



COLORADO WATER CONSERVATION BOARD

Department of Natural Resources

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Statewide Water Supply Initiative Water Demands Fact Sheet



Overview

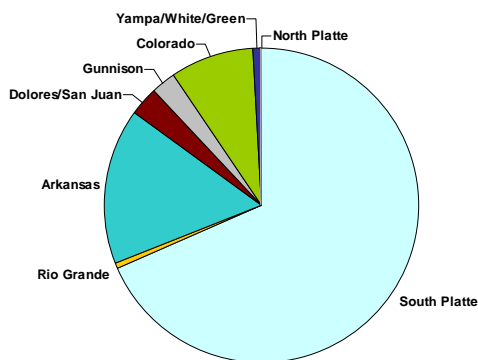
The Colorado Water Conservation Board (CWCB) initiated the Statewide Water Supply Initiative (SWSI) in June 2003.

Thoughtful management of Colorado's water resources is essential to ensure a healthy

economy while protecting our natural resources. The goal of SWSI is to help Colorado maintain an adequate water supply for our citizens and the environment.

To help accomplish this goal, the CWCB is examining current and future water use in Colorado's eight major river basins and identifying how future water needs might be met. Basin Technical Roundtables that are made up of diverse local interests (i.e., water providers, agricultural water users, environmental and recreational interests, local governments, etc.) have been formed in each river basin and are assisting in the implementation of the project.

This fact sheet reports some of the preliminary findings of SWSI with respect to current and future water needs in Colorado. For additional information, visit the CWCB website at cwcb.state.co.us.



State population projections indicate significant growth in all parts of the state; the Front Range will continue to comprise over 80 percent of the state's populace in 2030.

Water is managed in Colorado to meet the many important needs of our citizens. Municipal and Industrial (M&I) uses provide water for your home and for the industries (i.e., power production, manufacturing, and commercial uses) that serve our communities. Irrigation uses provide water for the crops we grow and for livestock production (i.e., beef, poultry, pork). Water is also essential for maintaining a healthy environment for plants and animals, and for recreational and environmental uses by humans (i.e., boating, fishing, hunting).

SWSI has developed a consistent and comprehensive method to estimate current and future M&I and Agricultural water demands. Environmental and Recreational water rights have been inventoried and a process for evaluating environmental and recreational needs is being developed.

In order to estimate Colorado's current and future water needs, SWSI obtained water use data, population estimates, and irrigated acreage in each of the state's major river basins. The preliminary results are summarized in the following sections.

Population Estimates

Colorado's population is expected to grow by 65 percent statewide. Table 1 shows current and future population estimates.

The pie chart at left shows how Colorado's population will be distributed by basin in 2030.

Table 1 Population Projections by Basin

Basin	2000	2030	Increase in Population	Percent Change 2000 to 2030	Percent Annual Growth Rate
Arkansas	835,100	1,293,000	457,900	55	1.5
Colorado	248,000	492,600	244,600	99	2.3
San Juan/Dolores/San Miguel	90,900	171,600	80,700	89	2.1
Gunnison	88,600	161,500	72,900	82	2.0
North Platte	1,600	2,000	400	25	0.7
Rio Grande	46,400	62,700	16,300	35	1.0
South Platte	2,985,600	4,911,600	1,926,000	65	1.7
Yampa/White/Green	39,300	61,400	22,100	56	1.5
TOTAL	4,335,500	7,156,400	2,820,900	65	1.7

Source: Colorado Department of Local Affairs Demography Section

Agricultural Water Uses

Agriculture is the largest current user of water in Colorado. Table 2 presents an estimate of current irrigated acres and average total diversions (in acre-feet (AF)) over a period of record for each basin. (An acre-foot is approximately 326,000 gallons.) SWSI projections indicate that agriculture will make up 86 percent of the agricultural, M&I and self-supplied industrial (SSI) water use in 2030. Significant changes are expected to occur in the Front Range as M&I growth moves into agricultural lands and/or as water is transferred from agriculture to support growth. Understanding the impact of these changes on rural Colorado economies, and the effect on the open space provided by farms and ranches, is a key challenge for all Coloradans. In other areas of the state, localized decreases and increases in agricultural water use are also expected.

