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Appendix A

Entities with Carson River Watershed Interests

Federal Agencies

- **US Bureau of Land Management (BLM)**

Website: www.nv.blm.gov

As one of the largest land managers in the watershed the BLM Carson District has provided significant technical assistance and guidance regarding watershed natural resources and land use activities on public lands. The BLM is responsible for the management of public lands on a multiple-use basis that benefits all land users and maintains resource values.

- **US Department of Defense, Army Corps of Engineers (Corps)**

Website: www.spk.usace.army.mil

The Corps is directly responsible for all aspects of water resources including flood control and mapping, navigation, water quality and wetlands, irrigation systems, etc. The Corps operates a permit program, the 404 Permit Program, and is responsible for wetland mapping. The Corps can also provide technical assistance and guidance regarding their program activities.

- **US Environmental Protection Agency, Region IX (EPA)**

Website: www.epa.gov/region09/index.html

EPA is responsible, as directed by the Clean Water Act of 1972 and its amendments, for restoring the quality of the nation's waters. Nonpoint source pollution has been identified as the primary contributor of pollutants to the Carson River system. EPA works closely with the State of Nevada Division of Environmental Protection in voluntarily controlling nonpoint source pollution through watershed based or community based programs.

- **US Geological Survey, Water Resources Division (USGS)**

Website: www.nevada.usgs.gov

As a federal agency with water quality and quantity responsibilities, the USGS can assist the watershed stakeholders in a variety of ways including technical assistance, data management, mapping and education. Their primary responsibility is the maintenance and collection of hydrologic data.

- **USDA Farm Service Agency (FSA)**

Website: www.fsa.usda.gov/pas/default.asp

The Agricultural Conservation Program (ACP) is administered by the FSA, formerly the Agricultural Stabilization and Conservation Service, and can provide financial and technical assistance to farmers, ranchers and non-industrial landowners who wish to apply soil, water and wildlife habitat conservation BMPs of long-term benefit to their land. FSA programs include Conservation Reserve, Sodbuster, Conservation Compliance, Water Bank and Rural Clean Water.

- US Fish & Wildlife Service (USFWS)

Website: www.nevada.fws.gov

The primary mission of the USFWS is to provide leadership in achieving a national net gain of fish and wildlife and the natural systems, which support them. They provide input to the Corps 404 Permit Program and offer financial assistance through several preservation/restoration programs.

US Fish and Wildlife Service, Stillwater National Wildlife Refuge Complex (SNWRC)

Website: <http://Stillwater.fws.gov>

SNWRC manages the wetlands of Stillwater and Fallon National Wildlife Refuges at the terminus of the Carson River in order to restore and maintain the natural biological diversity of the marsh. Toward that end, USFWS is engaged in a willing-seller Water Rights Acquisition Program in the Carson Division of the Newlands Project and segment 7 of the Carson River with a goal of purchasing enough water rights to maintain 25,000 acres of wetlands in the Lahontan Valley. USFWS is currently the single largest water owner in the Carson River Basin.

- US Fish & Wildlife Service, Fish Hatchery

Website: <http://www.fws.gov/lahontanfhc>

The Lahontan National Fish Hatchery is part of the Lahontan National Fish Hatchery Complex. The Lahontan National Fish Hatchery Complex is an integrated fishery program that includes the Nevada Fishery Resource Office, the Marble Bluff Fish Passage Facility, and the hatchery.

The Lahontan National Fish Hatchery is the primary site for production of a wild strain of Lahontan cutthroat trout native to the Truckee, Tahoe, and Walker basins, which have a greater potential to successfully reestablish natural spawning runs. The Hatchery houses an important brood stock of the original Pyramid Lake strain of Lahontan cutthroat trout that are critical to the re-establishment of wild populations of the species in the Pyramid Lake, Truckee River, Walker Lake, and Lake Tahoe Basins.

- USDA Forest Service, Toiyabe National Forest (USFS)

Website: www.fs.fed.us/r4/htnf

The USFS is a public land management agency responsible for the conservation and sustained yields of the Nation's forest resources. The Toiyabe National Forest Plan guides natural resource and land use activities within the watershed and agency participation is necessary for the success of overall watershed planning efforts.

- USDA Natural Resources Conservation Service (NRCS)

Website: www.nrcs.usda.gov

Conservation technical assistance is the core of the NRCS. Technical assistance activities include development of individual conservation plans, design and installation of conservation practices (including BMPs), and NRCS performs specific investigations of soil, plant, water and other natural resources to improve conservation technology. NRCS

is the technical service arm for Nevada and California Conservation Districts and can assist local landowners with a number of natural resource issues.

- USDA Rural Economic and Community Development Services (RECDS)

Website: www.ocdweb.sc.egov.usda.gov

RECDS, formerly the Farmers Home Administration can provide loans and grants when available to individual farmers and ranchers to develop water and soil conservation practices on their land. Loans are also available to landowner associations to improve irrigation systems and implement soil and water conservation projects. RECDS has been and will continue to be another source of assistance to watershed stakeholders.

- Bureau of Indian Affairs (BIA)

Website: www.doi.gov/bureau-indian-affairs.html

BIA administers: tribal management, real estate; leases, contracts and agreements; fiscal management; loan programs; surveying and mapping; tribal policies; housing; education and training; and social programs.

State Agencies

- State of California Water Resources Control Board, Lahontan Region (SWRCB)

Website: www.waterboards.ca.gov/lahontan

California's SWRCB is authorized by the California Legislature to allocate rights to the use of surface water and protect California's water quality, thus allowing comprehensive protection for California water resources. There are nine Regional Water Quality Control Boards that develop "basin plans" for their hydrologic areas, issue waste discharge requirements, take enforcement action against discharge violators and monitor water quality. The Lahontan Regional Water Quality Control Board (LRWQCB) is responsible for the California portion of the Upper Carson River Watershed.

- State of California Department of Fish and Game

Website: www.dfg.ca.gov

The Department of Fish and Game was established to protect and conserve plants, fish, wildlife and the habitats upon which they depend. The department consists of five Regions and manages natural resources throughout the entire state. The Department can provide technical assistance on a variety of fisheries, wildlife and habitat issues, participate in management planning and improvement projects and funding when available.

- State of California Department of Forestry and Fire Protection (CDF)

Website: www.fire.ca.gov

The Department of Forestry and Fire Protection was established to protect Californians from fire, respond to emergencies, and protect and enhance the state's forest, range and watershed resources. The Department oversees a variety of programs that can provide both technical assistance and funding resources.

- Nevada Division of Environmental Protection (NDEP)

Website: www.ndep.nv.gov/

The Division of Environmental Protection (NDEP) is responsible for implementation of statutory and regulatory provisions for the control of air and water (including point and nonpoint source) pollution and solid and hazardous waste management. NDEP has a variety of programs that directly or indirectly address nonpoint source (NPS) pollution issues and may offer assistance in NPS pollution control programs.

- Bureau of Air Quality Planning - The Bureau of Air Quality has responsibility for the issuance of air quality construction and operating permits. The purpose of the permits is to ensure, through enforceable permit conditions, that adequate air pollution control equipment is used in industrial processes to protect the ambient air quality standards and public health and safety, prevent injury to plant and animal life, prevent damage to property, and preserve visibility, scenic, aesthetic and historic values within the State.

- Bureau of Mining Regulation and Reclamation - The Bureau of Mining Regulation and Reclamation has the responsibility for protecting the environment from adverse impacts associated with mining activities. Permits for the design, construction, operation and closure of mining facilities are issued under the authority of NAC 445.242 through NAC 445.24388. The purpose of the permits is to protect waters of the State from unauthorized discharges from process components. These regulations do not apply to facilities involved solely in the mining and processing of sand and gravel, cinders, diatomaceous earth, slate, shale, gypsum, clay or crushed stone.

- Bureau of Water Pollution Control - The Bureau of Water Pollution Control is responsible for issuing ground water discharge permits, and the under the authority of Nevada Revised Statutes, Chapter 445. The purpose of the permit is to prevent groundwater pollution and to protect the environment. Permits are required for any activity such as waste treatment plants, etc., which would or could result in a discharge of pollutants having the potential to adversely impact groundwater.

This Bureau also issues National Pollution Discharge Elimination System (NPDES) permits. The purpose of these permits is to regulate discharges into surface waters to prevent water pollution, protect the environment and to preserve the beneficial uses that have been designated for those waters. Stormwater discharge permits are also issued under this program.

- Bureau of Waste Management - The Bureau of Waste Management issues permits for the operation of landfills under the authority of Nevada Revised Statutes. The purpose of

the permits is to ensure proper operation of such systems, in order to protect public health and the environment.

The Waste Management Bureau is also authorized to regulate hazardous wastes and to issue Resource Conservation and Recovery Act (RCRA) permits under authority of Nevada Revised Statutes (NRS) 459.400 through 459.600. Hazardous waste regulations and permits ensure proper management of hazardous wastes by generators, transporters, and treatment, storage, and disposal facilities.

- Bureau of Water Quality Planning - The Bureau of Water Quality Planning develops, reviews and revises beneficial uses and water quality standards for surface water, develops the total maximum daily loads of pollutants which can be introduced into a water body to meet in-stream water quality standards, manages the Wellhead Protection Program, the Comprehensive State Ground Water Protection Program, and conducts statewide surface water monitoring. This Bureau also manages the NPS pollution program. The focus of the program is to 1) identify categories of NPS pollution which contribute significantly to water quality degradation and are not adequately addressed or controlled by existing programs; 2) describe a strategy for managing these categories of NPS pollution; and 3) develop a schedule for achieving program goal and objectives.

The NDEP-BWQP requires and issues, as part of the 404 permitting process, a 401 Water Quality Certification on the Truckee and Carson River System.

- Bureau of Federal Facilities - The Bureau of Federal Facilities oversees permitting and remediation activities on lands owned by the Department of Energy and the Department of Defense.
- Bureau of Corrective Actions - The Bureau of Corrective Actions regulates underground storage tanks and provides regulatory oversight on remediation of leaking underground storage tanks (UST/LUST programs), provides oversight for RCRA corrective action cases, provides Certification of Remediation Consultants and UST personnel, and administers the Superfund programs.
- Nevada Division of Conservation Districts (NDCD)

Website: www.dcd.nv.gov

The NDCD oversees the activities of twenty-seven conservation districts throughout the State. NDCD provides technical and financial assistance to the conservation districts to improve the wise use and conservation of Nevada's natural resources, and sponsors education programs, public outreach, workshops and participation in the development of Nevada's Best Management Practices Handbook.

- Dayton Valley Conservation District (DVCD)
_Website: www.powernet.net/~juengers/wnvpg3.html

The DVCD, located in Lyon County, is Nevada's 28th and newest conservation district. Established in 1999 by the Nevada State Legislature, it began as the Middle Carson River Coordinated Resource Management Plan Working Group (CRMP) in 1994. After a devastating flood in 1997, the CRMP group concentrated on restoration of critically

eroding banks on the middle Carson River using new state-of-the-art bioengineering techniques. The District was honored with the second annual Wendell McCurry Award from the Nevada Division of Environmental Protection for excellence in improving water quality in the Carson River. The District was also awarded the Goodyear Award for the State of Nevada in recognition of its achievements in river improvement projects and noxious weed abatement, and also the EPA Region IX Watershed Award.

- Carson Valley Conservation District (CVCD)

Website: <http://www.conservationdistricts.org/>

Established in the 1940's the CVCD supports local resource conservation efforts in Carson Valley, Nevada. The District's support is demonstrated in a number of active ways such as: Implementing the Upper Carson River Watershed Management Plan, improving irrigation practices, noxious weed control, natural resource education and programs such as "Backyard Conservation". The CVCD also co-hosts an annual bioengineering workshop aimed at providing professionals and community members specialized training and hands-on experience in river restoration utilizing bioengineering techniques.

- Lahontan Conservation District (LCD)

Website unavailable

Lahontan Conservation District is a legal subdivision of the Nevada State Government that is self-governed by locally elected supervisors who set priorities for Churchill County. The District works cooperatively with the US Department of Agriculture Natural Resources Conservation Service. The District is involved in a number of projects including conservation planning with landowner involvement; on-farm evaluations of irrigation system efficiencies; education and information programs for community members; and noxious weed abatement.

- Alpine Resource Conservation District

Website: www.conservationdistricts.org/

The Alpine Resource Conservation District is responsible for the conservation of natural resources within the California portion of the Upper Carson River watershed.

- Nevada Division of Forestry (NDF)

Website: www.forestry.nv.gov

NDF manages and coordinates all forestry, nursery, endangered plant species and watershed resource activities on certain public and private lands on a statewide basis. Technical assistance regarding the management and conservation of woodland and riparian areas, financial assistance through several conservation programs and wildland fire prevention and protection are all NDF's responsibility. NDF has many resources, which can benefit future watershed implementation projects and overall watershed planning efforts.

- Nevada Division of State Lands (NDSL)

Website: www.lands.nv.gov

The NDSL provides land and land use planning services to the State, its agencies, and its people. In addition to three program areas, NDSL also administers other special programs as well as provide staff assistance to the Nevada TRPA and the State Land Use Planning Advisory Council. NDSL administers the Conservation and Resource Protection Grant Program, also known as the Question One Program. The goal of this program is to preserve water quality, protect open space, lakes, rivers, wetlands, and wildlife habitat, and restore and improve parks, recreational areas and historic and cultural resources.

- Nevada Division of State Parks (NDSP)

Website: <http://parks.nv.gov>

As outlined by the Nevada Revised Statute (NRS 407.013) the NDSP plans, develops and maintains a system of parks and recreation areas for the use and enjoyment of residents and visitors.

- Nevada Division of Wildlife (NDOW)

Website: www.ndow.org

One of the focuses of NDOW is environmental pollution which effects water quality, degrades wildlife and fisheries habitat and restricts production and/or propagation of fish and wildlife. NDOW can offer technical and educational assistance and at times financial assistance with NPS pollution control projects.

- Nevada Division of Water Resources (NDWR)

Website: www.water.nv.gov/

The Division of Water Resources is responsible for the appropriation of all surface and ground waters of the State, and regulates the construction of water wells. Nevada statutes exempt wells drilled before March 25, 1939, and those for single-family household use up to 1,800 gallons per day. The State Engineer is authorized to designate basins when administration of the basin is required to conserve ground water. Within designated basins, the State Engineer can establish preferred uses and limit withdrawals as needed. The State Engineer through a permit process regulates the following activities:

- appropriation of public waters;
- changing existing water rights;
- issuance of temporary changes of existing water rights;
- primary storage and use of secondary waste water;
- construction, reconstruction or alteration of dams;
- recharge, storage and recovery of water projects;

- claims of vested rights;
- subdivision review (permit not required but signature is); and,
- assignment of ownership of water rights (acknowledgment only, no permit required).

The State Engineer also licenses all well drillers and water right surveyors, maintains well logs from the drilling of all wells, and develops and enforces standards for well construction and closure. The goals of Nevada's water law are to protect the health and safety of Nevada's citizens, wildlife and fisheries, to preserve the quality of life and to protect the existing water rights of beneficial users.

Local Organizations

- Alpine County, California

Website: www.co.alpine.ca.us

There are two primary county entities, which are actively involved in watershed planning, the Alpine County Planning Commission and the Alpine County Board of Supervisors. The Planning Commission provides technical expertise and information regarding land use activities, master planning and zoning to the Board of Supervisors, who in turn adopt necessary ordinances, codes and policies to provide for economic growth and development. Both boards maintain and provide for the wise use and conservation of Alpine County's natural resources.

- Carson City, Nevada

Website: www.carson-city.nv.us/aboutcarson/vision.htm

Carson City will constantly strive to advance as a well-maintained community through open and accountable government leadership dedicated to providing public safety, responsible environmental planning, recreational opportunities, quality education, a natural setting and preservation of our cultural resources. The goal is to continue as a progressive, healthy, and livable community for future generations and to perpetuate a proud legacy as Nevada's historical State Capital. The Carson City Board of Supervisors lead Carson City through adopting of necessary ordinances, codes and policies for economic growth and development, and for the protection of natural resources.

- Carson City Wastewater Reclamation Plant (WRP)

Website; <http://www.carson-city.nv.us/CCUTL/wastewat.htm>

The Wastewater Reclamation Facility, located at the northwest corner of Edmonds Drive and East 5th Street, is authorized under Permit #NEV90008 by the Division of Environmental Protection for application of treated effluent on various lands for irrigation purposes.

Responsibilities include: 1) Treating domestic and industrial wastewater to meet the compliance's of State and Federal EPA; 2) Sewage lift pump stations; 3) Laboratory

monitoring, testing and recording of EPA compliance requirements and also for Plant process control; 4) land application and storage sites, Plant Operations and Maintenance.

