



GIANG T. NGUYEN  
HEALTH SERVICES AGENCY DIRECTOR

# County of Santa Cruz

---

## HEALTH SERVICES AGENCY

1080 EMELINE AVENUE, SANTA CRUZ, CA 95060

TELEPHONE: (831) 454-4000 FAX: (831) 454-4770

January 19, 2016

Board of Supervisors  
County of Santa Cruz  
701 Ocean Street  
Santa Cruz, CA 95060

**SUBJECT: Water Resources Management Status Report for 2015**

Dear Members of the Board:

The Health Services Agency (HSA) Environmental Health Division is submitting its Water Resources Management Status Report for 2015 (2015 Status Report) (attached). This calendar year 2015 Status Report summarizes eight facets of countywide water resource management that include: 1) Drought Response and Water Conservation; 2) Water Supply and Groundwater Management; 3) Small Water Systems; 4) Water Quality; 5) Watershed Health and Aquatic Habitat; 6) Stormwater and Flood Management; 7) Integrated Regional Water Management (IRWM) - Santa Cruz Region; and 8) IRWM- Pajaro Region. Following are highlights for drought, water supply, and regional water management planning.

### **Drought Response**

2015 was the fourth calendar year of a critical drought in California. In 2015, the severity of the drought in Santa Cruz county was reduced from 'Exceptional' drought level 5 of 5, to "Extreme" drought level 4, as determined in the U.S. Drought Monitor, sponsored by the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture. December 2014 rains helped to fill the City of Santa Cruz Loch Lomond reservoir to 83% of capacity. However, total winter season rains were insufficient to provide significant groundwater recharge and countywide streamflows continued to remain at historically low levels. Rains so far in the 2015-16 water year (October through September), and the predicted El Nino conditions for 2016 hold promise for some relief from the drought, but water supply conditions in the county will remain tenuous pending long term management actions.

For 2015, all large public water systems in the county continued to implement water rationing, use restrictions, and/or encouragement of voluntary conservation to address impacts of the drought and to comply with increased State requirements for reduction of water use. County residents responded heroically to the need to save water and Santa Cruz county achieved some of the highest levels of water use reduction in the state, with decreases of 28.6% in the City of Santa Cruz service area, and 23-31% in other jurisdictions. The 2015 Status Report includes a table

that itemizes conservation restrictions and achievements in 2015 for State and local water management agencies (Report Appendix A). Countywide water consumption for 2014 is also provided in a table lists 2014 water use, and significant reductions achieved since 2013 in both 2014 and 2015 (Report Appendix B). The Status Report additionally includes a graph that depicts water production for large water systems over time from 1984 through 2014 (Report Appendix C). This graph illustrates a substantial decrease in water use in 2013 and 2014 compared to a steady upward trend over the prior 28 years.

In 2015, the County adopted emergency measures to limit excessive outdoor watering and responded to reports of excessive or unpermitted water use at private residences, commercial properties, and agricultural operations throughout the county. For the approximately 130 small public water systems within the county, only eight needed to purchase water or use back-up supplies, and only two experienced water quality issues. These ten systems were dependent on surface water. Santa Cruz county continues to face water supply shortfalls during normal years as well as during current and future droughts. All of the county's major water agencies are continuing to explore future water supply options

### **Milestones in Water Supply Management**

A number of key actions regarding water management occurred in 2015 at the State and local level:

#### **State:**

- January 1, 2015: the California Sustainable Groundwater Management Act of 2014 took effect, providing local agencies the responsibility and authority to manage groundwater pumping and conduct activities needed to eliminate overdraft by 2040.
- April 1, 2015: The Governor issued Executive Order B-29-15, through February 28, 2016, mandating water use restrictions necessary to achieve a 25% reduction in statewide potable urban water use from 2013 levels. Emergency regulations to achieve these reductions were adopted by the State Water Resources Control Board on May 5, 2015.
- November 13, 2015: The Governor issued the fifth in a series of drought-related Executive Orders that stem from provisions in two successive 2014 Proclamations. Executive Order B-36-15, extended the term of the State's urban water use drought restrictions from February 28 to October 31, 2016 if drought conditions persist through January 2016.

#### **County of Santa Cruz and Local Water Agencies:**

- May 19, 2015: The Board of Supervisors received an HSA report on Sustainable Groundwater Management and authorized the County to join a Joint Powers Authority for management of the Soquel-Aptos Groundwater Basin.
- June 9, 2015: The Board of Supervisors adopted the County of Santa Cruz Steelhead and Coho Salmon Conservation Strategy 2015, which commits County departments to implement actions to support restoration of steelhead and salmon in county streams.
- June 23, 2015: The Board of Supervisors adopted an urgency ordinance declaring a state of drought emergency in Santa Cruz County and requiring further restrictions on non-essential water use, and adopted an ordinance requiring metering and reporting of water use by all small water systems with 5-199 connections.
- November 24, 2015: Santa Cruz City Council adopted a Water Supply Advisory Committee recommended strategy for water conservation and enhanced groundwater storage plans with

backup options using advanced treated recycled water or desalinated water.

- November 30, 2015: Soquel Creek Water District released its Community Water Plan that describes the District's approach to attaining sustainability by 2040.
- January 12, 2016: The Board of Supervisors considered a report and recommendations to support sustainable management efforts in the Mid-County Groundwater Basin and the Santa Margarita Groundwater Basin.

