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Section 7
Uintah Basin Plan

Utah State Water Plan

Regulation/Institutional Considerations

The regulation of water resources is necessary to manage conflicts and to provide orderly future planning and development.

7.1 Introduction

This section discusses federal and state regulations to protect and manage water resources in the Uintah Basin. It also discusses some environmental concerns.

Local, state and federal governments have formalized the institutional arrangements we now have by passing laws. Laws create government agencies empowered with the authority and responsibility to carry out specific missions. The mission of Utah's water agencies is to provide orderly water rights administration, adequate supplies of good quality water, and a quality environment to meet the needs of its people.

7.2 Setting

In the Department of Natural Resources, the Division of Water Rights (also known as the State Engineer's Office) is responsible for water allocation, distribution, dam safety and stream alteration. The Division of Water Resources regulates the cloud seeding program, is responsible for state water planning, and manages three water development funding programs. Two divisions within the Department of Environmental Quality, the Division of Drinking Water and the Division of Water Quality, bear the major responsibility for water quality. The *State Water Plan* (1990), Sections 7, 9, 11 and 12, explains these state agencies' statutory functions.

Federal agencies are also part of the regulatory picture (see Section 16). The U.S. Fish and Wildlife Service has a prominent role in protecting the threatened or endangered species and managing the Ouray National Waterfowl Refuge. The Environmental Protection Agency and the Army Corps of Engineers also have a significant role in protecting water quality and wetlands.

River commissioners regulate the use of water at the local level. Water masters and ditch riders operate the systems of irrigation waters. Cities, towns, districts, water associations, and the Uintah and Ouray Ute Tribe operate the community systems.

7.2.1 Current Regulation

Water Rights - Water law is administered by the Division of Water Rights (State Engineer) and based on the doctrine of prior appropriation. The Division of Water Rights has a regional office in Vernal that carries out the day-to-day activities within the basin.

Utah water law allows changes in the point of diversion, place of use and/or nature of use of an existing right. To make any change, the water user must file a change application with the State Engineer who will approve or reject the application. The decision is strongly dependent upon whether the change will impair the water rights of others. Compensation can be made, or conflicting rights may be acquired to resolve problems.

Perfected and approved water rights are considered real property. Unapproved applications and stock in mutual water companies are considered personal property. As such, they can be bought and sold in the open market.

In the appropriation process, the State Engineer analyzes the available data and, when needed, conducts one or more public meetings to present findings and receive input before adopting a final

policy regarding future appropriation and administration of water within a given area.

Through regulatory authority, the State Engineer influences water management by establishing and/or regulating diversion limitations (duty of water, usually about 3.0 or 4.0 acre-feet per acre in the Uintah Basin) for various uses. The State Engineer also sets policies on water administration for surface water and groundwater supplies. It is the state law that the State Engineer can allow improved irrigation efficiency but not expansion of acreage.

The State Engineer is responsible for a number of functions. These include: 1) distribution of water in accordance with established rights, 2) adjudication of water rights under an order of a state district court, 3) approval of plans and specifications for construction of dams and inspection of existing structures for safety, 4) licensing and regulating the activities of water well drillers, 5) regulation of geothermal development, 6) authority to control streamflow and reservoir storage or releases during a flooding emergency, and 7) regulation of stream channel alteration activities.

Water Quality - The Utah Department of Environmental Quality, through the Division of Water Quality, is responsible for water quality regulation. Quality of a specific body of water is determined using a set of standards for allowable contaminant levels. The state's antidegradation policy says in part: "Waters whose existing quality is better than the established standards for the designated uses will be maintained at high quality unless it is decided by the board, after appropriate intergovernmental coordination and public participation, in concert with Utah's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located."

7.2.2 Agencies and Organizations

In the 20th century, with enactment of the federal reclamation law, the Bureau of Reclamation, Natural Resources Conservation Service, Rural Utilities Service, Army Corps of Engineers, U. S. Geological Survey, Environmental Protection Agency, and the U. S. Fish and Wildlife Service have all come to play major roles. Their roles have been to provide regulatory, technical and financial assistance to water users through state and local organizations. The organizations formed by specific enabling state legislation are described below.

Water Conservancy Districts - The State District Court establishes these districts in response to formal petitions. A board of directors, appointed by the relevant county commission, governs when the district consists of a single county. The governor appoints directors for multi-county districts.

Conservancy districts have very broad powers. These include constructing and operating water systems, levying taxes and contracting with governmental entities. Districts may include incorporated and unincorporated areas. Those located in the Uintah Basin are the Central Utah Water Conservancy District, the Uintah Water Conservancy District and the Duchesne County Water Conservancy District.

Special Service Districts - These districts have many of the same duties and authorities of other districts and can be created by either counties or municipalities. They can be established to provide water, sewer, drainage, flood control, as well as non-water related service. The basin has 17 special service districts. A more complete list of special service districts can be found in the *Directory of Local Government Officials*, published annually by the Utah League of Cities and Towns.

City Water Departments - Municipalities establish these to provide water service to residents.

Mutual Irrigation Companies - Mutual irrigation companies were responsible for most early water development in Utah. They are formed under the state corporation code, and the majority are nonprofit. Stockholders have the right to a quantity of water, and they are assessed for the expenses of their company operations according to the number of shares they individually own.

Private Water Companies - These are organized as for-profit and nonprofit corporations. The nonprofit companies are not regulated by the Public Service Commission and only need to provide service to shareholders.

Strawberry Reservoir

Duchesne County has more than 37 water organizations, including mutual and private water companies and water users associations. Uintah and Daggett counties have 33 and six, respectively. Wasatch, Summit and Carbon counties have no water organizations in the Uintah Basin study area.

7.3 Problems and Needs

Reservoirs in the Uintah Basin attract large crowds of flat-water recreationists, namely boaters, anglers, water skiers and campers. Pollution of the drinking water flowing from these reservoirs is an increasing problem. Overcrowding and associated safety issues, especially at Strawberry and Steinaker reservoirs, are also concerns.

Inclusion of the Colorado pikeminnow (formerly, the Colorado squawfish), humpback chub, bonytail chub and razorback sucker on the endangered species list by the U. S. Fish and Wildlife Service (USFWS) has necessitated close coordination with the USFWS and other resource agencies for those who wish to alter and diversify the uses of the Green River and its tributary waters. Biological investigations are underway to determine what flows are needed to protect the habitat for these fish. If additional flows are needed, it is the responsibility of the Upper Colorado River RIP to obtain these flows.

Drains installed in the Jensen area by the Bureau of Reclamation to take irrigation return flows to Stewart Lake have created a selenium problem with the wildlife. Median selenium concentrations in all drain water discharged to Stewart Lake have historically exceeded the state standard of five micrograms per liter established for wildlife protection. The drains have been diverted around the lake and now discharge directly into the Green River. Refer to Section 12.

The Mosby Canal on May 18, 1997, breached and joined with water from spring runoff to form an erosion gully that diverted 30 cfs of its water into Dry Fork Creek. The gully created by the flood water was 200 feet deep, about 400 feet across and 2,000 feet long. Flood flows washed nearly 1.5 million cubic yards of fine red soil into Dry Fork Creek, an important source of irrigation and culinary water for Ashley Valley.

Problems from the red sediment closed down the Ashley Valley Water Treatment Plant, filled canals and plugged sprinkler systems. The potential for future erosion and sediment deposition in Dry Fork and Ashley creeks still exist. The Ashley Creek Stabilization Project is being designed to solve these problems. Possible solutions are:

- Construct a reservoir on Trout Creek to store and regulate early spring stream flows.
- Stream bank stabilization - gabions and tree revetments.
- Stream bank tree and bush plantings.
- Rebuild the old Ashley Creek meander channel through Vernal.
- Riprap stream banks.
- Stabilize the gully with dead trees to collect sediment.
- Reseed the gully and sediment deposits.
- Further develop the capability to use Red Fleet water through the Ashley Valley Water Treatment Plant.
- Reestablish the trout fishery in Ashley Creek.

The Corps of Engineers is developing a plan to stabilize Ashley Creek above the Fort Thornburg Diversion. Gabions and riprap will be added to streambank sections to control the high stream flows.

7.4 Water Rights Regulation

Since 1903, under Utah water law, the only two ways to obtain the right to use surface water are by filing an application with the State Engineer and securing his approval or by acquiring an existing rights. Before approving an application to appropriate water, the State Engineer must find: 1) there is unappropriated water in the proposed source, 2) the proposed use will not impair existing rights, 3) the proposed plan is physically and economically feasible, 4) the applicant has the financial ability to complete the proposed works, and 5) the application was filed in good faith and not for the purpose of speculation or monopoly. The State Engineer can withhold action on, or outright reject, an application if it is determined it will interfere with an existing right and is detrimental to the public welfare or the natural resources environment. After the State Engineer approves an application, the applicant has a specific time to divert the water and put it to beneficial use. For good cause, this time may be extended. The applicant does the work and submits proof of appropriation, then the State Engineer issues a certificate of appropriation as evidence of a perfected water right.