- Carson Highlands Estates Wastewater Treatment Facility (WWTF)

Website not available

Carson Highlands Estates Wastewater Treatment Facility (WWTF), which is located at 2000 Highlands Drive, Moundhouse, Lyon County, NV. The WWTF is permitted for 0.068 million gallons per day on a 30-day average basis and treats domestic (sanitary) wastewater generated from 290 residences.

- Carson-Truckee Conservation District

Website unavailable

The Carson Truckee Water Conservancy District (District) was formed in 1958 and is a political subdivision of the State of Nevada. Business is conducted under the rules and regulations governing all state government entities, it holds regular monthly meeting and public budget hearings. The District includes all land and property within Carson City, Churchill and Washoe counties, and parts of Douglas, Lyon and Storey counties. The Board of Directors is comprised of one Director from each of the six counties, a representative from the Truckee Carson Irrigation District, Truckee Meadows Water Authority, and Washoe County Water Conservation District.

- Carson Water Subconservancy District (CWSD)

Website: www.cwsd.org

The CWSD, is a unique multi-county, bi-state agency dedicated to establishing a balance between the needs of the communities within the Carson River Watershed and the function of the river system. The Board of Directors consists of representatives from each of the five counties within the watershed plus two representatives from the agricultural community. Granted no regulatory authority of its own, the CWSD's mission is to work within existing governmental frameworks to promote cooperative action for the watershed that crosses both agency and political boundaries. CWSD serves as an information resource for the Carson River Watershed, and has overseen and funded numerous projects to better understand the complex dynamics of the region. Over 190 reports are currently catalogued at the CWSD and are available for use by the public. The CWSD serves as the coordinating entity for the integrated watershed planning process and the Carson River Coalition, and administers the AB380 Water Rights Purchase Program.

- Churchill County, Nevada

Website: www.churchillcounty.org/aboutcounty.htm

There are two primary county entities, which are actively involved in watershed planning, the Churchill County Planning Commission and the Churchill County Board of Commissioners. The Planning Commission provides technical expertise and information regarding land use activities, master planning and zoning to the Commissioners, who in turn adopt necessary ordinances, codes and policies to provide for economic growth and

development, and for the wise use and conservation of Churchill County's natural resources.

- Douglas County, Nevada

Website: www.co.douglas.nv.us/

Douglas County residents are served by the Douglas County Planning Commission and the Douglas County Board of County Commissioners. The Planning Commission oversees a planning staff and provides technical input and recommendations to the County Commissioners. The Douglas County Planning Department maintains a significant amount of land use, utility infrastructure and natural resource data.

- Douglas County Sewer Improvement District No. 1 (DCSID)

Website: <http://cocode.co.douglas.nv.us/mpchapter10.htm>

The DCSID Treatment Facility is also located in the Lake Tahoe Basin, and the District disposes of its treated effluent on irrigated fields on the Marvin Settlemeyer Ranch and a portion of Bently Agrodynamics property.

- Incline Village General Improvement District (IVGID)

Website: www.ivgid.org

The Incline Village General Improvement District, commonly referred to as IVGID, is a quasi-public agency established under Nevada Revised Statute, Chapter 318 and chartered to provide water, sewer, trash and recreation services for the communities of Incline Village and Crystal Bay, Nevada. It is governed by an elected Board of Trustees which, acting on behalf of the electorate, sets policy and determines strategies for the accomplishing its charter. Both Incline Village and Crystal Bay, Nevada are located within Washoe County, the entity that had the authority to create IVGID, and they are both unincorporated areas within Washoe County.

Within the limits of the statutes, IVGID is empowered to determine what facilities and services it should offer that will preserve or enhance the general health, safety and welfare of the community. It may set rates, tolls and fees to be charged for the provision of those facilities and services, and it may borrow or raise funds to acquire, construct and/or provide those facilities and services to the community. Finally, IVGID has the power to levy and collect taxes necessary to sustain its operations.

- Indian Hills General Improvement District (IHGID)

Website: www.indianhillsnevada.com

The Indian Hills General Improvement District is a multi function district, with an elected Board of Trustees, who, within the established boundaries of the District, own and govern the development, maintenance, and use of public facilities such as the water and sewer systems, streets and sidewalks, parks and open space.

IHGID serves residential, commercial, and other customers in the Indian Hills/Jacks Valley Planning Community. IHGID operates two water systems; all customers are served by the main system except for the Jacks Valley School District, which is served by a subsystem.

- Lahontan Valley Environmental Alliance (LVEA)

Website: www.lvea.org/

The Lahontan Valley Environmental Alliance is committed to organize and coordinate the efforts to protect the natural resources and the economic vitality in the Lahontan Valley. Lahontan Valley Environmental Alliance respects the inherent sovereignty of its members and works toward identifying common resource issues and pursuing mutually beneficial solutions.

- Lyon County, Nevada

Website: www.lyon-county.org/

Lyon County residents are served by the Lyon County Planning Commission and the Lyon County Board of Commissioners. The Planning Commission oversees a planning staff and provides technical input and recommendations to the County Commissioners. The Lyon County Planning Department maintains a significant amount of land use, utility infrastructure and natural resource data.

- Markleeville Public Utilities District (PUD)

No website available

The Markleeville Public Utility District operates a sewage treatment facility serving the town of Markleeville.

- Minden-Gardnerville Sanitation District (MGSD)

Website: <http://cocode.co.douglas.nv.us/mpchapter10.htm>

The MGSD Wastewater Treatment Facility is located in Minden and serves the towns of Minden and Gardnerville and by contract, the Gardnerville Ranchos area, as well as other developments, such as the Bently Science Park, which are not located within the previously mentioned entities' boundaries.

- Newlands Protective Association

Website: www.newlands.org/

The Newlands Water Protective Association is a non-profit corporation formed in 1993 whose purpose is to protect and defend the water and hydropower rights of the water right owners of the Newlands Reclamation Project in Northwestern Nevada.

NWPA primarily represents farmers, but the leadership includes individuals from all walks of life including educators, lawyers, administrators and scientists.

- North Valley Wastewater Treatment Facility (NVWWTF)

No Website available

Douglas County operates the North Valley Wastewater Treatment Facility in the Johnson Lane Planning Community, serving residential uses in some Johnson Lane subdivisions as well as industrial uses in the Airport Community.

- Rolling A Wastewater Treatment Facility (RAWWTF)

Website: www.lyon-county.org/utilities/wastewtrs.htm

Rolling "A" Wastewater Treatment Facility is located at Fort Churchill and River Roads in Lyon County. This state of the art facility has been completed with revenues generated

from development. This plant will provide reclaimed water that will benefit existing and future agriculture.

- Silver Springs General Improvement District (SSGID)

Website: www.silverspringsonline.com/the_community.htm

Silver Springs is governed by Lyon County with local input from the Silver Springs Advisory Board. The more densely populated area near the 50/95A intersection is served by the Silver Springs General Improvement District and the Silver Springs Mutual Water Company. The remainder of the area uses private wells and septic systems.

- South Tahoe Public Utilities District (STPUD)

No Website available

- Truckee Carson Irrigation District

Website: www.tcid.org/

TCID is a political subdivision of the State of Nevada organized, and chartered in 1918 for the purpose of representing the water right holders within the boundaries of the Newlands Project in connection with the operations of the Project. The District was formed, and is paid for, by landowners within the boundaries of the Newlands Project who own water rights appurtenant to their land, which water rights the federal government is obligated, both contractually and statutorily, to serve. As a result, TCID's first and fundamental obligation is to the farmers who are its constituents-promoting their rights and defending their interests with respect to the operations of the Newlands Project.

- Western Nevada Resources, Conservation and Development (WNRC&D)

Website: <http://www.powernet.net/~juengers/index.htm>

The WNRC&D, located in Carson City, Nevada, is a USDA program that helps local groups plan and implement activities necessary to achieve the development, improvement, conservation and wise use of the natural and human resources of the area. Member-sponsors include Carson City, Churchill, Douglas, Lyon, Storey, and Washoe Counties; Walker River Irrigation District; Carson Water Subconservancy District; eight conservation districts; Washoe Tribe, Pyramid Lake Paiute Tribe, Yerington Paiute Tribe, Fallon Paiute-Shoshone Tribe, and the Walker River Paiute Tribe. Current project measures include river restoration utilizing bioengineering techniques, commercial composting, open space protection, carbon sequestration, streambank stabilization, and floodplain retention. WNRC&D coordinates the Carson River Workdays that have involved over 10,000 community members and over 100 organizations since 1995.

Watershed Groups

- Alpine Watershed Group

Website: www.alpinecountyca.com/watershed/index.html

The Alpine Watershed Group works to preserve and enhance the natural system functions of Alpine County's watersheds for future generations. The group works by inspiring participation to collaborate, educate, and proactively implement projects that benefit and steward the County's watersheds. Meetings are held on a monthly basis and are open to the public.

- Carson River Coalition

Website: www.cwsd.org

The CRC is a large watershed wide stakeholder group that was established to serve as the steering committee for the integrated watershed planning process. The goal of watershed process is to establish a program for the long-term management of the resources of the Carson River Watershed that addresses the diverse needs and concerns of all stakeholders. Participants in the CRC include landowners, local, state and federal agencies, environmental, and citizen-driven groups. The Carson Water Subconservancy Districts serves as the coordinating entity for the CRC. Meetings are held on a bi-monthly basis and are open to the public.

- Clear Creek Watershed Council

Website: www.conservationdistricts.org/ccwc/

The Clear Creek Watershed Council's mission is to protect, conserve, and restore the unique and valuable resource of Clear Creek and its watershed through collaboration, education, planning, and project implementation. The Clear Creek Watershed Council is comprised of landowners, concerned citizens, politicians, and natural resource managing agencies that share a common interest and responsibility to address the issues regarding the quality and health of the Clear Creek watershed. The goals of the council are to maintain a high level of water quality, protect healthy native fisheries and wildlife, minimize impacts of development and erosion, protect the riparian corridor, promote cultural and historical integrity, and encourage public access and passive recreation. These goals will be attained by means of identifying and assessing potential issues of importance in the watershed, enhancing relationships between agencies and stakeholders, educating the members of the council and the community, and coordinating efforts or activities that have an impact on the watershed. Through collaboration, education, planning, and project implementation the goals of the Clear Creek Watershed Council may be achieved and the primarily natural, ecologically functioning watershed that Clear Creek is today will be protected, conserved, and restored for tomorrow.

Community Organizations

- Carson River Advisory Committee

The Carson River Advisory Committee provides the Carson City Board of Supervisors with advice on matter concerning the Carson City Master Plan updates as it pertains to uses of the Carson River, coordination and implementation of various projects along the river, and promotion of education and public awareness of the vital resources of the Carson River. Meetings are open to the public and are held the first Wednesday of each month in the Carson City Community Center, Sierra Room.

- River Wranglers

www.riverwranglers.org

River Wranglers is a non-profit organization whose mission is to explore, conserve and celebrate the Carson River through community programs, projects and hands-on experience. The program offers opportunities for high school student mentors to work with younger students regarding water quality and river restoration activities. Students benefit from participating in environmental activities and restoration projects which address watershed issues such as streambank stabilization and restoration, groundwater movement and contamination, fish and wildlife, wetlands, and noxious weeds.

Environmental Organizations

- Lahontan Audubon Society

Website: www.nevadaaudubon.org

The mission of the Lahontan Audubon Society is to preserve and improve the remaining habitat of birds and other wildlife, restore historical habitat, and educate the public, with emphasis on children, providing vision to all about our unique Nevada environments.

- Sierra Nevada Alliance

Website: www.sierranevadaalliance.org

Since 1993 the Sierra Nevada Alliance has been protecting and restoring Sierra lands, water, wildlife and communities. Our mission is to protect and restore the natural resources of the Sierra Nevada for future generations while promoting sustainable communities. The organization is an Alliance of conservation groups that are based or work in the Sierra Nevada region. There are over sixty member groups that span the entire 400 mile mountain range.

- The Nature Conservancy

Website: www.nature.org

The Nature Conservancy is a non-profit organization whose mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. The Nevada Chapter of The Nature Conservancy has 6,000 members and has helped conserve critical lands in Nevada since 1983, including Soldier Meadows, Red Rock Canyon, Ash Meadows, Franklin Lake, Stillwater and Carson Lake wetlands, and other important natural areas. Since 2000, The Nature Conservancy has been working on the Carson River project with a diverse group

of river stakeholders, biologists, and land managers. One of the conservation priorities for the Carson River is to protect the floodplain through the use of acquisitions and conservation easements. The Nature Conservancy has protected approximately 2,600 acres and 7 river miles in Douglas County through acquisitions and conservation easements. The Nature Conservancy also is working with the Carson River Coalition to identify and implement additional methods of protecting the floodplain. In addition, The Nature Conservancy is working to protect and, where possible, re-establish the natural function, structure and composition of the river and its riparian and wetland ecosystems. Currently The Nature Conservancy is developing a restoration design that will restore and enhance a section of the Carson River and its riparian wetlands as it passes through The Nature Conservancy's River Fork Ranch property. Through a partnership with Bently Agrowdynamics, The Nature Conservancy is also working to protect and restore the riparian woodland habitat on River Fork Ranch by developing and implementing sustainable agriculture practices.

Education and Research

- University of Nevada Cooperative Extension (UNCE)

Website: www.unce.unr.edu

The Cooperative Extension Service has a primary role of public education (educational outreach and technology transfer), utilizing the technical expertise of specialists from the University of Nevada-Reno and elsewhere for field assistance when necessary.

Assistance is provided through local extension staff who, in turn, work closely with other agencies.

- Desert Research Institute (DRI)

Website: www.dri.edu

The DRI is the nonprofit research campus of the Nevada System of Higher Education (NSHE), which is overseen by a Chancellor and a 13-member Board of Regents. DRI is a unique blending of academia and entrepreneurship. DRI employs more than 500 faculty, support staff, and students who are engaged in a research enterprise generating approximately \$45 million in total annual revenue. At any give time, DRI is engaged in about 300 scientific research projects from our main research campuses in Las Vegas (Southern Nevada Science Park) and Reno (Dandini Research Park), with subsidiary campuses in Boulder City, Nevada and Steamboat Springs, Colorado. DRI's environmental research programs are directed from three core divisions (Atmospheric Sciences, Earth and Ecosystem Sciences, and Hydrologic Sciences) and three interdisciplinary centers (Center for Arid Lands Environmental Management, the Center for Watersheds and Environmental Sustainability) and the Frank H. Rogers Center for Environmental Remediation and Monitoring (CERM).

Tribal Governments

- Fallon Paiute Shoshone Tribe

Website: www.fpst.org/thetribe/thetribe.htm

The Fallon Paiute Shoshone Tribe, also known as the Toi Ticutta (cattail eaters) is located in the Lahontan Basin, in the shadow of the sacred Fox Peak Mountain.

At the foot of the Fox Peak was the terminus of the Carson River. For centuries this watershed flowed into the area now called the Carson Sink. Prior to the contact period, the Paiute people enjoyed the wealth of a huge marshland with an abundance of waterfowl, fish and marsh plants. The surrounding desert and mountains also provided wild game and edible plant food. Also very important to the Paiute people were the medicinal plants in the valley and nearby mountains. To generalize the territory that the Toi Ticutta inhabited surrounds the area of present day Fallon. The Tribe ranged to the east approximately 60 miles to the west, 50 miles along the Carson River to the South approximately 30 miles and to the North approximately 40 miles.

- Pyramid Lake Paiute Tribe

Website: www.plpt.nsn.us/plpt.html

10 Tribal Council members who are elected bi-annually in December and are on staggered two-year terms govern the Pyramid Lake Paiute Tribe. The Tribe operates under the Indian Reorganization Act Constitution and By-Laws approved on January 26, 1936 by the Department of Interior.

The Tribes' Reservation is located thirty-five miles northeast of Reno, Nevada in a remote desert area located in the counties of Washoe, Lyon, and Storey. The area of the reservation contains 475,000 acres or 742.2 square miles. Out of this acreage approximately 112,000 acres cover the surface of a terminal desert lake, Pyramid Lake. Pyramid Lake is one of the most valuable assets of the Tribe and is entirely enclosed within the boundaries of the Reservation. Pyramid Lake is approximately 15 miles long and 11 miles wide. Pyramid Lake measures 350 feet at its deepest point.

