What criterion is DDW willing to consider when looking at DPR on a case by case basis?

- The Surface Water Augmentation concept can be evaluated as either an IPR project or a DPR project. The difference is what is happening between the point of discharge of the advanced treated wastewater into the system and where this water enters an existing surface water treatment plant. IPR regulations (which, as stated above, are expected in

early 2017) contain dilution, retention time, and treatment requirements. If these requirements cannot be met (because dilution water is unavailable or the blending reservoir is too small for example) the project would be considered a DPR project. DDW would likely want to start with an alternative like Alternative 5 – Surface Water Augmentation in Loch Lomond Reservoir where IPR requirements could be met before pursuing it as a DPR project. The DPR the RWFPS is evaluating, Alternative 7, basically removes the reservoir and pipe system between the point of discharge of the advanced treated wastewater and the point where the water enters the Graham Hill (Surface) Water Treatment Plant.

When will we get another update on the Recycled Water Study?

- Staff responded: Currently staff anticipates a preliminary recommendation on feasible recycled water projects in April, and a draft of the final report in June. These may slip however due to the level of analysis still needed to vet some of the alternatives.

Final Commissioner Comments and Requests for Follow Up

- (During his presentation Mr. Pecson referenced the energy required to move water from Northern California to Southern California as context for the energy required for the recycled water alternatives being considered.) Commissioners noted that, as staff present this material to the local community, comparisons with other agencies may not hold up well. Providing context by other examples will likely be more meaningful and staff should think carefully about what examples to use.
- Given that the DDW is very cautious to create criteria for DPR, it seems like the DPR alternative still under consideration, (e.g., not flange to flange but rather blending of the advanced treated water upstream of the raw water entering the GHWTP) is a very prudent approach.
- Distribute copies of all presentations to Commissioners.

Public comment made by Becky Steinbruner.

5. Presentation Items on the Water Commission Agendas

Ms. Menard and Commissioners discussed a proposal for modifying the Commission's use of the Presentation agenda item to make it match the way the City Council uses it. After discussions of the issues, the Commission voted to modify the use of Presentation agenda items as proposed in staff report.

Public comment made by Becky Steinbruner.

Commissioner Schiffrin moved the recommendation to modify the use of Presentation agenda items as proposed in the staff report. Commissioner Mekis seconded.

VOICE VOTE: MOTION CARRIED
AYES: J. Mekis, A. Schiffrin, L. Wilshusen, W. Wadlow
NOES: D. Baskin, D. Engfer.
ABSENT: D. Schwarm.

8. Proposed Memorandum of Agreement with the San Lorenzo Valley Water District and the Scotts Valley Water District for Collaborative Work on Potential Supply Augmentation Projects.

Ms. Menard summarized the discussion draft of a potential Memorandum of Understanding with Scotts Valley and San Lorenzo Valley water districts was summarized for the Commission. She indicated that the Commission will see a final draft in the next two months after all agencies have vetted the memo. Please forward all comments and questions to Rosemary in an email.

When this item comes back, will there be a work plan included?

- Yes.

The reason why the San Lorenzo Valley Water District doesn't take its share of water out of Loch Lomond is because there is no pipe and they don't want to pay for the pipe. Is that correct?

- It is a little more complicated than that. The San Lorenzo Valley Water District was taking the water via a surface water diversion before the federal Surface Water Treatment Rule was adopted in 1989. After that time they could no longer take that water without sending it to a treatment plant, so they abandoned the systems that they were using, put in wells. Since then they have not been able to take their 314 acre feet of water.

Is this process going to threaten the City's water supply?

- The San Lorenzo Valley Water District has a contractual right to take their share of water of out Loch Lomond. In the various supply modeling work the City did for the WSAC process, the water that is contractually available to the San Lorenzo Valley Water District has been taken into account and does not result in adding more volume to the 1.2 billion gallon worst year gap.

9. Draft Agenda for the March 14, 2017, Joint Meeting of the Santa Cruz City Council and the Water Commission.

Do you have any expectations of the Water Commission having a Commission based comment on that or are you equally comfortable with individual observations?

- There really isn't a need for a Commission statement (in the form of a specific recommendation, for example) because the WSAC's work plan is a work in progress. If the Commission feels they want to provide the Council with specific feedback on the Department's work on implementing the WSAC recommendations that would be fine and certainly appropriate. However, it would also be appropriate and acceptable for individual Commissioners to share their perspectives.

Final Comments and Requests for Follow Up

- Please be clear that the main topic of this joint meeting is water supply.
- It is important to focus on decision making, what we are doing, where we are going, and invite them to many of our meetings.
- Indicate which projects are WSAC recommendations on the CIP list.

- With new members joining the City Council, they need to be reminded that we absolutely do need a supplemental supply project by repeating factual findings such as the 1.2 billion gallon worst year water supply gap.
- Invite all Councilmembers to any of our meetings.

Subcommittee/Advisory Body Oral Reports No items.

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

- There is a third leak on the Newell Creek pipe, located on Pipeline Road.
- The surface water situation in the conditions we have right now is extremely challenging and we have been relying on the Laguna Creek, Liddell Creek and the new Tait Well.

Adjournment Meeting adjourned at 11:21 p.m. The next meeting of the Water Commission is scheduled for March 6, 2017, at 7:00 p.m. in Council Chambers.

Respectfully submitted,

Amy Poncato

Digitally signed by Amy Poncato
DN: cn=Amy Poncato, o=Water Department, ou=Administration, email=aponcato@cityofsantacruz.com, c=US
Date: 2017.03.06 13:55:39 -08'00'

Staff

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WATER COMMISSION
INFORMATION REPORT

DATE: 2/28/2017

AGENDA OF: March 6, 2017

TO: Water Commission

FROM: Eileen Cross, Community Relations Specialist

SUBJECT: Water Department Strategic Framework for Communications, 2017-2019

RECOMMENDATION: Accept the Strategic Framework for Communications

BACKGROUND: At its November 24, 2015, meeting, the Santa Cruz City Council directed the City's Water Commission to assume oversight of the implementation of the work plan resulting from the WSAC recommendations and agreements. As part of this oversight, the Water Commission receives regular reports and presentations from Water Department staff on studies underway; they hear from leading experts on topics like water conservation, aquifer storage, and recovery, and recycled water; and they receive quarterly progress reports on the status of work on each of the WSAC recommendations.

When feasibility, cost and energy studies for each recommendation are completed, it will ultimately be the Water Commission that will follow through on the WSAC's work by using the WSAC agreed upon decision framework to make a recommendation to the City Council on the suite of water supply projects that will meet the City's goal to improve the reliability of its water supply. With that in mind, the Water Commission places a high priority on keeping the community appraised and engaged in the ongoing work on the WSAC Recommendations. At their January 9 meeting, the Water Commission asked staff to provide a strategic communications framework to support WSAC-related work.

The desired outcome from the proposed communications framework is for an educated and informed public to feel confident that the WSAC's recommendations have been diligently followed during the feasibility analyses phase of the work and are appropriately reflected in the Water Commission's recommendations to the City Council. While many public engagement opportunities are opportunistic (for example, tying the 2017 World Water Day theme of wastewater to a public tour focused on how the City's Wastewater Treatment Plant could support a recycled water project), there are several communication activities that will be ongoing throughout the analyses and decision-making processes for the WSAC Recommendations.

Included in the attached Community Relations Plan are the ongoing, regular communication activities. Activities for the next 6-months are identified in more detail.

FISCAL IMPACT: Budget includes support for graphics, advertising, mailers, public events.

PROPOSED MOTION: Accept the Strategic Framework for Communications.

ATTACHMENTS: Water Department Strategic Framework for Communications, 2017-2019.

WATER DEPARTMENT COMMUNITY RELATIONS
Strategic Framework for Communications, 2017-2019

OUTCOME: Public support for implementation of Water Supply Advisory Committee Recommendations.

GOALS:

A. Engender public trust and confidence in Water Department practices.
B. Maintain community awareness of, and buy-in for, WSAC process and Recommendations.
C. Maintain consistent and trust-worthy information channels.

OBJECTIVES:

1. Build community awareness of water supply sources and water treatment processes.
2. Raise community awareness of the value of watershed management, vis-à-vis water for fish.
3. Provide regular progress reports on WSAC Recommendations, through a variety of channels.
4. Provide in-field opportunities to learn about WSAC strategies.
5. Maintain regular Water Department updates with electeds and key influentials.
6. Partner with other water agencies on engagement opportunities.

TACTICS:

YEAR ONE, 2017		
GOAL	**OBJECTIVE**	**TACTIC**
A, B, C	1, 3, 5	Monthly Water Commission press releases
A, B, C	1, 3	Monthly WSAC email newsletters
A, B, C	3	Annual WSAC progress report
A, B, C	3, 5	Joint meeting of WC & CC for WSAC progress report, Mar 14 -Press release/media advisory -Announcement on WSAC progress report; monthly WSAC email newsletter -Newspaper ad -City-wide commission invitation -RM on KSCO morning show, 3/14
A, B, C	1, 2, 3, 5	Monthly WD updates to electeds and key influentials
A	2, 6	State of the San Lorenzo River Symposium, March 4 -Theme: flow
A, B	1, 3, 6	Chamber of Commerce Bus Fair, March 15 -Conservation tabling
A, B	1, 3, 4,	World Water Day, March 22. Theme: wastewater -Public tour of SCWWTP, as it relates to the WSAC recommendation for recycled water
A, B	1, 3, 6	Fix-A-Leak Week, March 20-22 -Newspaper ads -Tabling at local hardware stores
A, B	1, 2, 4,	Public tour of GHWTP, April 18
A, B	3, 5, 6	Earth Day, April 22 -Tabling with Conservation Coalition
A, C	1, 2, 6	Public tour, Loch Lomond, April 29

