

the Watershed Watch

Newsletter of Salt Lake County Watershed Planning & Restoration

Spring 2018, Issue 18

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RainHarvest 2018

Rain barrel sale and distribution program
Utah Rivers Council
Order by June 3; Pickup June 9

Golden Spoke

Celebrating 100+ miles of connected multi-use trail, including the Jordan River Trail!
Wasatch Front Regional Council
June 2

Get Into The River Festival

30-day celebration of the Jordan River
Jordan River Commission
September

2018 Salt Lake County Watershed Symposium

Salt Lake County Watershed Planning & Restoration
November 14-15

Monitoring ecological change with smart phones and social media

by Watershed Planning & Restoration

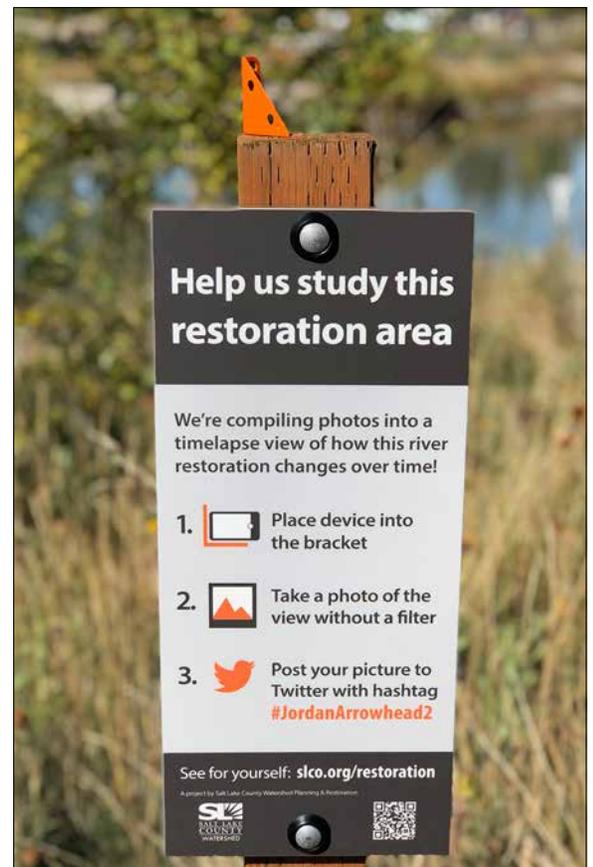
Salt Lake County Watershed Planning & Restoration is using crowdsourced photos to help with the ongoing monitoring of our stream restoration projects on the Jordan River! “How?” you may ask. It’s simple: Put up a sign inviting people to set their phone or camera in an angle bracket, take a photo, and post it to Twitter with a site-specific hashtag. Then harvest the photos to create slideshows that show change over time.

Jordan River Trail users may have already noticed a number of these “self-serve” photo monitoring stations, which were installed last fall. What’s new are the crowdsourced slideshows, now available on our website at <http://slco.org/watershed/restoration/monitor-change>.

Post-project monitoring is an important part of any restoration project. With the new photo stations, we’re inviting citizens to become part of the monitoring process. This is truly a crowdsourcing effort. Salt Lake County doesn’t own these photos. We won’t download and save the photos. Instead, we developed an online tool that harvests the Twitter hashtags and allows us to view the photos in a slideshow format. Image consistency is important for photo monitoring to be effective. The bracket on top of each photo station helps to ensure a consistent height, angle, and direction for each

photo. It’s not perfect. Some photos have been taken vertically, when ideally we prefer them horizontal to capture as much of the restored streambanks as possible. But that little glitch aside, we’re getting loads of great photos! The end result: slideshows that simulate timelapse photography.

Much of the Jordan River’s banks and historic floodplain have been
(continued on page 4)



Salt Lake County Watershed is crowdsourcing photos to help monitor change at our stream restoration projects along the Jordan River.



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Rethink your lawn and go native!

by Watershed Planning & Restoration

Reducing the total area of lawn in your home landscape is one of the best improvements you can make to protect water quality and conserve water. In our arid climate, a typical Kentucky bluegrass lawn requires a whole lot of water (and fertilizer, and other lawn care chemicals) to stay green and healthy throughout the growing season. A 1,000 square foot lawn (0.02 acres) needs approximately 15,000 gallons of water per year to keep it green! And that's a conservative estimate. Cool-season bluegrasses have shallow root systems that are not

very effective at using and absorbing water. In comparison, the deep roots of native plants utilize water much more effectively, which saves water and decreases the risk of runoff into stormdrains (which lead straight to our rivers and streams).

From a habitat perspective, a typical bluegrass lawn offers very little in terms of shelter, cover, or food. Diversity is key—in plant species types and structural diversity (different layers of vegetation, including trees, shrubs, and ground layers)—to achieve environmental benefits and a beautiful landscape!

If you love the look of a lawn, try replacing thirsty bluegrasses with drought-tolerant native turfgrasses such as Blue grama grass (*Bouteloua gracilis*) or Buffalo grass (*Buchloe dactyloides*). Blue grama requires about 70% less water than Kentucky bluegrass! These native turf grasses can be left unmowed to create a low meadow that complements natural plantings and creates more structural diversity and habitat. They can also be mowed if you prefer a more manicured look. Either way, you can save money, save time, and protect the environment with a sustainable lawn.

Regardless of what type of grass you have, the following tips will help you conserve water and create a healthier landscape:

- **Mow 3" or higher** Longer grass means deeper roots, hardier plants, and less need for water.
- **Water deeply and less often** This will encourage robust and deeper rooting.

This article was excerpted from the *Stream Care Guide: A Handbook for Residents of Salt Lake County*, available on our website at <https://www.slco.org/watershed/resource-center/guide-books/>. You can also visit these websites to learn more about creating sustainable landscapes, <http://waterwiseutah.org/> and <https://conservewater.utah.gov/>. □