### **Regional Collaboration: Connecting the Drops**

The large majority of the water resource management efforts in 2015 involved collaboration among entities including water supply agencies, land use agencies, stormwater management agencies, private water users, and non-governmental organizations. HSA staff continues to work closely with these stakeholders to provide a comprehensive and integrated approach to countywide water resources management resulting in a substantial number of collaborative projects to address significant water resources issues. These collaborative efforts, involving various agencies and numerous facets of water management, will be highlighted at an upcoming public forum on January 28, 2016 entitled "Connecting the Drops", sponsored by the County, the Local Agency Formation Commission, and the various partner agencies.

### **Conclusion**

In calendar year 2015, a wide range of water supply and conservation measures achieved significant progress in addressing the fourth year of statewide drought. The Health Services Agency will submit the next annual status report in January 2017.

Sincerely,



Giang T. Nguyen  
Health Services Agency Director

Attachment: Santa Cruz County Water Resources Management Status Report for 2015.

Cc: County of Santa Cruz Public Works Department  
County of Santa Cruz Planning Department  
County of Santa Cruz Water Advisory Commission  
Santa Cruz Local Agency Formation Commission  
City of Santa Cruz Water Department  
Lompico County Water District  
San Lorenzo Valley Water District  
Scotts Valley Water District  
Soquel Creek Water District  
Central Water District  
Pajaro Valley Water Management Agency

## **Santa Cruz County Water Resources Management Status Report for 2015**

Santa Cruz county continues to address major water resource challenges. The four year drought of 2012-15 greatly diminished streamflow and available water supplies, but water agencies and their customers were able to substantially reduce demand in order to accommodate the shortfall. Most of the county's groundwater basins are being pumped in excess of sustainable yield and the major water supply agencies do not have sufficient supplies to meet current and future demand. Historic salmon and steelhead populations have been greatly diminished by reductions in streamflow, increased erosion and sedimentation, barriers to migration, and removal of large woody material from streams. Coastal water quality has been degraded by urban runoff and leaky sewer systems. The natural benefits of wetlands, floodplains, riparian corridors, and groundwater recharge areas have been significantly diminished by land development and agricultural use. The County and its partner agencies continue to conduct a range of efforts to address these and other water resource challenges.

Following is a summary of eight topic areas of 2015 water resource management:

1. Drought Response and Water Conservation
2. Water Supply and Groundwater Management
3. Small Water Systems
4. Water Quality
5. Watershed Health and Aquatic Habitat
6. Stormwater and Flood Management
7. Integrated Regional Water Management (IRWM) – Santa Cruz Region
8. IRWM- Pajaro Region

### **1. Drought Response and Water Conservation**

- a) 2015 was the fourth year of an extreme drought in California and Santa Cruz county. Drought conditions moderated somewhat from exceptional drought to extreme drought in 2015, due to about 50% more rain and twice as much runoff in 2015 than 2014. Surface storage in Loch Lomond reservoir recovered to 83% as a result of generous December rain and runoff, as well as pumping approximately 250 million gallons from the Felton Diversion on the San Lorenzo River up to Loch Lomond. However, little groundwater recharge occurred and groundwater levels continued to decline in much of the county. Streamflow in the San Lorenzo River, the primary water source for the City of Santa Cruz service area, continued to be at a 77-year historically low level. Other streams dried up or were at extremely low levels. Groundwater levels in mid-county did recover somewhat as a result of the reduced pumping resulting from water conservation, although this may only be temporary, pending long term impacts of the drought.
- b) All large public water systems (over 199 connections) in the county continued to implement water rationing, use restrictions, and/or encouragement of voluntary conservation in 2015 to address the impacts of the drought and to comply with increased State requirements for reduction of water use. A table is provided that lists State and local water use restrictions which applied within Santa Cruz county in 2015 along with water savings achieved by the restrictions since 2013 (Appendix A).

- c) Significant water conservation was achieved by large public water systems in 2014 and 2015. A table is provided that lists 2014 water use, and reductions achieved since 2013 in both 2014 and 2015 (Appendix B). Additionally, a graph is provided that depicts water production for large water systems over time from 1984 through 2014 (Appendix C). As illustrated on the graph, water production was substantially lower in 2013 and 2014 compared to a steady upward trend from 1884 through 2012. Water use reductions were greater in 2015 than 2014, primarily as a result of increased voluntary customer actions. Santa Cruz county saw some of the highest levels of water use reduction in the state, with reductions of 28.6% in Santa Cruz City and 23-31% in other county jurisdictions (as cumulative savings June-October 2015 compared to 2013). For October 2015, Santa Cruz City had the lowest per capita residential water use in the Central Coast area and the 8<sup>th</sup> lowest in the state, at a rate of 40.6 residential gallons/ per capita/ per day (R-GPCD). Soquel had the sixth lowest residential water use in the Central Coast at 53.3 R-GPCD. (Source: State Water Resources Control Board, Urban Water Supplier Dataset.)
- d) Although all large water systems reduced their water use significantly, Lompico County Water District and seven small public water systems experienced serious shortfalls requiring purchased water, backup supplies, or severe curtailment. These were all systems using surface water or springs. Two small public water systems using surface water also reported deterioration of water quality as a result of the drought. Systems served by groundwater were able to adequately meet demands. The number of well permit applications in 2014 and 2015 was up about 30% over pre-drought levels, but there were fewer applications in 2015 (59) than in 2014 (67). There were not reports of increased number of wells going dry.
- e) The County of Santa Cruz adopted additional emergency measures to limit excessive outside watering. County staff responded to reports and observations of excessive or unpermitted water use at private residences, commercial properties and agricultural operations throughout the county. Staff also performed follow-up checks to monitor the implementation of agricultural water conservation measures required as a condition of agricultural well permits.
- f) County staff have participated with all of the countywide water agencies in the Water Conservation Coalition of Santa Cruz County to increase outreach and education to the public. The Coalition participated in numerous tabling events including Earth Day and the County Fair, produced a Water Conservation Guide which was sent to tens of thousands of county residences, and maintained the website [www.watersavingtips.org](http://www.watersavingtips.org).
- g) HSA has recently received a \$99,000 grant from the Department of Conservation for the development of a voluntary Rotational Cover Crop Plan for the Pajaro Valley, in partnership with the Resources Conservation District and the Community Water Dialogue. This project will evaluate methods to encourage voluntary cover-cropping and fallowing, with expected results of reductions in overall groundwater use.
- h) The County of Santa Cruz updated the Water Efficient Landscape Ordinance in Chapter 13.13 of the Santa Cruz County Code to establish stricter standards for landscape water application.

