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February 28, 2011

Terri Edwards
Bureau of Reclamation
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Carson City, NV 89701

Interim 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 TMWA's 2010 Conservation Activities Pursuant to the 1996 Water Conservation Agreement

Dear Terri, Sue, John, Shaun and Katy:

This is TMWA's annual report on water conservation programs for 2010 which provides a breakdown of funds spent toward water conservation and a brief discussion of 2010 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 2010. The attached table identifies TMWA's various conservation activities and their level of expenditures in 2010 which are well in excess of the required spending amount.

By the end of 2010, TMWA's water meter retrofit program had completed over 99% of the original 42,000 single-family-water services that required retrofitting with a meter when the retrofit program was started in 1995. Achieving this goal is a significant accomplishment for the region toward implementing the Negotiated Settlement (see Section 29 in the Preliminary Settlement Agreement) and as a result, TMWA currently is billing over 91% of all single-family-water services based on metered usage.

The success of the water meter retrofit program provided one of the biggest changes in 2010 which allowed TMWA's to move from twice-per-week watering to a three-times-per week watering schedule. Even addresses can water Tuesdays, Thursdays and Saturdays while odd addresses can water Wednesdays, Fridays and Sundays. Watering remained unpermitted on Mondays and the "no-watering" times of day were expanded from 1:00 p.m. to 5:00 p.m. to noon to 6:00 p.m. from Memorial Day through Labor Day.

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.

Customers responded favorably to the new watering schedule. Customer satisfaction surveys indicate 72% of customers were aware of and accepted the new watering schedule by the end of 2010. Although many customers were grateful for enhancing the flexibility of a third day to water, many remained on a twice-per-week watering regime. Numerous customers who embraced the new watering schedule reported they were able to conserve more water than under the previous schedule. It is difficult to isolate the effects of this change from the economic factors affecting the region, but tentative results indicate the new schedule is helping to reduce daily peaks experienced during a summer week as well as a slight downward trend in overall weekly use per service.

In order to ensure effective outreach, a direct mailer was sent to all customers and numerous and varied forums were used to promote the program changes. Free irrigation workshops were offered throughout the spring and summer to assist customers with the transition. In addition, Washoe County Department of Water Resources began promoting TMWA's three-times-per-week watering schedule to its customers making regional messaging concerning outdoor watering consistent.

TMWA, in cooperation with the Northern Nevada Water Planning Commission (NNWPC) and the Western Regional Water Commission (WRWC), continues to fund its water audit/usage review program which includes audits of residential as well as commercial services. A total of 3,330 audits were completed in 2010 (see table below), an increase of 24% over the number of audits conducted in 2009. Of the total, 88 percent were residential audits, consistent with previous years.

	<u>Total</u>	<u>Commercial</u>	<u>Residential</u>
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 continues to be extremely positive. Working with customers one-on-one at their homes and businesses where auditors can advise them of ways to better manage their on-site water use is highly effective. In 2010, 285 of the audits were performed for flat-rate customers. In 2009, 322 audits were performed for flat-rate customers.

TMWA sponsors an annual poster contest where children develop slogans and pictures conveying how they conserve water. In 2010, children were encouraged to create artwork around TMWA's modified Assigned Day Watering program by incorporating the slogan, "Responsible Water Use: It's Easy As 1-2-3." The winning entries were once again turned into bookmarks and distributed in cooperation with the Washoe County School District.

TMWA uses the World Wide Web for numerous outreach and education efforts related to water conservation. In 2010, the Conservation section at www.tmwa.com was updated and expanded. Water conservation topics are regular content in both TMWA's monthly Quality. Delivered. Newsletter and quarterly enewsletters.

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.

TMWA updated the content of TMWA Academy, its web-based educational service for Washoe County School District. The website includes lessons for all school grades which are comprehensive in nature, covering all different disciplines for water conservation. Visit the site at www.tmwaacademy.com.

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. In 2010, a major design update was implemented and a list of climate-appropriate trees and plants updated that are suitable to our high-desert region, was completed. The guide has long been recognized throughout the community as a valuable resource for residents of the Truckee Meadows. Visit the site at www.tmwalandscapeguide.com.

In 2010, 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 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 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 *NevadaHome* magazine, homeowners and professional contractors are recognized for designing beautiful and water-efficient landscapes. In 2010, TMWA enhanced the program by adding a tour of several of the previous Landscape Awards winners. Customers were able to tour beautiful and water-efficient yards, discussing plants, maintenance, and design ideas with the homeowners. The tour was a success and will be offered again in 2011.

Also in 2010, TMWA, in conjunction with other agencies and professionals, continued to lead 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. Trees provide substantial economic, environmental, and aesthetic benefits to the entire community. Tree care needs, especially watering requirements, are not obvious to the average resident. Arborists are concerned that growth in the region and conversion to a fully-metered water system has resulted in tree loss throughout the community.

