

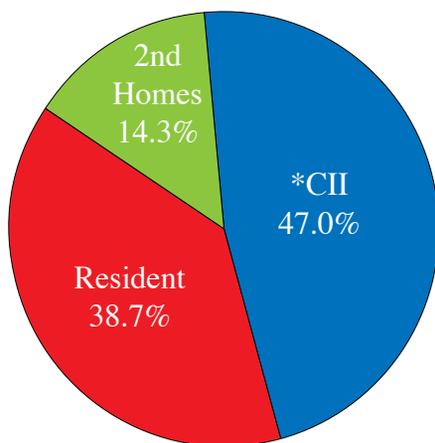
## Water Line Fall 2009

### Water for Today and Tomorrow

#### Facts

- **72,559 acre feet** – current reliable potable water supply in Washington County
- **54,800 acre feet** – current reliable potable water supply being used
- **17,759 acre feet** – current reliable potable water supply available for growth

#### Water Use Percentages



\*CII= commercial, institutional and industrial

WASHINGTON COUNTY PORTION OF LAKE POWELL PIPELINE COST ESTIMATED COSTS IN 2008	
Total Cost	\$695M
Cost/1000 Gallons	\$1.42
Cost/Gallon	\$0.00140
Cost/1000 Gallons in St. George today	\$1.60

### Completed, commenced and continuing projects of 2009

It is my pleasure to have this opportunity to share with you information about the water projects the Washington County Water Conservancy District (District) and its Board of Trustees have been overseeing in 2009.

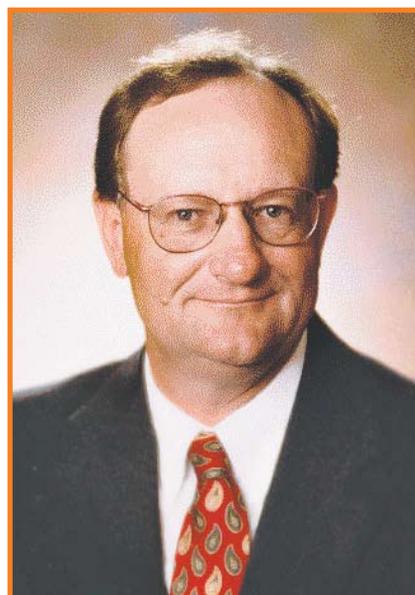
Most of these projects actually began years ago with studies being initiated and plans drawn up. Few, if any, water development projects can ever be accomplished in just one year.

#### Crystal Creek Pipeline

This project actually had its beginning 13 years ago with the completion of a feasibility study which confirmed that the project would be a viable source of water.

In 2005, District staff began obtaining easements from local landowners. Between 2006 and 2009, building an access road, construction of the diversion and the diversion pad, and laying 12 miles of 36-inch HDPE and 30-inch steel pipe were completed. It is expected that by late November of this year water will be running through the pipeline into Kolob Reservoir. The project was challenging due to the steep terrain and early snowfalls. There were basically only four months during any given year when work could be accomplished at the site.

Now that the pipeline is completed,



### Update from the Board of Trustees

*By Ed Bowler, Chair*

Ed Bowler is from Gunlock and St. George. He is a local business man and rancher. Mr. Bowler has served on the District's Board since April 1998. He became the acting Chair in January 2009.

Kolob Reservoir will probably fill every year, which will prove beneficial in several ways.

- Kolob water will be available to be released during the hottest months of the year to increase Virgin River flows.
- Kolob water eventually ends up in either Quail Creek or Sand Hollow Reservoirs and can be used for culinary water.
- Kolob water enhances habitat for the local fish population and riparian areas.

*(Continued on pages 2 & 3)*



36" HDPE pipe

# Piping of the Washington Fields Canal

Plans to pipe this historic, open ditch canal began in 2003. The project was completed in several stages. By 2007, 8.63 miles of pipe replaced the original canal.

Replacing the canal with an enclosed pipe has reduced the risk of children falling into the canal or other injuries which might arise in connection

with residential encroachment into the canal right-of-way.

As much as 4,400 acre feet of water will be saved each year as the water lost to leakage and evaporation is no longer a factor.

Over the years, fields adjacent to the open canal were flooded during high water events. This will no longer be an issue.

The pipeline

sprinkler systems. With pressurization, water from the pipeline can be used on landscaping, thereby conserving culinary water for future households.