## **2. Water Supply and Groundwater Management**

- a) In November 2015 the City of Santa Cruz Council adopted recommendations from its Water Supply Advisory Committee to pursue a strategy of water conservation and enhanced groundwater storage, with a back-up option of advanced treated recycled water or desalinated water. Enhanced groundwater storage will involve working with Scotts Valley and Soquel Creek Water Districts to increase groundwater storage through water exchanges, in lieu recharge and aquifer storage and recovery wells. This strategy, if it proves technically feasible, would contribute to recovery of the groundwater basins and provide additional stored water for the City during dry periods, particularly multi-year droughts.
- b) The Soquel Creek Water District worked with community stakeholders to develop a Community Water Plan, which includes: promoting water conservation and water neutral development to reduce groundwater extractions; implementing groundwater management programs to protect the aquifers; and seeking supplemental water supplies to meet water needs.
- c) The Sustainable Groundwater Management Act of 2014 (SGMA) went into effect on January 1, 2015. This landmark state legislation will provide local agencies greatly increased authority and responsibility to eliminate overdraft of groundwater basins. It mandates formation of Groundwater Sustainability Agencies by 2017 and development of Groundwater Sustainability Plans by 2020 to achieve groundwater sustainability by 2040. HSAIs actively working with local water agencies to pursue sustainability for the three major groundwater basins in the county as follows:
  - i. The Pajaro Valley Water Management Agency is the designated Groundwater Sustainability Agency for the Pajaro Valley Basin with its current boundaries.
  - ii. For the Mid-County (Soquel-Aptos) Basin, management is being pursued by a Joint Powers Agency consisting of the County of Santa Cruz, City of Santa Cruz, Soquel Creek Water District and Central Water District. The governing board includes three private well representatives. A basin boundary modification request is being submitted to the state to formally designate the basin boundaries.
  - iii. Management of the Santa Margarita Basin is being pursued as a joint effort with the County, the Scotts Valley Water District, and the San Lorenzo Valley Water District. A basin boundary modification request is being submitted to the state to formally designate the basin boundaries.
- d) The County, Soquel Creek Water District, and Central Water District have continued a series of meetings for private groundwater users and other interested stakeholders in the mid-county groundwater basin, to discuss basin management issues and engage non-municipal pumpers in long term management of the basin.
- e) Soquel Creek Water District has identified injection of advanced purified water into the groundwater basin as one of the preferred options to support basin recovery. The District is working with the County Sanitation District under a state grant and is near completion of a feasibility study to evaluate various options for recycled water use.

- f) Soquel Water District and the City of Santa Cruz Water Department both completed new wells in the 41<sup>st</sup> Avenue area that will allow shifting of pumping inland away from the coast to further reduce the threat of seawater intrusion.
- g) The City of Santa Cruz Water Department and Soquel Creek Water District reached agreement to undertake an initial effort to provide in lieu recharge during the coming winter. The two agencies agreed to a 5 year pilot study/water transfer agreement using the existing 8-inch bi-directional 1,000 gallon per minute (gpm) intertie at Soquel's O'Neill Ranch facility. It is anticipated that California Environmental Quality Act requirements will be satisfied in time to begin in lieu deliveries of water from the City's North Coast sources as early as February 2016. This agreement does not include provisions for returning water from Soquel to the City in the event of a drought. However, the City Council's approved water supply augmentation strategy provides direction for the two agencies to begin discussions about longer term water exchanges and transfers.
- h) Soquel Creek Water District completed construction of two new pump stations to facilitate movement of potable water between service areas, increasing potential for water exchange, and increasing overall system reliability and flexibility. The District also commissioned the first permitted hexavalent chromium treatment facility, reducing concentrations to well below new state MCL requirements. The District secured a full scale hexavalent chromium removal equipment procurement contract for a 2,000 gpm facility that is expected to come on line in 2017.
- i) The County submitted a grant application to the Department of Water Resources for \$250,000 to assist with outreach and Groundwater Sustainability Plan Development for the Mid-County Groundwater Basin. If approved, funds will be used for further development of a groundwater model for the basin, update of the database on wells and non-municipal water users, outreach and services targeted to private well owners, and maintenance of the website [www.midcountygroundwater.org](http://www.midcountygroundwater.org).
- j) The Scotts Valley Water District completed an update of the groundwater model for the Santa Margarita Groundwater Basin that will help determine groundwater management objectives and options, including the effects of water exchange and enhanced recharge. The District is completing an evaluation of the feasibility of using advanced treated recycled water for enhanced recharge.
- k) Scotts Valley Water District made recycled water available for pick up by water customers.
- l) The San Lorenzo Valley Water District and the Scotts Valley Water District completed construction of emergency interties connecting the two districts and the four subareas of the San Lorenzo District. These interties can eventually be used for conjunctive management and water exchange, but not until a full evaluation of fishery and other environmental impacts is completed. The fisheries assessment is underway.
- m) County staff continued to work with the Local Agency Formation Commission (LAFCO), San Lorenzo Valley Water District, and Lompico County Water District to pursue an effort to make capital improvements and merge the two Districts in order to address substantial deficiencies in water quality and reliability. Although a bond election failed to get two-thirds approval by one vote, formation of an alternative assessment district is currently in progress.