		-Theme: Native plants and tree identification
A, B, C	1, 2, 3, 4	Spring issue of the SCMU Review, May -Theme: TBD
A, B, C	1, 2, 3, 4	New City website launches, May
A, B	1, 4	ASR public tour at Beltz 12, May 17
A, C	1, 2, 4, 6	Great American Secchi Dip-In, Loch Lomond, July 29
Fall 2017 public tour line-up: TBD		
A, C	2, 4, 6	Public tour, Loch Lomond, October 28 -Theme: fall birding at the lake
A, B, C	1, 2, 3, 4, 6	Fall issue of the SCMU Review -Theme: TBD
YEAR 2, 2018		
A, B, C	1, 3, 5	Monthly Water Commission press releases
A, B, C	1, 2, 3	Monthly WSAC email newsletters
A, B, C	1, 2, 3, 5	Monthly WD updates to electeds and key influentials
A, B, C	3	Annual WSAC progress report to community
A, C	2, 6	Public tour, Loch Lomond, Jan 28 -Theme: Mushrooms (title TBD)
A, B	1, 3, 6	Fix-A-Leak Week, March
A, B, C	1, 2, 3, 4	Spring issue of the SCMU Review -Theme: TBD
Spring 2018 public tour line-up: TBD		
A, B, C	1, 2, 3, 4, 6	Fall issue of the SCMU Review -Theme: TBD
Fall 2018 public tour line-up: TBD		
YEAR 3, 2019		
A, B, C	1, 3, 5	Monthly Water Commission press releases
A, B, C	1, 2, 3	Monthly WSAC email newsletters
A, B, C	1, 2, 3, 5	Monthly WD updates to electeds and key influentials
A, B, C	3	Annual WSAC progress report to community
A, B	1, 3, 6	Fix-A-Leak Week, March
A, B, C	1, 2, 3, 4	Spring issue of the SCMU Review -Theme: TBD
Spring 2019 public tour line-up: TBD		
A, B, C	1, 2, 3, 4, 6	Fall issue of the SCMU Review -Theme: TBD
Fall 2019 public tour line-up: TBD		

WATER COMMISSION
INFORMATION REPORT

DATE: 3/1/2017

AGENDA OF: March 6, 2017

TO: Water Commission

FROM: Heidi Luckenbach, Deputy Director/Engr. Mgr. and Malissa Kaping, Management Analyst

SUBJECT: FY 2018 – 2030 Capital Improvement Program, Working Draft

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RECOMMENDATION: Receive information regarding the recommended FY 2018 – 2030 Capital Improvement Program and provide feedback.

BACKGROUND: In Fall 2015 the Water Supply Advisory Committee (WSAC) concluded their work on a Water Supply Augmentation Strategy (WSAS). The WSAC recommendations were accepted by the City Council in late 2015. In winter/spring of CY2016 Water Department staff began implementing the WSAS work plan while at the same time developing a larger work plan that incorporated the various elements of the WSAS into the Water Department Capital Improvement Program (CIP).

In early CY2016 the Water Commission received information and discussed inputs for the Water Department's Long-Term Financial Plan, Cost of Service Analysis and Rate Design. The resulting rate design is now structured more specifically towards funding rehabilitation or replacement of aging infrastructure. CIP projects are categorized based on the Primary Driver: Rehabilitate or Replace, Upgrade or Improve, Water Supply Reliability. Attachment A includes each CIP project and their primary driver.

The Water Department's capital projects are primarily funded through the Water Enterprise Fund (Fund 711) with a smaller portion of some projects focused on improving system capacity funded through the System Development Fund (Fund 715). Keeping consistent with City policies, the CIP contains capital projects while maintenance projects are categorized as operating expenditures and included in the FY 2017 Operating Budget.

It is traditional for the City to provide two additional years (FY 2019 and FY 2020) in the CIP budget document to provide a longer term view of multi-year projects. However, as in past years, only the first year budget (FY 2018) will be appropriated, and the Department is using either a 5-year or 10-year CIP outlook for financial planning purposes.

The CIP (along with the Operating budget) will come back to the Water Commission on April 4 for a recommendation to City Council; the CIP goes to City Council on April 25.

DISCUSSION: Attachment B includes all projects funded in the CIP in FY2017 and FY2018. The format is adopted from the template used by the City, but modified to include additional detail requested by the Water Commission: Project Duration, Project Status, Work Planned for FY2018, etc.

The following projects have been added this fiscal year.

- Laguna Dam
- Majors Dam

Several key projects are wrapping up.

- Bay Street Tanks
- Phase 3 of the North Coast Pipeline Replacement
- Graham Hill Water Treatment Plant (GHWTP) Filter Rehabilitation

The following projects are expected to make significant progress in FY2018 – FY2020.

- Replacement of the University No. 5 water storage tank
- Replacement of the tube settlers at the GHWTP
- Design and Replacement of the Concrete Tanks (x3) at the GHWTP
- Construction of a new building at the GHWTP to house Water Resources staff and provide other functions
- Phase 2 of the Aquifer Storage and Recovery study

As staff plans for the implementation of the 10-year CIP, several staff-augmentation strategies are being contemplated and have been incorporated into the FY2018 budget; namely Construction Management (CM) and Program Management (PM). These are two mechanisms intended to assist with project development and implementation by providing depth and breadth to Department staff. The Department has experience with Construction Management; the Covello Group was hired as Construction Manager on the North Coast Pipeline Project to function as full time field staff assigned to conducting day to day activities, field inspections, interfacing with the contractor, etc. This has freed staff to work on other projects while maintaining involvement, albeit at a higher level.

Staff is recommending, and has budgeted for, CM services on two projects: The Newell Creek Dam Inlet/Outlet Pipe and the City-Initiated Main Replacement Project. They are budgeted at approximately 10% of the construction cost. Similar to the North Coast Project, a CM will be available during the remainder of the design, project start up, construction and demobilization. They will be the field presence providing administrative and technical support.

Program Management is a flexible approach to building project teams, primarily when a project is not fully defined (and additional resources are needed to provide definition), has multiple

phases (e.g., design, permitting, environmental review, construction, etc.), or has multiple resource requirements (e.g., administrative support, technical, environmental, etc.). Staff is recommending, and has budgeted for, PM on two programs – Surface Water Treatment and Raw Water Transmission Mains. These are budgeted at approximately 10% of the construction cost. Initial tasks will include condition assessment and prioritizing projects followed by design, permitting and project implementation. The staff resources of the PM firm will likely change over time as projects are developed and implemented.

The Department continues to with Public Financial Management (PFM) for financial planning. PFM was engaged to assist the Department in understanding the opportunities and constraints for using debt to help finance its CIP, to provide a review of its financial policies, and to advise the Department on how to establish and maintain a sustainable financial position that would support access to capital markets on favorable terms.

As modifications to the CIP continue, staff will work closely with PFM to understand how and when to issue debt so as to maintain the financial goals and policies of the Department and successfully accomplish the CIP.

Staff will present additional information at the meeting and be available for questions.

FISCAL IMPACT: Development of a financial sustainability plan was thoroughly discussed at the Water Commission's February 2016 meeting. Feedback received from the Water Commission regarding financial policy was taken into consideration during the development of the attached recommended CIP and Operating budgets.

RECOMMENDED MOTION: No action requested at this time. Request the Commission provide feedback on the draft CIP.

Attachments:
Attachment A: CIP Projects Overview Primary Driver
Attachment B: Working Draft FY 2018-20230 CIP detail

Attachment A

CIP Projects Overview

Rehabilitation or Replacement Projects	Project #	Prior Years Spend	FY2017 Amd Budget	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - 2030 Projected	Life of Project Total (Projected)	Project Duration	Current Status
Aerators	c701706	-	350,000	-	-	-	-	350,000	2017 - 2019	Feasibility
Bay Street Reservoir Reconstruction	c700313 & -027	24,361,493	1,697,711	200,000	-	-	-	26,259,205	2007 - 2017	Wrap-up/Phase 4
Beltz Rehabilitation & Development	c700026	64,243	145,000	300,000	-	-	-	509,243	2017-2018	Pre-Design
Coast Pump Station Line Repairs	c701707	-	50,000	500,000	-	-	-	550,000	2018	Feasibility
Felton Diversion Replac. & Pump Station	c701602	73,636	226,364	400,000	500,000	-	-	1,200,000	2016 - 2020	Pre-Design
Gravity Trunk Main Valve Replacement	c701504	258,019	381,981	-	-	-	-	640,000	2014 - 2017	Construction
Laguna Dam	TBD	-	-	250,000	500,000	1,000,000	-	1,750,000	2018 - 2021	Feasibility
Majors Creek Diversion	TBD	-	-	250,000	500,000	1,000,000	-	1,750,000	2018 - 2021	Feasibility
Newell Creek Dam Inlet/Outlet Pipeline	c701606	300,951	1,879,793	2,975,000	475,000	32,380,000	12,220,000	50,230,744	2016 - 2021	Design
Newell Creek Pipeline Rehabilitation	c701701	-	710,000	1,500,000	6,500,000	5,000,000	6,500,000	20,210,000	2016 - 2020	Feasibility
North Coast System Rehabilitation -Phase 3	c709835	7,698,905	6,487,854	1,500,000	-	-	13,000,000	28,686,759	2012 - 2017	Construction
Pressure Regulating Stations	c701703	-	310,000	60,000	60,000	60,000	-	490,000	2017 - 2020	Pre-Design
Recoat University Reservoir No. 4	c701505	-	270,000	100,000	3,550,000	-	-	3,920,000	2014 - 2020	Feasibility
Replace University Reservoir No. 5	c701506	91,747	386,253	3,500,000	-	-	-	3,978,000	2014 - 2018	Design
San Lorenzo River Diversion & Tait Wells	c709872	884,455	1,170,559	-	-	-	-	2,055,014	2002 - 2017	Project Wrap-up
Water Treatment Upgrades	c700025 & -1401	357,820	157,727	300,000	-	-	-	815,548	On-going	Feasibility
Wharf Water Main	c701613	158,188	35,313	-	-	-	-	193,501	2016	Completed
WTP Concrete Tanks	c701501	201,732	1,026,588	1,900,000	7,700,000	-	-	10,828,320	2014 - 2020	Design
WTP Filter Rehabilitation and Upgrades	c701303	5,379,485	657,815	-	-	-	-	6,037,300	2013 - 2017	Construction
WTP Flocculator Mixers	c701502	-	60,000	-	2,300,000	-	-	2,360,000	2018 - 2019	Feasibility
		39,830,675	**16,002,958**	**13,735,000**	**22,085,000**	**39,440,000**	**31,720,000**	**162,813,633**		

Upgrades or Improvement Projects		Prior Years Spend	FY2017 Amd Budget	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - 2030 Projected	Life of Project Total (Projected)	Project Duration	Current Status
Advanced Metering Infrastructure (AMI)	c701603	-	50,000	-	-	-	-	50,000	TBD	Feasibility
Loch Lomond Facilities Improvements	c701301	49,676	235,324	100,000	-	-	-	385,000	2013 - 2020	Design/Construction
Photovoltaic System Evaluation/Construc	c701607	-	40,000	-	-	-	-	40,000	2016 - 2018	Design/Construction
Security Camera & Building Access Upgrades	c701704	-	95,000	150,000	200,000	200,000	-	645,000	2016 - 2019	Feasibility
Spoils and Stockpile Handling Facilities	c701508	5,100	344,900	-	-	-	-	350,000	2015 - 2017	Construction
Tube Settlers	c701708	-	200,000	2,000,000	-	-	-	2,200,000	2018	Pre-Design
Water Resources Building	c701702	-	1,100,000	1,000,000	-	-	-	2,100,000	2016 - 2017	Design
		54,776	**2,065,224**	**3,250,000**	**200,000**	**200,000**	**-**	**5,770,000**		

Water Supply Reliability & Studies		Prior Years Spend	FY2017 Amd Budget	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - 2030 Projected	Life of Project Total (Projected)	Project Duration	Current Status
Aquifer Storage and Recovery	c701609 & -10	25,100	509,900	2,450,000	250,000	-	-	3,235,000	2016 - 2020	Feasibility
Recycled Water	c701611 & -12	53,639	521,361	-	-	-	-	575,000	2016 - TBD	Feasibility
Source Water Evaluation	c701608	33,079	566,921	250,000	250,000	-	-	1,100,000	2016 - 2020	Feasibility
Water Supply Reliability - WSAC	c701402 & -03	2,276,428	19,821	-	-	-	-	2,296,250	2014 - 2016	Completed
Water Supply Augmentation Strategy	c701705	-	78,352	300,000	-	1,200,000	103,200,000	104,778,352	2020 - 2025	Feasibility
		2,388,247	**1,696,355**	**3,000,000**	**500,000**	**1,200,000**	**103,200,000**	**111,984,602**		

Water Main Replacements		Prior Years Spend	FY2017 Amd Budget	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - 2030 Projected	Average Spend Per Year	Project Duration	Current Status
City Engineering	c700002 +	6,041,084	2,061,011	4,050,000	2,250,000	2,250,000	20,250,000	1,317,932	Annual - Ongoing Programs	
Customer Initiated	c700004	301,259	50,000	50,000	50,000	50,000	500,000	35,759		
Distribution	c701507	468,136	481,864	325,000	325,000	325,000	3,250,000	369,643		
Outside Agencies	c700003	1,103,581	478,211	250,000	250,000	250,000	2,500,000	172,564		
		7,914,060	**3,071,086**	**4,675,000**	**2,875,000**	**2,875,000**	**26,500,000**	**1,895,898**		

	Prior Years Spend	FY2017 Amd Budget *	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - 2030 Projected	Total Life of Projects (Projected)
TOTAL	50,187,757	22,835,623	24,660,000	25,660,000	43,715,000	161,420,000	328,478,381
Cumulative Inflation	100.00%	103.00%	106.09%	111.39%	116.96%	123% to 191%	106% to 191%
TOTAL w/ Inflation	50,187,757	23,520,692	26,161,794	28,582,674	51,129,064	226,355,538	405,937,519

* Includes approved FY17 budget adjustments not yet posted

Attachment B: CIP Detail

Rehabilitation or Replacement Projects

Aerators (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2017 - 2019 **Project Status:** Feasibility **Project #:** c701706 **Project Manager:** Taylor Ronne & Terry McKinney

Project Description: Condition assessment followed by rehabilitation or replacement of the aerators for Loch Lomond Reservoir.

Work planned for FY2018 request: Develop model of Loch Lomond Reservoir, develop lake/reservoir management strategy, and design and install new aeration system.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	-	350,000	-	350,000	-	-	-	-	350,000
Project Total	**-**	**-**	**350,000**	**-**	**350,000**	**-**	**-**	**-**	**-**	**350,000**

Bay Street Reservoir Reconstruction (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2007 -2017 **Project Status:** Wrap-up Phase 3 & Phase 4 **Project #:** c700313 & c700027 **Project Manager:** Doug Valby

Project Description: The Bay Street Reservoir reached the end of its useful life and was replaced with two 6 MG tanks. Construction of Tank 1 was completed in FY 2014; construction of Tank 2 was completed in FY 2016. Final project elements include site clean-up, security, and landscaping. A portion of the project is funded by System Development Charges (20% SDC-Fund 715).

Work planned for FY2018 request: Project had 4 phases: temporary tanks, Tank 1, Tank 2, site improvements, and landscaping and final site improvements. Work should be complete in Fall 2017.

	Prior Year Spent [1]	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
c700313, Fund 711	19,442,010	1,388,666	(40,000)	46,918	1,301,748	200,000	-	-	-	20,990,676
c700027, Fund 715	4,919,483	359,045	(10,000)	11,729	337,316	-	-	-	-	5,268,529
Project Total	**24,361,493**	**1,747,711**	**(50,000)**	**58,647**	**1,639,064**	**200,000**	**-**	**-**	**-**	**26,259,205**

[1] Prior year spent includes phases 1, 2, and part of 3; includes all spent from FY2007 through FY2016.

Beltz Rehabilitation & Development (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2017-2018 **Project Status:** Pre-Design **Project #:** **c700026** Project Manager: Isidro Rivera

Project Description: This project would convert an existing monitoring well to a production well, renamed Beltz 11, and will rehabilitate Beltz 10. Beltz 10 and 11 will pump from the Santa Margarita aquifer. The project would reduce pumping from the Purisima Formation which is impacted by pumping by the City and other users. Project includes feasibility study, pump test, CEQA and construction efforts.

Work planned for FY2018 request: Project scheduled to be completed within FY2018.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	64,243	70,000	75,000	-	145,000	300,000	-	-	-	509,243
Project Total	**64,243**	**70,000**	**75,000**	**-**	**145,000**	**300,000**	**-**	**-**	**-**	**509,243**

Coast Pump Station Line Repairs (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2018 **Project Status:** Feasibility **Project #:** c701707 **Project Manager:** Kalen Dodd

Project Description: Condition assessment followed by rehabilitation or replacement of the Coast Pump Station discharge pipeline.

Work planned for FY2018 request: Currently evaluating feasibility of slip-lining existing pipeline. This would be followed by construction in 2018.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711			50,000		50,000	500,000	-	-	-	550,000
Project Total	**-**	**-**	**50,000**	**-**	**50,000**	**500,000**	**-**	**-**	**-**	**550,000**

Felton Diversion Replac. & Pump Station (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2016 - 2020 **Project Status:** Pre-Design **Project #:** c701602 **Project Manager:** Matt Zeman

Project Description: This project consists of evaluation of the existing dam and pump station with recommendations to rehabilitate or replace existing facilities. Alternate diversions to be considered will include horizontal collector wells and other subsurface intake(s). This project will replace aging facilities and evaluate potentially more efficient ways to divert water from the San Lorenzo River at Felton. Additional funding for construction in FY2019.

Work planned for FY2018 request: Design and permitting for new rubber, inflatable dam.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	73,636	226,364	-	18,400	207,964	400,000	500,000	-	-	1,200,000
Project Total	**73,636**	**226,364**	**-**	**18,400**	**207,964**	**400,000**	**500,000**	**-**	**-**	**1,200,000**

Gravity Trunk Main Valve Replacement (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2014 -2017 **Project Status:** Construction **Project #:** c701504 **Project Manager:** Doug Valby

Project Description: The gravity trunk main is the primary water main delivering water from the Graham Hill Water Treatment Plant to the community and was installed in the 1960s. Phase 1 of this project was completed in FY16 and replaced failed isolation valves on and surrounding the 36 inch trunk transmission main and made improvements needed to inspect the condition of the pipeline. Phase 2 of this project includes inspection of the transmission main. The inspection may result in future projects to ensure pipeline integrity and reliable service. Future projects have not been funded.

Work planned for FY2018 request: Inspection, analysis, and prioritization of future work.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	258,019	381,981	-	325,500	56,481	-	-	-	-	640,000
Project Total	**258,019**	**381,981**	**-**	**325,500**	**56,481**	**-**	**-**	**-**	**-**	**640,000**

Laguna Dam (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2018 - 2021 **Project Status:** Feasibility **Project #:** TBD **Project Manager:** Chris Berry & Sarah Easley Perez

Project Description: The City diverts water from Laguna and Majors Creeks. These sources are passively diverted into pipelines that carry the water to the North Coast Pipeline. The North Coast System Rehab project (c. 2002) included the evaluation of the diversions to determine if they are sound and if modifications could be made to improve the efficiency and reduce the potential environmental impacts associated with City operations. This project will update the findings of the 2002 analysis, and design and construct needed improvements.

Work planned for FY2018 request: Update the findings of the 2002 analysis conducted by Entrix and Wood Rogers.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	-	-	-	-	250,000	500,000	1,000,000	-	1,750,000
Project Total	**-**	**-**	**-**	**-**	**-**	**250,000**	**500,000**	**1,000,000**	**-**	**1,750,000**

Majors Creek Diversion (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2018 - 2021 **Project Status:** Feasibility **Project #:** TBD **Project Manager:** Chris Berry & Sarah Easley Perez

Project Description: The City diverts water from Laguna and Majors Creeks. These sources are passively diverted into pipelines that carry the water to the North Coast Pipeline. The North Coast System Rehab project (c. 2002) included the evaluation of the diversions to determine if they are sound and if modifications could be made to improve the efficiency and reduce the potential environmental impacts associated with City operations. This project will update the findings of the 2002 analysis, and design and construct needed improvements.

