CITY OF SANTA CRUZ
Water Department

Water Commission Agenda
Regular Meeting
7:00 p.m. – October 3, 2016
Council Chambers
809 Center Street, Santa Cruz

Agenda

Call to Order

Roll Call

Presentation *Organized groups may make presentations to the Water Commission. Presentations that require more than three minutes should be scheduled in advance with Water Department staff.*

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 1-8)

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 September 12, 2016 Water Commission Minutes ☆ (Pages 3-8)

Items Removed from the Consent Agenda

General Business (Pages 9-27)

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 docu-

ments will also be available for review at the Water Commission meeting with the display copy at the rear of the Council Chambers.

3. Report on Public Health Goals and Water Quality Discussion ☆(Pages 9-27)

Recommendation: That the Water Commission hold a public hearing for the purpose of accepting and responding to public comments on this report and water quality relative to public health goals and maximum contaminant level goals.

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 tentatively scheduled for November 7, 2016 at 7:00 p.m. 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
REPORT

DATE: September 28, 2016

TO: Water Commission

FROM: Rosemary Menard
Water Director

SUBJECT: City Council Items Affecting Water

September 13, 2016

Gravity Trunk Main Inspection Contract Award and Budget Adjustment (WT)

Motion carried to accept the proposal of Pure Technologies U.S., Inc. (San Diego, CA) in the amount of $325,500 for the inspection and condition assessment of the Gravity Trunk Main and to authorize the City Manager to execute an agreement in a form approved by the City Attorney.

Resolution No. NS-29,137 was adopted appropriating funds and amending the FY 2017 budget in the amount of $290,000 from the Water Enterprise Fund (Fund 711) to fund the cost of the inspection and condition assessment and related support work.

Newell Creek Dam Outlet Rehabilitation/Replacement - Professional Service Contract – Task 5 (WT)

Motion carried to ratify a contract with AECOM (Oakland, CA) in the amount of $570,702 to provide professional services related to Phase 2 of the Newell Creek Dam Outlet Conduit Rehabilitation/Replacement Program.

September 27, 2016

Integrated Regional Water Management – Memorandum of Agreement and Grant Sub-agreement (PW and WT)

Motion carried to authorize the City Manager to execute the Memorandum of Agreement for the Santa Cruz Integrated Regional Water Management Plan in a form approved by the City Attorney.

Resolution No. NS-29,142 was adopted authorizing the City Manager to execute a Proposition 84 Integrated Regional Water Management Grant Agreement between the Regional Water Management Foundation and the City of Santa Cruz Water Department for the project entitled Tait Wells Replacement Project, in a form approved by the City Attorney; accept the funds; and execute all standard agreements for such funds and any amendments thereto and any other documents necessary to secure the grant funds in a form approved by the City Attorney.

City of Santa Cruz Corporation Yard Material Storage Bin Roof Project – Approval of Specifications and Contract Documents and Authorization to Advertise for Bids and Award of Contract, and Authorize Exception from Local and Apprentice Employment Requirement (WT)

Motion carried to approve the specifications and contract documents for the City of Santa Cruz Corporation Yard Material Storage Bin Roof Project and authorize staff to advertise for bids and award the contract, and authorize exception from the local and apprentice employment requirement due to specialized nature of the construction.

Motion carried to authorize the City Manager to execute the contract as authorized by Resolution No. NS-27,563 in a form approved by the City Attorney.

Appropriate Funds for IBank Origination Fee - Budget Adjustment (WT)

Resolution No. NS-29,143 was adopted appropriating funds and amending the FY 2017 budget in the amount of $250,000 from the Water Fund (711) to fund the IBank Loan Origination Fee.

Water Department

Water Commission
7:00 p.m. – Monday, September 12, 2016
Santa Cruz Public Library – Downtown Branch
Second Floor Conference Room
224 Church Street, Santa Cruz

Minutes of a Water Commission Meeting

Call to Order – Chair Wadlow called the meeting to order at 7:05 p.m. in the Santa Cruz Public Library conference room.

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

Staff Present: H. Luckenbach Deputy Director/Engineering Manager; T. Goddard, Administrative Service Manager; N. Dennis Principal Management Analyst; M. Zeman Engineering Associate; N. Christen Water Conservation Representative; A. Poncato, Administrative Assistant III.

Others: 5 members of the public.

Presentation: Presentation by J. Paul and S. McGilvray.

Statements of Disqualification: There were no statements of disqualification.

Oral Communications: Oral communications made by Randa Solick.

Announcements: There were no announcements.

Consent Agenda

1. City Council Actions Affecting Water
2. Approve the August 1, 2016, Water Commission Minutes

Commissioner Baskin moved item 1. City Council Actions Affecting Water of the Consent Agenda. Commissioner Schwarm seconded.
VOICE VOTE: MOTION CARRIED
AYES: All.
NOES: None.
ABSENT: L. Wilshusen

Commissioner Baskin moved item 2. Approval of the August 1, 2016, Water

Commission Minutes. Commissioner Engfer seconded.
VOICE VOTE: MOTION CARRIED
AYES: All.
NOES: None.
ABSTAIN: W. Wadlow and A. Schiffrin due to absence from the August 1, 2016, Water Commission meeting
ABSENT: L. Wilshusen

Items Removed from the Consent Agenda

No items removed from the Consent Agenda.

General Business

3. Presentation on Loch Lomond ADA Improvements

Mr. Zeman presented an overview of the accessibility and improvements at Loch Lomond.

Questions included:

Did we experience any runoff across the new pavement into Loch Lomond as part of this project?

- That was a special concern of staff, but the dry winter and our construction best management practices kept any oily runoff from entering the lake.

Where does the water for the drinking fountains come from?

