

Water Conservation Plan



Sierra Lakes County Water District
PO Box 1039
Soda Springs, California 95728

February 22, 2014

Introduction

The Sierra Lakes County Water District was formed in 1961 and operates in accordance with California State Water Code Sections 30000 et seq. The District provides domestic water and sanitary sewer collection services to the residents of the Serene Lakes area of Placer County. The primary source of water is "Ice Lakes" which are tributary to Serena Creek and the North Fork of the American River. Diversion and use of this surface water source is allowed by the State of California State Water Resources Control Board under Permit #14248 (Application #20601) originally issued in 1962 and amended in 2013.

The Permit allows direct diversion at a maximum rate of 0.8 cubic feet per second from October 1st of each year to June 30th of the succeeding year, with an annual limit of 394 acre-feet and 783 acre-feet per annum by storage to be collected from October 1st of each year to June 30th of the succeeding year. The total amount of water to be taken from the source shall not exceed 1,177 acre-feet per water year (October 1st to September 30th). Allowable uses are: Municipal, Industrial (snowmaking), Fish Culture and Recreation. The quantity authorized for beneficial use is 365 acre-feet. The Permit requires proof of Beneficial Use by December 31, 2042.

Condition 12 of the Amended Permit states:

The Permittee shall consult with the Division of Water Rights and develop and implement a water conservation plan or actions. The proposed plan or actions shall be presented to the State Water Board for approval within one-year of the date of this permit or such further time as, for good cause shown, may be allowed by the Board. A progress report on the development of a water conservation program may be required by the Board at any time within this period. All cost effective measures identified in the water conservation program shall be implemented in accordance with the schedule for implementation found therein.

This Water Conservation Plan was prepared by the Sierra Lakes County Water District to satisfy Condition 12.

Development History and Water Use

The Serene Lakes community is comprised of eight residential subdivisions containing 1,045 single-family residential lots, a 26 room lodge and restaurant, the District office, a fire station and a cross-country ski area day-use lodge. The first subdivision, Ice Lakes #1 was recorded in 1946, the last subdivision (Ice Lakes Lodge) was recorded in 1997; the majority of the parcels were created in the late 1960's and early 1970's. Of the 1,045 residential lots, 803 are developed. Ten undeveloped large parcels surrounding the subdivisions were recently purchased by the Truckee Donner Land Trust and no development is planned by that entity. As of December 31, 2013, the District has 820 Equivalent Dwelling Unit (EDU) connections; the 17 non-residential EDU's are comprised of the previously mentioned lodges and municipal buildings. Figure 1 shows the connection history of the District since 1990.

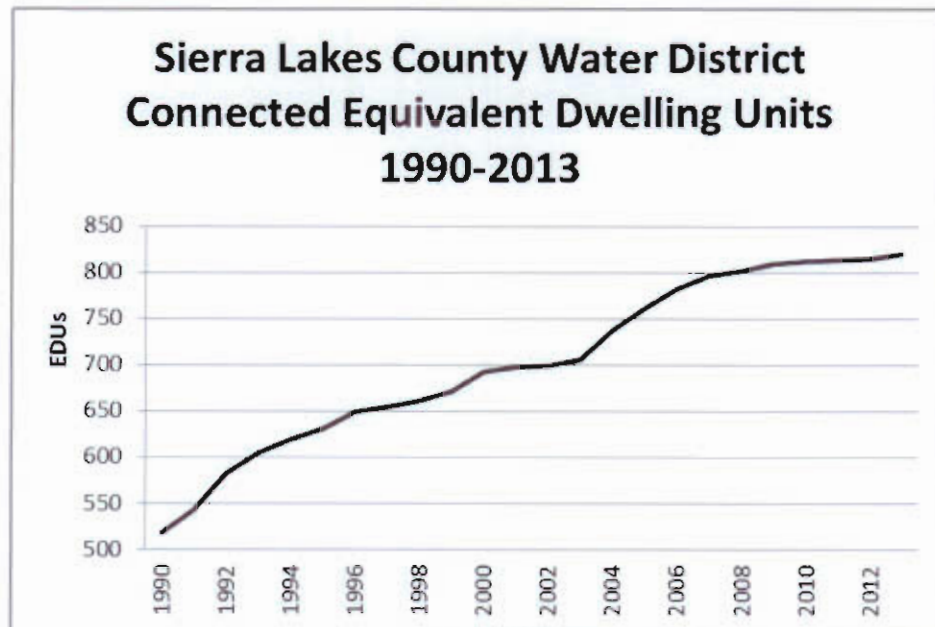


Figure 1

The State (Senate Bill 610) required all Urban Water Suppliers (3,000 customers or 3,000 acre-foot/year) to develop a Water Conservation Plan by July 1, 2011, and reduce consumption 10% by the end of 2015 and 20% by 2020 (the baseline is the 10-year average from 2000-2010). While the District does not meet the definition of an Urban Water Supplier, the same goals and typical programs described in SB-610 were used in the preparation of this Plan.

