Chapter 7

Legal and Regulatory Constraints on Regional Water Planning

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Purpose and Scope

In developing this Regional Water Plan, it is necessary to recognize the constraints within which the plan must operate. Resource limitations are identified in Chapter 1. This chapter addresses legal, regulatory, and institutional constraints; environmental values; and policies of authorities within and outside the Regional Water Planning Commission (RWPC). This chapter covers Safe Drinking Water Act standards, Clean Water Act requirements, Tribal policies, Endangered Species Act, National Environmental Policy Act, the Cui-ui Recovery Plan, State Water Law, Orr Ditch Decree and Truckee River Agreement, Negotiated Settlement and its associated TROA, policies of the Truckee Meadows Regional Plan, and provisions of NRS 540A, the enabling legislation for this plan.

Summary of Findings

Although many constraints apply to the water issues facing the Regional Water Plan, none are expected to be "fatal flaws" to meeting the region's 20-year needs. Some constraints may add costs or limit alternatives for the region. Topics from this chapter that the RWPC has incorporated into the plan, either through policy adoption (Chapter 1) or it's Action Plan (Chapter 11) include:

- Arsenic standards for drinking water
- Revisions to the Cui-ui Recovery Plan and implementation of the Lahontan Cutthroat Trout Management Strategy
- Implementation of effluent reuse

7.1 Federal Constraints

Federal laws cover many topics that impact the Regional Water Plan. During the time period available to develop this plan, it was assumed by the RWPC that federal regulations would not be changed but would be observed as constraints to planning. Only those aspects of federal law that directly affect the plan are described in the following sections.

7.1.1 Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974, to protect public health by regulating the nation's public drinking water supply. At that time, the Act focused primarily on treatment as the means of providing safe drinking water. The SDWA was amended in 1986, and 1996, and now requires various actions to protect drinking water and its sources, i.e. rivers, lakes, reservoirs, springs, and groundwater wells. The SDWA does not regulate private wells that serve fewer than 25 individuals.

The SDWA also gives the EPA the authority to control underground injection to protect underground drinking water sources. The EPA's Underground Injection Control (UIC) regulations, published in 1980, set minimum standards that state programs must meet in order to receive primary enforcement responsibility (primacy) of the UIC program. NDEP is the lead agency in administering the State UIC program, and has authority under NRS 445A to regulate injection wells.

The Safe Drinking Water Act was re-authorized in 1986 to strengthen the process of setting regulations and to increase the rate at which the EPA was to set drinking water standards. Since the 1986 Amendments the number of regulated contaminants has increased to a total of

87 constituents (see Appendix C). The Surface Water Treatment Rule, promulgated in 1989, was one of the new regulations that significantly affected the use of surface water supplies for M&I purposes. The rule requires filtration of surface water supplies and groundwater under the influence of surface water. The SDWA was amended again in 1996, to include two rules that further affect the use of surface water, the Enhanced Surface Water Treatment Rule and the Disinfectants/Disinfection By-Product Rule. The EPA is also proposing the Groundwater Rule (GWR), which specifies the appropriate use of disinfection in groundwater and addresses other components of groundwater systems to assure public health protection.

The Enhanced Surface Water Treatment Rule imposes treatment requirements for the removal and inactivation of giardia, cryptosporidium and viruses. Improvements have been made at TMWA's treatment plants to meet this regulation. The Disinfectants/Disinfection By-Product Rule addresses several complex and interrelated issues. The rule considers risk trade-offs between microbial diseases versus possible adverse health effects from disinfection by-products. Proposed in two phases, the rule applies to conventional water treatment plants and establishes treatment techniques to remove disinfection by-product precursors. TMWA's treatment plants may not meet the more stringent Phase 2 standards without process improvements based on existing water quality data.

The GWR establishes multiple barriers to protect against bacteria and viruses in drinking water sources, and will establish a targeted strategy to identify groundwater systems at high risk for contamination. The rule was proposed in 2000, with a final rule to be implemented in 2005, or 2006. The proposed GWR will specify when corrective action (including disinfection) is required to protect consumers who receive water from groundwater systems with bacteria and viruses. Key components of the draft GWR include sanitary surveys, hydrogeologic assessments, source water monitoring, corrective actions, and routine compliance monitoring.

In addition to the above proposed rules, new or proposed standards may impact groundwater supplies. Two naturally occurring constituents of concern to the region are radon and arsenic. The proposed radon standard is 300 pCi/l, which would require treatment at the majority of wells throughout the region. Treatment would involve equipping wellheads with packed tower aeration systems. Under the amended SDWA, the EPA must develop an alternative radon standard based on average concentration of radon in air for states or public water systems, which have a multimedia radon mitigation program. The proposed alternative standard is 4,000 pCi/l, thus possibly eliminating the need to treat radon at wells. The Nevada State Health Division is taking the lead towards the establishment of a "multi-media mitigation" program acceptable to the EPA. The EPA anticipates promulgation of the new radon standards in 2005.

In 2001, the arsenic standard was changed from 0.050 mg/l to 0.010 mg/l. Public water systems have until January 2006, to comply with the new standard. This constituent is found in various concentrations throughout the region. Compliance with the new standard may require treatment of groundwater or blending with other sources depending on the water quality of each well. TMWA reports that 11 of its 30 wells will be affected. Water from most of these wells is, or can be, piped to a treatment facility. The Glendale Water Treatment Plant currently treats water from three of TMWA's wells, which exceed the existing arsenic standard. WCDWR anticipates that 9 County wells and 2 STMGID wells will be affected. Water purveyors are currently evaluating strategies to comply with the 0.01 mg/l arsenic standard. In addition to blending and treatment at existing water treatment facilities, alternatives may include aquifer storage and recovery (ASR) and additional treatment facilities.

In addition to naturally occurring constituents, urbanization has introduced pollutants, such as solvents and fuel oils, into the Central Truckee Meadows aquifer. Drinking water standards exist for a variety of these pollutants (Appendix C). Of primary significance is PCE, an industrial solvent that is commonly used in the dry cleaning industry, automobile repair and servicing industry, by fuel oil distributors, and automobile paint shops. The drinking water standard for PCE is 0.005 mg/l. State laws that address PCE remediation are discussed under State Constraints below, and in Chapter 2.

7.1.2 Clean Water Act

The Clean Water Act is the primary legal authority for surface water pollution control programs and regulations. The objective of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters". One goal of the Act is to eliminate the discharge of pollutants to navigable waters. The key components of the Act that directly affect this planning effort are the National Pollutant Discharge Elimination System (NPDES), Section 208 and Section 404. The NPDES program, administered by NDEP, under NRS 445A and EPA-delegated authority, regulates the discharge of pollutants to "waters of the United States," including lakes, rivers, creeks, and some dry washes and playas.

Section 208, also administered by NDEP, requires water quality management plans (208 plans) for areas having substantial water quality control problems. Section 404, administered by the US Army Corps of Engineers (Corps), originally regulated the discharge of dredged or fill materials to navigable water; this authority has been extended to the protection of wetlands from encroachment.

The NPDES permit for TMWRF regulates its discharges to the Truckee River. The phosphorus, nitrogen, and TDS waste load allocations (WLAs) - 134 pounds per day, 500 pounds per day and 120,168 pounds per day respectively under the NPDES permit - are constraints upon this planning effort. The phosphorus and nitrogen WLAs may change over time if flow augmentation is shown to increase the assimilative capacity of the Truckee River. Without an increase in the nitrogen WLA or implementing reuse for all incremental TMWRF sewer flows after 2007, there is a 50 percent probability of violating the nitrogen WLA. The TDS WLA is a fixed cap that may not be exceeded. The result of this TDS constraint is the need for TDS treatment or non-river discharge of a portion of the effluent. To the extent possible, if non-point sources of these constituents can be reduced, there may be a potential for some adjustment to waste load allocations from the TMWRF through exchanges of discharge allocation. To address the WLA limitation on TMWRF effluent discharge to the Truckee River, effluent reuse and pollutant trading will be necessary.