- There is a small water treatment plant at the park which provides water for the park. It draws water from the lake. (This is not Graham Hill Water Treatment Plant-produced water.)

4. System Water Loss Evaluation

Mr. Goddard introduced the item and turned the presentation over to Mr. Christen, who provided a brief project background and then introduced Ms. Kate Gasner of Water Systems Optimization, Inc. (WSO) to provide a presentation on the Water Audit & Water Loss Control Program for the City of Santa Cruz.

Questions included:

How do you account for the potential differences between a study year like 2014, when we were in a drought and rationing water, versus a normal year when the system was producing more water?

- Lower demand does not trigger operational differences and approaches compared to a regular season. System pressure remains similar regardless of how much water is being moved.

Why would we value our real losses at the cost of production as opposed to lost revenue or how it would be offset for us to develop a new supply?

- There are different approaches to valuing lost water. WSO used the variable cost of water supplies for real losses which is conservative. The value of real losses does not include property damage that sometimes occurs due to a main break because costs vary so widely and are difficult to predict. Apparent losses from inaccurate meters are valued at the retail rate.

Is the GHWTP going to get an effluent meter?

- The main issue is finding a place to put the meter: meter accuracy requires the pipe to be full and a prescribed distance before and after the meter that is straight. The meter also needs to be in a location where it can be easily tested. There was a meter at the finished water tank but it was unreliable because the pipe was not always full at that location. The tank project in the CIP will consider this again.

How much water does a similar sized water utility in California lose?

- The average Infrastructure Leakage Index (ILI) for other water systems in California is 2.5, compared to 1.2 for the City of Santa Cruz. This means Santa Cruz is leaking only 20% more than the technical minimum for a system with its characteristics (miles of main, number of connections, and average pressure), according to models.

How many miles of potable transmission lines do we have?

- 270 miles treated water transmission and distribution mains.

Final Comments and Requests for Follow Up

- One member commented that given the City's low level of leakage, even if it fixed every leak, it wouldn't eliminate the need for additional water supply. Another mentioned that leaks are like weeds – you can pull them but other come up again. It's a never ending job to control water losses.
- In the future, lost water should also be valued at the cost to replace the water as opposed to just the cost to treat it. The replacement, or avoided costs, would likely be higher.
- It would be helpful to have the Department document which of the consultant's recommendations the Water Department plans to implement.
- What are next steps and/or projects/programs?

5. Water Supply Augmentation Strategy Quarterly Review

Ms. Luckenbach presented the Water Supply Augmentation Strategy quarterly review.

Questions included:

Has Soquel Creek Water District (District) submitted an agreement and operational plan to receive a State issued permit yet?

- As the City understands the situation, the District needs to amend their existing permit through the State Division of Drinking Water to include City's surface water transfers as an additional water source. An attachment to this amendment request is the operations plan. This plan is still in draft form, under review by Soquel Creek Water District.

How are the University of California, Santa Cruz and North Coast customers affected by the switch to calculating water rates based on volume used?

- Both North Coast customers and University of California, Santa Cruz customers will see substantially increased bills after switching to a more volume-based rate structure. Annual revenue from the University of California, Santa Cruz has averaged a little over $1.1 to 1.2 million over the last five years. Before the rate increase, it was projected to be $1.4M in 2017 and will now be closer to $2.3M, on an annual basis. This will climb to about $3.0M by 2018, meaning in less than four years, The University of California, Santa Cruz cost for water service will effectively triple. The North Coast customers will also see steeper bills due to the increase in commodity rates and the addition of the infrastructure reinvestment fee.
- Discussion with Commissioners and staff regarding flexibility within the existing agreement.
- Discussion with Commissioners and staff about the water quality concerns and the work the District is considering (loop and/or coupon testing) to shed more light on any potential impacts to the project.
- Staff ensured continued support of the project and helping out the District in any way possible.
- It would be helpful to have a project plan/road map for the in-lieu portion of the strategy so that the required activities can be better understood by the Commission.

<u>Final Comments and Requests for Follow Up</u>

- The terms and conditions of the Cooperative Water Transfer Agreement were set intentionally to protect City's supply. Any changes that are not within the provisions of the agreement should be brought back to the City Council at a minimum and Water Commission if possible, for approval.
- It would be helpful to have a project plan/road map for the in-lieu portion of the strategy so that the required activities can be better understood by the Commission.
- Staff clarified that horizontal collector wells (e.g., Ranney Collectors) are being considered within existing capital improvement projects focusing on source water monitoring and Felton Diversion.
- The public should be aware of the progress made so far on the WSAS and the Department will want to carefully consider how to keep the community engaged.
- Staff mentioned several technical memoranda for the aquifer storage and recovery project that are due to the city the week of September 12; Commission Baskin requested that the Water Commission see these before the next quarterly update.

Subcommittee/Advisory Body Oral Reports No items.

Director's Oral Report Ms. Luckenbach mentioned the recent trip she and Director Menard took to Sacramento to meet with various agencies including the State Water Resources Control Board, Division of Financial Assistance to discuss potential funding

opportunities, and the Division of Safety of Dams to discuss the Newell Creek Dam project.

Adjournment Meeting adjourned at 9:13 p.m. The next meeting of the Water Commission is scheduled for October 3, 2016, 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: 2016.09.29 07:11:13 -07'00'

Staff

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WATER COMMISSION
INFORMATION REPORT

DATE: 9/29/2016

AGENDA OF: October 3, 2016

TO: Water Commission

FROM: Rosemary Menard, Water Director
Hugh Dalton, Water Quality Manager

SUBJECT: Report on Public Health Goals 2013-2015 and Water Quality Discussion

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RECOMMENDATION: That the Water Commission hold a Public Hearing for the purpose of accepting and responding to public comment on the Report on Public Health Goals and water quality relative to public health goals and maximum contaminant level goals.

