

Los Alamos County Commercial Audit Summary Report
NM Office of the State Engineer/Bureau of Reclamation Grant No. 07-FG-40-2618
Water Conservation Training Audits and Retrofits

The New Mexico Office of the State Engineer (NMOSE) entered into the Bureau of Reclamation grant agreement #07-FG-40-2618, *Water Conservation Training Audits and Retrofits* in July 2007. In February 2008, the NMOSE pilot tested audit materials and methodology in Gallup, New Mexico. At that time it was determined that it would be beneficial to determine if the materials and methodology could stand alone, without aid from NMOSE or hired contractors. NMOSE solicited the assistance of the Los Alamos County, Department of Public Utilities.

In March 2008, Los Alamos County, Department of Public Utilities (County) agreed to test the NMOSE materials and install the pre-rinse spray nozzles while conducting water audits at food service establishments. During the summer of 2008, the County distributed invitations to local establishments to participate in the program. However, County personnel had to back track to obtain legal permission from the County to partner with the state and federal agencies.

Once the legal paper work was secured, the County began analysis of utility usage data. At this time, the utility decided to combine the water audits with energy audits. The County sells water, natural gas and electricity and determined this would be the most beneficial use of the staff time. They also determined that an audit of County owned facilities that sold food would be the best place to start.

To compliment the audits, the County chose to retrofit or replace various items as needed. They obtained the pre-rinse spray nozzles from the NMOSE that were part of the Bureau of Reclamation grant. In addition, they purchased faucet aerators, toilet flappers, toilet dye tablets, and toilet displacement bags. These items will also be used in the County's residential programs. The County is contributing \$*** (**% of their total equipment costs) to the restaurant audit program.

The first three audits were completed in March 2009 on County owned facilities: Los Alamos County Ice Rink, Fuller Lodge, and Los Alamos County Golf Course. Audits were provided for the food service sections only. Both the ice rink and the golf course prepared food on-site at snack type counters. Fuller Lodge is an event center with a full kitchen. Two additional audits were completed around the same time at the request of each establishment's ownership: First United Methodist Church and Bandelier National Monument. The First United Methodist Church has three kitchens that cook for an on-site school/nursery. Bandelier has a high volume lunch counter that caters to staff and visitors.

County staff used an existing form for their on-site audit (Appendix A) and followed the on-site visit with a phone call to obtain the addition information requested on the NMOSE audit form. The County on-site form was left with the participant as a record of what had been installed or what is recommended. Where applicable, the on-site audit

included installation of the pre-rinse spray nozzle (the church received three, all others received one), faucet aerators, toilet displacement bags, and toilet flappers. Dye tablets were also used to determine if the tank type toilets were leaking.

The County placed a follow-up phone call one to three months after the audit was completed. The phone call included a review of pre and post audit data, which was sent to the participating establishment (see example Attachment B). In each case, immediate decline in water use was noted. Long term savings are not known at this time.

The county has plans to continue the program into the summer of 2009. They would like to audit the remaining 26 restaurants in the County, and prepare and distribute informational posters for placement in public restrooms and commercial kitchens. The summer 2009 program will include on-site audits, phone surveys and tracking comments. The water audits will also promote the Environmental Protection Agency's two conservation programs, WaterSense and Energy Star. The County will provide a cost benefit analysis for each establishment, encouraging them to focus on the easiest fixes first.

The County's Water and Energy Conservation Coordinator was primarily responsible for all data analysis, on-site audits and follow up calls. To date this accounts for approximately 35 in-kind hours. Assistance was provided by administrative staff for pulling data, to date this accounts for approximately 4 hours. For the summer of 2009, the County staff anticipates at least 40 to 50 hours additional time for the remaining audits and promotional material. This includes: a second round of invitation letters, pre and post data analysis, on-site audits, follow up phone calls and poster development and delivery.

In a debriefing conversation with NMOSE, the County staff cautioned that it is essential to have a realistic plan for implementation of an audit program. The plan also needs to be vetted with all relevant parties. In their case, the legal problems interfered with a marketing plan that was already put in place.

General:

Lot size _____ x _____ = _____ Sq. Ft. Landscape Area: _____ Sq. Ft. House Size: _____ Sq. Ft.

Provided Soil Probe **YES** **NO** Turf Area: _____ Sq. Ft. Static Pressure: _____ p.s.i.

Irrigation Information:

Irrigation Devices:

Pop-up/spay # of zones

Rotor/impact

Micro spray

Drip/bubbler

Mix w/ drip bubbler

Mix w/ drip bubbler

Primary Irrigation Area:

Backyard Front yard

Side yard 1 Side yard 2

Plants, Soils, Root Types:

Turf Cool Warm Mix

and/or Trees Shrubs

 Natural Garden

 Xeri Mix

Soil Type Clay Sandy Rocky

Root Depth

Normal

Shallow

Irrigation Leaks:

Misting System

Irrigation System Audit:

Area: Sq. Ft.

Station #:

Controller Type:

None

Manual

Separate Cycle

Consecutive Cycle

Water Supply:

City

Well

Mulch:

no

light

medium

heavy

mixed

Customer **Surveyor**

July Watering Schedule

	Turf	Non-Turf
# days per week:	<input type="text"/>	<input type="text"/>
# minutes per day:	<input type="text"/>	<input type="text"/>
# of cycles:	<input type="text"/>	<input type="text"/>

Schedule Recommendations:

	Turf	Non-Turf
# days per week:	<input type="text"/>	<input type="text"/>
# minutes per day:	<input type="text"/>	<input type="text"/>
# of cycles:	<input type="text"/>	<input type="text"/>

Current: Precipitation Rate in/hr Flow Rate gpm

Lot Map:

Summary of Recommendations:

Suggested to install ultra low flow toilet

Suggested to install high efficiency clothes washer

Suggested to fix irrigation system

Suggested to reduce watering schedule

Other (explain) _____

Surveyor Notes:
