

**WASHINGTON COUNTY
WATER CONSERVANCY DISTRICT**



Water Line™

2011 Special Summer Edition — Water Needs Assessment (Population)
Water for Today and Tomorrow™

Planning today for tomorrow's people

By Ron Thompson, General Manager

For the past 30 plus years dating back to when Quail Creek Reservoir was in the planning stages, the District has been able to stay in front of demand when scheduling water development projects. Since the early 1980s, the District has been assessing water needs in an effort to ensure that its planning and development kept up with demand. These assessments represented attempts to realistically deal with the economic and demographic changes occurring in Washington County. The most recent effort comes in the form of a Water Needs Assessment (WNA) completed in 2011. Assessing Washington County's water needs and working to meet them is something the District will continue to do.

The annual growth rate for Washington County between 2009 and 2060 is projected at 3.48%.

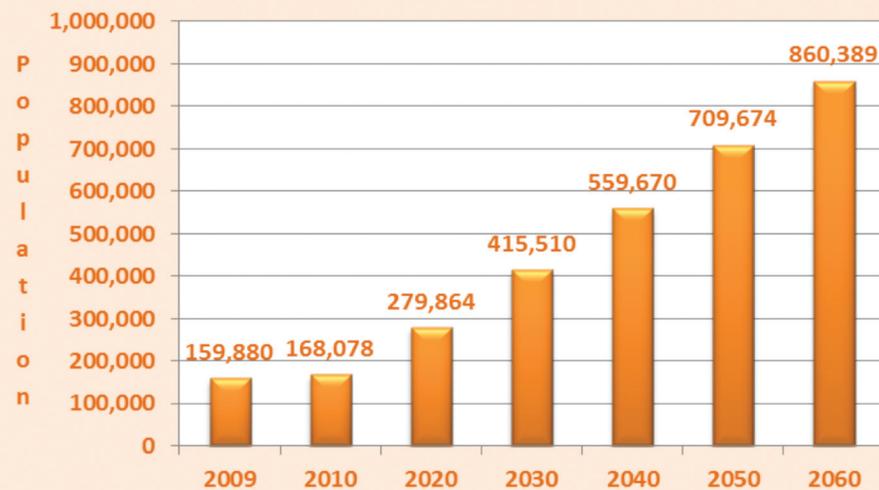
- the amount of water these people will need for quality of life (demand)
- the amount of water currently developed and what will have to be developed to meet demand (current and future supply) and
- water conservation projections.

In this and subsequent issues of the *Water Line*, we will present the information gathered and the determinations made concerning future population numbers, water supply and water demand as presented in the 2011 WNA. In this special edition of the *Water Line*, we will focus just on population projections for Washington County and what that means for our water supply.

It is very difficult to accurately forecast population numbers especially over a fifty-year planning period.

The numbers relied upon in the WNA are based on population estimates from the Utah Governor's Office of Planning and

Population projections for WCWCD service area



Budget (GOPB) updated in 2008 along with actual population data from the U.S. Census Bureau. Historically, population growth projections from the GOPB have been lower than actual growth numbers.

The range of population projections was "determined by increasing and decreasing the 2008 projections by 10 percent"

(WNA, page ES-6).

These projections give water managers some idea of the amount of water that will be needed to meet future demand. It also allows them to establish an estimated timeline when the water supply will actually need to be online.