Table 2 Preliminary Statewide Agricultural Demands

Basin	Current Estimated Irrigated Acres	Average Total Diversions* (AF)	Period of Record for Average Diversions
Arkansas	538,100	1,769,900	1999 - 2001
Colorado	237,700	1,986,900	1975 - 1990
San Juan/Dolores/San Miguel	254,900	810,100	1975 - 1990
Gunnison	263,500	1,726,000	1950 - 2000
North Platte	95,700	396,900	1993 - 2002
Rio Grande	632,700	1,514,500	1950 - 1997
South Platte	1,003,500	2,545,500	1993 - 2002
Yampa/White/Green	118,500	629,900	1975 - 1990
TOTAL	3,144,600	11,379,700	-

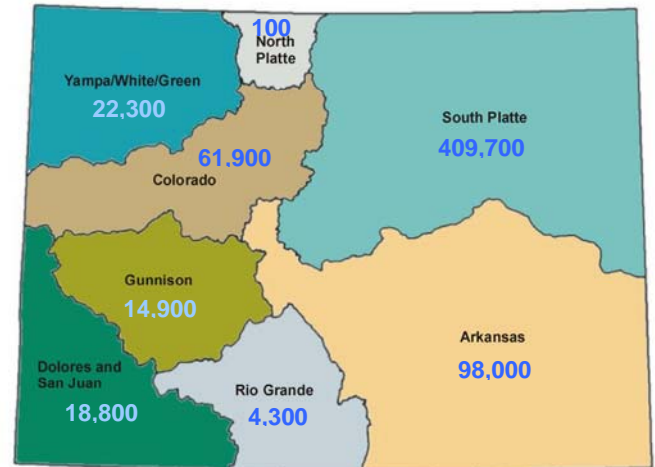
Environmental and Recreational Uses

Recreational and environmental water uses are also considered in SWSI. While these uses are significantly different than M&I and agricultural uses – in that for the most part, they are nonconsumptive uses – CWCB recognizes the importance of recreational and environmental values. For SWSI, the baseline demands include adjudicated instream flows and recreational in-channel diversions. These decreed in-stream flow requirements for each basin are used as the minimum requirement for future years' flows. However, higher-flow options can and are being discussed as part of future water management solutions in several of the basins as SWSI progresses. Other contributors to environmental and recreational flows include interstate compacts, federal reserved water rights, mitigation measures such as those required by federal permitting, Endangered Species Act requirements, satisfaction of downstream senior water rights obligations, and flow management agreements.

Preliminary Projection of 2030 M&I Water Needs

Demands on Colorado's water resources are projected to increase dramatically through 2030. In large part, this will be driven by the continued rates of population increases, while agricultural demands remain high and recreational and environmental uses of water continue.

Overall, gross M&I demands are expected to increase by about 630,000 acre-feet per year (AFY) between 2000 and 2030, an increase of about 53 percent over 2000 levels.



Colorado's eight major river basins and the expected increase in gross M&I water use in acre-feet per year by the year 2030.

Next Steps

Providing an understanding of how Colorado will meet its future water needs is essential. Having a safe and reliable water supply is vital to all our citizens and business economy. Maintaining a healthy environment and providing for recreation is also critical to many of our communities and contributes to the scenic beauty and "quality of life" in Colorado. SWSI will identify how water providers are planning to meet their future needs, and where existing plans fall short, additional water supply alternatives will be developed. All options will be considered; conservation and efficient water use should be relied upon to the extent practical. Enlargement of water storage and new water storage will also be vital. Meeting Colorado's long-term water needs is a serious challenge facing our state, and SWSI is now exploring options for closing the remaining gap so all Coloradans will have sufficient water supplies for the future.

For more information about this or other water resource topics, please contact the CWCB at:

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