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January 31, 2012

Terri Edwards  
Bureau of Reclamation  
705 N Plaza St, Rm 320  
Carson City, NV 89701

City Manager  
City of Reno  
P.O. Box 1900  
Reno, NV 89505

Director, Water Resources  
Pyramid Lake Paiute Tribe  
P.O. Box 256  
Nixon, NV 89424

City Manager  
City of Sparks  
P.O. Box 857  
Sparks, NV 89432

County Manager  
Washoe County  
P.O. Box 11130  
Reno, NV 89520

RE: Annual Report on Truckee Meadows Water Authority's 2011 Conservation Activities Pursuant to the 1996 Water Conservation Agreement

Dear Terri, Andrew, John, Shaun and Katy:

This is TMWA's annual report on water conservation programs for 2011 which provides a breakdown of funds spent toward water conservation and a brief discussion of 2011 conservation efforts. TMWA, as successor in interest to the Water Conservation Agreement (WCA), is committed to spend approximately \$300,000 on the Water Consultant (Watcher) Program, education and distribution materials, and landscape irrigation reduction programs during 2011. The attached table identifies TMWA's various conservation activities and their level of expenditures in 2011 which are in excess of the required spending amount.

Due to the success of the water meter retrofit program, TMWA implemented a three-times-per week watering schedule in 2010. During 2011 the program continued without change: even addresses water Tuesdays, Thursdays and Saturdays while odd addresses water Wednesdays, Fridays and Sundays. Outdoor watering remained unpermitted on Mondays. The "no-watering" times of day—noon to 6:00 p.m. from Memorial Day through Labor Day—coincide with the hottest and windiest parts of our summer days.

During the second year of three-times-per-week watering, TMWA experienced fewer customer inquiries about Assigned-Day watering (compared to 2010 when the change was implemented). While it remains difficult to isolate the effects of the new watering schedule from the economic factors affecting the region, analysis indicates the new schedule is helping to reduce daily peaks. It has also enabled a slight downward trend in overall weekly use per service during the irrigation season.

*Truckee Meadows Water Authority is a not-for-profit, community-owned water utility, overseen by elected officials and citizen appointees from Reno, Sparks and Washoe County.*

In 2011, TMWA held eight public workshops for customers on the topics of irrigation start-up, setting the irrigation system for Assigned-Day watering, tree watering using drip systems, and winterizing irrigation systems. The workshops were well attended and will be offered again in 2012. TMWA also assisted Washoe County Parks and Recreation staff with their commonsense gardening workshop series at Rancho San Rafael Regional Park.

TMWA, in cooperation with the Northern Nevada Water Planning Commission (NNWPC) and the Western Regional Water Commission (WRWC), continued to fund its Water Usage Review Program which assists both residential and commercial customers with auditing their water use. While some of the education that takes place during a water usage review may address indoor water use (such as opportunities to increase the efficiency of a toilet or other water-using appliance), the majority of recommendations to customers involve outdoor water use during irrigation season. Settings on automatic sprinkler and drip irrigation systems provide the best opportunities for customers to reduce the amount of water they use.

More than 2,000 audits were completed in 2011 (see table below), approximately 60 percent of the total number of water usage reviews completed in 2010. The majority of the audits are performed during the summer months when customers are watering outdoors. The high volume of water usage reviews completed in 2010 is attributed to the transition to three-times-per-week watering.

	<u>Total</u>	<u>Commercial</u>	<u>Residential</u>
2011	2,044	206	1,838
2010	3,330	381	2,949
2009	2,675	300	2,375
2008	2,461	265	2,196
2007	2,025	221	1,804
2006	731	70	661
2005	894	123	771
2004	497	66	431
2003	444	42	402

Customer response to this program is extremely positive. Working with customers one-on-one at their homes and businesses where water use specialists can advise them of ways to better manage their on-site water use is highly effective. Of the total, 90 percent were residential audits, consistent with previous years. Also consistent in 2011, approximately 260 of the residential water usage reviews were performed for flat-rate customers.