Irrigators were able to draw water from the entire pipeline in March 2007. In 2009, several old ditches were torn out and replaced with 7-1/2 miles of pipe. The total cost of the project was \$13,458,000. Eight million dollars was paid by loans from the Utah Division of Water Resources to the St. George and Washington Fields Canal Company. The remaining cost was paid through grants from USDA-NRCS.

*The country's first domestically produced 63-inch HDPE pipe was used in the piping of the Washington Fields Canal. JM Manufacturing produced this particular sized pipe expressly for use in piping the St. George and Washington Fields Canal.*



63" HDPE pipe in the old canal alignment

## Ash Creek Project

The Ash Creek Project was envisioned as early as 1995 when it was included in the District's Purpose and Need Study as a project that could meet projected water demands.

The Ash Creek reservoir lies at the top of the BlackRidge. It was built when I-15 was constructed and lies in a volcanic formation. It has never held water.

The Ash Creek Project will take winter water from Leap Creek, Ash Creek, South Ash Creek and Wet Sandy and place it in a pipeline. The water will then be piped to a new reservoir at Anderson Junction.

This reservoir will be interconnected

with the Toquerville Secondary Water System. The water from the reservoir will be used as secondary/irrigation water leaving the high quality Toquerville Springs water to be used for culinary purposes.

Since 2006, work has been done on the alignment and the dam specifications. Currently, the preliminary design is in process.

JBR Engineering is doing the environmental

work which should be completed in 2010. At that point, a permit would be needed from the BLM and the job could then be put out for bid. 2012 is the projected completion date.



Ash Creek

## 10-million gallon water tank at the Quail Creek Water Treatment Plant

The District is committed to providing water to the community and at the same time lowering its energy usage in order to reduce its carbon footprint. Therefore, a new 10-million gallon underground water tank will be built at the Quail Creek Water Treatment Plant (Plant). The tank will provide:

- needed storage, and
- increased flexibility in managing the District's resources in an energy-efficient manner.

Since the Plant has only 10-million gallons of actual usable storage, it is constantly chasing demand during the hot summer months. This new tank will allow the District to store half of the daily production of the plant.

A power conservation plan initiated by District staff found that "batching" water production would

result in maximum energy conservation. Batching produces water at the maximum rate and then shuts the system down for a time resulting in lower energy use.

During 2008-09, energy conservation resulted in a 791,438 kWh savings between the months of October and June. 58,338 kWh of the savings are attributed to batching production. Without the added storage provided by this new tank, batching on a regular basis would not be possible.

Bid requests went out on September 8, 2009. Alder Construction Company submitted the low bid of \$7,651,000.

The project will be paid for with loans and grants from the state Division of Drinking Water and the Rural Development Agency. Completion is scheduled for July 2010.

# Success of the Regional Water Supply Agreement

The District began selling water under the new Regional Water Supply Agreement (RWSA) to municipal customers in Washington County, starting with the City of St. George in April of 2006. Soon, Ivins, Washington, Hurricane and La Verkin joined, followed in January 2007 with Toquerville and in 2009, Leeds. Santa Clara is now poised to sign on as well.

The RWSA has brought the District and its municipal customers into a partnership that allows pooling of resources for planning, development and management of water resources. Many of the projects outlined in this article are enhanced by the collaboration

among the RWSA participants, who meet regularly to brainstorm ideas for providing service to water customers in the most efficient, cost-effective manner.

*RWSA partners help to ensure that water comes out of the tap when you turn it on.*

These new ideas are saving water and money for all of us. They will help us to diversify water resources and to meet the additional demands that drought will continue to impose.

Most importantly, the combined efforts and resources of the RWSA partners will help us to ensure that we can develop the future projects that will be necessary to ensure that water comes out of the tap when you turn it on.

# Connectivity from Virgin to Ivins

At present, the District's culinary water system serves seven communities all the way from the eastern to the western reaches of the County, along the mainstem Virgin River and the Santa Clara River.

The cities that are partnering with the District pursuant to the RWSA are joined by the Town of Virgin, which also purchases water from the District. Many of these communities are long-standing District customers under previous "take-or-

pay" contracts. As partners, it is easier to find ways to move water from one end of the pipeline system to another.

Many of the cities and the District have joined together in constructing pipelines to bring water from the source at the Quail Creek Water Treatment Plant to the various communities.

When there is an emergency, the District can rely upon its contractual partners to ensure that water is provided where needed.