BACKGROUND: Attached for review is the 2016 Public Health Goal (PHG) report for the City of Santa Cruz drinking water quality (2013-2015) relative to the Public Health Goals adopted by California Environmental Protection Agency's (EPA's) Office of Environmental Health Hazard Assessment (OEHHA) and the Maximum Contaminant Level Goals (MCLGs) adopted by the USEPA. As described in more detail in the report, PHGs and MCLGs are non-enforceable standards and no requirements are in place to meet these goals.

The Santa Cruz water system complies with all of the health-based drinking water standards and Maximum Contaminant Levels (MCLs) required by the State Water Resources Control Board (SWRCB), Division of Drinking Water and the USEPA. PHGs (a California standard) and MCLGs (a federal equivalent) are levels of a contaminant in drinking water below which there is no known or expected risk to health. MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. During the three-year reporting period, there were two exceedances: one exceedance was measured for arsenic and one for hexavalent chromium. Although these results exceeded the Public Health Goals, they were far below the mandated MCL limits. The City of Santa Cruz drinking water is of very high quality and no recommendations for improvement are made in the attached report.

The law requires that a public hearing is held for the purpose of accepting and responding to public comments on this report comparing the City of Santa Cruz drinking water quality relative to PHGs and MCLGs. The October 3, 2016, Water Commission meeting will serve as the hearing for accepting and responding to public comment on this report, Water Quality Relative to Public Health Goals (2013-2015).

FISCAL IMPACT: There are no specific fiscal implications from accepting the 2016 Public Health Goal Report.

PROPOSED MOTION: Accept the 2016 Public Health Goal Report.

ATTACHMENTS: 2016 Public Health Goal Report

City of Santa Cruz Water Department
Water Quality Relative to Public Health Goals
2013 Through 2015
Water System CA4410010

Background and Summary

The California Health and Safety Code (Attachment 1) specifies that water utilities serving more than 10,000 connections must prepare this written report when one or more contaminants in drinking water exceed the applicable Public Health Goal (PHG) within the three year reporting period. The Water Department has chosen to prepare a report regardless of the whether or not detections were measured. This report was due by July 1, 2016; administrative circumstances prevented a more timely release.

Unlike the primary Maximum Contaminant Levels (MCLs) which must not be exceeded in drinking water, PHGs are non-enforceable goals. PHGs are established by the Cal-EPA's Office of Environmental Health Hazard Assessment (OEHHA).

The law also requires that where OEHHA has not adopted a PHG for a constituent, the water supplier is to use the MCLG (Maximum Contaminant Level Goal) adopted by the USEPA. There are constituents that do not have a PHG or MCLG adopted by OEHHA or USEPA; however, only constituents which have a California primary MCL and for which either a PHG or MCLG has been set are addressed in this report. Attachment 2 is a list of all regulated constituents with the MCLs and PHGs or MCLGs.

There are a few constituents that are routinely detected in water systems at levels usually below the drinking water standards and for which no PHG or MCLG has yet to be adopted by OEHHA or USEPA. These will be addressed in a future PHG report after a PHG has been adopted.

For constituents detected in the City's water supply in 2013, 2014 or 2015 at a level exceeding an applicable PHG or MCLG, this report provides the information required by the law. This information includes the category or type of risk to health that could be associated with each constituent, the numerical public health risk associated with the MCL and the PHG or MCLG for constituents with a carcinogenicity health risk, the best treatment technology available that could be used to reduce the constituent level, and an estimate of the cost to install that treatment if it is appropriate and feasible.

In the reporting period addressed herein, two constituents have been detected in the treated water at concentrations above the PHGs. Therefore, this report has been prepared to document that the Santa Cruz Water Department has reviewed all the relevant data in comparison to the PHGs and MCLGs and to further inform our customers of the high water quality of their drinking water.

What are PHGs and MCLGs?

PHGs are set by the California Office of Environmental Health Hazard Assessment (OEHHA), which is part of the Cal-EPA. PHGs are based solely on public health risk considerations. None of the practical risk-management factors that are considered by the USEPA or the SWRCB in setting drinking water standards (maximum contaminant levels; MCLs) are considered in setting the PHGs. Practical risk-management factors include such considerations as analytical detection limits and the availability, benefits, and costs of treatment technology. The PHGs are non-enforceable goals and are not required to be met by any public water system. For more information on PHGs visit this website: http://oehha.ca.gov/water/public-health-goals-phgs MCLGs are the federal equivalent to California PHGs.

Water Quality Data Considered

All of the 2013, 2014 and 2015 water quality data from treated water at the point-of-entry to the distribution system was considered for this report. Annual regulatory compliance with the MCLs was summarized in our 2013, 2014 or 2015 Annual Water Quality Consumer Confidence Reports that are made available to all of our customers each May following the reporting year. The 2015 Consumer Confidence Report (CCR) is included as Attachment 3. The three most current CCR's are available online: www.cityofsantacruz.com/ccr2015; www.cityofsantacruz.com/ccr2014; and www.cityofsantacruz.com/ccr2013.

Guidelines Followed

The Association of California Water Agencies (ACWA) prepared guidelines for water utilities to use in preparing these PHG reports. The ACWA guidelines were used in the preparation of this report. Limited guidance was provided by State Water Resources Control Board (SWRCB), Division of Drinking Water staff.

Best Available Treatment Technology and Cost Estimates

Both the USEPA and SWRCB adopt what are known as BATs (Best Available Technologies) that are the best-known methods of reducing contaminant levels below the MCL. Costs can usually be estimated for such BATs. However, since many PHGs and all MCLGs are set much lower than the MCL, it is not always feasible to determine what treatment is needed to further reduce a constituent downward to or near to the PHG or MCLG, many of which are set at zero. Estimating the costs to reduce a constituent to zero

is difficult, if not impossible because it is not possible to verify by analytical means that the level has been actually lowered to zero. In some cases, installing treatment to try and further reduce very low levels of one contaminant may have adverse effects on other aspects of water quality.

As described below, two constituents have been detected above the PHGs or MCLGs, cost estimates for reducing these contaminant concentrations to the PHGs are not relevant to this year's report.

Contaminants Detected that Exceed a PHG or MCLG

In this triennial monitoring period (2013, 2014 and 2015), Arsenic and Hexavalent Chromium were detected in the treated drinking water at levels above the PHGs or MCLGs.

Arsenic: The MCL for Arsenic is 0.010 mg/L, while the PHG is 0.000004 mg/L. In 2014, one sample result from the Live Oak Water Treatment Plant measured greater than the PHG of 0.000004 mg/L or 4 parts per trillion, and greater than the Detection Level of Reporting (DLR) of 0.002 mg/L. This single sample result measured 0.0022 mg/L, while eight other treated water samples during this monitoring period were Non-Detect and less than the instrument Method Reporting Limit (MRL) of 0.001 mg/L or 1 part per billion. In 2013, 2014 and 2015, the annual treated water averages for Arsenic were all below the DLR of 0.002 mg/L, as well as the MRL of 0.001 mg/L.

(Note: PHGs are established based purely on health risk regardless of whether or not an instrument can test at such a low level. The DLR for each contaminant is set by the SWRCB – Division of Drinking Water and represents their minimum reporting limit; results measured below the State DLR are reported as Non-Detect or ND. The instrument MRL is a function of an instrument's ability to measure at a lower threshold that the DLR requires; the MRL reporting results can be below the DLR or the same as the DLR.)

The Arsenic standard balances the current understanding of Arsenic's possible health effects against the costs of removing excessive amounts of Arsenic from drinking water. The USEPA continues to research the health effects of low levels of arsenic, which is known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Typical sources of contamination: Erosion of natural deposits; runoff from orchards; glass and electronics production wastes.

Heath related concerns: Some people who drink water containing Arsenic in excess of the MCL (> 0.010 mg/L) over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.

For more in depth information of the Public Health Goal setting by OEHHA for Arsenic: http://oehha.ca.gov/media/downloads/water/chemicals/phg/asfinal_0.pdf

Hexavalent Chromium: The newly adopted MCL in 2014 for Hexavalent Chromium is 0.010 mg/L, while the PHG is 0.00002 mg/L or 20 parts per trillion. In 2013 and 2014, the Third Unregulated Contaminant Monitoring Rule (UCMR3) https://www.epa.gov/dwucmr/third-unregulated-contaminant-monitoring-rule studied Hexavalent Chromium with a Minimum Reporting Level (MRL) of 0.00003 mg/L or 30 parts per trillion. The detectable data set of the UCMR3 study is summarized in all three annual CCR's (2013, 2014 and 2015). In 2014 and 2015, Hexavalent Chromium became a California requirement for annual Title 22 required testing. In 2014 and 2015: 3 out of 6 treated water samples measured greater than the PHG of 0.00002 mg/L. Comparing these three detectable results of 0.000022 mg/L, 0.000046 mg/L and 0.000058 mg/L to the MCL of 0.010 mg/L, the highest measurable result of 0.000058 mg/L is less than one percent of the MCL of 0.010 mg/L or 10 parts per billion. The other 3 out of 6 treated water samples measured Non-Detect and were not detected above the PHG of 0.00002 mg/L.

Typical sources of contamination: Electroplating factories; leather tanneries and textile manufacturing facilities. Chromium also enters groundwater by leaching from soil. Chromium can exist in water as either Cr III or Cr VI. When high levels are present, they can usually be related to sources of pollution.

Health related concerns: Some people who drink water containing hexavalent chromium in excess of the MCL (> 0.010 mg/L) over many years may have an increased risk of getting cancer.

For more in depth information of the Public Health Goal setting by OEHHA for Hexavalent Chromium:
http://oehha.ca.gov/media/downloads/water/chemicals/phg/cr6phg072911_0.pdf

Hugh Dalton
Water Quality Manager

6/29/16
Date

Attachment No. 1

California Health and Safety Code
Public Health Goal Reporting Requirements

116470. (b) On or before July 1, 1998, and every three years thereafter, public water systems serving more than 10,000 service connections that detect one or more contaminants in drinking water that exceed the applicable public health goal, shall prepare a brief written report in plain language that does all of the following:

(1) Identifies each contaminant detected in drinking water that exceeds the applicable public health goal.

(2) Discloses the numerical public health risk, determined by the office, associated with the maximum contaminant level for each contaminant identified in paragraph (1) and the numerical public health risk determined by the office associated with the public health goal for that contaminant.

(3) Identifies the category of risk to public health, including, but not limited to, carcinogenic, mutagenic, teratogenic, and acute toxicity, associated with exposure to the contaminant in drinking water, and includes a brief plainly worded description of these terms.

(4) Describes the best available technology, if any is then available on a commercial basis, to remove the contaminant or reduce the concentration of the contaminant. The public water system may, solely at its own discretion, briefly describe actions that have been taken on its own, or by other entities, to prevent the introduction of the contaminant into drinking water supplies.

(5) Estimates the aggregate cost and the cost per customer of utilizing the technology described in paragraph (4), if any, to reduce the concentration of that contaminant in drinking water to a level at or below the public health goal.

(6) Briefly describes what action, if any, the local water purveyor intends to take to reduce the concentration of the contaminant in public drinking water supplies and the basis for that decision.

