

the Watershed Watch

Newsletter of the Salt Lake County Watershed Planning & Restoration Program

Fall 2016, Issue 15

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New & Noteworthy

The 10th Annual Salt Lake
County Watershed Symposium
November 15-16, 2016
[http://slco.org/watershed/symposium/
index.html](http://slco.org/watershed/symposium/index.html)

Riverfront Communities Best
Practices Series

Green Infrastructure:
Putting it to work
November 18, 2016

[http://jordanrivercommission.com/
training/](http://jordanrivercommission.com/training/)

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The Summer of Green and Blue

by SLCo Watershed Planning and Restoration

As summer continued to heat up and our waterbodies continued to warm conditions developed for the growth of potentially harmful blue-green algae blooms (HABs). This blue-green algae, also known as cyanobacteria is a photosynthetic, single celled, aquatic bacteria that can be found living near the surface of waterbodies. While most cyanobacteria get their name from their bluish greenish coloration they can also appear yellow, brown or red. Fueled by phosphorus and nitrogen many nutrient rich bodies of water such as Utah Lake can support rapid growth of cyanobacteria. Most species of these blooms are buoyant and will float to the surface where they can form scum layers or floating mats. Under

normal conditions these blooms cannot maintain an abnormally high population for long and will rapidly die off and disappear after a week or two. However if conditions remain favorable, another bloom can quickly replace the previous one and may overlap the dying bloom making it appear as if there has been one continues bloom.

When blue-green algae is present in high concentrations it can be a cause of alarm for humans and animals alike. Some concerns associated with blue-green algae blooms include:

- Eye, ear and skin irritations
- Discolored water

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HABs on Utah Lake (Photo: Kayla Folwer)

Blue-green Algae
Continued from cover

- Gastrointestinal symptoms such as vomiting and diarrhea
- Reduced light penetration
- Taste and odor problems
- Dissolved oxygen depletions during die off
- Toxin productions

Majority of the blue-green algae blooms are non-toxic, still some algae can produce different types of toxins including a neurotoxin and a hepatotoxin. The neurotoxins affect the nervous systems of animals and humans that ingest it and can cause muscle cramps, twitching, paralysis and cardiac or respiratory failure. The symptoms can occur within an hour of exposure or can take as long as 36 hours to develop. The hepatotoxin which affects the liver can cause nausea, vomiting and acute liver failure. These symptoms will appear rapidly following exposure to high levels, but may take several days to appear in cases of moderate exposures. However even in the absence of these toxins blue-green algae may still cause skin rashes.

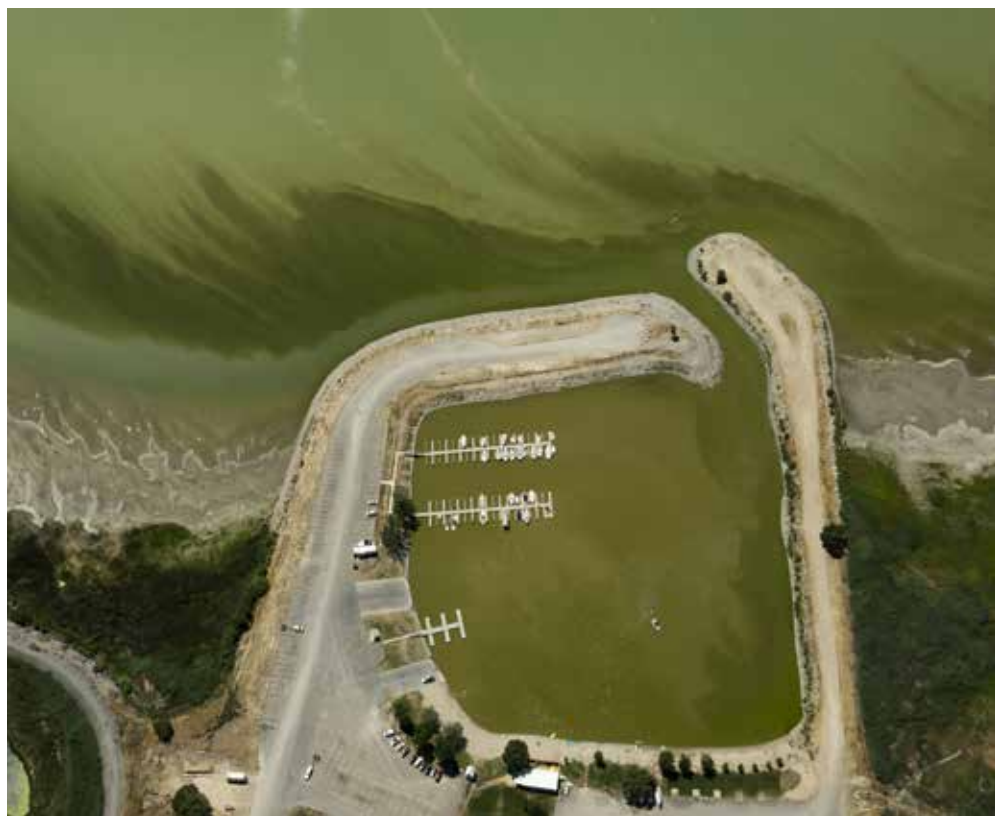
Unfortunately once a bloom has formed, treating it with algaecides or any other chemicals is not a practical solution. Most treatments can cause the cyanobacteria cells to break open and release all of their toxins into the waterbodies possibly creating bigger problems than before.