TMWA completed a large water usage review in cooperation with the Reno Air National Guard located at Reno-Tahoe International Airport. In addition to assisting Air Guard facilities maintenance staff with a thorough fixture inventory and water audit, a report and recommendations for reducing water use at the 63-acre campus was provided to decision makers. The study assisted the Air Guard with data to meet a Department of Defense mandate to achieve conservation at the facility.

TMWA continued its education and outreach on water conservation to the broader community by sponsoring the Water-Efficient Landscape Awards program. Conducted in partnership with local nurseries, turf companies and a new 2011 sponsor, Reno News & Review, homeowners were recognized for designing landscape makeover plans that achieved conservation. TMWA hosted a very successful second annual Water-Efficient Landscapes Tour and Tree Care Workshop that commenced at the Hug High Garden (discussed below). Customers were able to tour beautiful water-efficient yards and discuss plants, maintenance, and design ideas with the landscapers and homeowners. The tour will be offered again in June 2012.

TMWA, in conjunction with the guidance of other agencies and professionals, continued to lead and facilitate the Truckee Meadows Community Forestry Coalition (TMCFC). The purpose of the TMCFC is to promote a sustainable community forest in and around the Truckee Meadows, recognizing the benefits of both public and private trees. The continued economic recession, which has further decimated the urban forestry and parks/recreation budgets at Reno, Sparks and Washoe County, has underscored the importance of regional cooperation to ensure trees are cared for so they can provide important conservation benefits.

In 2011, the TMCFC continued to fund its residential tree-evaluation program (modeled after TMWA's successful Water Usage Review Program) and continued to develop and promote its tree care website ([www.communityforestry.org](http://www.communityforestry.org)) with particular emphasis on best practices for homeowners including:

- installation of drip irrigation systems to efficiently and effectively irrigate trees,
- the importance of inorganic mulches around trees to maximize water efficiency, and
- turf removal under and around trees to ensure tree health and water efficiency.

In 2011, the Ask An Arborist forum at the TMCFC website grew substantially in popularity; residents of the Truckee Meadows can submit tree care questions and pictures using email to get helpful advice from certified arborists.

In 2011, TMWA completed installation of a 23,700 s.f. bioregional garden at Proctor Hug High School where turf had been previously installed on a sloped area. The garden includes 13,000 s.f. of Sierra Nevada native plants including an edible food forest, 5,200 s.f. of Great Basin native and drought-tolerant plants, and 5,500 s.f. of vegetable gardens. The entire landscape retrofit project area is now watered using water-efficient drip systems with conservation water budgets designed specifically for each bioregion of the garden. TMWA has established maintenance contracts with local landscape professionals and Urban Roots Garden Classrooms to ensure the student body and teachers at Hug High are able to successfully maintain the vegetable gardens over the long term as well as map classroom curriculum to garden. Chef Wayne Tuma leads the Culinary Program at Hug High School and has been particularly supportive of the project, integrating it into his class.

On May 26, TMWA and its partners at Hug High School held an open house to highlight the water-efficient bioregional garden which is more water efficient than turf by up to 90 percent in some areas. Elected officials and the media participated in a tour, listened to the partners speak about the project, and ate lunch prepared by Hug High culinary students using food items from the garden. TMWA considers the Hug High Garden a successful demonstration project that highlights the benefits of irrigating with drip systems and the diversity of food and plants that can be grown in our high-desert climate.

TMWA uses the internet for numerous outreach and educational efforts related to water conservation. In 2011, the Conservation section at [www.tmwa.com](http://www.tmwa.com) was refined and expanded. One of the most visited pages at the TMWA website is the water waste report form where residents can anonymously report water waste. Water conservation topics, especially those targeting water conservation and water-efficient landscapes, are regular content featured in TMWA's monthly *Quality. Delivered.* Newsletter, quarterly newsletters and on billing envelopes.

