

**MUNICIPAL AND INDUSTRIAL
WATER SUPPLY AND USES
in the
WEBER RIVER BASIN**

(Data Collected for Calendar Year 2005)

Prepared by

**Utah Department of Natural Resources
Division of Water Resources**

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Dennis J. Strong, Director

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EXECUTIVE SUMMARY

The purpose of this report is to document the municipal and industrial (M&I) water system supplies and uses within the Weber River Basin during the calendar year of 2005. These water systems deliver culinary (potable) and/or secondary (non-potable) water and have been separated into four categories, as defined on pages 26 and 27 of this report. The four categories are public community, public non-community, self-supplied industrial and private domestic water systems. Water supplies, under the current hydrologic and each systematic condition, are evaluated for only potable water service in public community water systems.

The base data for both water supply and uses of public community water systems was provided by each of the water systems. Data for the other categories of water systems was compiled by also using various other agencies and references.

M&I water uses, for the basin, were then totaled and tabulated by county. Portions of the four counties of Davis, Morgan, Summit, and Weber are contained within the Weber River Basin.

Public Community Water Systems

Of the aforementioned categories, public community systems serve about 95 percent of all residents in the State of Utah. Within the Weber River Basin, approximately 98 percent of the population is served by 75 public community water systems. Refer to **Figure 4** on page 13 for a location map of these systems, as well as the general boundaries of the basin.

For planning purposes, accurate and detailed current water use and supply information is invaluable in determining the ability of the basin to meet future water demands. The Division of Water Resources (DWRe) uses the annual reliable potable water supply, as defined on page 17, as a tool to quantify the amount of water that can be delivered by each public community water system to satisfy current and projected peak day demands with present water supply conditions.

In the Weber River Basin, it was determined that the current annual reliable potable water supply from the sources of the public community water systems is 98,606 acre-feet. In addition, Weber Basin Water Conservancy District wholesales a large amount of water to most of the systems. See page 4 for further information. Springs account for 10 percent, wells 78 percent, and surface supplies 12 percent of this supply. The breakdown of this supply is presented in the following **Table I**.

TABLE I
WEBER RIVER BASIN
Reliable Potable Water Supplies for Public Community Systems
(Acre-feet/year)

County	Springs	Wells	Surface	Total ¹
Davis	230.0	37,771.9	1,120.0	39,121.9
Morgan	705.9	583.6	0.0	1,289.5
Summit	4,105.8	10,283.2	2,690.3	17,079.3
Weber	5,018.9	28,011.4	8,085.5	41,115.8
Basin Totals	10,060.6	76,650.1	11,895.8	98,606.5

Notes: 1. Does NOT include wholesale water from Weber Basin Water Conservancy District. See page 4 for this and more information on the District.

M&I water use, within these systems, can be subdivided by two types of water: potable (culinary) and non-potable (secondary). Potable water is delivered by the public community system itself. However, secondary water can be delivered not only by the system, but also by separate irrigation companies, exclusively in some locations.

Table II, on the following page, shows public community system water use data for both potable and non-potable categories within the Weber River Basin. Categorically, the percentage of total water use is 21% residential indoor, 57% residential outdoor, 9% commercial, 11% institutional, and 2% light industrial/stockwatering.

TABLE II
WEBER RIVER BASIN
Water Use for Public Community Systems
(Acre-Feet/Year)

	Davis County	Morgan County	Summit County	Weber County	Total
Potable Use					
Residential Indoor	20,382.8	505.3	3,224.2	16,976.4	41,088.7
Residential Outdoor	9,160.3	476.8	4,687.0	13,493.2	27,817.3
Commercial	5,588.8	83.8	2,180.4	2,342.5	10,195.5
Institutional	4,709.7	212.4	499.9	4,878.6	10,300.6
Industrial	1,478.7	23.3	93.9	1,264.0	2,859.9
Total Potable	41,320.3	1,301.6	10,685.4	38,954.7	92,262.0
Secondary Use					
Residential	51,118.0	320.0	801.4	30,365.0	82,604.4
Commercial	3,497.0	150.0	1,240.0	2,620.0	7,507.0
Institutional	6,510.0	60.0	190.0	3,095.0	9,855.0
Industrial	0.0	0.0	5.0	1,150.0	1,155.0
Total Secondary	61,125.0	530.0	2,236.4	37,230.0	101,121.4
TOTAL WATER USE	102,445.3	1,831.6	12,921.8	76,184.7	193,383.4

In general, and specifically for this report, all per capita water use figures refer to the water use within public community water systems only. Out of a total basin population of 533,120 in 2005, 526,950 people were served by the public community systems. For these systems, residential potable per capita water use calculates to 117 gallons per capita per day (gpcd). Similarly, non-potable residential water use calculated to 140 gpcd. The resultant total per capita water use is 257 gpcd for residential purposes within the public community systems of the basin. With the addition of water use in the commercial, institutional and industrial categories, the per capita water use for public community systems is 156 gpcd for potable and 172 gpcd for non-potable water, for an overall water use of approximately 328 gpcd. Comparatively, in 2005, the statewide average per capita water use was 190 gpcd potable and 70 gpcd non-potable, for a total of 260 gpcd.

In the Weber River Basin, secondary (non-potable) water comprises a high percentage of the residential and institutional outdoor use. In fact, secondary water use, in this basin, is the most extensive in the state, comprising almost half of all the secondary water use in the state. Considering that secondary water is rarely metered, its use tends to far exceed outdoor watering needs. Combined, these factors all contribute to the much above average per capita water use, in this basin. The per capita water use values for various combinations of categories and types of water are shown in the following **Table III**.

**TABLE III
WEBER RIVER BASIN
Average Per Capita Use
(Supplied by Public Community Systems)**

CATEGORY	Average Per Capita Use (Ac-Ft/Yr)	Average Per Capita Use (GPCD)
Residential Potable Use	0.131	117
Residential Potable Plus Secondary Use	0.288	257
Total Potable Use	0.175	156
Total Potable Plus Secondary Use	0.367	328

Note: Total Potable categories include residential, commercial, institutional and industrial uses.

Total M&I Water Use

Table IV, on the following page, shows the total potable and non-potable M&I water use for all system types in the Weber River Basin for the year 2005. As can be seen, public community systems deliver the majority of the potable water used within the basin. However, as in this basin, self-supplied industries can also use significant amounts of water. The table indicates that the total potable M&I water use in 2005 was 98,508 acre-feet. Total non-potable M&I water use in 2005 for the basin was 107,881 acre-feet. Therefore, total M&I water use for all system categories and types of water in 2005, for the Weber River Basin, was 206,389 acre-feet.

TABLE IV
WEBER RIVER BASIN
Total M&I Water Use for all Categories
(Acre-Feet/Year)

	Davis County	Morgan County	Summit County	Weber County	Total
Potable Use					
Public Community Systems	41,320.3	1,301.6	10,685.4	38,954.7	92,262.0
Public Non-Community Systems	1,778.3	54.7	60.4	185.4	2,078.8
Self-Supplied Industries	2,175.1	40.0	0.2	1,022.3	3,237.6
Private Domestic	80.0	400.0	150.0	300.0	930.0
Total Potable	45,353.7	1,796.3	10,896.0	40,462.4	98,508.4
Secondary Use					
Secondary Irrigation Companies	61,125.0	530.0	2,236.4	37,230.0	101,121.4
Non-Community Systems	467.5	380.0	150.0	205.3	1,202.8
Self-Supplied Industries	0.0	220.0	0.0	5,336.3	5,556.3
Total Secondary	61,592.5	1,130.0	2,386.4	42,771.6	107,880.5
TOTALS	106,946.2	2,926.3	13,282.4	83,234.0	206,388.9

M&I Water Deliveries and Depletions

On the following page, **Table V** shows both the deliveries and depletions for all the M&I water in the basin. The information contained in the table is very useful for overall water planning purposes. See pages 28 and 29 for detailed definitions of the terms used. In **Appendix B**, there is a table that contains a breakdown of all the deliveries and depletions of each public community water system, as well as all other categories of water systems, within the basin.

**TABLE V
WEBER RIVER BASIN
M&I Deliveries and Depletions
(Acre-Feet/Year)**

COUNTY	Deliveries			Depletions		
	Indoor Use	Outdoor Use	Total	Indoor Use	Outdoor Use	Total
Davis	31,157.7	75,788.5	106,946.2	6,068.2	50,525.6	56,593.8
Morgan	1,061.2	1,865.1	2,926.3	341.4	1,243.4	1,584.8
Summit	5,231.7	8,050.7	13,282.4	374.7	5,367.1	5,741.8
Weber	27,622.2	55,611.8	83,234.0	8,419.7	37,074.5	45,494.2
Basin Totals	65,072.8	141,316.1	206,388.9	15,204.0	94,210.6	109,414.6

INTRODUCTION

Authority

The Utah Division of Water Resources (DWR_e) has the overall responsibility for completing studies, investigations, and plans to assist the responsible development and utilization of the water resources of the state of Utah. The State Water Plan, prepared and distributed in early 1990, provided the foundation and overall direction to establish and implement the state policy framework of water management. As part of the state water planning process, detailed plans are prepared for the 11 hydrologic basins in the state. The Weber River Basin is one of these 11 basins. A location map of the Weber River Basin is shown on the following page in **Figure 1**.

Each basin water plan identifies potential conservation and development projects and describes alternatives to efficiently satisfy the water needs of that basin. As part of this effort, background data reports are completed for each river basin. These include a Water-Related Land Use Report and a Municipal & Industrial (M&I) Water Supply & Use Report.

Scope

As stated earlier, the subject of this report is a determination of the present M&I water supplies and uses within the Weber River Basin. The data presented in all the referenced reports may be used in the State Water Plan for the Weber River Basin, as well as other division reports and studies. Information considered for this report also includes related investigations recently completed by the DWR_e and the Utah Division of Water Rights (DWR_i).

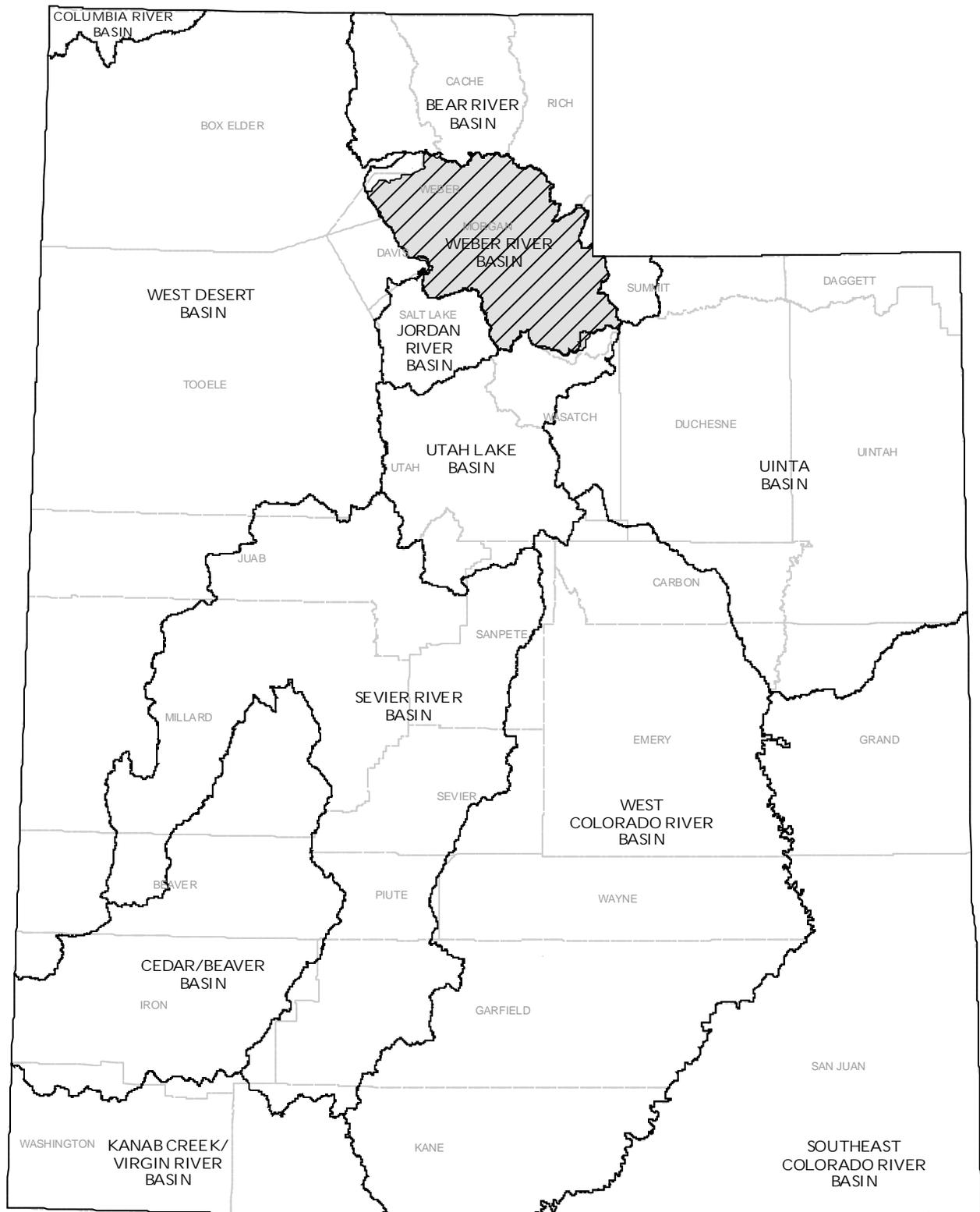


Figure 1. Location of the Weber River Basin

Data Collection

This study was begun in August 2006 by DWRe staff. The 2005 *Municipal and Industrial Water Use Forms*, distributed by the DWRi in cooperation with the DWRe and the Utah Division of Drinking Water (DDW), were used as a basis for the study. In all counties, the data collection process is as described in the following section, *Water Supply and Use Methodology*. Water rights discussions and information presented herein were prepared based, in part, on information provided by John Mann, area engineer of the State Engineer's Office, who is responsible for the oversight of the water rights in the Weber River Basin.

General Description of the Basin

The Weber River Basin contains a total of approximately 2400 square miles in north-central Utah. Bordered by the Great Salt Lake on the west, the land within the basin rises from this low elevation of (on the average) 4200 feet above sea level to approximately 11,900 feet at its western edge in the Uinta Mountains. From the shore of the Great Salt Lake, the basin encompasses the remaining area of Weber and Davis Counties, all of Morgan County, and the western portion of Summit County. See **Figure 2** on page 5 for a detailed drainage map of the basin.

The Weber River itself originates near the west end of the Uinta Mountains at an elevation of about 11,740 feet near Reids Peak and flows northwesterly for approximately 130 miles before it terminates into the Great Salt Lake. About one-half of the length of the river runs through Summit County, 25 miles in Morgan County, and 30 miles in Weber County. Major tributaries of the river that drain the basin include Beaver, Chalk, Echo, East Canyon, Lost, and Silver Creeks, as well as the Ogden River system with its tributaries of North Fork, Middle Fork, South Fork, and Wheeler Creeks.

With the completion of the U.S. Bureau of Reclamation's Weber Basin Project of the 1950's and the 1960's, the Weber River Basin is heavily regulated by man-made reservoirs, including: Smith-Morehouse, Rockport Lake (formerly Wanship Reservoir), Echo, Lost Creek, Causey, Pineview, and East Canyon. Rockport Lake, along with Lost Creek, East Canyon, and Echo Reservoirs regulate the flow of the Weber River before it emerges from its mountain watershed. Causey and Pineview Reservoirs regulate the Ogden River before it emerges from the mountains to join the Weber River as its major tributary. With current stewardship of the Weber Basin Project, as well as ownership and/or control of many other water sources in the basin, the Weber Basin Water Conservancy District (District) is a major supplier of water for many different uses within the basin. Following is a brief history of the District and the Weber Basin Project.

Weber Basin Water Conservancy District (Weber Basin Project)

Weber Basin Water Conservancy District (WBWCD), a political subdivision of the State of Utah, was formed in 1950 to act as a local sponsor of the federal Weber Basin Project. WBWCD (District) is one of the single largest suppliers and distributors of water in the state. Total deliveries of the District are approaching one quarter of a million acre feet of water per year for agricultural as well as municipal and industrial purposes. The District is unique in its ability to provide five different classifications of water service, including agricultural, culinary (from three separate treatment plants), industrial, groundwater recharge (aquifer storage and recovery), and pressurized secondary irrigation for municipal use in home gardens and landscaping. The following **Figure 3**, on page 6, is an illustration of the major facilities of the Weber Basin Project, as well as the projects and general service area of the District.

