CHURCHILL COUNTY
Water Conservation Plan

OVERVIEW

On 4 August 2006, Churchill County became responsible for taking over the operation, maintenance, and administration of the Pine Grove Water System which had been County owned, but operated and maintained by another entity since 1994. In March 2007 it is anticipated that the construction of the first Phase of expansion of the County owned and operated municipal system, that includes water treatment and Arsenic removal and infrastructure replacement for the prior Pine Grove and Country Club Estates water systems, will be fully operational. At commencement of the operation of this system expansion there will be approximately 350 accounts including 2 mobile home parks and several commercial accounts. Churchill County has contracted with SPB Utilities to operate the system and manage billing.

Physical Setting

Churchill County is located approximately 63 mile east of Reno and 30 miles east of the City of Fernley. Churchill County lies within the Carson Desert Hydrographic Basin, Basin 101.

Climate

Churchill County experiences a high desert climate with hot summers, cold winters, and an average annual precipitation of 2 to 3 inches. Average temperatures: summer 85 degrees; winter 39 degrees; and an average diurnal temperature variation of about 35 degrees.

Water Sources and Allotment:

Churchill County has recently completed a Water Resources Plan update that identifies all potential water sources and water rights owned by Churchill County. Upon approval by the Board of County Commissioners the plan will be available at www.churchillcounty.org . Churchill County currently owns 4,170 afa of underground water rights. The total duty of underground water rights transferred to County Well No 1 ("Sand Creek") is 1,581.17 afa. (Permits 72404 and 60109). Churchill County requires development to dedicate underground water rights to the County as a condition of approval of any subdivision. Churchill County also owns a significant quantity of surface water rights and continues to accumulate surface water rights for recharge and potential future surface water treatment through various programs.

Water System

The first phase of the Churchill County water system provides service to a limited number of subdivisions lying west of the Fallon City limits and east of Gummow Drive (see attached map). Planning for the second phase of expansion is under way and will incorporate a number of additional wells, treatment facilities and storage tanks. Water service will be provided to a number of additional subdivisions north of Rice Road.

The primary production well for the County water system is the "Sand Creek" well drilled to approximately 500 feet in 2005 and capable of pumping between 750 and 1,000 gpm. The existing Pine Grove wells will l initially act as the emergency back up wells to the system until a second, new production well is drilled in 2007. The Churchill County water system meets all

water quality, fire flow and storage standards. An on site treatment facility treats for Manganese and Arsenic and the water storage tank provides 1,000,000 gallon capacity. All services are metered and a tiered meter rate goes into effect when the expansion comes on line in March 2007 to encourage conservation.

Conservation

Although the County has only recently expanded its water system to include treatment several standards and regulations within the County promote active and prudent water conservation including building codes that require low flow fixtures and a landscape ordinance that encourages use of desert tolerant plants and promotes xeriscaping. Water conservation will continue to be promoted through the following codes, and programs:

- 100% metering of connections,
- A tiered rate structure to promote water conservation,
- County Building Code mandated low-flow fixtures,
- Reuse of effluent from County Waste Water Treatment Plants. Reuse agreements are in place or in work for the local golf course, agricultural application and open space/wetlands.
- Support of water conservation education through
    - Funding of the Churchill County Museum's water conservation exhibits,
    - Support of the Newlands Water Protection Association,
    - Billing inserts promoting conservation,
    - Usage history shown on bills,
    - Public school outreach,
    - Private organization and clubs outreach, such as with the Chamber of Commerce, Future Farmer's of America, Rotary and Cooperative Extension
    - Efficient outdoor water use programs through NRCS and others
- Continued support of TCID and agricultural efficiency programs, and
- Periodic review of conservation program effectiveness

Since Churchill County system expansion is providing all new infrastructure and all connections will be metered, any system loss will be minimal and readily apparent by comparing production volume with end user quantities. Additionally, customer and system usage history will be available over time so that identification of leaks or unusual use can be identified. Meters will be tested periodically to ensure accuracy and the County will maintain water pumpage and consumption records for the water system.

Water resource planning and conservation

Effective water resources protection and planning is key to the long-term sustainability of our community. To this end the County has implemented several measures, including adoption of a Water Resource Protection Policy, to ensure continued recharge to the aquifers and protection of vital resources. The County has worked closely with Carson Water Subconsevancy District, USGS, the State Engineer's office and legislators in support of a statewide water inventory, water table monitoring, and a Basin 101 pumping inventory. In addition, Churchill County has joined with USGS, USFWS, CWSD and TCID to sponsor a study of water usage in the Carson

River basin above Lahontan Reservoir. In the mean time the county's requirement for water dedication to match any new pumping ensures conservation of groundwater resources. These measures will be reviewed and evaluated regularly to ensure long-term sustainability.

Water Shortage Contingency Plan

98% of Basin 101 recharge comes from infiltration of waters from the Carson and Truckee Rivers. Therefore sustainment of their flows and of existing decrees and agreements is vital to water storage, recharge and contingency planning in Churchill County.

Newlands Project irrigation provides the means for surface water recharge to the Lahonton Valley and Basin 101. Land and water conservation programs and support for agriculture, wetlands and improved agricultural practices creates and sustains recharge and storage.

Existing 1.12 and 2.02 acre-foot of ground water permit/surface water permit dedication requirements ensure an appropriate drought reserve or contingency buffer. Water authorities or systems which reduce dedication requirements, to utilize all recharge and maximize numbers of customers, risk exceeding safe yield and retain insufficient ground water drought reserve. Churchill County believes systems without appropriate required reserves will fail under long-term drought conditions. Under Churchill County policy, ground water right owners and persons wishing to subdivide and create new wells have a responsibility to contribute to maintaining ground water levels and peak pumping and drought reserve.

Churchill County policy requires maintenance/preservation of agriculture and Newlands Project irrigation, as-well-as wetlands and reservoirs as "soft" areas of water use which may be altered or discontinued in prolonged drought in order to temporarily divert waters to "hard" M&I requirements through leasing or other means. Churchill County recognizes surface water rights specifically addressed by litigation (Agreements and Decrees) and legislation (PL 101-618) as "hard" requirements.

Identified surface water induction and injection locations as-well-as a planned network of dispersed wells, treatment facilities and large storage tanks, with a fully metered system create opportunity and options for implementing mandatory watering restrictions or adjusting the tiered rates during time of prolonged drought.

Water resources in nearby Dixie Valley have been applied for and incorporated into future plans. These waters could be accessed and imported via various methods if pending shortages were forecast. Dixie Valley has been identified as a critical component of Churchill County's future growth and future drought contingency planning. As such, Churchill County has submitted applications for all identified ground waters in Dixie Valley and is working with Navy, BLM, USFWS and others to protect this valuable resource.

Implementation of all aspects of this plan is already underway or complete. This is intended to be a living plan and document which will evolve as time progresses and as new data and knowledge become available.

Public Notice

As required by NRS 540.131, the Conservation Plan was presented to the Board of County Commissioners at their February 15, 2007 meeting. Users were notified of the meeting and provided a copy of the Plan. The Plan was made available to the public for inspection and comment on the County web page, in County offices and at the County Library. During that time, no written comments were received**.**

The approved Water Conservation Plan will be available for public inspection during office hours at the County Administration offices at 155 N Taylor South, Suite 194 and 110, Fallon NV 89406. The Plan will also be posted on the Churchill County web page www.churchillcounty.org to be viewed at any time.