

electronic cc:  
Exec, OCC, EM  
VAW, SRH, LLE, RAS, JT

**From:** "Mark Millan" <millan@datainstincts.com>  
**To:** "Brian Hines" <brian@ncsr.com>, <info@datainstincts.c  
**Date:** 3/4/05 5:57PM  
**Subject:** RE: Trout Unlimited Petition

Brain, sorry we missed you this morning. As I mentioned on the phone I was not aware of your letter nor the questions you have posed to the Board of Supervisors or the State Board. But I do have some background information that may prove helpful; Santa Rosa's conservation plans for 2005, and a recent update regarding implementation of Santa Rosa's Recycle Water Master Plan.

Contact information for Jenifer Durkin is within the conservation document if you would like to contact her regarding Conservation Pricing.

Hope this helps, let me know if you have additional questions.

Mark Millan

Public Information Coordinator

[www.RecycledWaterProgram.com](http://www.RecycledWaterProgram.com)

707.836.0300

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From: Brian Hines [mailto:brian@ncsr.com]  
Sent: Friday, March 04, 2005 5:01 PM  
To: info@datainstincts.com  
Cc: dirvin@waterboards.ca.gov; cbonham@tu.org  
Subject: Trout Unlimited Petition

March 4, 2005

Mark Milan  
Data Instincts  
239 Windsor Road  
Windsor, CA 95492

Dear Mark:

Sorry I couldn't make the meeting this AM to discuss the City of Santa Rosa's waste water discharge plans. I did have a question for you however. Has any progress been made on any of the 4 points I brought up in the attached letter to the Sonoma County Board of Supervisors which was also

submitted to the State Water Resources Control Board last year? I am not aware of progress having been made on any of 4 recommendations in my letter by either the City of Santa Rosa or the Sonoma County Water Agency.

These recommendations included:

- 1) Completely eliminate waste water discharges to the Russian River in favor of conservation and agricultural reuse.
- 2) Implement the Pacific Institute's water conservation recommendations in their report, "Waste Not Want Not".
- 3) Implement Conservation Pricing by all of the Sonoma County Water Agency's water contractors such as the City of Santa Rosa.
- 4) Completely account for all the water diversions in the Russian River watershed.

I see little progress has been made on completely eliminating discharges of "waste" water to the Russian River as was the promise when the City spent \$200 million dollars building the Geyser Pipeline. Over 250 million gallons have been discharged by the City of Santa Rosa this winter already. 1.5 billion gallons were discharged by the City of Santa Rosa last winter. Then as you know, last summer we suddenly had a water shortage crisis in Lake Mendocino which resulted in emergency low flow conditions imposed on the Russian River. The "crisis" also resulted in the inability of the City of Santa Rosa to deliver "waste" water to its irrigation clients. Too bad the 1.5 billion gallons dumped in the River in the winter of 03/04 were not available for the irrigators the summer of 04.

I would add a 5th recommendation to the 4 in my letter of 10/26/04 also.

It would be that the Army Corp. of Engineers stop dumping water out of Lake Mendocino at the high rate they are RIGHT NOW.

WINTER water releases from both Lake Mendocino and Lake Sonoma should be done according to the natural hydrograph.

Currently water is being released in such unnatural high quantities(since Feb. 23) that it guarantees two things:

- 1) Less water will be available next summer causing an illegitimate call for "low flow" when the manufactured low water situation could have been avoided by releasing water according to the natural hydrograph during the winter.
- 2) Releases of too much water in the winter "blows out" sport fishing for Steelhead in the Russian River. This has caused many sport fishers to give up on the Russian and take their tourism dollars elsewhere. This suits the political purposes of those that have an interest in the River's impaired conditions as it reduces the number of steelhead fisher advocates for the River. See graphs below for Lake Mendocino(Coyote Dam) releases which bear no relationship to the natural rainfall pattern.

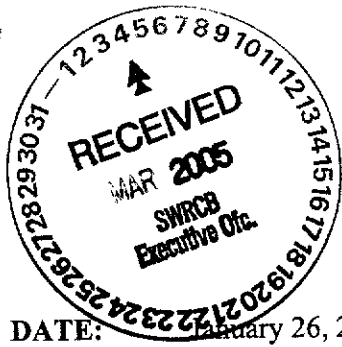
I would like to hear your opinion on these matters and it is what I would have discussed with you today.

Thank you.

R. Brian Hines, Secretary  
California State Council  
Trout Unlimited of California

(707) 575-3999  
(707) 575-3525 fax

**CC:** <dirvin@waterboards.ca.gov>, <cbonham@tu.org>



UTILITIES DEPARTMENT  
MEMORANDUM

DATE: January 26, 2005

TO: Board of Public Utilities  
City Council

FROM: Jennifer Durkin, Water Conservation Program Coordinator

SUBJECT: Water Conservation Achievements in 2004 and Goals for 2005

Each year the Water Conservation Subcommittee of the Board of Public Utilities reviews the Water Conservation Program achievements from the previous year and establishes goals for the coming year. Attached, please find a summary of the achievements from 2004 and the goals for 2005.

Some of the highlights of our goals for 2005 include:

- Present the 4<sup>th</sup> annual award-winning Water Fair
- Conduct 10<sup>th</sup> annual Elementary School Poster Contest
- Work with Master Gardeners to create and present a landscape workshop series for residents
- Maintain 93% completion on measurement of landscape irrigation sites for water budget program
- Update the Urban Water Shortage Contingency Plan

Should you have any questions, please contact me at 543-3938.

Thank you.

Attachments (2)

Water Conservation Program Accomplishments 2004  
Water Conservation Program Goals 2005

# **WATER CONSERVATION PROGRAM YEAR 2004 ACCOMPLISHMENTS**

## **Public Awareness Campaign**

- Held the 3<sup>rd</sup> Annual Water Fair in May
- Created 10 Bill Inserts, 9 of which were in both English and Spanish
- Completed a successful Water Awareness Month campaign, including poster contest, leak detection kit mailing, proclamation and water conservation awards
- Participated in 6 Downtown Markets
- Completed Spanish language version of website
- Implemented outreach to the Hispanic Community by participating in the Cultural Diversity Day celebration and staffing a booth at the Cinco de Mayo celebration. Participated in a Spanish radio interview on KBBF and presented water conservation information in Spanish for parents of headstart students. Staff continued participation in the Diversity committee and the Hispanic Chamber of Commerce.
- Attended various public events, including booths at Agilent, Kaiser, Memorial Hospital environmental days, Juneteenth/MLK Day, International Day, the California Native Plants Society Wildflower festival, and the City of Santa Rosa Green Building Launch
- Held 9<sup>th</sup> annual elementary school poster contest with 17 schools and 1,535 students participating
- Maintained literature displays at four sites
- Initiated monthly mailing of Water Conservation Welcome Packets to new utility customers

## **Indoor water use campaign for residential and commercial/industrial customers**

- Replaced 846 residential washing machines at rebates of \$100 - \$150 each, depending on water efficiency of machine. Since 1998, have replaced over 4,000 machines in conjunction with SCWA.
- Replaced 124 commercial washing machines at rebate of \$400 - \$450 each, depending on water efficiency of machine, in conjunction with CPUC and LightWash program.
- Replaced 95 pre-rinse spray nozzles under the "Rinse & Save" program in conjunction with CPUC and CUWCC
- Installed 60 CII ULFT's through the CII Direct Install program
- Initiated pilot Pressure Reduction Valve (PRV) Study, installing 41 PRV's at residential sites
- Created and distributed CII Water Conservation Programs Brochure
- Conducted written survey of CII customers and received a 12% response rate
- Processed two Sustained Reduction Rebates
- Worked closely with Engineering division and sent letters to customers affected by CIP projects to encourage submetering and separate irrigation meters

## **Peak Reduction Measures**

- Completed water budgets for 93% of dedicated landscape irrigation accounts
- Entered into agreement with Pacific Institute to analyze CII outdoor water conservation potential
- Presented two workshops on low water-use plants for home gardeners
- Implemented Spanish version of Water Efficiency Calculator on website
- Completed work on NASA/Space Imaging grant, including production and presentation of final report to NASA Headquarters
- Distributed Water Wise Gardening CDs
- Analyzed ET controller impacts on both CII and residential participants. Prepared final report and recommendation on residential ET timer study to complete DWR grant.
- Processed 6 Irrigation Efficiency Rebate Applications, resulting in one rebate.
- Held four professional landscape workshops, two in English and two in Spanish
- Continued to monitor and calibrate two CIMIS stations, including weekly updates to Turf-Time

## **Measures to secure sustainable water supply**

- Continued negotiations with SCWA for a new water supply agreement
- Worked with IWRP team to determine implementation of water conservation options among sub-regional partners

