

the Watershed Watch

Newsletter of Salt Lake County's Watershed Planning & Restoration Program

Summer 2021, Issue 23

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Happenings

#LoveYourWatershed Fridays

Every first Friday of the month, pledge to help our watershed and share your photos and experiences
Jordan River Commission

USU Research Landscapes
Seminar Series
Utah State University

Seven Creeks Walk Series
August 7, Seven Canyons Trust

Range 2 River Relay
Bike, boat, and run from the Wasatch Range to the Jordan River.
September 4, Seven Canyons Trust

15th Annual Salt Lake County
Watershed Symposium
November 17, SLCo Watershed Program

What is “D4 Exceptional Drought” all about?

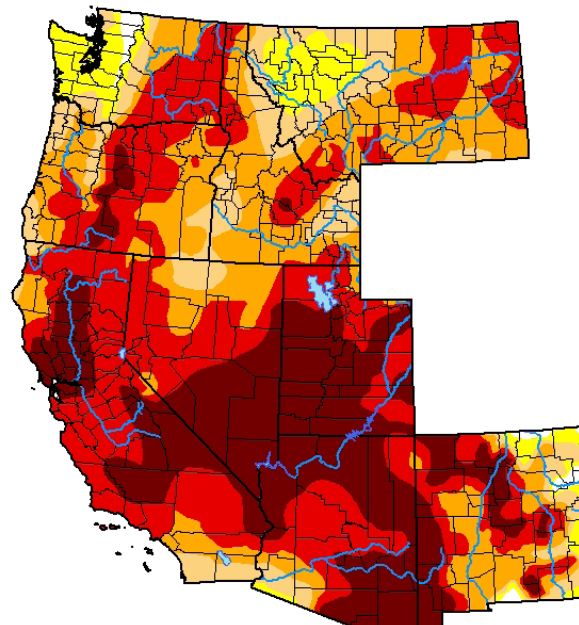
by Watershed Planning & Restoration

When the U.S. Drought Monitor updated its drought forecast maps in March, most of Salt Lake County was in the “D4 Exceptional Drought” category. And it’s no surprise that not much has changed since then. As of July 6, 65% of Utah and 82% of Salt Lake County are in this most extreme category of drought intensity. In fact, much of the American west is locked in a severe drought. But what does that mean, exactly? How did we get here after a number of years with great snowpack in Salt Lake County? A common definition of drought is “a prolonged period of abnormally low rainfall, leading to a shortage of water.” But it isn’t really that simple. There

are many different types of drought including hydrological, agricultural, and atmospheric.

Hydrological drought occurs when level of lakes or rivers fall below a given threshold. Agricultural drought occurs when a lack of water is available for crops due to a lack of precipitation, changes in the earth’s surface like nearby stream bed erosion, soil changes, or lack of water available in local streams or lakes used for irrigation. Atmospheric drought occurs when, over a period of time, less precipitation falls than expected. All of these drought conditions have the similarity of water being in short supply. When this condition occurs, water managers need to make decisions

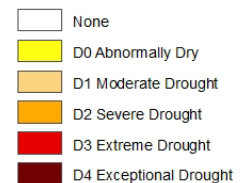
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U.S. Drought Monitor: West July 6, 2021

Data released July 8, 2021

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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droughtmonitor.unl.edu

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Since March, 65% of Utah and 82% of Salt Lake County are in a condition of “D4 Exceptional Drought”, per the *U.S. Drought Monitor*. D4 is the Drought Monitor’s most severe category of drought intensity. (Graphic courtesy of U.S. Drought Monitor)

Who poops where, and why we care

by Watershed Planning & Restoration

No one likes seeing, smelling, or stepping in poop, but did you know that it presents serious issues for water quality and human health?

Unscopied poop in the landscape will typically make its way into our streams, rivers, and lakes in a couple of ways. In our cities and neighborhoods, when rain and melting snow flow across yards, roads, and sidewalks it's called stormwater, and pet waste is just one of many pollutants that get picked up by stormwater and carried into the storm drain. From there it flows directly down to our streams and rivers. No filters. No treatment.

Once the growing season is in full swing, sprinklers on lawns and landscapes that aren't adjusted properly will often end up watering sidewalks, driveways, and roads too. Just like stormwater, this sprinkler overflow will carry poop (and other pollutants) straight into the storm drain.

The storm drain is different from the sanitary sewer system that your house is connected to. When you flush

a toilet, the sewer pipe takes it to a water treatment plant. Poop also gets into our waterways when animals are pooping too close to the stream banks, or of course directly in the water. Think of the parks where dogs are allowed off-leash to play in and around streams. Cows and horses spend a lot of time in and near streams. Their poop is a problem too.

What's the big deal? Pet poop is just natural fertilizer, right?

Actually, no. Not really! All this excess poop is not part of the natural stream ecosystem and can become a big problem for water quality. First of all, poop is basically raw sewage. In particular, dog and human poop is full of nasty bacteria like *E. coli* and salmonella, and potentially even parasites like giardia, tapeworm, roundworm, and more. These pathogens can then be transmitted to other animals or humans that come in contact with the contaminated water.

Not quite as gross, but actually a much bigger problem, are the nutrients released by poop when it enters our waterways. Specifically, nitrogen and phosphorus. These two nutrients are

essential to plant growth and a natural part of underwater ecosystems. But when so much nutrient-rich poop is pouring into our streams and rivers from storm drains, farms, and parks, it causes an imbalance that leads to the overgrowth of algae and bacteria in the water. This is called nutrient pollution. As algae starts growing out of control it uses up oxygen in the water when it decays, which can cause fish and other aquatic species to suffocate. Too much algae can also clog the gills of fish and invertebrates, and it smothers fish nests and underwater plants.

Then there's the Harmful algal blooms. When the conditions are right, normally occurring cyanobacteria in the water will multiply quickly to form visible colonies or mats of algae. These blooms sometimes produce potent cyanotoxins that are dangerous to humans and animals. Can you guess the number one factor leading to a harmful algal bloom? You guessed it... nutrient pollution. Have we made our point yet? Excess nutrients from poop is a big problem for water quality.

What about wild animals?

They're also pooping in the woods and in the streams, right? It's important to remember that there is a difference. They're wild and a natural part of their ecosystem. They're not owned or farmed by humans. Wild animals eat the resources and nutrients from their ecosystem, then return those same nutrients to the same ecosystem.

Let's face it. The biggest challenges to water quality come when humans are involved. Whether it's our pets, our farm animals, or just us!

So what are we doing about it?

Here at Salt Lake County's Watershed Program, we're keeping an eye on stream water quality by doing regular testing in streams throughout the county. In particular, we're testing for *E. coli* bacteria, which is found in great quantities in the intestines of humans and other warm blooded animals. Finding *E. coli* in the streams almost always indicates recent poop contamination. The higher the levels of *E. coli* in the water, the greater the risk that other pathogens are also present.



Pet owners, please be sure to scoop your dog (and cat) poop. Every pile. Every time. Unscopied poop has a nasty habit of making it's way into the storm drain, and from there it flows directly into our streams and lakes. No filters. No treatment

By visiting the same locations in the same streams every month, year after year, we have compiled a large record of *E. coli* data that helps us understand where the poop pollution is occurring, how things change season to season, and also how things change over time. Also, in the past couple of years, we've added a new test that looks for the DNA of specific animals. Which means now we can tell who's poop we're finding! It's called Microbial Source Tracking (MST), and we can identify the poop of humans, dogs, fowl (like ducks and geese), and ruminants (which includes cows, horses, moose, elk and deer).

By understanding who's poop is contaminating streams, and where, we can do a better job of figuring out how to prevent the problem in the first place.

What can I do to keep poop out of our streams?

Tips for pet owners:

- If you have a dog, or an outdoor cat, please scoop their poop at least once a week to keep your yard clean. Backyard poop is a big problem.
- Keep your dog on a leash so you know exactly where they poop. Then scoop it up, every time.
- Remember to bring poop baggies when you walk your dog. Plus extras to share.
- Seal up those bags and toss them in the trash.
- Never use pet waste in your garden or compost. Remember, it is not a natural fertilizer.

Tips for horses, cows, or other farm animals:

- Collect and compost stockpiled manure on a regular basis.
- Keep manure piles at least 100 feet away from streams and other waterways. And make sure that they aren't stored on steep slopes or places that drain towards the stream.
- Plant and maintain a strip of native plants along streams and other waterways. When you leave this area natural, unmowed, and ungrazed,



When poop makes it's way into streams and lakes, the excess nutrients can lead to an overgrowth of algae and bacteria. As the algae starts to decay it uses up oxygen in the water, causing fish and other aquatic species to suffocate.

it acts like a filter for any nutrient-rich poop that could wash into the stream when it rains.