Implementation of the Regional Water Plan may require periodic amendment of the 208 Water Quality Management Plan in coordination with the three-year review and update process. The Truckee Meadows Regional Planning Governing Board is the state-designated 208 agency for the region. 208 Plan amendments must be coordinated with, and approved by that board.

The NPDES permitting system now applies to storm water runoff from industrial activities, including construction sites where there is one acre or more of land disturbance. The federal regulations require preventing storm water pollution to the maximum extent practicable through the use of Best Management Practices (BMPs). Wastewater treatment facilities are on the list of industrial activities that require an NPDES storm water discharge permit and implementation

of BMPs to prevent the pollution of storm water. Illicit discharges to the municipal storm water systems are also prohibited.

7.1.3 Endangered Species Act

Discussion of the Endangered Species Act relative to the Regional Water Plan will be limited to the Cui-ui *(Chasmistes cujus),* Recovery Plan and the Lahontan Cutthroat Trout *(Oncorhynchus clarki henshawi)* Recovery Plan. Reestablishment of the cutthroat trout fishery in the Truckee River is a goal of the Pyramid Lake Pauite Tribe (Tribe) and the US Fish and Wildlife Service (USFWS). Other listed plants and animals exist in the planning area, but are not considered as major constraints to our planning effort.

Cui-ui Recovery Plan

The listing of the cui-ui *(Chasmistes cujus),* a lake suckerfish, in 1967 as an endangered species is the major constraint under the Endangered Species Act that the regional water planning effort will have to recognize. The second revision of the Cui-ui Recovery Plan (1991) specifically develops strategies to delist the species by 2012. The major component of this strategy is to increase annual flows to Pyramid Lake by 100,000 af to raise the lake level to 3,810 feet. The current average annual inflow to the lake is 363,000 af based on the 1958 to 1993 record at the Nixon gage.

The strategy is to purchase, on average, 5,000 af of Truckee River water rights per year over a 20-year time frame with the assumption this strategy will delist the species. Delisting is defined as demonstrating the species has a probability of 0.95 of persisting 200 years. Reducing the listing from endangered to threatened corresponds to an increase in annual Truckee River flows to Pyramid Lake by 60,000 af/yr at a minimum rate of 5,000 af/yr. Reclassification to "threatened" is defined as demonstrating the species has a probability of 0.85 of persisting for 200 years.

To enhance and/or stabilize the existing population during the 20-year time frame of the recovery plan, stored water in Stampede Reservoir is used to enhance spawning opportunities for cui-ui. These releases are based on maintaining specific water temperatures in the lower Truckee River. Decisions on whether to release water for spawning, when, and how much are jointly decided each January by representatives from Bureau of Reclamation, the Tribe, and USFWS. Decisions are based on expected natural hydrological flow, water in storage, and spawning frequency (years between successful spawning runs). These decisions have not been without controversy, especially during drought years, but for purposes of this plan, it has been assumed that these strategies will continue.

Minimum attraction volume of 60,000 af is required from January through April when delta passage is available, and 176,000 af with fishway access alone (Buchanan and Burge, 1988). The minimum managed spawning flows between May and June is set at 1,000 cubic feet per second (cfs) or 60,000 af per month. These flows maintain a maximum average daily water temperature of 17.2 degrees Centigrade at Nixon, assuming normal air temperatures. June flows are managed to equal May flows but to not exceed 2,500 cfs. High flows can kill eggs and yolk-sac larvae (Buchanan and Strekal, 1988). If spawning migration peaks later (May instead of April) July flows that average 520 cfs would be needed (Buchanan and Strekal, 1988).

Recent improvement in riparian canopy and channel geometry could possibly reduce the peak of these minimum flow requirements due to assumed reduction in water temperature associated

with improved riparian/channel conditions. The plan also identifies the need to improve water quality in the lower river and Pyramid Lake. Riparian/channel improvements will involve the regulation of summer flows to a greater extent than they have been regulated.

The RWPC recognizes that the strategies and ongoing reservoir management dictated by the Cui-ui Recovery Plan, and ultimately by the Endangered Species Act, are constraints to water supply and water quality issues.

Associated with the Cui-ui Recovery Plan and a component of Public Law (PL) 101-618 are the restoration activities on the lower Truckee River, specifically the river within the boundaries of the Pyramid Lake Paiute Reservation. An initial Corps reconnaissance study has been accepted by the Tribe and will move next into a feasibility study for the same reach of river. Activities ongoing with these studies and previously released waters under the Cui-ui Recovery Plan have improved riparian conditions along the lower Truckee River as noted above.

The initial report suggests river corridor management (restricting grazing and agricultural activities within the defined corridor) and also suggests several structural improvements to enhance fish passage at Marble Bluff, Numana, and Derby Dams. The major component of the plan is to increase flows to Pyramid Lake by 75,000 af/yr until the lake elevation is raised to the base of Marble Bluff Dam. This is projected to 20 years. At this time, implementation and funding for this initial report have not been identified and do not represent an immediate constraint to the water planning effort but could have future impacts.

Lahontan Cutthroat Trout Recovery Plan and Short-Term Action Plan

The Lahontan cutthroat trout (LCT) was listed as an endangered species in 1970. In 1975 the LCT was reclassified as threatened to facilitate management and to allow for regulated angling. In 1995, the USFWS released its recovery plan for LCT, encompassing six river basins within LCT historic range, including the Truckee River Basin. The Lahontan Cutthroat Trout Recovery Plan (1995) identified the need to develop ecosystem plans for the Truckee and Walker River Basins. The objective for recovery of LCT, as stated in the 1995 Recovery Plan, is to delist the LCT from the List of Threatened and Endangered Wildlife and Plants. The USFWS coordinated an assessment of watershed and ecosystem conditions in the Truckee River system, including Pyramid Lake. This action has resulted in the development of restoration strategies and short-term actions to improve ecosystem function and facilitate the recovery of the threatened LCT.

To adequately address the complexity of issues surrounding recovery of LCT, the USFWS determined that basin-specific interagency and interdisciplinary teams, as well as public stakeholder participation, would be needed for developing specific technical actions. In 1999, the USFWS organized a Management Oversight Group (MOG) and the Truckee River Basin Recovery Implementation Team (TRIT) to develop technical recommendations for the implementation of LCT restoration and recovery efforts in the Truckee River Basin. Public stakeholder involvement began in 2000. The TRIT recognizes that the federally endangered cui-ui, found only in the Pyramid Lake and lower Truckee River, is a significant component of the ecosystem. The TRIT developed this short-term strategy for LCT considering the recovery needs for cui-ui. The strategy proposed in this document to restore and recover LCT, will improve ecosystem connectivity and function and will benefit cui-ui.

Members of the TRIT have area-specific and regional technical experience associated with fisheries biology, geomorphology, hydrology, restoration ecology, population viability analysis and genetics. The TRIT developed short-term actions they believe are necessary to understand

critical lacustrine and fluvial LCT life history requirements and address threats to the species long-term persistence.

While the short-term actions were being formulated, they were twice presented to public stakeholders. Several issues were identified by the public as high priorities or critically important to address: economic impacts to local communities, fish management issues, recreational fishery impacts, habitat restoration; in-stream flow requirements for fish and recreation, water management in the Truckee River system, land management issues along the riparian zone, water quality conditions in the Truckee River system, and the genetic basis for LCT recovery. Feedback and recommendations from the public have been incorporated into the design of short-term actions. The MOG has given its preliminary approval, predicated on periodic review as specified within the short-term action plan and the implementation of an Adaptive Management Program.