## **WATER CONSERVATION PROGRAM 2005 GOALS**

### **Expand/Maintain Public Awareness Campaign**

- Continue bill inserts, including "Water Matters" series
- Continue to explore means of outreach to diverse communities
- Participate in Downtown Markets
- Maintain and publicize website
- Present 4<sup>th</sup> Annual Water Fair
- Maintain Water Awareness Month activities
- Conduct 10<sup>th</sup> Annual Elementary School Poster Contest
- Continue Water Conservation Welcome Packet Mailing

### **Expand/Maintain indoor water use campaign for all customers**

- Maintain CPUC/Energy Solutions "LightWash" program
- Continue implementation of CPUC/Honeywell DMC "Rinse and Save" pre-rinse nozzle program
- Continue to administer residential washer rebate program in conjunction with SCWA
- Evaluate new hardware and incentive options as they become available
- Conduct CII focus group
- Adjust CII program and outreach based on findings of focus group
- Analyze PRV Pilot study impacts on residential sites.

### **Expand/Maintain Peak Reduction Measures**

- Work with Pacific Institute to complete analysis of CII outdoor water conservation potential
- Distribute Water Wise Gardening CD
- Publicize incentives to irrigators for efficient water use, including Split Service Incentive and Efficient Landscape Irrigation rebates
- Present three professional landscape workshops, two to Spanish speaking professionals and one to English speaking professionals
- Work with Master Gardeners to create and present a landscape workshop series for residents
- Continue to monitor and calibrate two CIMIS stations, including weekly updates to Turf-Time
- Evaluate new locations for demonstration gardens and new outreach materials for proper plant selection
- Maintain 93% completion on measurement of landscape irrigation sites for water budget program
- Develop marketing piece for water budget program

### **Maintain Conservation Role in Water Supply and Wastewater Long-Range Plans**

- Update Urban Water Shortage Contingency Plan
- In cooperation with Sonoma County Water Agency, update the Urban Water Management Plan
- Work closely with the Sonoma County Water Agency in carrying out water conservation component in their Water Supply and Transmission System Project.

## Frequently Asked Questions

Because many people have questions specifically about discharge, the following Q&A relates primarily to that topic.

### Why is river discharge being studied now?

Discharge includes direct and indirect options. Both are affected by ongoing changes in the regulatory environment. If new regulations prevent or limit one option, the City will have to rely heavily on the other. In preparation for whatever the regulatory outcome is, the long process of studying and evaluating the discharge options is being conducted far in advance of when the options will need to be implemented.

### Why not continue Laguna discharge?

If we could, we might. However, the Laguna is an impaired waterway, with low flows during parts of the discharge season. Staff predicts that by 2010 or so, CTR and other regulatory rules will make Laguna discharge difficult, if not impossible. From a regulatory standpoint and for restoration of the Laguna, it makes sense to consider alternative discharge types and locations.

### What is the difference between direct and indirect discharge?

Direct discharge uses a pipe from which recycled water is released directly into the River. Indirect discharge uses percolation from a pond or shallow well injection. Water then flows through soil, where additional treatment occurs, prior to discharge to the River. The current Laguna discharge is a direct discharge.

### What specific areas along the River are being considered for direct and indirect discharge?

No decision has been made regarding discharge location. A wide range of options are described in the Master Plan. Studies are currently being planned to identify and, ultimately, provide the basis of site selection through a public process.

### What will these discharge projects cost?

The current estimate is about \$90 million for indirect discharge and \$30 million for direct discharge. The costs depend on many factors, such as distance of the discharge location from existing pipelines.

### Is the plan to employ both direct and indirect discharge methods, or just one?

The City has asked that a combination of the two discharge strategies be explored. For example, studies may show indirect discharge is best during low flow river conditions, and direct discharge is needed during highest flow situations. If so, the City would then request a permit from the Regional Water Quality Control Board.

### Is discharge really necessary? Are there other ways to solve this problem?

Even with the options for expansion of The Geysers Project and reuse, the price tag for a zero-discharge system is more than \$300 million. The City cannot afford this cost.

### I read last summer that farmers were trying to get more recycled water for their crops.

### Can't the problem be solved by sending more water to them?

Last year was an unusually dry year and farmers currently under contract to receive recycled water from the City were competing with the Geysers Project for this resource. In the end, Calpine (The Geysers operator) agreed to take less water for their system, so that the farmers could irrigate their crops.

Agricultural irrigation is key among the reuse options, and it is expected to be expanded. However, farmers typically need water only in the summer. This and other factors combine to make winter the season in which the system is most likely to reach capacity. For farmers to accept water in the winter, they would need to build storage ponds, which can be expensive and difficult to site. Adjustments and system flexibility will ensure there is enough water available for the Geysers, farmers, and new urban reuse users, who will also be dependent upon recycled water.