In 2011, TMWA continued to educate customers about our water sources, storage and supply. Research has shown that customers who understand the source of their water supply are more likely to conserve water. The Truckee River Flows and Storage site at [www.tmwastorage.com](http://www.tmwastorage.com) allows users to see river flows in real time (using US Geological Survey stream gage data), compare historic river flows and learn about storage levels in Donner Lake, Independence Lake, Prosser Creek Reservoir, Stampede Reservoir and Boca Reservoir. The site also incorporates the Lake Tahoe storage site which shows users the real-

time level of Tahoe as well as historic lake levels, and provides facts and figures about our water system's largest reservoir.

TMWA's interactive Water-Efficient Landscape Guide allows visitors to search and download information on climate-compatible landscape plants and practices to ensure the water-efficiency of yards. It provides landscape design templates, an interactive irrigation plan, tips on planting, soils, trees, and lawns, plus it gives detailed information on turf and plant maintenance. The guide has long been recognized throughout the community as a valuable resource for residents of the Truckee Meadows. Visit the site at [www.tmwalandscapguide.com](http://www.tmwalandscapguide.com).

TMWA has sponsored an annual poster contest where school kids develop slogans and pictures conveying how water is precious and the importance of using it responsibly. In 2011, children were encouraged to create artwork around the importance of conservation addressing the theme, "Water is a precious and limited resource. Save it today so we have it tomorrow." The winning entries are featured at the TMWA Academy website, [www.tmwaacademy.com](http://www.tmwaacademy.com), as well as reproduced and displayed as posters in local libraries.

TMWA's "How Do You Save?" website is an interactive experience with sound where visitors can post fun and interesting tips about how they use water responsibly. Visit the site at [www.howdoyousave.org](http://www.howdoyousave.org).

TMWA continues to be active in promoting, developing and implementing new programs to reduce water use consistent with the WCA. During winter months, we work proactively with the remaining flat rate customers in our service territory to ensure they are notified of above-average water use as it may indicate leaks. TMWA will continue to partner with Green Industry professionals and Homeowners Associations throughout the area to develop and implement Best Landscape Practices (BLPs) that achieve water efficiency. TMWA is an EPA WaterSense partner which further promotes conservation. We expect continued success and growing reductions in water use as a result of our programs and related efforts.

Sincerely,

Lora Rose Richards  
Administrator of Conservation & Community Education

cc:  
Mark Foree, TMWA General Manager  
John Erwin, Director of Natural Resources  
Kim Mazeres, Director of Customer Relations

**2011 ANNUAL EXPENDITURE REPORT  
WATER CONSERVATION PROGRAMS**

Under the terms of the July 18, 1996 Water Conservation Agreement among Truckee Meadows Water Authority (successor in interest to Sierra Pacific Power Company), Washoe County, Reno, Sparks, and Pyramid Lake Paiute Tribe, and approved by the United States Government, TMWA implements certain water conservation actions each year consistent with Article 4 of the agreement. The following actions with accompanying expenditures occurred in 2011:

**Water Saving Devices**

Devices including low-flow showerheads, hose timers,  
hose auto shut-off valves, faucet aerators, leak dye tabs  
and water flow bags \$ 6,245

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**TOTAL** **\$ 6,245**

**Conservation Personnel**

Responded to high bill and water waste inquiries  
5 permanent and 4 temporary employees \$ 336,275

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**TOTAL** **\$ 336,275**

**Education & Outreach**

Assigned-Day watering information, kids poster art contest, Landscape  
Awards & Tour, Water-efficient Landscape Guide, TMWA Academy,  
How Do You Save?, TMWA River Flows & Storage, community events  
such as Kids Free Fishing and Reno Earth Day Celebration \$ 83,428

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**TOTAL** **\$ 83,428**

**Landscape Efficiency**

Program planning, website maintenance, public education & outreach and  
arborist services in support of the Truckee Meadows Community Forestry  
Coalition and Hug High Garden project \$ 56,897

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**TOTAL** **\$ 56,897**

**GRAND TOTAL** **\$ 482,845**

*Note: This report supersedes the previous report under Bureau of Reclamation  
Contract #04-07-20-W1177 in accordance with Article 4.5.*

Distribution:  
Bureau of Reclamation  
City of Reno  
City of Sparks  
Pyramid Lake Paiute Tribe  
Truckee Meadows Water Authority  
Washoe County