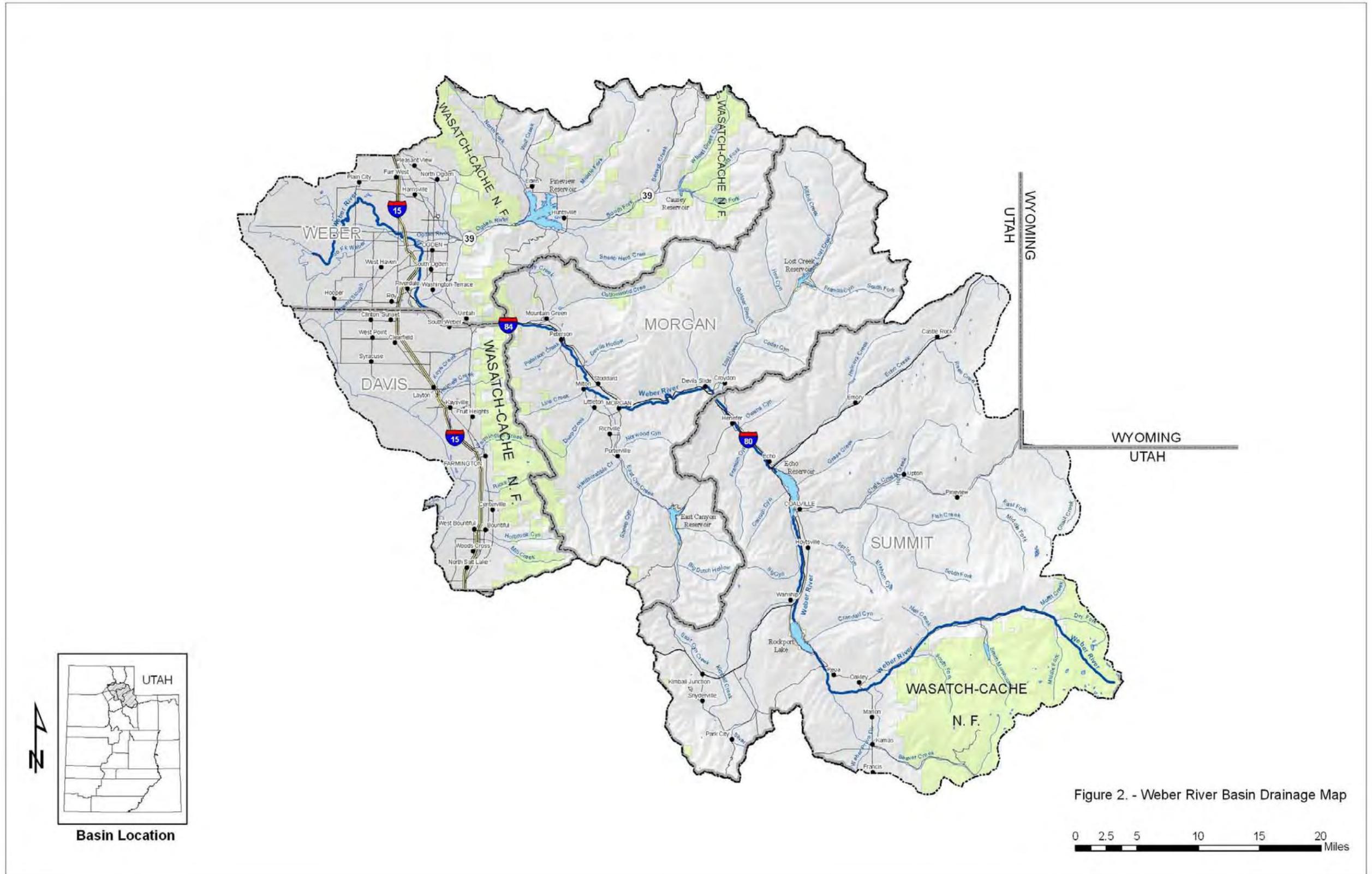


Figure 2. Weber River Basin Drainage Map

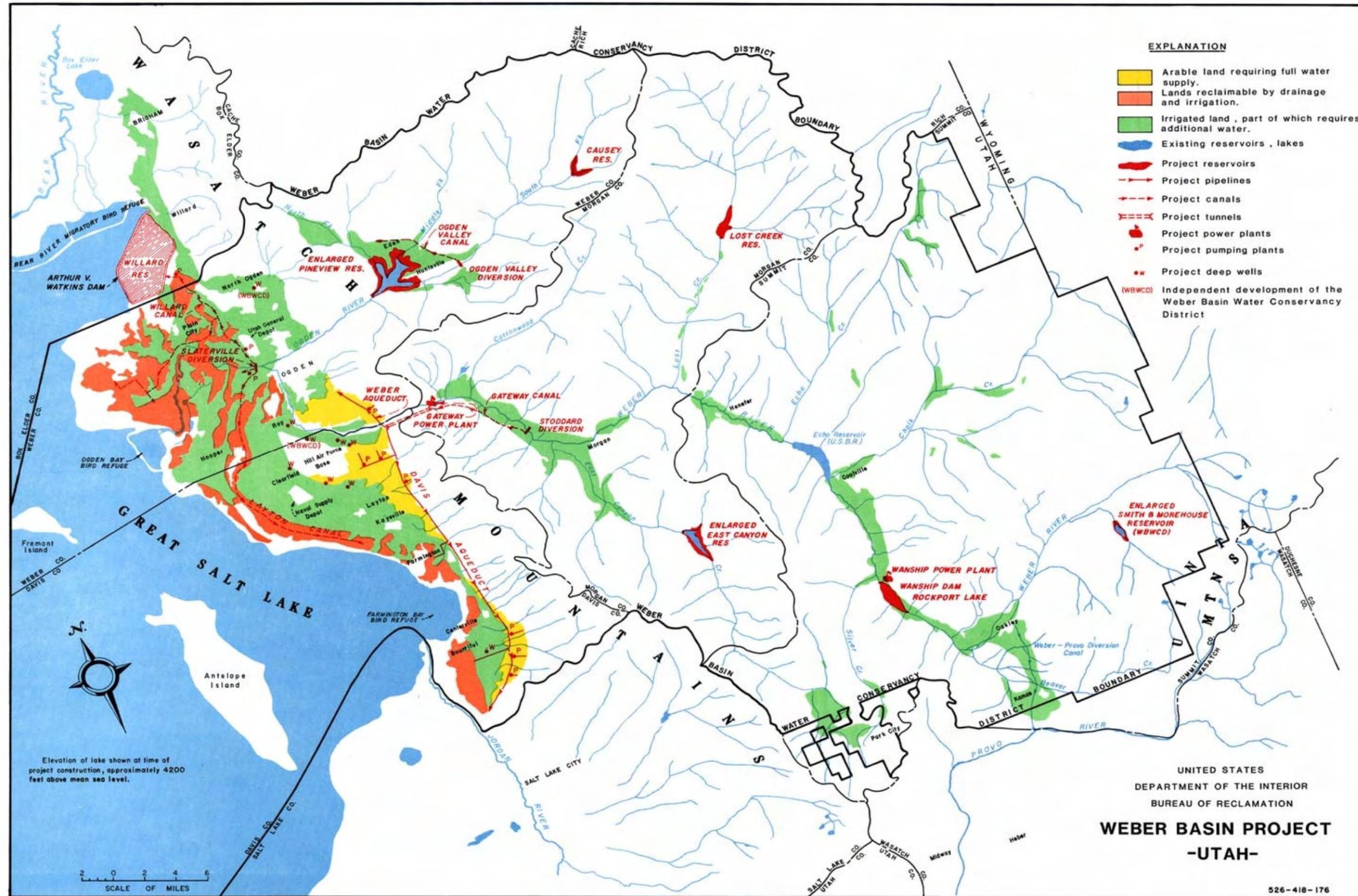


Figure 3. Weber Basin Project

Planning for the Weber Basin Project began as early as 1942 by the U.S. Bureau of Reclamation. Prior to this, there had already been extensive development of water projects, within the Weber River Basin. In 1931, the federally funded Weber River Project facilitated the construction of Echo Reservoir with a capacity of 74,000 acre-feet. Five years later, in 1936, the federally funded Ogden River Project facilitated the construction of Pineview Reservoir with an initial capacity of 44,000 acre-feet, as well as the necessary conveyance systems to utilize the water in the Weber River Basin. Additionally, there were numerous private developments of the water resources in the basin.

The Weber Basin Project was authorized by Congress in 1949, with monies for construction appropriated in 1952. Construction of facilities for the project began in 1956. Four new reservoirs were constructed to impound and control the waters of the Weber River. Wanship (Rockport Lake) Reservoir was completed in 1957 with a total storage capacity of 62,100 acre-feet. The next reservoir to be constructed, at the end of the system, was at Willard Bay. The impoundment has been named the Arthur V. Watkins dam and has the capacity to hold 215,120 acre-feet. Two smaller reservoirs were constructed on the South Fork of the Ogden River (the largest tributary of the Weber River) and Lost Creek. These were Causey and Lost Creek Reservoirs, with 47,100 and 22,510 acre-feet of respective storage capacity.

Two existing reservoirs were enlarged by the project. Pineview Reservoir, on the Ogden River, was enlarged from its original capacity of 44,000 acre-feet to its current capacity of 110,150 acre-feet. This enlarged capacity not only increased irrigation supply for the Ogden River Project, but also provides additional irrigation water for the Slaterville Diversion on the Weber River, as described below. The existing East Canyon Reservoir was enlarged with a new thin arch concrete dam, increasing its capacity from 29,000 to 51,200 acre-feet.

Three major diversions were constructed as part of the original project. The Stoddard Diversion was constructed on the Weber River just west of Morgan City from 1956 to 1957 with a flow capacity of 6,000 cubic feet per second (cfs). Completed in 1957, the Slaterville Diversion just west of Ogden City was built with a capacity of 9,000 cfs. From 1962 to 1964 the Ogden Valley Diversion was constructed on the South Fork of the Ogden River with a capacity of 2,000 cfs. Collectively, the Weber Basin Project was constructed to provide 166,000 acre-feet per year of water for irrigation purposes and 50,000 acre-feet of water for municipal and industrial (M&I) applications.

Concurrent with the construction of the Stoddard Diversion, the Gateway Canal, as well as both the Weber and Davis Aqueducts were constructed to distribute the diverted water. Eight and one-half miles long, the Gateway Canal is a concrete lined canal with a carrying capacity of 700 cfs. The Weber Aqueduct is just over four miles of concrete pipe, with a carrying capacity of 80 cfs. The Davis Aqueduct is also a concrete pipe, about twenty three miles in length, with a capacity of 355 cfs. Along the Davis Aqueduct there are also six pumping stations and numerous discharge points and their associated distribution piping.

Four to five years after the completion of the Slaterville Diversion, both the Layton and the Willard Canals were constructed. The Layton Canal, completed in 1964, was both earth lined and concrete pipe, nine miles long and built with a carrying capacity of 260 cfs. The Willard Canal, completed in 1963, just prior to the Layton Canal, was completely earth lined with a much larger carrying capacity of 1,150 cfs and conveys water to the Arthur V. Watkins dam.

At about the same time as the Layton and Willard Canals were being constructed, the Ogden Valley Diversion was also being built, along with the Ogden Valley Canal as its conveyance structure. The Ogden Valley Canal is mostly earth lined, over nine miles in length, has a capacity of 35 cfs, and conveys water to the lands in the Huntsville-Eden area.

Operation and maintenance of the Weber Basin Project was officially turned over to the WBWCD (District) on October 1, 1968. The District itself constructed several projects. It enlarged the existing Smith & Morehouse Reservoir to a capacity of over 8,000 acre feet. It also doubled the number of Project supplemental groundwater wells to a current total of 18 wells ranging in capacity from 450 to 5,000 gallons per minute. Three hydroelectric generating stations were constructed, with a total generating capacity of over eight megawatts of power. Additionally, under an emergency loan, the District constructed a sixty inch diameter pipeline that conveys water pumped from an equalizing reservoir near the Layton Canal into the Davis-Weber Canal. This allows the District to exchange water from the Arthur V. Watkins Reservoir during periods of high demand and/or lower overall supplies as a result of periodic droughts or other systematic problems. The exchanged water is held in upstream reservoirs or diverted through the Gateway Canal and Tunnel. The District also has stockholdings of water stored in Echo Reservoir, as well as its own water rights in the Weber and Ogden Rivers and various mountain streams.

As can readily be concluded from the above information, WBWCD not only has a complex history, but also a complex and extensive distribution system that utilizes all qualities of water from a variety of sources. All considered, this is why the District has only recently been able to quantify their “reliable” supply of water for municipal and industrial (m&i) purposes to any degree of accuracy and/or confidence. Through an extensive and comprehensive study conducted by the consulting firm of Bowens, Collins & Associates, all sources of water for the District were categorized and quantified, as well as current demands in order to determine both the current and future capabilities of the District to supply the growing water demands of the basin. Following is a summary explanation of the District’s water supply from the information contained in **Table 3-8** of the January 2008 **DRAFT** report of the study.

The “reliable projected dry year yield” of all of the District’s water sources combined is indicated in the report to be 219,495 acre feet per year. In order to determine the supply for m&i purposes only, the amount of water used for agricultural purposes had to be subtracted. Considering that most agricultural (ag) water is only grossly measured, often as simply as how long a certain “gate” is opened, quantities generally need to be estimated with a given set of assumptions. For Weber and Davis counties, the current retail ag water was separated out by assuming that all accounts with three acres of land or more were agricultural. A “water duty” (in feet per year) was assigned to these parcels, according to each local climatic conditions, and multiplied by the areas (acres) to obtain the annual agricultural water use in units of acre feet. Using this methodology, it was determined that the retail ag water for Davis and Weber counties was 10,217 and 6,608 acre feet, respectfully.

Additional agricultural water deliveries that were more readily quantifiable include: 24,000 acre feet storage at Willard; 12,637 acre feet stock watering; decreed water rights totaling 2,851 acre feet; Echo Reservoir storage rights at 1,288 acre feet; and wholesale contracted ag water to various irrigation companies collectively adding to 28,019 acre feet. In total, it was calculated that agricultural water deliveries were 85,620 acre feet. Subtracting the ag water from the total water supply of 219,495 gives the total reliable annual water supply available for m&i purposes at 133,875 acre feet for the District’s service area. This total supply includes both potable and non-potable water. Again, due to the lack of metering of the non-potable water, as well as both potable and non-potable water, in some cases, coming from the same source, it is not possible to accurately separate specific supply quantities for potable and/or non-potable water for m&i use.

<u>In summary:</u>	total dry year reliable supply	219,495 acre feet
	minus agricultural supply	<u>-85,620 acre feet</u>
	total M&I reliable supply (combined potable and non-potable)	133,875 acre feet

Public Water Systems

Within the Weber River Basin, there are 75 public community water systems serving a total population of approximately 526,950 people (most all of the total basin population of 533,120). See **Figure 4** on page 13 for the location of these systems. The basin also has just over sixty public non-community water systems. These systems serve Federal Forest Service campgrounds, State Park facilities, isolated commercial and institutional establishments, summer home developments, roadside rest areas and parks. Among the larger non-community systems is the Snow Basin ski resort that includes snowmaking capabilities. The basin also has nine self-supplied industries. Among these industries, an additional 110,000 acre-feet of saline water from the Great Salt Lake is utilized. None of this saline water use is included in any of the water use figures in this report. As can be realized, inclusion of this amount of water would disproportionately skew some water use figures.

Demographically, the basin's population is becoming increasingly more urbanized. Internal growth, migration of the Wasatch Front population, expanding recreational opportunities and areas (particularly ski resorts) are some of the major driving factors of this growth. The basin currently has six ski resorts, including the world-renowned ski areas of Park City, The Canyons, Deer Valley, and Snow Basin. This growth of the ski industry is largely responsible for making Summit County the fastest growing county in Utah from 1990 to the year 2000. Additionally, with large employers, such as Hill Air Force Base, and a broadening economic base throughout the basin, this population trend is likely to continue well into the future.

The Governor's Office of Planning and Budget projects that the basin's population will nearly double from the current population to over 900,000 people by the year 2050. Accordingly, M&I water use is steadily increasing within the basin. In order to facilitate such growth, there will need to be more efficient use of current water supplies, a reduction in per capita use and additional water development.

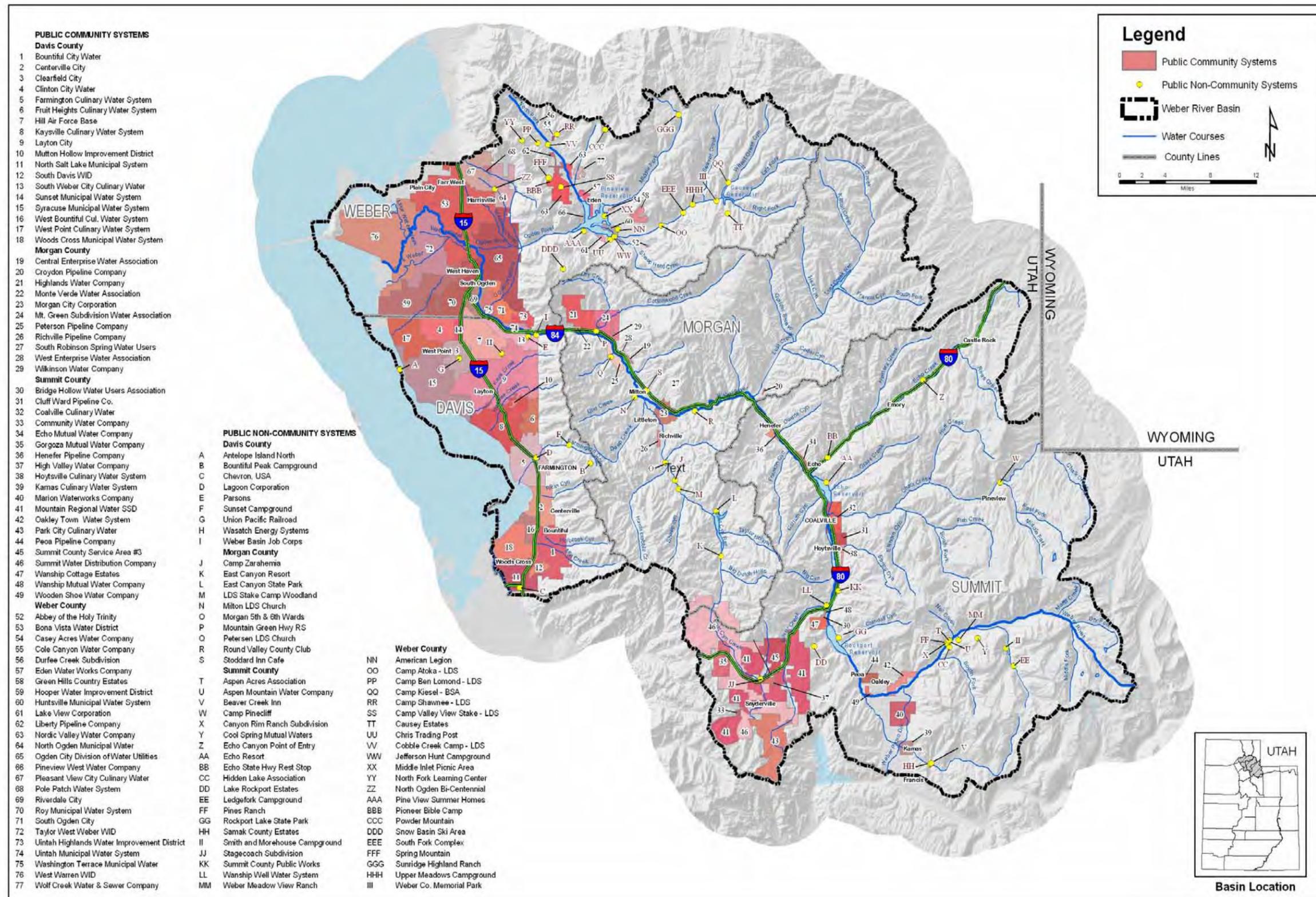


Figure 4. Location of Public Water Systems

WATER SUPPLY AND USE METHODOLOGY

Background

Over the past 45 years the Utah Division of Water Resources (DWRe) has employed various procedures to obtain municipal and industrial (M&I) water use data. In recent years, these procedures have become increasingly more comprehensive. When the division began water planning in the 1960's, available data consisted mainly of supplies and uses for the entire state. At that time, agriculture uses far exceeded M&I uses in Utah. M&I water use was generally calculated by using available or estimated per capita rates and multiplied by the census population data.

By the early 1980's, M&I diversions made up a larger percent of all statewide water uses and the entire water community began to increase their focus on M&I water supplies and uses. The Utah Division of Water Rights (DWRi) launched a program to collect yearly, statewide M&I data from each public community water system. The procedure involved mailing a survey designed to query each of the major public water suppliers about their sources of water supply. Additionally, the United States Geological Survey (USGS) began M&I water use studies. The division relied on both data sources in its planning efforts by the late 1980's.

With the preparation of the State Water Plan Basin reports, and the increasing focus on water conservation, the DWRe saw the need to verify and improve the quality and quantity of the available data. The first method used included assisting the DWRi in the improvement of their M&I data collection program. Secondly, the DWRe began verifying the accuracy of the data through yearly field surveys described in the following four sections.

Data Collection Methodology for Public Community Water Systems

Each year, the DWRe targets several hydrologic basins for M&I water supply and use analysis. The most recent water use information supplied by the DWRi is the basis used to begin the study. Prior to 2003, this information was submitted using a standard form by each water supplier. An example of the water use data form for Enoch is found in **Appendix A**. Since 2003, the program has been updated, allowing for the water suppliers to electronically submit their data.

The DWRe staff contact the manager or operator of each community water system (as defined by the DDW) to schedule a data collection and analysis meeting. These meetings are necessary because data often is not reported (either on the water use forms or electronically) in the detail required for a complete M&I water use study. During these meetings, staff clarifies and collects additional data as needed. Total water supply and usage of the water systems are calculated based on information gathered during these meetings. When data is not available, it is necessary to estimate a part or all of the system use.

A secondary objective of these meetings is to instruct the operator or manager on how to most accurately and effectively complete the water use data form and/or submit their information electronically. This methodology has been used since 1992.

Water Supply

Potable Water

Two factors define the potable water supply for public community water systems: maximum developed potable water supply available under present conditions and reliable potable water supply. The maximum developed potable water supply available under present conditions is defined as the water resource that is presently being utilized. It is limited by a mechanical constraint (such as pump capacity or pipe size), a hydrologic constraint (such as reliable stream flow or groundwater safe yield) or a legal constraint (such as a water right or legal contract).

The lesser amount of water supply, due to these three constraints, is considered to be the maximum developed potable water supply available under present conditions used in this analysis.

The determination of well pump capacities, average annual spring flow estimates, treatment plant capacities, and water right information aid in the calculation of this value. It should be noted that, due to the complexity of water rights, contracts, exchanges, etc., a detailed search of water right limitations associated with each entity is not within the scope of this study.