- n) The County, City of Santa Cruz, and San Lorenzo Valley Water District are conducting a project to identify and better understand the occurrence of karst geology, which has the potential to store and transmit significant amounts of water, but which is very susceptible to adverse impacts from overlying land use. This work should be completed in 2016 and could potentially result in recommendations to update County policies to provide increased water resource protection in karst areas.
- o) The presence of naturally elevated levels of hexavalent chromium in excess of the new state drinking water standards that occur in south county groundwater will create expensive treatment challenges for the City of Watsonville, Soquel Creek Water District (SqCWD), Central Water District, and some small water systems that draw water from the Aromas Formation aquifer. SqCWD has worked with consultants to develop a new treatment approach and is one of the first in the state to receive a permit for a treatment plant for hexavalent chromium.
- p) The County continues to coordinate submission of groundwater level data to the State's 'CASGEM' groundwater monitoring program. County staff also implement a cooperative program to monitor private well levels in the inland mid-county area.

### **3. Small Water Systems**

- a) County staff continue to effectively assist and direct over 130 water systems to maintain compliance and meet the ongoing needs of the people and communities, which rely upon them regarding water quality, quantity, treatment, distribution, water system organization, and evolving compliance requirements. The Drinking Water program met and exceeded its routine water system permitting and inspection goals established with the State Water Resources Control Board.
- b) The County of Santa Cruz adopted new requirements for metering and reporting of water use by all small water systems, with individual connection meters required for systems with 15 or more connections by 2018. This will provide additional information for assessment of rural water use and provide the County and the water systems with tools to minimize excessive water use. Systems were advised and consulted during the preparation and adoption of these new requirements and staff has provided support for compliance. Staff worked with the Rural Community Assistance Corporation to host a community educational class in 2016, entitled "Optimizing Water meters for Increased Water Efficiency".
- c) County staff established the Small Water Systems Forum to help build technical, managerial, and financial capacity among the small water systems within the community. Four quarterly meetings were held on various subjects, including: water conservation, drought status, current themes in drinking water, hexavalent chromium standards and compliance, recycled/greywater, water quality database inquiry, new treatment technologies, Electronic Annual Reporting, legislative updates, metering/water use data and ordinance changes, loan sources, rate setting, insurance/liability for water systems, and small water system involvement in the Sustainable Groundwater Management Act.



- d) Staff developed and promulgated information on new compliance requirements related to drought, metering, electronic annual reporting of system information, and hexavalent chromium standards.

#### **4. Water Quality**

- a) County staff continue to work with the State, City of Santa Cruz, City of Capitola, and the County Sanitation District to implement projects and conduct monitoring to assess public health threats, reduce bacterial contamination, and improve beach water quality.
- b) County staff continued to participate with the City of Santa Cruz, Save the Waves Coalition, Surfrider Foundation, Sierra Club, and Coastal Watershed Council in the Cowell Beach Working Group, which has been meeting monthly to better understand and control the elevated bacteria levels at Cowell Beach, which have resulted in it being named as one of the most polluted beaches in the state. City improvements have eliminated any significant sources of human contamination and efforts will now target pigeons residing under the wharf.
- c) County staff continue to participate with the Coastal Watershed Council, Surfrider Foundation and City of Santa Cruz in the San Lorenzo Alliance Water Quality Working Group, which has been seeking to evaluate the sources of elevated bacteria in the lower San Lorenzo River. A recent investigation used multiple lines of evidence to conclude that there was minimal human contribution to the elevated bacteria levels observed in 2014.
- d) County staff maintain ongoing efforts for water quality protection through septic system management, monitoring, and investigation, funded by County Service Area (CSA) 12. In 2015, staff continued work with the Onsite Sewage Disposal Technical Advisory Committee to update the County's onsite wastewater management program and sewage disposal ordinance to bring it into compliance with new state septic system requirements. Properly functioning onsite sewage systems are a good method of groundwater recharge and contribute to approximately 10% of the San Lorenzo River's summer baseflow.
- e) Public Works Department staff have received grant funds to upgrade the sewer systems near Nobel Gulch, Soquel Creek, and Neary Lagoon in order to eliminate potential sewer leaks and sources of contamination to Cowell and Capitola beaches.
- f) County staff continue to work with the City of Watsonville and the Resource Conservation District (RCD) to monitor harmful algae blooms in Pinto Lake. This work also includes maintaining warning signs, and assessing and controlling sources of nutrients that may be stimulating the blooms. The City and RCD have received grant funds to implement measures to reduce nutrient loading in 2016.
- g) The San Lorenzo Lagoon experienced a harmful algal bloom in 2015. The County worked with the City of Santa Cruz and researchers from the University of California at Santa Cruz to monitor the lagoon and post warning signage before conditions were relieved by manual breaching and the onset of fall rains.