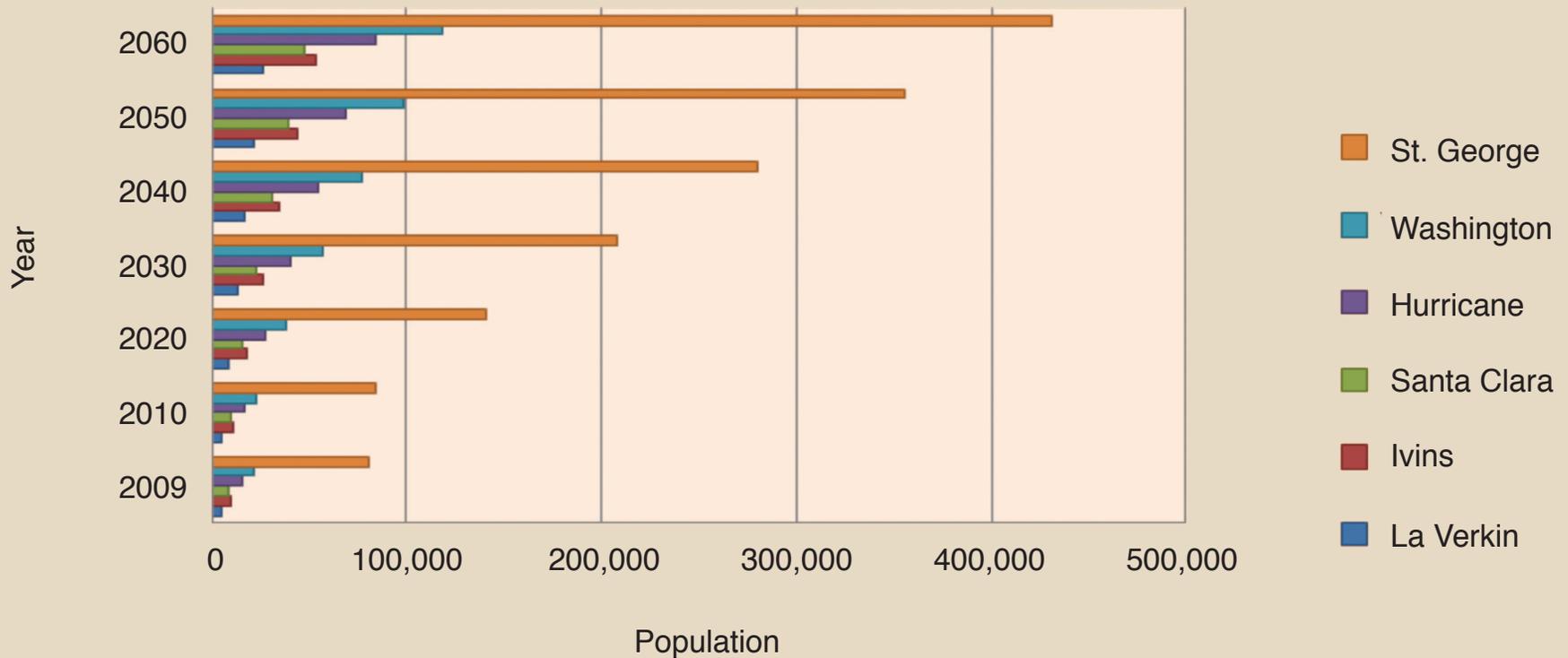
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The WNA takes into consideration:

- how many people will eventually make Washington home (growth)

will eventually make Washington County their home (growth)

Population projections for major cities in Washington County



- St. George
- Washington
- Hurricane
- Santa Clara
- Ivins
- La Verkin

Graph continued from article on page 1

Water users in Washington County can be broken down into four categories

Permanent Residents

Anyone who has lived here for any length of time is well aware of the draw that southern Utah has on young families, retirees, students and those loving the outdoors. Zion National Park, along with four Utah State Parks, contributes to the allure of Washington County. Proximity to Bryce Canyon and Arches National Parks and Lake Powell also adds to the appeal.

Warm winters draw hikers, golfers and bikers. Hot summers attract those who enjoy any kind of water sport.

The Washington County School District appeals to young couples with children.

Now that Dixie State College offers four-year degrees, many young people remain in Washington County to pursue their education, develop their careers and raise their families. Currently, 35% of the student population comes from out-of-state or from other areas in Utah.

Non-Permanent Residents/Second Home Owners

Approximately 27% of the residential properties in Washington County are owned by part-time, second home owners who reside in Washington County from four to six months out of the year.

These owners are not counted in the population records and their water use is attributed to full-time residents.

This paints a deceiving picture about the amount of water used per capita since the use numbers do not reflect the correct number of people actually using the water. Second homes use indoor water approximately four to six months out of the year and water on outdoor landscape 10 to 11 months out of the year. Since outdoor water use is the largest portion of per capita usage values, the values attributable to full-time residents is inflated.

Non-Permanent Residents/Tourists

Tourists numbering 16 million plus (an average annual tourist estimate) come to Washington County annually. Each tourist uses about 35 gallons of water per day.

Non-Permanent Residents/Student Population

Approximately 10,100 students attend local learning institutions such as Dixie State College, Dixie Applied Technology College and Utah State University Extension.

Currently, 64 percent of the students enrolled at Dixie State College are from Washington County. They were therefore included in the GOPB's full-time population data. Over the past three years, the college has experienced a 65%

growth in student enrollment.

With Dixie State College only three to five years away from achieving university status, student population is going to continue to grow. It is estimated enrollment will eventually reach 15,000 students.

Although these non-permanent residents are not included in population values, their water use is included in the total water use values used to compute per capita use rates. This can significantly inflate per capita use estimates. (WNA ES-6)

Continued on page 3



Virgin River in Zion National Park
(Photo courtesy of Doug Wilson)

Projecting the amount of water needed for the future is a complicated process. But as complicated as the process may be, all possible scenarios must be considered when preparing for future water supplies.