The reliable potable water supply is defined as the capacity to meet peak day demands, expressed as an annual volume. It is valuable in determining future water supply capacities of the particular community water system sources (wells, springs, etc.). **The reliable potable water supply is calculated by adding together the maximum developed water supply capacity of surface sources, one-half of the maximum yield of wells or their pump capacities (unless otherwise indicated by the system manager), and a percentage of the average annual flow of spring sources.** The determination of the percentage is based on information historical flow information, if available, and/or information provided by the water supplier.

On page 19, **Figure 5** graphically presents the relationship between the maximum developed potable water supply and the reliable potable water supply of a system. By quantifying the maximum developed and the reliable potable water supply of a system, the total population that a system may potentially support can be determined. The current total yearly water use is the volume under the lower curve (*Present Water Use Pattern*). The future total yearly water use is the volume under the upper curve (*Future Water Use Pattern*). The latter volume is equivalent to the reliable developed potable water supply.

The maximum developed potable water supply under present conditions is the volume under the upper line (*Maximum Water Supply*) in **Figure 5**. This amount is a theoretical annual volume based upon a maximum daily flow rate (limited by the water right or system capacity). Consequently, the peak day demand point on the future

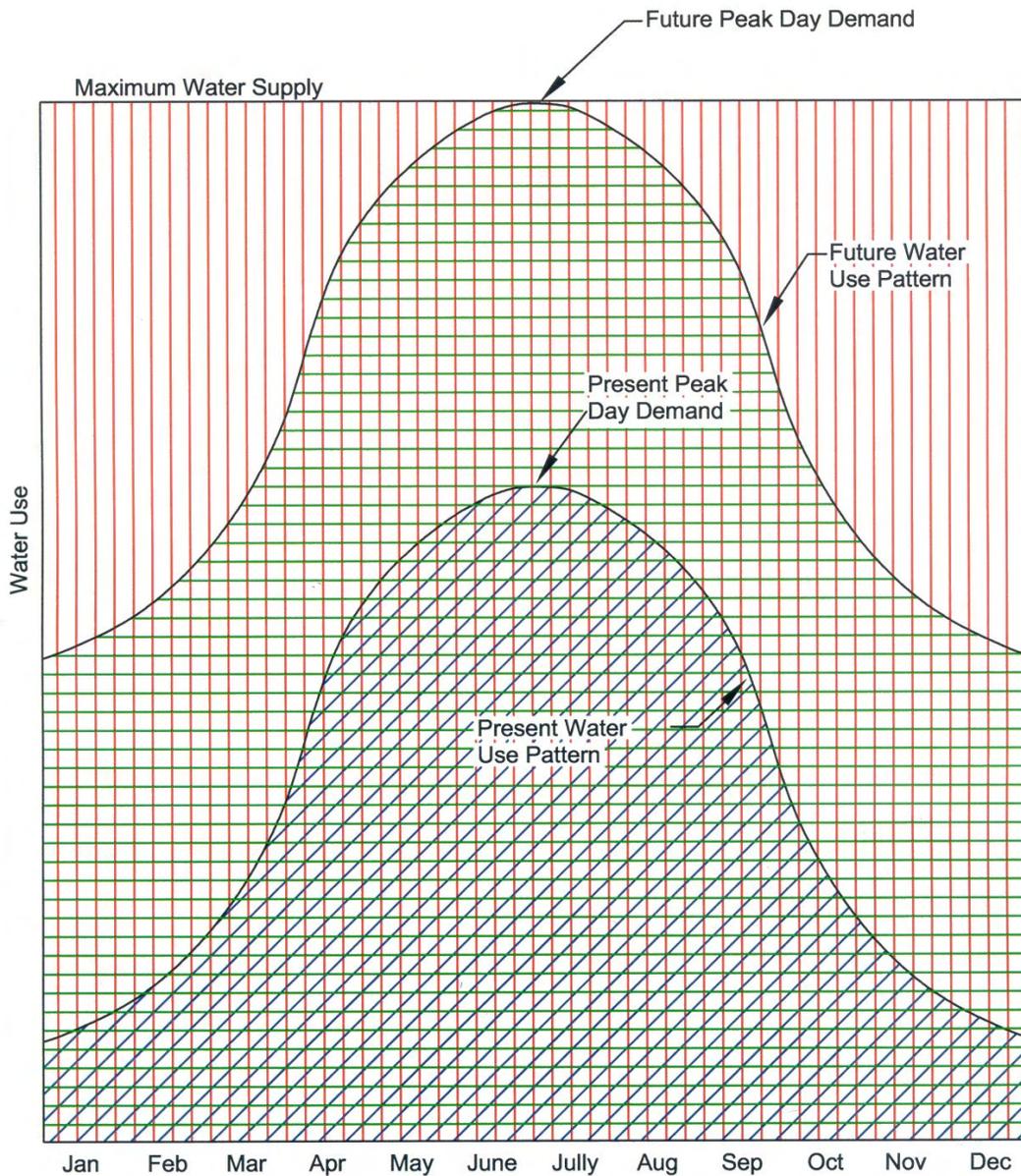
water use curve (*Future Peak Day Demand*) cannot exceed this upper limit. Due to the fluctuating nature of some sources (particularly springs), and the fact that most culinary water system storage tanks are designed to store only about one day of water demand, not all of the total maximum developed potable water supply is available to meet future water needs.

It is important to note that the reliable potable water supply is a theoretical annual volume based upon the current daily peak demand flow rate of any one system, under its current demand conditions. Additional supply may be made available by lowering and/or increasing the size of existing well pumps, pumping existing wells for longer durations, increasing storage capacity and/or distribution pipe sizes. However, being based only on current conditions, these systematic changes may cause operational problems during times of peak demand. Therefore, the DWRe uses the reliable potable water supply only as a reference tool to quantify the annual amount of water that can be delivered by each community water system.

For planning purposes, the reliable potable water supply is essential for estimating what population base each system can theoretically support with current demand patterns. It is also a guideline to help predict the approximate timing of future system improvements in order to meet any increase in demand.

Secondary Water

Deliveries of non-potable (secondary) water are an important component of the water use within the boundaries of public community water systems. However, quantifying the available supply of this water is difficult. In Utah, many of the secondary water systems are part of a larger agricultural irrigation system. Hence, the theoretical supply includes both agricultural and M&I water. Currently, separating M&I secondary from agricultural water is mostly estimated, due to the lack of and/or absence of metering, particularly at the level of individual property connections.



- 
 Present Yearly Water Use (Volume under curve)
- 
 Present Reliable Water Supply/Future Water Use (Volume under Curve)
 When this volume is divided by annual per capita water use, this yields the population that can be reliably served.
- 
 Maximum Water Supply Available Under Present Conditions (Volume under line)

Figure 5. Water Supply and Use Hydrograph

With secondary water use becoming more prevalent for outdoor landscaping, estimating the available supply of this water is becoming increasingly more important. **For planning purposes, the DWRe assumes that the supply for M&I secondary irrigation is simply equal to the current use.**

Water Use

Present water use, as defined herein, is the developed water supply that is actually delivered by the distribution system from surface or subsurface sources. Water use is divided into four categories: residential, commercial, institutional and industrial.

Residential

The staff collects data about the number of residential connections and the amount of water used by those connections from a water system representative. Water use in this category is divided into three subcategories: culinary-outdoor, culinary-indoor, and secondary-outdoor. While most systems will meter the total culinary residential water use, indoor and outdoor use are rarely metered separately. Secondary water use is rarely metered. Therefore, the DWRe usually estimates these subcategory totals.

Typically, culinary indoor use will be estimated first. One method to estimate the indoor use is to review residential meter reading totals for the system from the winter months, if available. Since outdoor watering typically does not occur during the winter months, it can be assumed that the water used in winter months is for indoor use only. The winter water use is then used to determine the total yearly indoor use.

When the above method does not yield a reasonable value for indoor use, the per capita indoor water use for a system can be estimated by using an equation that was developed in a detailed residential study, "Identifying Residential Water Use", completed by the DWRe in 2001. The mathematical equation that was developed is as follows:

$$\text{GPCD}_{\text{Indoor}} = 90.3 / P_{\text{PH}} + 42.3$$

where:

$\text{GPCD}_{\text{Indoor}}$ = gallons per capita day (per capita indoor water use)

P_{PH} = persons per household (US Census Bureau)

The total yearly indoor water use is then calculated for the system by multiplying the result of the above equation by the current population. Outdoor culinary water use can then be estimated by subtracting the total yearly indoor water use from the given total residential culinary water use.

Because very few entities meter secondary outdoor water use, the DWRe staff estimates the outdoor secondary water use by using the average lot size, percent irrigated, percent of residences that are supplied by separate secondary (pressurized and ditch) irrigation systems, water right-duty rates (volume of water required for turf growth) in the area, and other related information for each system. In determining residential secondary use, care is taken to not include irrigation water use for small pastures or farm fields that can often be found adjacent to residences, particularly in rural communities.

Commercial

For most systems, the system operator can separate metered commercial water use data from the total water use. In cases where this data is not available, or is extremely difficult to obtain, the DWRe staff attempts to estimate commercial water use by inventorying commercial businesses in the area and using published commercial water use estimates. The DDW and the Utah State Water Lab, among others, publish these estimates. In some rural communities where there are a relatively small number of commercial connections, the businesses are visited individually by the DWRe staff and asked about their water use.

Some commercial facilities use secondary water to irrigate outside landscapes. This is especially typical for commercial golf courses. Again, it is typical that secondary water is not metered. The DWRe staff estimates this use by multiplying the size of the irrigated area by a water right-duty rate or the evapotranspiration (ET) rate with assumed application efficiency percentage. The ET used is indicative of the amount of water, in inches, necessary for turf growth.

Institutional

Institutional water use is water used for city, county, state and federal government facilities, parks, municipal golf courses, schools, hospitals, churches, military facilities, as well as fire hydrant testing and other municipal losses in the water system. Because this water use is often not metered, the process to acquire this data is difficult. The system operator is asked to provide information about city facilities such as the number and size (irrigated acreage) of parks, schools, churches, and municipal golf courses. Water right-duty rates and/or the ET, with appropriate efficiencies, are used to calculate the amount of water that is needed to irrigate these areas. Estimates of leakage and water use for testing of system facilities are also included in this category.

Industrial

Industrial water use is defined as water used in the production of a product. Therefore, such commercial establishments as dairies, mink farms, and greenhouses, as well as stockwatering, are included in this category, provided a community water system serves them. Industrial water use within community water systems is calculated with the same process used to calculate commercial water use data discussed earlier.

Data Collection Methodology for Public Non-Community Water Systems

The DWRe staff attempts to contact each non-community system and/or make a personal visit to these systems. Non-community systems rarely meter their water use, so the DWRe staff estimate the annual water use. Questions are asked to determine the types of facilities on the system, population served, water source information, irrigation of outside areas, etc. This data, along with information found in water-related publications, is used to determine water use. The maximum and reliable water supplies for these systems are relatively small, often not available and are therefore not included in this study. However, for planning purposes, the DWRe assumes that the water supply for these systems is equal to their water use.

Data Collection Methodology for Self-Supplied Industrial Water Systems

Although self-supplied industries are included in the Non-Community Water Systems category as defined by the DDW, the DWRe has divided them into a separate category due to their importance. The category is equivalent to the DDW's Non-Community, Non-Transient category.

Water use is acquired for self-supplied industries by using data from the DWRi's Industrial Water Use Form and/or electronically submitted data. The DWRi collects annual water use data from most of the major self-supplied industrial water users in the state. This data is confidential. Therefore, the data presented in this M&I study is only presented as county totals. As with other non-community systems, the maximum and reliable water supplies are often not available and are not in the scope of this study. For planning purposes, the DWRe assumes that the water supply for these systems is equal to their water use.

Data Collection Methodology for Private Domestic Water Systems

Private domestic systems are residences that are not connected to any public community or non-community water system. They are usually supplied by individual wells. To determine the water use data for this category, the population of those served by private domestic systems is estimated. This population is estimated by subtracting the population served by community water systems from the county population data acquired from the Governor's Office of Planning and Budget (GOPB). The remainder is assumed to be the population that is served by private domestic systems. The per capita water use rate for this category is assumed to be the same as the rate for the public community system residential category for that county. To determine the total water use by private domestic systems, the estimated population is then multiplied by this rate. Again, the maximum and reliable water supplies for private wells, being relatively small, are not in the scope of this study. Similarly, for planning purposes, the DWRe assumes that the water supply for these systems is equal to their water use.

DEFINITIONS OF WATER TERMS

Water is supplied by a variety of systems for many types of users. The general term supply is defined as the amount of water available. Municipalities own most of the individual water supply systems. However, in some cases the owner/operator is a private company, state or federal agency. Thus, a "public" water supply may be either publicly or privately owned and supply treated and/or untreated water.

Water Supply Terms

Maximum Developed Potable Water Supply - The annual volume of potable (culinary) water which is the lesser of the hydrologic capacity of the water source, the physical capacity of the water system, or the amount allowed by the collective water rights. (See pages 16-18 for a more detailed explanation)

Reliable Potable Water Supply - The annual volume within the maximum developed water supply that is available to meet peak demands. This is generally calculated as 100% of the maximum supply from surface water sources, 50% of the maximum yield of wells, and between 50% and 100% of the average annual spring flows. When this number is divided by the average per capita usage, the resulting number represents the theoretical maximum population that the water source can serve. (See pages 16-18 for a more detailed explanation)

Municipal and Industrial Water Supply - Includes all water (potable and non-potable) supplied for residential, commercial, institutional, light industry, and self-supplied industries. This supply is delivered by public community systems, public non-community (transient and non-transient) systems, self-supplied industrial systems, unregulated Indian water systems and private wells.

Types of Water

Potable Water – Includes water meeting all applicable Federal, State, and Local drinking water requirements for residential, commercial, institutional and industrial uses. It is also referred to as culinary water supply.

Secondary Water – Includes water not meeting safe drinking water requirements. It is also referred to as non-potable (non-culinary) water. This water is usually delivered by pressurized or open ditch systems for irrigation of privately and publicly owned landscapes, gardens, parks, cemeteries, golf courses and other open areas. Sometimes called "dual" water systems, they are installed to provide an alternative to irrigating with culinary water for these outdoor areas. Although Irrigation companies most often provide this water, public community systems may deliver this water as well. Self-supplied industries can also use secondary water for industrial processes.

Water System Categories

Public Community Water System - Provides potable and/or non-potable water by either a privately or publicly owned water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year round residents. Water from the public community water supplies may be used in both indoor and outdoor applications for residential, commercial, institutional, and industrial purposes.

Public Non-Community Water System - Provides potable and/or non-potable water by either a privately or publicly owned water system of one of two types: transient and non-transient. Transient systems are systems that do not serve 25 of the same non-resident persons per day for more than six months per year. Examples include campgrounds, RV parks, restaurants, convenience stores, etc. Non-transient systems are systems that regularly serve 25 of the same non-resident persons per day for more than six months per year. Examples include churches, schools and industries. This report categorizes industrial non-transient systems as self-supplied industries.

Self-Supplied Industrial System - Provides potable and/or non-potable water for use by individual privately owned industries (usually from their own wells or springs).

Private Domestic System – Provides potable and/or non-potable water from privately owned wells and/or springs for use by individual homes.

Water Use Terms

Water is used in a variety of ways and for many purposes. It is often said that water is "used" when it is diverted, demanded, withdrawn, depleted or consumed. But it is also "used" in place for such things as fish and wildlife habitat, recreation and hydropower production. **Water use in this report is defined as “delivered” water.** A table that shows the basin’s M&I water deliveries and depletions is provided in **Appendix B.**

In the previous water supply section, the word “use” can be interchanged with the word “supply” to define the current demand associated with those definitions. Some additional water use terms are as follows:

Commercial Use - Use normally associated with small business operations that may include drinking water, food preparation, personal sanitation, facility cleaning and maintenance and irrigation of facility landscapes. Examples include retail businesses, restaurants and hotels.

Industrial Use - Use associated with the manufacturing or production of products. The volume of water used by industrial businesses can be considerably greater than water used by commercial businesses. Examples include manufacturing plants, oil and gas producers, mining companies, mink farms and dairies.

Institutional Use - Use normally associated with general operation of various public agencies and institutions (i.e. schools, municipal buildings, churches) including drinking water, personal sanitation, facility cleaning and maintenance and irrigation of parks, cemeteries, playgrounds, recreational areas, golf courses, and other facilities. The amount of water used by cities for outside irrigation of public areas typically is not metered.

Residential Use - Use associated with residential cooking, drinking water, washing clothes, miscellaneous cleaning, personal grooming and sanitation, irrigation of lawns, gardens and landscapes, and washing automobiles, driveways and other outside residential facilities. Examples include single-family homes, apartments, duplexes and condominiums.

Other Water Terms

Consumption - Water evaporated, transpired or irreversibly bound in either a physical, chemical or biological process. Consumed water results in a loss of the original water supplied.

Consumptive Use - Losses of water brought about by human endeavors when used for residential, commercial, institutional, industrial, agricultural, power generation, and recreation. Naturally occurring vegetation, fish and wildlife also consumptively use water.

Deliveries - Water already within a system that is being provided to an individual connection, whether potable or non-potable and/or metered or not. The connection can be for residential, commercial, institutional, and/or industrial uses. **For the purpose of this report, the delivered water amount is equivalent to water use.**

Depletion - Water consumed and made unavailable for return to a given designated area, river system or basin. It is intended to represent the net loss to a system. The terms consumption and depletion are often used interchangeably but are not the same. For example, water exported from a basin is depletion from the basin system but is not consumed in the basin. The exported water is available for use (consumption) in another basin or system. Water diverted to irrigate crops in a given system, but not returned for later use, is depletion. Precipitation that falls on irrigated crops is not considered a part of the supply like surface water and groundwater diversions. For this reason, precipitation falling on and consumed by irrigated crops is not considered as being depletion from the system.

Diversion - Water diverted from supply sources such as streams, lakes, reservoirs or groundwater for a variety of purposes, including cropland irrigation, as well as residential, commercial, institutional and industrial uses.

Withdrawal - Water withdrawn from supply sources such as lakes, streams, reservoirs or groundwater. This term is normally used in association with groundwater withdrawal. The terms *diversion* and *withdrawal* are often used interchangeably.

WATER RIGHTS IN THE WEBER RIVER BASIN

In general, all surface waters in the basin have been fully appropriated. The 1937 Weber River Decree and the 1948 Ogden River Decree, for water rights prior to those dates, adjudicated the majority of the basin. No updates of those decrees or the inclusion of groundwater have yet been ordered.

With the exception of the Snyderville/Park City area, which is closed to all new appropriations of both surface and ground water, there is a limited amount of groundwater resource available. Applications for the appropriation of one acre-foot per year or less will generally be considered, particularly if there is no public water supply available. Any applications for larger amounts of water will be extensively reviewed on an individual basis.

Although a detailed analysis of water rights is not within the scope of this report, brief overview statements of the water rights status for each sub-area of the basin are listed below. Each statement is intended to only generally explain water right regulations in the Weber River Basin pertaining to municipal and industrial (M&I) uses. For more detailed information and current water right regulations in the area, contact the Utah Division of Water Rights (DWRi).

Davis County

There have been five Proposed Determination of Water Rights books published for the county. Four were published in 1966 for the Southern Davis Division, and one for the Centerville Division in 1970. As recently as December 2006 there have been no final decrees issued.

In 1995 a groundwater management plan for the Bountiful sub-area was issued, stating that approval of any new applications for appropriation of water would not serve the long-term interests of the county. The opinion was expressed that the area's groundwater resources have been over appropriated. Total maximum groundwater withdrawals were therefore limited to 30,000 acre-feet, with the average annual recharge estimated at 26,000 acre-feet per year. Although the area is generally closed to new applications, those limited to one acre-foot or less are considered. However, all approved applications must abandon their water rights when a public water system becomes available.

