

**Nevada State Water Plan**  
**PART 1 — BACKGROUND AND RESOURCE ASSESSMENT**

**Section 3**  
**The Institutional Framework for**  
**Water Planning and Management**

*Introduction*

This section presents an overview of the institutional framework affecting water planning and management within the State. All entities involved with water planning, allocation, management and development issues must navigate their way through portions of this institutional framework in their decision-making process.

*Statutory, Regulatory and Legal Considerations*

This subsection provides a general summary of the major state and federal statutory, regulatory and legal constraints impacting water planning and management. Water quantity allocation and management; interstate water resource management; water quality protection and management; resource protection; flood protection and drought planning; and conservation are all important constraints to consider for a successful water plan.

**Water Quantity Allocation and Management**

**Nevada Water Law.** All waters within the boundaries of Nevada, whether above or beneath the ground surface, belong to the public and are managed on their behalf by the State. The State Engineer is responsible for the administration of Nevada Water Law, which ensures that these waters are managed so that sufficient quantities are available to preserve our quality of life and to protect existing water rights. Entities within the State can apply for the right to use that water. Like many of the western states, Nevada water law is founded on the doctrine of prior appropriation - “first in time, first in right.” Under this doctrine, the first user of water from a watercourse acquires a priority right to the water and to the extent of its use under that right.

Nevada water law is set forth in Nevada Revised Statutes (NRS), Chapters 533 and 534. In addition, there are numerous court decisions which have further defined Nevada law. It is the State Engineer who determines the limit and extent of the rights of claimants to water, the use to which water may be put, the quantity of water that is reasonably required for beneficial use, and where water may be used.

As part of the duties of the office, the State Engineer reviews applications for new water rights appropriations. In approving or rejecting an application to appropriate water, the State Engineer follows statutory criteria:

- Is there unappropriated water in the proposed source?
- Will the proposed use impair existing rights?
- Will the proposed use prove detrimental to the public interest?
- Is the project feasible and not filed for speculative purposes?

All water rights are considered real property and can be bought, sold, traded and leased. The place of use and type of use can be changed with the State Engineer's approval. The attributes of appropriative water rights in Nevada are: 1) beneficial use is the measure and limit of the right to the use of the water; 2) rights are stated in terms of definite quantity, manner of use, and period of use; and 3) a water right can possibly be lost by abandonment or forfeiture.

The State Engineer has primary responsibility for the distribution of all surface water in Nevada except on civil decreed streams systems unless so granted by the civil court; and except on federally decreed stream systems. Stream systems which have been adjudicated are distributed in accordance with the associated decree by water commissioners. The water commissioners are recommended by the State Engineer and confirmed by the state district court. In areas where an irrigation district has been formed, the water is distributed by irrigation district personnel.

**Decrees.** Most surface waters in Nevada are managed in accordance with civil, state or federal decrees. There are over 100 decrees governing water allocation and management in Nevada. Following is a brief summary of the major decrees affecting water allocation and management in specified basins:

- **Alpine Decree (federal).** The waters of the Carson River are distributed in accordance with the Alpine Decree issued in *United States v. Alpine Land and Reservoir Co., et al.* by the federal district court on October 28, 1980. Although the Alpine Decree encompasses water rights in both Nevada and California, it is not an interstate allocation as neither state was a party to the decree.
- **Bartlett Decree, Edwards Decree (state).** The waters of the Humboldt River are distributed in accordance with the Bartlett Decree issued by state district court in 1931 and the Edwards Decree issued by state district court in 1935. The Edwards Decree corrected errors and omissions in the Bartlett Decree.
- **Orr Ditch Decree (federal).** The waters of the Truckee River and its tributaries are distributed in accordance with the Orr Ditch Decree issued in *United States v. Orr Ditch Water Company, et al.* by federal district court on September 8, 1944. No rights to the use of Truckee River water in California were included in this decree. The Orr Ditch Decree also incorporated the provisions of the earlier Truckee River Agreement. In 1935, the United States, Truckee-Carson Irrigation District, Sierra Pacific Power Company, and the Washoe County Water Conservation District entered into the Truckee River Agreement which set out the operational rules of the river system.

- **Walker River Decree (federal).** The waters of the Walker River and its tributaries are distributed in accordance with the federal decree issued in *United States v. Walker River Irrigation District, et al.* by federal district court on April 14, 1936 and amended on April 24, 1940. Although the Walker River Decree encompasses water rights in both Nevada and California, it is not an interstate allocation as neither state was a party to the decree.

**Tribal Water Rights.** When the United States reserved land from the public domain for uses such as Native American reservations, it also implicitly reserved sufficient water to satisfy the purposes for which the reservation was created. This federal reserved water rights doctrine was established by the U.S. Supreme Court in 1908 in *Winters v. United States*. Federally reserved Indian water rights differ from state-issued rights in a number of ways. For instance, the Winters Doctrine asserts that federal reserved rights cannot be lost by failure to put the associated water to beneficial use.

In Nevada, the more than 20 Native American reservations and colonies occupy approximately 1.6% of the land area (about 1 million acres). About 90% of these reserved lands are within five reservations: 1) Pyramid Lake Indian Reservation (southern Washoe County); 2) Walker River Indian Reservation (predominately northern Mineral County); 3) Duck Valley Indian Reservation (northern Elko County); 4) Goshute Indian Reservation (northeastern White Pine County); and 5) Moapa River Indian Reservation (northern Clark County).

### **Interstate Water Resource Management**

**Colorado River.** In addition to Nevada, the states of California, Arizona, Wyoming, Colorado, New Mexico, and Utah, and the Republic of Mexico, all use water from the Colorado River. In 1922, these seven states entered into an interstate compact which includes a provision for the equitable division and apportionment of the waters of the Colorado River system. The Boulder Canyon Act of 1928 provided, among other things, for the construction of works to protect and develop the Colorado River Basin by the U.S. Bureau of Reclamation. The U.S. Supreme Court Decree in *Arizona v. California*, 1964, established several additional dimensions to the apportionment of Colorado River water, including apportionments to the lower basin states of Nevada, California and Arizona. It was ruled that of the first 7.5 million acre-feet of mainstem water consumed in the lower basin, California was entitled to a consumptive use of 4.4 million acre-feet/year; Arizona to 2.8 million acre-feet/year; and Nevada to 0.3 million acre-feet/year. In 1968, the Colorado River Basin Project Act authorized the Central Arizona Project and it provided for allocations to the lower basin states in years of insufficient mainstream water to satisfy the specified consumptive use of 7.5 million acre-feet per year.

The Nevada State Legislature recognized the value of this resource in 1935 when it created the Nevada Colorado River Commission to serve as the State’s watchdog over the Colorado River. Among its other statutory responsibilities, the commission is required to “receive, protect and safeguard and hold in trust for the State of Nevada” all the water and associated water rights in the Colorado River to which the State is entitled under federal law, interstate compacts and treaties. The Commission is also responsible in various ways for the distribution of this water, and thus is authorized to contract for the use of the water.

