the Watershed Watch

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

Fall 2021, Issue 24

Inside

Happenings

Did you miss anything at the **2021 Salt Lake County Watershed Symposium** on November 17? Watch the live conference recording and on demand sessions!

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USU Spring Runoff Conference
Utah State University
March 29, 2022

Great Salt Lake Issues Forum
"Great Salt Lake: The Gift That Keeps On Giving, Just Add Water"
FRIENDS of Great Salt Lake
May 11-13, 2022

Seven Creeks Walk Series
Seven Canyons Trust
Ongoing

SALT LAKE COUNTY WATERSHED

Watershed Planning and Restoration Program
2001 S. State Street
Salt Lake City UT 84190
(385) 468-6600
slco.org/watershed

Reconnecting Jordan River floodplains

by Watershed Planning & Restoration

For every stream restoration project that Salt Lake County's Watershed Program takes on, our primary goal is to improve the health of the riparian ecosystem. Since 2015, we've been working on a stretch of Jordan River between 4800 South and 5100 South (approximately), with target areas on both the Murray and Taylorsville sides of the river. Each phase of our Jordan River Murray/Taylorsville Ecosystem Restoration Project (JRMT) has focused on improving riparian habitat for native fish, bird, and invertebrate populations through re-establishment of native flora, construction of active floodplains, use of large woody debris to stabilize eroding streambanks, and ongoing invasive weed control. The first three phases (2015-2020) improved over 3,100 lineal feet of river bank. During this 5-year period: six acres of weeds were sprayed, seven acres of disturbed ground was re-seeded, 40,000+ native plants were planted, six interpretive signs were installed, and four photo monitoring stations were initiated to collect crowdsourced photos.

Beginning February 2021, JRMT Phase 4 improved over 350 feet of failing river banks at the Kennecott Nature Center of Murray. To repair the severe erosion at the Nature Center, we installed a log platform to extend the base of the bank roughly 6 feet into the stream channel. The logs provided a stable base to rebuild the bank and reconnect the river to an active floodplain. A conifer revetment

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A unique log platform provides a stable base to rebuild eroded stream banks on the Jordan River. Conifers secured along the water's edge will protect against future erosion.

continued from cover

made up of recycled Christmas trees was installed along the front of the logs to protect the bank from the erosive forces of the river and enhance aquatic habitat. The conifer branches create a "roughness" that catches the current and slows the stream's velocity along the bank.

While most of the project installation was done by hand, we did have a bit of help from the Flood Control Operations crew. They brought in the big machine when it came time to scoop the gravelly streambed soil up and onto the log platform. The soil was then wrapped in a coir fabric like a burrito. Coir is a coconut fiber landscaping cloth that prevents erosion. This gives newly seeded and planted native riparian plants a chance to put down some roots and get established. In addition to restoring riparian habitat, this construction design also helped restore the river to a more ideal width and depth, which is important to return the stream channel to a more self-sustaining form. Over time, heavily impacted urban streams can become too shallow and too wide, which exacerbates the excess bank erosion that leads to the loss of an active and connected floodplain.

The Jordan River is far from a natural or healthy stream system. A long history of human impacts on the river corridor have taken their toll, including loss of the river's historic floodplain to development, river channelization, and development in the watershed as a whole. The river is impaired for excess sediment, *E. coli* contamination, low levels of dissolved oxygen, and excessively warm temperatures. The causes of these impairments vary, but most likely they are due to a combination of falling banks, stormwater, wastewater treatment effluent, decomposition of excess organic matter, and a lack of functioning wetlands surrounding the river. A significant legacy of contamination from historic smelting and ore hauling has also degraded the Jordan River ecosystem. Stream restoration projects designed and built by Salt Lake County's Watershed Program aim to repair these impacts where possible, to restore natural function and habitat to the river.

The Watershed Program would like to thank the U.S. Fish and Wildlife Service for providing grant funding to complete JRMT Phase 4. □

Next Page: Beginning February 2021, restoration of the vertically eroded Jordan River bank at the JRMT Phase 4 project site began with the construction of a log platform, upon which the bank and floodplain were rebuilt and revegetated!

Below: Rocky Mountain Bee Plant and Coyote Willow (live stakes) thrive at JRMT Phase 4, two of the many native riparian plants used in the restoration.

Why is a healthy riparian zone so important?

The riparian zone is the area of land that runs along lakes, rivers and streams. It usually contains the river's floodplain, or the land that floods seasonally after heavy rains. This is a place of constant change, sometimes flooded and sometimes dry.

Healthy riparian areas provide:

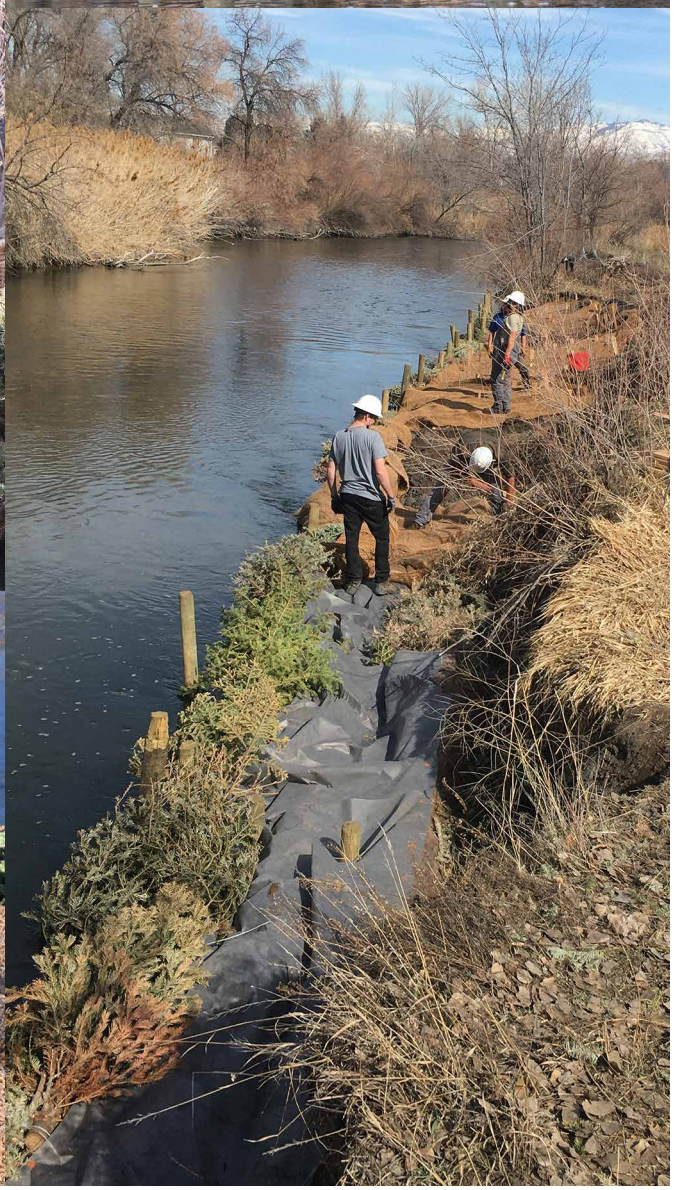
Clean water Trees, shrubs, wildflowers and grasses in the riparian zone protect the stream by slowing and filtering stormwater runoff (flowing off the landscape) that may contain pollutants and sediments.

Wildlife habitat The riparian zone provides three primary resources that animals need to survive: cover (a place to hide), food, and water. Many animals use the stream corridor as a route to travel from place to place.

Fish habitat Shade from trees leaning over the stream keeps waters cool. This creates better habitat for fish and other aquatic species, because cooler water has more oxygen.

Erosion control Plants help hold soil on riverbanks, reducing the amount of sediment that enters the stream.

Flood control Plants in the floodplain slow down and absorb floodwaters before they reach higher ground. When water slows down sediments drop out, returning cleaner water to the river and nourishing the land.



Leave the leaves and put down those pruners!

by Watershed Planning & Restoration

As fall is winding down here in Salt Lake County, we've only recently begun to experience typical crisp autumn days and freezing temperatures at night. The record warm temps and relative lack of precipitation for most of this fall might mean you haven't quite gotten around to the big "fall garden cleanup" in your home landscape. If so, that's a good thing. Rather than scraping up every last leaf and pruning down every plant in sight, consider leaving things natural to benefit wildlife and the environment.

The desire to make our fall gardens clean and tidy before winter—pruning and raking, cutting and clearing—can be hard to ignore. But what you might not realize is that the typical fall cleanup is robbing your landscape of precious nutrients! Leaves form a natural mulch that helps suppress weeds and fertilizes the soil as it breaks down. Why pay for mulch and fertilizer, when you can have it for free? Removing leaves and pruning stems also has serious impacts on wildlife habitat. From songbirds to toads, and mammals to invertebrates, they all rely on leaves and stems for food, shelter, and nesting material. From the perspective of pollinators and beneficial insects, according to the Xerces Society for Invertebrate Conservation "all it takes is a weekend and some garden tools to wipe out whole populations that have been hard at work all summer—provisioning their nests and making well-stocked winter homes for the next generation. Cut down stalks and stems while the bees are settling in for the winter and it's game over for your pollinator pals." Many moth and butterfly caterpillars overwinter in fallen leaves before emerging in spring.

And let's not forget that leaf litter does a fantastic job of retaining moisture in the soil. Something we dearly need here in Utah. October's precipitation was a welcome reprieve from the drought we've been enduring for so many months, but not nearly enough to make a dent in the dry soils left over from last winter. Our trees and landscapes have been seriously stressed for quite some time.

Need one more reason to leave the leaves and put down the pruners? For streamside residents, you'll help protect stream water quality and prevent flood damage. When brush piles and big garden debris piles are stored near streams, they have a tendency to get picked up and carried downstream when stream waters rise during high flows. These big piles are also more likely to blow right into the stream on a windy day. The nutrients released by decomposing leaves and stems dispersed evenly throughout your landscape are a good thing. But when those nutrients are "dumped" into streams in large quantities, it contributes to the already excessive nutrient pollution afflicting most urban streams. And from a flood control perspective, brush piles stashed on streambanks often end up clogging culverts or hung up on bridges when they get carried away by high streamflows. This increases potential flood damage and danger for everyone downstream.

So put your rakes and pruners away. Not only will it benefit the environment, your soil, and wildlife, think of all the hours you'll save not doing yard work! If you must remove leaves from lawn areas, use them as mulch in your existing garden beds or compost them on site. □

Don't rake away critical habitat! Your "messy" garden can support a bounty of birds, beneficial insects, and other wildlife all year long.