Also in 1995, the groundwater management plan for the Weber Delta sub-area was issued. Recognizing a general decline (some as great as 40 feet) in groundwater levels, diversions from wells was limited to a total of 90,000 acre-feet on a five year moving average. Any single year's total withdrawals cannot exceed 120,000 acre-feet. For quantities greater than a single acre-foot per year, preference will be given to municipal water supplies with a demonstrated immediate need. There are, however, restricted areas, mostly in and around Hill Air Force Base, where no groundwater development can occur due to identified contamination.

Weber and Ogden Rivers

This area basically includes the remainder of the basin. The surface waters are considered to be fully appropriated through the two river decrees previously discussed. Water uses not included in the decrees and established prior to 1903 for surface water and 1935 for groundwater may file Diligence Claims. Any new diversions or consumptive uses of this "old" water are to be considered only through change applications.

Groundwater resources of this area are considered limited. No new appropriations are to be approved at the mouths of the canyons. Only currently owned or acquired water rights can be used in this area through change applications. New appropriations below the canyons are reviewed on an individual basis. Further limitations have been imposed in the Samak and Garff Ranch/Kamas areas.

Following is a separate discussion of the Snyderville/Park City sub-basin due to the dramatic recent growth in the area and a recently issued Interim Policy.

Snyderville/Park City Sub-Basin

The Weber River Decree closed this area to any new appropriation of surface water in 1937. Groundwater appropriations were closed in 1973. By the late 1970's, a moratorium was put into effect that prevented the transfer of any water rights into the basin in excess of one acre-foot per year. The moratorium boundaries were expanded in 1988 and revised to include transfer of any water right, regardless of amount.

The State Engineer's interim policy for the area went into effect in February of 1999, with the latest revision issued December 24, 2002. The policy closed the area to all new appropriations of both surface and ground water. Applications that transfer and/or exchange water rights into the area will be considered, on a case-by-case basis. Aquifer tests, as well as other tests and sampling, will be required for any new well in the area. The Weber River Commissioner is responsible for regulating and monitoring the policy requirements. Additionally, the Commissioner shall distribute the waters of the area by their priority date in conjunction with other water rights on the Weber River system.

DAVIS COUNTY M&I WATER SUPPLIES AND USES

With the exception of Antelope Island in the Great Salt Lake, the Weber River Basin encompasses all of the land area of Davis County. Within Davis County are the incorporated communities of Bountiful, Centerville, Clearfield, Clinton, Farmington, Fruit Heights, Kaysville, Layton, North Salt Lake, South Weber, Sunset, Syracuse, West Bountiful, West Point, and Woods Cross. Also within the county is the large institutional complex of Hill Air Force Base. There are 18 public community water systems, nine public non-community water systems, and three self-supplied industries in the county. Locations of these systems are shown in **Figure 4** on page 13.

Mutton Hollow Improvement District serves customers in the Kaysville area that are not on the Kaysville City system. South Davis Water Improvement District serves the unincorporated area between North Salt Lake and Bountiful. Weber Basin Water Conservancy District (WBWCD) wholesales culinary, as well as secondary (non-potable), water to the above-mentioned systems (with the exception of the communities of Clearfield and Sunset).

The WBWCD operates and maintains the Weber Basin Project that was built in the 50's and 60's (see page 4 for a brief history of both WBWCD and the Weber Basin Project) to provide both culinary and secondary water to most of the communities and agricultural areas of Davis County. Myriad canal and irrigation companies, as well as other districts, provide secondary water to individual customers. **Table 3**, on page 38, shows the tiers of organizations and the amounts of secondary water delivered to the community water systems by each secondary provider.

Shown in the following **Table 1**, the maximum potable water supply of the public community water systems in Davis County is 76,159 acre-feet: 460 acre-feet from springs, 73,459 acre-feet from wells, and 2,240 acre-feet from surface supplies.

**TABLE 1
DAVIS COUNTY
Maximum Potable Water Supplies for Public Community Systems
(Acre-Feet/Year)**

WATER SUPPLIER	Springs	Wells	Surface	Total
Bountiful City Water	0.0	9,920.0	2,240.0	12,160.0
Centerville City	0.0	5,645.5	0.0	5,645.5
Clearfield City	0.0	9,516.6	0.0	9,516.6
Clinton City Water	0.0	1,290.0	0.0	1,290.0
Farmington Culinary Water System	0.0	3,500.0	0.0	3,500.0
Fruit Heights Culinary Water System	0.0	322.6	0.0	322.6
Hill Air Force Base	0.0	9,573.1	0.0	9,573.1
Kaysville Culinary Water System	0.0	0.0	0.0	0.0
Layton City	0.0	14,000.0	0.0	14,000.0
Mutton Hollow Impr. District	0.0	0.0	0.0	0.0
North Salt Lake Municipal System	120.0	8,550.0	0.0	8,670.0
South Davis Water Imp. District	340.0	3,200.0	0.0	3,540.0
South Weber City Culinary Water	0.0	398.2	0.0	398.2
Sunset Municipal Water System	0.0	0.0	0.0	0.0
Syracuse Municipal Water System	0.0	0.0	0.0	0.0
West Bountiful Culinary Water System	0.0	1,292.0	0.0	1,292.0
West Point Culinary Water System	0.0	1,411.4	0.0	1,411.4
Woods Cross Municipal Water System	0.0	4,840.0	0.0	4,840.0
DAVIS COUNTY TOTALS	460.0	73,459.4	2,240.0	76,159.4

Note: All values represent maximum system source capacities limited by water rights, hydrologic constraints, and/or physical system constraints.

The reliable potable water supply, at 39,123 acre-feet, is just over half of the maximum supply. The breakdown of the reliable supply for the public community water systems is presented in the following **Table 2**. Bear in mind, both of these supply tables only include the supplies of the individual systems. Neither table includes supplies of wholesalers of water. In particular, WBWCD supplies a large amount of wholesale water to several of these systems. For more information on the District and its water supplies see page 4.

TABLE 2
DAVIS COUNTY
Reliable Potable Water Supplies for
Public Community Systems

WATER SUPPLIER	SPRINGS	WELLS	SURFACE	TOTAL
Bountiful City Water	0.0	4,960.0	1,120.0	6,080.0
Centerville City	0.0	2,822.8	0.0	2,822.8
Clearfield City	0.0	5,322.9	0.0	5,322.9
Clinton City Water	0.0	645.0	0.0	645.0
Farmington Culinary Water System	0.0	1,750.0	0.0	1,750.0
Fruit Heights Culinary Water System	0.0	161.3	0.0	161.3
Hill Air Force Base	0.0	5,221.2	0.0	5,221.2
Kaysville Culinary Water System	0.0	0.0	0.0	0.0
Layton City	0.0	7,000.0	0.0	7,000.0
Mutton Hollow Impr. District	0.0	0.0	0.0	0.0
North Salt Lake Municipal System	60.0	4,275.0	0.0	4,335.0
South Davis Water Imp. District	170.0	1,600.0	0.0	1,770.0
South Weber City Culinary Water	0.0	242.0	0.0	242.0
Sunset Municipal Water System	0.0	0.0	0.0	0.0
Syracuse Municipal Water System	0.0	0.0	0.0	0.0
West Bountiful Culinary Water System	0.0	646.0	0.0	646.0
West Point Culinary Water System	0.0	705.7	0.0	705.7
Woods Cross Municipal Water System	0.0	2,420.0	0.0	2,420.0
DAVIS COUNTY TOTALS	230.0	37,771.9	1,120.0	39,121.9

NOTES:

1. Wells are limited to 50% of their "maximum" capacity for reliable supply when well/pump capacity is the limiting factor. Surface supplies are considered reliable at their maximum capacity. Absent yearly flow records or other limiting factors, springs were considered reliable at 50% of their maximum flow rate.
2. Table **does not** include WBWCD reliable supplies (see page 10 for information)

As aforementioned, several of the public community water systems in Davis County, as part of their water supply, have wholesale purchase contracts. WBWCD is the major wholesale water provider in the county. The following **Table 3** shows the contracted and purchased amounts of wholesale potable water for each of the public community water systems from WBWCD in 2005.

**TABLE 3
DAVIS COUNTY
Wholesale Potable Water Suppliers,
Customers and Deliveries**

WATER SUPPLIER/CUSTOMER	Contracted Amount (Acre-Feet)	Purchased Amount (Acre-Feet)
Weber Basin Water Conservancy District		
Bountiful City Water	1,000.0	983.7
Centerville City	500.0	491.6
Chevron, USA	2,000.0	1,369.5
Clearfield City	4,380.0	4,348.2
Clinton City Water	1,600.0	1,442.0
Farmington Culinary Water System	501.0	467.9
Fruit Heights Culinary Water System	445.0	307.1
Geneva Rock	42.0	34.6
Hill Air Force Base	1,018.8	1,017.5
Kaysville Culinary Water System	2,500.0	2,369.1
Layton City	6,789.0	6,665.9
Mutton Hollow Improvement District	205.0	186.9
North Salt Lake Municipal System	1,905.0	1,818.2
South Davis Water Improvement District	360.0	355.4
South Weber City Culinary Water	600.0	580.9
Sunset Municipal Water System	1,400.0	967.1
Syracuse Municipal Water System	1,525.0	1,636.1
Wasatch Energy Systems	353.0	283.1
Webbs Canyon Water Co.	9.0	7.1
West Bountiful Culinary Water System	750.0	680.0
West Point Culinary Water System	700.0	481.5
Woods Cross Municipal Water System	100.0	0.0
DAVIS COUNTY TOTALS	28,682.8	26,493.4

The following **Table 4** is a breakdown of the potable water use for each of the public community water systems. The table shows an annual potable water use of 41,320 acre-feet. This use is more than the reliable water supply of the county, as indicated in the table. However, WBWCD wholesales water to many of these systems. See page 10 for details on the water supply of WBWCD.

Non-potable water use for each of the public community water systems, broken down by provider, is presented in **Table 5** on page 40.

**TABLE 4
DAVIS COUNTY
Water Use for Public Community Systems**

DAVIS COUNTY WATER SUPPLIER	POTABLE WATER USAGE (Acre-Feet/Year)						Service Population	Gallons Per Capita Per Day
	Residential Indoor	Residential Outdoor	Commercial Total	Institutional Total	Industrial Total	TOTAL M & I		
Bountiful City	2,572.7	1,121.7	596.7	290.2	89.6	4,670.9	31,900	130.7
Centerville City	1,185.2	39.4	200.0	162.2	0.0	1,586.8	15,560	91.0
Clearfield City	1,890.0	2,428.4	500.0	500.0	400.0	5,718.4	23,680	215.6
Clinton City	1,154.0	0.0	57.0	46.0	0.0	1,257.0	18,460	60.8
Farmington City	1,058.2	644.0	92.1	18.4	0.0	1,812.7	14,100	114.8
Fruit Heights	366.7	33.3	10.0	5.0	0.0	415.0	4,930	75.1
Hill Air Force Base	0.0	0.0	0.0	2,705.7	0.0	2,705.7	8,000	301.9
Kaysville City	1,856.7	318.3	350.0	75.0	40.0	2,640.0	23,680	99.5
Layton City	5,214.5	2,431.5	2,350.0	362.2	0.0	10,358.2	65,560	141.0
Mutton Hollow Impr. District	57.6	129.3	0.0	0.3	0.0	187.2	750	222.8
North Salt Lake	755.7	724.8	970.2	385.7	692.2	3,528.6	9,370	336.2
South Davis Water Imp. District	490.0	309.3	108.2	21.9	0.0	929.4	5,870	141.3
South Weber City	442.7	169.9	60.6	10.0	0.0	683.2	5,960	102.3
Sunset Municipal Water System	400.0	600.0	50.0	10.0	0.0	1,060.0	5,090	185.9
Syracuse Water System	1,480.0	70.0	50.0	25.0	0.0	1,625.0	19,840	73.1
West Bountiful Water System	341.2	115.8	73.0	60.0	0.0	590.0	4,480	117.6
West Point Water System	488.4	0.0	0.0	8.8	0.0	497.2	9,030	49.2
Woods Cross Water System	629.2	24.6	121.0	23.3	256.9	1,055.0	9,060	104.0
DAVIS COUNTY TOTALS	20,382.8	9,160.3	5,588.8	4,709.7	1,478.7	41,320.3	275,320	134.0
A	B	C	D	E	F	G	H	J

B, C, D, E, F, and H
G=B+C+D+E+F
J=G*(325,851 gallons per acre-foot)/(365 days per year)/H

These values are all input data.
This value represents only Potable M&I Water Use.
Average gallons per capita per day potable water use.

TABLE 5
DAVIS COUNTY
Secondary (Non-Potable) Water Use
Within Public Community Water System Service Areas
(Acre-Feet/Year)

DAVIS COUNTY WATER SUPPLIER	Residential Use (Ac-Ft/Yr)	Commercial Use (Ac-Ft/Yr)	Institutional Use (Ac-Ft/Yr)	Industrial/ Stockwater (Ac-Ft/Yr)	Total Secondary Use (Ac-Ft/Yr)
Bountiful City Water					
Bountiful Water Subcons. Dist.	9,550.0	300.0	900.0	0.0	10,750.0
South Davis Water Imp. District	1,000.0	0.0	0.0	0.0	1,000.0
Deuel Creek Irrigation	300.0	0.0	0.0	0.0	300.0
Centerville City					
Bountiful Water Subcons. Dist.	10.0	0.0	0.0	0.0	10.0
Deuel Creek Irrigation	3,800.0	100.0	100.0	0.0	4,000.0
Weber Basin Water Cons. Dist.	1,350.0	300.0	200.0	0.0	1,850.0
Clearfield City	0.0	0.0	0.0	0.0	0.0
Clinton City Water					
Davis & Weber Canal Co.	5,000.0	200.0	300.0	0.0	5,500.0
Farmington Culinary Water System					
Benchland Water District	6,400.0	300.0	800.0	0.0	7,500.0
Weber Basin Water Cons. Dist.	250.0	103.0	0.0	0.0	353.0
Fruit Heights Culinary Water System					
Hights Creek Irrig. Co.	800.0	40.0	60.0	0.0	900.0
Benchland Water District	250.0	0.0	0.0	0.0	250.0
Hill Air Force Base	0.0	0.0	2,000.0	0.0	2,000.0
Weber Basin Water Cons. Dist.	0.0	0.0	522.0	0.0	522.0
Kaysville City					
Hights Creek Irrig. Co.	1,500.0	250.0	50.0	0.0	1,800.0
Davis & Weber Canal Co.	3,000.0	0.0	0.0	0.0	3,000.0
Benchland Water District	1,800.0	0.0	200.0	0.0	2,000.0
Weber Basin Water Cons. Dist.	700.0	150.0	250.0	0.0	1,100.0
Layton City					
Layton Canal & Irrig. Co.	2,500.0	300.0	350.0	0.0	3,150.0
Kays Creek Irrigation	1,850.0	50.0	100.0	0.0	2,000.0
Davis & Weber Canal Co.	300.0	100.0	0.0	0.0	400.0
Holmes Creek Irrigation	100.0	0.0	0.0	0.0	100.0
Mutton Hollow Imp. District					
Kaysville Irrigation Co.	100.0	0.0	0.0	0.0	100.0
North Salt Lake Municipal System					
Salmaho Irrigation Co.	0.0	104.0	0.0	0.0	104.0
South Davis Water Imp. District	300.0	0.0	0.0	0.0	300.0
Weber Basin Water Cons. Dist.	0.0	0.0	20.0	0.0	20.0
South Davis Water Imp. District					
Weber Basin Water Cons. Dist.	2,000.0	250.0	100.0	0.0	2,350.0
South Weber City Culinary Water					
South Weber Water Imp. Dist.	400.0	0.0	0.0	0.0	400.0
Weber Basin Water Cons. Dist.	1,100.0	200.0	100.0	0.0	1,400.0
Sunset Municipal Water System	0.0	0.0	0.0	0.0	0.0
Syracuse Municipal Water System					
Davis & Weber Canal Co.	2,000.0	0.0	0.0	0.0	2,000.0
Layton Canal & Irrig. Co.	600.0	350.0	50.0	0.0	1,000.0
Weber Basin Water Cons. Dist.	188.0	0.0	0.0	0.0	188.0
West Bountiful Culinary Water System					
Bountiful Subconservancy Dist.	20.0	0.0	0.0	0.0	20.0
Weber Basin Water Cons. Dist.	1,100.0	0.0	158.0	0.0	1,258.0
West Point Culinary Water System					
Davis & Weber Canal Co.	1,200.0	200.0	100.0	0.0	1,500.0
Woods Cross Municipal Water System					
Bountiful Subconservancy Dist.	50.0	0.0	0.0	0.0	50.0
Weber Basin Water Cons. Dist.	1,600.0	200.0	150.0	0.0	1,950.0
DAVIS COUNTY TOTALS	51,118.0	3,497.0	6,510.0	0.0	61,125.0

Note: Separate irrigation companies provide secondary water to the water supplier unless indicated by an ***.

Various gallons per capita per day (gpcd) water use rates for the public community water systems are given in the following **Table 6**.

TABLE 6
DAVIS COUNTY
Average GPCD M&I Water Use for Public Community Systems

Water Supplier	Service Population	Residential Water Use			CII Water Use*			TOTAL WATER USE		
		Potable	Non-Potable	Sub Total	Potable	Non-Potable	Sub Total	Potable	Non-Potable	TOTAL
Bountiful City	31,900	103	304	407	27	34	61	131	337	468
Centerville City	15,560	70	296	366	21	40	61	91	336	427
Clearfield City	23,680	163	0	163	53	0	53	216	0	216
Clinton City	18,460	56	242	298	5	24	29	61	266	327
Farmington City	14,100	108	421	529	7	76	83	115	497	612
Fruit Heights	4,930	72	190	263	3	18	21	75	208	283
Hill Air Force Base	8,000	0	0	0	302	58	360	302	58	360
Kaysville City	23,680	82	264	346	18	34	51	100	298	397
Layton City	65,560	104	65	169	37	38	75	141	102	243
Mutton Hollow Impr. District	750	222	119	342	0	0	0	223	119	342
North Salt Lake	9,370	141	29	170	195	12	207	336	40	377
South Davis Water Imp. District	5,870	122	304	426	20	53	73	141	357	499
South Weber City	5,960	92	225	316	11	45	56	102	270	372
Sunset Municipal Water System	5,090	175	0	175	11	0	11	186	0	186
Syracuse Water System	19,840	70	125	195	3	18	21	73	143	217
West Bountiful Water System	4,480	91	223	314	27	31	58	118	255	372
West Point Water System	9,030	48	119	167	1	30	31	49	148	197
Woods Cross Water System	9,060	64	163	227	40	0	40	104	163	267
DAVIS COUNTY TOTALS	275,320	96	166	262	38	32	71	134	198	332

*Commercial, Institutional, and Industrial

Table 7, on the following page, shows the water use for public non-community system and private domestic systems. There are three self-supplied industries and several private domestic wells. Collectively, these uses amount to 4,033 acre-feet of potable water use and 468 acre-feet of secondary water use.