The recovery of LCT will be a long-term effort and will require the coordination of the states, federal government, Tribes and the public. Priority will be given to collaborative, willing partnerships to maximize the potential for recovery and to avoid adverse impacts to existing recreation and ecological resources. This initial short-term strategy is focused on gathering information about habitat needs and limitations and initiating or completing demonstration projects and scientifically valid research that will further our collective understanding of the opportunities for restoring a viable lacustrine population in Pyramid Lake and other lake systems within the Truckee River Basin.

The TRIT will meet biannually or quarterly to develop annual work plans, establish project leads, and summarize project updates and completed research findings for MOG review and to feed into the adaptive management approach for refining future projects and priorities. Consistent with the commitment, the plan will be updated or revised as necessary under the principles of adaptive management. The “final” plan will be updated on a five-year basis as tasks are accomplished, or revised as environmental conditions change, as additional information becomes available, or as new tasks are initiated. The “final” version will remain a working document and subject to change as the short-term actions are implemented and new information becomes available.

7.1.4 National Environmental Policy Act (NEPA)

The National Environmental Policy Act is not, in itself, a direct constraint to the consideration and inclusion of alternatives in the plan. NEPA is a procedural law that requires federal decision-making to be open to public involvement and scrutiny. It requires the federal government to make informed decisions and does not prohibit decisions that may result in adverse impacts. It is strictly a process of impact disclosure for the federal decision-makers. The primary impacts of NEPA on this planning process relate to the substantial time and expense required to obtain any necessary federal permits. NEPA is generally not an impediment to implementing an alternative, unless the NEPA process discloses an adverse impact to a resource that is protected under another federal law, such as the Endangered Species Act.

7.1.5 Federal Flood Control Regulations

Flood protection for the Reno/Sparks metropolitan area and surrounding Washoe County is provided by two mechanisms: (1) flood plain management regulations and (2) flood control projects. Both of these mechanisms are influenced by federal regulations.

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 offer subsidized flood insurance and flood disaster protection in return for participating communities' implementation of flood plain management regulations as set forth in the National Flood Insurance Program.

The Cities of Reno and Sparks and Washoe County have been participants in the National Flood Insurance Program since the mid 1970s. Each jurisdiction has adopted Flood Hazard Reduction Ordinances that establish guidelines and requirements for the development of property within areas determined to be subject to flood damage.

In general, in all flood hazard areas (basically defined as the flooded area inundated by the 100-year flood to 1 foot in depth) and limited flooding areas (basically defined as the area inundated by the 500-year flood or the 100-year flood to less than 1 foot in depth), the ordinances require that the top of the lowest floors of residential buildings be elevated to 1 foot or more above the expected depth of flooding. Non-residential structures shall be flood-proofed to the same depth as stated above. The ordinances also prohibit development in a floodway. Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing water surface elevation more than 1 foot.

Detailed scientific and engineering studies are performed by the Federal Emergency Management Agency (FEMA) to identify the flood hazard areas and limited flooding areas. These studies are used by FEMA to prepare Flood Insurance Rate Maps (FIRMs) that are adopted and incorporated by reference into the Flood Hazard Reduction Ordinances administered by each jurisdiction. The initial FIRMs for Washoe County were completed in 1984. Annually, the community meets with FEMA to discuss the need for new studies, or restudies. These new studies or restudies are used to revise the 1984 maps. The current FEMA maps are updated through September 1994 with the exception of some tributary maps, such as Galena, Whites and Thomas Creeks, which were revised and reissued in 2001. The Public Works Departments of Reno and Sparks and the Washoe County Department of Community Development maintain on file the current FIRMs for the communities.

Federal flood control projects are generally proposed and constructed under Congressional authority and assigned for implementation to various federal agencies. The US Department of Agriculture, Natural Resources Conservation Service (NRCS), under the authority of the Watershed Protection and Flood Prevention Act, designed and constructed four flood detention facilities in Northwest Reno. The City of Reno's responsibility was to provide lands, easements, right-of-way, and operation and maintenance of the facilities.

The US Department of the Interior, Bureau of Reclamation, under authorization of the Truckee River Storage Project Act and the Washoe Project Act, completed construction of Boca Reservoir in 1938, Prosser Creek Reservoir in 1963, and Stampede Reservoir in 1969. The Corps, under authorization of the Flood Control Act of 1954, improved the bank-full capacity of the Truckee River channel to 7,000 cfs from the Glendale Bridge to Vista including removal of the Vista Reefs and removed obstructions downstream from the Truckee Meadows to Pyramid Lake. This project also improved the capacity of the river from the California state line to the Glendale Bridge to 14,000 cfs. This work was completed in 1963. Removal of the Vista Reefs resulted in major flooding, bank erosion, and loss of fisheries and wildlife habitat downstream from Vista.

Under the Flood Control Act of 1962, the Corps designed and constructed the Martis Creek Reservoir, which was completed in 1972. The Martis Creek project's operation and maintenance manual calls for maintaining the channel from the California state line to the Glendale Bridge at a capacity of 14,000 cfs. The Nevada State Engineer is responsibile for maintaining the capacity of 14,000 cfs from the state line to the Glendale Bridge. Reno, Sparks, Washoe County, Storey County and the Carson-Truckee Water Conservancy District are responsible for maintaining the 6,000 cfs capacity from the Glendale Bridge to the Wadsworth Bridge. The Tribe is responsible for maintaining this capacity from the Wadsworth Bridge to Pyramid Lake. The river gages along the Truckee River belong to the USGS. The USGS maintains their gages to monitor the flow of the river with cost participation from entities such as the City of Reno, Washoe County, TCID and the Federal Water Master.

In 1971, the Corps completed a flood control management plan for the Truckee River reservoirs. Stampede, Boca, Prosser Creek, and Martis Creek Reservoirs have 65,000 af of flood control space reserved from November to April each year. The operation of the reservoirs for flood control is to be coordinated to limit the flow in the Truckee River at Reno to a maximum of 6,000 cfs. The Corps estimates that the flood control facilities mentioned above have reduced the 100-year flood flows through Reno from 41,000 cfs to 20,700 cfs, which still exceeds the Reno channel capacity (14,000 cfs) and the Sparks channel capacity (7,000 cfs).

In July 1977, the Corps, at the request of Reno, Sparks, and Washoe County, resumed investigation of alternatives for providing flood protection from the Truckee River through the Truckee Meadows. This investigation resulted in an adopted plan in 1985 consisting of channel improvements, levees, and detention facilities. This plan received Congressional authorization in 1988 and design proceeded. An economic re-evaluation office report on the project completed in 1991 indicated that the project had an unfundable benefit to cost ratio. As a result of that report the project was re-classified to a deferred status. In 1993, Washoe County asked the Corps to activate and re-evaluate the project. The Corps included funds in fiscal year 1996-97 to initiate the reevaluation.

A reconnaisance study completed in 1997-98 found that there was a federal interest in re-evaluating the Truckee River Flood Project. In 1998 work on the General Re-evalation Report for the project began. In 1999 the Corps and the Project sponsors of Reno, Sparks and Washoe County agreed to develop this reevaluation through a community coalition process to provide greater public participation. From April of 2000 to June 2002 the Community Coalition worked on defining a community-acceptable plan to reduce flood damages, provide ecosystem restoration along the Truckee River, and provide recreational benefits.

From July 2002 to October of 2003 the Corps studied and assessed the river below the Truckee Meadows for ecosystem restoration potential. A number of potential restoration sites were identified. Eleven sites were determined to be justified for Federal cost participation. Feasibility level design of these sites is nearing completion. These restoration designs will be included in the project General Re-evaluation Report as well as the environmental impact statements for the Truckee River Flood Management project. A draft project plan is scheduled to be completed in the summer or fall of 2004. A final project alternative selection supported by the Corps will be included in the Corps' Chief's Report to Congress and the Office of Management and Budget which is expected by the end of 2005. Authorization of the project will be pursued through congressional action in 2006 with congressional funding coming either in 2006 or 2007.