**California-Nevada Interstate Compact.** The need for apportioning the water of the Truckee, Carson and Walker rivers between Nevada and California has been considered over the years. After years of negotiations, the state legislatures of California (in 1970) and Nevada (in 1971) passed legislation adopting the California-Nevada Interstate Compact. However, the U.S. Congress never ratified the Compact. Interstate allocations of the Truckee and Carson rivers were addressed in the Truckee-Carson-Pyramid Lake Water Rights Settlement Act of 1990.

**Truckee-Carson-Pyramid Lake Water Rights Settlement Act of 1990.** The latest effort to resolve long-standing disputes over water and water rights on the Truckee River has been the enactment of congressional settlement legislation for the Truckee and Carson Rivers. This legislation, known as the Truckee-Carson-Pyramid Lake Water Rights Settlement Act (or “Negotiated Settlement”), was approved by the 101<sup>st</sup> Congress on November 16, 1990. The main authorizations and directives included in the legislation are:

- an interstate allocation between Nevada and California is made of the waters of the Truckee and Carson Rivers, and Lake Tahoe;
- a new operating agreement is to be negotiated for the Truckee River;
- the Newlands Projects is reauthorized to serve additional purposes, including recreation, fish and wildlife, and as a municipal water supply for the Fallon area;
- a recovery program is to be developed for the endangered Pyramid Lake cui-ui fish and threatened Lahontan cutthroat trout, with a water right acquisitions program authorized; and
- a water rights purchase program is authorized for the Lahontan Valley wetlands.

Many of the Negotiated Settlement’s provisions, including the interstate apportionment, will not become effective until a number of conditions are met, including dismissal of certain lawsuits and the negotiation of an operating agreement for the Truckee River among the United States, Nevada, California, the Pyramid Lake Paiute Indian Tribe, the Sierra Pacific Power Company, and other parties. The involved parties hope to complete the operating agreement negotiations by 1999.

### **Water Quality Protection and Management**

**Clean Water Act (CWA).** The Water Quality Act is a 1987 amendment to the Clean Water Act of 1977, which amended the Federal Water Pollution Control Act of 1972, and is the primary legislative vehicle for federal water pollution control programs. The Water Quality Act is often referred to as the Clean Water Act (CWA). This Act was established to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters” and set goals to eliminate discharges of pollutants into navigable water, protect fish and wildlife, and prohibit the discharge of toxic pollutants in quantities that could adversely affect the environment.

The State Environmental Commission (SEC), established by State law, has adopted regulations which define State programs to carry out the provisions of Nevada’s Water Pollution Control Laws. These laws, contained in Chapter 445A of the Nevada Revised Statutes (NRS), establish the authority to implement portions of the CWA and the Safe Drinking Water Act in addition to several non-federal water pollution control programs. In addition to adopting regulations, the SEC establishes fee schedules for permits, advises, consults and cooperates with other governmental agencies regarding

water pollution matters, establishes qualifications for sewage treatment plant operators, and holds hearings regarding the actions of the Nevada Division of Environmental Protection (NDEP). The powers and duties of the SEC are listed primarily in NRS 445A.425, and also in NRS 445A.135, 445A.160, 445A.180, 445A.428, 445A.430, 445A.605, and 445A.610.

NDEP has been delegated the authority to implement aspects of the CWA in Nevada. Following is a summary of major sections of the CWA and their application to water quality management in Nevada.

- **Section 106(e) - Water Quality Monitoring.** With assistance from federal grants, NDEP operates a surface water quality monitoring network with water quality parameters monitored at about 100 sites throughout the State. In addition, NDEP has access to water quality data collected by other agencies. Data collected under these monitoring programs are used to establish water quality standards, assess compliance with water quality standards, conduct trend analyses, validate water quality models, set discharge limitations, conduct nonpoint source assessments, compile the Section 303(d) List, develop Section 208 Plan amendments, and develop the Section 305(b) Report.
- **Section 208 - Water Quality Management Plans.** Section 208 of the CWA was promulgated for the purpose of encouraging and facilitating the development and implementation of areawide wastewater treatment management plans. If an area(s) within the State is identified as having substantial water quality control problems as a result of urban-industrial concentrations or other factors, the Governor of the State may designate the boundaries of each such area and appoint a single representative organization, including elected officials from local governments or their designees, capable and responsible for developing effective areawide water treatment management plans. Absent action by the Governor, NDEP is the responsible agency for developing 208 Plans. Following are the five areas for which 208 plans have been developed and the agencies responsible for plan development:

Carson River Basin - NDEP

Clark County - Clark County Board of County Commissioners

Lake Tahoe Basin - Tahoe Regional Planning Agency

Washoe County - Truckee Meadows Regional Planning Agency

Remainder of the State (non-designated area) - NDEP

Section 208 Plans are used in the review of permit and funding applications. Proposed activities which are inconsistent with the 208 Plan cannot go forward until a plan amendment is approved.

- **Section 303 - Water Quality Standards.** Federal requirements for water quality standards and antidegradation are contained in Section 303 of the CWA. State requirements are contained in NRS 445A.520 and NRS 445A.425 states the powers and duties of the SEC, including the adoption of water quality standards. Water quality standards define water quality goals of a waterbody by designated uses and by setting criteria necessary to protect the uses. Antidegradation requirements are contained in NRS 445A.565 which requires that waters of higher quality be protected. Water quality standards serve as the regulatory basis for establishing

water quality based treatment controls. In Nevada, the SEC is required to establish water quality standards at a level to protect and ensure a continuation of the designated beneficial use or uses within a stream or other waterbody (NRS 445A.425).

- **Section 303(d) List.** Section 303(d) of the CWA requires states to identify waters that do not or are not expected to meet applicable water quality standards with existing controls alone. This Section 303(d) List, developed by the NDEP provides a comprehensive inventory of waterbodies impaired by all sources of pollution, including point sources, nonpoint sources, or a combination of both. This inventory is the basis for targeting waterbodies for watershed solutions.

Once these waters are identified, the State is required to develop total maximum daily loads (TMDLs) for these waters. A TMDL quantifies allowable pollutant loads that a given water body can assimilate to the level needed to meet the water quality standards. TMDLs are then used to set effluent limits for permitted discharges.