**TABLE 7
DAVIS COUNTY
Water Use for Public Non-Community Systems,
Self-Supplied Industries and Private Domestic Systems**

DAVIS COUNTY WATER SUPPLIER	POTABLE WATER USAGE (Acre-Feet/Year)					Total Secondary Water Use (Ac-Ft/Yr)
	Residential	Commercial	Institutional	Industrial	Total Potable Use	
Chevron, USA	0.0	0.0	0.0	1,369.5	1,369.5	294.5
Forest Service Facilities:						
Bountiful Peak Campground	0.0	0.0	0.1	0.0	0.1	0.0
Sunset Campgrounds	0.0	0.0	0.1	0.0	0.1	0.0
Lagoon Corporation	0.0	73.5	0.0	0.0	73.5	103.0
Parsons	0.0	22.0	0.0	0.0	22.0	0.0
State Parks Facilities:						
Antelope Island North	0.0	0.0	25.0	0.0	25.0	5.0
Union Pacific Railroad	0.0	5.0	0.0	0.0	5.0	0.0
Wasatch Energy Systems	0.0	283.1	0.0	0.0	283.1	0.0
Weber Basin Job Corps	0.0	0.0	0.0	0.0	0.0	65.0
Non-Community SubTotals	0.0	383.6	25.2	1,369.5	1,778.3	467.5
SELF-SUPPLIED INDUSTRIES ¹	0.0	0.0	0.0	2,175.1	2,175.1	0.0
PRIVATE DOMESTIC SYSTEMS	80.0	0.0	0.0	0.0	80.0	0.0
DAVIS COUNTY TOTALS	80.0	383.6	25.2	3,544.6	4,033.4	467.5

¹Jack B. Parson Co.'s, Silver Eagle Refining, Woods Cross Refining Co., LLC

The combined total potable M&I water use of all categories of water systems in the county is 45,354 acre-feet, while secondary water use is 61,593 acre-feet; giving an overall total M&I water use of 106,947 acre-feet.

MORGAN COUNTY M&I WATER SUPPLIES AND USES

The Weber River Basin encompasses all of Morgan County, which includes the incorporated communities of Croyden, Enterprise, Littleton, Milton, Mountain Green, Morgan City, Peterson, Porterville, and Richville. Within the area there are 11 public community systems, 10 public non-community systems, and two self-supplied industries. The locations of these systems in Morgan County are shown in **Figure 4** on page 13.

Table 8 shows that the maximum annual potable water supply for public community systems in Morgan County is 2,579 acre-feet: 1,412 acre-feet from springs and 1,167 acre-feet from wells.

TABLE 8
MORGAN COUNTY
Maximum Potable Water Supplies for Public Community Systems
(Acre-Feet/Year)

WATER SUPPLIER	Springs	Wells	Surface	Total
Central Enterprise Water Assc.	0.0	49.2	0.0	49.2
Croydon Pipeline Company	20.0	0.0	0.0	20.0
Highlands Water Company	585.0	0.0	0.0	585.0
Monte Verde Water Association	82.3	26.0	0.0	108.3
Morgan City Corporation	629.5	890.5	0.0	1,520.0
Mt. Green Subdivision Water Assc	0.0	10.0	0.0	10.0
Peterson Pipeline Company	0.0	98.5	0.0	98.5
Richville Pipeline Company	65.0	0.0	0.0	65.0
S. Robinson Spring Water Users	29.7	0.0	0.0	29.7
West Enterprise Water Association	0.0	13.0	0.0	13.0
Wilkinson Water Company	0.0	80.0	0.0	80.0
MORGAN COUNTY TOTALS	1,411.5	1,167.2	0.0	2,578.7

Note: All values represent maximum system source capacities limited by water rights, hydrologic constraints, and/or physical system constraints.

The reliable potable water supply for public community systems in Morgan County is 1,290 acre-feet or about 50 percent of the maximum annual water supply. The breakdown of this supply is presented in the following **Table 9**.

TABLE 9
MORGAN COUNTY
Reliable Potable Water Supplies for Public Community Systems
(Acre-Feet/Year)

WATER SUPPLIER	SPRINGS	WELLS	SURFACE	TOTAL
Central Enterprise Water Assc.	0.0	24.6	0.0	24.6
Croydon Pipeline Company	10.0	0.0	0.0	10.0
Highlands Water Company	292.5	0.0	0.0	292.5
Monte Verde Water Association	41.2	13.0	0.0	54.2
Morgan City Corporation	314.8	445.3	0.0	760.1
Mt. Green Subdivision Water Assc.	0.0	5.0	0.0	5.0
Peterson Pipeline Company	0.0	49.3	0.0	49.3
Richville Pipeline Company	32.5	0.0	0.0	32.5
S. Robinson Spring Water Users	14.9	0.0	0.0	14.9
West Enterprise Water Association	0.0	6.5	0.0	6.5
Wilkinson Water Company	0.0	40.0	0.0	40.0
MORGAN COUNTY TOTALS	705.9	583.6	0.0	1,289.5

NOTES:

1. Wells are limited to 50% of their "maximum" capacity for reliable supply when well/pump capacity is the limiting factor. Surface supplies are considered reliable at their maximum capacity. Absent yearly flow records or other limiting factors, springs were considered reliable at 50% of their maximum flow rate.
2. Table **does not** include WBWCD reliable supplies (see page 10 for information)

Table 10 shows a breakdown of the potable water use for each public community system. This table shows that for Morgan County the current annual potable water use of public community water systems is 1,302 acre-feet. Although this is about equal to the reliable system source capacity, it is only 50 percent of the maximum annual potable water supply.

TABLE 10
MORGAN COUNTY
Water Use for Public Community Systems

MORGAN COUNTY WATER SUPPLIER	POTABLE USAGE (Acre-Feet/Year)						Service Population	Gallons Per Capita Per Day
	Residential Indoor	Residential Outdoor	Commercial Total	Institutional Total	Industrial Total	TOTAL M & I		
Central Enterprise Water Assc.	30.0	30.0	5.0	5.0	0.0	70.0	400	156.2
Croydon Pipeline Company	5.5	4.5	1.0	1.0	0.0	12.0	70	153.0
Highlands Water Company	83.7	94.8	17.7	15.0	0.0	211.2	1,150	164.0
Monte Verde Water Association	10.2	14.8	0.0	0.0	0.0	25.0	140	159.4
Morgan City Corporation	247.3	176.9	54.1	181.4	19.3	679.0	3,200	189.4
Mt. Green Subdivision Water Assc	6.6	9.8	0.0	0.0	0.0	16.4	90	162.7
Peterson Pipeline Company	23.5	46.5	1.0	5.0	0.0	76.0	300	226.2
Richville Pipeline Company	10.2	6.3	0.0	2.0	4.0	22.5	130	154.5
S. Robinson Spring Water Users	3.0	9.0	0.0	0.0	0.0	12.0	40	267.8
West Enterprise Water Association	2.3	9.7	0.0	0.0	0.0	12.0	30	357.1
Wilkinson Water Company	83.0	74.5	5.0	3.0	0.0	165.5	1,140	129.6
MORGAN COUNTY TOTALS	505.3	476.8	83.8	212.4	23.3	1,301.6	6,690	173.7
A	B	C	D	E	F	G	H	J

B, C, D, E, F, and H These values are all input data.
G=B+C+D+E+F This value represents only Potable M&I Water Use.
J=G*(325,851 gallons per acre-foot)/(365 days per year)/H Average per capita potable water use.

Secondary water is another important aspect of municipal and industrial (M&I) water use. **Table 11** gives the annual amount of secondary water used for various categorical uses within the boundaries of the public community systems. In Morgan County, several separate irrigation companies provide secondary water to customers within the public communities. None of the communities operate their own secondary water systems. Total secondary water use for the public community water systems is 530 acre-feet.

TABLE 11
MORGAN COUNTY
Secondary (Non-Potable) Water Use
Within Public Community Water System Service Areas
(Acre-Feet/Year)

WATER SUPPLIER	Residential Use	Commercial Use	Institutional Use	Industrial/ Stockwater Use	Total Secondary Use
Central Enterprise Water Assc.					
Spring Hollow Grove Home Owners Assc.	30.0	0.0	0.0	0.0	30.0
Croydon Pipeline Company					
Croydon Irrigation Company	10.0	0.0	0.0	0.0	10.0
Highlands Water Company	0.0	0.0	0.0	0.0	0.0
Monte Verde Water Association	0.0	0.0	0.0	0.0	0.0
Morgan City Corporation					
East Richfield Ditch Co.	20.0	0.0	0.0	0.0	20.0
North Morgan Irrigation Co.	40.0	0.0	0.0	0.0	40.0
South Morgan Water Ditch Co.	40.0	0.0	0.0	0.0	40.0
Weber Canal Company	100.0	150.0	50.0	0.0	300.0
Mt. Green Subdivision Water Assc	0.0	0.0	0.0	0.0	0.0
Peterson Pipeline Company					
Peterson Irrigation Company	50.0	0.0	5.0	0.0	55.0
Richville Pipeline Company					
Richville Irrigation Company	20.0	0.0	5.0	0.0	25.0
West Porterville Irrigation	10.0	0.0	0.0	0.0	10.0
S. Robinson Spring Water Users	0.0	0.0	0.0	0.0	0.0
West Enterprise Water Association	0.0	0.0	0.0	0.0	0.0
Wilkinson Water Company	0.0	0.0	0.0	0.0	0.0
MORGAN COUNTY TOTALS	320.0	150.0	60.0	0.0	530.0

Various gallons per capita per day (gpcd) water use rates for the public community systems of Morgan County are shown in the following **Table 12**.

TABLE 12
MORGAN COUNTY
Average GPCD M&I Water Use for Public Community Systems

Water Supplier	Service Population	Residential Water Use			CII Water Use*			TOTAL WATER USE		
		Potable	Non-Potable	Sub Total	Potable	Non-Potable	Sub Total	Potable	Non-Potable	TOTAL
Central Enterprise Water Assc.	400	134	67	201	22	0	22	156	67	223
Croydon Pipeline Company	70	128	128	255	26	0	26	153	128	281
Highlands Water Company	1,150	139	0	139	25	0	25	164	0	164
Monte Verde Water Association	140	159	0	159	0	0	0	159	0	159
Morgan City Corporation	3,200	118	56	174	71	56	127	189	112	301
Mt. Green Subdivision Water Assc	90	163	0	163	0	0	0	163	0	163
Peterson Pipeline Company	300	208	149	357	18	15	33	226	164	390
Richville Pipeline Company	130	113	206	319	41	240	282	155	446	601
S. Robinson Spring Water Users	40	268	0	268	0	0	0	268	0	268
West Enterprise Water Association	30	357	0	357	0	0	0	357	0	357
Wilkinson Water Company	1,140	123	0	123	6	0	6	130	0	130
MORGAN COUNTY TOTALS	6,690	131	43	174	43	28	71	174	71	244

*Commercial, Institutional, and Industrial

Table 13, on the following page, shows the annual water use for public non-community systems, self-supplied industries, and private domestic systems. The total water use of these water systems is 495 acre-feet of potable water and 600 acre-feet of secondary water use.

TABLE 13
MORGAN COUNTY
Water Use for Public Non-Community Systems,
Self-Supplied Industries and Private Domestic Systems
(Acre-Feet/Year)

MORGAN COUNTY WATER SUPPLIER	POTABLE USAGE					Total Secondary Water Use
	Residential Use	Commercial Use	Institutional Use	Industrial/ Stockwater Use	Total Potable Use	
Camp Zarahemla	0.0	0.0	1.0	0.0	1.0	10.0
East Canyon Resort	0.0	30.0	0.0	0.0	30.0	180.0
LDS Stake Camp Woodland	0.0	0.0	8.5	0.0	8.5	0.0
Milton LDS Church	0.0	0.0	1.0	0.0	1.0	0.0
Morgan 5th & 6th Wards	0.0	0.0	1.0	0.0	1.0	0.0
Peterson LDS Church	0.0	0.0	1.0	0.0	1.0	0.0
Round Valley Country Club	0.0	0.2	0.0	0.0	0.2	180.0
State Facilities:						
East Canyon State Park	0.0	0.0	10.0	0.0	10.0	10.0
Mountain Green Hwy RS	0.0	0.0	1.5	0.0	1.5	0.0
Stoddard Inn Café	0.0	0.5	0.0	0.0	0.5	0.0
Non-Community SubTotals	0.0	30.7	24.0	0.0	54.7	380.0
SELF SUPPLIED INDUSTRIES ¹	0.0	0.0	0.0	40.0	40.0	220.0
PRIVATE DOMESTIC SYSTEMS	400.0	0.0	0.0	0.0	400.0	0.0
MORGAN COUNTY TOTALS	400.0	30.7	24.0	40.0	494.7	600.0

¹ Browing Arms, Holcim (US), Inc.

Total potable M&I water use for all categories of water systems in the county is then about 1,797 acre-feet, while non-potable use is 1,130 acre-feet. The overall total annual M&I water use is then 2,927 acre-feet.

SUMMIT COUNTY M&I WATER SUPPLIES AND USES

The Weber River Basin encompasses only the western end of Summit County, which includes most of the population of the county in the communities of Coalville, Echo, Francis Town, Henefer Town, Hoytsville, Kamas, Marion, Oakley Town, Park City, Peoa, Wanship, and Woodland Hills. Within this area are 20 public community systems, 20 public non-community systems, and two self-supplied industries. Locations of these systems are shown in **Figure 4** on page 13.

Table 14 shows that the maximum annual potable water supply for public community systems in Summit County is 31,482 acre-feet; 5,462 acre-feet from springs, 23,330 acre-feet from wells, and 2,690 acre-feet from surface supplies.

TABLE 14
SUMMIT COUNTY
Maximum Potable Water Supplies for Public Community Systems
(Acre-Foot/Year)

WATER SUPPLIER	Springs	Wells	Surface	Total
Bridge Hollow Water Assoc.	0.0	74.0	0.0	74.0
Cluff Ward Pipeline Co.	128.9	0.0	0.0	128.9
Coalville Culinary Water	575.2	631.7	0.0	1,206.9
Community Water Co.	0.0	267.8	290.3	558.1
Echo Mutual Water Co.	53.4	0.0	0.0	53.4
Gorgoza Mutual Water Co.	161.3	1,221.7	0.0	1,383.0
Henefer Pipeline Co.	483.9	0.0	0.0	483.9
High Valley Water Co.	0.0	285.0	0.0	285.0
Hoytsville Pipeline Co.	86.9	123.1	0.0	210.0
Kamas Culinary Water System	224.5	627.3	0.0	851.8
Marion Waterworks Co	48.4	161.3	0.0	209.7
Mountain Regional Water SSD	531.0	4,711.0	0.0	5,242.0
Oakley Town Water System	800.0	75.0	0.0	875.0
Park City Culinary Water	1,613.0	12,258.8	1,000.0	14,871.8
Peoa Pipeline Company	282.3	0.0	0.0	282.3
Summit Co Service #3	0.0	255.0	0.0	255.0
Summit Water Distribution	408.2	2,606.4	1,400.0	4,414.6
Wanship Cottage Estates	0.0	10.0	0.0	10.0
Wanship Mutual Water Co	35.0	22.0	0.0	57.0
Wooden Shoe Water Company	30.0	0.0	0.0	30.0
SUMMIT COUNTY TOTALS	5,462.0	23,330.1	2,690.3	31,482.4

Note: All values represent maximum system source capacities limited by water rights, hydrologic constraints, and/or system constraints.

The reliable potable water supply is shown in **Table 15**. At 17,079 acre-feet per year, the reliable potable water supply is about 54 percent of the maximum potable water supply.

TABLE 15
SUMMIT COUNTY
Reliable Potable Water Supplies for Public Community Systems
(Acre-Feet/Year)

WATER SUPPLIER	SPRINGS	WELLS	SURFACE	TOTAL
Bridge Hollow Water Assoc.	0.0	37.0	0.0	37.0
Cluff Ward Pipeline Co.	91.9	0.0	0.0	91.9
Coalville Culinary Water	345.1	344.1	0.0	689.2
Community Water Co.	0.0	133.9	290.3	424.2
Echo Mutual Water Co.	32.0	0.0	0.0	32.0
Gorgoza Mutual Water Co.	96.8	1,221.7	0.0	1,318.5
Henefer Pipeline Co.	290.3	0.0	0.0	290.3
High Valley Water Co.	0.0	285.0	0.0	285.0
Hoytsville Pipeline Co.	86.9	123.1	0.0	210.0
Kamas Culinary Water System	224.5	627.3	0.0	851.8
Marion Waterworks Co	29.0	161.3	0.0	190.3
Mountain Regional Water SSD	154.0	1,518.3	0.0	1,672.3
Oakley Town Water System	550.0	37.5	0.0	587.5
Park City Culinary Water	1,613.0	4,302.5	1,000.0	6,915.5
Peoa Pipeline Company	282.3	0.0	0.0	282.3
Summit Co Service #3	0.0	161.3	0.0	161.3
Summit Water Distribution	245.0	1,303.2	1,400.0	2,948.2
Wanship Cottage Estates	0.0	5.0	0.0	5.0
Wanship Mutual Water Co	35.0	22.0	0.0	57.0
Wooden Shoe Water Company	30.0	0.0	0.0	30.0
SUMMIT COUNTY TOTALS	4,105.8	10,283.2	2,690.3	17,079.3

NOTES:

1. Wells are limited to 50% of their "maximum" capacity for reliable supply when well/pump capacity is the limiting factor. Surface supplies are considered reliable at their maximum capacity. Absent yearly flow records or other limiting factors, springs were considered reliable at 50% of their maximum flow rate.
2. Table **does not** include WBWCD reliable supplies (see page 10 for information)

Table 16 shows a breakdown of the potable water use for each public community system. This table shows that for Summit County the total current annual potable water use is 10,685 acre-feet, which is 62 percent of the reliable potable water supply.

**TABLE 16
SUMMIT COUNTY
Water Use for Public Community Systems**

SUMMIT COUNTY WATER SUPPLIER	POTABLE USAGE (Acre-Feet/Year)						Service Population	Gallons Per Capita Per Day
	Residential Indoor	Residential Outdoor	Commercial Total	Institutional Total	Industrial Total	TOTAL M & I		
Bridge Hollow Water Assoc.	5.0	3.0	0.0	0.0	0.0	8.0	50	142.8
Cluff Ward Pipeline Co.	13.3	10.0	0.0	0.0	0.0	23.3	170	122.4
Coalville Culinary Water	100.0	20.0	32.3	15.1	7.3	174.7	1,430	109.1
Community Water Co.	80.0	27.8	15.0	2.7	0.0	125.5	1,230	91.1
Echo Mutual Water Co.	5.0	0.6	2.0	0.5	0.0	8.1	80	90.4
Gorgoza Mutual Water Co.	269.4	293.8	10.0	5.0	0.0	578.2	3,700	139.5
Henefer Town	58.2	137.9	7.7	6.1	3.1	213.0	740	257.0
High Valley Water Co.	37.9	93.5	0.0	0.0	0.0	131.4	520	225.6
Hoytsville Pipeline Co.	36.9	43.1	10.0	5.0	0.0	95.0	470	180.4
Kamas Culinary Water System	98.0	270.3	33.1	9.2	1.5	412.1	1,250	294.3
Marion Waterworks Co	27.4	47.6	5.0	15.0	20.0	115.0	340	302.0
Mountain Regional Water SSD	900.0	1,300.0	200.0	200.0	60.0	2,660.0	9,500	250.0
Oakley Town Water System	100.0	50.0	10.0	20.0	0.0	180.0	1,260	127.5
Park City Culinary Water	1,000.0	1,500.0	1,000.0	200.0	0.0	3,700.0	7,800	423.5
Peoa Pipeline Company	10.0	10.0	0.0	0.0	2.0	22.0	250	78.6
Summit Co Service #3	35.0	32.0	0.6	0.0	0.0	67.6	490	123.2
Summit Water Distribution	425.8	831.9	852.7	21.3	0.0	2,131.7	5,430	350.5
Wanship Cottage Estates	1.0	0.5	0.0	0.0	0.0	1.5	30	44.6
Wanship Mutual Water Co	17.3	8.0	2.0	0.0	0.0	27.3	230	106.0
Wooden Shoe Water Company	4.0	7.0	0.0	0.0	0.0	11.0	50	196.4
SUMMIT COUNTY TOTALS	3,224.2	4,687.0	2,180.4	499.9	93.9	10,685.4	35,020	272.4
A	B	C	D	E	F	G	H	J

A, B, C, D, E, F, H, and K
G=B+C+D+E+F
J=G*(325,851 gallons per acre-foot)/(365 days per year)/H

These values are all input data.
This value represents only Potable M&I Water Use.
Average gallons per capita per day potable water use.