(c) Public water systems required to prepare a report pursuant to subdivision (b) shall hold a public hearing for the purpose of accepting and responding to public comment on the report. Public water systems may hold the public hearing as part of any regularly scheduled meeting.

(d) The department shall not require a public water system to take any action to reduce or eliminate any exceedance of a public health goal.

(e) Enforcement of this section does not require the department to amend a public water system's operating permit.

(f) Pending adoption of a public health goal by the Office of Environmental Health Hazard Assessment pursuant to subdivision (c) of Section 116365, and in lieu thereof, public water systems shall use the national maximum contaminant level goal adopted by the United States Environmental Protection Agency for the corresponding contaminant for purposes of complying with the notice and hearing requirements of this section.

(g) This section is intended to provide an alternative form for the federally required consumer confidence report as authorized by 42 U.S.C. Section 300g-3(c).

Attachment No. 2
MCLs and PHGs or MCLGs

MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants

(Units are in milligrams per liter (mg/L), unless otherwise noted.)

Last Update: September 23, 2015

This table includes:

California's maximum contaminant levels (MCLs)

Detection limits for purposes of reporting (DLRs)

Public health goals (PHGs) from the Office of Environmental Health Hazard Assessment (OEHHA)

Also, PHGs for NDMA and 1,2,3-Trichloropropane (which are not yet regulated) are included

	MCL	DLR	PHG	Date of PHG
Chemicals with MCLs in 22 CCR §64431—Inorganic Chemicals				
Aluminum	1	0.05	0.6	2001
Antimony	0.006	0.006	0.02	1997
Antimony	--	--	0.0007	2009 draft
Arsenic	0.010	0.002	0.000004	2004
Asbestos (MFL = million fibers per liter; for fibers >10 microns long)	7 MFL	0.2 MFL	7 MFL	2003
Barium	1	0.1	2	2003
Beryllium	0.004	0.001	0.001	2003
Cadmium	0.005	0.001	0.00004	2006
Chromium, Total - OEHHA withdrew the 0.0025-mg/L PHG	0.05	0.01	withdrawn Nov. 2001	1999
Chromium, Hexavalent	0.010	0.001	0.00002	2011
Cyanide	0.15	0.1	0.15	1997
Fluoride	2	0.1	1	1997
Mercury (inorganic)	0.002	0.001	0.0012	1999 (rev2005)*
Nickel	0.1	0.01	0.012	2001
Nitrate (as nitrogen, N)	10 as N	0.4	45 as NO3 (=10 as N)	1997
Nitrite (as N)	1 as N	0.4	1 as N	1997
Nitrate + Nitrite (as N)	10 as N	--	10 as N	1997
Perchlorate	0.006	0.004	0.001	2015
Selenium	0.05	0.005	0.03	2010
Thallium	0.002	0.001	0.0001	1999 (rev2004)
Copper and Lead, 22 CCR §64672.3				
Values referred to as MCLs for lead and copper are not actually MCLs; instead, they are called "Action Levels" under the lead and copper rule				
Copper	1.3	0.05	0.3	2008
Lead	0.015	0.005	0.0002	2009

MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants (Units are in milligrams per liter (mg/L), unless otherwise noted.) Last Update: September 23, 2015				
Radionuclides with MCLs in 22 CCR §64441 and §64443—Radioactivity				
[units are picocuries per liter (pCi/L), unless otherwise stated; n/a = not applicable]				
Gross alpha particle activity - OEHHA concluded in 2003 that a PHG was not practical	15	3	none	n/a
Gross beta particle activity - OEHHA concluded in 2003 that a PHG was not practical	4 mrem/yr	4	none	n/a
Radium-226	--	1	0.05	2006
Radium-228	--	1	0.019	2006
Radium-226 + Radium-228	5	--	--	--
Strontium-90	8	2	0.35	2006
Tritium	20,000	1,000	400	2006
Uranium	20	1	0.43	2001
Chemicals with MCLs in 22 CCR §64444—Organic Chemicals				
(a) Volatile Organic Chemicals (VOCs)				
Benzene	0.001	0.0005	0.00015	2001
Carbon tetrachloride	0.0005	0.0005	0.0001	2000
1,2-Dichlorobenzene	0.6	0.0005	0.6	1997 (rev2009)
1,4-Dichlorobenzene (p-DCB)	0.005	0.0005	0.006	1997
1,1-Dichloroethane (1,1-DCA)	0.005	0.0005	0.003	2003
1,2-Dichloroethane (1,2-DCA)	0.0005	0.0005	0.0004	1999 (rev2005)
1,1-Dichloroethylene (1,1-DCE)	0.006	0.0005	0.01	1999
cis-1,2-Dichloroethylene	0.006	0.0005	0.1	2006
trans-1,2-Dichloroethylene	0.01	0.0005	0.06	2006
Dichloromethane (Methylene chloride)	0.005	0.0005	0.004	2000
1,2-Dichloropropane	0.005	0.0005	0.0005	1999
1,3-Dichloropropene	0.0005	0.0005	0.0002	1999 (rev2006)
Ethylbenzene	0.3	0.0005	0.3	1997
Methyl tertiary butyl ether (MTBE)	0.013	0.003	0.013	1999
Monochlorobenzene	0.07	0.0005	0.07	2014
Styrene	0.1	0.0005	0.0005	2010
1,1,2,2-Tetrachloroethane	0.001	0.0005	0.0001	2003
Tetrachloroethylene (PCE)	0.005	0.0005	0.00006	2001
Toluene	0.15	0.0005	0.15	1999
1,2,4-Trichlorobenzene	0.005	0.0005	0.005	1999
1,1,1-Trichloroethane (1,1,1-TCA)	0.2	0.0005	1	2006
1,1,2-Trichloroethane (1,1,2-TCA)	0.005	0.0005	0.0003	2006
Trichloroethylene (TCE)	0.005	0.0005	0.0017	2009
Trichlorofluoromethane (Freon 11)	0.15	0.005	1.3	2014
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1.2	0.01	4	1997 (rev2011)
Vinyl chloride	0.0005	0.0005	0.00005	2000
Xylenes	1.75	0.0005	1.8	1997

MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants (Units are in milligrams per liter (mg/L), unless otherwise noted.) Last Update: September 23, 2015				
(b) Non-Volatile Synthetic Organic Chemicals (SOCs)				
Alachlor	0.002	0.001	0.004	1997
Atrazine	0.001	0.0005	0.00015	1999
Bentazon	**0.018**	**0.002**	**0.2**	**1999 (rev2009)**
Benzo(a)pyrene	0.0002	0.0001	0.000007	2010
Carbofuran	0.018	0.005	0.0017	2000
Carbofuran	--	--	0.0007	2015 draft
Chlordane	0.0001	0.0001	0.00003	1997 (rev2006)
Dalapon	0.2	0.01	0.79	1997 (rev2009)
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	0.00001	0.0000017	1999
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.07	0.01	0.02	2009
Di(2-ethylhexyl)adipate	0.4	0.005	0.2	2003
Di(2-ethylhexyl)phthalate (DEHP)	0.004	0.003	0.012	1997
Dinoseb	0.007	0.002	0.014	1997 (rev2010)
Diquat	0.02	0.004	0.015	2000
Diquat	--	--	0.006	2015 draft
Endrin	0.002	0.0001	0.0018	1999 (rev2008)
Endrin	--	--	0.0003	2015 draft
Endothal	0.1	0.045	0.094	2014
Ethylene dibromide (EDB)	0.00005	0.00002	0.00001	2003
Glyphosate	0.7	0.025	0.9	2007
Heptachlor	0.00001	0.00001	0.000008	1999
Heptachlor epoxide	0.00001	0.00001	0.000006	1999
Hexachlorobenzene	0.001	0.0005	0.00003	2003
Hexachlorocyclopentadiene	0.05	0.001	0.002	2014
Lindane	0.0002	0.0002	0.000032	1999 (rev2005)
Methoxychlor	0.03	0.01	0.00009	2010
Molinate	0.02	0.002	0.001	2008
Oxamyl	0.05	0.02	0.026	2009
Pentachlorophenol	0.001	0.0002	0.0003	2009
Picloram	0.5	0.001	0.5	1997
Picloram	--	--	0.166	2015 draft
Polychlorinated biphenyls (PCBs)	0.0005	0.0005	0.00009	2007
Simazine	0.004	0.001	0.004	2001
2,4,5-TP (Silvex)	0.05	0.001	0.003	2014
2,3,7,8-TCDD (dioxin)	$3x10^{-8}$	$5x10^{-9}$	$5x10^{-11}$	2010
Thiobencarb	0.07	0.001	0.07	2000
Thiobencarb	--	--	0.042	2015 draft
Toxaphene	0.003	0.001	0.00003	2003

MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants (Units are in milligrams per liter (mg/L), unless otherwise noted.) Last Update: September 23, 2015				
Chemicals with MCLs in 22 CCR §64533—Disinfection Byproducts				
Total Trihalomethanes	0.080	--	0.0008	2010 draft
Bromodichloromethane	--	0.0010	--	--
Bromoform	--	0.0010	--	--
Chloroform	--	0.0010	--	--
Dibromochloromethane	--	0.0010	--	--
Haloacetic Acids (five) (HAA5)	0.060	--	--	--
Monochloroacetic Acid	--	0.0020	--	--
Dichloroacetic Adic	--	0.0010	--	--
Trichloroacetic Acid	--	0.0010	--	--
Monobromoacetic Acid	--	0.0010	--	--
Dibromoacetic Acid	--	0.0010	--	--
Bromate	0.010	0.0050**	0.0001	2009
Chlorite	1.0	0.020	0.05	2009
Chemicals with PHGs established in response to DDW requests. These are not currently regulated drinking water contaminants.				
N-Nitrosodimethylamine (NDMA)	--	--	0.000003	2006
1,2,3-Trichloropropane	--	--	0.0000007	2009
*OEHHA's review of this chemical during the year indicated (rev20XX) resulted in no change in the PHG.				
**The DLR for Bromate is 0.0010 mg/L for analysis performed using EPA Method 317.0 Revision 2.0, 321.8, or 326.0.				

Attachment No. 3

2015 Annual Consumer Confidence Report

CITY OF SANTA CRUZ WATER DEPARTMENT
CONSUMER CONFIDENCE REPORT
2015

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

此份有關你的食水報告,內有重要資料和訊息,請找他人為你翻譯及解釋清楚。

WHAT IS THIS REPORT?

This annual Consumer Confidence Report provides a summary of the water quality in 2015 and has been prepared to inform the City of Santa Cruz Water Department customers about their drinking water. Included in this report are details about where your water comes from, what it contains and how it compares to Federal and State drinking water standards. The City of Santa Cruz Water Department vigilantly safeguards its water supplies and provides thorough treatment to ensure that our customers receive high quality drinking water. We are committed to providing our customers with accurate information about their drinking water quality.

In 2015, your tap water met or exceeded all United States Environmental Protection Agency (USEPA) and California drinking water health standards.

WHERE DOES OUR WATER COME FROM?

To provide water for our service area, the City of Santa Cruz depends on water supplies from four locales: the North Coast sources, the San Lorenzo River, Loch Lomond Reservoir and the Live Oak Wells. Except for groundwater from the Live Oak Wells, these are all surface water sources dependent on rainfall and runoff. No water is purchased from State or Federal sources or imported to the region from outside the Santa Cruz area.