An owner of a perfected water right may lose the right if beneficial use ceases for longer than five years. The owner may file for, and be granted, an extension of time to resume use to protect a right that is not being used. A provision in the state constitution (Article XI, Section 6) prohibits municipalities from selling or otherwise disposing of any water rights they hold. An exception is if they trade for other water rights of equal value.

7.5 Water Quality Control

The Utah Water Quality Act (UWQA) regulates discharge of pollutants. The Utah Water Quality Board (UWQB) carries out the regulations, policies and continuous planning necessary to prevent, control or abate surface and groundwater pollution. The UWQB develops and carries out Utah water quality rules under authority of *Utah Code Annotated* 26-11-1 through 20. They are described in Section 12 of the *State Water Plan*. The Division of Water Quality, Department of Environmental Quality, serves as staff to the UWQB.

Water quality certification by the state is covered under Section 401 of the federal Water Pollution Control Act (1977). This act requires state certification on any application for a federal license or permit resulting in discharge into waters and/or wetlands of the United States. These activities include, but are not limited to, the construction or operation of the discharging facilities. Any discharges must comply with applicable state water

quality standards and the applicable provisions of the Clean Water Act (CWA).

The UWQB adopts and enforces groundwater protection rules. These rules are the building blocks in a formal program to protect beneficial uses of groundwater in Utah. Three main regulatory concepts are provided. They are to: 1) prohibit the reduction of groundwater quality, 2) prevent groundwater contamination in the interest of obviating a need for after-the-fact clean-up, and 3) provide protection based on the differences in existing groundwater qualities. There are five significant components: 1) groundwater quality standards, 2) groundwater classification, 3) groundwater protection levels, 4) aquifer classification procedures, and 5) a groundwater discharge permit system. Statutory authority for the rules is contained in Chapter 19-5 of the *Utah Code Annotated.*

The groundwater protection rules contain a groundwater discharge permitting system that controls activities which may affect groundwater quality. A groundwater discharge permit is required if, under normal circumstances, there may be a release to groundwater. Owners of existing facilities are not obligated to apply for a groundwater discharge permit immediately. An existing facility is a facility or activity that was in operation or under construction before February 10, 1990. Owners of these facilities must nevertheless notify the Executive Secretary of the UWQB of the nature and location of their discharge.

These regulations provide for a permit by rule for certain facilities or activities. Many operations pose little or no threat to groundwater quality. Some are already adequately regulated by other agencies. These operations are automatically extended a permit and need not go through the formal permitting requirements. Therefore, facilities qualifying under provisions of Section R448-6-6.2 will administratively be extended a groundwater discharge permit (permit by rule). But these operations are not exempt from the applicable total dissolved solids (TDS) limits or groundwater quality standards.

The authority for CWA, Section 401 certification, commonly known as 401 Water Quality Certification, is carried out through the Utah Water Quality Board by the Division of Water Quality. Whether the EPA administers a CWA program directly or delegates it to a state, the EPA retains the oversight role to insure compliance with all rules, regulations and policies.

Local communities are encouraged to set up and carry out a local aquifer protection management plan. They can contact the Division of Water Quality for information and assistance.

7.6 Drinking Water Regulation

The Drinking Water Board is empowered to adopt and enforce rules establishing standards prescribing maximum contaminant levels in public water systems. This authority is given by Title 26, Chapter 12, Section 5 of the *Utah Code Annotated*, 1953. These standards govern turbidity as well as bacteriological, radiological, inorganic chemical and organic chemical quality. Standards are also set for monitoring frequency and procedures.

The Division of Drinking Water serves as staff for the Drinking Water Board to assure compliance with the standards. At the local level, considerable reliance is placed on public water supply operators. Those operating systems serving over 800 people are currently required to have state certification. Water systems serving fewer than 800 people will only need to have a certified operator if the water system has a treatment facility in place. Public community system details are presented in Section 11.

7.7 Environmental Considerations

Water is often viewed as a commodity for people's use with little thought given to other water use systems. Adequate quantity and quality of water is crucial to maintaining healthy wildlife habitats and populations. This includes providing instream flows where prudent and possible, and maintaining wetland areas.

The importance of providing instream flow as a beneficial use to maintain fish and wildlife populations, riparian vegetation, and stream channels is widely recognized. The Utah Legislature has recognized this through recent legislation. For example, the Division of Wildlife Resources and the Division of Parks and Recreation are empowered to

file application for permanent or temporary changes to regulate instream perfected water rights. Adequate water resources planning allows consideration of instream flow needs early in any project design process so these flows can be resolved before construction or operation of the project.