The District's population fluctuates significantly due to the second-home nature of the community; approximately 10% of the homes are occupied on a full-time basis. For that reason, the District has chosen to measure consumption in terms of acre-foot (af) per Equivalent Dwelling Unit (EDU) per year, as compared to the more typical gallons/person/day (gpd) used for communities composed of primary residences. Information from calendar years 2000 through 2013 (Figure 2) shows a significant decrease in water use during the past fourteen years. An almost 28% reduction, when the 2000-2010 average of 0.159 af/EDU/yr. is compared to the 2013 rate of 0.114 af/EDU/yr., has been achieved by the District.

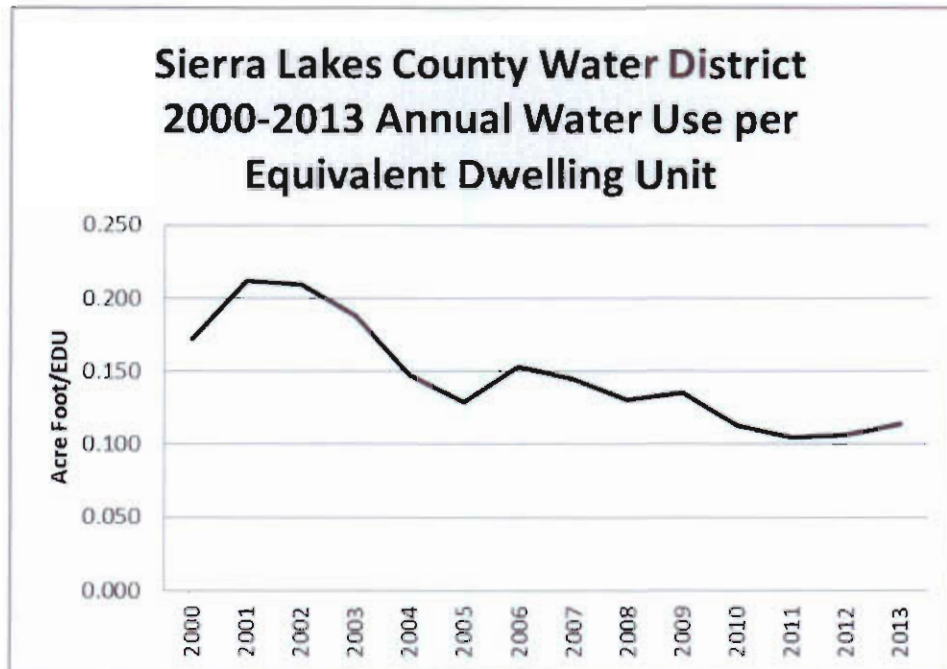


Figure 2

Water Conservation Plan

While the District has met the 2020 requirements of SB-610 ($\geq 20\%$ reduction), additional savings can be realized by the implementation of a Water Conservation Plan that incorporates the following components:

- customer education
- distribution system leakage reduction
- a plumbing fixture retrofit program
- water conservation building codes and ordinances

Customer Education and Outreach

The District will prepare an insert for inclusion in the annual utility billing and semi-annual postings on the District's website. The flyer will describe ways to save water both inside and outside the house by modifying user habits, how/where to look for leaks, why water conservation benefits the community and a fixture retrofit program. The next scheduled utility billing is July 2014, and the posting on the website will begin at the start of 2014-2015 fiscal year.