Work planned for FY2018 request: Update the findings of the 2002 analysis conducted by Entrix and Wood Rogers.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	-	-	-	-	250,000	500,000	1,000,000	-	1,750,000
Project Total	**-**	**-**	**-**	**-**	**-**	**250,000**	**500,000**	**1,000,000**	**-**	**1,750,000**

Newell Creek Dam Inlet/Outlet Pipeline (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2016 - 2021 **Project Status:** Design **Project #:** c701606 **Project Manager:** Leah Van Der Maaten, Isidro Riveria, & Taylor Ronne

Project Description: The Newell Creek Dam was installed in the 1960's. A pipeline runs through the base of the dam to deliver water to the reservoir from Felton Diversion and from the reservoir to the Graham Hill Water Treatment Plant. The pipeline rehabilitation includes inspection of the pipeline and its appurtenances which will result in rehabilitation or replacement of all or parts of the inlet/outlet.

Work planned for FY2018 request: Design or rehabilitation and replacement options; together with benefits analysis will result in project selection, CEQA, permitting, hiring of construction manager/owner's representative.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	300,951	2,229,793	(350,000)	792,895	1,086,898	2,975,000	475,000	32,380,000	12,220,000	50,230,744
Project Total	**300,951**	**2,229,793**	**(350,000)**	**792,895**	**1,086,898**	**2,975,000**	**475,000**	**32,380,000**	**12,220,000**	**50,230,744**

Newell Creek Pipeline Rehabilitation (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2016 - 2020 **Project Status:** Feasibility **Project #:** c701701 **Project Manager:** Doug Valby

Project Description: Conduct a condition assessment and program level environmental review followed by full or partial replacement of the pipeline between the base of Loch Lomond Reservoir and the Graham Hill Water Treatment Plant. This pipeline was constructed in the 1960s. This project is intended to ensure continued reliability of this water supply transmission main.

Work planned for FY2018 request: Hire consultant/project manager to provide depth/breadth to staff to do condition assessment, CEQA, permits, and prioritize projects.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	710,000	-	-	710,000	1,500,000	6,500,000	5,000,000	6,500,000	20,210,000
Project Total	**-**	**710,000**	**-**	**-**	**710,000**	**1,500,000**	**6,500,000**	**5,000,000**	**6,500,000**	**20,210,000**

North Coast System Rehabilitation (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2012- 2017 **Project Status:** Construction **Project #:** c709835 **Project Manager:** Kevin Crossley

Project Description: Springs and streams along the coast north of the City limits supply approximately 25% of the City's raw water. Some of the facilities related to these water supplies are reaching the end of their useful life. This program consists of multiple projects over the next 15 to 20 years to evaluate, rehabilitate, and replace portions of the existing infrastructure to ensure continued reliability. Engineering, environmental review, and permitting for the coast segment (Phase 3) began in FY 2013 and continues through FY 2017.

Work planned for FY2018 request: Phase 3 project will be completed in FY2018, remaining phases will be analyzed and prioritized along with Newell Creek Pipeline.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	7,698,905	6,637,854	(150,000)	5,563,621	924,233	1,500,000	-	-	13,000,000	28,686,759
Project Total	**7,698,905**	**6,637,854**	**(150,000)**	**5,563,621**	**924,233**	**1,500,000**	**-**	**-**	**13,000,000**	**28,686,759**

Pressure Regulating Stations (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2017 - 2020 **Project Status:** Pre-Design **Project #:** c701703 **Project Manager:** Doug Valby & Terry McKinney

Project Description: Evaluation and replacement of pressure regulating stations (PRS). A PRS maintains (sustains or reduces) downstream pressure in order to deliver sufficient water pressure. The water distribution system contains 15 PRS and they vary in age from 66 years old to 8 years old. This project will evaluate the condition of each PRS and prioritize rehabilitation or replacement.

Work planned for FY2018 request: Condition assessment of each station followed by prioritizing and replacement.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	60,000	250,000	6,648	303,352	60,000	60,000	60,000	-	490,000
Project Total	**-**	**60,000**	**250,000**	**6,648**	**303,352**	**60,000**	**60,000**	**60,000**	**-**	**490,000**

Recoat University Reservoir No. 4 (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2014 - 2020 **Project Status:** Feasibility **Project #:** c701505 **Project Manager:** Kevin Crossley & Taylor Ronne

Project Description: Perform engineering analysis and condition assessment of the aging University 4 tank to ensure continued reliable service. Establish scope of work for recoating/rehabilitation project. Acquire construction easements from UCSC and perform environmental analysis to install temporary tank for use during construction. Create plans and specifications for recoating/rehabilitation project.

Work planned for FY2018 request: Predesign

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	270,000	-	-	270,000	100,000	3,550,000	-	-	3,920,000
Project Total	**-**	**270,000**	**-**	**-**	**270,000**	**100,000**	**3,550,000**	**-**	**-**	**3,920,000**

Replace University Reservoir No. 5 (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2014 - 2018 **Project Status:** Design **Project #:** c701506 **Project Manager:** Kevin Crossley & Taylor Ronne

Project Description: Perform engineering analysis and condition assessment of the aging University 5 tank to ensure continued reliable service. Establish scope of work for recoating/rehabilitation project. Create plans and specifications for recoating/rehabilitation project. Install temporary tank and variable speed pumps for use during construction. Construct recoating/rehabilitation project.

Work planned for FY2018 request: Project being implemented in 3 phases: maintenance tank (4th Qtr FY2017), ~700LF main replacement (1st & 2nd Qtr FY2018), and U5 replacement (1st thru 4th Qtr 2018).

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	91,747	236,253	150,000	231,750	154,502	3,500,000	-	-	-	3,978,000
Project Total	**91,747**	**236,253**	**150,000**	**231,750**	**154,502**	**3,500,000**	**-**	**-**	**-**	**3,978,000**

San Lorenzo River Diversion & Tait Wells (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2002 - 2017 **Project Status:** Project Wrap-up **Project #:** c709872 **Project Manager:** Ryan Ernst & Colin Smith

Project Description: Conduct a condition assessment of the existing diversion and wells including consideration of sanding issues, potential dam replacement, potential use of infiltration gallery, and relocation of existing wells. Project will ensure reliable and efficient diversion of water from the San Lorenzo River at Tait St. Condition assessment followed by recommended intake modifications and/or new wells. Current project consists of replacing 2 wells, rehabilitating 1 existing well, and abandoning 1 well.

Work planned for FY2018 request: Well project wrapping up. Evaluation of additional wells (including Ranney-style collector wells) will be underway and project status will return to "feasibility."

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	884,455	1,170,559	-	1,053,403	117,156	-	-	-	-	2,055,014
Project Total	**884,455**	**1,170,559**	**-**	**1,053,403**	**117,156**	**-**	**-**	**-**	**-**	**2,055,014**

Water Treatment Upgrades (Primary Driver: Rehabilitation or Replacement project)

Project Duration: On-going **Project Status:** Feasibility **Project #s:** c700025 & c701401 **Project Manager:** Isidro Rivera

Project Description: Upgrades to the Graham Hill Water Treatment Plant are necessary to meet new and planned regulatory requirements, and increase overall system reliability. This is a recurring project to prioritize needs and make smaller improvements.

Work planned for FY2018 request: Continued **e**valuation of various process improvements; once a project is defined, it becomes its own CIP.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
c700025, Fund 711	313,986	126,561	-	67,014	59,547	300,000	-	-	-	740,548
c701401, Fund 711	43,834	31,166	-	18,787	12,379	-	-	-	-	75,000
Project Total	**357,820**	**157,727**	**-**	**85,801**	**71,926**	**300,000**	**-**	**-**	**-**	**815,548**

Wharf Water Main (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2016 **Project Status:** Completed **Project #:** c701613 **Project Manager:** Doug Valby

Project Description: Emergency project to repair the Wharf Water Main that failed during strong swell in late January 2016. This project was completed in Fall 2016 and the City did receive an insurance reimbursement.

Work planned for FY2018 request: This project is in the process of closing.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	158,188	35,313	-	-	35,313	-	-	-	-	193,501
Project Total	**158,188**	**35,313**	**-**	**-**	**35,313**	**-**	**-**	**-**	**-**	**193,501**

WTP Concrete Tanks (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2014 - 2020 **Project Status:** Design **Project #:** c701501, c701503, & c701605 **Project Manager:** Kalen Dodd

Project Description: As part of an overall plan to ensure compliance with changing water quality regulations, improvements are needed at the Graham Hill Water Treatment Plant. This project will evaluate the condition of four concrete tanks located at the site (as well as an off-site concrete tank), make improvement recommendation, and construction.

Work planned for FY2018 request: The project is in design March 2017 - February 2018. Construction anticipated for April 2018 - September 2019.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
c701501, Fund 711	201,732	761,588	-	47,013	714,575	1,900,000	7,700,000	-	-	10,563,320
c701503, Fund 711	-	40,000	-	-	40,000	-	-	-	-	40,000
c701605, Fund 711	-	750,000	(525,000)	-	225,000	-	-	-	-	225,000
Project Total	**201,732**	**1,551,588**	**(525,000)**	**47,013**	**979,575**	**1,900,000**	**7,700,000**	**-**	**-**	**10,828,320**

WTP Filter Rehabilitation and Upgrades (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2013 - 2017 **Project Status:** Construction/Wrap-up **Project #:** c701303 **Project Manager:** Isidro Rivera & Matt Zeman

Project Description: As part of an overall plan to ensure compliance with changing water quality regulations, improvements are needed at the Graham Hill Water Treatment Plant. This project will rehabilitate and improve the filter performance. Project will be complete in 2017.

Work planned for FY2018 request: Project is wrapping up.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	5,379,485	657,815	-	589,295	68,520	-	-	-	-	6,037,300
Project Total	**5,379,485**	**657,815**	**-**	**589,295**	**68,520**	**-**	**-**	**-**	**-**	**6,037,300**

WTP Flocculator Mixers (Primary Driver: Rehabilitation or Replacement project)

Project Duration: 2018 - 2019 **Project Status:** Feasibility **Project #:** c701502 **Project Manager:** Kevin Crossley & Isidro Rivera

Project Description: As part of an overall plan to ensure compliance with changing water quality regulations, improvements are needed at the Graham Hill Water Treatment Plant. This project will replace aging paddle wheel flocculators and improve sedimentation processes. Project includes seismic evaluation as well as consideration for covering all basins.

Work planned for FY2018 request: Project relying on rollver funds for pre-design in 2017.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	60,000	-	-	60,000	-	2,300,000	-	-	2,360,000
Project Total	**-**	**60,000**	**-**	**-**	**60,000**	**-**	**2,300,000**	**-**	**-**	**2,360,000**

Upgrades or Improvement Projects

Advanced Metering Infrastructure (AMI) (Primary Driver: Upgrades or Improvement project)

Project Duration: TBD **Project Status:** Feasibility **Project #:** c701603 **Project Manager:** Kyle Petersen

Project Description: Evaluate the use of AMI as replacement to the current AMR metering (Automatic Meter Reading). AMR provides 1-way communication between a meter and the City and AMI provides two-way communication between a meter and the City as well as between a meter and the customer. Benefits include early leak detection, customer conservation affect, and workflow management. Implementation to occur in future years.

Work planned for FY2018 request: Completion of evaluation/business case for AMI.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	50,000	-	5,600	44,400	-	-	-	-	50,000
Project Total	**-**	**50,000**	**-**	**5,600**	**44,400**	**-**	**-**	**-**	**-**	**50,000**

Loch Lomond Facilities Improvements (Primary Driver: Upgrades or Improvement Project)

Project Duration: 2013 - 2020 **Project Status:** Design/Construction **Project #:** c701301 **Project Manager:** Matt Zeman & Gar Eidam

Project Description: Complete facilities assessment and improvement program at Loch Lomond. A Use study was completed in FY 2013 which resulted in a number of planned projects to enhance the recreation area usability for its visitors. Several ADA and other recreational improvements are being pursued over the next 5 years.

Work planned for FY2018 request: ADA improvements of Loch View picnic area.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	49,676	235,324	-	24,700	210,624	100,000	-	-	-	385,000
Project Total	**49,676**	**235,324**	**-**	**24,700**	**210,624**	**100,000**	**-**	**-**	**-**	**385,000**

Photovoltaic System Evaluation/Construc (Primary Driver: Upgrades or Improvement project)

Project Duration: 2016 - 2018 **Project Status:** Design/Construction **Project #:** c701607 **Project Manager:** Heidi Luckenbach & Matt Zeman

Project Description: Ongoing project to evaluate, design and construct PV systems on various water department facilities. The current project is at the Bay Street Tank Site. Once installed, each project will add to the departments and City's green energy portfolio and work towards meeting and exceeding our climate action goals.

Work planned for FY2018 request: The department has submitted an interconnection agreement to PG&E and is striving to complete the project at Bay St Reservoir by July 1st to benefit from current rate structure.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	40,000	-		40,000	-	-	-	-	40,000
Project Total	**-**	**40,000**	**-**	**-**	**40,000**	**-**	**-**	**-**	**-**	**40,000**

Security Camera & Building Access Upgrade (Primary Driver: Upgrades or Improvement project)

Project Duration: 2016 - 2019 **Project Status:** Feasibility **Project #:** c701704 **Project Manager:** Doug Valby, Carlos Silva, & Terry McKinney

Project Description: Evaluation and implementation of security camera and building access upgrades at various Water facilities. Current security equipment is proprietary and could be improved. A transition to a new system will require camera replacement and additional video storage equipment.

Work planned for FY2018 request: Identify priority sites and begin implementation.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process [(2)]	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	95,000	-		95,000	150,000	200,000	200,000	-	645,000
Project Total	**-**	**95,000**	**-**	**-**	**95,000**	**150,000**	**200,000**	**200,000**	**-**	**645,000**

[(2)] The cost of this project is actually ~$500K; priority of sites still needed.

Spoils and Stockpile Handling Facilities (Primary Driver: Upgrades or Improvement project)

Project Duration: 2015 - 2017 **Project Status:** Construction **Project #:** c701508 **Project Manager:** Taylor Ronne

Project Description: Suitable storage for materials (sand, base rock, cold mix and spoils) is needed at the City's Corporation yard. Improvements will allow for better handling of wet spoils generated by the vactor truck, as well as prevent sediment laden runoff from entering the storm water drainage system. (Project title modified from Bunker Roof Project.)

Work planned for FY2018 request: Project should be complete by July 1, 2017.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	5,100	344,900	-	196,768	148,132	-	-	-	-	350,000
Project Total	**5,100**	**344,900**	**-**	**196,768**	**148,132**	**-**	**-**	**-**	**-**	**350,000**

Tube Settlers (Primary Driver: Upgrades or Improvement project)

Project Duration: 2018 **Project Status:** Pre-Design **Project #:** c701708 **Project Manager:** Isidro Rivera

Project Description: This is an outcome of prior work completed under "Water Treatment Upgrades," projects #c700025 and c701401, and involves design and replacement of tube settlers and related appurtenances.

Work planned for FY2018 request: Complete design drawings for replacement of tube settlers in sedimentation basins; construct.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	-	200,000	-	200,000	2,000,000	-	-	-	2,000,000
Project Total	**-**	**-**	**200,000**	**-**	**200,000**	**2,000,000**	**-**	**-**	**-**	**2,000,000**

Water Resources Building (Primary Driver: Upgrades or Improvement project)

Project Duration: 2016 - 2017 **Project Status:** Design **Project #:** c701702 **Project Manager:** Kalen Dodd

Project Description: The Watershed Resources Division is currently housed in temporary trailers. This project consists of a needs assessment, design, and construction. The needs assessment portion of the project has been completed; FY 2016/17 will focus on site selection and design; FY 2017/18 will be construction.

Work planned for FY2018 request: Final design will be completed and construction started.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	1,100,000	-	200,020	899,980	1,000,000	-	-	-	2,100,000
Project Total	**-**	**1,100,000**	**-**	**200,020**	**899,980**	**1,000,000**	**-**	**-**	**-**	**2,100,000**

Water Supply Reliability & Studies Projects

Aquifer Storage and Recovery (Primary Driver: Water Supply Reliability & Studies)

Project Duration: 2016 - 2020 **Project Status:** Feasibility **Project #:** c701609 & c701610 **Project Manager:** Isidro Rivera

Project Description: Evaluate the feasibility of Aquifer Storage and Recovery as per the recommendations of the Water Supply Advisory Committee. Funds in FY 2016 and 2017 will be used for Phase 1 of the proposed study. Phase 2 will include pilot work and be funded in FY 2018. Project would potentially provide additional potable water to City and other agency customers, addressing part or all of water supply deficiencies.

Work planned for FY2018 request: Completion of Phase 1: groundwater modeling, identification of pilot sites; begin Phase 2.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
c701609, Fund 711	17,570	356,930	-	304,689	52,241	1,715,000	175,000	-	-	2,264,500
c701610, Fund 715	7,530	152,970	-	130,581	22,389	735,000	75,000	-	-	970,500
Project Total	**25,100**	**509,900**	**-**	**435,270**	**74,630**	**2,450,000**	**250,000**	**-**	**-**	**3,235,000**

Recycled Water (Primary Driver: Water Supply Reliability & Studies)

Project Duration: 2016 - TBD **Project Status:** Feasibility **Project #:** c701611 & c701612 **Project Manager:** Heidi Luckenbach & David Kehn

Project Description: Evaluate the feasibility of using advanced treated wastewater for beneficial uses as per the recommendations of the Water Supply Advisory Committee. The project will be collaboration amongst the Water and Public Works Departments. The project would potentially provide additional water to City and other agency customers, addressing all or part of water supply deficiencies.

Work planned for FY2018 request: The Recycled Water Feasibility Planning Study will wrap-up by Winter 2017; includes a financial analysis by Raftelis Financial Consultants of feasible projects.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
c701611, Fund 711	36,234	313,766	52,500	337,480	28,786	-	-	-	-	402,500
c701612, Fund 715	17,405	132,595	22,500	158,787	(3,692)	-	-	-	-	172,500
Project Total	**53,639**	**446,361**	**75,000**	**496,267**	**25,093**	**-**	**-**	**-**	**-**	**575,000**

Source Water Evaluation (Primary Driver: Water Supply Reliability & Studies)

Project Duration: 2016 - 2020 **Project Status:** Feasibility **Project #:** c701608 **Project Manager:** Kevin Crossley, Sarah Easley Perez, & Terry McKinney

Project Description: Evaluate source water quality, operational and infrastructure alternatives to maximize use of surface water. This project was prompted in part by the recommendations of the Water Supply Advisory Committee, accepted by Council in Nov 2015, to evaluate use of additional winter flows in the San Lorenzo River for various purposes to solve the regional water supply issues.

Work planned for FY2018 request: The project currently consists of a number of studies including source water quality sampling, jar testing, and in-plant hydraulic modeling that will lead to near, mid, and long term projects to improve water quality and reliability.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	33,079	566,921	-	149,229	417,692	250,000	250,000	-	-	1,100,000
Project Total	**33,079**	**566,921**	**-**	**149,229**	**417,692**	**250,000**	**250,000**	**-**	**-**	**1,100,000**

Water Supply Reliability (Primary Driver: Water Supply Reliability & Studies)

Project Duration: 2014 - 2016 **Project Status:** Completed **Project #:** c701402 & c701403 **Project Manager:** Heidi Luckenbach

Project Description: Support the Water Supply Advisory Committee (WSAC) to explore the City of Santa Cruz's water situation and potential supply options. Will include exploration of elements that impact supply such as the Habitat Conservation Plan process, elements affecting demand such as the conservation master plan, and potential water supply alternatives such as water exchange and beneficial uses of recycled water, and funding of Water Supply Advisory Committee facilitation. Potential for funding contributions from other agencies for exploration of regional solutions and/or grant funding. Includes supporting various elements of the WSAC final recommendations.