Secondary water is another important aspect of total M&I water use. **Table 17** shows the amount of secondary water use for public community systems. In Summit County, separate irrigation companies supply secondary water for several of the communities for a total use of 2,236 acre-feet.

TABLE 17
SUMMIT COUNTY
Secondary (Non-Potable) Water Use
Within Public Community Water System Service Areas
(Acre-Feet/Year)

SUMMIT COUNTY WATER SUPPLIER	Residential Use	Commercial Use	Institutional Use	Industrial/ Stockwater Use	Total Secondary Use
Bridge Hollow Water Assoc.	0.0	0.0	0.0	0.0	0.0
Cluff Ward Pipeline Co.	10.0	0.0	0.0	0.0	10.0
Coalville Culinary Water	200.0	0.0	0.0	0.0	200.0
Community Water Company	0.0	0.0	0.0	0.0	0.0
Echo Mutual Water Company					
Echo Ditch Company	14.0	0.0	0.0	0.0	14.0
Gorgoza Mutual Water Co.	0.0	0.0	0.0	0.0	0.0
Henefer Town					
Henefer Irrigation Company	50.0	5.0	5.0	0.0	60.0
High Vallely Water Co.	0.0	0.0	0.0	0.0	0.0
Hoytsville Culinary Water System					
Hoytsville Ditch Company	50.0	0.0	0.0	0.0	50.0
Kamas Culinary Water System	0.0	0.0	0.0	0.0	0.0
Marion Waterworks Co					
Lower Ditch Irrigation Co.	4.0	0.0	0.0	0.0	4.0
Upper Ditch Irrigation Co.	4.0	0.0	0.0	0.0	4.0
Ditch Sprinkler Group	12.0	0.0	0.0	0.0	12.0
Mountain Regional Water SSD	20.0	275.0	0.0	0.0	295.0
Oakley Town Water System					
New Field & N. Bench Irr. Co.	220.0	10.0	20.0	0.0	250.0
North Bench Canal Co.	10.0	0.0	0.0	0.0	10.0
Smith & Morehouse Res. Co.	40.0	0.0	0.0	0.0	40.0
Park City Culinary Water	100.0	800.0	165.0	0.0	1,065.0
Peoa Pipeline Company	15.0	0.0	0.0	5.0	20.0
Summit Co Service #3	0.0	0.0	0.0	0.0	0.0
Summit Water Distribution	0.0	150.0	0.0	0.0	150.0
Wanship Cottage Estates	2.4	0.0	0.0	0.0	2.4
Wanship Mutual Water Co					
Wanship Ditch Co.	40.0	0.0	0.0	0.0	40.0
Wooden Shoe Water Company	10.0	0.0	0.0	0.0	10.0
SUMMIT COUNTY TOTALS	801.4	1,240.0	190.0	5.0	2,236.4

The following **Table 18** gives various gallons per capita per day (gpcd) water use rates for the public community systems of the county.

TABLE 18
SUMMIT COUNTY
Average GPCD M&I Water Use for Public Community Systems

Water Supplier	Service Population	Residential Water Use			CII Water Use*			TOTAL WATER USE		
		Potable	Non-Potable	Sub Total	Potable	Non-Potable	Sub Total	Potable	Non-Potable	TOTAL
Bridge Hollow Water Assoc.	50	143	0	143	0	0	0	143	0	143
Cluff Ward Pipeline Co.	170	122	53	175	0	0	0	122	53	175
Coalville Culinary Water	1,430	75	125	200	34	0	34	109	125	234
Community Water Co.	1,230	78	0	78	13	0	13	91	0	91
Echo Mutual Water Co.	80	62	156	219	28	0	28	90	156	247
Gorgoza Mutual Water Co.	3,700	136	0	136	4	0	4	140	0	140
Henefer Town	740	237	60	297	20	12	32	257	72	329
High Valley Water Co.	520	226	0	226	0	0	0	226	0	226
Hoytsville Pipeline Co.	470	152	95	247	28	0	28	180	95	275
Kamas Culinary Water System	1,250	263	0	263	31	0	31	294	0	294
Marion Waterworks Co	340	197	53	249	105	0	105	302	53	354
Mountain Regional Water SSD	9,500	207	2	209	43	26	69	250	28	278
Oakley Town Water System	1,260	106	191	298	21	21	43	128	213	340
Park City Culinary Water	7,800	286	11	298	137	110	248	423	122	545
Peoa Pipeline Company	250	71	54	125	7	18	25	79	71	150
Summit Co Service #3	490	122	0	122	1	0	1	123	0	123
Summit Water Distribution	5,430	207	0	207	144	25	168	350	25	375
Wanship Cottage Estates	30	45	71	116	0	0	0	45	71	116
Wanship Mutual Water Co	230	98	155	253	8	0	8	106	155	261
Wooden Shoe Water Company	50	196	179	375	0	0	0	196	179	375
SUMMIT COUNTY TOTALS	35,020	202	20	222	71	37	107	272	57	329

*Commercial, Institutional, and Industrial

On the following page, **Table 19** indicates the water use for public non-community systems and private domestic systems. Rockport State Park facilities, several summer and year-round developments, Campgrounds, and Summit County Public Works are among the 20 non-community systems. There are two self-supplied industries in Summit County. All these uses amount to 211 acre-feet of potable water and 150 acre-feet of non-potable water.

TABLE 19
SUMMIT COUNTY
Water Use for Public Non-Community Systems,
Self-Supplied Industries and Private Domestic Systems
(Acre-Feet/Year)

SUMMIT COUNTY WATER SUPPLIER	POTABLE USAGE					Total Secondary Water Use
	Residential Use	Commercial Use	Institutional Use	Industrial/ Stockwater Use	Total Potable Use	
Aspen Acres Association	5.0	0.0	0.0	0.0	5.0	0.0
Aspen Mountain Water Co.	5.0	0.0	0.0	0.0	5.0	0.0
Beaver Creek Inn	0.0	0.3	0.0	0.0	0.3	0.0
Camp Pinecliff	0.0	0.0	1.0	0.0	1.0	0.0
Canyon Rim Ranch Subdivision	4.0	0.0	0.0	0.0	4.0	0.0
Cool Spring Mutual Waters	8.0	0.0	0.0	0.0	8.0	0.0
County Facilities:						
Summit County Public Works	0.0	0.0	2.0	0.0	2.0	0.0
Echo Resort	0.0	3.0	0.0	0.0	3.0	0.0
Forest Service Systems:						
Ledgefork CG	0.0	0.0	0.3	0.0	0.3	0.0
Smith Morehouse CG	0.0	0.0	0.3	0.0	0.3	0.0
Hidden Lake Association	3.0	0.0	0.0	0.0	3.0	0.0
Lake Rockport Estates	2.0	0.0	0.0	0.0	2.0	0.0
Pines Ranch	3.0	0.0	0.0	0.0	3.0	150.0
Samak Country Estates	2.0	0.0	0.0	0.0	2.0	0.0
Stagecoach Subdivision	2.0	0.0	0.0	0.0	2.0	0.0
State Facilities:						
Echo Canyon Port of Entry	0.0	0.0	2.0	0.0	2.0	0.0
Echo State Hwy Rest Stop	0.0	0.0	10.0	0.0	10.0	0.0
Rockport State Park	0.0	0.0	4.0	0.0	4.0	0.0
Wanship Well Water System	0.5	0.0	0.0	0.0	0.5	0.0
Weber Meadow View Ranch	3.0	0.0	0.0	0.0	3.0	0.0
Non-Community SubTotals	37.5	3.3	19.6	0.0	60.4	150.0
SELF-SUPPLIED INDUSTRIES ¹	0.0	0.0	0.0	0.2	0.2	0.0
PRIVATE DOMESTIC SYSTEMS	150.0	0.0	0.0	0.0	150.0	0.0
SUMMIT COUNTY TOTALS	187.5	3.3	19.6	0.2	210.6	150.0

¹Citation Oil Co., Western Gas Resources

Total potable M&I water use for all categories of water systems in the county is then 10,685 acre-feet, while total non-potable water use is 2,236 acre-feet, giving a total overall M&I water use in 2005 of about 12,921 acre-feet for Summit County within the Weber River Basin.

WEBER COUNTY M&I WATER SUPPLIES AND USES

The Weber River Basin encompasses most of the land area of Weber County. Included within the basin are the communities of Eden, Hooper, Huntsville, Liberty, North Ogden, Ogden City, Pleasant View, Riverdale City, Roy, South Ogden City, Taylor, West Weber, Uintah, Washington Terrace, and Warren.

Within this area are 26 public community systems, 22 public non-community systems, and two self-supplied industries. Locations of these systems are shown in **Figure 4** on page 13.

As shown in **Table 20** on the following page, the maximum annual potable water supply for the public community systems of Weber County is 74,338 acre-feet; 8,916 acre-feet from springs, 49,251 acre-feet from wells, and 16,171 acre-feet from surface sources.

TABLE 20
WEBER COUNTY
Maximum Potable Supplies for Public Community Systems
(Acre-Feet/Year)

WATER SUPPLIER	Springs	Wells	Surface	Total
Abbey of the Holy Trinity	544.0	0.0	0.0	544.0
Bona Vista Water District	150.0	1,900.0	0.0	2,050.0
Casey Acres Water Co.	0.0	13.0	0.0	13.0
Cole Canyon Water Co.	116.0	0.0	0.0	116.0
Durfee Creek Subdivision	0.0	20.0	0.0	20.0
Eden Waterworks Co.	217.2	100.0	0.0	317.2
Green Hills Country Estates	0.0	110.0	0.0	110.0
Hooper Water Improvement Dist.	0.0	6,515.7	0.0	6,515.7
Huntsville Municipal Water Sys.	324.2	0.0	0.0	324.2
Lake View Corporation	0.0	100.0	0.0	100.0
Liberty Pipeline Company	88.7	300.0	0.0	388.7
Nordic Valley Water Co.	0.0	121.0	0.0	121.0
North Ogden Municipal Water	1,200.0	2,000.0	0.0	3,200.0
Ogden City Div. of Water Utilities	3,811.9	21,250.0	13,000.0	38,061.9
Pineview West Water Co.	0.0	78.0	0.0	78.0
Pleasant View City Culinary Water	967.8	1,242.0	0.0	2,209.8
Pole Patch Water System	0.0	0.0	0.0	0.0
Riverdale City	0.0	3,266.3	0.0	3,266.3
Roy Municipal Water System	586.4	5,518.1	0.0	6,104.5
South Ogden City	0.0	806.5	3,170.9	3,977.4
Taylor-West Weber WID	0.0	1,448.0	0.0	1,448.0
Uintah Highlands Water Imp. Dist.	156.5	429.6	0.0	586.1
Uintah Municipal Water System	753.0	0.0	0.0	753.0
Washington Terrace Muni. Water	0.0	3,883.4	0.0	3,883.4
West Warren Improvement Dist.	0.0	0.0	0.0	0.0
Wolf Creek Water & Sewer Co.	0.0	150.0	0.0	150.0
WEBER COUNTY TOTALS	8,915.7	49,251.6	16,170.9	74,338.2

Note: All values represent maximum system source capacities limited by water rights, hydrologic and/or physical system constraints.

The reliable potable water supply is shown in **Table 21** on the following page to be 41,116 acre-feet.

TABLE 21
WEBER COUNTY
Reliable Potable Water Supplies for Public Community Systems
(Acre-Feet/Year)

WATER SUPPLIER	SPRINGS	WELLS	SURFACE	TOTAL
Abbey of the Holy Trinity	272.0	0.0	0.0	272.0
Bona Vista Water District	75.0	950.0	0.0	1,025.0
Casey Acres Water Co.	0.0	13.0	0.0	13.0
Cole Canyon Water Co.	58.0	0.0	0.0	58.0
Durfee Creek Subdivision	0.0	20.0	0.0	20.0
Eden Waterworks Co.	108.6	50.0	0.0	158.6
Green Hills Country Estates	0.0	92.7	0.0	92.7
Hooper Water Improvement Dist.	0.0	4,314.8	0.0	4,314.8
Huntsville Municipal Water Sys.	162.1	0.0	0.0	162.1
Lake View Corporation	0.0	50.0	0.0	50.0
Liberty Pipeline Company	53.2	150.0	0.0	203.2
Nordic Valley Water Co.	0.0	60.5	0.0	60.5
North Ogden Municipal Water	600.0	1,000.0	0.0	1,600.0
Ogden City Div. of Water Utilities	2,287.1	10,625.0	6,500.0	19,412.1
Pineview West Water Co.	0.0	39.0	0.0	39.0
Pleasant View City Culinary Water	580.7	621.0	0.0	1,201.7
Pole Patch Water System	0.0	0.0	0.0	0.0
Riverdale City	0.0	3,266.3	0.0	3,266.3
Roy Municipal Water System	351.8	2,759.0	0.0	3,110.8
South Ogden City	0.0	403.2	1,585.5	1,988.7
Taylor-West Weber WID	0.0	1,290.4	0.0	1,290.4
Uintah Highlands Water Imp. Dist.	93.9	214.8	0.0	308.7
Uintah Municipal Water System	376.5	0.0	0.0	376.5
Washington Terrace Muni. Water	0.0	1,941.7	0.0	1,941.7
West Warren Improvement Dist.	0.0	0.0	0.0	0.0
Wolf Creek Water & Sewer Co.	0.0	150.0	0.0	150.0
WEBER COUNTY TOTALS	5,018.9	28,011.4	8,085.5	41,115.8

NOTES:

1. Wells are limited to 50% of their "maximum" capacity for reliable supply when well/pump capacity is the limiting factor. Surface supplies are considered reliable at their maximum capacity. Absent yearly flow records or other limiting factors, springs were considered reliable at 50% of their maximum flow rate.
2. Table **does not** include WBWCD reliable supplies (see page 10 for information)

Several of the public community water systems in Weber County, as part of their water supply, have wholesale purchase contracts. WBWCD is the major wholesale water provider in the county (see page 4 for more detailed information and background on WBWCD). Ogden City also provides some wholesale water. **Table 22** shows the contracted and purchased amounts of wholesale water for each of the public community water systems in Weber County.

**TABLE 22
WEBER COUNTY
Wholesale Potable Water Suppliers,
Customers and Deliveries**

WATER SUPPLIER/CUSTOMER	Contracted Amount (Acre-Feet)	Purchased Amount (Acre-Feet)
Weber Basin Water Conservancy District		
Bona Vista Water District	2,686.0	2,441.2
Hooper Water Improvement Dist.	5.0	0.1
Ogden City Div. of Water Utilities	7,000.0	6,318.5
Parsons	22.0	22.0
Riverdale City	1,100.0	1,089.0
Roy Municipal Water System	3,628.0	3,538.4
South Ogden City	785.0	785.0
Taylor-West Weber WID	450.0	444.4
Uintah Highlands Water Imp. Dist.	237.0	141.6
Uintah Municipal Water System	358.0	288.0
Washington Terrace Muni. Water	1,000.0	867.7
West Warren Improvement Dist.	300.0	195.4
Ogden City Div. of Water Utilities		
Bona Vista Water District	1,450.0	1,450.0
WEBER COUNTY TOTALS		
	19,021.0	17,581.3

Table 23, on the following page, presents the breakdown of the potable water use for each public community system of the county. As indicated by the table, the current total annual potable water use is 38,955 acre-feet which is 95 percent of the reliable potable water supply of these systems. However, WBWCD wholesales water to many of these systems from its reliable M&I water supplies (see page 10 for more information).

**TABLE 23
WEBER COUNTY
Water Use for Public Community Systems**

WEBER COUNTY WATER SUPPLIER	POTABLE WATER USAGE (Acre-Feet/Year)						Service Population	Gallons Per Capita Per Day
	Residential Indoor	Residential Outdoor	Commercial Total	Institutional Total	Industrial Total	TOTAL M & I		
Abbey of the Holy Trinity	0.0	0.0	5.0	3.0	0.0	8.0	40	178.5
Bona Vista Water District	1,200.0	1,890.0	200.0	80.0	600.0	3,970.0	14,000	253.2
Casey Acres Water Co.	3.1	0.0	0.0	0.0	0.0	3.1	40	69.2
Cole Canyon Water Co.	6.0	15.0	0.0	0.0	0.0	21.0	80	234.3
Durfee Creek Subdivision	3.0	6.0	0.0	0.0	0.0	9.0	40	200.9
Eden Waterworks Co.	80.0	50.0	15.0	20.0	0.0	165.0	1,000	147.3
Green Hills Country Estates	57.5	28.4	0.0	0.0	0.0	85.9	390	196.6
Hooper Water Improvement Dist.	1,000.0	100.0	19.2	26.4	0.0	1,145.6	14,500	70.5
Huntsville Municipal Water Sys.	64.1	139.5	6.3	8.4	0.7	219.0	830	235.6
Lake View Corporation	12.0	41.4	0.0	5.0	0.0	58.4	150	347.6
Liberty Pipeline Company	57.8	50.0	5.0	10.0	0.0	122.8	580	189.0
Nordic Mountain Water Co.	36.4	7.1	0.0	0.0	0.0	43.5	500	77.7
North Ogden Municipal Water	1,200.0	25.0	56.2	8.8	0.0	1,290.0	16,470	69.9
Ogden City Div. of Water Utilities	6,600.0	8,400.0	1,500.0	4,000.0	500.0	21,000.0	78,520	238.8
Pineview West Water Co.	4.0	2.0	0.0	0.0	0.0	6.0	50	107.1
Pleasant View City Culinary Water	400.0	280.0	10.0	20.0	0.0	710.0	5,070	125.0
Pole Patch Water System	5.5	23.7	0.0	0.0	0.0	29.2	70	372.4
Riverdale City	640.0	1,420.0	75.0	93.0	5.0	2,233.0	8,150	244.6
Roy Municipal Water System	2,833.2	127.4	100.0	200.0	0.0	3,260.6	35,130	82.9
South Ogden City	1,241.2	258.8	100.0	200.0	0.0	1,800.0	15,390	104.4
Taylor-West Weber WID	426.6	331.9	1.7	30.0	80.6	870.8	5,290	147.0
Utah Highlands Water Imp. Dist.	190.0	10.4	49.1	24.0	0.0	273.5	2,900	84.2
Utah Municipal Water System	95.4	124.6	20.0	40.0	7.7	287.7	1,200	214.0
Washington Terrace Muni. Water	662.6	55.0	50.0	80.0	20.0	867.6	8,480	91.3
West Warren Improvement Dist.	58.0	57.0	20.0	10.0	50.0	195.0	750	232.1
Wolf Creek Water & Sewer Co.	100.0	50.0	110.0	20.0	0.0	280.0	300	833.2
WEBER COUNTY TOTALS	16,976.4	13,493.2	2,342.5	4,878.6	1,264.0	38,954.7	209,920	165.7
A	B	C	D	E	F	G	H	J

A, B, C, D, E, F, H, and K These values are all input data.
G=B+C+D+E+F This value represents only Potable M&I Water Use.
J=G*(325,851 gallons per acre-foot)/(365 days per year)/H Average gallons per capita per day potable water use.

Secondary water is another important aspect of municipal and industrial (M&I) water use. **Table 24** shows the amount of secondary water use within the public community water systems service areas. Some communities partially supply their own secondary water. By far, however, several different canal and irrigation companies, as well as large conservancy districts deliver the bulk of the secondary water. The total secondary water use for the area is 37,230 acre-feet, almost equal to the total potable water use.

TABLE 24
WEBER COUNTY
Secondary (Non-Potable) Water Use
Within Public Community Water System Service Areas
(Acre-Feet/Year)

WEBER COUNTY WATER SUPPLIER	Residential Use	Commercial Use	Institutional Use	Industrial/ Stockwater Use	Total Secondary Use
Abbey of the Holy Trinity	200.0	300.0	0.0	0.0	500.0
Bona Vista Water District					
Marriott Irrigation Co.	0.0	0.0	0.0	0.0	0.0
Three Mile Creek Irrigation Co.	100.0	50.0	50.0	0.0	200.0
Weber Box Elder Cons. Dist.	1,350.0	175.0	300.0	0.0	1,825.0
Western Irrigation Co.	300.0	50.0	100.0	50.0	500.0
Casey Acres Water Co.					
Mountain Canal Irrigation	20.0	0.0	0.0	0.0	20.0
Cole Canyon Water Co.	30.0	0.0	0.0	0.0	30.0
Durfee Creek Subdivision	0.0	0.0	0.0	0.0	0.0
Eden Waterworks Co.					
Eden Irrigation Co.	200.0	0.0	0.0	0.0	200.0
Green Hills Country Estates	0.0	0.0	0.0	0.0	0.0
Hooper Water Improvement Dist.					
Hooper Irrigation Co.	2,100.0	200.0	200.0	0.0	2,500.0
Roy Water Cons. Dist.	500.0	50.0	50.0	0.0	600.0
Weber Basin Water Cons. Dist.	1,000.0	0.0	0.0	0.0	1,000.0
Wilson Irrigation Co.	100.0	0.0	0.0	0.0	100.0
Huntsville Municipal Water Sys.					
Huntsville South Bench Canal Co.	300.0	50.0	50.0	0.0	400.0
Huntsville Waterworks Corp.	250.0	0.0	50.0	0.0	300.0
Lake View Corporation	0.0	0.0	0.0	0.0	0.0
Liberty Pipeline Company					
Liberty Irrigation Co.	150.0	0.0	10.0	0.0	160.0
Nordic Valley Water Co.	0.0	0.0	0.0	0.0	0.0
North Ogden Municipal Water					
North Ogden Irrigation Co.	500.0	50.0	150.0	0.0	700.0
Weber Box Elder Cons. Dist.	1,750.0	50.0	50.0	0.0	1,850.0

(table continued on next page)

**TABLE 24 (cont.)
WEBER COUNTY
Secondary (Non-Potable) Water Use
Within Public Community Water System Service Areas
(Acre-Feet/Year)**

WEBER COUNTY WATER SUPPLIER	Residential Use	Commercial Use	Institutional Use	Industrial/ Stockwater Use	Total Secondary Use
Ogden City Div. of Water Utilities					
Lynn Irrigation Co.	0.0	0.0	0.0	0.0	0.0
Ogden River Water Users Assc.	2,500.0	100.0	400.0	100.0	3,100.0
South Ogden Water Cons. Dist.	2,500.0	200.0	300.0	0.0	3,000.0
Weber Basin Water Cons. Dist.	1,000.0	0.0	0.0	500.0	1,500.0
Weber Box Elder Cons. Dist.	2,500.0	200.0	300.0	500.0	3,500.0
Pineview West Water Co.	15.0	0.0	0.0	0.0	15.0
Pleasant View Culinary Water					
Bona Vista Water Imp. Dist.	350.0	25.0	50.0	0.0	425.0
Pineview Water Systems	250.0	0.0	25.0	0.0	275.0
Pole Patch Water System	0.0	0.0	0.0	0.0	0.0
Riverdale City					
Pineview Water Systems	100.0	0.0	0.0	0.0	100.0
Weber Basin Water Cons. Dist.	20.0	0.0	0.0	0.0	20.0
Roy Municipal Water System					
Roy Water Cons. Dist.	3,500.0	200.0	300.0	0.0	4,000.0
South Ogden City					
South Ogden Water Cons. Dist.	600.0	50.0	150.0	0.0	800.0
Weber Basin Water Cons. Dist.	1,800.0	50.0	150.0	0.0	2,000.0
Taylor-West Weber WID					
Hooper Irrigation Co.	850.0	100.0	50.0	0.0	1,000.0
Weber Basin Water Cons. Dist.	500.0	0.0	0.0	0.0	500.0
Wilson Irrigation Co.	1,000.0	150.0	200.0	0.0	1,350.0
Uintah Municipal Water System					
Mountain Stream Irrigation Co.	50.0	20.0	0.0	0.0	70.0
Pioneer Irrigation Co.	10.0	0.0	0.0	0.0	10.0
Uintah Central Irrigation Co.	20.0	0.0	0.0	0.0	20.0
Uintah Highlands Water Imp. Dist.					
Weber Basin Water Cons. Dist.	2,000.0	100.0	50.0	0.0	2,150.0
Washington Terrace Muni. Water					
Pineview Water Systems	300.0	20.0	30.0	0.0	350.0
Weber Basin Water Cons. Dist.	1,400.0	30.0	70.0	0.0	1,500.0
West Warren Improvement Dist.					
Warren Irrigation Co.	50.0	0.0	10.0	0.0	60.0
Weber Basin Water Cons. Dist.	100.0	100.0	0.0	0.0	200.0
Wolf Creek Water & Sewer Co.					
Wolf Creek Irrigation Co.	100.0	300.0	0.0	0.0	400.0
WEBER COUNTY TOTALS	30,365.0	2,620.0	3,095.0	1,150.0	37,230.0

The following **Table 25** gives various gallons per capita per day (gpcd) water use rates for the public community water systems of the county.

TABLE 25
WEBER COUNTY
Average GPCD M&I Water Use for Public Community Systems

Water Supplier	Service Population	Residential Water Use			CII Water Use*			TOTAL WATER USE		
		Potable	Non-Potable	Sub Total	Potable	Non-Potable	Sub Total	Potable	Non-Potable	TOTAL
Abbey of the Holy Trinity	40	0	4,464	4,464	179	6,696	6,874	179	11,159	11,338
Bona Vista Water District	14,000	197	112	309	56	49	106	253	161	414
Casey Acres Water Co.	40	69	446	516	0	0	0	69	446	516
Cole Canyon Water Co.	80	234	335	569	0	0	0	234	335	569
Durfee Creek Subdivision	40	201	0	201	0	0	0	201	0	201
Eden Waterworks Co.	1,000	116	179	295	31	0	31	147	179	326
Green Hills Country Estates	390	197	0	197	0	0	0	197	0	197
Hooper Water Improvement Dist.	14,500	68	228	296	3	31	34	71	259	329
Huntsville Municipal Water Sys.	830	219	592	811	17	161	178	236	753	988
Lake View Corporation	150	318	0	318	30	0	30	348	0	348
Liberty Pipeline Company	580	166	231	397	23	15	38	189	246	435
Nordic Mountain Water Co.	500	78	0	78	0	0	0	78	0	78
North Ogden Municipal Water	16,470	66	122	188	4	16	20	70	138	208
Ogden City Div. of Water Utilities	78,520	171	97	267	68	30	98	239	126	365
Pineview West Water Co.	50	107	268	375	0	0	0	107	268	375
Pleasant View City Culinary Water	5,070	120	106	225	5	18	23	125	123	248
Pole Patch Water System	70	372	0	372	0	0	0	372	0	372
Riverdale City	8,150	226	13	239	19	0	19	245	13	258
Roy Municipal Water System	35,130	75	89	164	8	13	20	83	102	185
South Ogden City	15,390	87	139	226	17	23	41	104	162	267
Taylor-West Weber WID	5,290	128	397	525	19	84	103	147	481	628
Uintah Highlands Water Imp. Dist.	2,900	62	616	677	22	46	69	84	662	746
Uintah Municipal Water System	1,200	164	60	223	50	15	65	214	74	288
Washington Terrace Muni. Water	8,480	76	179	255	16	16	32	91	195	286
West Warren Improvement Dist.	750	137	179	315	95	131	226	232	309	542
Wolf Creek Water & Sewer Co.	300	446	298	744	387	893	1,280	833	1,190	2,024
WEBER COUNTY TOTALS	209,920	130	129	259	36	29	65	166	158	324

*Commercial, Institutional, and Industrial

On the following page, **Table 26** shows the water use for public non-community, self-supplied industries, and private domestic water systems. There are several campgrounds, both private and public, summer home developments, private businesses, as well as the two ski resort areas of Powder Mountain and Snow Basin. There are also two self-supplied industries. Collectively, these water uses amount to 1,508 acre-feet of potable and 5,542 acre-feet of secondary water.

An additional large amount of saline water (110,000 acre-feet) is utilized for industrial purposes. However, this water is not included in any reported water use and/or supply numbers. Inclusion of such a large amount of non-potable water would result in disproportionate per capita water use numbers that would not be useful for comparative purposes.

TABLE 26
WEBER COUNTY
Water Use for Public Non-Community Systems,
Self-Supplied Industries and Private Domestic Systems
(Acre-Feet/Year)

WEBER COUNTY WATER SUPPLIER	POTABLE WATER USAGE (Acre-Feet/Year)					Total Secondary Water Use
	Residential Use	Commercial Use	Institutional Use	Industrial Use	Total Potable Use	
American Legion	0.0	0.2	0.0	0.0	0.2	0.0
Camp Atoka - LDS	0.0	0.0	2.0	0.0	2.0	12.0
Camp Ben Lomond - LDS	0.0	0.0	4.0	0.0	4.0	0.0
Camp Kiesel - BSA	0.0	0.0	10.0	0.0	10.0	0.0
Camp Shawnee - LDS	0.0	0.0	2.0	0.0	2.0	0.0
Camp Valley View Stake - LDS	0.0	0.0	4.0	0.0	4.0	0.0
Causey Estates	50.0	0.0	0.0	0.0	50.0	0.0
Chris Trading Post	0.0	1.0	0.0	0.0	1.0	0.0
Cobble Creek Camp - LDS	0.0	0.0	5.0	0.0	5.0	0.0
Forest Service Facilities:						
Jefferson Hunt Campground	0.0	0.0	0.3	0.0	0.3	0.0
Middle Inlet Picnic Area	0.0	0.0	0.1	0.0	0.1	0.0
South Fork Complex	0.0	0.0	0.4	0.0	0.4	0.0
Upper Meadows Campground	0.0	0.0	0.2	0.0	0.2	0.0
North Fork Learning Center	0.0	0.0	3.0	0.0	3.0	0.0
North Ogden Bi-Centennial	0.0	0.0	0.1	0.0	0.1	0.0
Pine View Summer Homes	10.0	0.0	0.0	0.0	10.0	0.0
Pioneer Bible Camp	0.0	0.0	1.0	0.0	1.0	0.0
Powder Mountain	0.0	7.5	0.0	0.0	7.5	0.0
Snow Basin Ski Area	0.0	41.6	0.0	0.0	41.6	190.3
Spring Mountain	30.0	0.0	0.0	0.0	30.0	3.0
Sunridge Highland Ranch	10.0	0.0	0.0	0.0	10.0	0.0
Weber Co. Memorial Park	0.0	0.0	3.0	0.0	3.0	0.0
Non-Community SubTotals	100.0	50.3	35.1	0.0	185.4	205.3
SELF-SUPPLIED INDUSTRIES ¹	0.0	33.5	0.0	988.8	1,022.3	5,336.3
PRIVATE DOMESTIC SYSTEMS	300.0	0.0	0.0	0.0	300.0	0.0
WEBER COUNTY TOTALS	400.0	83.8	35.1	988.8	1,507.7	5,541.6

¹ Great Salt Lake Minerals, Parsons, and Western Zirconium (an additional 110,000 ac-ft of saline water is used in the basin)

Total M&I potable water use for all water systems in the county is 40,462 acre-feet, while non-potable use is 42,772 acre-feet for a total overall M&I water use of 83,234 acre-feet.

APPENDIX A

**SOUTH OGDEN CITY
WATER USE DATA FORM**

REV 2/15/02 2/17/02

UTAH WATER USE DATA FORM DATA FOR 2001

Information jointly requested by:
Utah Division of Water Resources, 538-7264
Utah Division of Drinking Water, 536-4200; and
Utah Division of Water Rights, 538-7392.

Return completed form to:
Utah Division of Water Rights
PO Box 146300
Salt Lake City, UT 84114-6300

System Name: South Ogden City
Address: 5590 S 600 E
South Ogden, UT 84405

Population Served: 15,556 DEQ#: 29017
County: Weber
E-Mail Address:

Contact Person: Bruce Miller
Form filled out by: Bob Shafer

Phone Number: (801) 479-7130
Phone Number: SAME

I. STORAGE INVENTORY Total treated storage capacity: 5 Million in gallons. Number of Tanks: 5

II. SOURCE INVENTORY

1 Source Name: Strong & Burch Creek Can Type: Location: Sec 02, TSN, R1W, S186W WR Number: 35-8100 35-8132 35-8107 35-8092 35-5633
Method of Measurement: Master Meter, Estimate, Other
Units of Measurement: ACRE FT

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
80.00	70.00	50.51	80.00	102.37	100.01	80.00	80.00	70.00	40.00	20.00	38.94	811.83 A.F.T.

2 Source Name: Weber Basin W.C.D.
Method of Measurement: Master Meter, Estimate, Other
Units of Measurement: ACRE FT

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
51.40	48.94	70.37	45.43	45.65	58.95	73.37	82.89	70.84	95.00	95.07	87.86	825.66 A.F.T.
1637.49 A.F.T. TOTAL												

3 Source Name: Well (8")
Method of Measurement: Master Meter, Estimate, Other
Units of Measurement:

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL

RECEIVED

FEB 14 2002

WATER RIGHTS
SALT LAKE

** If you are using other sources which are not shown above, please enter the appropriate data in the space provided below. **

4 Source Name: _____ Type: _____ Location: _____
 Method of Measurement: [] Master Meter, [] Estimate, [] Other _____
 Units of Measurement: _____ WR Number: _____

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL

5 Source Name: _____ Type: _____ Location: _____
 Method of Measurement: [] Master Meter, [] Estimate, [] Other _____
 Units of Measurement: _____ WR Number: _____

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL

6 Source Name: _____ Type: _____ Location: _____
 Method of Measurement: [] Master Meter, [] Estimate, [] Other _____
 Units of Measurement: _____ WR Number: _____

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL

SOURCE COMMENTS: Water supply conditions were: [] Above normal, [] Below normal

III. WATER USE BREAKDOWN (Please, use sum of the readings from individual meters, not master meter readings at source. If quantities are not known, please estimate. See instructions for definition of uses shown in bold.)

Units of Measurement: _____

Residential: Annual quantity of water delivered for residential purposes 85% Total number of residential connections 4654
 Meter readings at individual connections ; or Estimated []
 Number of connections serving multiple units (apartments) from a single connection - Units per connection (avg)

Commercial: Annual quantity of water delivered for commercial purposes 10% Total number of commercial connections 189
 Meter readings at individual connections ; or Estimated []
 Annual quantity of water delivered for industrial purposes 0 Total number of industrial connections

Industrial: Annual quantity of water delivered for industrial purposes 13 Total number of institutional connections
 Meter readings at individual connections []; or Estimated []
 Institutional: Annual quantity of water delivered for institutional purposes 0 Total number of stockwatering connections

Stockwatering: Annual quantity of water delivered for stockwatering purposes _____ Please attach a listing of those supplied.
 Meter readings at individual connections ; or Estimated []
 Wholesale: Annual quantity of water delivered for wholesale purposes _____ Total number of other connections 1

Other Uses: Annual quantity of water delivered for other purposes _____
 Meter readings at individual connections ; or Estimated []
 Describe other uses WASHINGTON TERRACE CONNECTION TO SOUTH OGDEN SYSTEM.

Unmetered: Annual estimate of water delivered by unmetered connections _____ Total number of unmetered connections _____
 Unmetered connections used for _____

Total annual quantity of water delivered for all purposes 100% Total number of all connections 4857
 Of this total, how many connections are active? _____

IV. IRRIGATION SYSTEM (Separate lawn and garden irrigation system, whether controlled by the drinking water supplier or not)

Is any of your area served by a separate ditch or pipe fed irrigation water system? Yes, [] No If yes, please provide the following information:
 What percent of your customers are served by a separate irrigation system? 95
 Of these customers, what percent are served by ditch? 0
 What percent are served by pressurized pipe? 95
 Do you operate and maintain the separate lawn and garden irrigation water system? [] Yes, [] No
 If the separate irrigation system is operated by other entities, please give name of companies, contact person & phone number:
STONE VIEW WATER TERRY LAMDRIGHT 602-6555

Weber Basin Water Scott Paxman 771-1677

APPENDIX B

**2005 WEBER RIVER BASIN
M&I DELIVERIES AND DEPLETIONS**

2005 WEBER RIVER BASIN M&I DELIVERIES AND DEPLETION TABLE

(Acre-Feet/Year)

WATER SUPPLIER	Potable Residential Indoor Use	Potable Residential Outdoor Use	Potable Commercial Use	Potable Institutional Use	Potable Industrial/ Stockwater Use	Total Potable Use	Total Secondary Water Use	Total Indoor Use	Total Outdoor Use	Residential Indoor Return Flow	Commercial Indoor Return Flow	Institutional Indoor Return Flow	Industrial/ Stockwater Indoor Return Flow	Total Indoor Return Flow To Treatment Facility	Pond Evaporation	Facility Outflow (Indoor Return Flow)	Outdoor Return Flow	Total Return Flow	Total Deliveries	Total Depletions
Davis County																				
Bountiful City	2,572.7	1,121.7	596.7	290.2	89.6	4,670.9	12,050.0	3,197.7	13,523.2	2,521.2	467.8	56.9	0.0	3,045.9	0.0	2,985.0	4,507.7	7,492.8	16,720.9	9,228.1
Centerville City	1,185.2	39.4	200.0	162.2	0.0	1,586.8	5,860.0	1,377.6	6,069.2	1,161.5	156.8	31.8	0.0	1,350.1	0.0	1,323.1	2,023.1	3,346.1	7,446.8	4,100.7
Clearfield City	1,890.0	2,428.4	500.0	500.0	400.0	5,718.4	0.0	2,790.0	2,928.4	1,852.2	392.0	98.0	0.0	2,342.2	0.0	2,295.4	976.1	3,271.5	5,718.4	2,446.9
Clinton City	1,154.0	0.0	57.0	46.0	0.0	1,257.0	5,500.0	1,208.8	5,548.2	1,130.9	44.7	9.0	0.0	1,184.6	0.0	1,160.9	1,849.4	3,010.3	6,757.0	3,746.7
Farmington City	1,058.2	644.0	92.1	18.4	0.0	1,812.7	7,853.0	1,135.6	8,530.1	1,037.0	72.2	3.6	0.0	1,112.8	0.0	1,090.6	2,843.4	3,934.0	9,665.7	5,731.7
Fruit Heights	366.7	33.3	10.0	5.0	0.0	415.0	1,150.0	375.7	1,189.3	359.4	7.8	1.0	0.0	368.2	0.0	360.8	396.4	757.3	1,565.0	807.7
Hill Air Force Base	0.0	0.0	0.0	2,705.7	0.0	2,705.7	2,522.0	541.1	4,686.6	0.0	0.0	530.3	0.0	530.3	0.0	519.7	1,562.2	2,081.9	5,227.7	3,145.8
Kaysville City	1,856.7	318.3	350.0	75.0	40.0	2,640.0	7,900.0	2,191.7	8,348.3	1,819.6	274.4	14.7	0.0	2,108.7	0.0	2,066.5	2,782.8	4,849.3	10,540.0	5,690.7
Layton City	5,214.5	2,431.5	2,350.0	362.2	0.0	10,358.2	5,650.0	7,166.9	8,841.3	5,110.2	1,842.4	71.0	0.0	7,023.6	0.0	6,883.1	2,947.1	9,830.2	16,008.2	6,178.0
Mutton Hollow Impr. District	57.6	129.3	0.0	0.3	0.0	187.2	100.0	57.7	229.5	56.4	0.0	0.1	0.0	56.5	0.0	55.4	76.5	131.9	287.2	155.3
North Salt Lake	755.7	724.8	970.2	385.7	692.2	3,528.6	424.0	2,301.2	1,651.4	740.6	760.6	75.6	0.0	1,576.8	0.0	1,545.3	550.5	2,095.8	3,952.6	1,856.8
South Davis Water Imp. District	490.0	309.3	108.2	21.9	0.0	929.4	2,350.0	580.9	2,698.5	480.2	84.8	4.3	0.0	569.3	0.0	557.9	899.5	1,457.4	3,279.4	1,822.0
South Weber City	442.7	169.9	60.6	10.0	0.0	683.2	1,800.0	493.2	1,990.0	433.8	47.5	2.0	0.0	483.3	0.0	473.7	663.3	1,137.0	2,483.2	1,346.2
Sunset Municipal Water System	400.0	600.0	50.0	10.0	0.0	1,060.0	0.0	442.0	618.0	392.0	39.2	2.0	0.0	433.2	0.0	424.5	206.0	630.5	1,060.0	429.5
Syracuse Water System	1,480.0	70.0	50.0	25.0	0.0	1,625.0	3,188.0	1,525.0	3,288.0	1,450.4	39.2	4.9	0.0	1,494.5	0.0	1,464.6	1,096.0	2,560.6	4,813.0	2,252.4
West Bountiful Water System	341.2	115.8	73.0	60.0	0.0	590.0	1,278.0	411.6	1,456.4	334.4	57.2	11.8	0.0	403.4	0.0	395.3	485.5	880.8	1,868.0	987.2
West Point Water System	488.4	0.0	0.0	8.8	0.0	497.2	1,500.0	490.2	1,507.0	478.6	0.0	1.7	0.0	480.4	0.0	470.7	502.3	973.1	1,997.2	1,024.1
Woods Cross Water System	629.2	24.6	121.0	23.3	256.9	1,055.0	2,000.0	987.6	2,067.4	616.6	94.9	4.6	0.0	716.0	0.0	701.7	689.1	1,390.9	3,055.0	1,664.1
TOTAL COMMUNITY SYSTEMS	20,382.8	9,160.3	5,588.8	4,709.7	1,478.7	41,320.3	61,125.0	27,274.5	75,170.8	19,975.1	4,381.6	923.1	0.0	25,279.9	0.0	24,774.3	25,056.9	49,831.2	102,445.3	52,614.1
Non-community Systems	0.0	0.0	383.6	25.2	1,369.5	1,778.3	467.5	1,681.4	564.4	0.0	300.7	4.9	0.0	305.7	0.0	290.4	188.1	478.5	2,245.8	1,767.3
Self-Supplied Industries	0.0	0.0	0.0	0.0	2,175.1	2,175.1	0.0	2,175.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,175.1	2,175.1
Private Domestic Systems	26.7	53.3	0.0	0.0	0.0	80.0	0.0	26.7	53.3	26.2	0.0	0.0	0.0	26.2	0.0	24.9	17.8	42.6	80.0	37.4
COUNTY TOTALS	20,409.5	9,213.6	5,972.4	4,734.9	5,023.3	45,353.7	61,592.5	31,157.7	75,788.5	20,001.3	4,682.4	928.0	0.0	25,611.7	0.0	25,089.5	25,262.8	50,352.4	106,946.2	56,593.8

Morgan County																				
Croyden Pipeline Company	30.0	30.0	5.0	5.0	0.0	70.0	30.0	35.0	65.0	29.4	3.9	1.0	0.0	34.3	0.0	32.6	21.7	54.3	100.0	45.7
Enterprise Estates Water Assc.	5.5	4.5	1.0	1.0	0.0	12.0	10.0	6.5	15.5	5.4	0.8	0.2	0.0	6.4	0.0	6.1	5.2	11.2	22.0	10.8
Highlands Water Company	83.7	94.8	17.7	15.0	0.0	211.2	0.0	100.9	110.3	82.0	13.9	2.9	0.0	98.8	2.3	94.5	36.8	131.3	211.2	79.9
Monte Verde Water Association	10.2	14.8	0.0	0.0	0.0	25.0	0.0	10.2	14.8	10.0	0.0	0.0	0.0	10.0	0.2	9.6	4.9	14.5	25.0	10.5
Morgan City Corporation	247.3	176.9	54.1	181.4	19.3	679.0	400.0	346.2	732.8	242.4	42.4	35.6	0.0	320.3	15.1	298.8	244.3	543.1	1,079.0	535.9
Mt. Green Subdivision Water Assc	6.6	9.8	0.0	0.0	0.0	16.4	0.0	6.6	9.8	6.5	0.0	0.0	0.0	6.5	0.1	6.2	3.3	9.5	16.4	6.9
Peterson Pipeline Company	23.5	46.5	1.0	5.0	0.0	76.0	55.0	25.3	105.7	23.0	0.8	1.0	0.0	24.8	0.0	23.6	35.2	58.8	131.0	72.2
Richville Pipeline Company	10.2	6.3	0.0	2.0	4.0	22.5	35.0	14.6	42.9	10.0	0.0	0.4	0.0	10.4	0.0	9.9	14.3	24.2	57.5	33.3
S. Robinson Spring Water Users	3.0	9.0	0.0	0.0	0.0	12.0	0.0	3.0	9.0	2.9	0.0	0.0	0.0	2.9	0.2	2.7	3.0	5.7	12.0	6.3
West Enterprise Water Association	2.3	9.7	0.0	0.0	0.0	12.0	0.0	2.3	9.7	2.3	0.0	0.0	0.0	2.3	0.0	2.1	3.2	5.4	12.0	6.6
Wilkinson Water Company	83.0	74.5	5.0	3.0	0.0	165.5	0.0	87.6	77.9	81.3	3.9	0.6	0.0	85.8	2.1	82.0	26.0	108.0	165.5	57.5
TOTAL COMMUNITY SYSTEMS	505.3	476.8	83.8	212.4	23.3	1,301.6	530.0	638.1	1,193.5	495.2	65.7	41.6	0.0	602.5	20.1	568.0	397.8	965.8	1,831.6	865.8
Non-community systems	0.0	0.0	30.7	24.0	0.0	54.7	380.0	29.4	405.3	0.0	24.1	4.7	0.0	28.8	0.0	27.3	135.1	162.4	434.7	272.3
Self-Supplied Industries	0.0	0.0	0.0	0.0	40.0	40.0	220.0	260.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	260.0	260.0
Private Domestic Systems	133.7	266.3	0.0	0.0	0.0	400.0	0.0	133.7	266.3	131.0	0.0	0.0	0.0	131.0	0.0	124.5	88.8	213.2	400.0	186.8
COUNTY TOTALS	639.0	743.1	114.5	236.4	63.3	1,796.3	1,130.0	1,061.2	1,865.1	626.2	89.8	46.3	0.0	762.3	20.1	719.8	621.7	1,341.5	2,926.3	1,584.8

Summit County																				
Bridge Hollow Water Assoc.	5.0	3.0	0.0	0.0	0.0	8.0	0.0	5.0	3.0	4.9	0.0	0.0	0.0	4.9	0.0	4.7	1.0	5.7	8.0	2.3
Cluff Ward Pipeline Co.	13.3	10.0	0.0	0.0	0.0	23.3	10.0	13.3	20.0	13.0	0.0	0.0	0.0	13.0	0.0	12.4	6.7	19.0	33.3	14.3
Coalville City Water System	100.0	20.0	32.3	15.1	7.3	174.7	200.0	136.2	238.5	98.0	25.3	3.0	0.0	126.3	0.0	123.8	79.5	203.3	374.7	171.4
Community Water System	80.0	27.8	15.0	2.7	0.0	125.5	0.0	92.5	33.0	78.4	11.8	0.5	0.0	90.7	0.0	88.9	11.0	99.9	125.5	25.6
Echo Mutual Water System	5.0	0.6	2.0	0.5	0.0	8.1	14.0	6.7	15.4	4.9	1.6	0.1	0.0	6.6	0.0	6.2	5.1	11.4	22.1	10.7
Gorgoza Mutual Water Co.	269.4	293.8	10.0	5.0	0.0	578.2	0.0	278.4	299.8	264.0	7.8	1.0	0.0	272.8	0.0	267.4	99.9	367.3	578.2	210.9
Henefer Town	58.2	137.9	7.7	6.1	3.1	213.0	60.0	68.7	204.3	57.0	6.0	1.2	0.0	64.3	27.8	35.2	68.1	103.3	273.0	169.7
High Valley Water Co.	37.9	93.5	0.0	0.0	0.0	131.4	0.0	37.9	93.5	37.1	0.0	0.0	0.0	37.1	0.0	35.3	31.2	66.5	131.4	64.9
Hoytsville Pipeline Co.	36.9	43.1	10.0	5.0	0.0	95.0	50.0	45.9	99.1	36.2	7.8	1.0	0.0	45.0	0.0	42.7	33.0	75.8	145.0	69.2
Kamas City Water System	98.0	270.3	33.1	9.2	1.5	412.1	0.0	127.8	284.3	96.0	26.0	1.8	0.0	123.8	31.6	89.7	94.8	184.5	412.1	227.6
Marion Waterworks Co	27.4	47.6	5.0	15.0	20.0	115.0	20.0	54.4	80.6	26.9	3.9	2.9	0.0	33.7	0.0	32.0	26.9	58.9	135.0	76.1
Mountain Regional SSD	900.0	1,300.0	200.0	200.0	60.0	2,660.0	295.0	1,160.0	1,795.0	882.0	156.8	39.2	0.							

2005 WEBER RIVER BASIN M&I DELIVERIES AND DEPLETION TABLE - cont.
(Acre-Foot/Year)

WATER SUPPLIER	Potable Residential Indoor Use	Potable Residential Outdoor Use	Potable Commercial Use	Potable Institutional Use	Potable Industrial/ Stockwater Use	Total Potable Use	Total Secondary Water Use	Total Indoor Use	Total Outdoor Use	Residential Indoor Return Flow	Commercial Indoor Return Flow	Institutional Indoor Return Flow	Industrial/ Stockwater Indoor Return Flow	Total Indoor Return Flow To Treatment Facility	Pond Evaporation	Treatment Facility Outflow (Indoor Return Flow)	Outdoor Return Flow	Total Return Flow	Total Deliveries	Total Depletions
Weber County																				
Abbey of the Holy Trinity	0.0	0.0	5.0	3.0	0.0	8.0	500.0	4.6	503.4	0.0	3.9	0.6	0.0	4.5	0.0	4.3	167.8	172.1	508.0	335.9
Bona Vista Water District	1,200.0	1,890.0	200.0	80.0	600.0	3,970.0	2,525.0	1,976.0	4,519.0	1,176.0	156.8	15.7	0.0	1,348.5	0.0	1,321.5	1,506.3	2,827.8	6,495.0	3,667.2
Casey Acres Water Co.	3.1	0.0	0.0	0.0	0.0	3.1	20.0	3.1	20.0	3.0	0.0	0.0	0.0	3.0	0.0	2.9	6.7	9.6	23.1	13.5
Cole Canyon Water Co.	6.0	15.0	0.0	0.0	0.0	21.0	30.0	6.0	45.0	5.9	0.0	0.0	0.0	5.9	0.0	5.6	15.0	20.6	51.0	30.4
Durfee Creek Subdivision	3.0	6.0	0.0	0.0	0.0	9.0	0.0	3.0	6.0	2.9	0.0	0.0	0.0	2.9	0.0	2.8	2.0	4.8	9.0	4.2
Eden Waterworks System	80.0	50.0	15.0	20.0	0.0	165.0	200.0	96.0	269.0	78.4	11.8	3.9	0.0	94.1	0.0	89.4	89.7	179.0	365.0	186.0
Green Hills Country Estates	57.5	28.4	0.0	0.0	0.0	85.9	0.0	57.5	28.4	56.4	0.0	0.0	0.0	56.4	0.0	53.5	9.5	63.0	85.9	22.9
Hooper Water Improvement Dist.	1,000.0	100.0	19.2	26.4	0.0	1,145.6	4,200.0	1,020.6	4,325.0	980.0	15.1	5.2	0.0	1,000.2	0.0	971.2	1,441.7	2,412.9	5,345.6	2,932.7
Huntsville Municipal Water Sys.	64.1	139.5	6.3	8.4	0.7	219.0	700.0	71.5	847.5	62.8	4.9	1.6	0.0	69.4	0.0	65.9	282.5	348.4	919.0	570.6
Lake View Corporation	12.0	41.4	0.0	5.0	0.0	58.4	0.0	13.0	45.4	11.8	0.0	1.0	0.0	12.7	0.0	12.1	15.1	27.2	58.4	31.2
Liberty Pipeline Company	57.8	50.0	5.0	10.0	0.0	122.8	160.0	63.8	219.0	56.6	3.9	2.0	0.0	62.5	0.0	59.4	73.0	132.4	282.8	150.4
Nordic Mountain Water Co.	36.4	7.1	0.0	0.0	0.0	43.5	0.0	36.4	7.1	35.7	0.0	0.0	0.0	35.7	0.0	33.9	2.4	36.3	43.5	7.2
North Ogden Municipal Water	1,200.0	25.0	56.2	8.8	0.0	1,290.0	2,550.0	1,246.7	2,593.3	1,176.0	44.1	1.7	0.0	1,221.8	0.0	1,197.3	864.4	2,061.8	3,840.0	1,778.2
Ogden City Div. of Water Utilities	6,600.0	8,400.0	1,500.0	4,000.0	500.0	21,000.0	11,100.0	9,100.0	23,000.0	6,468.0	1,176.0	784.0	0.0	8,428.0	0.0	8,259.4	7,666.7	15,926.1	32,100.0	16,173.9
Pineview West Water Co.	4.0	2.0	0.0	0.0	0.0	6.0	15.0	4.0	17.0	3.9	0.0	0.0	0.0	3.9	0.0	3.7	5.7	9.4	21.0	11.6
Pleasant View Culinary Water	400.0	280.0	10.0	20.0	0.0	710.0	700.0	412.0	998.0	392.0	7.8	3.9	0.0	403.8	0.0	395.7	332.7	728.4	1,410.0	681.6
Pole Patch Water System	5.5	23.7	0.0	0.0	0.0	29.2	0.0	5.5	23.7	5.4	0.0	0.0	0.0	5.4	0.0	5.3	7.9	13.2	29.2	16.0
Riverdale City	640.0	1,420.0	75.0	93.0	5.0	2,233.0	120.0	723.6	1,629.4	627.2	58.8	18.2	0.0	704.2	0.0	690.1	543.1	1,233.3	2,353.0	1,119.7
Roy Municipal Water System	2,833.2	127.4	100.0	200.0	0.0	3,260.6	4,000.0	2,953.2	4,307.4	2,776.5	78.4	39.2	0.0	2,894.1	0.0	2,836.3	1,435.8	4,272.1	7,260.6	2,988.5
South Ogden City	1,241.2	258.8	100.0	200.0	0.0	1,800.0	2,800.0	1,361.2	3,238.8	1,216.4	78.4	39.2	0.0	1,334.0	0.0	1,307.3	1,079.6	2,386.9	4,600.0	2,213.1
Taylor-West Weber WID	426.6	331.9	1.7	30.0	80.6	870.8	2,850.0	514.6	3,206.2	418.1	1.3	5.9	0.0	425.3	0.0	412.9	1,068.7	1,481.7	3,720.8	2,239.1
Uintah Highlands Imp. Dist.	190.0	10.4	49.1	24.0	0.0	273.5	100.0	234.0	139.4	186.2	38.5	4.7	0.0	229.4	0.0	224.8	46.5	271.3	373.5	102.2
Uintah Municipal Water System	95.4	124.6	20.0	40.0	7.7	287.7	2,150.0	127.1	2,310.6	93.5	15.7	7.8	0.0	117.0	0.0	114.7	770.2	884.9	2,437.7	1,552.8
Washington Terrace Muni. Water	662.6	55.0	50.0	80.0	20.0	867.6	1,850.0	738.6	1,979.0	649.3	39.2	15.7	0.0	704.2	0.0	690.1	659.7	1,349.8	2,717.6	1,367.8
West Warren Improvement Dist.	58.0	57.0	20.0	10.0	50.0	195.0	260.0	126.0	329.0	56.8	15.7	2.0	0.0	74.5	0.0	70.8	109.7	180.4	455.0	274.6
Wolf Creek Water & Sewer Co.	100.0	50.0	110.0	20.0	0.0	280.0	400.0	192.0	488.0	98.0	86.2	3.9	0.0	188.2	0.0	178.8	162.7	341.4	680.0	338.6
TOTAL COMMUNITY SYSTEMS	16,976.4	13,493.2	2,342.5	4,878.6	1,264.0	38,954.7	37,230.0	21,090.1	55,094.6	16,636.9	1,836.5	956.2	0.0	19,429.6	0.0	19,009.7	18,364.9	37,374.6	76,184.7	38,810.1
Non-community Systems	33.0	67.0	50.3	35.1	0.0	185.4	205.3	80.3	310.4	32.3	39.4	6.9	0.0	78.7	0.0	74.7	103.5	178.2	390.7	212.5
Self-Supplied Industries	0.0	0.0	33.5	0.0	988.8	1,022.3	5,336.3	6,351.9	6.7	0.0	26.3	0.0	0.0	26.3	0.0	25.0	2.2	27.2	6,358.6	6,331.4
Private Domestic Systems	100.0	200.0	0.0	0.0	0.0	300.0	0.0	100.0	200.0	98.0	0.0	0.0	0.0	98.0	0.0	93.1	66.7	159.8	300.0	140.2
COUNTY TOTALS	17,109.4	13,760.2	2,426.3	4,913.7	2,252.8	40,462.4	42,771.6	27,622.2	55,611.7	16,767.2	1,902.2	963.1	0.0	19,632.5	0.0	19,202.5	18,537.2	37,739.7	83,234.0	45,494.2

	Potable Residential Indoor Use	Potable Residential Outdoor Use	Potable Commercial Use	Potable Institutional Use	Potable Industrial/ Stockwater Use	Total Potable Use	Total Secondary Water Use	Total Indoor Use	Total Outdoor Use	Residential Indoor Return Flow	Commercial Indoor Return Flow	Institutional Indoor Return Flow	Industrial/ Stockwater Indoor Return Flow	Total Indoor Return Flow To Treatment Facility	Pond Evaporation	Treatment Facility Outflow (Indoor Return Flow)	Outdoor Return Flow	Total Return Flow	Total Deliveries	Total Depletions
BASIN COMMUNITY SYSTEMS	41,088.7	27,817.3	10,195.5	10,300.6	2,859.9	92,262.0	101,121.4	54,165.1	139,218.3	40,266.9	7,993.2	2,018.9	0.0	50,279.1	89.0	49,144.7	46,406.1	95,550.8	193,383.4	97,832.5
Total Non-Community Systems	45.5	92.0	467.9	103.9	1,369.5	2,078.8	1,202.8	1,810.1	1,471.5	44.6	366.8	20.4	0.0	431.8	0.0	410.2	490.5	900.7	3,281.6	2,380.9
Self-Supplied Industries	0.0	0.0	33.5	0.0	3,204.1	3,237.6	5,556.3	8,787.2	6.7	0.0	26.3	0.0	0.0	26.3	0.0	25.0	2.2	27.2	8,793.9	8,766.7
Private Domestic Systems	310.4	619.6	0.0	0.0	0.0	930.0	0.0	310.4	619.6	304.2	0.0	0.0	0.0	304.2	0.0	289.0	206.5	495.5	930.0	434.5
WEBER RIVER BASIN TOTALS	41,444.6	28,528.9	10,696.9	10,404.5	7,433.5	98,508.4	107,880.5	65,072.8	141,316.1	40,615.7	8,386.3	2,039.3	0.0	51,041.3	89.0	49,868.9	47,105.4	96,974.2	206,388.9	109,414.6

Color Code:

 	Potable Use Data
 	Secondary Use Data
 	Indoor/Outdoor Use Data
 	Return Flow Data
 	Deliveries Data
 	Depletion Data

Treatment Facility Key: Regular = Sewage Treatment Plant
Bold = Facultative Ponds/ Lagoons
Bold/Italics = Septic System/Tanks