The various benefits of ecosystem restoration have generated interest from several stakeholders who are also pursuing restoration projects. Restoration on the eleven identified sites is an integral part of the Corps' plan and is necessary to maintain a positive benefit-cost ratio. It is critical that restoration planning be coordinated closely with the Corps and implemented as part of the Corps' project.

The Corps, under the authority of the 1948 Flood Control Act, can evaluate, design, and construct small watershed protection projects. At Reno and Washoe County's request, the Corps evaluated the feasibility of a flood detention facility in the Thomas Creek watershed to protect City of Reno and Washoe County citizens. This study determined that the damages to existing residences were insufficient to warrant federal participation in a flood detention facility. Other flood studies are described in Chapter 4.

7.2 State Constraints

Laws, regulations, and policies adopted by the State of Nevada that affect the Regional Water Plan are described below.

7.2.1 Water Rights and Water Law

Surface Water Rights

Water rights to the Truckee River and its tributaries were established by Federal Court decree in 1944 (see description under Section 7.4). Changes to the use of the Truckee River rights are granted by the State Engineer through the State process for water rights change. To date, there has been little or no controversy over changes in the place of use of irrigation water rights on the river, nor over the many instances where irrigation rights have been converted to municipal use, as is required for issuance of a will-serve letter by TMWA and other local water purveyors.

In the future, if transfers are sought from the Newlands Project to the Truckee Meadows, this will raise transfer issues that have not yet been explored. The State Engineer does not allow water rights to be transferred from one source to another. The ability to exchange Thomas Creek and Whites Creek water for river water for municipal development in the South Truckee Meadows is being explored and is based upon precedent from prior State Engineer decisions on the Humboldt River system. This exchange process is not a strict transfer from one source to another, because the tributary water is essentially diverted to the main stem to replace the water that is diverted from the main stem of the river.

The State Engineer allows conversion of the full duty of a water right (commonly 4 af per acre) with the expectation that return flows from the wastewater treatment plant will provide volumes of water to downstream users similar to those that the historic irrigation use of the rights had provided. If the practice of returning effluent to the river is altered, through increased reuse of effluent, water rights will be required to make up the unrealized return flows. In general, the Truckee River Operating Agreement (TROA) specifies that return flow water rights must be provided in an amount equivalent to the wastewater generated from uses of Truckee River water outside of the Truckee River basin. This is discussed further in Chapters 3, 6 and 10.

State Engineer Groundwater Policies

Inter-Basin Transfers

Physical water can be moved from one basin to another basin, but the point of diversion cannot be transferred to another basin. Under Nevada law, a water right is tied to a particular source of water and cannot be changed to another source, such as a different groundwater basin. The State Engineer considers applications for inter-basin transfers of groundwater according to criteria in NRS 533.370(4). Criteria cover factors such as the need to import water from another basin, the existence and status of a water conservation plan for the receiving basin, the environmental soundness of the proposal, the long-term appropriateness of the transfer relative to possible growth limitations in the basin of origin and any other relevant factor. In some instances the State Engineer may restrict the export of water to the historic consumptive use portion of a water right.

Administered Basins

Within this planning area, all basins are administered by the State Engineer. If a basin's aquifer shows a continued lowering of the water table and evidence of groundwater mining or the potential for it, the State Engineer may begin to further administer the basin by limiting pumping on a priority basis and/or call for Proofs of Beneficial Use. Pumping would then be restricted to those rights that have been certificated at a certain date and all other permits would be canceled. It could become necessary to further restrict pumping based on an appropriation date basis to maintain some level of aquifer viability. Such administrative actions are rare. Since the late 1970s, the State Engineer has not taken such actions in Washoe County. Instead, the State Engineer has worked with the local governments to institute land use policies that limit the utilization of water from over-appropriated groundwater resources for land development purposes.

Although the State Engineer has the right and ability to directly regulate the water resources, subsequent local governmental approvals of land developments utilizing water make such regulation a difficult matter, because the land development does not usually coincide with the water rights priorities. Regulation by priority date would tend to result in eliminating the water supply for many long-standing residential and commercial developments throughout the state. Therefore the current primary approach to regulating the over-allocation of groundwater is to limit the conversion of groundwater rights to municipal use. This is accomplished through State Engineer denial of change applications and through land use policies of local governments.

Conjunctive Use

The State Engineer's Office encourages the concept of conjunctive use in the Truckee Meadows. One conjunctive use concept is to rely heavily on surface water during good water years while allowing the groundwater aquifers to recover and then to be able to pump heavily during drought years. (This would entail a multi-year water balance.) Additionally, Nevada Revised Statutes allow for underground injection of surface waters for use at a later date. This is accomplished after demonstrating the project's technical aspects and appropriate estimates of the amount of recoverable water.

Truckee Meadows Water Authority Groundwater Pumping Cap

Prior to 1986, SPPCo (the predecessor to TMWA) had groundwater certificates totaling in excess of 40,000 af. It became a concern to the State Engineer that this amount of pumping could cause migration of poor quality water to areas of pumping. SPPCo was at the time

pumping less than 10,000 af. Consequently, the State Engineer placed an "administrative cap" of 12,000 af of annual pumping on those rights. That cap was amended as the result of additional water rights acquisitions and the incorporation of a groundwater banking procedure. The groundwater pumping order provides for an average groundwater production of 15,950 af/yr, with significant annual variations in pumping allowed providing for banking of water not pumped. Under this order, the banked water may be used to provide for an annual drought pumping limit of 22,000 af for up to three consecutive years.

Domestic Wells

Nevada water law requires a person wishing to appropriate groundwater from a well for almost any purpose to file for and obtain a water right permit from the State Engineer (NRS 534.020.) The law, however, provides an exemption for domestic wells. A water right permit is not required. Domestic use means indoor and outdoor uses directly related to a single-family dwelling (NRS 534.013), as long as no more than 1,800 gallons per day is produced (NRS 534.180). At the time the Nevada Legislature crafted these laws they provided that everyone has the right to drill and construct a domestic well wherever a dwelling could be established.

The legislature also passed laws that provide some flexibility for the State Engineer to grant permits for water appropriations later in time, even where the proposed later appropriations may cause the water level to be lowered at a prior appropriator's well, "…so long as any protectible interests in existing domestic wells as set forth in NRS 533.024 and the rights of holders of existing appropriations can be satisfied under such express conditions." (NRS 534.110 (5)). The law further provided, as a specific condition of each appropriation of groundwater, that the right must allow for a reasonable lowering of the static water level in a particular area (NRS 534.110 (4)). In other words, the State Engineer can approve permits to divert water not previously appropriated, generally up to the average annual groundwater replenishment (recharge), even if water level declines will occur, as long as every well owner can produce water without unreasonable water level declines.

The State Engineer is charged with determining the existence or extent of water level impacts on domestic well users that are caused by public supply wells. He must use his discretion to determine whether the water level impacts are reasonable and then decide whether the rights of existing domestic well owners, in the same way as the rights of those holding existing appropriations, can be satisfied. The State Engineer considers numerous factors as he analyzes the impacts that public supply wells may have on domestic wells. The age and condition of a domestic well are two of the many factors that are judged and weighed just as carefully as the effects of the public supply well pumpage.

Additions to the law in 2001 directed the State Engineer to include as an express condition of a permit for municipal or public supply well operators, that pumpage "…may be limited or prohibited to prevent any unreasonable adverse effects on an existing domestic well located within 2,500 feet of the well…" (NRS 534.110 (5)). These provisions are the result of concerns about what protections were provided by law for domestic well owners. The intent of this legislation was to establish the rights of some domestic well owners as not unlike those rights of the prior appropriators. Regarding what priority dates are associated with domestic well owners, generally as in western states law, those priorities for domestic users may be determined to be when the diversion and use of the domestic well water was first established.