- Washoe Tribe of California and Nevada

Website: www.washoetribe.us

The Washoe Tribe of Nevada and California is a federally recognized Indian Tribe organized pursuant to the Indian Reorganization Act of June 18, 1934, as amended. The Tribe has four communities, three in Nevada (Stewart, Carson, and Dresslerville), and one in California (Woodfords). There is also a Washoe community located within the Reno-Sparks Indian Colony. The Tribe has jurisdiction over trust allotments in both Nevada and California, with additional Tribal Trust parcels located in Alpine, Placer, Sierra, Douglas, Carson, and Washoe Counties.

Appendix B

County's Land Use and Land Ownership Maps

Land Use Alpine County May 2007

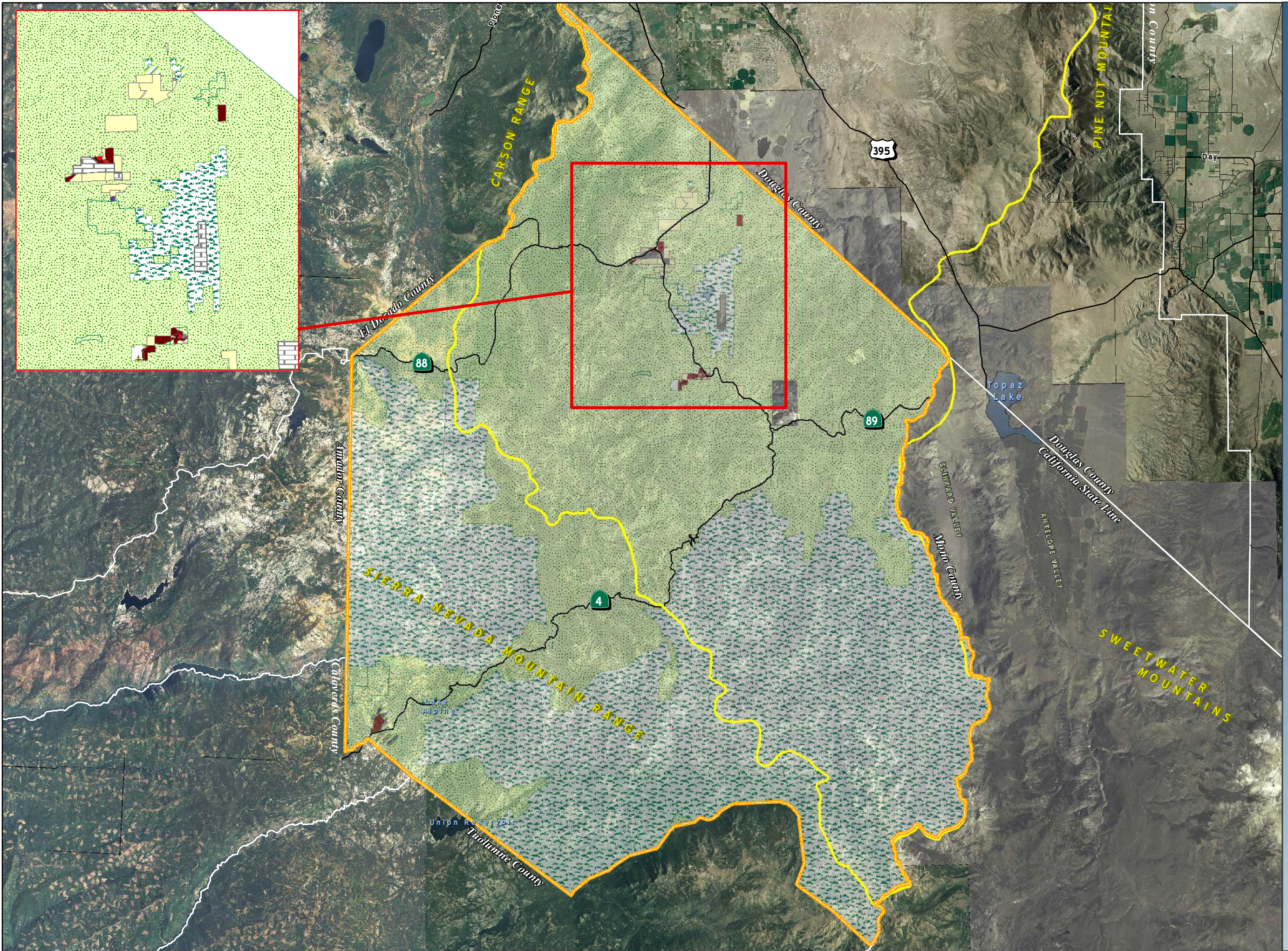
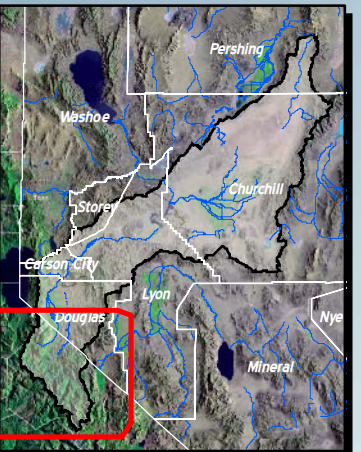


Map Elements

- Roads
- County Boundaries
- Water Bodies
- Watershed Boundary
- Alpine County Boundaries

Land Use Codes

- Agricultural
- Commercial
- Industrial
- Land Preserve
- Neighborhood Commercial
- Planned Development
- Residential Estates
- Residential Neighborhoods
- Timber Preserve



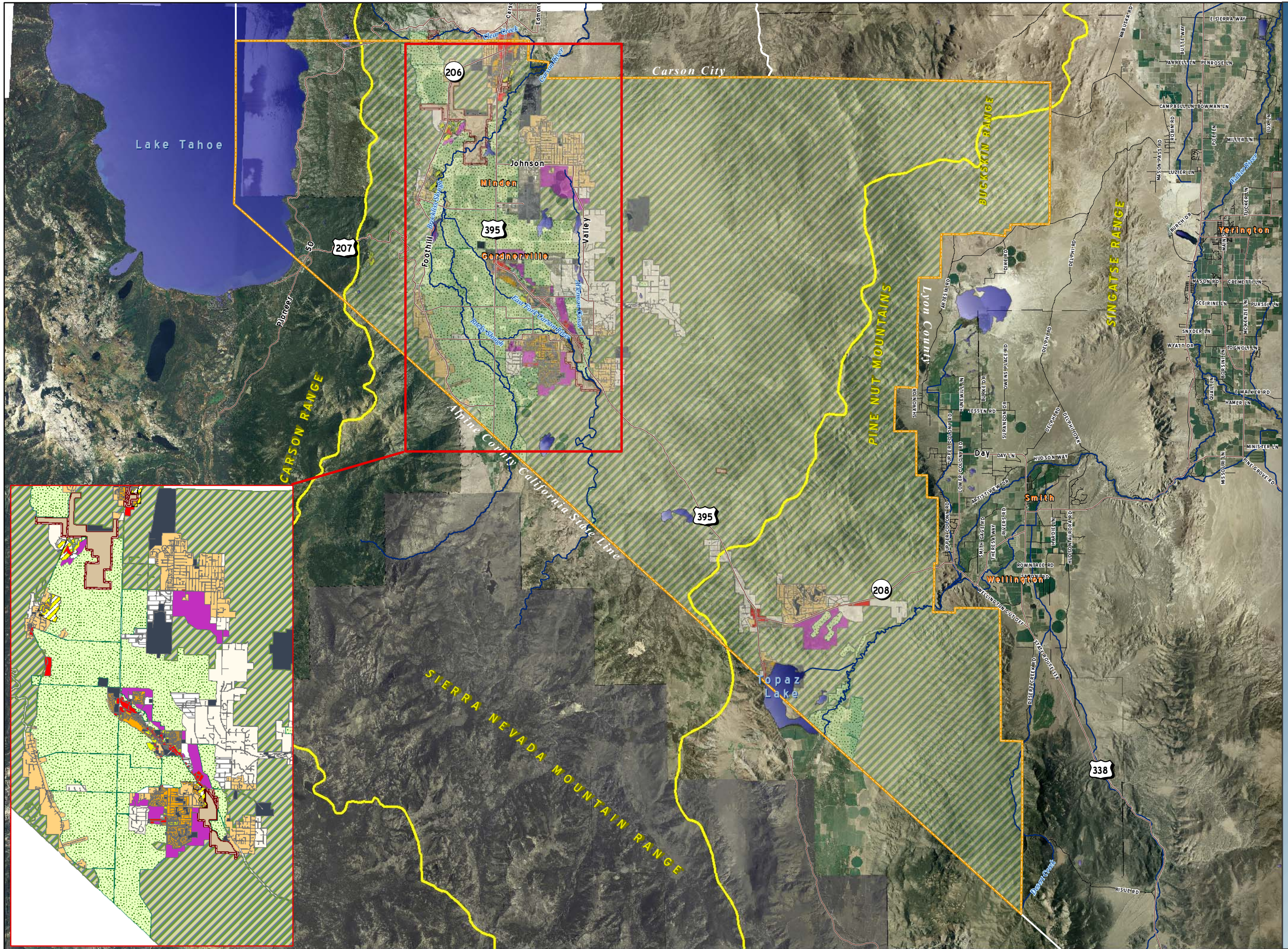
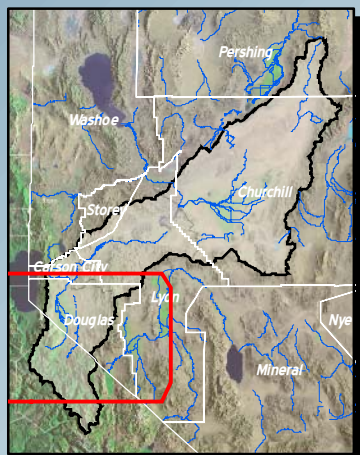
Land Use Douglas County

May 2007



Map Elements

- Streets
- Douglas County Boundaries
- NV Counties
- Water Bodies
- Watershed Boundary
- Land Use Codes**
 - Agriculture
 - Commercial
 - Community Facilities
 - Forest and Range
 - Industrial
 - Washoe Tribal Land
 - Multi Family Residential
 - Receiving Area
 - Recreation
 - Rural Residential
 - Single Family Estates
 - Single Family Residential

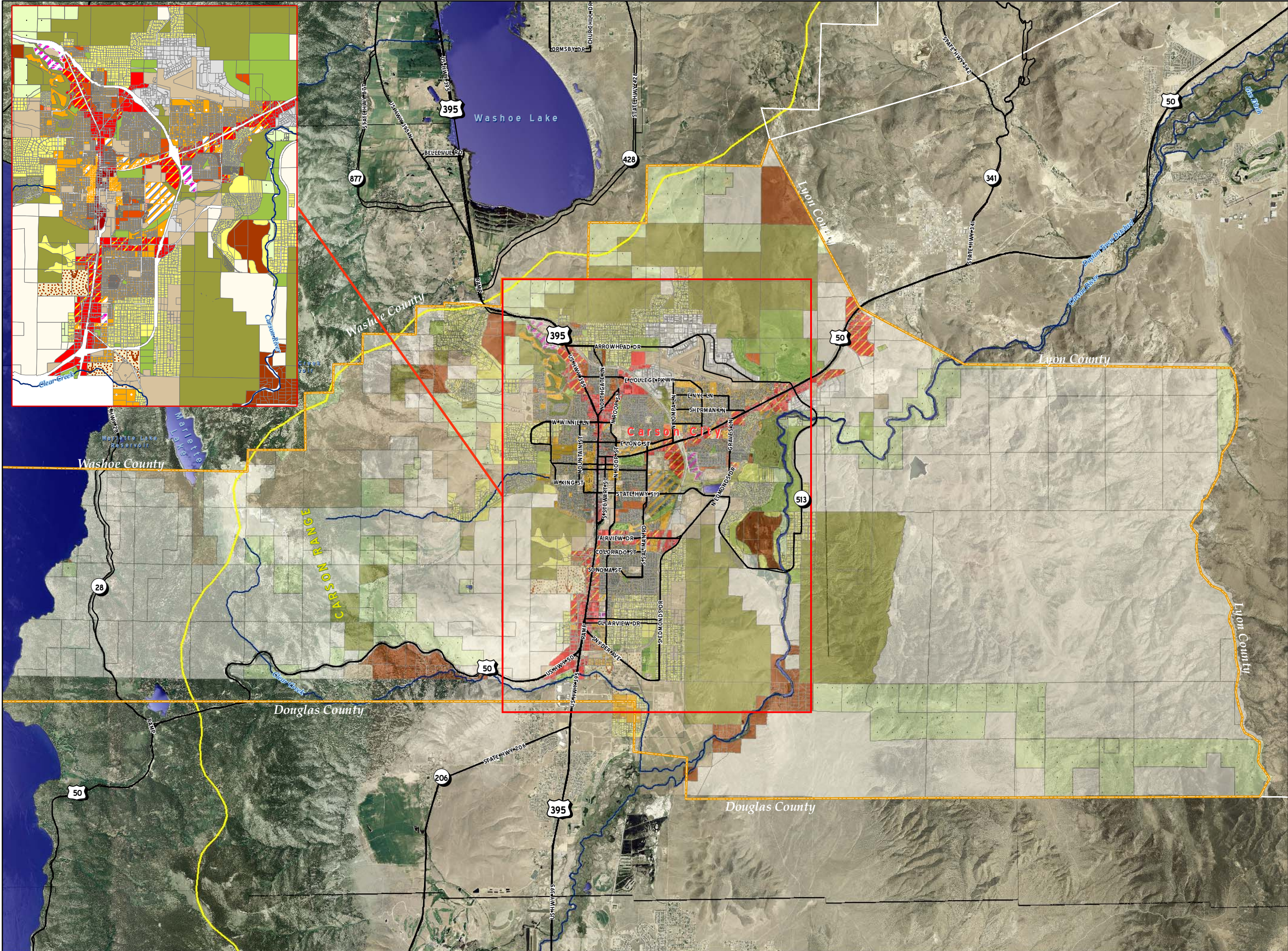
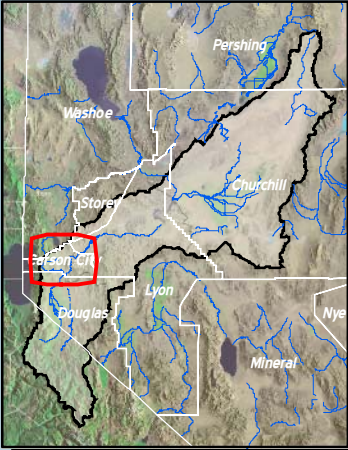


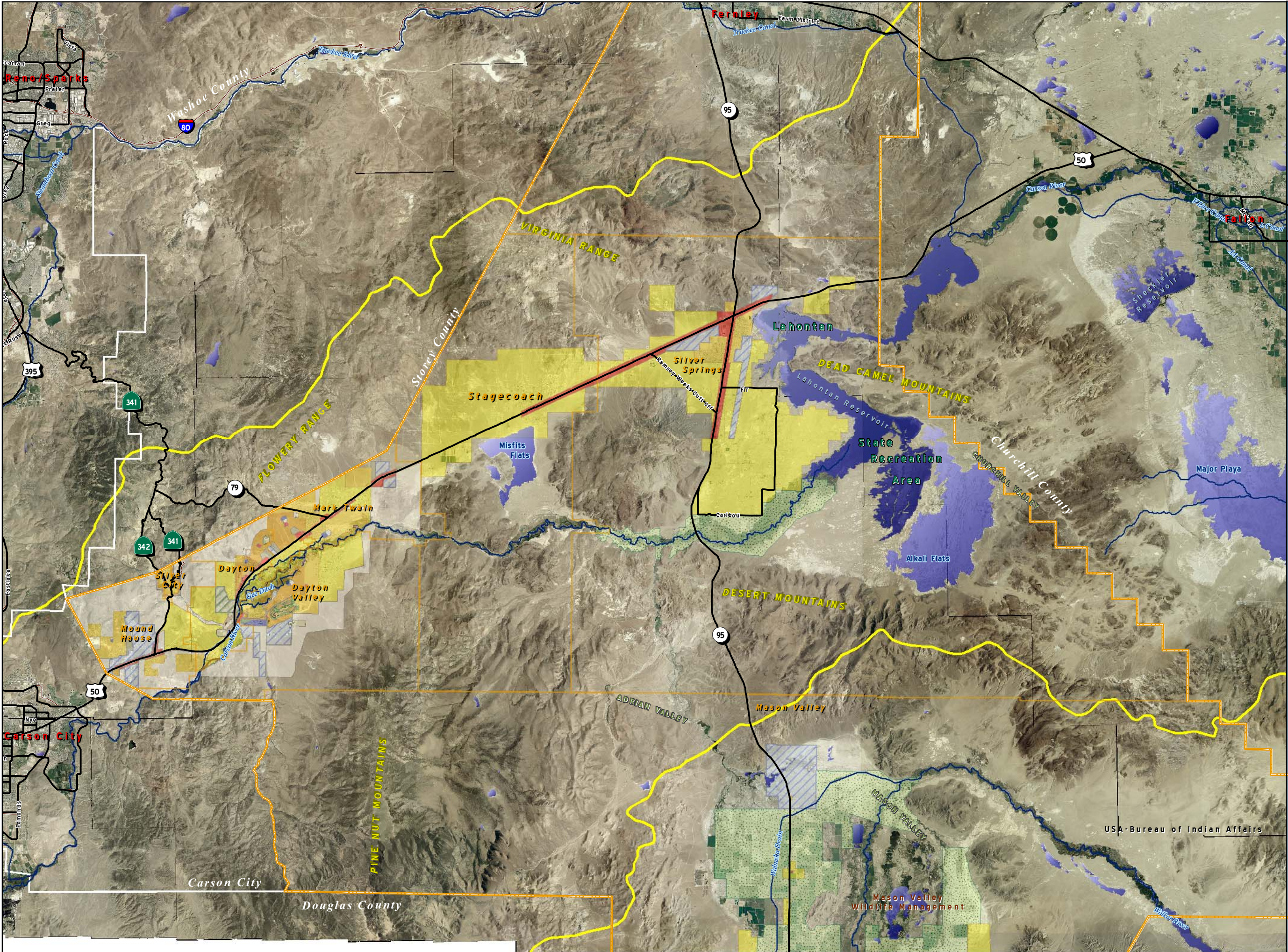
Land Use
Carson City
May 2007



Map Elements

- Roads
Carson City Boundaries
NV Counties
Water Bodies
Watershed Boundary
- Land Use Codes**
- Mixed-Use Employment
 - Mixed-Use Residential Neighborhood
 - Downtown Mixed-Use
 - Mixed-Use Commercial
 - Community/Regional Commercial
 - Neighborhood Commercial
 - Office
 - Industrial
 - CR
 - Rural Residential
 - Low Density Residential
 - Medium Density Residential
 - High Density Residential
 - Public Conservation
 - Open Space
 - Parks and Recreation
 - Public/Quasi-Public
 - Vacant Private Land
 - Washoe Tribe