## 5. Watershed Health and Aquatic Habitat

- a) Steelhead and coho salmon are two anadromous salmonid species that have historically occurred in county watersheds but have experienced a severe drop in numbers as a result of habitat and watershed degradation. Coho are designated as endangered and steelhead are designated as threatened under the federal Endangered Species Act.
- b) National Oceanographic and Atmospheric Administration (NOAA) Fisheries is the federal agency that oversees the status and recovery of our nation's marine and anadromous species. NOAA Fisheries has launched a "Species in the Spotlight: Survive to Thrive" campaign and has identified eight NOAA species as the nation's most at risk of extinction. Central California Coastal (CCC) coho salmon is one of the eight identified. In early 2016, NOAA Fisheries will launch their 5-Year Species Spotlight Plan for CCC Coho Salmon and perform outreach to stakeholders and partners regarding federal initiatives for coho salmon protection. Since most of our watersheds are privately owned, the recovery of coho salmon in Santa Cruz county will depend on broad based community efforts and collaboration with NOAA. NOAA completed the coho recovery plan in 2013 and is now circulating the draft steelhead recovery plan for final comments.
- c) Environmental Health staff completed the development of the Steelhead and Coho Salmon Conservation Strategy, which was approved by the Board in June 2015. The Steelhead and Coho Salmon Conservation Strategy describes 19 key actions to protect and improve stream habitat that can be implemented by HSA, Public Works, Planning, Parks, and the Agricultural Commissioner's Office within the next three years, as well as 13 ongoing actions.
- d) County staff continued to work with water agencies to maintain annual sampling of stream habitat and juvenile salmonids in four watersheds: San Lorenzo, Soquel, Aptos and Pajaro. In 2015, steelhead numbers were critically low throughout the four watersheds in the fourth year of the drought. Coho salmon were found in the Soquel watershed for the first time since 2008, showing that conservation efforts in the Scott Creek watershed are helping to boost adult numbers, with fish straying to nearby watersheds. The City of Santa Cruz continued monitoring fish downstream of their diversions and found coho juveniles in Laguna Creek for the first time in ten years.
- e) The City of Santa Cruz and San Lorenzo Valley Water District continued efforts to monitor streamflow and habitat conditions downstream of their diversions in an effort to establish objectives for habitat improvement.
- f) Environmental Health staff coordinated with the Department of Public Works to provide an update of the County of Santa Cruz Stream Crossing Inventory and Fish Passage Evaluation. The County has completed 11 fish passage projects since 2002.
- g) County staff continued to implement the Large Woody Material Management Program to maintain large wood for habitat value in county streams without increasing flood risks or jeopardizing public safety. With existing El Nino conditions, staff have been responding to requests, participating in several outreach events, and coordinating with resource agencies and the Public Works Department on response to anticipated increased occurrence of large woody material.

- h) Staff from the County Planning Department and the HSA Environmental Health Division continued to meet with other regulatory agencies to coordinate effective approaches to environmental code compliance. Environmental Health staff provided recommendations to the Cannabis Cultivation Choices Committee on ways to avoid adverse environmental impacts.
- i) The Resource Conservation District continued to work with landowners and agency partners to complete habitat improvement projects through the Integrated Watershed Restoration Program (IWRP). These projects included wetland restoration, fish barrier removal, rural road upgrades, stream habitat improvement, managed recharge assessment, stormwater management and community education.
- j) As a part of an interim agreement with the fishery agencies, during 2015, the City of Santa Cruz released significant more flow for fish than in previous droughts in Laguna Creek, the lower San Lorenzo River, and other streams.
- k) The City of Santa Cruz conducted a number of efforts, including ongoing lagoon monitoring, hosting the first annual State of the San Lorenzo River Symposium, and pursuing illegal stream diversions on critical streams.
- l) County staff are participating with the Coastal Watershed Council, City of Santa Cruz, and other entities in the San Lorenzo River Alliance, which is seeking to improve water quality and reinvigorate community engagement with the lower river and the watershed. The County has also participated in recent efforts to launch “San Lorenzo 2025”, which is a targeted lobbying effort to secure substantial funding to restore fish habitat in the San Lorenzo River Watershed.

## **6. Stormwater and Flood Management**

- a) County Public Works Department (DPW) staff continue to maintain operation of the Automated Local Evaluation in Real Time (ALERT) flood warning system. In September, 2015, DPW, received notice of a grant award of \$100,000 from the State’s “Flood Emergency Response Program” to upgrade the ALERT system field stations, radio and internet communications network, and base station software to the ALERT 2 platform. This work will be completed in partnership with the Monterey County Water Resources Agency in the Summer of 2016.
- b) The County, City of Watsonville, and other entities continue to pursue implementation of a project with the Army Corps of Engineers to significantly upgrade the flood conveyance system to provide an adequate level of flood protection for the Pajaro River, Salsipuedes Creek, and Corralitos Creek.
- c) County staff continue to implement the County’s stormwater management program and update the program to address evolving state and federal requirements.
- d) The County, City of Santa Cruz, and Scotts Valley Water District received Proposition 84 stormwater grant funds to implement projects that reduce stormwater runoff and increase groundwater recharge by infiltrating runoff from impervious surfaces. The County

completed two projects in 2015, one at the Heart of Soquel Park and one at Brommer Street Park. The City also completed a parking lot retrofit on Cedar Street.

- e) The County and local water agencies are working with Ecology Action of Santa Cruz to implement a grant to promote use of low impact development measures and rainwater catchment to reduce stormwater runoff.
- f) County Staff partnered with the Resource Conservation District to hold a Winter Preparedness workshop for rural homeowners in anticipation of a wet winter.