- **Section 305(b) - Water Quality Assessment.** Section 305(b) of the CWA requires states to produce biennial “Water Quality Assessments” that assess progress in achieving the objectives of the CWA. NDEP is responsible for producing Nevada’s 305(b) Reports.
- **Section 314 - Clean Lakes.** Pursuant to Section 314 of the CWA, the Clean Lakes Program was established in 1972 to define the causes and extent of water pollution problems in the lakes of each State and for developing and implementing effective techniques to restore them. Through the Clean Lakes Program, NDEP State has received Federal funding for numerous studies and implementation projects. Federal funding is no longer available under Section 314.
- **Section 319 - Nonpoint Source Pollution.** Section 319 of the CWA authorizes the Nonpoint Source Pollution Management Program and provides funding to states to implement nonpoint source program. Nevada began the Nonpoint Source (NPS) Management Program in 1987 using Federal funds. The primary goal of the program is to identify, control and abate the impacts of NPS pollution on the quality of the State’s surface and ground waters. The State’s current approach in controlling nonpoint sources is to seek voluntary compliance through regulatory and non-regulatory programs including technical and financial assistance, training, technology transfer, demonstration projects and education.
- **Section 401 Certification Program.** Under provisions of the CWA, any applicant for a Federal license or permit (e.g. 404 permit) to conduct any activity that may result in a discharge to navigable waters must provide the Federal agency with a Section 401 certification. The 401 certification, made by the state in which the discharge originates, declares that the discharge will comply with applicable provisions of the CWA, including water quality standards. Section 401 provides states with two distinct powers: 1) the power indirectly to deny Federal permits or licenses by withholding certification; and 2) the power to impose conditions upon Federal permits by placing limitations on certification.

In Nevada, NDEP has the responsibility to review and comment on proposed projects under the 401 Certification Program. NDEP may grant, waive or deny certification for a federally permitted

activity that may result in a discharge to the waters of the state or adversely impact downstream water quality. If the applicant can demonstrate that the proposed project will not impact existing water quality nor cause a violation of a water quality standard, or water quality improvements are expected, 401 certification is given. If the project is expected to negatively impact water quality, NDEP will require conditions in the permit to offset project impacts or deny certification.

- **Section 402 - National Pollutant Discharge Elimination System.** Section 402 of the CWA established a permit system known as the National Pollutant Discharge Elimination System (NPDES) to regulate point sources of discharges (wastewater treatment plants, etc.) into surface waters of the United States. In 1987, Section 402 was amended to require the regulation of stormwater runoff under the NPDES. The U.S. Environmental Protection Agency (EPA) has delegated this program to NDEP. NPDES permits cannot be issued if the proposed discharge is inconsistent with the 208 Water Quality Management Plan for the area (NRS 445A.490).
- **Section 404 - Dredge and Fill Permits.** Section 404 regulates the discharge of dredged and fill materials into navigable rivers, and protects wetlands from encroachment. None of these regulated activities may occur unless a permit is obtained from the U.S. Army Corps of Engineers. Generally, the project proponent must agree to mitigate or have plans to mitigate environmental impacts caused by the project before a permit is issued.

Under amendments in the CWA, the State is responsible for certifying a Section 404 project proposal's compliance with applicable water quality standards. NDEP has the responsibility to review and comment on proposed projects under the 401 Certification Program and has the right to deny certification of a 404 permit which would prevent the Corps of Engineers from using the permit.

- **Section 603 - State Revolving Fund Program.** Section 603 of the CWA provides for the establishment of State Revolving Fund (SRF) programs. Through the SRF, NDEP provides loans at or below market rates and other forms of financial assistance to municipalities and other entities to assist in financing the construction of waste water treatment works or projects to control nonpoint sources of water pollution. Only those facilities addressed in the Section 208 Plan are eligible for funding under this program.

**Other State Programs (NDEP).** In addition to the federal CWA and Safe Drinking Water Act programs delegated to NDEP, numerous state programs exist to protect, control and restore the quality of the waters of the State. Apart from the NPDES permits issued under the CWA, NDEP issues Water Pollution Control Permits with a zero-discharge performance standard for certain mining facilities, and State Ground Water Permits for infiltration basins, land application of treated effluent, large septic systems and industrial facilities. In addition to these permitting processes, NDEP reviews subdivision plans to ensure that wastewater is disposed of adequately. Also, NDEP regulates highly hazardous substances under the chemical accident prevention program. Remediation of polluted soil and/or groundwater falls under the State Corrective Actions Program which includes authorities under two federal acts: the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

**Other Federal Programs (NDEP).** Management of solid waste, hazardous waste and underground storage tanks are covered by the Resource Conservation and Recovery Act (RCRA) programs delegated to NDEP. Nevada also has a program under the Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) to perform spill reporting and tracking, assessments, investigations and remedial activities as necessary.

**Safe Drinking Water Act.** In 1974, the U.S. Congress enacted the Safe Drinking Water Act (SDWA) to enhance the safety of public drinking water in the United States through the establishment and enforcement of national drinking water standards. Congress gave the EPA the responsibility for implementation and enforcement of the SDWA. In 1978, EPA granted primary enforcement authority (primacy) for the SDWA in Nevada to the State of Nevada (Division of Health). The State Health Division is responsible for implementing the program in 15 of Nevada's 17 counties. The Health Division has interlocal agreements with Clark County Health District and Washoe County District Health Department to implement various activities related to the SDWA and State Board of Health requirements in those counties.

The SDWA applies to all public drinking water systems which provide piped water for human consumption to at least 15 service connections, or regularly serve an average of at least 25 individuals daily for at least 60 days out of the year. There are currently about 700 public water systems in Nevada that are regulated under the SDWA.

In 1996, additional amendments were enacted and a state revolving loan fund was authorized. The amendments included a "right to know" provision which will require water authorities to disclose chemicals and bacteria found in drinking water and required EPA to establish more stringent standards against cryptosporidium and other drinking water contaminants that pose significant health risks. The new law goes beyond a regulatory approach to add the concept of prevention. The law seeks to prevent problems by increasing public water systems' capacity to provide safe drinking water, and by protecting the source waters. EPA is currently developing additional rules which will address radon, uranium and arsenic concentrations, disinfection byproducts, groundwater disinfection, and enhancement of the Surface Water Treatment Rule. Following are descriptions of the main highlights of the current SDWA.

- **Public Water Supply Supervision Program.** Primary enforcement authority of the SDWA is the responsibility of the Nevada Health Division. Through the State Public Water Supply Supervision Programs (PWSS), the Nevada Health Division enforces the drinking water quality standards of the water provided by the 700 public water systems in the State. The Health Division has interlocal agreements with Clark County Health District and Washoe County District Health Department to implement various activities related to the SDWA and State Board of Health requirements.
- **Underground Injection Control Program.** Authorized under the Safe Drinking Water Act, the Underground Injection Control (UIC) Program is delegated to the State. NRS 445 provides the authority which allows the NDEP, Bureau of Water Pollution Control, through the SEC, to regulate the UIC Program and issue permits. The purpose of the UIC permit is to regulate

underground injection and to prevent pollution of groundwater and protect the environment. A UIC permit must be obtained prior to drilling an injection well or injecting fluid into a well.

- **Wellhead Protection Program.** The 1986 Amendments to the SDWA established a new Wellhead Protection Program (WHPP) to protect groundwater supplies for public water supply systems, and mandated that each state develop a WHPP. The authority to implement Nevada's WHPP was delegated to NDEP by the Governor during the same year. At a minimum, each State's WHPP must: 1) specify roles and duties of state and local entities, and public water suppliers, with respect to the development and implementation of WHPPs; 2) delineate the wellhead protection area (WHPA) for each well; 3) identify sources of contamination within each WHPA; 4) develop management options to protect the water supply within the WHPA from such contaminants; 5) develop contingency plans in the event of contamination; 6) site new wells as needed to maximize yield and minimize potential contamination; and 7) ensure public participation.