Land Use Lyon County

May 2007

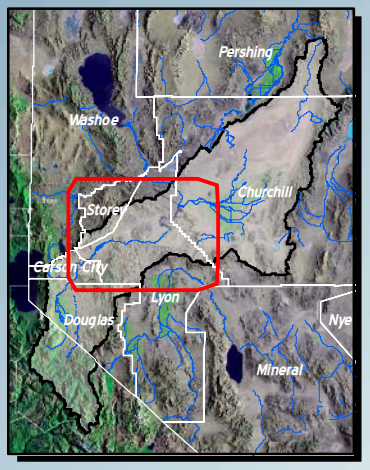
All areas with no color within Lyon County boundaries are considered Open Space.

Map Elements

- Lyon County Boundaries
- Cities & Townsites
- NV Counties
- Watershed Boundary
- Water Bodies

Land Use Plan

- Agricultural
- Business Offices
- Commercial
- Educated Facilities
- Golf Course
- High Density Residential
- Historical Overlay
- Industrial
- Low Density Residential
- Lyon County Land
- Medium Density Residential
- Open Space
- Park
- Recreational Vehical Park
- Sewer Plant
- Sports Complex
- State Park
- Very Low Density Residential
- River



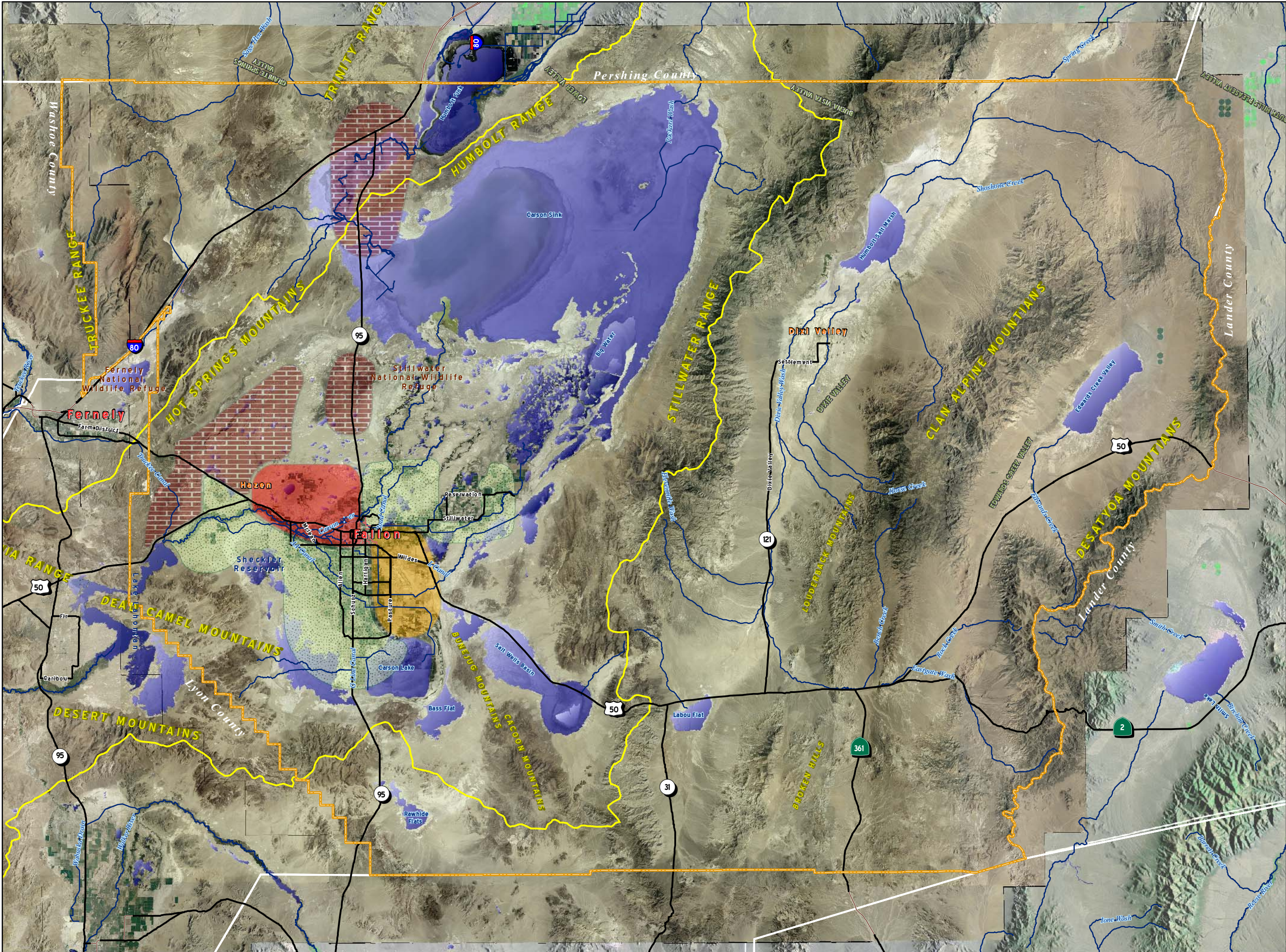
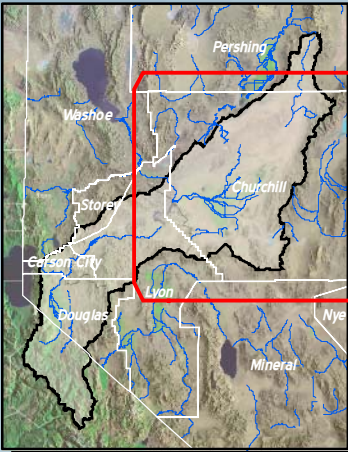
Land Use
Churchill County
May 2007

All areas with no color within Lyon County boundaries are considered Open Space.



Map Elements

- Churchill County Boundary
- State Hwy
- Major Roads
- Fallon City Limits
- Rivers, Ditches, Creeks, & Canals
- Churchill County
- NV Counties
- Watershed Boundary
- Planning Boundaries
 - AGRICULTURE
 - BASE BUFFER / AGRICULTURE
 - INDUSTRIAL
 - URBANIZING
 - Water Bodies



Land Ownership
Alpine County
May 2007

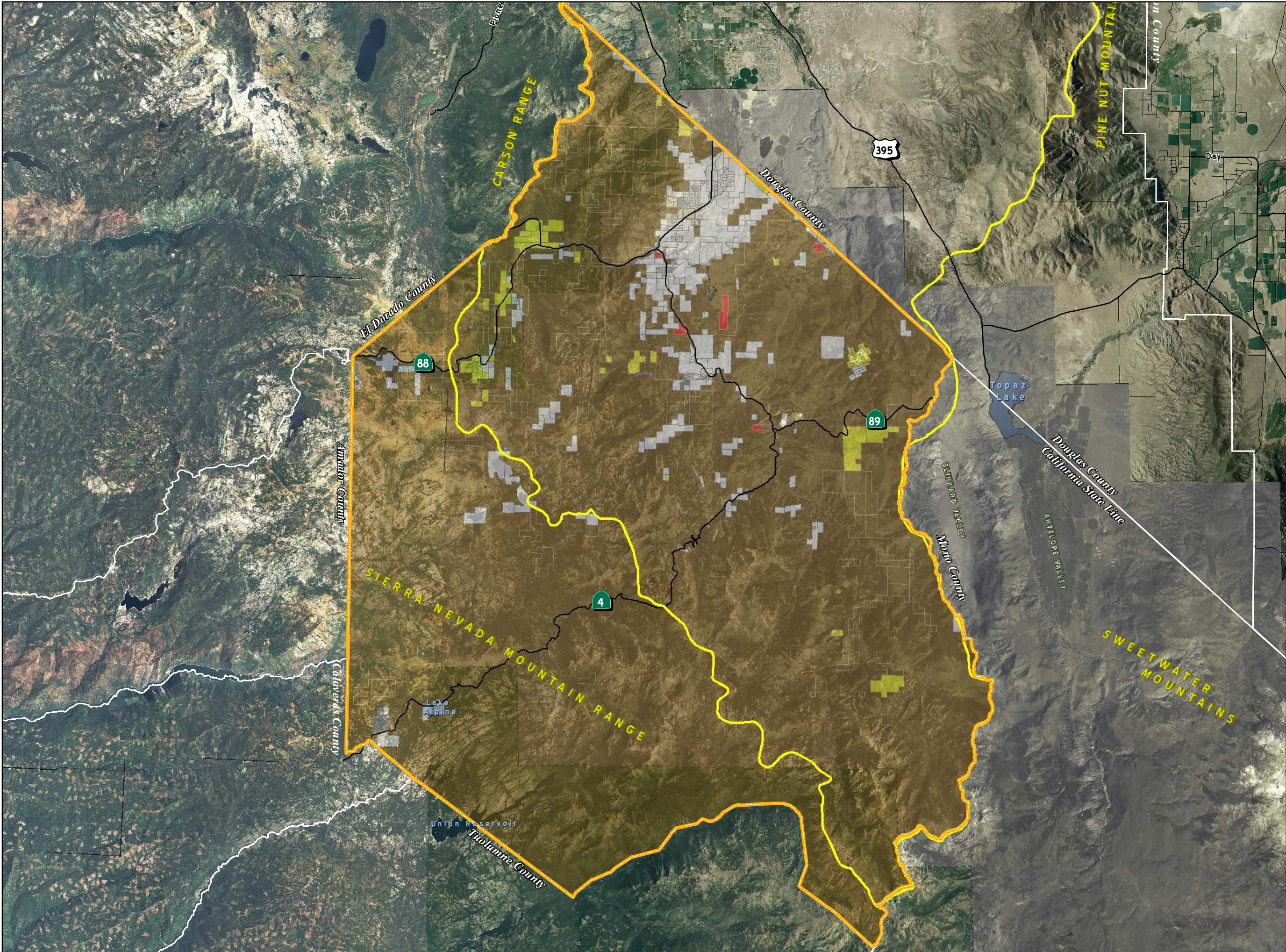
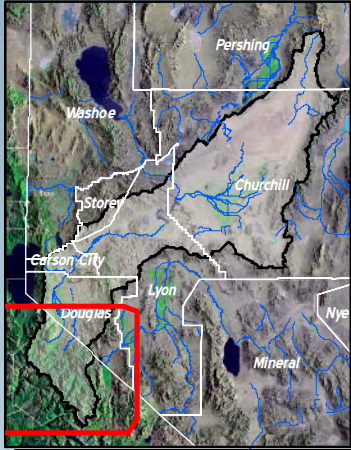


Map Elements

- Roads
- County Boundaries
- NV Counties
- Water Bodies
- Watershed Boundary
- Alpine County Boundaries

Ownership

- Alpine County
- Bureau of Indian Affairs
- State of California
- Federal Lands
- Private Lands



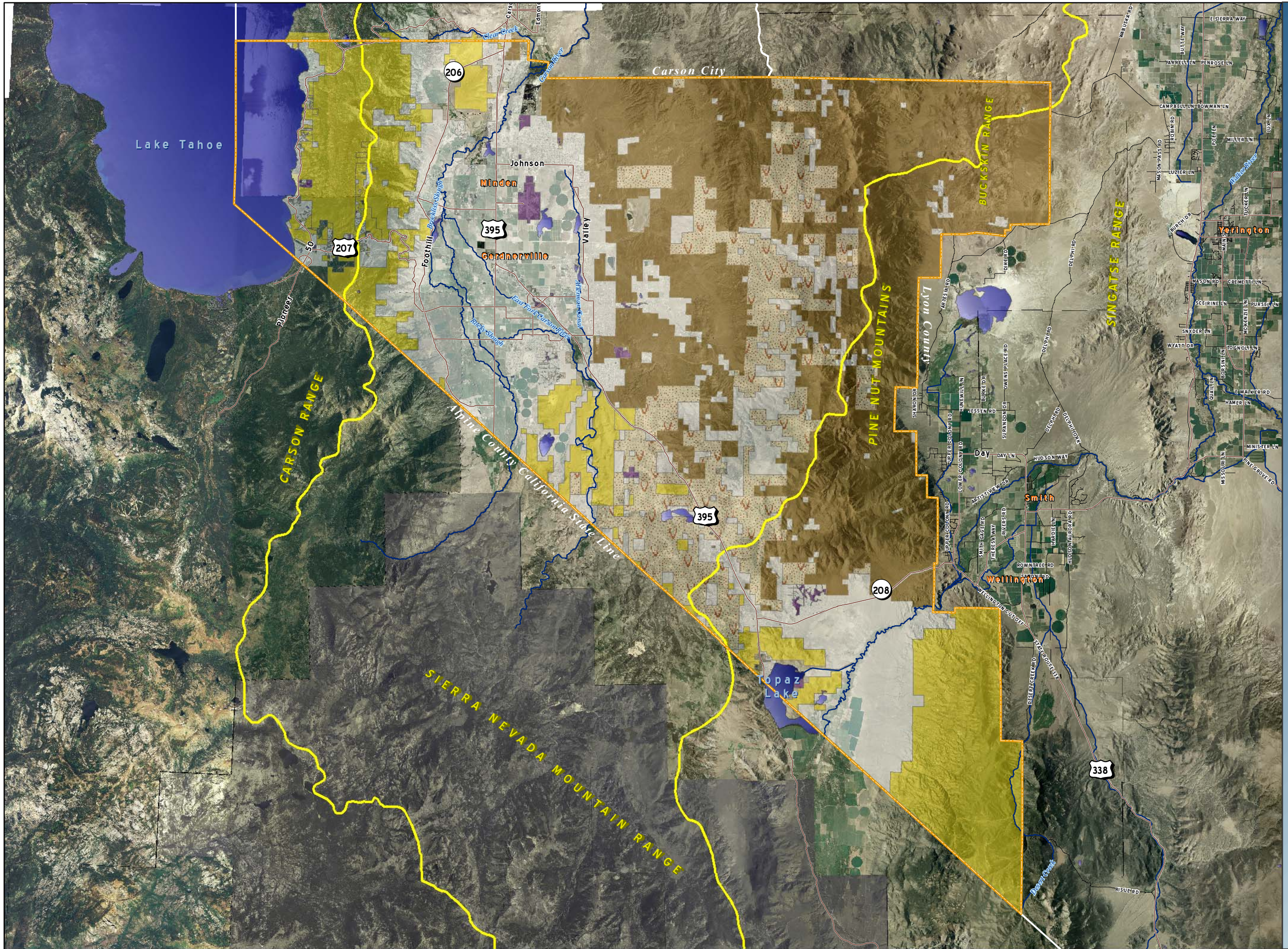
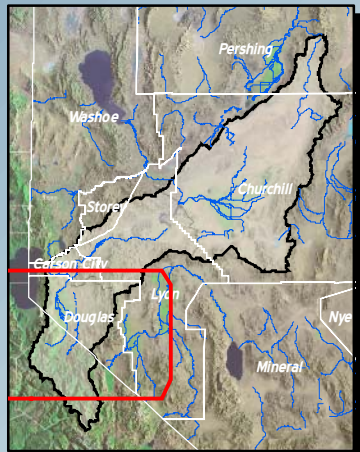
Land Ownership Douglas County

