

Are You a Water Savvy Steward??



Did you know by letting the water run while brushing your teeth, shaving or washing dishes you can waste 3 to 5 gallons a minute? That adds up to about 20,000 wasted gallons a year in your home!!

Water Saving Tips

- Repair leaking pipes and faucets
- Only run the dishwasher when its full
- Set the washing machine for the appropriate level
- Don't run the water while brushing your teeth, shaving, or washing your hands
- Store a pitcher of water in the refrigerator for drinking so you won't have to let the faucet run to get cold water
- Don't use the toilet as a trash can

Want to learn more?

Stephanie Duer
Salt Lake City
Water Conservation
Coordinator
(801) 483-6860
stephanie.duer@slc.gov.com
www.slch2o.com

Do you know how much water you use?

	Non-Conserving Activities	Conserving Activities
Shower (5 Minutes)	Regular showerhead uses 30 gallons	Low-flow showerhead/restrictor 15 gallons and Wet-down, rinse off 4 gallons
Toilet Flushing	Conventional toilet 5 to 7 gallons per flush	Ultra-low flush toilet 1.6 gallons
Brushing Teeth	Tap running 10 gallons	Wet brush, rinse, 1/2 gallon or less
Shaving	Tap running 20 gallons	Fill basin 1 gallon
Washing Hands	Tap running 2 gallons or more	Soap and rinse 1 gallon or less
Wash Dishes	Tap running 30 gallons	Wash and rinse in dishpan or sink 5 gallons
Automatic Dishwasher	Full cycle 15 gallons	Short cycle 11 gallons
Washing Machine	Full cycle, top water level 40 gallons	New "tumble-action" efficient clothes washer 25 gallons

WHAT'S NEXT FOR SALT LAKE COUNTY?

With a final **Water Quality Stewardship Plan (WaQSP)** in hand, Salt Lake County has successfully received several grants to start implementation in 2009. Additionally, the County Council has allocated money for continued stream restoration and **WaQSP** support. The momentum surrounding water quality stewardship is truly a product of everyone's support! **Thank you!**

2009 TASKS

- ### Ecosystem Enhancement
- Bingham Junction – large scale ecosystem restoration project on the Jordan River between 6400 and 9000 South
 - 9000 South – ecosystem restoration project on the Jordan River
 - 8600 South – develop design drawings to construct an overland flow stormwater treatment facility to remove sediment and nutrients
 - Dry Creek (between 700 and 1300 East) – large scale stream restoration project

- ### Land Use Ordinances
- Develop sensitive areas overlay zone ordinance template for use on the west side of unincorporated Salt Lake County.

- ### Continuing Planning and Data Collection
- Develop a Countywide Water Quality Predictive Management Tool for water quality planning and compliance purposes
 - Expand water quality and quantity data collection. Install five (5) flow gauge stations that will also be used for water quality monitoring
 - Sample instream water quality during storm events – conduct pilot instream sampling of Mill Creek during a storm event

- ### Public Involvement
- Publish bi-annual Watershed Watch newsletter
 - Organize and facilitate annual Watershed Symposium
 - Continue to facilitate meetings with the Jordan River Watershed Council.
 - Provide assistance, coordination, facilitation and oversight for water quality improvement grant applications.



Salt Lake County Public Works
Flood Control & Water Quality Division
Water Resources
Planning & Restoration Program
2001 South State Street, Suite N3100
Salt Lake City, Utah 84190

Digital copies available online at www.waterresources.slco.org
We welcome submissions!

CONVERSATION WRAP-UP

2nd Annual Salt Lake Countywide Watershed Symposium



Symposium Participants Listen to Mayor Corroon's Opening Remarks

Thank you to everyone who participated in and joined the conversation at the **2nd Salt Lake Countywide Watershed Symposium** this past fall! We had approximately 300 participants from a variety of backgrounds. Participants chose from 24 presentations and three field trips, all fostering conversations about water quality issues in Salt Lake County. We received many positive comments and it was the consensus that the Salt Lake Countywide Symposium is worthwhile and would like to see it grow. Thanks to your support, we are excited to announce the County will host the **3rd Salt Lake Countywide Symposium** this year!! Thank you and with your continuing support, we hope to make the Salt Lake Countywide Symposium an annual event.



the Watershed Watch

Spring 2009 Vol 4, Issue 1.