### What about environmental documentation of the new discharge and reuse options?

Each of the options being considered will be subject to project-level environmental review, tiering off of the Incremental Recycled Water Program EIR.

### What are the new regulations?

In 2000 the U.S. Environmental Protection Agency issued its guidelines for water quality objectives for surface waters. The state of California adopted these guidelines and they are referred to as the California Toxics Rule or CTR. This has a potential effect on Santa Rosa's ability to continue to discharge recycled water to the Russian River and its tributaries. In 2001, the State Water Resources Control Board adopted its State Implementation Policy which outlines the way in which the CTR will be applied.

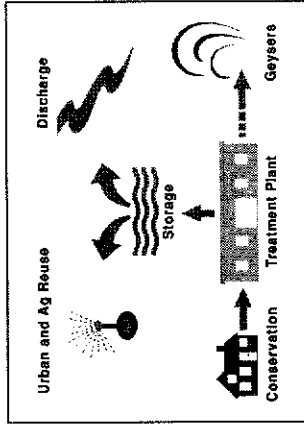
The State Water Board is considering modifications to the Implementation Policy, which may allow additional flexibility, thus allowing for continued discharge of recycled water to the Russian River and/or its tributaries, while still protecting the quality of those waters.

For more information visit [www.RecycledWaterProgram.com](http://www.RecycledWaterProgram.com) or call 707.836.0300.

# MEETING DEMAND AND NEW RECYCLED WATER REGULATIONS

## Incremental Recycled Water Program

currently served. A detailed study of urban reuse options will be conducted in 2005 to determine the location, size, and timing of a project to add more urban reuse to the system. The Sonoma County Water Agency is studying additional agricultural reuse options using the Subregional System's recycled water. The Geysers steamfield recharge activities can also be increased. Discussion with The Geysers operators regarding injection of additional recycled water is planned for 2005.



The system is flexible to meet demand and new regulations.

### Reviewing New Discharge Locations and Methods

Discharge will continue to be an essential element of the Subregional System because the amount of recycled water produced varies substantially from year to year in relation to local weather conditions and weather-related increases in recycled water production are considered unreliable for reuse. Because reuse is extremely expensive (about five times the cost of discharge) and commitments by users to take the unreliable portion of our recycled water supply are unlikely, it is simply not practical to construct infrastructure to reuse water that will not be consistently available and consumed annually. Therefore, discharge of the unreliable supply has been, and will continue to be, a valuable component of the disposal system.

Until recently, discharge to the Laguna de Santa Rosa met reliability, and environmental standards. Regulatory changes, however, make continued operation of Laguna discharge unreliable. That is why relocation of a portion of the discharge to the Russian River (with no increase

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### Why Santa Rosa is Exploring Expanded Water Recycling Including Alternative Discharge Options

A goal of the Board of Public Utilities (BPU) is to expand the current Subregional recycled water system to meet demand and be responsive to regulatory changes. Studies are being conducted that will help the BPU achieve these goals by evaluating a range of potential solutions.

The Geysers Recharge Project, which went on line in December 2003, added sufficient capacity to the Subregional System to meet population growth plans that were in place at the time the project was selected. Since then, several Subregional System partners have modified their plans. In addition, a new regulation, the California Toxics Rule, will impact current discharge practices into the Laguna de Santa Rosa, a tributary of the Russian River.

As a result, in March 2004, the City of Santa Rosa adopted the Incremental Recycled Water Program (IRWP) Master Plan. The Master Plan maintains current water recycling programs (Geysers recharge, urban and agricultural irrigation), caps discharge at the currently permitted level (4,500 MG per year), and relocates a portion of the discharge to the Russian River from the Laguna de Santa Rosa. It also calls for expanded reuse and water conservation. The Master Plan is to be implemented, as needed, between 2005 and about 2020. The first steps are to study reuse and discharge options in detail. The studies, which are currently underway, will identify the best location, size, and timing of the projects, and evaluate their environmental impacts. Regulatory requirements are expected to necessitate discharge relocation prior to 2010, and population growth is expected to require expansion of reuse projects prior to about 2012.

### Reuse Options: Urban and Agricultural Irrigation and Geysers Recharge

Water recycling is considered beneficial because it reduces demand on other water resources such as groundwater, the Russian River, and its tributaries. The Subregional System already irrigates with about two billion gallons per year. Under the Master Plan, this would be doubled to about four billion gallons per year by adding storage ponds and a network of pipes to deliver water to new urban and agricultural areas that are not

## Recycled Water Quality

For many years recycled water has been used safely for irrigation and other applications throughout California and the world. In California, the treatment and use of recycled water is carefully regulated by the California Department of Health Services and the California Regional Water Quality Control Board. California's regulations regarding recycled water (Title 22) are some of the most stringent in the world.