Because of the number undeveloped parcels in the region on which a domestic well can legally be drilled, and the uncertainty in the number that will actually be drilled, conservative water

demand projections must assume a demand of 2.02 af/yr (1,800 gallons per day) for every parcel with a land use designation allowing a domestic well.

7.2.2 State Water Pollution Control Law – NRS 445A

NDEP is responsible for protecting the quality of the waters of the state from any adverse effects resulting from a discharge, i.e., any addition of a pollutant or pollutants to water (NRS 445A.345). The definition of "waters of the state" includes streams, lakes, ponds, impounding reservoirs, marshes, water courses, waterways, wells, springs, irrigation and drainage systems and all bodies or accumulations of water, surface and underground, natural or artificial.

To maintain the quality of the state's waters, NDEP issues permits for discharges; reviews and approves technical designs, including those for wastewater treatment facilities and subdivision plans (tentative maps); conducts compliance inspections of facilities; enforces permit conditions; and enforces law that prohibits unauthorized discharges.

Surface water discharge permits are issued under authority delegated by the EPA to implement the NPDES program authorized by the federal Clean Water Act, described elsewhere in this chapter. With the exception of underground injection permits, described below, groundwater permits are issued under a state program to protect groundwater quality. NDEP issues groundwater permits for activities such as surface disposal of treated wastewater effluent, large septic systems, mound septic systems, unlined ponds, overland flow, effluent reuse and irrigation. "Zero discharge permits" are also issued in cases where a potential to discharge exists, e.g. lined ponds and tanks. Proposed projects are evaluated to ensure that the background groundwater quality is not degraded or that drinking water quality standards are not violated.

State UIC regulations were adopted in July 1987 and primacy for the federal UIC program was granted in October 1988. Nevada UIC regulations divide injection wells into five classes and describe the State's UIC permit program. The UIC program may be considered a constraint to regional water management planning because the injection of any fluid through a well requires a permit. Permits typically include limitations on quality and quantity of the fluid injected. Regulated activities of particular interest with respect to regional water management planning include aquifer storage and recovery, aquifer recharge, storm water infiltration through wells and injection of treated effluent or water treated as a result of a corrective action.

Discharge permit limitations, whether in NPDES or State permits, constrain wastewater utilities as to the amount, pollutant load/concentration, location and timing of treated wastewater effluent discharge. In the future it is possible that in some areas of the region, these constraints could become more limiting than the region's ability to supply water resources or provide flood control. In addition to the water quality-related constraints presented by discharge permit limitations, NDEP's general responsibility to enforce state water pollution control law is also a constraint. In 2000, NDEP directed Washoe County to begin planning for sewer service in a portion of Spanish Springs Valley because of elevated nitrate concentrations in groundwater pumped from public supply wells, due to the density of septic systems.

7.2.3 Requirements of NRS 540A

NRS 540A.010 through 240 is very specific about the makeup of the RWPC, the content of the Regional Water Plan, who approves/amends plans, and the extent of cost analysis. (See Appendix A for a complete copy of NRS 540A.)

In 1995, the Nevada legislature passed Senate Bill 489 (see NRS 540A.250 through 285) requiring the formation of a remediation district once a groundwater contamination problem is certified by NDEP and/or the WCDHD. Both agencies provided letters in August of that year certifying a PCE contamination problem in the aquifer underlying the central Truckee Meadows. In 1997, NRS 540A was amended to provide a funding mechanism to support groundwater remediation activities and the Central Truckee Meadows Remediation District (CTMRD) was formed later that year. Presently, 11 of TMWA's municipal wells are contaminated with PCE. District funding has paid for three air-stripping treatment facilities that remove PCE from five TMWA wells. Additionally, funding was used to develop a Remediation Plan, which was approved by the Board of County Commissioners and NDEP in 2003. The CTMRD is discussed in more detail in Chapter 2.

7.2.4 State Water Plan

Section 17.3 of NRS 540A requires the Regional Water Plan to be consistent with the State Water Plan. It states, "The plan must be consistent with the state water plan in effect at the time that the plan is adopted."

NRS 540.101 required the Nevada Division of Water Planning to coordinate with local governments in developing a State Water Plan. This statute also requires a local government to consider the State Water Plan when developing or implementing its mission, programs, plans and responsibilities regarding water resources, but indicates that a local government is not bound by a recommendation or provision of the plan unless it formally adopts the recommendation or provision. The State Water Plan currently in effect was accepted by the Nevada Legislature in 1999. It is published in five volumes including background and resource assessments, water use information and forecasts, water planning and management issues, a summary and supporting appendices.

7.2.5 Water Meters

Water meters in the Truckee Meadows have long been a subject of State legislation; the first law prohibiting water meters in Reno and Sparks was passed in 1913. Since that time, gradual changes have occurred to require meters on all businesses (1977), to require meters on all new homes built after 1988, to allow meters on residences upon owner request, and most recently (1989) to allow SPPCo (now TMWA) to retrofit meters on residences under certain circumstances tied to the Negotiated Settlement.

With the creation of TMWA, the State law water meter prohibition no longer applies in Washoe County. The statutory prohibition related to PUC regulated public utilities operating in cities or towns of more than 7,500 persons. After the creation of TMWA and its acquisition of the SPPCo water business, there are no longer any PUC regulated water utilities operating in Reno or Sparks. The remaining PUC regulated utilities serve portions of the unincorporated area of Washoe County and were not subject to the meter prohibition.

TMWA is continuing the developer funded meter retrofit program that was initiated by SPPCo. In addition, TMWA has adopted a policy of installing water meters upon change in tenancy of any residence and billing those customers using the current metered water rate.

7.2.6 State-Imposed Financing Constraints

Public Utilities Commission Jurisdiction over Regulated Utilities

During the development of the Regional Water Plan, projects may be proposed which a regulated public utility may be expected to construct or operate. These utilities are subject to the jurisdiction of the Nevada Public Utilities Commission, which has authority to:

- Determine the prudence of all expenditures
- Establish water rates and other fees
- Require the submittal of a Utility Environmental Policy Act document
- Approve water resource plans and other plans

Public Funding Constraints

The Public Utilities Commission does not regulate or set rates for the publicly owned utilities. However, the rates must be reviewed and approved by the respective governing bodies of these governmental utilities following public hearings on the rate proposals.

Other funding mechanisms available include short- and long-term bonds supported from either operating revenues of the utility or a dedicated portion of County general fund operating resources. Due to the many demands and mandates for service, the pool of resources available for general fund supported debt is limited.

The users of the County owned systems do have the final voice in providing funding options through voter-approved bonds. These bonds, however, also have a cap based on the available tax rate. The current statutory cap is $3.64 per $100 of assessed valuation. This capacity has to provide funding for expanding operational needs and any other bond or tax override proposals.

7.3 Tribal Policies and Regulations

Although the Pyramid Lake Paiute Reservation is not physically within the boundaries of the regional water planning area, the Tribe does have regulatory authority on lower Truckee River water quality standards. The 1987 amendments to the Clean Water Act allowed federally recognized Indian tribes to apply for status as states and develop water quality standards. The Tribe applied for recognition as a state under these amendments in 1989, and received EPA state status in 1990. Under this state status the Tribe received grants to conduct a limnology study of Pyramid Lake and gathered other water quality data.

Using the information from these studies the Tribe has developed draft water quality standards for the lower Truckee River and Pyramid Lake. On May 24, 2001, the Pyramid Lake Tribal Council approved the Tribe's Water Pollution Control Plan (WQS). The Tribe's water quality standards are included within this plan. This plan was submitted to the EPA on July 18, 2001, for review and approval. These standards, if accepted by the EPA, could become constraints on upstream point and non-point water issues. These standards will be included in future revisions of this plan as they become available.