Wetlands are important for groundwater recharge and discharge, flood storage, shoreline stabilization, sediment trapping, water purification, pollution control, food chain support, fish and wildlife habitat establishment, and active and passive recreation. Stream channelization, draining or filling of wet areas can also impact wetlands.

Numerous potential sources of pollution may adversely affect the quality of groundwater. These sources include agriculture, on-site waste treatment systems, solid wastes, hydrologic modification, hazardous wastes, oil and gas exploration and production, mining, surface impoundments, timber harvesting, and urban runoff. The importance of groundwater as a resource should always be considered. Any developmental activities should emphasize protection of recharge areas of the major aquifers.

The Uintah Basin has several environmentally sensitive areas. These include the lower 2-1/2 miles of the Duchesne River (which has been designated as critical habitat for the razorback sucker by the U. S. Fish and Wildlife Service), Stewart Lake, Nine Mile Canyon, Ouray National Waterfowl Refuge, the Book Cliffs and the High Uinta Wilderness. These areas are shown and discussed in plans prepared by the Bureau of Land Management, U. S. Fish and Wildlife Service and the Forest Service. Protection and/or mitigation should be considered when water development is contemplated. The Green River has been designated critical habitat for the endangered fish.

7.8 Dam Safety[159]

All dams that impound over 20 acre-feet of water are assigned a hazard rating. Dams impounding less than 20 acre-feet may be ruled exempt if they do not constitute a threat to human life or property. Hazard ratings reflect either high, moderate or low damage potential if the dam failed. It does not reflect the condition or reliability of the dam, but rather the potential for loss of life or property damage in the event the dam were to fail. This determines the frequency of inspection. High-, moderate- and low-hazard dams are inspected every one, two and five years, respectively.

Following the inspection, a letter from the State Engineer suggests maintenance needs and requests specific repairs. The State Engineer can declare the dam unsafe and order it drained and even breached after drainage. Efforts are always made to work with dam owners to schedule necessary repairs.

The State Engineer has outlined design standards in a publication entitled, *State of Utah Statutes and Administration Rules for Dam Safety*. Plans and specifications must be consistent with these standards. Dam safety personnel monitor dam construction to insure compliance with plans, specifications and design reports. Any problems are resolved before final approval.

The State Engineer is currently assessing the ability of all high hazard dams to meet minimum safety requirements. The assessment includes seismic stability and the dam's capability to pass the appropriate Inflow Design Flood (IDF). Table 7-1 shows the dams classified as high hazard in the Uintah Basin. The Division of Water Rights rates federal dams, but these are exempt from requirements of the State Dam Safety Program. The Bureau of Reclamation inspects dams constructed under its programs.

The federal government holds title to all the major reservoirs in the Uintah Basin. As the storage facilities are finished, conservancy districts take over management and maintenance. ❑

Table 7-1
High Hazard Dams

Dam Name	Ownership	Year Completed	Height (Feet)	Capacity (Acre-Feet)
Big Sand Wash	Moon Lake WUA	1965	112	12,100
Bottle Hollow	BIA	1970	86	11,100
Currant Creek	CUP/BR	1977	177	15,670
Flaming Gorge	CUP/BR	1964	502	3,789,000
Moon Lake	BR/Moon WUA	1938	101	35,260
Red Fleet	CUP/BR	1980	161	26,170
Soldier Creek	CUP/BR	1973	251	1,106,500
Starvation	CUP/BR	1970	200	167,500
Steinaker	CUP/BR	1961	162	33,300
Brough	Ouray Park Irr. Co.	1975	75	3,100
Brown Draw	Moon Lake WUA	1981	89	5,900
Bullock Draw	Ouray Park Irr. Co.	1970	21	560
Chepeta Lake	Whiterocks Irr. Co.	1944	42	2,810
Cliff Lake (Duchesne)	Ouray Park Irr. Co.	1957	28	1,060
Cottonwood	Ouray Park Irr. Co.	1982	78	6,130
East Park	Wildlife Resources	1919	35	3,770
East Timothy	Moon Lake WUA	1951	37	620
LaPoint	Whiterocks Irr. Co.	1985	70	1,520
Long Park (Daggett)	Sheep Cr. Irr. Co.	1980	113	13,700
Montez Creek	Dry Gulch Irr. Co.	1937	48	1,220
Paradise Park	Whiterocks Irr. Co.	1924	42	3,140
Red Creek (Duchesne)	Red Creek Irr. Co.	1960	107	5,700
Twin Pots	Moon Lake WUA	1931	38	4,130
Upper Stillwater	CUP/BR	1987	195	32,009
Whiterocks Lake	Ouray Park Irr. Co.	1957	29	1,080