In 1994, Nevada's WHPP was approved by EPA and has been successfully implementing wellhead protection at the local level. Presently there are seventeen Nevada communities developing or implementing WHPPs with the assistance of NDEP, and interest has been expressed by several more communities. The voluntary nature of Nevada's WHPP coupled with both financial and technical assistance from the State and EPA have been the keys to its success.

- **Comprehensive State Ground Water Protection Program.** EPA initiated the Comprehensive State Ground Water Protection Program (CSGWPP) guidance to provide states with a framework for developing comprehensive, integrated groundwater protection programs. EPA is encouraging states to develop and implement CSGWPPs that meet the needs of the state. CSGWPPs are voluntary and encourage groundwater resource management through a cooperative, multi-agency approach.

While the State of Nevada has the primary role in protecting and managing its groundwater resources, the CSGWPP process provides the opportunity to review, evaluate, and revise groundwater protection efforts so as to improve their effectiveness. The goal of a Fully-Integrated CSGWPP is to ensure that groundwater protection and management efforts are consistent and coordinated across all federal, State and local programs. The Nevada Division of Environmental Protection is the lead agency for the CSGWPP development and received EPA endorsement of its core CSGWPP in November 1997.

- **Drinking Water State Revolving Fund.** The SDWA Amendments of 1996 authorized a Drinking Water State Revolving Fund (DWSRF) to assist public water systems to finance the costs of infrastructure needed to achieve or maintain compliance with SDWA requirements and to protect public health objectives of the Act. The administrator of EPA is authorized to award capitalization grants to States, which in turn can provide low cost loans and other types of assistance to eligible systems (community and non-profit non-community water systems). To be eligible to receive capitalization grants, a state must establish a drinking water treatment revolving loan fund.

Under this program, Nevada will receive an annual allotment from the federal government, but must contribute an amount equal to 20 percent of the total federal contribution. The DWSRF funds can then be loaned to public water systems to facilitate compliance with national primary drinking water regulations and further the health protection objectives of the SDWA. Disadvantaged systems may receive loan subsidies, including forgiveness of the principal. Portions of the DWSRF funds may also be used for fund administration, small system technical assistance, Public Water Supply Supervision activities, state capacity development strategies, operator certification programs, and source water protection programs. The Bureau of Health Protection Services is the lead agency for the DWSRF.

- **Capacity Development.** Under the 1996 SDWA Amendments, states are given until October 1, 1999 to obtain the authority to ensure that new community water systems and non-transient non-community water systems have the technical, financial, and managerial capacity to meet National Primary Drinking Water Regulations. A state will receive only 80 percent of its Drinking Water State Revolving Fund allotment unless the state has such authority. As part of this program, states are required to prepare and submit to EPA a list of community water systems and non-transient, non-community water systems that have a history of significant noncompliance and the reasons for their noncompliance. States are also required to establish strategies for assisting systems in developing and maintaining technical, financial and management capacity. Periodic reports on the efficacy of their development strategies and water system capacity improvements are required.
- **Vulnerability Assessment Program.** The SDWA regulations set forth monitoring requirements (e.g. sampling frequency, etc.) for various potential contaminants. The costs associated with some of the related laboratory analyses can place a significant financial burden on water systems. Sensitive to these potential high costs, the SDWA allows states some flexibility in establishing water chemistry monitoring requirements. In response, the Nevada State Health Division, Bureau of Health Protection Services, has voluntarily developed a monitoring waiver program. Certain water quality monitoring requirements may be waived for a given water system if the vulnerability assessment shows the system to be at low risk to contamination.

The waiver program focuses on performing vulnerability assessments including an evaluation of the source water site, an evaluation of the components of the water system, previous monitoring results, prior historical/environmental/land usage in the source water area, contaminant persistence and transport potential, hydrogeology of the area, well construction, known well abandonment history and a review of the initial water quality monitoring results.

As a direct result of the vulnerability assessment program, water systems throughout Nevada have saved about \$3.5 million to date in monitoring costs. It is anticipated that a total of \$5.5 million to \$6 million could be saved if vulnerability assessments are performed for all water sources.

- **Source Water Assessment Program.** Reauthorization of the SDWA in 1996 added new requirements for States to develop and implement a Source Water Assessment Program (SWAP). The purpose of a SWAP is to identify existing sources of drinking water and determine what potential contamination problems may arise that need to be addressed. In part, the final SWAP

is to address: delineations of land area contributing to public water systems' sources (Source Water Protection Areas - SWPA); inventory of known and significant contaminants within the SWPAs; analysis of source susceptibility to contamination; and plans for protection of source waters. The Bureau of Health Protection Services is responsible for development and implementation of SWAP.

**Insecticide, Fungicide, and Rodenticide Act (Pesticide Management Plan).** The Nevada Division of Agriculture (DOA) has primacy to administer the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in the State. With regard to pesticides, the primary responsibility is to regulate the registration, use, storage, sale, and disposal of unwanted, canceled and suspended pesticides in Nevada. The DOA has been involved in groundwater protection activities since 1988 as a direct result of a nationwide EPA study which discovered that at least 46 different pesticides had contaminated groundwater in 26 states. In most cases, sources of contamination were traced to legal, prescribed use of the particular pesticide. However, some contamination was attributed to direct sources such as pesticide mixing and loading, accidents, and improper well design.

Although the EPA study did not detect pesticide contamination in Nevada, the DOA decided to take a pro-active approach to this problem and designed a program that would prevent further degradation of groundwater quality. Based on the experience of other states and EPA, DOA has developed a program to address this issue. The program began with the development of a Generic State Management Plan that contains a description of essential elements designed to accomplish the goal of designing a protective program that would prevent further degradation of groundwater quality. This has led to the development of Pesticide Management Plans (PMPs). These PMPs as well as the Generic State Management Plan contain many elements. The major elements discussed in the plans will include: 1) protective and preventative actions; 2) monitoring; 3) resources available; 4) other state and federal agencies' roles and responsibilities; and the DOA's legal authority to administer the groundwater protection program. The Generic State Management Plan has been developed which addresses most of these elements. A regulatory framework will be part of the PMPs, which may require setback restrictions, restricted use classification, time of year restrictions, and outright cancellation of pesticides where the water resources may be vulnerable to groundwater contamination.

## **Resource Protection**

**Endangered Species Act.** The federal Endangered Species Act provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The U.S. Fish and Wildlife maintains a list of endangered and threatened species. Species include birds, insects, fish, reptiles, mammals, crustaceans, flowers, grasses, and trees, all of which are dependent upon water. The law prohibits any action, administrative or real, that results in a "taking" of a listed species, or adversely affects habitat.