So what can be done? There is no quick or easy remedy for these HABs and most fixes will require long term solutions. A major component to reducing the HABs that needs to be addressed is reducing the amount of nutrients that wash into the lakes and rivers. If these nutrients can be reduced, eventually the frequency and intensity of these blooms will likely decrease as well. Many of these reductions in nutrients can be accomplished by supporting the following practices in the community:

- Do not use more lawn fertilizers than the recommended amount, and keep fertilizers out of storm drains, off driveways and sidewalks.

- Prevent lawn debris (leaves, grass clippings, dirt) from washing down the storm drains.
- Maintain or install native plants around shorelines and streams. Native plants don't require fertilizers and help filter water.
- Properly care for and maintain your septic system.
- Do not allow livestock or domestic pets to drink or defecate in streams or lakes.
- Take steps to prevent soil erosion.
- Use Phosphate-free soaps and other household products

As stewards of the watershed it is important to do whatever can be done to decrease the amount of unnecessary nutrients making it into the waterways in hopes of decreasing the amount of HABs and producing healthier waterways while improving water quality.



Algae bloom on Utah lake (Photo: Rick Egan, Salt Lake Tribune)

2016 Salt Lake County Integrated Watershed Plan (IWP).

Salt Lake County's integrated planning process provides a framework of goals and policies that are intended to forge water quality stewardship consistent with Congressional goals and representative of the needs of the local population. The overriding goal is to improve the following watershed functions: water quality, hydrology, habitat, and social & recreational services.

Public and stakeholder comments have been received and the final plan was granted a Resolution of Approval from Salt Lake County Council in October 2016. Next steps in the plan approval process include submitting the final plan for approval by Governor Herbert, then submitting final plan for approval by EPA Region VIII.

You can learn more here
<http://slco.org/watershed/watershed-planning/>.

Harvesting Rain to Help the Watershed

by Nick Schou of Utah Rivers council

Utahans are America's biggest per-person water users according to the United States Geological Survey (USGS) and few people realize Utah is also proposing some of the largest river diversions in the nation. However, recent poll data shows that most Utahans are eager to embrace water conservation.

For several years, a rainwater harvesting revolution has been sweeping the nation with over 100 cities distributing tens of thousands of rain barrels to their residents. Not only does this practice save water, it improves water quality and participating municipalities can use rain barrels to demonstrate progress in complying with Clean Water Act (CWA) regulations.

Since the summer of 2015, the Utah Rivers Council has partnered with 7 northern Utah municipalities to offer a community rain barrel program called RainHarvest. The idea behind RainHarvest is to make conserving water easy and cheap for residents that want to make a difference in their own backyards. This concept resonated with thousands of Utahans, making the program a huge success overnight.