Recycled water is commonly used for agricultural and landscape irrigation, industrial processes, fire suppression and toilet flushing. Recycled water usage in front and backyard irrigation is just starting to catch on in California, but in states such as Arizona, Florida and Texas, it has been in use for many years.

The Santa Rosa Subregional System has improved its recycled water quality over several years, investing in new equipment and processes. The Laguna Treatment Plant is currently able to provide filtered UV-treated tertiary recycled water that meets or exceeds the highest level recognized in California water recycling regulations; in fact, it generally meets US Environmental Protection Agency drinking water standards. Santa Rosa's recycled water is approved and is used for irrigation of parks and playgrounds, grapes, vegetables, and other food crops throughout the growing cycle. A total of 6,400 acres are currently irrigated. The Subregional System's standards are also consistent with Calpine's requirement that they receive the highest quality water for the Geysers Recharge Project, so as not to adversely affect their steam fields. The recycled water system is monitored daily to ensure all water quality standards are met.

## Where does all the water go?

The average dry weather flow (ADWF) of the Subregional System is approximately 16.5 million gallons per day (mgd). The Subregional System is currently designed to tertiary-treat about 8.5 billion gallons of wastewater in an average year. The reuse and disposal system consists of Geysers steamfield recharge (4 BGD), irrigation (2.1 BGD) and discharge (2.4 BGD). These volumes represent the average year capacity of the Subregional System associated with 21.3 mgd ADWF.

The City undertook the Incremental Recycled Water Program (IRWP) in 2001 to develop additional treatment and reuse capacity for planned growth beyond 21.3 mgd. General plans in the service area are expected to result in 25.9 mgd ADWF. The change between 21.3 and 25.9 mgd is expected to occur between approximately 2010 and 2020. In addition to providing capacity for growth, the IRWP also includes a strategy for maintaining compliance with the California Toxic Rule and State Implementation Plan regulations. The IRWP Master Plan (Master Plan) and associated EIR were adopted in March 2004 and are available at [www.recycledwaterprogram.com](http://www.recycledwaterprogram.com).

Master Plan implementation will involve capital projects at the treatment plant, expansion of the storage and reuse system, and development of additional discharge locations.

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in total volume above currently permitted levels) was included in the Master Plan. Both direct discharge (a pipe from which recycled water is released directly into the River) and indirect discharge (percolation through soil allowing additional treatment prior to discharge to the River) options are available under the Master Plan. Currently, direct discharge is used at the Laguna.

Studies of river discharge, both direct and indirect, are currently being planned. In spring 2005, the BPU will commission a study plan that will, when completed, provide information to support a decision regarding the type(s) and location(s) of discharge.

More information including the IRWP Master Plan is available at [www.recycledwaterprogram.com](http://www.recycledwaterprogram.com).

## Background

The current Geysers Recharge Project and existing agricultural and urban irrigation systems were designed to work with discharge to the Laguna occurring from mid-October through mid-May, when irrigation becomes unnecessary and weather conditions put more water into the system.

While the Geysers project was under construction, the City of Santa Rosa adapted its plans to comply with new and stricter environmental regulations, including the California Toxic Rule (CTR), which has been adopted to protect the aquatic environment. These regulations affect irrigation activities and the amount of treated recycled water that can be discharged into the Laguna. At the same time, population growth - which was projected after the Geysers project was selected - will add water into the system.

Therefore, Santa Rosa embarked on another phase of studies, called the Incremental Recycled Water Program (IRWP), to determine the best alternatives for future recycled water disposal. To maintain system flexibility, a combination of these options will be applied incrementally. They include expansion of the Geysers project, urban and agricultural reuse, conservation, and continued discharge (direct and indirect).

The City of Santa Rosa Utilities Department is responsible for the Santa Rosa Subregional Water Reclamation System, which operates the Laguna Wastewater Plant and oversees the industrial Pretreatment Systems and reclamation, treatment, and distribution of recycled water for more than 225,000 residents and 6,500 businesses in the cities of Cotati, Rohnert Park, Santa Rosa, Sebastopol, the South Park Sanitation District and portions of the unincorporated areas of Sonoma County. As managing partner of the Subregional System, the City of Santa Rosa is responsible for operating the system economically and safely and for solving the system's recycled water disposal challenges.