Work planned for FY2018 request: The projects are in the process of closing. A separate WSAS project was created for implementation.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
c701402, Fund 711	1,606,048	124,334	(110,459)	13,874	0	-	-	-	-	1,619,923
c701403, Fund 715	670,380	48,840	(42,893)	5,946	0	-	-	-	-	676,327
Project Total	**2,276,428**	**173,174**	**(153,352)**	**19,820**	**-**	**-**	**-**	**-**	**-**	**2,296,250**

Water Supply Augmentation Strategy Implementation (Primary Driver: Water Supply Reliability & Studies)

Project Duration: 2020 - 2025 **Project Status:** Feasibility **Project #:** c701705 **Project Manager:** Heidi Luckenbach

Project Description: This CIP replaces the Water Supply Advisory Committee (WSAC) to capture various studies and analyses to further the WSAC recommendations.

Work planned for FY2018 request: Complete analysis of Desal (Part of Element 3), do comparative analysis of Desal and Recycled Water alternatives as per WSAC recommendations.

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	-	-	78,352	22,088	56,264	300,000	-	1,200,000	103,200,000	104,778,352
Project Total	**-**	**-**	**78,352**	**22,088**	**56,264**	**300,000**	**-**	**1,200,000**	**103,200,000**	**104,778,352**

Water Main Replacement Projects

Main Replacements -City Engineering (Primary Driver: Water Main Replacements)

Project Duration & Status: On-going annual work **Project #s:** c700002, c709833, & c700017 **Project Manager:** Doug Valby

Project Description: Recurring program to replace deteriorated or undersized mains as identified and prioritized by the Department. Priorities are based on the need to maintain water system reliability, deliver adequate fire flows, improve circulation and water quality, and reduce maintenance costs. These projects are typically large in terms of linear feet and are installed by contractors according to bid plans and specifications.

Work planned for FY2018 request: Funding in FY17 and FY18 includes the Murray St Bridge and Riverside Dr (both Public Works projects), River St (from Highway 1 to Water), and Potrero St (from River to Mora). The River St and Potrero St work is scheduled for April - Dec 2017 .

	Prior Year Spent [1]	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
c700002, Fund 711	3,182,963	1,140,164		1,078,830	61,334	4,050,000	2,250,000	2,250,000	20,250,000	33,123,128
c709833, Fund 711	2,348,760	736,677		17,685	718,992	-	-	-	-	3,085,437
c700017, Fund 715	509,361	184,169		-	184,169	-	-	-	-	693,531
Project Total	**6,041,084**	**2,061,011**		**1,096,515**	**964,495**	**4,050,000**	**2,250,000**	**2,250,000**	**20,250,000**	**36,902,095**

[1] Prior year spent for project c700002 and c700017 includes work from FY2000 through FY2016. The prior year spent for project c709833 includes work from FY1998 through FY2016.

Main Replacements -Customer Initiated (Primary Driver: Water Main Replacements)

Project Duration & Status: On-going annual work **Project #:** c700004 **Project Manager:** Doug Valby

Project Description: Recurring program similar to the other Main Replacement Projects; however, these projects are initiated on an as-needed basis to accommodate customer-requested service connections to undersized or inadequate mains. Funds, to the extent of the appropriation, are disbursed to customers on a first-come, first-served basis. This project is funded by System Development Charges (100% SDC – Fund 715).

Work planned for FY2018 request: Actual projects are still to be determined.

	Prior Year Spent [3]	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 715	301,259	50,000		-	50,000	50,000	50,000	50,000	500,000	1,001,259
Project Total	**301,259**	**50,000**		**-**	**50,000**	**50,000**	**50,000**	**50,000**	**500,000**	**1,001,259**

[3] Prior year spent includes work from FY2000 through FY2016.

Water Main Replacements - Distribution (Primary Driver: Water Main Replacements)

Project Duration & Status: On-going annual work **Project #:** c701507 **Project Manager:** Miguel Valencia & Doug Valby

Project Description: Recurring program to replace deteriorated or undersized water mains, as identified and prioritized by the Department and implemented by the Distribution Section. Projects are typically based on leak history, but also address water quality and fire flow issues.

Work planned for FY2018 request: Actual projects are still to be determined.

	Prior Year Spent [5]	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	468,136	481,864		182,310	299,554	325,000	325,000	325,000	3,250,000	5,175,000
Project Total	**468,136**	**481,864**		**182,310**	**299,554**	**325,000**	**325,000**	**325,000**	**3,250,000**	**5,175,000**

[5] Prior year spent includes all expenses from FY2015 through FY2016.

Main Replacements -Outside Agency (Primary Driver: Water Main Replacements)

Project Duration & Status: On-going annual work **Project #:** c700003 **Project Manager:** Doug Valby

Project Description: Water main, service line, valve, or water meter relocation necessitated by County or other Agency road improvement, storm drain improvement projects, and/or other projects that conflict with existing water infrastructure.

Work planned for FY2018 request: Actual projects are still to be determined.

	Prior Year Spent [2]	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Project (Projected)
Fund 711	1,103,581	478,211		27,778	450,433	250,000	250,000	250,000	2,500,000	4,831,792
Project Total	**1,103,581**	**478,211**		**27,778**	**450,433**	**250,000**	**250,000**	**250,000**	**2,500,000**	**4,831,792**

[2] Prior year spent includes work from FY2000 through FY2016.

Total

	Prior Year Spent	FY2017 Amd Budget	FY2017 Budget Adjustment in process	FY2017 Enc & Spent (Thru 1/31/17)	FY2017 Balance	FY2018 Request	FY2019 Projected	FY2020 Projected	FY2021 - FY2030 Projected	Total Life of Projects (Projected)
Fund 711	43,762,338	21,908,005	30,393	11,322,296	10,616,102	23,875,000	25,535,000	43,665,000	160,920,000	319,695,736
Fund 715	6,425,419	927,619	(30,393)	307,044	590,182	785,000	125,000	50,000	500,000	8,782,645
Total	**50,187,757**	**22,835,624**	**(0)**	**11,629,340**	**11,206,284**	**24,660,000**	**25,660,000**	**43,715,000**	**161,420,000**	**328,478,381**

WATER COMMISSION
INFORMATION REPORT

DATE: 3/1/2017

AGENDA OF: March 6. 2017

TO: Water Commission

FROM: Rosemary Menard

SUBJECT: Draft Agenda for the proposed March 14, 2017, Joint Meeting of the Santa Cruz City Council and the Water Commission.

RECOMMENDATION: Receive information and provide feedback to staff on the draft presentation for the March 14, 2017, joint meeting with City Council.

BACKGROUND: At its February 6, 2017, meeting the Water Commission received information about staff's goals and approach for the planned March 14, 2015, joint study session between the City Council and the Water Commission. Below is the information provided to the Commission in February regarding how the planned agenda would be structured:

1. A general overview of WSAC's Recommendations and Agreements;
2. Details about WSAC's recommended decision making process, timeline and the work plan being pursued to support decision-making;
3. A progress report on the City's work during calendar 2016 to implement the WSAC's agreed upon work plan, and an overview of the key outcomes of the calendar 2017 work plan; and
4. An opportunity for a discussion between Councilmembers and Commissioners about the on the City's pursuit of the WSAC recommendations.

Public comment will be received during this discussion, likely between agenda item 3 and 4.

Please note, the joint meeting is being framed as a study session. Council or Commission action on any specific action that might be discussed would need to be included in a future agenda for Council or Commission action.

The presentation provided with this staff report would be given as part of item number one. Staff has developed this presentation to provide a reasonable level of detail without getting too much in to the weeds. The goal is to stimulate questions and discussion not reprise the entire WSAC process.

FISCAL IMPACT: None

PROPOSED MOTION: Receive information and provide feedback to staff on the draft presentation for the March 14, 2017 joint meeting with City Council.

ATTACHMENT: Working Draft of Presentation for Joint Study Session.

Joint Study Session

Santa Cruz City Council
Santa Cruz Water Commission

Briefing on City Water Supply Advisory Committee Final Report on Agreements and Recommendations

March 14, 2015

Background/Context

- October 2013 City Council directed staff to develop a Community Engagement Program to address Santa Cruz' water supply issues
- November 2013 City Council accepts framework recommended by staff to establish a "Drought Solutions Citizen Advisory Committee"
- February 2014 Council approves membership of the "Water Supply Advisory Committee"
- April 2014 - October 2015 WSAC meets
- November 10 and 24 2015 Joint Water Commission - City Council Study Session and Council adoption of WSAC Agreements and Recommendations

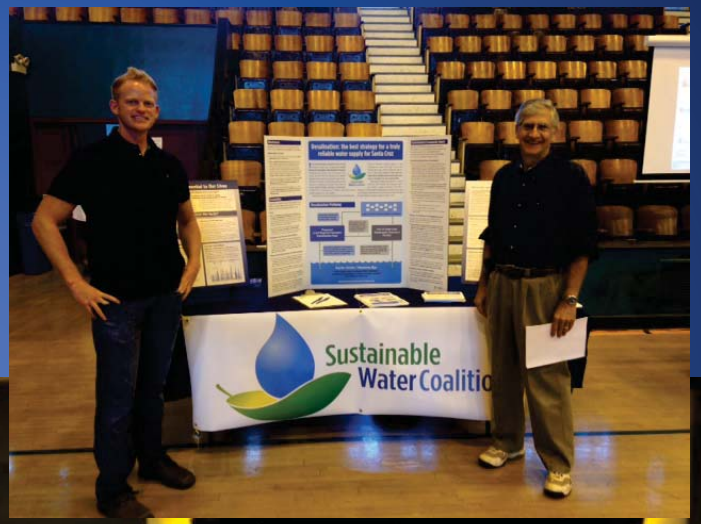
Water Supply Advisory Committee

- 14 Citizens of Santa Cruz and Live Oak
- Appointed by Council
- Representing the Chamber, Desal Alts, Sierra Club, Surfrider, Sustainable Water Coalition, the Water Commission and 3 community-at-large members.