Growth is not an issue that can be swept under the rug. Washington County will grow and resources must be in place to meet future demand. There are no simple answers, but there is guidance.

Growth projections have been compiled by professional growth-forecasters based on the best-available data. Water development must be managed and timed such that when Washington County reaches estimated population projections, water will be available to meet both culinary and

secondary needs.

The District has planned a block of projects providing 174,000 acre feet (AF) of water that will serve a population of 459,710 through 2039. This number assumes that both the Ash Creek and Warner Valley projects reach completion, and also includes water from the Lake Powell Pipeline.

Without the 69,000 AF from the Lake Powell Pipeline project, only 105,000 AF of water could be developed. This would supply Washington County with sufficient water until sometime in the early 2020s, and would serve a population of approximately 280,000 residents.

The 2011 WNA was used by the State of

Utah and its contractors for the Lake Powell Pipeline Project, MWH Americas, Inc., as a basis for determining future water demand, and the need for the Lake Powell Pipeline to meet that demand.

It takes years of investment in a community to make it thrive. For well over 150 years, residents have worked to ensure water resources were available that would allow people to build a life here. Leaders have worked to

- bring businesses into the area to guarantee jobs
- encourage tourism to strengthen the economy, and
- promote Washington County by bringing in such big events as the

Huntsman Senior Games, the St. George Marathon and more recently the Ironman competition.

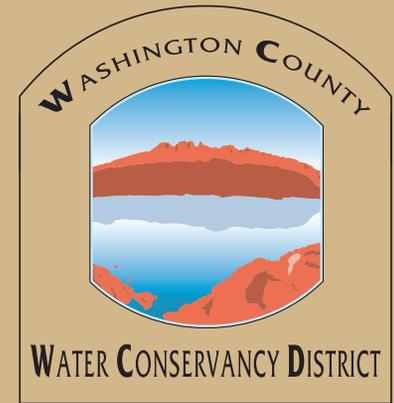
The geographic beauty of our area, its rich history, the climate, arts and leisure activities, educational opportunities and the warmth of the local people continue to be a magnet that will draw people to Washington County.

Our population will grow. The District has some guidance on how many people will need water, and it has water projects planned that will provide water to Washington County until 2039.

The Water Needs Assessment can be accessed on the District's webpage <http://wvcd.org>.



Photo courtesy of Doug Wilson



Water Line™ Special Summer Edition 2011

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Board Meeting - 6 pm
at the District office
August—no meeting
September—no meeting
Tuesday, October 18

Water users benefit from cooperation between District and Cities

By Ann Jensen

The Ash Creek/Anderson Junction Project has been in the planning stages for at least the past 16 years when it was proposed in the District's Purpose & Needs Study dated March 1995.

This project will take water from the leaky Ash Creek Reservoir and convey it through a pipeline for storage in a new reservoir at Anderson Junction. The secondary water supply will supplement irrigation needs, thereby conserving the high-quality Toquerville Spring water for culinary use in Toquerville, La Verkin, and Hurricane (Cities).

The Cities and the District have come to the table to outline a plan that will benefit each of the Cities and their residents. The Ash Creek Project is part of the District's Capital Facilities Plan, which has been approved by the Cities as partners in the Regional Water Supply Agreement (RWSA). Therefore, the costs associated with this project would be covered by impact fees.

Currently, Toquerville is making improvements to Highway 19 between

Toquerville and La Verkin. There is an above-ground pipeline in this area. Since the highway project is now under construction, it would seem to be a perfect time to consider burying the new pipeline to spare the area a visual obstruction and to improve safety. This highway project was just the impetus needed to bring the parties together to talk about a regional water facility that would benefit the Cities.

The Agreement calls for the District to, among other things:

- construct the underground pipeline
- be responsible for maintenance of the pipeline
- increase the capacity of the current pipeline and
- hire an engineer to develop a long-term master plan to enhance delivery systems and distribute the water efficiently.

Benefits to the Cities will include:

- Water that is now lost out of Ash Creek Reservoir will be captured and transmitted to the Anderson Junction Reservoir for storage.

- Cities' water rights can be utilized or stored in the reservoir.
- Cities' culinary water rights will receive first priority in Toquerville Springs.
- Cities would be relieved of the financial burden of having to construct the water system out of their budgets.

The Cities and the District have moved forward on broader coordination efforts for the benefit of all water users. The whole idea of the RWSA is to work together to maximize efficiency of water development and promote a cost-effective approach to handling local water supplies without duplication of resources.

Under the RWSA, the District accepts the responsibility for water delivery facilities that benefit two or more municipal customers.

This project is just one more example of people coming together in a spirit of cooperation for the good of the community.

We all share in the long-range planning for the future of Washington County.