May 2007



Map Elements

- Streets
- Douglas County Boundaries
- NV Counties
- Water Bodies
- Watershed Boundary
- Private Ownership
- Douglas County
- Federal Land
- BLM
- Indian Affairs



Land Ownership Lyon County

May 2007

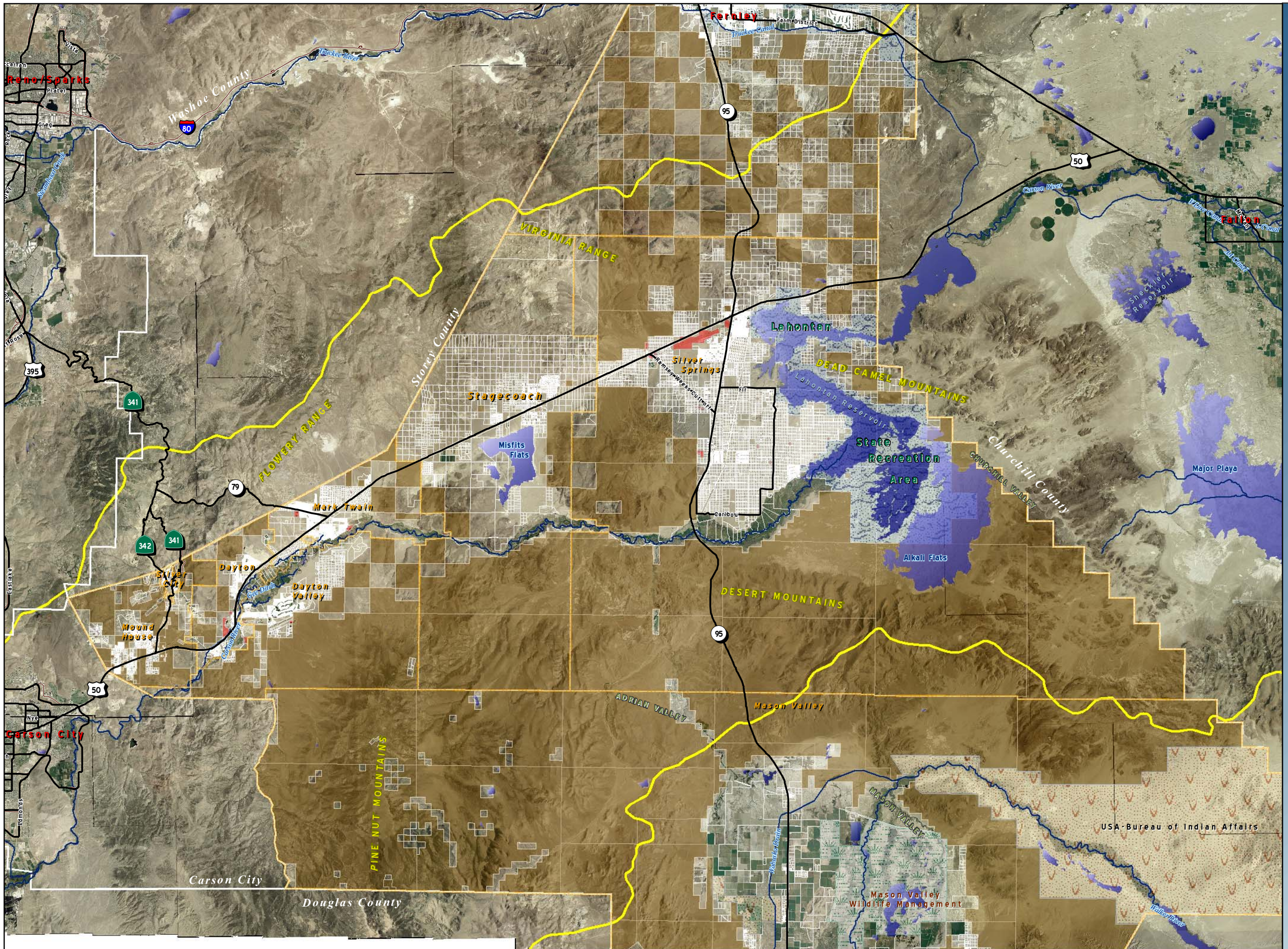
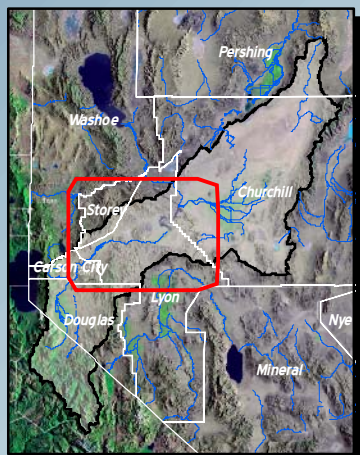


Map Elements

- Cities & Townsites
- NV Counties
- Watershed Boundary
- Water Bodies

Ownership

- Bureau of Land Management
- Bureau of Reclamation
- Department of Forestry
- Indian Lands
- Lyon County
- MV Wildlife Management Area
- Private Parcels

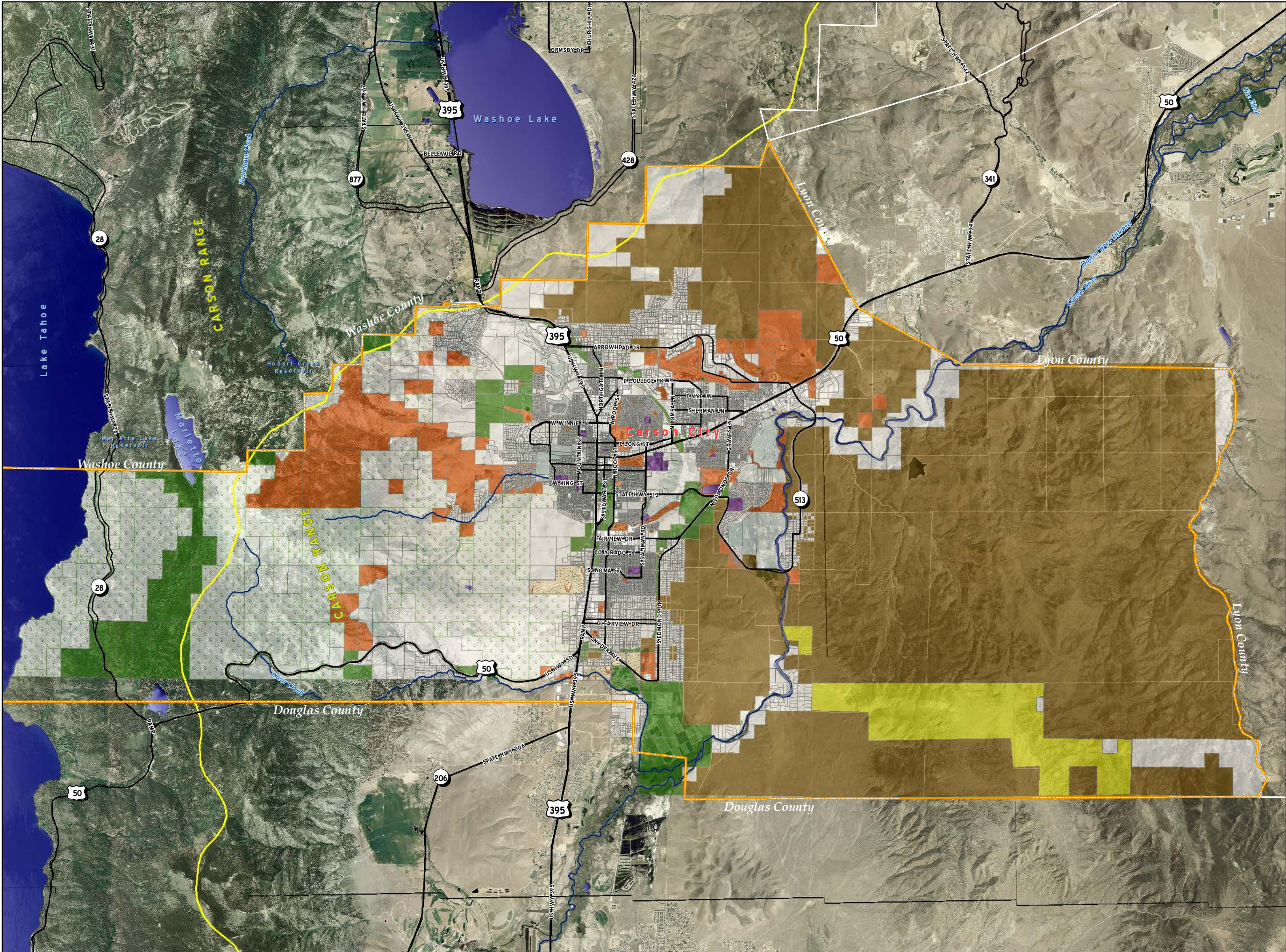
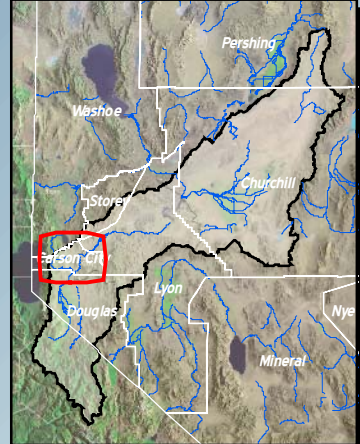


Land Ownership
Carson City
May 2007



Map Elements

- Roads
- Carson City Boundaries
- NV Counties
- Water Bodies
- Watershed Boundary
- Ownership**
- BIA ALLOTMENTS
- BUREAU OF INDIAN AFFAIRS
- BUREAU OF LAND MANAGEMENT
- CARSON CITY SCHOOLS
- CITY OF CARSON CITY
- PRIVATE
- STATE OF NEVADA
- U.S. FOREST SERVICE
- U.S. GOVERNMENT



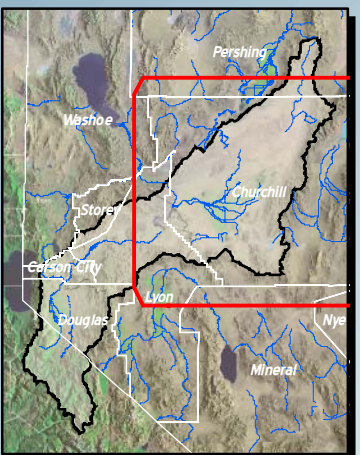
Land Ownership Churchill County

May 2007



Map Elements

-  Churchill County Boundary
 -  State Hwy
 -  Major Roads
 -  Fallon City Limits
 - Rivers, Ditches, Creeks, & Canals
 -  Churchill County
 -  NV Counties
 -  Watershed Boundary
- Federal Lands**
-  Bureau of Land Management
 -  USA - Dept of Navy/Engine Field
 -  Private Parcels
 -  Water Bodies



Appendix C

Nevada Water Quality Standards Summary
Nevada Water Quality Standards NAC
Nevada Beneficial Uses

Summary of Selected Beneficial Use Criteria for Waterbodies Identified in the Nevada Administrative Code

NAC	Name	Description	Beneficial Use Criteria													
			pH	Dissolved Oxygen (mg/l)	Maximum Temperature (degrees C)	Total Phosphorus (as P - mg/l)	Total Nitrogen (as N - mg/l)	Nitrite (as N - mg/l)	Nitrate (as N - mg/l)	Total Suspended Solids (mg/L)	Turbidity (NTU)	Total Dissolved Solids (mg/l)	Chloride (mg/l)	Sulfate (mg/l)	Color (PCU)	E coli (number/militer)
CLASS A WATERS																
445A.124	Various waterbodies		6.5 - 8.5	6.0	20°	0.05 - 0.10						500				
CLASS B WATERS																
445A.125	Various waterbodies		6.5 - 8.5	5.0 (nontrout waters); 6.0 (trout waters)	20° (trout waters); 24° (nontrout waters)	0.1						500				
CLASS C WATERS																
445A.126	Various waterbodies		6.5 - 8.5	5.0 (nontrout waters); 6.0 (trout waters)	20° (trout waters); 34° (nontrout waters)	0.3						500				
CLASS D WATERS																
445A.127	Various waterbodies		6.0 - 9.0	3.0												
CARSON RIVER BASIN																
445A.147	West Fork Carson River	At stateline	6.5 - 9.0	5.0 (Nov-May); 6.0 (Jun-Oct)	13° (Nov-May); 17° (Jun); 21° (Jul); 22° (Aug-Oct)	0.10 (AA)		0.06	10	25	10	500 (AA)	250	250	75	126 (AGM); 410
445A.148	Bryant Creek	At stateline														
445A.149	East Fork Carson River	At stateline														
445A.150	East Fork Carson River	Stateline to Highway 395														
445A.151	East Fork Carson River	Highway 395 to Muller Lane			13° (Nov-Apr); 17° (May-June); 23° (July- Oct)	80	50									
445A.152	EF/WF & Carson River	EF at Muller to Genoa Lane & WF at stateline to Genoa Lane														
445A.153	Carson River	Genoa Lane to Cradlebaugh Bridge														
445A.154	Carson River	Cradlebaugh Bridge to Mexican Ditch Gage			18° (Nov-May); 23° (Jun-Oct)	50										
445A.155	Carson River	Mexican Ditch Gage to New Empire														
445A.156	Carson River	New Empire to Dayton Bridge			11° (Nov-Mar); 24° (Apr-Jun); 28° (July- Oct)	25										
445A.157	Carson River	Dayton Bridge to Weeks Bridge														
445A.158	Carson River	Weeks Bridge to Lahontan Dam														
						0.06		1.0								126 (AGM); 235

All criteria are for single values unless otherwise noted as follows:

AA = annual average

AGM = annual geometric mean

AM = annual median

- The temperature beneficial use standard is 21 degrees C from February through June when Lahontan cutthroat trout are present in this reach.
- The nitrite beneficial use standard is 0.06 mg/l from February through June when Lahontan cutthroat trout are present in this reach.
- When lake is stratified, the dissolved oxygen criteria applies only to the epilimnion.
- The flow weighted annual average concentrations for total dissolved solids in mg/l at the three lower main stem stations of the Colorado River are as follows: Below Hoover Dam = 723, Below Parker Dam = 747; Imperial Dam = 879

- Standard applies to the epilimnion or average in water column during periods of stratification.
- Aerobic conditions are established as a goal rather than a standard. Aerobic conditions is intended to mean the absence of objectionable odors that may be caused by wastewater discharges in excess of existing odors.

- Total suspended solids standard does not apply when flows are greater than 110 percent of average flow as measured at nearest gage. Average flow is defined as 12-month rolling average of the average monthly flow.

- When flows are adequate to induce spawning runs of cutthroat trout, the standard is 14 degrees C from April through June.
- The desired temperature for the protection of juvenile Lahontan cutthroat trout is 21 degrees C, even though that temperature is not attainable at all times.
- DO standard presented as minimum allowable percent of saturation of 90 percent.
- Standard presented as maximum soluble phosphorus annual average concentration of 7.0 mg/l

- Turbidity must not exceed 3 NTU at any point in the lake too shallow to determine a reliable vertical extinction coefficient.