7.4 Agreements and Court Decrees

Area resources, especially the Truckee River, are managed to a large degree according to the long-standing practice among water users that have been adjudicated by the Courts in various decrees. There are also other agreements that influence resource management among local governments, utilities, districts, and others. Existing and expected future agreements are described in this section. Any recommendations for changes to existing agreements and/or needs for future agreements appear in Chapter 11, Action Plan and Recommendations.

7.4.1 Orr Ditch Decree (1944)

Water rights to the Truckee River and its tributaries were adjudicated in 1944 in the Orr Ditch Decree, which sets forth a listing of all owners of water rights, the amount of water they were granted, and the place of diversion and use for those rights. The Decree covers all uses of Truckee River water in Nevada other than the unappropriated water application of the Tribe. California uses of the river, with the exception of some irrigation water rights in Dog Valley, are not addressed by the Decree but have been agreed to informally by the States of Nevada and California under an unratified bi-state compact. California's allocation is defined in PL101-618, described later. Two of the high priority rights in the Decree are the Tribe's irrigation rights with an 1859 priority. Most of the irrigation rights in the Decree range from 1860 to 1880 in priority, except for the Newlands Project rights, which date to 1902.

7.4.2 Truckee River Agreement (1935)

An important part of the Orr Ditch Decree is the Truckee River Agreement of 1935. It sets forth the operational rules of the river, including preserving from an earlier decree the requirement that "Floriston Rates" be maintained. This is a constant flow of 500 cfs in the summer and 300–400 cfs in the winter, which is maintained by passing natural flow through reservoirs and releasing water from Lake Tahoe and Boca Dam. The purpose of the Truckee River Agreement was largely to divide the waters of the Truckee River between the farming communities of Fallon/Fernley and the Truckee Meadows, with provision for hydroelectric generation and 40 cfs of municipal water for use by SPPCo in Reno/Sparks. No rights were provided for environmental, fishery, in-stream, or other similar uses. Constant flow rates established by Floriston Rates were designed to produce electric generation and to support the mills that existed at the time.

Other key provisions of the Truckee River Agreement include conditions to reduce shoreline flooding at high water levels at Lake Tahoe, conditions on when water could be pumped from Lake Tahoe, definition of the interrelationship of water in private reservoirs (Donner and Independence) versus other reservoirs, and provision for construction of Boca Dam. As described later, the pending TROA would significantly add flexibility to the operating rules of the 1935 Truckee River Agreement.

7.4.3 Other Truckee River Agreements and Court Actions

In addition to the Truckee River Agreement and the Orr Ditch Decree, other regulations, agreements, and requirements govern the day-to-day manner in which the Truckee River is operated. It is the job of the Federal Water Master to implement many of these provisions and to coordinate among the various entities that have interest in, or authority over, the Truckee River. Key documents are:

- The Truckee River General Electric Decree (also called the 1915 Decree), establishing Floriston Rates in exchange for the United States' gaining control over Tahoe Dam
- The Tahoe-Prosser Exchange Agreement providing in-stream flows below Tahoe Dam (unless the lake level is below the outlet rim) in exchange for water credit in Prosser
- Deed restrictions on the ownership of Donner Lake by TMWA and the Truckee-Carson Irrigation District limiting the extent to which the lake can be drawn down during summer months
- Corps of Engineers prescription of the flood operating criteria for the reservoirs
- California Division of Safety of Dams requirement that Donner's water level be lowered to the outlet gates during winter months, allowing no carryover storage
- Operating Criteria and Procedures for the Newlands Project determining how much Truckee River water may be diverted at Derby Dam (20 miles east of Reno) for use by Newlands Project farmers
- Sierra Valley Decree establishing the rights of farmers in Sierra Valley, California, to divert water from the Little Truckee River for use in the Feather River Basin
- California storage permits or licenses limiting how much water may be stored in various reservoirs and whether minimum in-stream flows are required below the dam

Preliminary Settlement Agreement and the Truckee River Operating Agreement

In 1989, the Tribe and SPPCo (now TMWA) entered an agreement as to certain mutually acceptable changes to river operations that would benefit both the drought water supply for the Truckee Meadows and the endangered cui-ui fish at Pyramid Lake. The Preliminary Settlement Agreement (PSA) was subsequently ratified by the United States, subject to the final approval and effectiveness of a new Truckee River Operating Agreement. The result of the agreement will be a **tripling** of the drought storage (compared to 1989 storage rights) available to the Truckee Meadows. Key provisions of the agreement include:

- Sierra Pacific waived the right to constant flows for hydroelectric generation it holds under the 1915 and subsequent decrees, allowing river flows to be re-timed in a manner more beneficial to fish spawning and to allow the storage of water rights at times they are not needed for later use during droughts.
- TMWA must continue to require water rights in order to issue will-serve letters.
- Certain other water resource development options are supported by the Tribe.
- TMWA may accrue water in credit storage in the federal reservoirs, provided that the water is used only for drought supply and quantities above specified limits are transferred to fish purposes during non-drought years.
- Guidelines are established as to the priority and sequence of storage in the reservoirs, carryover rules, conditions for use of stored water, exchanges, and other operating matters.

The provisions of the PSA are incorporated into the Draft TROA. For TROA to become effective, certain contingencies must be met including:

- Settlement legislation must be passed by Congress and signed by the President (complete).
- State law prohibiting water meters must be modified (complete).
- A water meter retrofit finance plan must be approved (complete).
- An inverted block water rate structure must be approved (complete).

- A water conservation plan to save 10 percent during droughts must be approved (complete).
- An EIS/EIR must be completed regarding TROA and the changes to California water rights permits and licenses (in preparation).
- TROA must be approved by TMWA, the Tribe, California, Nevada, and the United States (pending).
- The United States must become a party to the PSA (occurs upon Unites States approval of TROA).
- Storage contracts must be executed (only an interim contract is complete).
- Two Federal Courts must approve the Agreement (not yet submitted to Courts).
- Water rights change application must be approved by the Nevada State Engineer to permit transferring Orr Ditch Decree water rights to storage in California Reservoirs.
- Compensation and indemnification agreements between TMWA and United States (pending).
- All pending litigation is to be resolved (not yet submitted to Courts).

TROA will be a federal regulation when it becomes effective. It changes the fundamental management of the Truckee River, while protecting the existing water rights for storage and diversion of water. Through its changes in the river operations it will provide a mechanism to permit the accumulation of Credit Water in storage. Credit Water storage is explicitly permitted for several of the parties to TROA including TMWA (for drought protection), Reno, Sparks and Washoe County (for water quality purposes), California (for municipal and environmental purposes), the Tribe (for fish purposes), and the United States (for Newlands Project purposes). Credit waters are accumulated by retaining water in storage at times when it could otherwise be diverted to a beneficial use by the party establishing the credit water in storage.

Public Law 101-618 (Negotiated Settlement)

In 1990, PL 101-618 was enacted with two titles: Title I is the “Fallon Paiute Shoshone Indian Tribes Water Rights Settlement Act of 1990", and Title II is the “Truckee-Carson-Pyramid Lake Water Rights Settlement Act". (See Appendix F for the complete law.) This law settles lawsuits with two Indian tribes on the Truckee-Carson River systems and contains many other provisions. It is the enabling legislation for TROA.

Water Quality Agreement

During the winter of 1994-95, Nevada Senator Harry Reid initiated a series of multi-party negotiations to see whether resolution could be reached on the issues surrounding the lower Truckee-Carson Rivers that had not been solved in PL 101-618. Despite failure to reach an overall settlement of those issues, one portion of the discussion, that concerning water quality enhancement for the lower Truckee River, has continued forward and was approved by local governments and the Tribe in October 1996.