City Creek - A Unique Local Treasure

By *Mathew Prince & Patrick A. Shea, Former BLM Director*

Just above Salt Lake City, City Creek Canyon still looks much as it did when the first pioneers arrived in 1847. Historically, City Creek influenced the location of development within the valley, and provided valuable water to a growing population. However the canyon was not without controversy. This article provides an historic perspective on a beloved Salt Lake City treasure.

naturally near what is now the intersection of State St. and North Temple. However, early settlers set in motion the diversion of City Creek from its natural course, and by spring of 1848, over 5,000 acres of land were being irrigated and farmed with City Creek water.

In January 1851, the municipal



Pipe Construction—1874

"...No other city in the United States has such an accessible, prime piece of natural watershed....."

Mayor Ralph Becker

July 22, 1847, an advanced company, lead by Orson Pratt, camped along a creek near the site where the City and County building now stands. Once Brigham Young and his company reached the valley, one of the first items of business was naming various streams that ran from the mountains into the valley. The stream that provided refuge for Orson Pratt and his company was later named City Creek by Brigham Young.

As the Salt Lake valley was developed, City Creek's most valuable resource was the water it provided for settlers. When the pioneers first arrived, City Creek flowed out the canyon and split

government of the City of Great Salt Lake was created. The new government believed that the

privies, or deposit[ion] any filthy substance in or near any of the streams running through this city..." If anyone had such "filth"



City Creek North of Memory Grove During 1983 Floods



City Creek Ditch Flood North Temple—1907

public should own the natural resources of the valley; thus the County Courts were given jurisdiction over water and timber throughout the County. Since Salt Lake City's water was being used for culinary purposes, pollution was a primary concern. Due to concern for the public health, on March 21, 1851 the City Council passed an ordinance that prevented the, "building of cow yards,

along the banks or in the waters of the streams, it had to be removed.

City Creek, however, was not a tamed resource. There were problems with ice and high water where City Creek flowed into the City. Even when waters weren't overflowing their ditches, City Creek was still dangerous. In 1850 a young girl drowned when she

(Continued on page 2)

NAVIGATING THE WATER QUALITY MAZE

Negotiating water quality, watershed health, drinking water supply, stormwater, and wastewater in Salt Lake County can be tricky. We, as water professionals, often get calls from people who are trying to find the right phone number to call, the right person to talk with, or answers to what seem apparently straightforward questions. In Salt Lake County, a complex jurisdictional maze exists to manage water quality and water related issues. This maze can be confusing for those who work in it on a daily basis, let alone people who simply need an occasional answer. The following list of organizations is offered to help you navigate the water quality, watershed, and water supply world more easily.

RIVER RESTORATION

There are many organizations/ individuals who have been involved in stream restoration in

Salt Lake County. One of the most experienced:
Steven F. Jensen
SLCo Water Resources Planning
<http://www.waterresources.slco.org>
(801) 468-3630

STREAM ALTERATION

If you're going come into contact with a stream through construction activities, check with the Division of Water Resources to determine if you need a stream alteration permit.

<http://waterrights.utah.gov/stmalt/forms.asp>
(801) 538-7404

CULINARY WATER

If you're having problems with your culinary water, call your local water provider. If you're not sure who that is, the major water districts are:

Jordan Valley Water Conservancy
<http://www.jvwcd.org/>
(801) 565-4300

Salt Lake City
<http://www.slco.gov/utilities/>
(801) 483-6900

FLOODING

If you have flooding concerns or need a flood control permit, please contact the Salt Lake county Flood Control Division.
<http://www.pweng.slco.org/flood/>
(801) 468-2711

WASTEWATER

If you have questions about your sewer or wastewater system, call your local collection agency. If you don't know who your collection agency is, contact one of the major treatment facilities. They will help you identify the appropriate contact:

Salt Lake City
<http://www.slco.gov/utilities/>
(801) 483-6900

Central Valley Water Reclamation Facility
<http://www.cvwrf.org/>
(801) 973-9100

South Valley Water Reclamation Facility
(801) 566-7711

Magna Water
<http://www.magnawater.com/index.shtml>
(801) 250-2118

These are but a few suggestions. For more information, contact your local City and/or County offices. We'll do our best to help you navigate the ever complicated maze of water quality, watershed health, wastewater, and stormwater.

SIMPLE CHANGES = HAPPY FEATHERS

By Bill Fenimore



There are many reasons to be good stewards of our watershed. From enhancing recreational opportunities and protecting water quality, to supporting local wildlife and encouraging thoughtful awareness of the natural world, stewardship activities benefit all members of our community. However, as our houses and office buildings encroach on streams and associated wildlife habitat, we need to be aware of potential dangers. Specifically, there are numerous precautions that residents can take to protect local bird populations.

We often hear about birds that are lost due to window strikes. Skyscrapers have been the subject of many news articles reporting the birds who hit reflective windows during migration. Some architects and builders have worked on window designs and glass materials to avoid bird strikes. For example, Swarthmore College designed a state of the art science building with special glass and design features in

an attempt to avoid bird strikes. News stories that highlight potential dangers to birds are informative, yet they do not help backyard birders, and environmental stewards, prevent window strikes. Salt Lake County stewards are often disappointed to hear the tell tale thud of a flying bird striking a window in their home.

Here are a few tips to prevent bird strikes.

Birds see through glass windows without recognizing them. The number of bird strikes in the U.S. alone is estimated at

100 million birds per year, with 50% of bird strikes ending in fatality.

There are no universal solutions to prevent collisions. Screens offer effective barriers, and moving bird feeders within three feet of a window

will not only improve your viewing opportunities, but will reduce the rate of fatalities as well. Significantly, no fatal bird strikes have been recorded when feeders are placed this close to the home.

Placing electrostatic decals on windows with outlines of leaves, birds, hawks, or other opaque patterns can reduce the chance that birds will strike your windows. Decals are most effective if patterns are oriented vertically in columns separated by four inches, or oriented in horizontal rows separated by two inches. Objects with greater spacing reduce, but do not eliminate, all strikes.

The more elements used, the greater the protection. Additionally, it is important that the objects be placed on the outside glass pane. With modern double and triple paned glass windows, decals will not be

".....preventative measures can reduce bird strikes and support wildlife habitat restoration efforts...."



Example of Window Decals

seen by birds when placed on inside panes. You can find decals at specialty nature stores, like the Layton, Wild Bird Center (www.wildbird.com/layton). In addition to decals, films placed on windows, that make them opaque (CollidEscape: www.flap.org) are also effective deterrents.

There are continued studies for effective bird strike prevention devices. Current research with ultraviolet signals, which birds see but humans cannot, appear promising.

Take home message—preventative measures can reduce bird strikes and support wildlife habitat restoration efforts that occur in conjunction with stream restoration.

Bill Fenimore, author of the popular *Backyard Birds U.S. State Guide* series including the *Backyard Birds of Utah* (Gibbs-Smith, Publisher) and owner of the Layton, Wild Bird Center (www.wildbird.com/layton). Governor Jon Huntsman appointed Fenimore to his Great Salt Lake Advisory Council, commissioned in 2008.

City Creek - A Unique Local Treasure (Continued)

fell off a footbridge. Typhoid, and other water-borne diseases, were also prevalent in the open ditches and canals that ran through the City. While residents around City Creek were worried about too much water, the rest of the City was worried about water shortages. Therefore, on December 17, 1870 the idea of a piping system was introduced. In June 1877, the final water pipes were laid for the main conduit of water from City Creek into the City. Although costly, the pipes were a complete success. By 1892 there were 19,165 feet of supply lines and by 1949 there were 56.5 miles of supply lines. Individuals and businesses were charged annually to tap into the new water service, which provided a revenue stream for other municipal projects.

To protect City Creek Canyon, and



View of City Creek Canyon

by extension the creek itself, the City Council began acquiring land in the



Artist Sketch of City Creek Center

canyon in 1884. Acquisition gave the City legal control and provided the basis of preservation for one of the most protected creeks in Salt Lake County. By 1947, Salt Lake City had acquired the last available City Creek Canyon land. Subsequently, the City and the Federal Government have worked to protect upper City Creek sub-watershed through mutual agreements.

Today the Canyon is a much-loved resource that supports abundant recreational use. As a Nature Preserve (designated in 1985), City Creek Canyon provides recreational opportunities such as: picnicking, hiking, biking, and wildlife

observation. What's more, the Nature Preserve designation provides stream

to life for the early pioneers, much as it is today. Additionally, City Creek Canyon is a significant recreation area. Salt Lake City Mayor Ralph Becker explains, "City Creek Canyon is an unparalleled resource for Salt Lake City, flowing from mountains over 10,000 feet in elevation into the heart of downtown Salt Lake City at 4,500 feet. No other city in the United States has such an accessible, prime piece of natural watershed. We are fortunate for the foresight and wisdom that led to protection of this invaluable watershed, while allowing for appropriate recreational access for residents and visitors. I think of City Creek as my grand backyard."

protections that are essential to the health of City Creek. Recently, the Downtown Rising Project designed a plan to make City Creek more visible to local people. This includes returning some of City Creek's water (which currently flows underground below Memory Grove) to a newly constructed channel that will meander through pathways, plazas, living spaces, shops, and restaurants, while observers appreciate and enjoy its beauty.

Undoubtedly, City Creek has played a vital role in the development of Salt Lake City. The water it provides was essential

to life for the early pioneers, much as it is today. Additionally, City Creek Canyon is a significant recreation area. Salt Lake City Mayor Ralph Becker explains, "City Creek Canyon is an unparalleled resource for Salt Lake City, flowing from mountains over 10,000 feet in elevation into the heart of downtown Salt Lake City at 4,500 feet. No other city in the United States has such an accessible, prime piece of natural watershed. We are fortunate for the foresight and wisdom that led to protection of this invaluable watershed, while allowing for appropriate recreational access for residents and visitors. I think of City Creek as my grand backyard."



City Creek

For Reservations & Information
Salt Lake City Parks - 801.972.7800
Salt Lake City Public Utilities - 801.483.6705

FINAL REPORT—Stream Function Index (SFI) Page 3

The long anticipated Salt Lake Countywide Stream Function Index (SFI) is in its final stage of completion.

The Stream Function Index is a monitoring tool that will be used to measure stream health in Salt Lake County, identify enhancement opportunities, and measure Best Management Practice (BMP) effectiveness. This "tool" was developed in conjunction with the Countywide Water Quality Stewardship Plan (WaQSP) and is anticipated to be conducted every six years—along with WaQSP updates.

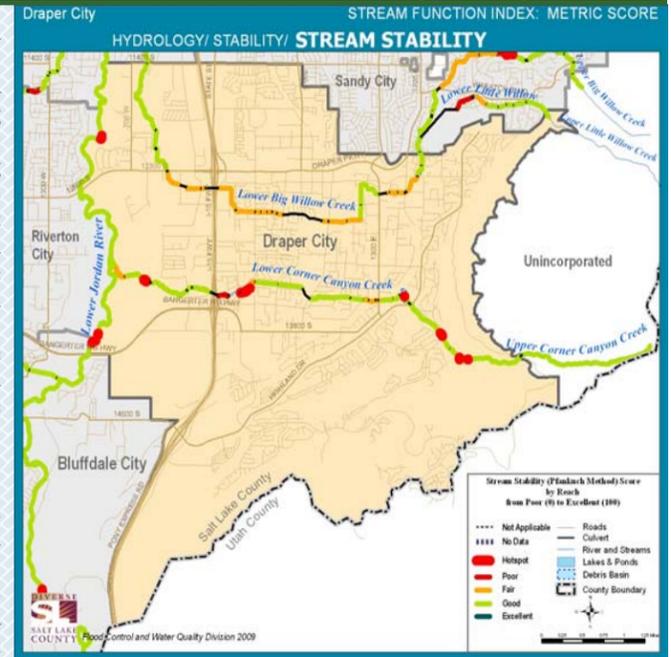
The SFI score is based on a rapid assessment of chemical, physical, and biological stream conditions. Social functions, such as recreational

compatibility, have also been included in the final score.