NAC 445A.147 Carson River: West Fork at the state line. ([NRS 445A.425, 445A.520](#))

Control Point at the West Fork at the state line. The limits of this table apply only to the West Fork at the state line.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT^a	 $\Delta T = 0^\circ\text{C}$	Nov.-May : $\leq 13^\circ\text{C}$ June : $\leq 17^\circ\text{C}$ July : $\leq 21^\circ\text{C}$ Aug.-Oct. : $\leq 22^\circ\text{C}$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life ^b and recreation involving contact with the water.
pH Units	7.4 - 8.4 —	S.V. : 6.5 - 9.0 ΔpH : ± 0.5 Max.	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	A-Avg. : ≤ 0.16 S.V. : ≤ 0.33	A-Avg. : ≤ 0.10	Aquatic life, ^b recreation involving contact with water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	A-Avg. : ≤ 0.4 S.V. : ≤ 0.5	Nitrate S.V. : ≤ 10 Nitrite S.V. : ≤ 0.6	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	— —	S.V. : Nov.-May : ≥ 5.0 Jun.-Oct. : ≥ 6.0	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	A-Avg. : ≤ 15 —	S.V. : ≤ 25	Aquatic life. ^b
Turbidity - NTU	A-Avg. : ≤ 3 S.V. : ≤ 5	S.V. : ≤ 10	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤ 75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A-Avg. : ≤ 70 S.V. : ≤ 95	A-Avg. : ≤ 500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A-Avg. : ≤ 3 S.V. : ≤ 5	S.V. : ≤ 250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	— S.V. : ≤ 4	S.V. : ≤ 250	Municipal or domestic supply. ^b
Sodium - SAR	A-Avg. : ≤ 1	A-Avg. : ≤ 8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO_3) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	A.G.M. : ≤ 105 —	$\leq 200/400^c$	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml Annual Geometric Mean Single Value	— —	≤ 126 ≤ 410	Recreation involving contact with the water ^b and recreation not involving contact with the water.

- Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
 - The most restrictive beneficial use.
 - Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.
 - Increase in color must not be more than 10 PCU above natural conditions.
 - The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).
- [Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 1, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 12-3-84; 9-15-94; R099-02, 12-17-2002)

NAC 445A.148 Carson River: Bryant Creek near the state line. ([NRS 445A.425, 445A.520](#))

Control Point at Bryant Creek near the state line. The limits of this table apply only to Bryant Creek near the state line.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT ^a	 ΔT = 0°C	Nov.-May : ≤13°C June : ≤17°C July : ≤21°C Aug.-Oct. : ≤22°C ΔT ≤2°C	Aquatic life ^b and recreation involving contact with the water.
pH Units	— —	S.V. : 6.5 - 9.0 ΔpH : ±0.5 Max.	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	A-Avg. : ≤0.36 S.V. : ≤0.5	A-Avg. : ≤0.10	Aquatic life, ^b recreation involving contact with the water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	A-Avg. : ≤0.6 S.V. : ≤1.0	Nitrate S.V. : ≤10 Nitrite S.V. : ≤0.6	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	— —	S.V. : Nov.-May : ≥6.0 Jun.-Oct. : ≥5.0	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	— —	S.V. : ≤25	Aquatic life. ^b
Turbidity - NTU	— —	S.V. : ≤10	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A-Avg. : ≤375 S.V. : ≤420	A-Avg. : ≤500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A-Avg. : ≤6 S.V. : ≤7	S.V. : ≤250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	— —	S.V. : ≤250	Municipal or domestic supply. ^b
Sodium - SAR	A-Avg. : ≤1	A-Avg. : ≤8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO ₃) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	A.G.M. : ≤50 S.V. : ≤90	≤200/400 ^c	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml Annual Geometric Mean Single Value	— —	≤126 ≤410	Recreation involving contact with the water ^b and recreation not involving contact with the water.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.

b. The most restrictive beneficial use.

c. Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.

d. Increase in color must not be more than 10 PCU above natural conditions.

e. The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 2, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 12-3-84; 9-15-94; R099-02, 12-17-2002)

NAC 445A.149 Carson River: East Fork at the state line. ([NRS 445A.425](#), [445A.520](#))

Control Point at the East Fork at the state line. The limits of this table apply only to the East Fork at the state line.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT^a	 $\Delta T = 0^\circ\text{C}$	Nov.-May : $\leq 13^\circ\text{C}$ June : $\leq 17^\circ\text{C}$ July : $\leq 21^\circ\text{C}$ Aug.-Oct. : $\leq 22^\circ\text{C}$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life ^b and recreation involving contact with the water.
pH Units	— —	S.V. : 6.5 - 9.0 $\Delta\text{pH} : \pm 0.5 \text{ Max.}$	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	A-Avg. : ≤ 0.3 S.V. : ≤ 0.65	A-Avg. : ≤ 0.10	Aquatic life, ^b recreation involving contact with the water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg. : ≤ 0.5 S.V. : ≤ 1.1	Nitrate S.V. : ≤ 10 Nitrite S.V. : ≤ 0.6	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	— —	S.V. : Nov.-May : ≥ 6.0 Jun.-Oct. : ≥ 5.0	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	— —	S.V. : ≤ 25	Aquatic life. ^b
Turbidity - NTU	A-Avg. : ≤ 5 S.V. : ≤ 8	S.V. : ≤ 10	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤ 75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A-Avg. : ≤ 145 S.V. : ≤ 185	A-Avg. : ≤ 500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A-Avg. : ≤ 3 S.V. : ≤ 5	S.V. : ≤ 250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	— S.V. : ≤ 3	S.V. : ≤ 250	Municipal or domestic supply. ^b
Sodium - SAR	A-Avg. : ≤ 2	A-Avg. : ≤ 8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO_3) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	A.G.M. : ≤ 40 S.V. : ≤ 60	$\leq 200/400^c$	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml Annual Geometric Mean Single Value	— —	≤ 126 ≤ 410	Recreation involving contact with the water ^b and recreation not involving contact with the water.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.

b. The most restrictive beneficial use.

c. Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.

d. Increase in color must not be more than 10 PCU above natural conditions.

e. The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 3, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 12-3-84; 9-15-94; R099-02, 12-17-2002)

NAC 445A.150 Carson River: East Fork at Highway 395, south of Gardnerville.
(NRS 445A.425, 445A.520)

Control Point for East Fork at Highway 395, south of Gardnerville (Riverview). The limits of this table apply from Riverview Mobile Home Park to the state line.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT^a	 $\Delta T = 0^\circ\text{C}$	Nov.-May : $\leq 13^\circ\text{C}$ June : $\leq 17^\circ\text{C}$ July : $\leq 21^\circ\text{C}$ Aug.-Oct. : $\leq 22^\circ\text{C}$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life ^b and recreation involving contact with the water.
pH Units	7.5 - 8.6 —	S.V. : 6.5 - 9.0 ΔpH : ± 0.5 Max.	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	— —	A-Avg. : ≤ 0.10	Aquatic life, ^b recreation involving contact with the water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg. : ≤ 0.4 S.V. : ≤ 0.5	Nitrate S.V. : ≤ 10 Nitrite S.V. : ≤ 06	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	— —	S.V. : Nov.- : ≥ 6.0 May : ≥ 5.0 Nov.-May Jun.-Oct.	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	— —	S.V. : ≤ 80	Aquatic life. ^b
Turbidity - NTU	— —	S.V. : ≤ 10	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤ 75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A-Avg. : ≤ 120 S.V. : ≤ 175	A-Avg. : ≤ 500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A-Avg. : ≤ 6 S.V. : ≤ 10	S.V. : ≤ 250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	— —	S.V. : ≤ 250	Municipal or domestic supply. ^b
Sodium - SAR	A-Avg. : ≤ 2	A-Avg. : ≤ 8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO_3) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	A.G.M. : ≤ 20 S.V. : ≤ 85	$\leq 200/400^c$	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml Annual Geometric Mean Single Value	— —	≤ 126 ≤ 410	Recreation involving contact with the water ^b and recreation not involving contact with the water.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.

b. The most restrictive beneficial use.

c. Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.

d. Increase in color must not be more than 10 PCU above natural conditions.

e. The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 4, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 12-3-84; 9-15-94; R099-02, 12-17-2002)

NAC 445A.151 Carson River: East Fork at Muller Lane. ([NRS 445A.425, 445A.520](#))

Control Point at the East Fork at Muller Lane. The limits of this table apply only from East Fork at Muller Lane to Highway 395, south of Gardnerville (Riverview Mobile Home Park).

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT^a	$\Delta T = 0^\circ\text{C}$	Nov.-May : $\leq 13^\circ\text{C}$ June : $\leq 17^\circ\text{C}$ July : $\leq 21^\circ\text{C}$ Aug.-Oct. : $\leq 22^\circ\text{C}$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life ^b and recreation involving contact with the water.
pH Units	7.4 - 8.7 —	S.V. : 6.5 - 9.0 ΔpH : ± 0.5 Max.	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	— —	A-Avg. : ≤ 0.10	Aquatic life, ^b recreation involving contact with the water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg. : ≤ 0.5 S.V. : ≤ 0.8	Nitrate S.V. : ≤ 10 Nitrite S.V. : ≤ 0.6	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	— —	S.V. : Nov.-May : ≥ 6.0 Jun.-Oct. : ≥ 5.0	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	— —	S.V. : ≤ 80	Aquatic life. ^b
Turbidity - NTU	— —	S.V. : ≤ 10	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤ 75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A-Avg. : ≤ 180 S.V. : ≤ 205	A-Avg. : ≤ 500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A-Avg. : ≤ 8 S.V. : ≤ 10	S.V. : ≤ 250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	— —	S.V. : ≤ 250	Municipal or domestic supply. ^b
Sodium - SAR	A-Avg. : ≤ 2	A-Avg. : ≤ 8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO_3) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	A.G.M. : ≤ 50 —	$\leq 200/400^c$	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml Annual Geometric Mean Single Value	— —	≤ 126 ≤ 410	Recreation involving contact with the water ^b and recreation not involving contact with the water.

- Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
- The most restrictive beneficial use.
- Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.
- Increase in color must not be more than 10 PCU above natural conditions.
- The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).
[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 5, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 12-3-84; 9-15-94; R099-02, 12-17-2002)

NAC 445A.152 Carson River at Genoa Lane. ([NRS 445A.425](#), [445A.520](#))

Control Point at Genoa Lane. The limits of this table apply from Genoa Lane to the East Fork at Muller Lane and to the West Fork at the state line.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT^a	$\Delta T = 0^\circ\text{C}$	Nov.-Apr. : $\leq 13^\circ\text{C}$ May-June : $\leq 17^\circ\text{C}$ Jul.-Oct. : $\leq 23^\circ\text{C}$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life ^b and recreation involving contact with the water.
pH Units	7.4 - 8.5 —	S.V. : 6.5 - 9.0 $\Delta\text{pH} : \pm 0.5 \text{ Max.}$	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	— —	A-Avg. : ≤ 0.10	Aquatic life, ^b recreation involving contact with the water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen A- : ≤ 0.8 Avg. : ≤ 1.3 S.V.	Nitrate S.V. : ≤ 10 Nitrite S.V. : ≤ 06	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia as (N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	— —	S.V. : Nov.-Apr. : ≥ 6.0 May-Oct. : ≥ 5.0	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	— —	S.V. : ≤ 80	Aquatic life. ^b
Turbidity - NTU	— —	S.V. : ≤ 10	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤ 75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A- : ≤ 165 Avg. : ≤ 220 S.V.	A-Avg. : ≤ 500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A- : ≤ 8 Avg. : ≤ 12 S.V.	S.V. : ≤ 250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	— —	S.V. : ≤ 250	Municipal or domestic supply. ^b
Sodium - SAR	A- : ≤ 2 Avg.	A-Avg. : ≤ 8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO_3) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	: ≤ 180 A.G.M. —	$\leq 200/400^c$	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E Coli - No./100ml Annual Geometric Mean Single Value	— —	≤ 126 ≤ 410	Recreation involving contact with the water ^b and recreation not involving contact with the water.

- Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
- The most restrictive beneficial use.
- Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.
- Increase in color must not be more than 10 PCU above natural conditions.
- The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).
[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 5A, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 12-3-84; 9-15-94; R099-02, 12-17-2002)

NAC 445A.153 Carson River at Cradlebaugh Bridge. ([NRS 445A.425](#), [445A.520](#))

Control Point at Cradlebaugh Bridge. The limits of this table apply from Cradlebaugh Bridge to Genoa Lane.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT^a	$\Delta T = 0^\circ\text{C}$	Nov.-Apr. : $\leq 13^\circ\text{C}$ May-June : $\leq 17^\circ\text{C}$ Jul.-Oct. : $\leq 23^\circ\text{C}$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life ^b and recreation involving contact with the water.
pH Units	7.5 - 8.4 —	S.V. : 6.5 - 9.0 ΔpH : ± 0.5 Max.	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	— —	A-Avg. : ≤ 0.10	Aquatic life, ^b recreation involving contact with the water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen A- : ≤ 85 Avg. : ≤ 1.2 S.V.	Nitrate S.V. : ≤ 10 Nitrite S.V. : ≤ 06	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	— —	S.V. : Nov.-Apr. : ≥ 6.0 May-Oct. : ≥ 5.0	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	— —	S.V. : ≤ 80	Aquatic life. ^b
Turbidity - NTU	— —	S.V. : ≤ 10	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤ 75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A- : ≤ 180 Avg. : ≤ 230 S.V.	A-Avg. : ≤ 500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A- : ≤ 8 Avg. : ≤ 15 S.V.	S.V. : ≤ 250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	— —	S.V. : ≤ 250	Municipal or domestic supply. ^b
Sodium - SAR	A- : ≤ 2 Avg.	A-Avg. : ≤ 8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO_3) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	— —	$\leq 200/400^c$	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml Annual Geometric Mean Single Value	— —	≤ 126 ≤ 410	Recreation involving contact with the water ^b and recreation not involving contact with the water.

- a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
- b. The most restrictive beneficial use.
- c. Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.
- d. Increase in color must not be more than 10 PCU above natural conditions.
- e. The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).
[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 6, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 12-3-84; 9-15-94; R099-02, 12-17-2002)

NAC 445A.154 Carson River at Mexican Ditch Gage. ([NRS 445A.425](#), [445A.520](#))

Control Point at Mexican Ditch Gage. The limits of this table apply from Mexican Ditch Gage to Highway 395, at Cradlebaugh Bridge.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT^a	 $\Delta T = 0^\circ\text{C}$	Nov.-Apr. : $\leq 13^\circ\text{C}$ May-June : $\leq 17^\circ\text{C}$ Jul.-Oct. : $\leq 23^\circ\text{C}$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life ^b and recreation involving contact with the water.
pH Units	7.4 - 8.5 —	S.V. : 6.5 - 9.0 $\Delta\text{pH} : \pm 0.5 \text{ Max.}$	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	— —	A-Avg. : ≤ 0.10	Aquatic life, ^b recreation involving contact with the water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen A- : ≤ 0.8 Avg. : ≤ 1.3 S.V.	Nitrate S.V. : ≤ 10 Nitrite S.V. : ≤ 06	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	— —	S.V. : Nov.-Apr. : ≥ 6.0 May-Oct. : ≥ 5.0	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	— —	S.V. : ≤ 80	Aquatic life. ^b
Turbidity - NTU	— —	S.V. : ≤ 10	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤ 75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A- : ≤ 285 Avg. : ≤ 360 S.V.	A-Avg. : ≤ 500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A- : ≤ 17 Avg. : ≤ 23 S.V.	S.V. : ≤ 250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	A- : ≤ 24 Avg. : ≤ 100 S.V.	S.V. : ≤ 250	Municipal or domestic supply. ^b
Sodium - SAR	A- : ≤ 2 Avg.	A-Avg. : ≤ 8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO_3) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	A.G.M. : ≤ 110 S.V. : ≤ 295	$\leq 200/400^c$	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml Annual Geometric Mean Single Value	— —	≤ 126 ≤ 410	Recreation involving contact with the water ^b and recreation not involving contact with the water.

- Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
- The most restrictive beneficial use.
- Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.
- Increase in color must not be more than 10 PCU above natural conditions.
- The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).
[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 6A, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 12-3-84; 9-15-94; R099-02, 12-17-2002)

NAC 445A.155 Carson River near New Empire. ([NRS 445A.425](#), [445A.520](#))

Control Point near New Empire. The limits of this table apply from New Empire to the Mexican Ditch Gage.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT^a	 $\Delta T = 0^\circ\text{C}$	Nov.-May : $\leq 18^\circ\text{C}$ Jun.Oct. : $\leq 23^\circ\text{C}$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life ^b and recreation involving contact with the water.
pH Units	7.4 - 8.4 —	S.V. : 6.5 - 9.0 ΔpH : ± 0.5 Max.	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	— —	A-Avg. : ≤ 0.10	Aquatic life, ^b recreation involving contact with the water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen A- : ≤ 1.3 Avg. : ≤ 1.7 S.V.	Nitrate S.V. : ≤ 10 Nitrite S.V. : ≤ 0.6	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	— —	S.V. : ≥ 5.0	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	— —	S.V. : ≤ 80	Aquatic life. ^b
Turbidity - NTU	— —	S.V. : ≤ 10	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤ 75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A- : ≤ 260 Avg. : ≤ 375 S.V.	A-Avg. : ≤ 500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A- : ≤ 13 Avg. : ≤ 24 S.V.	S.V. : ≤ 250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	— —	S.V. : ≤ 250	Municipal or domestic supply. ^b
Sodium - SAR	A- : ≤ 2 Avg.	A-Avg. : ≤ 8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO_3) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	— —	$\leq 200/400^c$	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml Annual Geometric Mean Single Value	— —	≤ 126 ≤ 410	Recreation involving contact with the water ^b and recreation not involving contact with the water.