This agreement among the Cities, County, Tribe, United States, and NDEP provides in broad terms that the community and the United States would both buy water rights to be used for in-stream flows in the Truckee River in exchange for dismissal of lawsuits by the Tribe. It is expected that the augmentation of flows in the river will enhance its water quality.

7.5 Utility and Service Area Agreements

7.5.1 Joint Powers Agreement forming TMWA

TMWA was formed in direct response to a September 2000 announcement by Sierra Pacific Resources (Sierra) of its intention to sell its water utility business serving water to the Reno/Sparks area in Washoe County. On October 20, 2000 Reno, Sparks and Washoe County submitted a joint "Proposal to Purchase the Water Utility Assets of Sierra Pacific Resources". Reno, Sparks and Washoe County indicated their intent to form a Joint Powers Authority (JPA) and to have the JPA in existence upon selection as the successful bidder. On November 13 and 14, 2000, a Cooperative Agreement was executed between Reno, Sparks and Washoe County forming TMWA. TMWA was officially born by execution of the "Cooperative Agreement among City of Reno, City of Sparks, and County of Washoe" on December 4, 2000, pursuant to the provisions of Chapter 277 of the NRS.

Some of the underlying principles Reno, Sparks and Washoe County sought to achieve through TMWA include:

- Assure that water resources are developed and managed to fulfill the present and future water needs of the greater Truckee Meadows community.
- Acquire and manage the water assets for the benefit of the Truckee Meadows community.
- A need for Reno, Sparks and Washoe County to act together with respect to such matters as water supply, allocation of water supply, water quality, treatment, and wheeling.
- Secure additional supplies of water and the effective management of existing supplies, best achieved through the cooperative action of Reno, Sparks and Washoe County, operating through TMWA.

After the successful launch of TMWA, Reno, Sparks and Washoe County subsequently submitted and were awarded the successful bid to acquire Sierra's water utility business. On January 13, 2001, TMWA approved the Asset Purchase Agreement, and Sierra approved it on January 15, 2001. Efforts to transfer the water assets and business from Sierra to TMWA began in earnest early in 2001 following these approvals. On June 5, 2001, TMWA sold $452.3 million in bonds pledged against its revenues and the sale of Sierra's water utility business with the transfer of title to all diversion, treatment, conveyance, water transmission, wells and distribution related facilities. When TMWA opened for business on June 11, 2001, 127 employees, all former water division employees of Sierra, continued managing and operating the water utility business for the greater Truckee Meadows area, and began the process to meet the business objectives established by the JPA, TMWA's Board of Directors and its management team.

7.5.2 Washoe County – Truckee Meadows Water Authority Service Areas Agreement

Section 32.5 of NRS 540A requires that the Board of County Commissioners and SPPCo "enter into an agreement which defines the respective areas within the region where the public utility and all systems for the supply of water which are controlled or operated by the Board will provide retail water services". The Board and SPPCo entered an agreement regarding the definition of retail and wholesale water service and resolution of water service–related issues.

With the creation of the Truckee Meadows Water Authority, TMWA assumed the rights and responsibilities of SPPCo under the services area agreement.

The agreement defines service areas for TMWA and Washoe County, develops guidelines for development of an integrated retail and wholesale water system, and provides mechanisms for adjustment to both retail and wholesale service. Decisions will be guided by provision of water service at the lowest aggregate costs, no adverse effects to customers, and the best interests of system development and integration. Figure 2-11 in Chapter 2, details the service areas of the water purveyors in the region.

7.6 Local and Regional Plans, Regulations and Policies

Ordinances, regulations, and policies adopted by local governments may affect the Regional Water Plan. With the exception of the Truckee Meadows Regional Plan, to which this plan must conform, local water policies are to conform to the Regional Water Plan and may require changes to do so. Any identified needs for such change appear in Chapter 11. Only matters that directly affect the Regional Water Plan are described in this section.

7.6.1 Truckee Meadows Regional Plan

The Truckee Meadows Regional Plan, required by NRS 278.0274 provides a framework for the future physical and orderly growth of the region. All local master plans and facility plans must conform to the Truckee Meadows Regional Plan. Interim policies adopted by the RWPC pursuant to the Regional Plan Settlement Agreement of October 17, 2002, or the continuation of said policies in the updated Regional Water Plan, are independent of, but to be applied to the degree possible, by local governments in the planning process consistent with the policies contained within the Truckee Meadows Regional Plan.

7.6.2 Washoe County Plans, Regulations and Policies

The plans, regulations, and policies of Washoe County do not present a constraint to the measures to be considered by the plan. Washoe County has adopted these control measures so that development in various portions of its jurisdiction will be kept in balance with the natural resources. The available quantities of water resources and economics of infrastructure development will provide the ultimate control on the facilities and alternatives to be included in the plan.

7.6.3 Water Rights Requirements

The area plans of the Washoe County Comprehensive Plan have each considered ground and surface water resource availability in determining the water supply requirements for development proposals. Water resource availability in individual hydrographic basins was not used as a development constraint in the area plans. The overall water supply available from the regional groundwater resources and Truckee River, if managed and used wisely, is more than adequate for the planned population growth through 2025.

The groundwater resources of many of the individual planning areas in southern Washoe County are not adequate to support additional development approvals if they are managed on a stand-alone basis. The creation of lots and parcels that rely upon domestic wells needs to be balanced against the available resources and existing water rights to those sources of water.

The Washoe County Development Code contains the specific Washoe County water rights requirements for each of the planning areas. In general, domestic wells require 2.02 af of water rights and community systems require 1.12 af. The area plans and Development Code modify these numbers and specify certain types of water rights for several planning areas where the water resources are not sufficient to meet the demand represented by the outstanding groundwater rights.

The Spanish Springs Basin is a good example of how the water rights requirements are modified to reflect conditions within the planning areas. The estimated perennial yield of Spanish Springs Valley is not sufficient to support the approval of additional groundwater-based development on a stand-alone basis. By requiring decreed surface water rights in addition to the groundwater rights, Washoe County is reserving resources to provide a firm water supply for the new development. The surface water rights may ultimately be used for artificial recharge or as part of a conjunctive surface/groundwater supply for the valley. The Development Code provides three water supply alternatives for developing land in Spanish Springs Valley:

- Decreed Truckee River water rights when used with an appropriate drought yield discount as determined by the State Engineer
- Imported groundwater from a source that is replenished in sufficient quantity to meet the demands placed upon the source without groundwater mining
- Certificated groundwater rights or permitted quasi-municipal groundwater rights (that existed as of May 22, 1990) matched by imported, decreed surface water, from a source such as the Truckee River, equal to one-half of the groundwater rights

It is beyond the scope of this document to list all of the water requirements found in the Development Code. Table 7-1 provides some of the major exceptions to the general requirements for groundwater rights. The reader is directed to the Washoe County Development Code for the specific water rights requirements.