## **7. Integrated Regional Water Management (IRWM) – Santa Cruz Region**

- a) Santa Cruz Region partner agencies continue to work together on integrated regional water management, with the Regional Water Management Foundation (RWMF) serving as a hub for the 11 partner agencies. In 2015, two new partner agencies, the Cities of Capitola and Scotts Valley, became signatories to the IRWM memorandum of agreement. All of the partner agencies contribute funding to support ongoing work of the RWMF to coordinate and administer efforts and position the region for future funding from the state. The County contributes \$15,000 of the total \$80,000 fund
- b) The IRWM Santa Cruz Region applied for drought funding under Proposition 84 to help expand recycled water use in Davenport, help fund treatment for hexavalent chromium in Soquel Creek Water District and replace aging wells for the City of Santa Cruz water supply. The application scored well, and tentatively will receive partial funding.
- c) The Santa Cruz Region is working with other regions in the Central Coast funding area to develop a plan for future equitable distribution of Proposition 1 IRWM funds. This has the potential to provide greater certainty regarding availability of future funds.

## **8. IRWM - Pajaro Region**

- a) County staff also participate actively in the Pajaro IRWM program, which encompasses the entire 1,300 square mile Pajaro River watershed. The Pajaro IRWM includes water supply and flood management projects throughout the Pajaro Valley, as well as water quality and habitat restoration projects in the Pajaro Valley outside the Watsonville Slough system. The Pajaro IRWM is led by Santa Clara Valley Water District, San Benito County Water District, and the Pajaro Valley Water Management Agency (PVWMA).
- b) PVWMA and its partners received approximately \$5 million in drought relief funding under Proposition 84. This will help fund expanded storage and distribution for recycled water irrigation and improved irrigation efficiency. As a part of the drought relief funding, the City of Watsonville was awarded a \$3.2M grant to upgrade its Corralitos surface water treatment plant. This upgrade will: (1) allow the City to treat and distribute water in the winter time; (2) reduce the amount of groundwater used in the winter time; and (3) enhance stream flow to benefit fisheries.

- c) PVWMA received ratepayer approval of pumping fees to fund implementation of their updated Basin Management Plan, which will implement projects to reduce groundwater pumping by 12,000 af/yr.
- d) The Community Water Dialog, a community stakeholder group, continued to promote agricultural grower and community support for a variety of efforts to implement managed groundwater recharge projects, improved irrigation efficiency, and community support for improved groundwater basin management.
- e) The Resource Conservation District has worked with the agricultural community to implement a variety of outreach, technical assistance, and cost-sharing programs to reduce water use, promote groundwater recharge, and improve water quality.

End.

2015 Water Use Restrictions in Santa Cruz County and Residential Water Savings From 2013 to 2015 (June to October)		
Agency	Restrictions	Residential Water Savings Accomplished in Gallons/per person/per day (R-GPCD)
<b>State Requirements</b> for all non-agricultural users (April 2015)	<ul style="list-style-type: none"> <li>Prohibited use of potable water:             <ul style="list-style-type: none"> <li>Washing sidewalks and driveways;</li> <li>Allowing runoff when irrigating</li> <li>Using hoses with no shutoff nozzles to wash cars;</li> <li>Decorative water features that do not recirculate the water;</li> <li>Irrigating outdoors during and within 48 hours following measureable rainfall;</li> <li>Irrigation of ornamental turf on public street medians;</li> <li>Irrigation outside of newly constructed homes and buildings that is not delivered by drip or micro-spray systems;</li> <li>Restaurants serving water to their customers unless requested</li> </ul> </li> <li>Hotels and motels must offer their guests the option to not have their linens and towels laundered daily.</li> </ul>	<b>Objective of 25%</b>
<b>State Requirements</b> for water purveyors >3000 connections (May 2015)	<ul style="list-style-type: none"> <li>Mandated restrictions between 4%-36%, assigned to each system, depending on water savings to date</li> </ul>	<b>27%</b>  <b>87 R-GPCD</b>
<b>State Requirements</b> for commercial, institutional, industrial users with independent water source, and water systems 15-3000 connections (May 2015)	<ul style="list-style-type: none"> <li>Limit outside watering to 2 days per week or 25% reduction in water use</li> </ul>	<b>Pending</b> (TBD in 2016)
<b>County of Santa Cruz</b> (No mandated reduction levels)	<ul style="list-style-type: none"> <li>No wasteful water use</li> <li>No operating ornamental fountain or cooling system that doesn't re-circulate water</li> <li>Outdoor water Restrictions             <ul style="list-style-type: none"> <li>No hosing off of hardscapes</li> <li>No irrigation run-off</li> <li>Shut-off nozzle required on hoses</li> <li>Leaks must be repaired within 24 hours</li> <li>Limit outside watering to 2 days per week for 15 minutes</li> <li>No spray irrigation 10am-5pm</li> </ul> </li> </ul>	<b>Not measured.</b>

Agency	Restrictions	Residential Water Savings Accomplished in Gallons/per person/per day (R-GPCD)
<b>Scotts Valley Water District</b> (State mandated reduction of 16% from 2013 levels)	<ul style="list-style-type: none"> <li>• Stage 1 (of 3) Water shortage</li> <li>• Irrigation limited to 2 days per week</li> <li>• Permanent Water Waste Prohibition               <ul style="list-style-type: none"> <li>○ No irrigation 10am-5pm,</li> <li>○ No hosing off of hardscapes</li> <li>○ Shut-off nozzle required on hoses</li> <li>○ No irrigation run-off</li> <li>○ Recycled water available for pick up by customers</li> </ul> </li> </ul>	<p><b>28%</b></p> <p><b>70 R-GPCD</b></p>
<b>City of Santa Cruz Water Department, May 2015</b> (State Mandated reduction of 8% from 2013 levels)	<ul style="list-style-type: none"> <li>• Stage 3 (of 5) Water Shortage Emergency</li> <li>• No wasteful water use</li> <li>• Restaurants cannot serve water to their customers unless requested</li> <li>• Hotels and motels must offer their guests the option to not have their linens and towels laundered daily</li> <li>• Outdoor water Restrictions               <ul style="list-style-type: none"> <li>○ Residential swimming pools may not be filled</li> <li>○ No spray irrigation 10am-5pm</li> <li>○ No hosing off of hardscapes or exteriors except for painting or sale</li> <li>○ Shut-off nozzle required on hoses</li> <li>○ No irrigation run-off</li> <li>○ Water service at visitor facilities only on request</li> <li>○ No irrigation after rainfall</li> </ul> </li> <li>Leaks must be repaired within 24 hours</li> </ul>	<p><b>28%</b></p> <p><b>41 R-GPCD</b></p>
<b>Soquel Creek Water District</b> (State mandated reduction of 8% from 2013 levels)	<ul style="list-style-type: none"> <li>• Stage 3 (of 5) Water Shortage Emergency</li> <li>• No wasteful water use</li> <li>• Restaurants cannot serve water to their customers unless requested</li> <li>• Hotels and motels must offer their guests the option to not have their linens and towels laundered daily</li> <li>• No carwash, ornamental fountain, or cooling equipment that doesn't re-circulate water</li> <li>• Outdoor water Restrictions               <ul style="list-style-type: none"> <li>○ No Watering 10am-8 pm</li> <li>○ No watering while raining</li> <li>○ No hosing off of hardscapes</li> <li>○ No irrigation run-off</li> <li>○ Shut-off nozzle required on hoses</li> <li>○ Leaks must be repaired within 72 hours</li> </ul> </li> <li>200% Water Demand Offset for new connections</li> </ul>	<p><b>26%</b></p> <p><b>53 R-GPCD</b></p>

Agency	Restrictions	Residential Water Savings Accomplished in Gallons/per person/per day (R-GPCD)
<b>San Lorenzo Valley Water District</b>  (State mandated reduction of 12% from 2013 levels)	<ul style="list-style-type: none"> <li>• Stage 2 (of 4) Water Restrictions</li> <li>• No wasteful water use</li> <li>• Restaurants cannot serve water to their customers unless requested</li> <li>• Hotels and motels must offer their guests the option to not have their linens and towels laundered daily               <ul style="list-style-type: none"> <li>○ Outdoor spray watering 3 days only</li> <li>○ No spray irrigation 10am-5pm</li> <li>○ No hosing off of hardscapes or exteriors except for painting or sale</li> <li>○ Shut-off nozzle required on hoses</li> <li>○ No irrigation run-off</li> <li>○ Residential swimming pools may not be filled</li> </ul> </li> <li>Leaks must be repaired within 24 hours</li> </ul>	<b>28%</b>  <b>70 R-GPCD</b>
<b>City of Watsonville</b>  (State mandated reduction of 20% from 2013 levels)	<ul style="list-style-type: none"> <li>• Permanent Water Wise Use</li> <li>• 20% voluntary reduction</li> <li>• Limit outside watering to 2 days per week</li> <li>• Permanent Water Waste Prohibition               <ul style="list-style-type: none"> <li>○ No spray irrigation 9 am-5pm</li> <li>○ Shut-off nozzle required on hoses</li> <li>○ No irrigation run-off</li> </ul> </li> </ul>	<b>23%</b>  <b>62 R-GPCD</b>
<b>Central Water District</b>  (No mandated reduction for Less Than >3,000 connections)	<ul style="list-style-type: none"> <li>• Stage 2 (of 4) Water shortage</li> <li>• No operating washing equipment or ornamental fountain that doesn't re-circulate water</li> <li>• Outdoor watering restrictions               <ul style="list-style-type: none"> <li>○ Outdoor spray watering 2 days only</li> <li>○ No spray irrigation 10am-7pm</li> <li>○ Reduced irrigation of play and common areas</li> <li>○ No hosing off of hardscapes or exteriors</li> <li>○ Leaks must be repaired within 24 hours</li> </ul> </li> <li>Shut-off nozzle required on hoses</li> </ul>	<b>31%</b>  <b>115 R-GPCD</b>