In Nevada, there are 28 endangered taxa (species/subspecies) (2 are plants) and 14 threatened taxa (7 are plants). Approximately another 250 taxa are considered as potential candidates for listing. More information is needed before these taxa can be removed from the candidate list or moved to the threatened/endangered list. Nevada leads the nation and North America in having the most fishes

listed as endangered, threatened, or of special concern (43 taxa according to the American Fisheries Society). Rankings by the Nevada Natural Heritage Program place Nevada in the top ten states having the most globally imperilled species of plants and vertebrates.

**Nevada Natural Heritage Program.** The State of Nevada Natural Heritage Program researches, collects, and analyzes information on the existence, locations, numbers, condition, biology, and habitats of hundreds of sensitive plant and animal species throughout Nevada. These are species that could qualify for listing as a threatened or endangered in the future under current management and land-use situations. The Program continually prioritizes conservation needs throughout the State, and its easily-accessible computer database, maps, and paper files serve as a cost-effective “early warning system” designed to help prevent costly future species listings.

**Wildlife Commission Statutory Authority.** NRS 503.589 grants the Division of Wildlife administrator the authority to enter into agreements with other entities for the conservation, protection, restoration and propagation of species of native fish, wildlife and other fauna which are threatened with extinction.

**Division of Forestry Statutory Authority.** NRS 527.300 grants the state forester firewarden the authority to enter into agreements with other entities for the conservation, protection, restoration and propagation of species of native flora which are threatened with extinction.

**National Environmental Policy Act.** The National Environmental Policy Act (NEPA) directs federal agencies to prepare an environmental impact statement (EIS) for all major federal actions which may have a significant effect on the human environment. NEPA states that it is the goal of the federal government to use all practicable means, consistent with other considerations of national policy, to protect and enhance the quality of the environment. NEPA requires all federal agencies to consider the environmental impacts of their proposed actions during the planning and decision-making processes.

**Wild and Scenic Rivers Acts (Federal and California).** In 1968, Congress passed the National Wild and Scenic Rivers Act to preserve in their free-flowing condition rivers which possess “outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values.” No rivers within Nevada have been designated under this federal act. In 1972, the California Legislature passed the State Wild and Scenic Rivers Act. Portions of the West Walker River and East Fork of the Carson River upstream of Nevada have been designated under the California Act. The California Act prohibits construction of any dam, reservoir, diversion or other water impoundments on a designated river.

The current U.S. Forest Service’s Humboldt and Toiyabe Land and Resource Management Plan has identified other river segments that are suitable for inclusion in the Wild and Scenic Rivers system. These river segments are:

- Jarbidge River - from Idaho-Nevada border to source;
- Little Humboldt River, North Fork - from reservoir at Little Humboldt River confluence to

source;

- Marys River - from west boundary of Section 13, T42N, R59E to source;
- Carson River, East Fork - from last diversion dam approximately one mile above Lahontan Fish Hatchery to source;
- East Walker River - from Bridgeport Reservoir to bridge crossing near Flying M Ranch headquarters; and
- West Walker River - from source at Tower Lake to confluence with Rock Creek.

### **Flood Protection and Drought Planning**

**Flood Control Act.** The Flood Control Act authorizes the U.S. Army Corps of Engineers to perform several flood-related tasks. Section 205 of the Act authorizes the construction of small flood control projects; Section 206 authorizes the Corps Flood Plain Management Services Program to deal with floods and floodplain issues; Section 208 provides for snagging and clearing for flood control in channels; and Section 14 authorizes emergency streambank and shoreline erosion protection for public facilities and services. Activities performed under the Flood Plain Management Services program include technical assistance, planning guidance, pamphlets and supporting studies.

**National Flood Insurance Act.** The National Flood Insurance Program (NFIP) was established in 1968 by the National Flood Insurance Act. The intent of this act is to encourage communities to mitigate future flood damage by adopting and enforcing strict floodplain management ordinances in accordance with federal regulations. The Act made federally subsidized flood insurance available in communities which participate in the NFIP. In Nevada, 15 counties and 13 incorporated cities voluntarily participate in the NFIP. The Federal Emergency Management Agency (FEMA) administers the program, providing flood insurance studies and mapping for participating communities. The flood insurance studies are used for development of the Flood Insurance Rate Maps (FIRMs) that are adopted and incorporated by reference into the Flood Hazard Reduction Ordinances administered by each community. In Nevada, the Division of Water Planning (NDWP) has responsibility for oversight and implementation of the NFIP.

**Emergency Watershed Protection.** The Emergency Watershed Protection program (EWP) is administered by the Natural Resource Conservation Service (NRCS). The program provides technical and financial assistance to restore small watersheds damaged by flooding. The type of assistance provided by the program includes clearing debris from clogged water sheds, restoring vegetation and stabilizing river banks. In addition, NRCS is authorized under the 1996 Farm Bill, to offer a floodplain easement option to agricultural landowners. This option allows land which has been damaged by flooding to be permanently restored to natural floodplain hydrology.

**State Floodplain Management.** Following the flooding experienced in northern Nevada in 1997, NDWP was designated as the lead agency for floodplain management at the State level. The Division's floodplain management duties include implementation of the Community Assistance Program (CAP) and Flood Mitigation Assistance program (FMA), sponsored by FEMA. Under CAP, NDWP provides technical assistance and training as needed to help communities achieve and maintain compliance with NFIP requirements. FMA grants are for mitigation projects aimed at reducing repetitive insurance losses and future damage.

- **Hazard Mitigation Program.** The Nevada Division of Emergency Management is responsible for implementing a comprehensive hazard mitigation program which includes flooding mitigation. The State Hazard Mitigation Officer manages the Hazard Mitigation Grant Program (HMGP), sponsored by FEMA.
- **Statewide All-Hazard Mitigation Committee.** This committee was established in 1998 to help coordinate mitigation activities and funding needs associated with all hazards including flooding. The 21 members come from a wide array of public and private organizations.
- **Channel Clearance Program.** The Channel Clearance program is managed by the Nevada Division of Water Resources (NDWR). The program provides funding for channel clearance maintenance, restoration, surveying and monumenting. Local communities, including counties, cities, irrigation districts, and flood control districts can apply for matching funds to maintain channels of navigable rivers within their jurisdictional boundaries.
- **Disaster Relief Bill.** During the 1997 State Legislative Session, Senate Bill 218 was passed, establishing a state fund of \$4 million to help communities recover from damages sustained in the event of a disaster. The fund is administered by the Legislative Counsel Bureau.

**Local Floodplain Management.** Regulations for the development of local flood control districts are described in NRS 543. The Clark County Regional Flood Control District was formed under this statute in 1985. The Clark County Regional Flood Control District is a proactive regional entity with the mission of protecting life and property from flood impacts through implementation of flood control infrastructure. Flood control projects are funded by a one quarter of one percent sales tax. The District has also implemented a comprehensive floodplain management program which includes flood hazard mitigation, community outreach, and mapping.