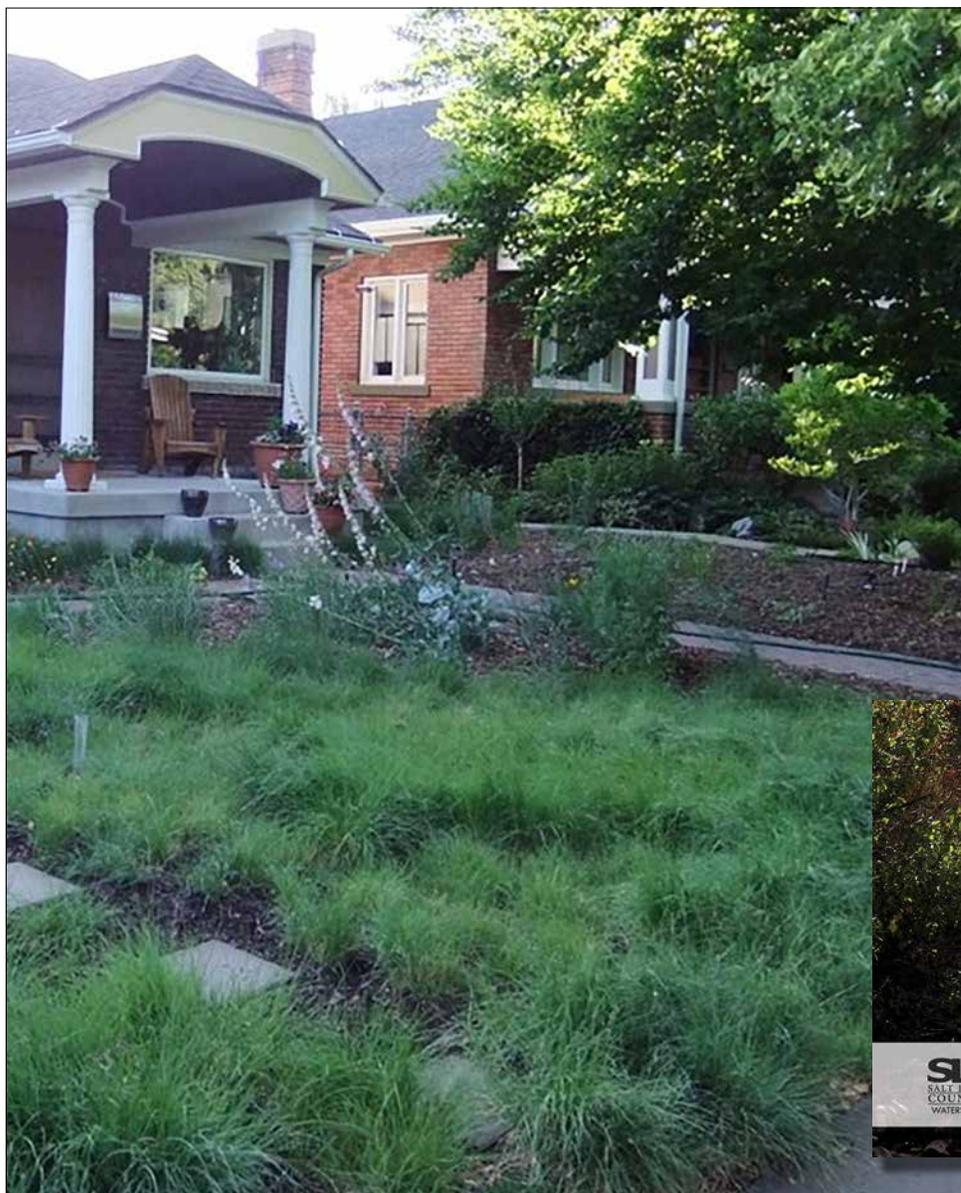
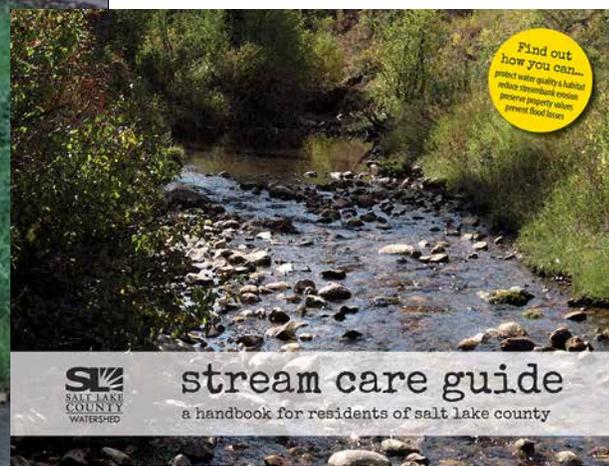


Photo © Shooting Star Design



This Blue grama grass (*Bouteloua gracilis*) lawn will need about **70% less water** than Kentucky bluegrass to keep it green and healthy throughout our growing season.

Assessing stream health by evaluating stream channel stability

by Watershed Planning & Restoration

Salt Lake County's Watershed Planning & Restoration Program is currently conducting a comprehensive evaluation of stream channel stability. Begun in 2015, this stability survey is an update to a similar rapid stream assessment completed in 2010, and is being completed on the Jordan River and nine of the river's tributaries in Salt Lake County.

Streams are dynamic. In a healthy stream system, stream banks move as erosive forces shape and reshape the channel and floodplain. Stream bank and bed mobility is a natural phenomenon. A stream is considered "stable" when the water flow and sediments carried by the channel do not cause excessive changes to the width, depth, cross-sectional area, and slope of the stream. The difference between stable and unstable streams is primarily marked by the *rate* of bank and bed mobility. The expected rate of change for a particular stream varies by **stream type**, which is based on steepness of the streambed and surrounding landscape, the surrounding geology, soil types, and other factors.

To evaluate channel stability, Watershed Program staff walk each stream to first delineate them into units called **reaches**, which are defined based on changes in geology and tributary influences. A variety of data is then collected for each reach using the Pfankuch Method (pronounced "fahn-cook"), which provides a combined assessment of physical variables of the upper bank, lower bank, and stream bed. Each variable is assigned a score, some weighted based on level of importance, and a final combined score indicates whether the overall channel stability is "Good", "Fair", or "Poor", based on stream type.