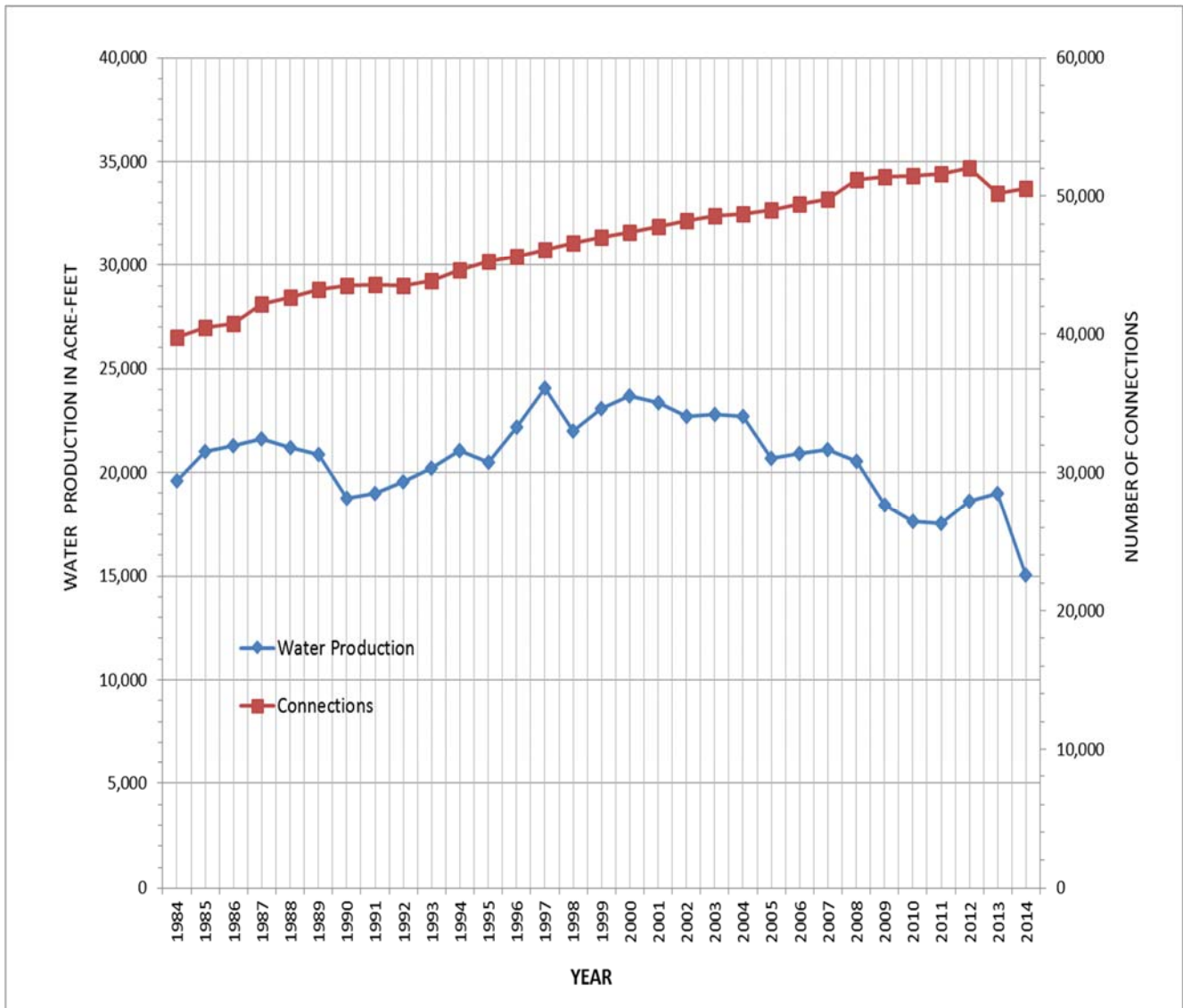
Source: State Water Resources Control Board, Urban Water Supplier Dataset, October 2015. Savings are cumulative savings June through October 2015 compared to 2013. Residential use in gallons/per person/ per day is estimated for October 2015.

Note: Agencies have more extensive programs in effect. Agency websites should be consulted for the complete list of water use restrictions and water conservation efforts.



Santa Cruz County Water Use 2014								
and Percentage Reductions From 2013 to 2014 and 2015								
Water Supplier	Connections	Population	Water Use Volume (acre-feet/yr)	% Groundwater	% Surface Water	% Recycled Water	% Reduced in 2014 <sup>a</sup>	% Reduced in 2015 <sup>b</sup>
Santa Cruz City Water Dept.	24,300	94,887	8,046	7%	93%		24%	29%
Watsonville City Water Dept.	14,328	65,740	7,522	99%	1%		12%	23%
Soquel Creek Water Distirct	14,390	37,720	3,474	100%			19%	30%
San Lorenzo Valley Water District	7,223	25,485	1,900	60%	40%		18%	28%
Scotts Valley Water Distirct	3,735	10,509	1,399	87%		13%	16%	28%
Central Water District	812	2,700	457	100%			22%	31%
Lompico Creek Water District	496	1,600	59	98%	2%		23%	
Big Basin Water Company	596	1,967	127	24%	76%		30%	
Mount Hermon Association	497	1,238	138	100%			26%	
Forest Lakes Mutual Water Company	326	1,076	40	100%			20%	
Small Water Systems (5-199 connections) <sup>c</sup>	2,600	7,300	1,040	95%	5%			
Individual Users <sup>c</sup>	8,000	20,000	3,200	95%	5%			
Agricultural								
Mid-County & North-County <sup>c</sup>			2,400	75%	25%			
South County - Pajaro Valley (excludes Monterey County use) <sup>d</sup>			27,884	94%	0.4%	6%	6%	
Totals	Total Count		Total Volume (acre-feet/year)					
Total Connections & Population:	77,303	270,222						
Total Volume Use:			57,686	46,605	9,339	1,742		
				81%	16%	3%		
Total Non-Agricultural:			27,402	18,594	8,628	180		
Total Agricultural:			30,284	28,011	712	1,562		
*a: Source: Annual reports submitted to State Division of Drinking Water.								
*b: Source: State Water Resources Control Board, Urban Water Supplier Dataset, October, 2015.								
*c: Estimated values.								
*d: 2014 agricultural water use on the Monterey County side of the Pajaro Basin = 21,770 acre-feet.								

**Water Production  
for Northern Santa Cruz County Large Water Purveyors\*  
1984 to 2014**



\* Water Suppliers include:

- City of Santa Cruz
- Scotts Valley Water District
- San Lorenzo Valley Water District
- Lompico Water District
- Soquel Creek Water District
- Central Water District