**State Drought Plan and the Drought Review and Reporting Committee.** During the first year of the 1987-94 drought, Governor Bryan formed the Drought Review and Reporting Committee (DRRC) to monitor drought severity and recommend actions. By 1991, NDWP, with assistance from the Governor's DRRC and the Advisory Board for Water Resource Planning and Development, developed the State Drought Plan. The State Drought Plan defines the State's response in the event of a drought. More specifically, the Drought Plan defines drought stages (warning, severe, emergency), and establishes the roles of the DRRC, drought task forces and other agencies during the various drought stages.

## **Conservation**

**Service Connection Metering.** A majority of the public water system withdrawals (in terms of volume) are metered, however not all deliveries to each service connection are metered. For example, only about 25 percent of residences in Reno/Sparks have water meters. Water meters were initially prohibited in the cities of Reno and Sparks by a 1919 statute (NRS 704.230). Since that time, gradual changes have occurred which: 1) require meters on all businesses (1977) and on all new homes built after 1988; and 2) allow meters on residences upon owner request and under certain

conditions tied to the Negotiated Settlement (1990).

**Low Flow Plumbing Standards.** The Nevada Legislature passed Assembly Bill 359 in 1991 thereby imposing certain minimum standards for plumbing fixtures (toilets, showers, faucets and urinals) in new construction and expansions in residential, industrial, commercial and public buildings. Each county and city was required to include these requirements in its building code or to adopt these requirements by ordinance, and to prohibit by ordinance the sale and installation of any plumbing fixture which does not meet the minimum standards.

**Conservation Plans.** In 1991, the Nevada Legislature passed Senate Bill 360 requiring all water purveyors (that supply water for municipal, industrial or domestic purposes) to adopt conservation plans before July 1, 1992. These plans were to include provisions relating to:

- Public education to increase public awareness for the need to conserve water;
- Specific conservation measures suitable for the service area;
- Water management, including leak detection, effluent reuse;
- Contingency plan for drought;
- Implementation schedule; and
- Measures to evaluate plan effectiveness.

Public water purveyors were to submit their plans to NDWP for review and approval before adoption (NRS 540.121 through 540.151). Private utilities were to submit their plans to the Public Service Commission (NRS 704.662 through 704.6624). However, Senate Bill 360 did not require periodic plan updates or progress reports.

**U.S. Bureau of Reclamation Conservation Plans.** On October 12, 1982, the Reclamation Reform Act (RRA) was signed into law. One of the provisions of the RRA requires each district, that has entered into a repayment contract or water service contract, to develop a water conservation plan. The plan is to contain definite goals, appropriate water conservation measures, and a time schedule for meeting the water conservation objectives. This provision of the RRA impacts districts such as the Truckee Carson Irrigation District and Pershing County Water Conservation District. Through their Field Services Program, Reclamation's intent is to encourage the consideration and incorporation of prudent and responsible water conservation measures in district operations. This is to be achieved by:

- Providing technical and financial assistance to districts and entities developing and implementing water conservation plans;
- Establishing collaborative efforts with districts and other entities to improve the management of water and to assist in meeting their water conservation goals;
- Encouraging joint efforts toward the coordinated planning, preparation and implementation of water conservation plans by districts with mutual or complementary needs;
- Ensuring that Reclamation assistance programs support and complement State water conservation efforts;
- Providing districts with education materials to assist with water plan development and implementation; and

- Providing water management and conservation planning workshops and training opportunities for districts and other entities.

***Local and State Water Planning and Management***

Many local and state entities have statutory authorities related to water use, management, protection and development. Some of the authorities are summarized in the following tables.

**Table 3-1. Local Organization Statutory Authority**

Category	Agency	Program	Authority (NRS)
<b>Water Supply</b>	Cities	Water Facilities	266.285
	Counties	Water Facilities	244.366
	General Improvement Districts	Water Facilities	318.144
	Irrigation Districts	Irrigation	539.010 - 539.783
	Water Conservancy Districts	Water Supply	541.010 - 541.420
<b>Water Quality</b>	Cities	Sewer Facilities	266.285
	Counties	Sewer Facilities	244.366
	General Improvement Districts	Sewer Facilities	318.140
<b>Environmental Uses</b>	Conservation Districts	Conservation of Natural Resources	548.010 - 548.550
<b>Flood Management</b>	Flood Control Districts	Flood Control	543.170 - 543.830
	Water Conservancy Districts	Flood Control and Drainage	541.010 - 541.420
<b>Water Planning and Management</b>	Cities	Master Plan	278.150 - 278.230
	Counties	Regional Plan	278.0272 - 278.029
		Master Plan	278.150 - 278.230

**Table 3-2. State Agency Statutory Authority**

Category	Agency	Program	Authority (NRS)
<b>Water Supply and Allocation</b>	State Engineer's Office (Division of Water Resources)	Water Right Adjudication and Appropriation	533
		Groundwater Regulation	534
	Division of Water Planning	Small Community Grant Program	349.980 - 349.987
		Conservation Plans	540.121 - 540.151
	Public Utilities Commission	Regulation of Public Utilities	704.001 - 704.960
		Utility Environmental Protection Act (UEPA)	704.001 - 704.960
Conservation Plans		704.662 - 704.6624	
<b>Water Quality</b>	Division of Environmental Protection	Water Pollution Control Clean Water Act State Groundwater Permit Safe Drinking Water Act Mining Reclamation	445A.300 - 445A.730 519A.010 - 519A.280
		Division of Agriculture	Control of Pesticides
	Bureau of Health Protection Services, Health Division	Safe Drinking Water Act	445A.800 - 445A.955
		Control of Septic Systems	444.650
<b>Environmental and Recreational Uses</b>	Division of Wildlife	Boating Safety	488, 501.243
		Wildlife Management and Propagation	504.140 - 504.490
		Protection of Threatened Species	503.584
	Natural Heritage Program	Threatened and Endangered Species Database	527.260 - 527.300
	Division of Parks	Park Facilities	407.011 - 407.250
	Division of Forestry	Protection and Preservation of Timbered Lands, Trees and Flora	527.010 - 527.330
Forest Practice and Reforestation		528.010 - 528.120	
<b>Flood Management</b>	Division of Water Planning	National Flood Insurance Program (Community Assistance, Flood Mitigation Assistance)	540
	Division of Water Resources	Dam Safety	535.005 - 535.110
		Channel Clearance	532.220 - 532.230
	Division of Emergency Management	Hazard Mitigation Grant	414
	Division of Forestry	Forest/Vegetative Cover for Flood Prevention	472.043
Department of Conservation and Natural Resources	Flood Control Loans	543.090 - 543.140	
<b>Water Planning and Management</b>	Division of Water Planning	State Water Plan	540.101
		Planning Assistance	540.011 - 540.151

## ***Regional Plans***

According to NRS 540.101(2), NDWP is to coordinate with local governments (political subdivisions) in developing the *State Water Plan*, and upon the request of the Division, each local government shall cooperate with and assist the Division in the development of the Plan. Following is a summary of selected regional planning efforts that are underway. These planning efforts will provide valuable information for the *State Water Plan*.