# Lake Powell Pipeline Project



Environmental studies that will be relevant to the NEPA document to be produced by FERC are currently being finalized. These studies consider the effects the pipeline might have on archaeological sites, vegetation, wildlife, geology and air quality to name but a few. If an impact is probable, suggestions for mitigation are presented.

Core drilling is currently being done on the forebay and afterbay sites on the Hurricane Cliffs and at the intake site at Glen Canyon Dam.

Water conservation is an important component

in this project. The State has hired a consultant to work with Iron, Kane and Washington counties to evaluate their water conservation programs and provide suggestions on how to improve these programs. The consultant should have its proposed plan ready for the counties by the end of this year.

*The Board of Trustees works closely with the District in order to guarantee that water is available for the public when needed.*

*It is our goal to provide water to residents of Washington County in a timely, cost-efficient and environmentally sound manner.*

# Conservation Corner

By Julie Breckenridge — Water Conservation Coordinator

## 2010 FREE LANDSCAPING WORKSHOPS

These workshops are held at the Tonaquint Nature Center —1851 Dixie Drive  
Space is limited so please call 673-3617 to reserve your seat.

### Landscape Design I

Thursday, January 14  
6:00—7:30 p.m.

### Efficient Irrigation Design II

Thursday, February 11  
6:00—7:30 p.m.

### Efficient Irrigation Design I

Thursday, January 21  
6:00—7:30 p.m.

### Landscape Design II

Thursday, February 18  
6:00—7:30 p.m.

### Total Tree Care

Saturday, January 23  
10:00—11:00 a.m.

### Spring into Vegetable Gardening

Saturday, February 20  
10:00—11:00 a.m.

Since Washington County experiences a limited amount of precipitation annually and since the elevations in Washington County vary anywhere from 2,000 feet to 10,000 feet above sea level, gardeners in Washington County face a variety of landscape challenges.

These workshops provide a wide range of appeal to a large variety of landscapers.

They focus on everything from tree care to landscape layout design to efficient irrigation methods.

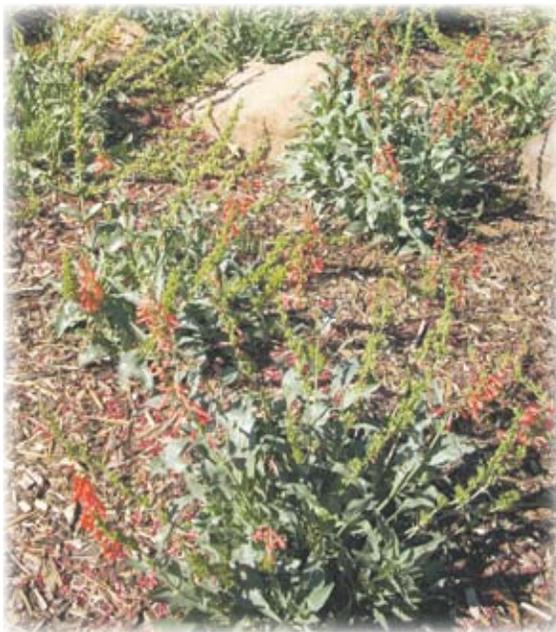
For more information on the FREE workshops log on to  
<http://wcwcd.state.ut.us/Conservation/2010>

## Water-wise plant feature Penstemon species

With the large number of the Penstemon species to choose from, there is one that will fit your landscape layout. Penstemon always have showy flowers and tend to bloom at varying times during the growing season. Most of them attract humming birds.

The species shown in this photo is the Scarlet Bugler. It blooms early in the summer and the blooms continue until fall if they are deadheaded.

The Penstemon is a water-wise plant preferring dry conditions.



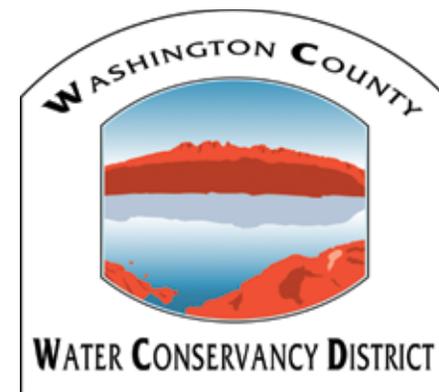
The Demonstration Garden features this Penstemon species.

## DON'T FORGET



## DON'T WASTE WATER

Remember to turn off  
your irrigation  
system for the winter.



## Water Line Fall 2009

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Next Board Meeting

Wednesday,

December 2, 2009, 6:00 pm