- a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
- b. The most restrictive beneficial use.
- c. Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.
- d. Increase in color must not be more than 10 PCU above natural conditions.
- e. The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).
[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 7, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 12-3-84; 9-15-94; R099-02, 12-17-2002)

NAC 445A.156 Carson River at Dayton Bridge. ([NRS 445A.425](#), [445A.520](#))

Control Point at Dayton Bridge. The limits of this table apply from Dayton Bridge to New Empire.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT^a	$\Delta T = 0^\circ\text{C}$	Nov.-Mar. : $\leq 11^\circ\text{C}$ Apr.-Jun. : $\leq 24^\circ\text{C}$ Jul.-Oct. : $\leq 28^\circ\text{C}$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life ^b and recreation involving contact with the water.
pH Units	7.5 - 8.6 —	S.V.: 6.5 - 9.0 $\Delta\text{pH}: \pm 0.5$ Max.	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	— —	A-Avg. : ≤ 0.1	Aquatic life, ^b recreation involving contact with the water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen A- : ≤ 1.2 Avg. : ≤ 1.6 S.V.	Nitrate S.V. : ≤ 10 Nitrite S.V. : ≤ 1.0	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	— —	S.V. : ≥ 5.0	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	— —	S.V. : ≤ 80	Aquatic life. ^b
Turbidity - NTU	A- : ≤ 12 Avg. : ≤ 25 S.V.	S.V. : ≤ 50	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤ 75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A- : ≤ 250 Avg. : ≤ 400 S.V.	A-Avg. : ≤ 500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A- : ≤ 10 Avg. : ≤ 18 S.V.	S.V. : ≤ 250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	— —	S.V. : ≤ 250	Municipal or domestic supply. ^b
Sodium - SAR	A- : ≤ 2 Avg.	A-Avg. : ≤ 8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO_3) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	: ≤ 50 A.G.M. : ≤ 280 S.V.	$\leq 200/400^c$	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml Annual Geometric Mean Single Value	— —	≤ 126 ≤ 410	Recreation involving contact with the water ^b and recreation not involving contact with the water.

- a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
- b. The most restrictive beneficial use.
- c. Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.
- d. Increase in color must not be more than 10 PCU above natural conditions.
- e. The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).
(Added to NAC by Environmental Comm'n, eff. 12-3-84; A 9-15-94; R099-02, 12-17-2002)

NAC 445A.157 Carson River at Weeks. ([NRS 445A.425](#), [445A.520](#))

Control Point at Weeks (Ft. Churchill). The limits of this table apply from the U.S. Highway 95 Bridge at Weeks to the Dayton Bridge.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT^a	$\Delta T = 0^\circ\text{C}$	Nov.-Mar. : $\leq 11^\circ\text{C}$ Apr.-Jun. : $\leq 24^\circ\text{C}$ Jul.-Oct. : $\leq 28^\circ\text{C}$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life ^b and recreation involving contact with the water.
pH Units	7.5 - 8.5 —	S.V. : 6.5 - 9.0 $\Delta\text{pH} : \pm 0.5 \text{ Max.}$	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	— —	A-Avg. : ≤ 0.1	Aquatic life, ^b recreation involving contact with the water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen A- : ≤ 0.6 Avg. : ≤ 1.1 S.V. : —	Nitrate S.V. : ≤ 10 Nitrite S.V. : ≤ 1.0	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	— —	S.V. : ≥ 5.0	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	— —	S.V. : ≤ 80	Aquatic life. ^b
Turbidity - NTU	— A- : ≤ 25 Avg. : — —	S.V. : ≤ 50	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤ 75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A- : ≤ 250 Avg. : ≤ 380 S.V. : —	A-Avg. : ≤ 500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A- : ≤ 10 Avg. : ≤ 18 S.V. : —	S.V. : ≤ 250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	A- : ≤ 100 Avg. : ≤ 140 S.V. : —	S.V. : ≤ 250	Municipal or domestic supply. ^b
Sodium - SAR	A- : ≤ 2 Avg. : —	A-Avg. : ≤ 8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO_3) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	: ≤ 90 A.G.M. : ≤ 240 S.V. : —	$\leq 200/400^c$	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml Annual Geometric Mean Single Value	— —	≤ 126 ≤ 410	Recreation involving contact with the water ^b and recreation not involving contact with the water.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.

b. The most restrictive beneficial use.

c. Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.

d. Increase in color must not be more than 10 PCU above natural conditions.

e. The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 8, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 12-3-84; 9-15-94; R099-02, 12-17-2002)

NAC 445A.158 Carson River at Lahontan Dam. ([NRS 445A.425](#), [445A.520](#))

Control Point at Lahontan Dam. The limits of this table apply from Lahontan Dam to the U.S. Highway 95 bridge at Weeks (Ft. Churchill).

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C- Maximum ΔT^a	 $\Delta T = 0^\circ\text{C}$	Nov.-Mar. : $\leq 11^\circ\text{C}$ Apr.-Jun. : $\leq 24^\circ\text{C}$ Jul.-Oct. : $\leq 28^\circ\text{C}$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life ^b and recreation involving contact with the water.
pH Units	— —	S.V. : 6.5 - 9.0 ΔpH : ± 0.5 Max.	Recreation involving contact with the water, ^b propagation of wildlife, ^b aquatic life, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphates (as P) - mg/l	— —	S.V. : ≤ 0.06	Aquatic life, ^b recreation involving contact with the water, ^b municipal or domestic supply and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen A- : ≤ 1.3 Avg. : ≤ 1.7 S.V. : —	Nitrate S.V. : ≤ 10 Nitrite S.V. : ≤ 1.0	Aquatic life, ^b municipal or domestic supply, ^b recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	e	Aquatic life. ^b
Dissolved Oxygen - mg/l	—	S.V. : ≥ 5.0	Aquatic life, ^b recreation involving contact with the water, propagation of wildlife, watering of livestock, municipal or domestic supply and recreation not involving contact with the water.
Suspended Solids - mg/l	—	S.V. : ≤ 25	Aquatic life. ^b
Turbidity - NTU	A- : ≤ 15 Avg. : ≤ 27 S.V. : —	S.V. : ≤ 50	Aquatic life ^b and municipal or domestic supply.
Color - PCU	d	S.V. : ≤ 75	Municipal or domestic supply. ^b
Total Dissolved Solids - mg/l	A- : ≤ 175 Avg. : ≤ 225 S.V. : —	A-Avg. : ≤ 500	Municipal or domestic supply, ^b irrigation and watering of livestock.
Chlorides - mg/l	A- : ≤ 9 Avg. : ≤ 15 S.V. : —	S.V. : ≤ 250	Municipal or domestic supply, ^b propagation of wildlife, irrigation and watering of livestock.
Sulfate - mg/l	A- : ≤ 35 Avg. : ≤ 50 S.V. : —	S.V. : ≤ 250	Municipal or domestic supply. ^b
Sodium - SAR	A- : ≤ 2 Avg. : —	A-Avg. : ≤ 8	Irrigation ^b and municipal or domestic supply.
Alkalinity (as CaCO_3) - mg/l	— —	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform- No./100ml	: ≤ 25 A.G.M. : ≤ 75 S.V. : —	$\leq 200/400^c$	Recreation involving contact with the water ^b , recreation not involving contact with the water, municipal or domestic supply, irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml Annual Geometric Mean Single Value	— —	≤ 126 ≤ 235	Recreation involving contact with the water ^b and recreation not involving contact with the water.

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.

b. The most restrictive beneficial use.

c. Based on the minimum of not less than 5 samples taken over a 30-day period, the fecal coliform bacterial level may not exceed a geometric mean of 200 per 100ml nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.

d. Increase in color must not be more than 10 PCU above natural conditions.

e. The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#). [Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 9, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 12-3-84; R099-02, 12-17-2002)

Appendix D

California 2002 303(d) List

Nevada 2002 & 2004 303(d) lists

2002 CWA SECTION 303(d) LIST OF WATER QUALITY LIMITED SEGMENT
LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD

Approved on 1/11/02
 by Resolution

REGION	TYPE	NAME	CAL WATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	R	Carson River, West Fork (Headwaters to Woodfords)	63320014	Nitrogen	Silviculture Onsite Wastewater Systems (Septic Tanks) Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Channel Erosion Erosion/Siltation Atmospheric Deposition Highway Maintenance and Runoff Natural Sources Recreational and Tourism Activities (non-boating)	Low	18 Miles	
				Phosphorus <i>Revision of standard may be considered</i>	Silviculture Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Channel Erosion Erosion/Siltation Atmospheric Deposition Highway Maintenance and Runoff Natural Sources Recreational and Tourism Activities (non-boating)	Low	18 Miles	
				Sodium	Onsite Wastewater Systems (Septic Tanks) Atmospheric Deposition Highway Maintenance and Runoff Natural Sources Recreational and Tourism Activities (non-boating)	Low	18 Miles	
6	R	Carson River, West Fork (Paynesville to State Line)	63310013	Pathogens	Pasture Grazing Riparian and/or Upland Agriculture-storm runoff Agriculture-irrigation tailwater	Low	3.3 Miles	

2002 CWA SECTION 303(d) LIST OF WATER QUALITY LIMITED SEGMENT

Approved by EPA
August 1997

LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD

REGION	TYPE	NAME	CALWATER WATERSHED	POLLUTANT/STRESSOR	POTENTIAL SOURCES	TMDL PRIORITY	ESTIMATED SIZE AFFECTED	PROPOSED TMDL COMPLETION
6	R	Carson River, West Fork (Woodfords to Paynesville)	63310012	Nitrogen	Pasture Grazing-Riparian and/or Upland Range Grazing-Riparian and/or Upland Agriculture-storm runoff Agriculture-subsurface drainage Agriculture-irrigation tailwater Silviculture Wastewater - land disposal Habitat Modification Removal of Riparian Vegetation Streambank Modification/Destabilization Channel Erosion Erosion/Siltation Atmospheric Deposition Highway Maintenance and Runoff Natural Sources Recreational and Tourism Activities (non-boating)	Low	3.6 Miles	
				<i>Revision of standards may be considered.</i>				
				Pathogens	Pasture Grazing-Riparian and/or Upland Agricultural Return Flows Natural Sources Recreational and Tourism Activities (non-boating)	Low	3.6 Miles	
				Sodium	Agriculture-storm runoff Agriculture-irrigation tailwater Agriculture-grazing Wastewater - land disposal Onsite Wastewater Systems (Septic Tanks) Atmospheric Deposition Highway Maintenance and Runoff Natural Sources Recreational and Tourism Activities (non-boating)	Low	3.6 Miles	

Nevada's 2004 303(d) List for Carson Basin - as approved and amended by EPA

NAC Reference	Waterbody Name	Reach Description	Pollutant or Stressor of Concern	Beneficial Use of Concern	TMDL Status
Carson River Basin					
445A.147	WF Carson River	Stateline	Zinc (dissolved)	Propagation of Aquatic Life	None
445A.148	Bryant Creek	Near Stateline	Arsenic (total)	Municipal/Domestic Supply	TMDL has been developed
			Copper	Propagation of Aquatic Life	None
			Iron (total)	Propagation of Aquatic Life	TMDL has been developed
			Nickel (total)	Municipal/Domestic Supply	
			Temperature	Propagation of Aquatic Life	None
			Total suspended solids	Propagation of Aquatic Life	TMDL has been developed
			Turbidity	Propagation of Aquatic Life	
			Zinc (dissolved)	Propagation of Aquatic Life	None
445A.150	EF Carson River	Stateline to Highway 395	Iron (total)	Propagation of Aquatic Life	None
			Turbidity	Propagation of Aquatic Life	None
445A.151	EF Carson River	Highway 395 to Highway 88	Temperature	Propagation of Aquatic Life	None
			Turbidity	Propagation of Aquatic Life	Under development
		Highway 88 to Muller Lane	Iron (total)	Propagation of Aquatic Life	None
			Temperature	Propagation of Aquatic Life	None
			Total phosphorus	Propagation of Aquatic Life	TMDL has been developed
			Turbidity	Propagation of Aquatic Life	Under development
445A.152	WF Carson River	Stateline to Muller	Iron (total)	Propagation of Aquatic Life	None
			Temperature	Propagation of Aquatic Life	None
			Total phosphorus	Propagation of Aquatic Life	TMDL has been developed
			Turbidity	Propagation of Aquatic Life	Under development
			Fecal coliform	Recreation	None
			E Coli	Recreation	None
			Zinc (dissolved)	Propagation of Aquatic Life	None
	EF/WF Carson River	Genoa Lane to EF Carson River at Muller Lane and to WF Carson River at Muller Lane	Iron (total)	Propagation of Aquatic Life	None
			Temperature	Propagation of Aquatic Life	None
			Total phosphorus	Propagation of Aquatic Life	TMDL has been developed
			Total suspended solids	Propagation of Aquatic Life	Under development
			Zinc (dissolved)	Propagation of Aquatic Life	None
			Turbidity	Propagation of Aquatic Life	Under development
445A.153	Carson River	Genoa Lane to Cradlebaugh Bridge	Iron (total)	Propagation of Aquatic Life	None
			Temperature	Propagation of Aquatic Life	None
			Total phosphorus	Propagation of Aquatic Life	TMDL has been developed
			Total suspended solids	Propagation of Aquatic Life	Under development
			Zinc (dissolved)	Propagation of Aquatic Life	None
			Turbidity	Propagation of Aquatic Life	Under development
445A.154	Carson River	Cradlebaugh Bridge to Mexican Ditch Gage	Iron (total)	Propagation of Aquatic Life	None
			Temperature	Propagation of Aquatic Life	None
			Total phosphorus	Propagation of Aquatic Life	TMDL has been developed
			Zinc (dissolved)	Propagation of Aquatic Life	TMDL has been developed
			Total suspended solids	Propagation of Aquatic Life	Under development
			Turbidity	Propagation of Aquatic Life	Under development
445A.155	Carson River	Mexican Ditch Gage to New Empire	Iron (total)	Propagation of Aquatic Life	None
			Temperature	Propagation of Aquatic Life	None
			Total phosphorus	Propagation of Aquatic Life	TMDL has been developed
			Zinc (dissolved)	Propagation of Aquatic Life	None
			Turbidity	Propagation of Aquatic Life	Under development
445A.156	Carson River	New Empire to Dayton Bridge	Iron (total)	Propagation of Aquatic Life	None
			Mercury (total)	Propagation of Aquatic Life	None
			Total phosphorus	Propagation of Aquatic Life	TMDL has been developed
			Zinc (dissolved)	Propagation of Aquatic Life	None
			Total suspended solids	Propagation of Aquatic Life	Under development
445A.157	Carson River	Dayton Bridge to Weed	Iron (total)	Propagation of Aquatic Life	None
			Mercury (total)	Propagation of Aquatic Life	None
			Total phosphorus	Propagation of Aquatic Life	TMDL has been developed

Table 2. Nevada's 2002 303(d) List - Carson River Basin

Waterbody Name	Reach Description	Pollutant or Stressor of Concern	Beneficial Use of Concern	Comment
Bryant Creek	Near Stateline	Arsenic (total)	MDS	Original 1998 Listing was in error. To be removed from List
		Copper	AQ(cwf)	
		Iron (total)	AQ(cwf)	
		Nickel	MDS	2002 Listing was in error. To be removed from List
		Temperature	AQ(cwf)	
		Total suspended solids	AQ(cwf)	
		Turbidity	AQ(cwf)	
EF Carson River	Stateline to Highway 395	Iron (total)	AQ(cwf)	
		Turbidity	AQ(cwf)	
EF Carson River	Highway 395 to Highway 88	Temperature	AQ(cwf)	
		Turbidity	AQ(cwf)	
	Highway 88 to Muller Lane	Iron (total)	AQ(cwf)	
		Temperature	AQ(cwf)	
		Total phosphorus	AQ(cwf)	
WF Carson River	Stateline to Muller Lane	Turbidity	AQ(cwf)	
		Iron (total)	AQ(cwf)	
		Temperature	AQ(cwf)	
		Total phosphorus	AQ(cwf)	
EF/WF Carson River	Genoa Lane to EF Carson River at Muller Lane and to WF Carson River at Muller Lane	Turbidity	AQ(cwf)	
		Total suspended solids	AQ(cwf)	
		Total phosphorus	AQ(cwf)	
		Temperature	AQ(cwf)	
		Iron (total)	AQ(cwf)	
Carson River	Genoa Lane to Cradlebaugh Bridge	Turbidity	AQ(cwf)	
		Total suspended solids	AQ(cwf)	
		Total phosphorus	AQ(cwf)	
		Temperature	AQ(cwf)	
		Iron (total)	AQ(cwf)	
Carson River	Cradlebaugh Bridge to Mexican Ditch Gage	Turbidity	AQ(cwf)	
		Total suspended solids	AQ(cwf)	
		Total phosphorus	AQ(cwf)	
		Temperature	AQ(cwf)	
		Iron (total)	AQ(cwf)	
Carson River	Mexican Ditch Gage to New Empire	Turbidity	AQ(cwf)	
		Total phosphorus	AQ(cwf)	
		Temperature	AQ(cwf)	
		Iron (total)	AQ(cwf)	
Carson River	New Empire to Dayton Bridge	Turbidity	AQ(wwf)	
		Total suspended solids	AQ(wwf)	
		Total phosphorus	AQ(wwf)	
		Mercury (total)	AQ(wwf)	