### **Southern Nevada Water Authority Water Resource Plan**

The Southern Nevada Water Authority (SNWA) was created in 1991 through a cooperative agreement among the following seven regional water and wastewater agencies:

- Big Bend Water District (Laughlin);
- City of Boulder City;
- Clark County Sanitation District;
- City of Henderson;
- City of Las Vegas;
- Las Vegas Valley Water District; and
- City of North Las Vegas.

The purposes of SNWA are to seek new water resources for Southern Nevada, to manage existing and future water resources, to construct and manage regional water facilities, and to promote responsible conservation. The SNWA Water Resource Plan was completed January 1996, and amended February 1997.

### **Washoe County Comprehensive Regional Water Management Plan**

In 1995, the Nevada State Legislature approved legislation which created the Regional Water Planning Commission and provided the basis and direction for the Commission and the 1995-2015 Washoe County Comprehensive Regional Water Management Plan. This legislation required that the Commission develop "...a comprehensive plan for the region covering the supply of municipal and industrial water, quality of water, sanitary sewerage, treatment of sewerage, drainage of storm waters and control of floods." The Plan was completed and approved by the 1997 State Legislature.

### **Clark County Regional Flood Control District Flood Control Master Plan**

In response to major floods in 1983 and 1984, the Clark County Regional Flood Control District (CCRFCDD) was established in 1985 to develop a regional flood control program for the Las Vegas Valley and surrounding environs. As part of the CCRFCDD mandate, a comprehensive, regional Master Plan was prepared and adopted in 1986. The principal objective of the Master Plan is to provide for the long-term improvement in public safety and property damage protection from flooding events by guiding the siting, design, and installation of flood control facilities. Periodic Master Plan updates are required by law to account for changes in land use, the construction of new facilities, and for improved hydrologic and hydraulic data.

### **Water Quality Management Plans (Section 208 of the Clean Water Act)**

Section 208 of the federal Clean Water Act was promulgated for the purpose of encouraging and facilitating the development and implementation of areawide waste treatment management plans. Following are the five areas for which 208 plans have been developed and the agencies responsible for plan development:

- Carson River Basin - NDEP
- Clark County - Board of County Commissioners
- Lake Tahoe Basin - Tahoe Regional Planning Agency
- Washoe County - Truckee Meadows Regional Planning Agency
- Remainder of the State (non-designated area) - NDEP

### **City/County Master Plans**

Nevada Revised Statutes 278.150 requires each city and county to prepare and adopt a comprehensive, long-term general plan for the physical development of the city, county or region. The master plan may address a variety of matters, such as:

- Conservation;

This element of the plan may address a variety of topics including development and utilization of natural resources, including water, underground water, water supply, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals and other natural resources. The reclamation of land and waters, flood control, prevention and control of the pollution of streams and other waters may also be included

- Land use;
- Population;
- Public services and facilities;
- Recreation; and
- Solid waste disposal.

### ***Water Resources Data Collection and Research***

The following section provides a brief discussion of the main entities collecting water resources data and performing water resources research in Nevada.

#### **U.S. Geological Survey - Water Resources Division**

The mission of the Water Resources Division (WRD) of the U.S. Geological Survey (USGS) is to provide the hydrologic information and understanding needed to manage the Nation's water resources to benefit the people of the United States. To accomplish this mission, WRD in cooperation with federal, state and local agencies, uses a variety of investigative and interpretive techniques to collect

and transfer hydrologic information to interested parties. Programs sponsored by WRD in Nevada include:

- Data collection to aid in evaluating the quantity, quality, distribution, and use of water resources in Nevada. WRD routinely collects water discharge data for gaging stations on streams, canals and drains; peak flow data at miscellaneous sites and springs; water elevation and contents for lakes and reservoirs; water levels in wells; and water quality for stream, canal and drain sites, and wells.
- Analytical and interpretive water-resources appraisals to describe the occurrence, quality, and availability of surface and ground water in Nevada.
- Basic and problem-oriented research in hydraulics, hydrology, and related fields of science and engineering
- Scientific and technical assistance in hydrology to other federal, state and local agencies
- Development and maintenance of national computer databases and associated Geographic Information System (GIS) databases for hydrologic data - streamflow, water quality and biology, groundwater characteristics and water use.
- Public distribution of water resources data and results of water resources investigations through reports, maps, computerized information services, and other forms of release

The USGS cooperates with more than 40 local, State, and Federal agencies and Indian Tribes in Nevada. Partnerships with local and State agencies typically are financed on a matching-funds basis.

### **Desert Research Institute**

A nonprofit, statewide division of the University and Community College System of Nevada, Desert Research Institute (DRI) pursues a full-time program of basic and applied environmental research on a local, national, and international scale. The five centers within DRI research such diverse areas as: the natural and human factors influencing the availability and quality of water resources, issues and concerns common to arid and developing regions worldwide, improving society's fundamental knowledge and understanding of hydrologic systems, and encouraging more effective and efficient management of water resources (Water Resources Center); improving the fundamental understanding of the nature of the Earth's dynamic surface from approximately 2 million years ago to the present day, and applying this knowledge toward enhancing effective management of the environment and cultural resources (Quaternary Sciences Center); understanding atmospheric chemistry, climate dynamics, large-scale dynamic meteorology, mesoscale dynamic meteorology, and physical meteorology, and developing instrumentation and techniques for atmospheric measurements (Atmospheric Sciences Center); researching how natural and agricultural ecosystems function and respond to natural and human impacts on the environment, especially air quality, and the technology that can be applied to mitigate these impacts (Energy and Environmental Engineering Center). Additionally, the Western Regional Climate Center, within the Atmospheric Sciences Center, is one of six regional centers funded by the National Oceanic and Atmospheric Administration. The Climate Center provides data and products tailored to the needs of federal agencies, regional organizations, state and local entities, and the private sector.

### **University of Nevada Reno (UNR)**

Within UNR's College of Agriculture, two departments perform a variety of research projects pertaining to Nevada's water resources. The Department of Environmental and Natural Resource Sciences provides interdisciplinary research in physical, biological and ecological sciences. The Department of Applied Economic and Statistics with the College of Agriculture provides research which emphasizes the application of economic principles and statistical analysis to issues involving growth, infrastructure, agriculture, natural resources and the environment.

### **Natural Resources Conservation Service**

The Natural Resources Conservation Service (NRCS) within U.S. Department of Agriculture works in three primary areas: soil and water conservation; resource inventories; and rural community development. Under one NRCS program, staff perform snow surveys and develop water supply forecasts. The purpose of the program is to provide western states and Alaska with information on future water supplies. NRCS field staff collect and analyze data on depth and water equivalent of the snowpack at more than 1,200 mountain sites and estimate annual water availability, spring runoff, and summer streamflows. Individuals, organizations, and state and Federal agencies use these forecasts for decisions relating to agricultural production, fish and wildlife management, municipal and industrial water supply, urban development, flood control, recreation power generation, and water quality management. The National Weather Service includes the forecasts in their river forecasting function.