Distribution System Leakage Reduction

The District spent approximately \$2.5 Million between 2008 and 2010 replacing the oldest water mains and laterals (main to property line) in the distribution system, significantly reducing the number of leaks originating from District owned infrastructure. While the mainline and lateral leakage is minimal, customer service line (property line to house) leakage has significantly

increased in the last year. District Staff has found that galvanized service piping (the oldest homes) has reached the end of its useful life and typically requires replacement due corrosion. To a lesser extent, leakage is also occurring on copper service lines of newer homes, typically due to contact with buried power lines. Most service leaks are in the one to four gallons/minute range and are difficult to find as the leaking water rarely surfaces. As a result, confirmation of a leaking service line is evidenced by observing flow through the existing water meter (if the house was built after 1992) or by the installation of a temporary meter at homes that have been retrofitted with a meter setter. Approximately 600 of the 803 existing homes are equipped with a meter or meter setter. Beginning the summer of 2014, District Staff will check at least 100 existing homes each construction season (typically June through October) for leaking service lines. Property owners will be notified of the leak and the water turned off at the curb-stop until the service line is repaired or replaced.

Plumbing Fixture Retrofit Program

A program to install low-use water fixtures in in the approximately 525 homes constructed in the District before 1992 will include the following incentives:

1. a rebate payment to the property owner of \$125/toilet, maximum of two per house, when a 3+ gallons/flush unit is replaced with a 1.28 gallons/flush unit. A Rebate Application would be completed by the owner and the original and replacement toilet(s) inspected by District Staff to confirm installation and gallon/flush amounts. The maximum number of rebates would be set at 20/year (\$2,500 total).
2. free low flow shower heads will be available at the District office, maximum of two per house, when a ≥ 2.5 gallon/minute unit is replaced. The flow rate of the original shower head(s) will be confirmed by District Staff. The maximum number of shower heads available in one fiscal year is 50 (\$500 total).
3. free screw-in kitchen and bathroom faucet aerators will be available at the District office. The maximum number of aerators given out in any one fiscal year will be 100 at an estimated cost to the District of \$300.
4. a rebate payment to the property owner of \$25 for the purchase of a landscape irrigation timer, maximum of one per house. A Rebate Application would be completed by owner and the timer inspected by District Staff to confirm its installation. The maximum number of rebates would be limited to 40/year (\$1,000 total).

The District's total "out-of-pocket" cost for the fixture and irrigation controller retrofit program would be limited to \$4,300 for any single fiscal year.

Water Conservation Building Codes and Ordinances

Senate Bill 407 requires the replacement of all non-compliant plumbing fixtures in any structure that is altered or improved beginning in January 2014. The Placer County Building Department's interpretation of the regulation is that projects that replace roofing, heating, electrical, windows,

siding and similar components are exempt from SB407; the number of residential remodels in the Serene Lakes Community that will be affected by SB407 is unknown.

Sierra Lakes County Water District Ordinance 84 requires the installation of a water meter setter and testing of the service line for leakage upon the sale, modification of the plumbing system or a significant remodel (> \$10,000 value) of the home. The Ordinance will be revised, effective July 1, 2014, to require that all non-compliant plumbing fixtures be replaced prior to the sale of an existing home. The District will establish a compliance/documentation program wherein District Staff will verify the installation of compliant fixtures at the same time the service line testing occurs.

Summary and Follow-Up

The Sierra Lakes County Water District will implement the Water Conservation Plan no later than July 1, 2014, including the commitment of staff and up to \$4,300 in out-of-pocket expenses for the plumbing fixture retrofit program. An annual report describing the success of leak reduction efforts, fixture retrofit participation and Ordinance 84 compliance will be provided to the Board of Directors; appropriate Plan revisions/amendments will be made to increase effectiveness at reducing water use.

Anna Nickerson

From: Bill Quesnel [bquesnel@litol.com]
Sent: Friday, May 30, 2014 8:15 AM
To: 'Mrowka, Kathy@Waterboards'
Cc: Anna Nickerson
Subject: RE: Permit 14248 (Application 20601) of Sierra Lakes County Water District

Mrs. Mrowka:

Thank you for the status update, the District plans to implement the program on July 1st.

Bill Quesnel PE
Operations Manager
Sierra Lakes County Water District

From: Mrowka, Kathy@Waterboards [<mailto:Kathy.Mrowka@waterboards.ca.gov>]
Sent: Thursday, May 29, 2014 11:22 AM
To: bquesnel@litol.com
Cc: Mrowka, Kathy@Waterboards
Subject: Permit 14248 (Application 20601) of Sierra Lakes County Water District

Division of Water Rights (Division) staff has reviewed the water conservation plan that you prepared for Sierra Lakes County Water District. This email provides confirmation of receipt of the plan and will be placed in the file. Thank you for the submittal.

Katherine Mrowka, Senior
Water Rights – Inland Streams Unit
P.O. Box 2000
Sacramento, CA 95814

916-341-5363