MDS = Municipal or Domestic Supply

AQ (cwf) = Propagation of Aquatic Life (coldwater fishery)

AQ (wwf) = Propagation of Aquatic Life (warmwater fishery)

Table 2. Nevada's 2002 303(d) List - Carson River Basin (cont'd)

Waterbody Name	Reach Description	Pollutant or Stressor of Concern	Beneficial Use of Concern	Comments
Carson River	Dayton Bridge to Weeks	Iron (total)	AQ(wwf)	
		Mercury (total)	AQ(wwf)	Superfund site, fish consumption advisory
		Total phosphorus	AQ(wwf)	
		Total suspended solids	AQ(wwf)	
		Turbidity	AQ(wwf)	
Carson River	Weeks to Lahontan Dam	Iron (total)	AQ(wwf)	
		Mercury (total)	AQ(wwf)	Superfund site, fish consumption advisory
		Total phosphorus	AQ(wwf)	
		Total suspended solids	AQ(wwf)	
		Turbidity	AQ(wwf)	
Carson River	Lahontan Reservoir to Carson Sink	Mercury	AQ(wwf)	Superfund site, fish consumption advisory
Clear Creek	Origin to Gaging Station in Sec 1, T14N, R19E	pH	AQ(cwf)	pH standard to be revised in near future resulting in delisting for Clear Creek.
Stillwater Marsh	Area of Stillwater Marsh east of Westside Road and north of the community of Stillwater	Arsenic	MDS	Original listing dates back to 1993. Uncertain about the basis for the listing.
		Boron	IRR	
		Mercury	AQ(wwf)	Fish consumption advisory
Brockliss Slough	Above Carson River	Iron (total)	AQ(cwf)	
		Temperature	AQ(cwf)	
		Total phosphorus	AQ(cwf)	
		Turbidity	AQ(cwf)	
Indian Creek	At Stateline	Total phosphorus	AQ(cwf)	
All waters below Lahontan Dam in Lahontan Valley	n/a	Mercury	AQ(wwf)	Fish consumption advisory

MDS = Municipal or Domestic Supply

AQ (cwf) = Propagation of Aquatic Life (coldwater fishery)

AQ (wwf) = Propagation of Aquatic Life (warmwater fishery)

			Total suspended solids	Propagation of Aquatic Life	Under development
			Zinc (dissolved)	Propagation of Aquatic Life	None
			Turbidity	Propagation of Aquatic Life	Under development
445A.158	Carson River	Weeks to Lahontan D	Iron (total)	Propagation of Aquatic Life	None
			Mercury (total)	Propagation of Aquatic Life	None
			Total phosphorus	Propagation of Aquatic Life	TMDL has been developed
			Total suspended solids	Propagation of Aquatic Life	Under development
			Zinc (dissolved)	Propagation of Aquatic Life	None
			Turbidity	Propagation of Aquatic Life	Under development
445A.126	Carson River	Lahontan Reservoir to Carson Sink	Mercury	Propagation of Aquatic Life	None
			Iron (total)	Propagation of Aquatic Life	None
			Zinc (dissolved)	Propagation of Aquatic Life	None
445A.125	Clear Creek	Gaging Station in Sec 1, T14N, R19E	Zinc (dissolved)	Propagation of Aquatic Life	None
445A.126	Stillwater Marsh	Area of Stillwater Marsh east of Westside Road and north of the community of Stillwater	Arsenic	Municipal/Domestic Supply	None
			Boron	Irrigation	None
			Mercury	Propagation of Aquatic Life	None
Tributary to Carson River - 445A153	Brockliss Slough	Above Carson River	Iron (total)	Propagation of Aquatic Life	None
			Temperature	Propagation of Aquatic Life	None
			Total phosphorus	Propagation of Aquatic Life	None
			Turbidity	Propagation of Aquatic Life	None
Tributary to EF Carson - 445A.151	Indian Creek	At Stateline	Total phosphorus	Propagation of Aquatic Life	None
445A.125	Stillwater Point Reservoir		Iron (total)	Propagation of Aquatic Life	None
Not applicable	All waters below Lahontan Dam in Lahontan Valley	n/a	Mercury	Propagation of Aquatic Life	None

Appendix E
Load Reduction Tables

Load Reduction Estimates for Selected Sites

1. Difference between Total Observed and Total Allowable Loads

West Fork at Paynesville Only for comparison to impaired sites

Duration Interval	Hydrologic Condition	#Samples = to or exceeding curve within Interval	Total Observed Sample Load, lbs/day	Total Allowable Load Allocation, lbs/day	Estimated Reduction to meet Target, lbs/day	Estimated Reduction, %
0 - 10%	Extreme high flows or flood	0	0	0	0	0
10 - 40%	Wet conditions	2	141	77	64	45
40 - 60%	Mid range flows	0	0	0	0	0
60 - 90%	Dry conditions	1	13	10	3	23
90 - 100%	Low flows	1	10	6	3	30

East Fork at Riverview Only for comparison to impaired sites

Duration Interval	Hydrologic Condition	#Samples = to or exceeding curve within Interval	Total Observed Sample Load, lbs/day	Total Allowable Load Allocation, lbs/day	Estimated Reduction to meet Target, lbs/day	Estimated Reduction, %
0 - 10%	Extreme high flows or flood	10	16,225	8910	7315	45
10 - 40%	Wet conditions	7	3577	1803	1774	50
40 - 60%	Mid range flows	0	0	0	0	0
60 - 90%	Dry conditions	3	424	176	248	58
90 - 100%	Low flows	1	23	21	2	9

New Empire Bridge

Duration Interval	Hydrologic Condition	#Samples = to or exceeding curve within Interval	Total Observed Sample Load, lbs/day	Total Allowable Load Allocation, lbs/day	Estimated Reduction to meet Target, lbs/day	Estimated Reduction, %
0 - 10%	Extreme high flows or flood	15	46,216	17,868	28,348	61
10 - 40%	Wet conditions	52	32,019	17,029	14,990	47
40 - 60%	Mid range flows	31	9723	3660	6063	62
60 - 90%	Dry conditions	51	6426	2219	4207	65
90 - 100%	Low flows	18	402	43	359	89

Weeks Bridge

Duration Interval	Hydrologic Condition	#Samples = to or exceeding curve within Interval	Total Observed Sample Load, lbs/day	Total Allowable Load Allocation, lbs/day	Estimated Reduction to meet Target, lbs/day	Estimated Reduction, %
0 - 10%	Extreme high flows or flood	22	56,897	21,096	35,800	63
10 - 40%	Wet conditions	65	29,753	16,224	13,529	45
40 - 60%	Mid range flows	38	6517	3515	3002	46
60 - 90%	Dry conditions	70	2647	1593	874	33
90 - 100%	Low flows	5	0	0	0	0

2. Difference between Median Observed and Median Allowable

West Fork Paynesville

Duration Interval	Hydrologic Condition	# Samples within Interval	Median Observed Sample Load, lbs/day	Median Allowable Load Allocation, lbs/day	Estimated Reduction to meet Target,	Estimated Reduction, %
0 - 10%	Extreme high flows	0	0	0	0	0
10 - 40%	Wet conditions	2	70	38	64	91
40 - 60%	Mid range flows	0	0	0	0	0
60 - 90%	Dry conditions	1	13	10	3	23
90 - 100%	Low flows	1	10	6	4	40

East Fork Riverview

Duration Interval	Hydrologic Condition	# Samples within Interval	Median Observed Sample Load,	Median Allowable Load Allocation, lbs/day	Estimated Reduction to meet Target,	Estimated Reduction, %
0 - 10%	Extreme high flows	10	1357	806	551	41
10 - 40%	Wet conditions	7	346	196	150	43
40 - 60%	Mid range flows	0	0	0	0	0
60 - 90%	Dry conditions	3	109	57	52	48
90 - 100%	Low flows	1	23	21	2	9

Mexican Gage

Duration Interval	Hydrologic Condition	# Samples within Interval	Median Observed Sample Load,	Median Allowable Load Allocation,	Estimated Reduction to meet Target,	Estimated Reduction, %
0 - 10%	Extreme high flows	20	1568	973	595	38
10 - 40%	Wet conditions	65	389	252	138	36
40 - 60%	Mid range flows	56	171	90	81	47
60 - 90%	Dry conditions	70	85	37	48	56
90 - 100%	Low flows	31	15	5	10	67

New Empire Bridge

Duration Interval	Hydrologic Condition	# Samples within Interval	Median Observed Sample Load,	Median Allowable Load Allocation, lbs/day	Estimated Reduction to meet Target,	Estimated Reduction, %
0 - 10%	Extreme high flows	15	1936	1024	911	47
10 - 40%	Wet conditions	52	548	309	240	44
40 - 60%	Mid range flows	31	250	119	131	52
60 - 90%	Dry conditions	51	95	40	54	57
90 - 100%	Low flows	18	6	2	4	67

Weeks Bridge

Duration Interval	Hydrologic Condition	# Samples within Interval	Median Observed Sample Load,	Median Allowable Load Allocation, lbs/day	Estimated Reduction to meet Target,	Estimated Reduction, %
0 - 10%	Extreme high flows	22	1454	798	656	45
10 - 40%	Wet conditions	65	429	229	200	47
40 - 60%	Mid range flows	38	150	89	61	41
60 - 90%	Dry conditions	70	25	13	12	48
90 - 100%	Low flows	5	0	0	0	0

West Fork Paynesville**Not impaired for TSS**

Duration Interval	Hydrologic Condition	# Samples = to or exceeding curve within Interval	Median Observed Sample Load, tons/day	Median Allowable Load Allocation, tons/day	Estimated Reduction to meet Target, tons/day	Estimated Reduction*, %
0 - 10%	Extreme high flows or flood	12	47.8	40	7.8	16
10 - 40%	Wet conditions	0	0	0	0	0
40 - 60%	Mid range flows	1	4	3.4	0.6	15
60 - 90%	Dry conditions	1	2.1	1.6	0.5	24
90 - 100%	Low flows	1	0.98	0.94	0.04	4

*(Estimated Reduction in tons/day / Median Observed Sample Load in tons/day) x 100

East Fork Riverview**Not impaired for TSS**

Duration Interval	Hydrologic Condition	# Samples = to or exceeding curve within Interval	Median Observed Sample Load, tons/day	Median Allowable Load Allocation, tons/day	Estimated Reduction to meet Target, tons/day	Estimated Reduction*, %
0 - 10%	Extreme high flows or flood	9	997	431	566	57
10 - 40%	Wet conditions	6	259	128	131	51
40 - 60%	Mid range flows	0	0	0	0	0
60 - 90%	Dry conditions	2	85	22	63	74
90 - 100%	Low flows	0	0	0	0	0

*(Estimated Reduction in tons/day / Median Observed Sample Load in tons/day) x 100

Mexican Gage**Applies to Reaches 445A.152, 445A.153 and 445A.154**

Duration Interval	Hydrologic Condition	# Samples = to or exceeding curve within Interval	Median Observed Sample Load, tons/day	Median Allowable Load Allocation, tons/day	Estimated Reduction to meet Target, tons/day	Estimated Reduction*, %
0 - 10%	Extreme high flows or flood	19	915	418	497	54
10 - 40%	Wet conditions	7	185	170	15	8
40 - 60%	Mid range flows	0	0	0	0	0
60 - 90%	Dry conditions	0	0	0	0	0
90 - 100%	Low flows	0	0	0	0	0

*(Estimated Reduction in tons/day / Median Observed Sample Load in tons/day) x 100

New Empire Bridge Not impaired for TSS

Duration Interval	Hydrologic Condition	# Samples = to or exceeding curve within Interval	Median Observed Sample Load, tons/day	Median Allowable Load Allocation, tons/day	Estimated Reduction to meet Target, tons/day	Estimated Reduction*, %
0 - 10%	Extreme high flows or flood	14	974	497	477	49
10 - 40%	Wet conditions	7	186	155	31	17
40 - 60%	Mid range flows	0	0	0	0	0
60 - 90%	Dry conditions	0	0	0	0	0
90 - 100%	Low flows	0	0	0	0	0

* (Estimated Reduction in tons/day / Median Observed Sample Load in tons/day) x 100

Weeks Bridge Applies to Reaches 445A.156 and 445A.157

Duration Interval	Hydrologic Condition	# Samples = to or exceeding curve within Interval	Median Observed Sample Load, tons/day	Median Allowable Load Allocation, tons/day	Estimated Reduction to meet Target, tons/day	Estimated Reduction*, %
0 - 10%	Extreme high flows or flood	12	918	352	566	62
10 - 40%	Wet conditions	4	162	116	46	28
40 - 60%	Mid range flows	0	0	0	0	0
60 - 90%	Dry conditions	0	0	0	0	0
90 - 100%	Low flows	0	0	0	0	0

* (Estimated Reduction in tons/day / Median Observed Sample Load in tons/day) x 100

Load Reduction Estimates for TSS as a Surrogate for Turbidity

West Fork Paynesville

Not impaired for Turbidity

Duration Interval	Hydrologic Condition	# Samples = to or exceeding curve within Interval	Median Observed Sample Load, tons/day	Median Allowable Load Allocation, tons/day	Estimated Reduction to meet Target, tons/day	Estimated Reduction*, %
0 - 10%	Extreme high flows or flood	1	84	59	25	30
10 - 40%	Wet conditions	3	8.2	6.9	1.3	16
40 - 60%	Mid range flows	0	0	0	0	0
60 - 90%	Dry conditions	1	2.6	1.8	0.8	31
90 - 100%	Low flows	0	0	0	0	0

* (Estimated Reduction in tons/day / Median Observed Sample Load in tons/day) x 100

East Fork Riverview

Applies to Reach 445A.150 only

Duration Interval	Hydrologic Condition	# Samples = to or exceeding curve within Interval	Median Observed Sample Load, tons/day	Median Allowable Load Allocation, tons/day	Estimated Reduction to meet Target, tons/day	Estimated Reduction*, %
0 - 10%	Extreme high flows or flood	14	448	173	275	61
10 - 40%	Wet conditions	18	135	59	76	56
40 - 60%	Mid range flows	0	0	0	0	0
60 - 90%	Dry conditions	2	118	9.4	108.6	92
90 - 100%	Low flows	1	9	6	3	33

• (Estimated Reduction in tons/day / Median Observed Sample Load in tons/day) x 100

New Empire Bridge

Applies to Reach 445A.155

Duration Interval	Hydrologic Condition	# Samples = to or exceeding curve within Interval	Median Observed Sample Load, tons/day	Median Allowable Load Allocation, tons/day	Estimated Reduction to meet Target, tons/day	Estimated Reduction*, %
0 - 10%	Extreme high flows or flood	16	644	204	440	68
10 - 40%	Wet conditions	28	111	62	49	44
40 - 60%	Mid range flows	13	34	24	10	29
60 - 90%	Dry conditions	5	19	12.7	6.3	33
90 - 100%	Low flows	1	1	0.9	0.1	10

* (Estimated Reduction in tons/day / Median Observed Sample Load in tons/day) x 100

Weeks Bridge Applies to Reach 445A.157 only

Duration Interval	Hydrologic Condition	# Samples = to or exceeding curve within Interval	Median Observed Sample Load, tons/day	Median Allowable Load Allocation, tons/day	Estimated Reduction to meet Target, tons/day	Estimated Reduction*, %
0 - 10%	Extreme high flows or flood	11	702	311	391	56
10 - 40%	Wet conditions	6	195	148	47	24
40 - 60%	Mid range flows	1	426	29	397	93
60 - 90%	Dry conditions	0	0	0	0	0
90 - 100%	Low flows	0	0	0	0	0

*
 (Estimated Reduction in tons/day / Median Observed Sample Load in tons/day) x 100