Facilitator-led, Consensus-based

Education and Engagement

Our Water, Our Future: The Santa Cruz Water Supply Convention - November, 2014



Decision Criteria for Evaluating "Our Water, Our Future" Water Supply Convention Alternatives

- Cost metrics
- Energy profile
- Environmental profile
- Legal feasibility
- Adaptive flexibility, including scalability
- Regulatory feasibility
- Political feasibility
- Potential for external funding
- Supply diversity
- Supply reliability
- Time required to demonstrate feasibility
- Time required to full scale production

Key Challenges Facing our Water Supply

- Seawater Intrusion Potential
- Limited storage
- Fish flows
- Climate change

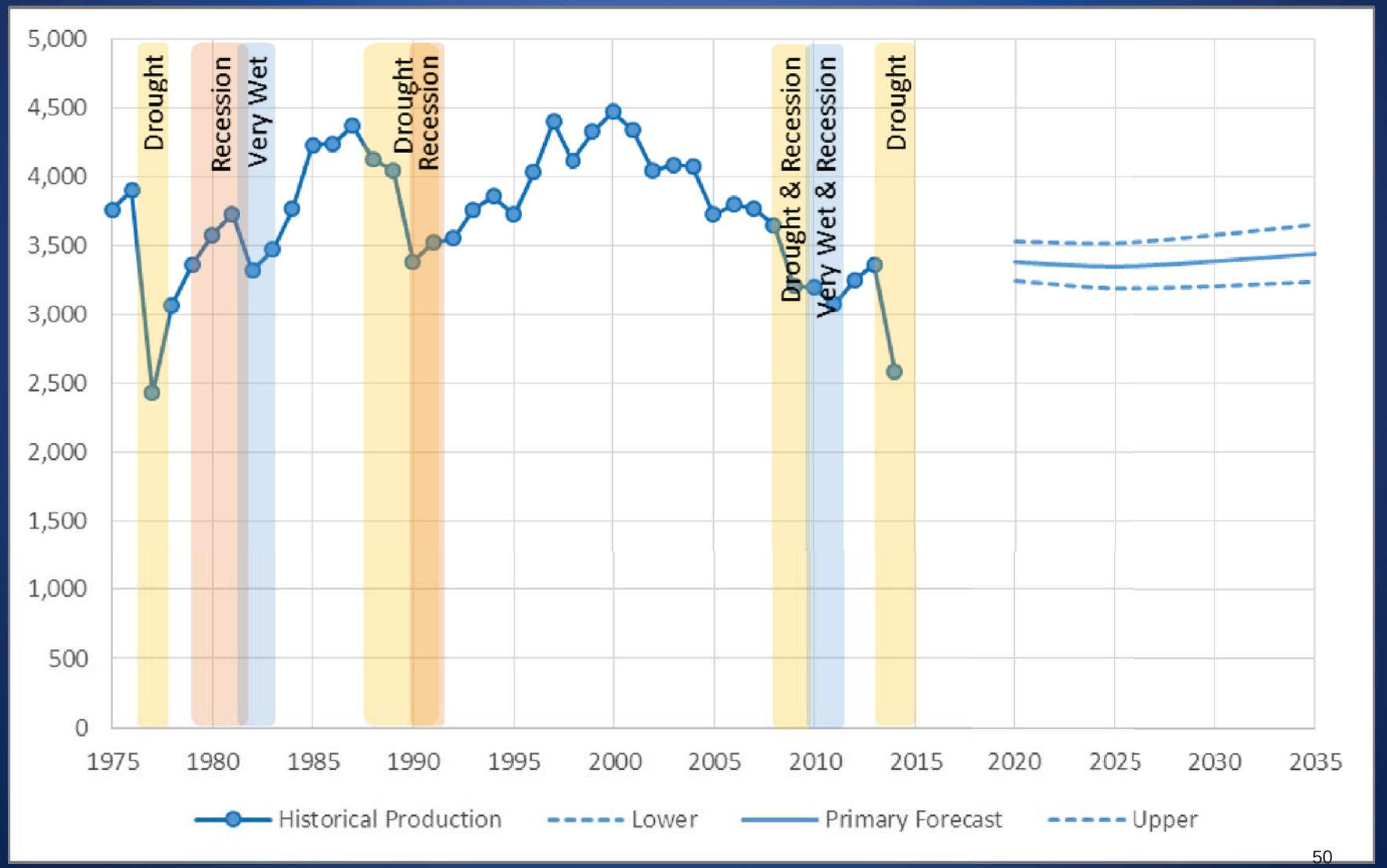
WSAC's Problem Statement

July 2015

- Limited Storage
- Fish Flow Requirements & Potential climate change impacts
- Resulting peak-season gap: 1.2 billion gallons worst case
- Water conservation alone is not enough

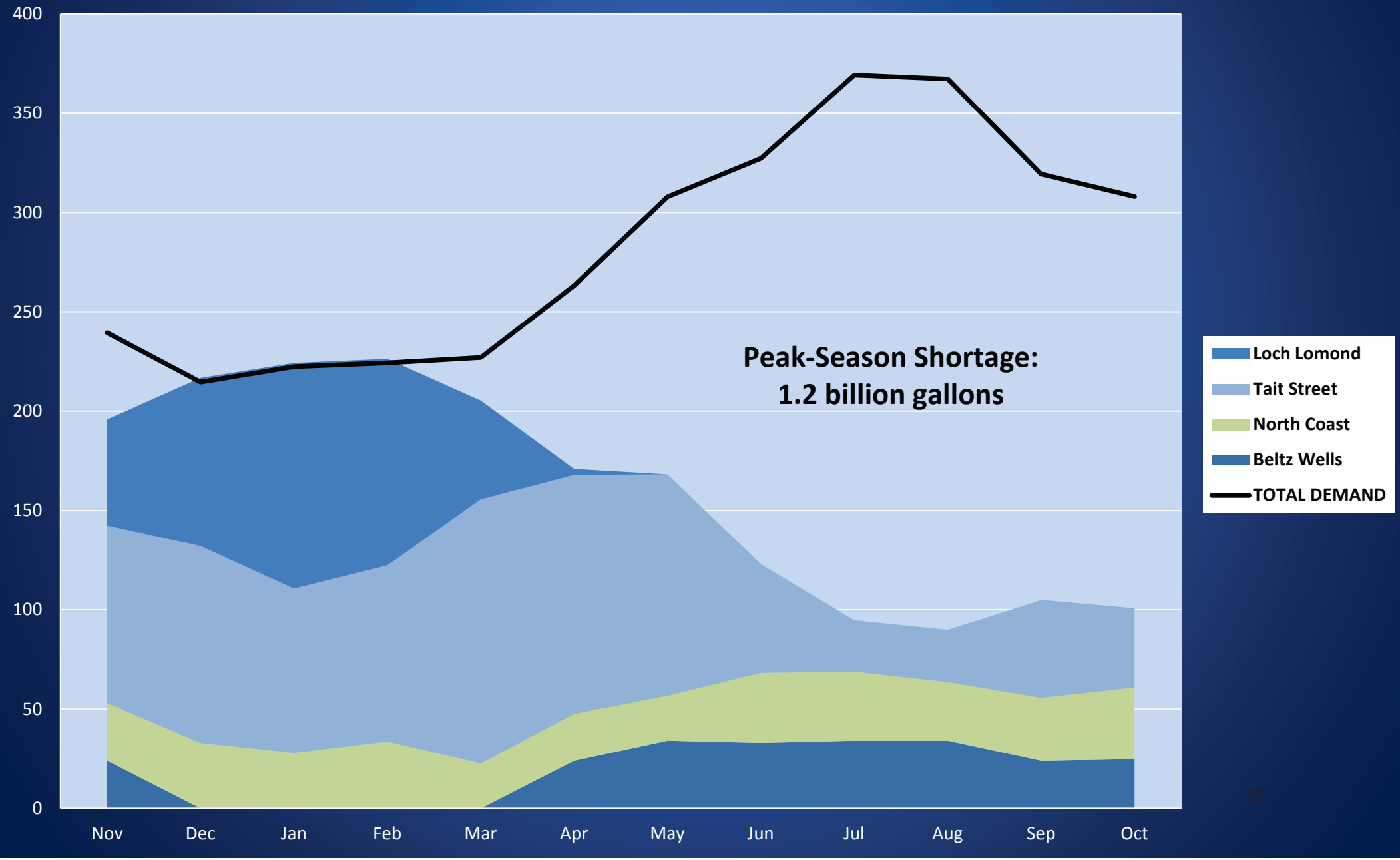
Final WSAC Forecast (Sept 2015)

Historical and Forecast Production (MG)



Projected Worst Year Gap

DFG-5 Flows, Final Demands, Climate Change
(millions of gallons per month)

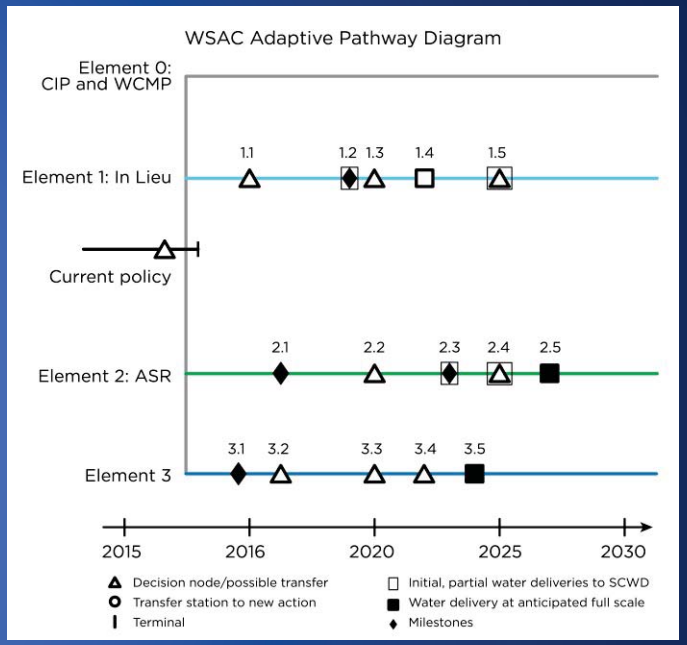


WSAC Goal

- The WSAC's agreed upon goal for its planning process was to establish a reasonable level of reliability for Santa Cruz water customers by substantially decreasing the size of the worst year gap while also reducing the frequency of shortages in less extreme years.