- Use fencing to limit and control access of animals to the streams.

We've given you a lot of ideas for how you can help protect water quality by dealing with poop. Some are easier, and things that you can start doing right away. Others will take a bit more time and planning. Any will help. All are important.

Finally, we want to say thank you to everyone who is already doing any of these tips to manage poop. You're protecting water quality, wildlife, and the well-being of your fellow humans. Keep up the good work and give yourself a nice pat. You deserve it.

Find more tips and resources at the Salt Lake County Stormwater Coalition website, <https://stormwatercoalition.org/slco-residents>. □

**I POOP.
You pick it up.
Any questions?**



15th Annual Salt Lake County Watershed Symposium

November 17, 2021 Save the date! We're going virtual again this year. Join us online for a comprehensive review of the current state of our watershed and water quality issues affecting us all.

Visit our website to learn more, <https://slco.org/watershed/watershed-symposium/>.

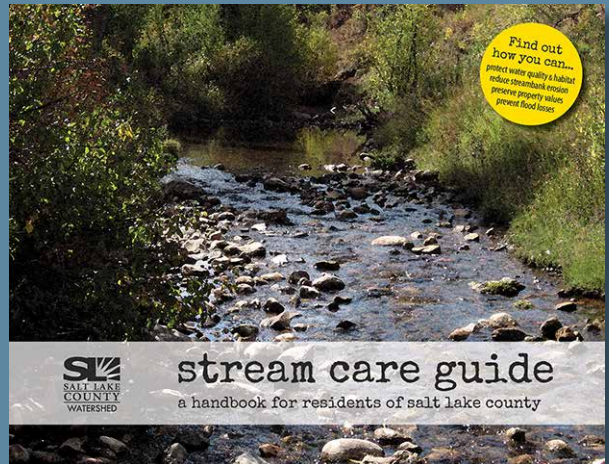
CALL FOR
ABSTRACTS
open through
SEPT 3

Get yourself a copy of our Stream Care Guide.

Find out how to protect water quality, create wildlife habitat, preserve property values, and prevent flood losses.

The basics of stream care are straightforward, but they do require active participation. This handbook is free and available from the Salt Lake County Watershed Planning & Restoration Program.

Download the PDF from our website, or request a print copy: <https://slco.org/watershed/resource-center/guide-books/>



D4 DROUGHT

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about how to use available water resources knowing there may not be enough to satisfy all demands. The water managers in Salt Lake County have been faced with drought numerous times, notably in the early 2000's when a nearly 10-year drought stressed water supplies. Water managers have a variety of

tools to work with during drought, including: drawing down water levels in local reservoirs, drilling additional groundwater wells to supplement available surface water supply, policy changes that limit water hungry landscaping practices, and conservation measures both voluntary and mandatory.

The drought we are currently facing in Salt Lake County stems from below average water levels in the local streams and lakes (hydrological drought); loss of water from the soils from plants, evaporation, and extended high temperatures throughout the spring, summer and autumn months (agricultural drought); and lack of precipitation through much of 2020 (atmospheric drought). The below average snowpack in the Wasatch Mountains this year further exacerbates the existing conditions.

Numerous Federal agencies combine their data to track drought conditions in the US. West Drought Monitor. This monitor is updated frequently to inform water and land managers of pending drought scenarios. The drought monitor examines

all of the different types of drought and places geographical regions in drought categories based on many factors compounding the drought, local water thresholds and other data.

The intensity level of our current drought conditions increases fire danger, stresses native vegetation, and affects water usage. While Salt Lake County remains in the D4 -Exceptional Drought category, local water managers will need to use the tools available to ensure supply is available for the most critical uses, like drinking water. This may mean tough decisions for all of us like less water for lawns, swimming pools, and green spaces.

To address this issue head-on, Mayor Jenni Wilson has pledged that Salt Lake County will cut a minimum of 5% of its water use in 2021, saving approximately 43,325,000 gallons of water through the heaviest-use months of May through October.

Learn more about water conservation in Salt Lake County, please visit <https://slco.org/water-conservation/>.

RESOURCES:

Drought Monitor
<https://droughtmonitor.unl.edu>

National Integrated Drought Information System
<https://www.drought.gov/states/Utah>

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Photo ©Salt Lake Tribune



Local reservoirs are experiencing low water levels much earlier in the season than typical. This is just one of the many signs of severe drought in Utah.