Table 7-1
Major Exceptions to General Requirements for Groundwater Rights
(Washoe County Development Code)

Planning Area	Water Rights Required per Domestic Well (AF/DU)	Water Rights Required for Community System (AF/DU)	Certificated	Permitted
North Valleys (Lemmon Valley)	2.02	1.12	Only	Not allowed
Spanish Springs	2.02	1.12	Okay when matched with decreed rights	Okay when matched with decreed rights
Warm Springs	2.50	2.33	Okay	Okay

Source: RWPC

7.6.4 City of Reno Plans, Regulations and Policies

City of Reno policies relating to water, wastewater, and flood control are contained within the City of Reno Master Plan, primarily in the Policy Plan and Conservation Plan elements. These policies may be summarized as follows:

- Ensure that flood control and flood plain management techniques are complementary to the city's efforts to beautify the Truckee River corridor
- Cooperate regionally to ensure best management of the supply of water resources in the future and the monitoring of water quality
- Support efficient water consumption practices
- Reserve sewage treatment capacity for final maps and building permits **only** upon the payment of sewer tap fees
- Require all property annexed to be within the service area of an authorized water distribution company
- Use effluent from the sewage treatment plants, where possible, to create, maintain, restore, or enhance wetlands
- Prohibit the loss of wetlands, stream environments, playas, and spring-fed riparian and non-404 wetlands in the City in terms of both acreage and value
- Encourage landscaping that utilizes drought-tolerant plant types and efficient irrigation or other low water usage practices
- In addition, major drainage ways within the City are designated and classified as to type and status within the City's Major Drainage Ways Plan. Many of these drainage ways are required to be left undisturbed by development.

City ordinances amplify the general policy established in the Master Plan, for example:

- All new development must be connected to a community water system and the city's sewer system.
- If sewer service is to be provided by an entity other than the City, then approval by the City Council is required.

- Annexation is required prior to the provision of sewer service if the property is within the city's sphere of influence as designated by the Regional Plan and is contiguous to the city's boundary.
- Xeriscape principles for landscaping are required to be incorporated into all new developments with the exception of single-family homes.
- Standards have been established for the review of development proposals within wetlands, stream environments, and areas of significant hydrologic resources to meet the goal of "no net loss".
- Regulations have been adopted for the development of property within areas determined to be subject to flood damage and for the discharge of wastes into the city's wastewater system.
- Adequate water rights must be dedicated to the City to serve new development projects.

For developments outside the Truckee River Basin that use Truckee River water, water rights whose current point of use is downstream from the Truckee Meadows must also be dedicated for the purpose of meeting return flow requirements.

7.6.5 City of Sparks Plans, Regulations and Policies

The Cities of Sparks and Reno jointly own the Truckee Meadows Water Reclamation Facility (TMWRF) and have developed policies and fee structures for service to customers from both within and outside of the city limits. Connection fees for wastewater conveyance through Sparks' interceptors and treatment at TMWRF have been established in such a manner that there is an equitable sharing of costs on a per customer basis, whether inside or outside the city limits. The City of Sparks currently leases Washoe County 0.5 MGD of treatment capacity for a term of 10 years until June 2005.

Sparks, Reno, and Washoe County have changed ordinances to limit outdoor watering of lawns to twice a week.

The City of Sparks has developed a marina park at the location of the former Helms Pit. The Sparks Marina Lake discharge is monitored for water quality and treated as necessary at a denitrifying water treatment facility before discharge to the People's drain, the North Truckee Drain and finally the Truckee River.

The Cities of Sparks and Reno, together with Washoe County, possess an NPDES permit for storm drainage to the Truckee River, which requires them to use best management practices with regard to their activities associated with storm drainage.

The City of Sparks, together with Washoe County is actively engaged in the study of new flood detention facilities for the protection of life and property, including possible construction of detention facilities in Spanish Springs. The City intends to remain proactive in this regard over the next 15 to 20 years to better protect new and existing development within its corporate boundaries. The City also has an extensive flood plain management program set forth in Chapter 15.11 of its Municipal Code, which does not permit development in the floodway and restricts development in the flood plain.

Chapter 20.47 of the Sparks Municipal Code restricts the permitted uses of land along the Truckee River corridor, which is defined as the center line of the Truckee River to a parallel line at the northern edges of the Truckee River Greenbelt (Zone 1) and from the edge of Zone 1 to a

parallel line 200 feet to the north of Zone 1 (Zone 2). The permitted uses in Zone 1 include public pedestrian and equestrian trails and service roads, public parking, and recreation areas and facilities, together with associated landscaping. Zone 2 allows everything allowed in Zone 1 but requires natural or artificial screening so as not to be visible from Zone 1.

7.6.6 Washoe County District Health Regulations and Policies

The Washoe County District Health Department has authority to review all projects in the District (Reno, Sparks, and Washoe County) for compliance with regulations adopted to protect the public health and prevent environmental contamination. With the cooperation of the Cities and the County, Environmental Health Services Division personnel review all planning items and building permit applications. Regulatory requirements are contained in the Nevada Revised Statutes, Nevada Administrative Code, and local regulations adopted by the District Board of Health.

Authority to regulate individual sewage disposal systems (septic systems) with flows less than 5,000 gallons per day is given to the District Board of Health in NRS 444.650. The Washoe County District Health Department is committed to working with NDEP to promote the public health and welfare and to protect the waters of the State by tightly regulating discharges from septic systems. Health Department personnel review plans for, and inspect the construction of, over 1,000 individual septic systems each year using the Sewage, Wastewater, and Sanitation Regulations. In 2001, the District Board of Health adopted revisions to these regulations that limit the minimum lot or parcel size to five acres for new subdivisions, and second and subsequent parcel maps proposing to use septic systems. The regulation allows for exceptions, but indicates that approvals will not be granted if the density of septic tanks will exceed the standard established by NDEP.

NRS 445.381 and 445.383 give the State Board of Health the authority to regulate public water systems. By contract, that authority has been given to the Washoe County District Health Department for public water systems in Washoe County. Health Department personnel enforce all provisions of the Federal Safe Drinking Water Act and State water quality standards. Additionally, District Health reviews all water system construction plans for compliance with State regulations.

NRS 278.335 assigns responsibility for review of subdivisions to the District Health Department regarding "sewage disposal, water pollution, water quality and water supply facilities". Included in the State subdivision regulations are specific requirements for quantity of water to be made available for each home in a new subdivision. These quantity requirements include that the water purveyor provide 200 gallons per person per day for average demand and that the water system be able to accommodate a peak-day flow two and a half times the average day demand. Enough storage must be provided to meet average demand for 24 hours or redundant equipment must be installed to make sure residents have water for at least 24 hours in an emergency.

Construction of water wells in Washoe County is governed by State Statutes (NRS 534.010 to 534.340 inclusive) and local Health Department well construction regulations. District Health Department personnel issue drilling permits and inspect finished wells in the Health District.

The District Health Department Environmental Health Services Division also regulates mobile home and recreational vehicle parks, food establishments, hotels/motels, underground storage tanks, and solid waste.

7.7 Adjacent State and County Plans, Regulations and Policies

Plans and actions by California and adjacent Nevada counties may have a direct impact upon the Truckee River and this plan. Water quality standards and conditions upstream in California are critical for determining appropriate water quality control measures in Washoe County. At present, both California and Nevada have consistent standards. Any future upstream water quality degradation would tend to increase our need for water quality control facilities. Similarly, industrial development on the south bank of the Truckee River in Storey and Lyon Counties may also have a similar effect. Downstream water quality standards that have been set by the Tribe may have the greatest effect upon the water quality planning requirements of the region.

7.7.1 California Environmental Quality Act (CEQA)

The California Environmental Quality Act applies to all actions and facilities that are located in California that require discretionary permits from a California state agency and also to some local California agency actions. The CEQA process and documentation is similar to NEPA, with one important difference; significant adverse impacts must be mitigated or the action / facility cannot be approved. The threshold of significance is a relatively subjective moving target, which partially varies by agency and project scope. Projects that provide secondary benefits to the constituency of an agency tend to be viewed more favorably when evaluating significance of adverse impacts. CEQA is a constraint upon this plan for facilities and resources that are located in California, such as changes in the use of the Truckee River reservoirs under TROA or the development of surface and groundwater resources through the Green Gulch project.

References Cited

Pyramid Lake Paiute Tribe, 2001, Water Pollution Control Plan.

Truckee Meadows Regional Planning Agency, 2002, Truckee Meadows Regional Plan version 6, amended February 13, 2003.