WSAC Recommendations

- Supply Augmentation Portfolio (“what”)
- Adaptive Management Strategy (“how”)
  - Tools to implement recommendations and manage change
- Reached consensus



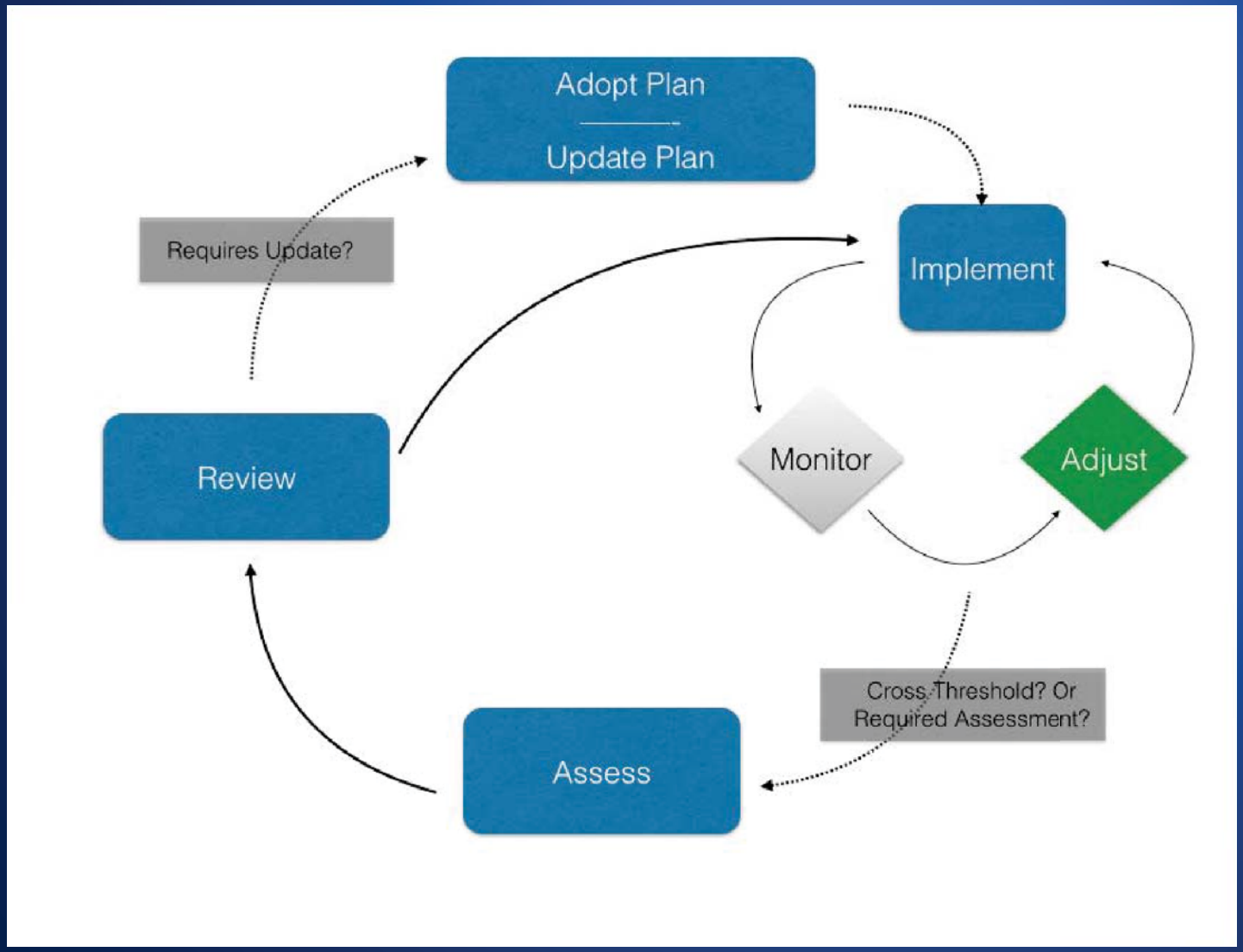
WSAC Supply Augmentation Recommendations: The What

- Strategy 0 = Implement Additional Water Conservation Efforts
  - Continued and increased conservation programs
- Strategy 1 = Explore the Feasibility of Winter Water Harvest
  - In-lieu water exchange with Soquel Creek and/or Scotts Valley Water Districts
  - Aquifer storage and recovery (ASR)
- Strategy 2 = Explore the Feasibility of Alternative Water Supplies
  - Recycled water
  - Desalination

Analytical Basis for Winter Water Harvest (Strategy 1)

- Storage Space Available:
  - Pueblo Water Resources identified available aquifer storage space in the Santa Cruz Mid-County and Santa Margarita Basins as providing a combined 5.6 billion gallons of potential groundwater storage.
- Water Available to Store:
  - Gary Fiske and Associates indicated that it would take 3 to 5 years to provide 3 billion gallons of winter water for groundwater storage under historic hydrologic conditions and 5 to 8 years under the climate change hydrologic conditions evaluated.

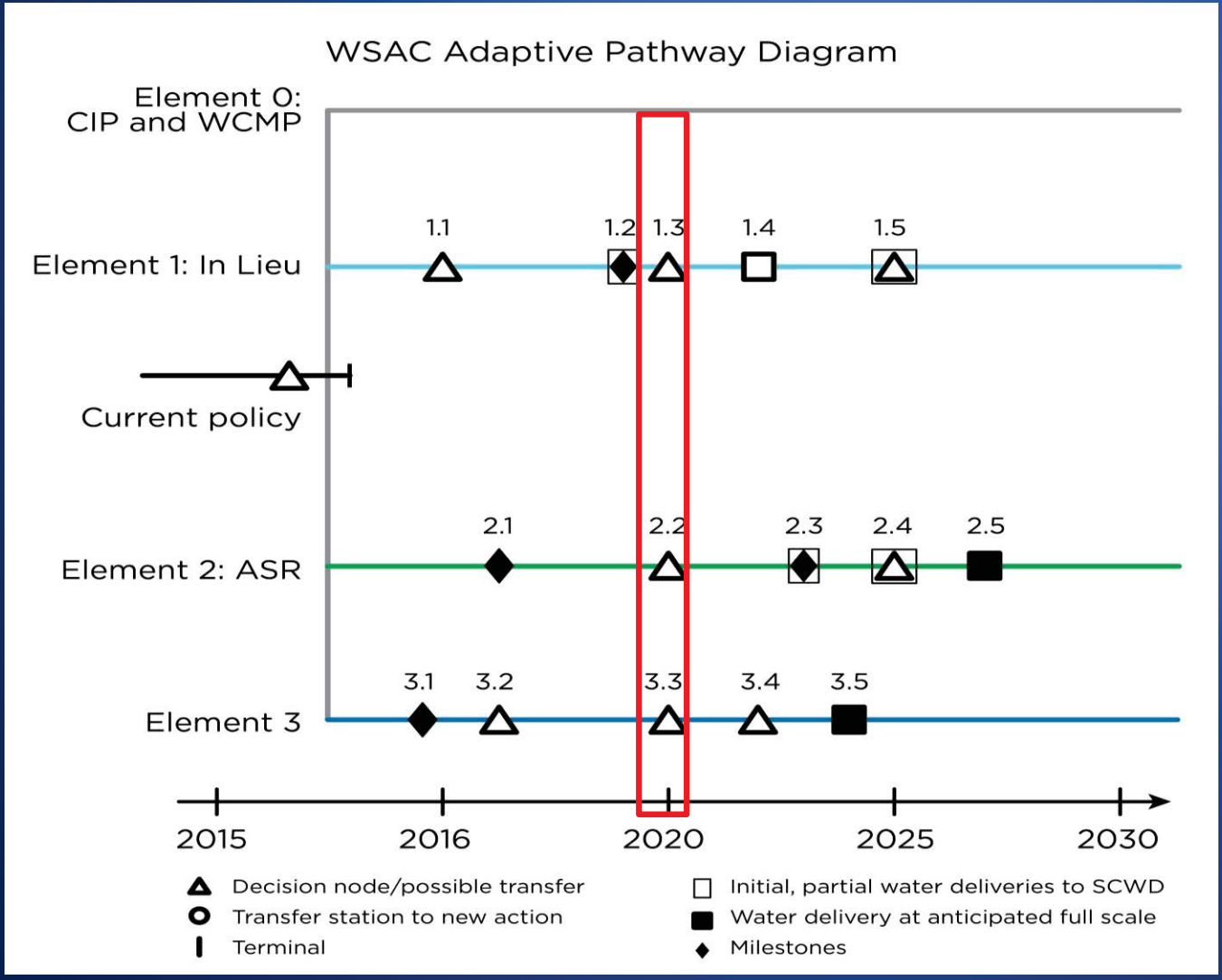
WSAC Recommended Adaptive Management Strategy: The How – Part 1



The WSAC adopted a more detailed version of the typical "Plan, Do, Check, Act" cycle as part of their strategy create a plan that can be adapted to changing information.

Each part of the adaptive management strategy includes clear definitions and appropriate metrics.

WSAC Recommended Adaptive Management Strategy: The How – Part 2



In order to maximize the potential for achieving water supply security by 2025, the WSAC recommended doing feasibility analysis on all three supply elements so that complete information would be available in 2020 to support decision making on supplemental water supply projects needed to close the supply gap.

November 24, 2015 City Council Action on WSAC Agreements & Recommendations

- Accepted the Water Supply Advisory Committee (WSAC) Agreements and Recommendations Final Report
- Directed staff to integrate the WSAC-recommended water supply packaged strategy into the Urban Water Management Plan update, required by the Department of Water Resources to be submitted by July 1, 2016 – Completed

Agreements & Recommendations

- Directed the Water Commission to assume oversight of the implementation of the work plan to implement WSAC Agreements and Recommendations and provide no less than semi-annual updates to the City Council
- Supported staff's continuing public information and engagement on the water supply strategy

QUESTIONS AND DISCUSSION