A complete data set was collected during 2007 and 2008 by walking nearly 300 miles of stream in Salt Lake County, recording data, and taking photos. Back in the office, data was entered into spreadsheets that calculated scores. The scores are then mapped in GIS to better analyze the stream conditions and locate potential opportunities to improve stream health.

Mapping is now complete and the final report is being prepared. The final SFI report will be posted on the Salt Lake County website (www.waterresources.slc.org) and will be available to interested stakeholders.

An example of an assessment map is provided for Lower Corner Canyon Creek sub-watershed in Draper City. The overall Channel Stability Score is 84 out of 100, which is considered generally stable. However, several hotspots exist and are portrayed in red. Salt Lake County anticipates working with the Division of Water Quality and local municipal governments to address stream health concerns.



The expected report release date is April 2009!

Please contact Kathlyn Collins (kcollins@slco.org or 801.468.3742) to reserve your copy.



LEGISLATURE ROUNDUP

The 2009 Utah State Legislative is in session. Several bills are in front of the legislature that could significantly effect water quality and watershed function in Salt Lake County. Below are summaries of a few bills of interest:

Rainwater Harvesting
S.B. 128-Sponsor Representative Jenkins, S.

This bill provides for the collection and use of precipitation without obtaining a water right under certain conditions. With this bill, a person may directly capture and store precipitation in a storage container with a maximum capacity of 2,500 gallons; and place the water captured and stored to beneficial use.



Example of a Rainwater Cistern

Development Exactions
H.B. 68 - Sponsor Representative Painter, P.
The State Water Development Commission

recommended this Bill. An exaction is a provision in the development approval process that requires a developer to give or provide something to a local government. This bill places limitations and restrictions on a county or municipality's imposition of an exaction for a water interest. It also requires culinary water authorities to provide the basis for its calculations of projected water right requirements.

State Owned Land Amendments
H.B. 179- Sponsor Representative Gibson, G.

This bill will allow a portion of the open space south of 123rd South along the Jordan River to be exchanged for another piece of land so the current open space can be used for a commuter rail station and related development.

Safe Drinking Water Act Amendment
S.B. 29 - Sponsor Senator Stowell, D.

Municipalities may not have fluorine added or removed from the public water system without the approval from the majority of the voters in the effected election area.

STAFF CHANGES FOR DWQ AND SALT LAKE COUNTY

Hilary Arens brings abundant enthusiasm and expertise to the role of Jordan River TMDL Coordinator at the Division of Water Quality (DWQ). We will miss Jim Harris; however, he is around as the new DWQ Monitoring Section Manager. **Marian Hubbard** will take over as the new Watershed Coordinator for the Jordan River basin as "Natalie Rees" became "Natalie Rees Wannamaker" and is following her Navy husband to unknown shores.

HB 40 Update

In order to assure a safe drinking water supply for Utah's residents, the State Legislature passed **HB 40** last year (2008). This Bill, long discussed in the Legislature, requires all counties to adopt a land use ordinance that institutionalizes procedures to prevent contamination of public wells. The deadline for adoption of such a bill is May 3, 2010.

In order to develop an ordinance, the Salt Lake County Public Works Department, and Salt Lake Valley Health Department (SLVHD), formed a committee with representatives from Planning and Development Services, Flood Control and Engineering Division, and the Environmental Health section of the SLVHD. The committee has met on a weekly basis for much of the last six months. Additionally, meetings have been held with Public Water Systems, the District Attorney's Office, and County leadership.

However, the **Water Source Protection Amendments Bill (HB 205)**, which amends HB 40, has been introduced to this year's State Legislature. If passed, the amendment will limit the requirement to adopt a water source protection ordinance to counties of the first and second class and also limit the authorization of a municipality to adopt a water source protection ordinance to municipalities located within a county of the first or second class. Although this and several legal issues remain, the County feels confident an ordinance will be in place by May of 2010.