Through the program, participating municipalities subsidize the cost of rain barrels for their residents to incentive conservation. This year, a limited quantity of rain barrels were offered for just \$50 each, and for \$75 each after the subsidies were exhausted. These same user-friendly rain barrels retail for \$129 each. All the barrels were sold online and distributed in just a few hours at a rain barrel pickup event weeks later.

Salt Lake County has participated in the program since its inception and each year all of the County's subsidized barrels sold out in 24-48 hours. The RainHarvest website had over 500 hits per hour and the program continues to go viral each time discounted barrels are offered.

To date, Salt Lake County, Murray, Sandy, Park City, Summit County,



Painted Rain Barrel by Lauren Kuhns

Ogden and Eagle Mountain have partnered with the Utah Rivers Council to distribute over 3200 rain barrels to Utah residents. This means every time it rains enough to fill a 50 gal barrel there is a potential to redirect the use of up to 160,000 gallons of water through this simple practice.

Community based water conservation programs like RainHarvest not only help reduce demand on municipal systems and improve water quality of local rivers and lakes, they also give residents something tangible to grasp in a water system where everything is out of sight and out of mind. In concept, once an individual starts capturing rain, their passions concerning water conservation will grow along with their gardens including a greater consciousness of how our water use is connected to our rivers and the wildlife communities they support.



Rain Barrel (Photo: Utah River Council)

A River, Trees and Community Engagement

By Julie Howe of Stantec

Each year Stantec extends our focus into the communities we call home. Across the company, groups are involved in many service projects from cleaning vacant lots, working in food pantries, and gathering items for the homeless. There are so many different ways our teams serve, each noteworthy in their own way, but too numerous to mention here.

Last year, the Salt Lake City and Sandy offices worked with the Salt Lake County Watershed Planning and Restoration Program to plant over 150 plants and trees as part of an effort to stabilize the banks of the Jordan River. The River is an urban waterway that has been mismanaged and neglected over the years, and is listed by the State as an impaired waterbody. The bank stabilization project is intended to help restore the river by reducing the amount of erosion and improving riparian habitat. It was hard work. We got our hands and boots dirty, but everyone

really enjoyed this project and talked about doing the same thing next year.

For Stantec, this is particularly important because Salt Lake County has been a client for several years; in fact, Stantec participated in the development of the 2009 Plan. One of the key recommendations in the 2009 plan was to re-vegetate the banks along the Jordan River that are particularly susceptible to erosion. Stantec helped develop the watershed plan - now the company has the opportunity to help put the plan into action. Following the community service day last year, Stantec wanted to see if there was a way for the company to do more for this project. With a little research, it was determined that Stantec has a program to provide grants for community projects. It really is a simple process that starts with a short application from the grantee; in this case Salt Lake County Watershed. If the project complies with Stantec's

funding guidelines the grantee is awarded the funds.

Stantec approved Salt Lake County's grant request of \$1,000 to help purchase plants and trees that were planted for this year's Stantec community service day on September 21, 2016. These funds were earmarked to purchase plants, shrubs and trees, including cottonwoods, willows, dogwoods and alders.

The folks at Salt Lake County Watershed are very appreciative of the help Stantec has provided, both in the form of the grant and volunteer time. Stantec appreciates the opportunity to partner with Salt Lake County on such a valuable project that hits so close to home.



Stantec Planting along the Jordan River



10 Years and Counting...Continuing the Conversation

Join us for the 10th anniversary of the Watershed Symposium. We have an excellent lineup of presentations covering a broad range of topics on water quality and watershed issues. In honor of our 10th year, we're also co-hosting a film screening at The City Library and a Green Infrastructure Workshop!

Free and open to all, the Symposium encourages a comprehensive review of the current state of our watershed. This event bringing together participants from state, federal, tribal, and municipal governments; the private sector; the public; academia; environmental groups; and local watershed organizations.

Register and learn more at the official event site,

<https://2016watershedsymposium>.

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.