### **Nevada Division of Environmental Protection**

NDEP operates a surface water quality monitoring network. Under this program, water quality parameters are monitored by NDEP at about 100 sites throughout Nevada. A variety of other data are compiled under other NDEP programs. NDEP's UIC (Underground Injection Control) program requires groundwater quality characterization data in the permit application. The Solid Waste program, hazardous waste facilities oversight, mining-related permitting and state groundwater permitting programs all require some amount of groundwater monitoring in the absence of any contaminant release. Facilities such as wastewater treatment plants and industrial operations with permitted discharges to surface water are required to monitor effluent quality and to submit discharge monitoring reports to NDEP.

### **Nevada Division of Water Resources**

NDWR maintains an electronic database of water rights within the State, including information on place of use, point of diversion, allowable diversion rates and volumes, and other ancillary data. NDWR also collects well log data and pumpage data, and develops crop and pumpage inventories.

### **Nevada Health Division and State Health Laboratory**

As required by state and federal drinking water regulations, public supply systems routinely submit

water samples to laboratories for analysis. The laboratory results are then sent as paper copies to the Nevada Health Division which has primary enforcement authority for drinking water regulations. Depending upon the public supply system, analyses are performed by either the State Health Laboratory or by private laboratories. The State Health Laboratory maintains analytical results in an electronic database.

### ***Funding Opportunities***

A variety of state and federal funding sources exist for the planning, management, protection and development of our water resources. The following discussion provides a brief introduction to the main funding programs available in Nevada.

#### **State Agencies**

**Grants for Capital Improvements to Community Water Systems (Nevada Division of Water Planning).** The Assembly Bill (AB) 198 Grant program provides assistance to water purveyors in partially funding capital improvements made necessary by the State health regulations and the federal Safe Drinking Water Act. Preference is given to water systems serving less than 6,000 people. Grants are limited to publicly owned water systems. Eligible projects include pipe and tank replacements, looping lines, improvement of springs, and drilling of new wells. Expansion of existing systems to meet growth needs is not eligible.

**Clean Water Act Section 319 Nonpoint Source Implementation Grant Program (Nevada Division of Environmental Protection, Nonpoint Source Program).** These grants are made available through federal funds passed through NDEP's Nonpoint Source Program, and are awarded annually on a competitive basis. Eligible activities include: best management practices which reduce, eliminate and/or prevent nonpoint source pollution; technology transfer, innovative methods or practices, ground water protection, pollution prevention, technical assistance and public education. This program is a matching grant program where at least 50 percent of the project cost is a local expense.

**Community Development Block Grant Program (Nevada Commission on Economic Development).** Under this program, grants are awarded for community infrastructure studies and construction. Eligible projects include construction of new wells and water distribution lines.

**Water Projects Financing Program (Nevada Department of Business and Industry).** Through this programs, loans are issued for financing any project for the management, control, delivery, use or distribution of water. To be eligible, any proposed project must satisfy one or more of the following: resolve or abate an emergency situation; provide for the best utilization of surface and ground waters; promote reclamation; provide storage; facilitate offstream storage; accomplish aquifer recharge; acquire site for a reservoir; generate benefits from the rehabilitation or modernization of existing facilities; and obtain significant economic, environmental and water conservation benefits.

**State Petroleum Fund (Nevada Division of Environmental Protection, UST/LUST/Claims**

**Branch).** The Nevada Petroleum Fund can reimburse underground and above-ground storage tank owners for a substantial percentage of costs incurred in clean-up activities. Home heating oil tanks are automatically enrolled in the Fund and are eligible for funding.

**State Revolving Fund (Clean Water Act) (Nevada Division of Environmental Protection, Bureau of Water Pollution Control).** The Nevada State Revolving Fund provides loans at or below market rate and other forms of financial assistance to municipalities and other entities to assist in financing the construction of waste water treatment works or projects to control nonpoint sources of water pollution.

**Drinking Water State Revolving Fund (Safe Drinking Water Act) (Nevada Division of Health, Bureau of Health Protection Services).** The SDWA Amendments of 1996 authorized a Drinking Water State Revolving Fund (DWSRF) to assist public water systems to finance the costs of infrastructure needed to achieve or maintain compliance with SDWA requirements and to protect public health objectives of the Act.

**Channel Clearance Program (Nevada Division of Water Resources).** This program provides funding for channel clearance maintenance, restoration, surveying and monumenting. Local communities, including counties, cities, irrigation districts, and flood control districts can apply for matching funds to maintain channels of navigable rivers within their jurisdictional boundaries.

**Disaster Relief Fund (Legislative Counsel Bureau).** In 1997, the Legislature established a state fund of \$4 million to help communities recover from damages sustained in the event of a disaster.

### **Federal Agencies**

**Rural Utilities Service Program (U.S. Dept. Of Agriculture, Rural Development).** This program provides a variety of funding opportunities for rural areas and towns with populations under 10,000. Rural Development offers loans for the development of water and waste disposal systems (including solid waste disposal and storm drainage). Also, Rural Development offers grants for:

- development of water and waste disposal systems;
- technical assistance and training on a wide range of issues related to water delivery and waste disposal;
- technical assistance and training for improved solid waste management; and
- emergency improvements to drinking water systems.

**Clean Water Act Section 104 (b)(3) Wetland Protection Development Grants (U.S. Environmental Protection Agency).** This grant program was designed to assist state, tribal and local governments in developing wetlands protection programs. Grants are provided to state agencies for priority wetlands planning activities such as wetland watershed protection approach demonstration projects; state wetlands conservation plan development, refinement or implementation; state/tribal section 404 assumption assistance; streamlining state/tribal regulatory programs; and assessing and monitoring the ecological integrity of wetlands.

**Wetlands Reserve Program (Natural Resources Conservation Service & U.S. Fish & Wildlife Service).** The Wetlands Reserve Program is a conservation easement and habitat restoration program that focuses primarily on wetlands in agricultural production. The purposes of the program are: to restore the hydrology and vegetation of converted wetlands (wetlands brought into agricultural production prior to December 23, 1985) or wetlands formed under natural conditions; to protect the functions and values of wetlands for wildlife habitat; and to improve water quality, floodwater retention, and ground water recharge capacity of wetlands. The program offers cash payment to landowners for placing permanent conservation easements on their wetland property, as well as cost-share assistance for restoration work.

**Environmental Quality Incentives Program (Natural Resources Conservation Service, USDA).** The 1996 Federal Agricultural Improvement and Reform Act of 1996 (1996 Farm Bill) created the Environmental Quality Incentives Program (EQIP) to combine the functions of most existing U.S. Department of Agriculture conservation cost-share programs. Its purpose is to provide flexible technical, financial and educational assistance to farmers and ranchers to address a broad range of conservation issues. EQIP provides cost-share assistance for up to 75 percent depending on the conservation practices used.

**Flood Mitigation Assistance Grants (Federal Emergency Management Agency and Nevada Division of Water Planning).** The Federal Emergency Management Agency provides grants to communities for mitigation projects aimed at reducing repetitive insurance losses and future damage. The Nevada Division of Water Planning is the point of contact for this grant program.