The North Coast sources consist of surface water diversions from three coastal streams and one natural spring. Due to the excellent water quality and the lowest production cost, these North Coast sources are used to the greatest extent possible. These source waters are conveyed to the City's Graham Hill Water Treatment Plant for treatment. The use of these sources by the City dates back to 1890.

San Lorenzo River flows are diverted to the Graham Hill Water Treatment Plant for treatment. Two wells located next to the San Lorenzo River and hydraulically connected are included in the City's water right. Additionally, the City can divert water from the San Lorenzo River in Felton to store in Loch Lomond Reservoir. This water is used to supplement storage in the reservoir during dry years, when natural water inflow from Newell Creek is low.

Loch Lomond Reservoir, constructed in 1960, provides surface water storage on Newell Creek. Water from the reservoir is treated at the Graham Hill Water Treatment Plant. Additionally, the reservoir and surrounding watershed are used for public recreation purposes, including fishing, boating, hiking, and picnicking.

The Live Oak well system consists of four groundwater wells and two small treatment plants located in the southeast portion of the City's service area. Three of these wells draw directly from the Purisima Aquifer, while one well draws from both the Purisima and Santa Margarita Aquifers. During the late spring, summer and early fall seasons, when surface water flows may be inadequate to meet the daily customer water demand, this supplemental groundwater supply is pumped from the four Live Oak Wells and treated on-site at two groundwater Treatment Plants and distributed to customers in the southeast service area.

IS OUR WATER VULNERABLE TO CONTAMINATION?

In 2002, water suppliers were required to conduct assessments of their water sources. These assessments included delineations of areas around sources from which contamination might reach the source. Further, these assessments included an inventory of activities with the potential to release contaminants within the delineated areas. There are potentially contaminating activities in the areas of the Santa Cruz water sources, such as automobile service facilities, septic systems, confined animal facilities, construction, timber harvest, road maintenance, "legacy" land disturbance including historic logging roads and isolated industrial operations resulting in contaminant plumes, as well as other activities. However, the City currently manages its water sources by prioritizing use of the purest source water during times when the drinking water system is most vulnerable (i.e. during storm runoff periods), so that we can produce the highest quality drinking water possible. In 2013, the Water Resources section completed an update of the 2007 Drinking Water Sanitary Survey of the San Lorenzo Valley and North Coast Watersheds. The 2013 Sanitary Survey can be viewed at www.cityofsantacruz.com/sanitarysurvey2013 or by contacting the City's Watershed Compliance Manager at (831) 420-5483 or by email at WaterResources@cityofsantacruz.com .

WHY ARE THERE CONTAMINANTS IN DRINKING WATER?

In order to ensure that tap water is safe to drink, U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.

The State Water Resources Control Board, Division of Drinking Water allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes

Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our 2015 monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immune-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immune-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

INORGANIC CONTAMINANTS WITH ACTION LEVELS

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, young children and infants. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Santa Cruz Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. **When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.** If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/lead. In 2015, tap water samples were collected from 34 Santa Cruz homes after their water sat unused overnight for 6 hours or more, and then analyzed for lead and copper. These specific homes were selected because they were all built and/or their plumbing was constructed between January 1983 and December 1987 with lead solder and copper pipe as required by the Lead and Copper Rule https://www.epa.gov/dwreginfo/lead-and-copper-rule . The City of Santa Cruz Water Department has a three year waiver for required Lead and Copper monitoring frequency.

WATER QUALITY DATA TABLE

The Table of Detected Contaminants lists drinking water contaminants that were detected during the 2015 calendar year. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

To interpret the tables, you will need the following definitions:

MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

MRDL: Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG: Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

N/A: Not Applicable

PDWS: Primary Drinking Water Standard: MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG: Public Health Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

LRAA: Locational Running Annual Average: The locational average of the most recent 12 months of data.

RAL: Regulatory Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

SDWS: Secondary Drinking Water Standards: MCLs for contaminants that may adversely affect the taste, odor or appearance of drinking water. These are aesthetic considerations that are not considered as health concerns.

TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

WATER QUALITY TABLE OF DETECTED CONTAMINANTS

Contaminants Regulated by Primary Drinking Water Standards								
Contaminants (units)	**PHG MCLG**	**PDWS MCL**	**Treated Water Average[2]**	**Source Water Range[1]**		**Sample Date**	**Violation**	**Typical Source of Contamination**
				Low	**High**			
Aluminum (ppm)	0.6	1	< 0.02	< 0.02	0.10	2015	No	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	0.004	10	< 1.0	1.0	3.8	2015	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride (ppm)	1	2.0	0.2	< 0.1	0.3	2015	No	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Hexavalent Chromium (ppb)	0.02	10	0.05	< 0.02	0.23	2015	No	Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer
Gross Alpha particle activity (pCi/L)	0	15	< 3.00	< 3.00	4.00	2011	No	Erosion of natural deposits
Nitrate as Nitrogen (ppm)	10	10	0.27	< 0.02	0.63	2015	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

Additional Contaminants Regulated by Primary Drinking Water Standards								
Contaminants (units)	**PHG MCLG**	**PDWS MCL**	**Treated Water Average[2]**	**Treated Water Range[2]**		**Sample Date**	**Violation**	**Typical Source of Contamination**
				Low	**High**			
Turbidity (NTU)	TT	Maximum 1 and 95% < 0.3	0.10	0.04	3.18	2015	No	Soil runoff

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Microbiological Contaminants							
Contaminants	**PHG MCLG**	**PDWS MCL**	**Treated Water[2]**	**Source Water[1]**	**Sample Date**	**Violation**	**Typical Source of Contamination**
Total Coliform Bacteria	0	less than 5% positive	2 positive		2015	No	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present
E. Coli	0	0	0 positive		2015	No	*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes

Contaminants Regulated by MRDL								
Contaminants (units)	**PHG**	**PDWS MRDL**	**Treated Water Average[2]**	**Treated Water Range[2]**		**Sample Date**	**Violation**	**Typical Source of Contamination**
				Low	**High**			
Chlorine (ppm)	4	4	0.82	0.06	1.84	2015	No	Drinking water disinfectant added for treatment

Disinfection Byproduct Contaminants under Stage 2 DBP Rule								
Contaminants (units)	**PHG MCLG**	**MCL**	**Treated Water[2]**	**Treated Water Range[2]**		**Sample Date**	**Violation**	**Typical Source of Contamination**
				Low	**High**			
TTHM [Total Trihalomethanes] (ppb)	N/A	80 (LRAA)	69 (LRAA)	5	83	2015	No	By-product of drinking water disinfection
HAA5 [Haloacetic Acids (five)] **(ppb)**	N/A	60 (LRAA)	45 (LRAA)	< 2	63	2015	No	By-product of drinking water disinfection

Inorganic Contaminants with Action Levels

Contaminants (units)	PHG	RAL	Tap Water 90th Percentile[3]	# of Samples Exceeding RAL[3]	Sample Date	Exceeds RAL	Typical Source of Contamination
Copper (ppm)	0.3	1.3	0.4	0	2015	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	0.2	15	< 2	0	2015	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

Contaminants with Secondary Drinking Water Standards (SDWS)

Contaminants (units)	SDWS MCL	Treated Water Average[2]	Treated Water Range[2]		Sample Date	Typical Source of Contamination
			Low	High		
Iron (ppb)	300	< 20	< 20	62	2015	Leaching from natural deposits; industrial wastes
Chloride (ppm)	500	31	22	61	2015	Runoff/leaching from natural deposits; seawater influence
Manganese (ppb)	50	< 2	< 2	14	2015	Leaching from natural deposits
Specific Conductance (µmhos/cm)	1600	465	370	780	2015	Substances that form ions when in water; seawater influence
Sulfate (ppm)	500	88	75	160	2015	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	1000	325	285	540	2015	Runoff/leaching from natural deposits

Other Monitoring Results

Other monitoring results are provided for consumer information.

Constituents (units)	Treated Water Average[2]	Treated Water Range[2]		Sample Date	Typical Source of Contamination
		Low	High		
Hardness (ppm)	183	164	266	2015	A measure of the major cations, primarily calcium and magnesium
Sodium (ppm)	30	27	58	2015	Runoff/leaching from natural deposits; saltwater influence

Unregulated Contaminants – UCMR3

Contaminants (units)	Treated Water Average[2]	Treated Water Range[2]		Sample Dates
		Low	High	
Chlorate (ppb)	180	73	320	2013/2014
Chromium-6 (ppb)	0.05	< 0.03	0.14	2013/2014
Molybdenum (ppb)	2.1	1.6	2.6	2013/2014
Strontium (ppb)	245	200	260	2013/2014
Vanadium (ppb)	0.3	< 0.2	0.7	2013/2014

Unregulated contaminants are those for which USEPA has not established drinking water standards. Unregulated contaminant monitoring helps USEPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

[1]Untreated water from the raw sources [2]Treated water from treatment plants and/or water mains [3]Water from 34 customers' household taps

Data Table Units:
NTU: Nephelometric Turbidity Units
pCi/L: picocuries per liter (a measurement of radioactivity)
ppm: parts per million or milligrams per liter (mg/L)
ppb: parts per billion or micrograms per liter (µg/L)
µmhos/cm: a measure of electrical conductivity

We hope this Consumer Confidence Report is valuable to you. If you have questions or comments about your water, please contact one of the City of Santa Cruz staff listed below.

WATER ADMINISTRATION
Rosemary Menard, Water Director
212 Locust St, Suite A
Santa Cruz, CA 95060
Phone: (831) 420-5200
Fax: (831) 420-5201

WATER QUALITY LABORATORY
Hugh Dalton, Water Quality Manager
715 Graham Hill Road
Santa Cruz, CA 95060
Phone: (831) 420-5484
E-mail: WaterQuality@cityofsantacruz.com
CCR2015:
www.cityofsantacruz.com/ccr2015

WATER RESOURCES
Chris Berry, Watershed Compliance Manager
715 Graham Hill Road
Santa Cruz, CA 95060
Phone: (831) 420-5483
E-mail:
WaterResources@cityofsantacruz.com

You can also find other information on the Water Department and its activities at the City's website www.cityofsantacruz.com There you can find information on Water Conservation, Loch Lomond Recreation Area, activities and projects of our Engineering Section, Water Commission and more. Meetings of the City Council and Water Commission provide excellent opportunities for you to get involved in issues related to drinking water. Their agendas are posted on the website listed above, at City Hall, or you can call the Water Department at (831) 420-5200 to find out more. We welcome your attendance and input.

SANTA CRUZ CITY COUNCIL
809 Center Street, Room 10
Santa Cruz, CA 95060
Phone: (831) 420-5020
E-mail: CityCouncil@cityofsantacruz.com

SANTA CRUZ WATER COMMISSION
Contact the Water Commission through the Water Department (831) 420-5200
Water Commission meetings are scheduled for the first Monday of each month at 7:00 pm.

Other sources of information:

STATE WATER RESOURCES CONTROL BOARD
DIVISION OF DRINKING WATER
Monterey District Office
(831) 655-6939
http://www.waterboards.ca.gov/drinking_water/programs/index.shtml

U.S. ENVIRONMENTAL PROTECTION AGENCY (USEPA)
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460
(202) 566-1729
http://water.epa.gov/drink/index.cfm