The current economic recession, which has resulted in drastic cuts to the urban forestry and parks/recreation budgets at Reno, Sparks and Washoe County have underscored the importance of regional cooperation to ensure trees are cared for and continue to provide important conservation benefits. In 2010, the TMCFC continued its residential tree-evaluation program and continued to develop and promote its tree care website (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 ensures tree health and water efficiency.

In 2010, the TMCFC website was expanded to include an Ask An Arborist forum and the group hosted its second annual Backyard Tree Care Workshop to educate residents on practical hands-on things they can do to sustain our community's trees. In 2011, the Backyard Tree Care workshop will be combined with

the Landscape Awards Tour so participants get complete do-it-yourself landscape advice from experts in the field.

Also in 2010, TMWA partnered with Proctor R. Hug High School in Reno to convert 23,700 square feet of sprinkler-irrigated turf to a bioregional garden consisting of 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 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 the Urban Roots Garden Classrooms organization to ensure the student body and teachers at Hug High are able to successfully maintain the vegetable gardens over the long-term.

TMWA also partnered with the Reno Air National Guard and assisted their facilities maintenance staff with a thorough fixture inventory and water audit of the 63-acre campus located at the Reno-Tahoe International Airport.

TMWA continues to be active in promoting, developing and implementing new programs to reduce water use consistent with the WCA. During the winter, 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 also looking into establishing a partnership with EPA's WaterSense Program in 2011. 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

**2010 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 2010:

Water Saving Devices

Devices including toilet flappers, low-flow showerheads, hose timers, hose auto shut-off valves, leak dye tabs and water flow bags	\$ 6,095
TOTAL	\$ 6,095

Conservation Personnel

Responded to approximately 10,000 customers (high bill/waste inquiries) 5 permanent and 5 temporary employees	\$ 390,428
TOTAL	\$ 390,428

Education & Outreach

New 3-day Assigned-Day watering including direct mailer, responsible water use, kids poster art contest, Landscape Awards & Tour, Water-efficient Landscape Guide update including climate-compatible tree list, TMWA Academy, How Do You Save?, TMWA River Flows & Storage, Lawn Care Guide reprint	\$ 142,042
Earth Day sponsorship and other community events	\$ 7,678
TOTAL	\$ 149,720

Landscape Efficiency

Program planning, website maintenance, public education & outreach and arborist services in support of the Truckee Meadows Community Forestry Coalition	\$ 54,533
Hug High Garden Project design and installation	\$ 53,850
TOTAL	\$ 108,383

GRAND TOTAL **\$ 654,626**

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
Pyramid Lake Paiute Tribe
Washoe County
City of Reno
City of Sparks
Truckee Meadows Water Authority



TMWA's Conservation Programs

Lora Rose Richards, Administrator

Standing Advisory Committee, 5/3/2011

Conservation

- It's required
 - Nevada Revised Statutes (NRS)
 - TROA Water Conservation Agreement
 - Regional Water Management Plan
- It's the right thing to do
 - Stewardship
 - Saving for a rainy day
- Responsible water use
 - Planning & management
 - Pay for what you use
 - Don't waste it



Benefits of Conservation

- Influences customer bills/usage
- Delays investments and timing in new treatment capacity
- Provides drought protection for the community
- Benefits fish and wildlife
- Water-energy nexus
 - Energy is required to treat & distribute water
 - Water is required to generate energy
- Customer education & expectations
 - It's part of our mission to be the best customer-focused water purveyor

Types of Measures

- Public education
- System management
 - Fully-metered water system
 - Non-potable water service
 - Leak detection & system repairs
 - System pressure standards
 - Correcting unauthorized use
- Other measures
 - Tiered water rates
- Drought conditions



Programs

1. Water Usage Review Program
2. Workshops & events
3. Devices & giveaways
4. Assigned-day Watering
5. Water Watchers Program
6. Community Forestry Coalition
7. Water-efficient Landscape Guide
8. Landscape Awards & Tour
9. Landscape Retrofit Program
10. Programs for Kids & Schools
 - Annual Poster Art Contest
 - TMWA Academy website
 - Classroom presentations



Messaging & Communications

- Educational materials
- High-desert environment with recurring droughts
- Water system awareness

- Radio, print and television media
- World Wide Web
- Social Media
- Meeting with customers at their homes & businesses



truckee meadows
COMMUNITY
FORESTRY
COALITION

TMWA River Flows & Storage

TRUCKEE RIVER FLOWS & STORAGE

Current River Flow

These measurements in cubic feet per second are in real time!

Farad Flows: **983 cu ft/s**
Reno Flows: **778 cu ft/s**

The Water System

The Truckee River water system, the major source of our water supply, delivers some of the best water to the Truckee Meadows region. Click here to learn more about the lakes and storage reservoirs that make up this system.

[WATCH THE VIDEO](#)

A Look at History

Click on the links for a comparison of river flows and reservoir storage at five points in time, including the 1997 flood and 1994 drought.

[1](#) [2](#) [3](#) [4](#) [5](#)

NEED HELP?