This system allows us to identify weak links and to discover what, if any, opportunities exist to correct the condition. Unnaturally high rates of stream bank erosion and bed mobility can have multiple causes. These



A device called a "gravelometer" (shown in the water) is used to measure the size of sediments (pebbles, cobbles, etc.) found in the stream banks and bed. This is one of many data variables collected by the Watershed Program to assess stream channel stability.

range from small-scale local causes like unrestricted livestock access or streamside landscaping changes made by unsuspecting homeowners, to larger-scale influences such as development that increases impervious surfaces (paving, rooftops) that can dramatically increase stormwater and pollutant inputs into a stream.

Stream channel stability is just one dataset being collected by the Watershed Program to help evaluate

the overall health of the watershed. Ultimately, our goal is to serve as a check and a measure of the stresses put on our urban streams, as well as the success and effectiveness of management options designed to repair damage and alleviate stresses. Land managers can use the stability data to appraise channel conditions and, hopefully, respond to adverse changes before impacts to the water resource become unacceptable and unalterable. □



2018 Rain Barrel Sale opens May 10

Rain barrels conserve water and protect our streams from polluted runoff. Purchase discounted barrels during RainHarvest 2018 for only \$75. While supplies last, Salt Lake County and Millcreek are offering subsidized rain barrels for only \$50 each!

Order by June 3 | Barrel pickup June 9

<http://utahrivers.org/rainharvest/>

Hosted by Utah Rivers Council, with partners Salt Lake County Watershed and Millcreek City

MONITOR CHANGE

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negatively impacted in one way or another due to development and stream alterations. These types of stresses can cause bank erosion to accelerate beyond the norm. The stream restoration projects designed by the Watershed Program use natural channel design to repair damaged streambanks, restore natural function to the river, and improve habitat for wildlife above and below the water.

The reconstructed floodplains and banks at all of our restoration projects are revegetated with native riparian plants, and photo monitoring is a great way to track the growth and success (or failure) of the plants. Also, photos taken during high water will show how the floodplains are handling the flows. During winter, when foliage is off and water levels are typically lower, we'll get a clearer view of how the reconstructed streambanks are holding up. We're relying on our new network of citizen monitors to create a year-round photographic record.

Next time you're on the Jordan River Trail, keep an eye out for the photo monitoring stations. And snap a few pictures! Five photo stations along the stretch of river from Arrowhead Park at 4800 South to approximately 5100 South in Murray, are documenting the Watershed Program's restoration work begun in 2015. One at Winchester Park (6500 South in Murray) is documenting the channel repair and revegetated streambanks completed in 2015. In Draper, one photo station was installed at our river realignment project at 12600 South (near Jordan River Rotary Park), which was completed in 2010.

In addition to the photo monitoring stations, we also installed a series of informational signs that discuss the goals of our stream restoration projects. Both types of signs were included to create awareness of stream restoration techniques used by the Watershed Program, explain why the work was needed, and how it can improve the river ecosystem. □

Save The Date!

12th Annual Salt Lake County Watershed Symposium

November 14-15, 2018

Utah Cultural Celebration Center
West Valley City UT

Free and open to all, the Watershed Symposium encourages a comprehensive review of the current state of our watershed while creating learning and networking opportunities for a broad array of stakeholders.

Hosted annually by Salt Lake County Watershed Planning & Restoration.

Learn more at
[https://2018watershedsymposium.
eventbrite.com](https://2018watershedsymposium.eventbrite.com)



Located at approximately 5100 S on the Murray side of the river, photos taken at this “self-serve” photo monitoring station will document change on the eroding streambank shown on the right. Look closely and you can see Watershed Program staff in the water! We were installing a bank stabilization technique in February 2018, to help slow down the rate of active erosion.

The views expressed in this periodical are those of the authors, not necessarily those of Salt Lake County, the Salt Lake County Mayor, the Flood Control Engineering Division, or any other entity.