



Mitchell Creek Fish Passage And Water Temperature Restoration - Chuck Lobdell, JCWC



Mitchell Creek post-restoration looking upstream.

JCWC's instream habitat program is focused on restoring salmon habitat and water quality and restoring fish access to these habitats, with emphasis on cold water tributaries. One such tributary is Mitchell Creek, which flows into Kelley Creek before joining Johnson Creek near the center of the watershed. Mitchell Creek is less than 2 miles in length, however it runs cold throughout the year and its headwaters are in largely intact forest that is protected in perpetuity by Metro ownership.

Since 2015, JCWC has been working with the Centennial School District to restore a 900' section of Mitchell Creek by removing two fish passage barriers and a 1-acre in-line pond. The pond, which monitoring has shown to increase water temperatures in Mitchell Creek by as much as 14 degrees Celsius, was created over 40 years ago when the property owner constructed an earthen track for racing horses and ATVs. This track also crossed Mitchell Creek in two locations, ultimately creating two fish passage barriers. The downstream culvert was perched, in that its inlet opening was higher than the creek flowing into it, which helped create the pond and contributed to downstream scour. The latter affected accessibility to fish moving upstream. The upstream culvert was undersized, and overly steep which served to scour the upper portion of the pond.

This past spring, we put the project out for public bid with emphasis toward involving contractors from women or minority owned businesses. Emphasis was also given to contractor schedule of availability. This was key because we had obtained approvals to perform our in water work earlier than the State's preferred time frame. In water work timing guidelines are set by the Oregon Department of Fish and Wildlife to minimize the risk of negative effects that construction activity might have on fish and wildlife. —(Continued on page 2)

Thank You Clean-Up Volunteers!

The numbers are in! 4.5 tons of trash were removed by 150+ STELLAR volunteers during our 12th annual Johnson Creek Clean-Up on August 24, 2019!

Each and every person who came to remove trash is literally a CREEK HERO—thank you all so much!



We also had rad helpers from teams who came out:

- Clackamas Rotary
- Precision Castparts Corp.
- Oregon Zoo Environmental Conservation Outreach Team
- Oregon Trail Recovery
- ROSE Community Development
- River Runners
- Boy Scouts Troop 22

This event is a big community effort and we have so many people to thank for the success of the day!

—(Continued on page 3)



Photo: Lloyd Vivola

LEAD STORY (Continued)

(Continued from page 1)

This opportunity to work earlier in the summer than usual likely contributed to us getting lower than expected bids, but also gave us an unusual look at how the project site will take shape. Work began the last week of June with the dewatering of the pond and concurrent fish salvage operations. Finding only one cutthroat trout in the pond (near the upstream culvert), ODFW gave us the go ahead to proceed with draining the pond and breaching to downstream culvert. Two days in, we were placing the rock structures below the pond outlet to ensure channel stabilization, and for the most part the pond was gone but for a remnant at the upper reach. The next two nights it rained, and we witnessed wetland recharge within the pond footprint that exceeded expectations!

We also witnessed that water flowing through the former pond was clear, and not transporting any suspended sediment. A couple days later the pond area dried out again and we witnessed four species of shorebirds using the site; two of which had not been previously seen in the Johnson Creek watershed. These observations were “unusual” because this type of work is typically performed in mid-late summer, and we don’t see the rain nor the bird response until the following year.

The physical restoration work was wrapped up by the fourth of July, with inspection and touch ups the following week. Another unusual observation was the rapid regeneration of native plants in the wetland area. Unusual for the aforementioned reasons, this regeneration was due in part to the site having a viable, dormant seed-bank awaiting nature’s cues and in part to the erosion control reseeded that followed construction.

Funding for this project was provided by the East Multnomah Soil and Water Conservation District, Oregon Watershed Enhancement Board, PGE/TNC, USFWS Willamette Valley Refuge Complex, mitigation funding and a new grant from Metro Nature in Neighborhoods to support revegetation efforts!

Mitchell Creek / Centennial Pond restoration in progress. Before (l) & Now (r). Yellow arrows identify fixed landscape points for comparison. The old culvert (red arrow) was blocking fish passage and backing up a shallow pond that raised the creek temperature by as much as 14C.



NEW GRANTS

MEYER MEMORIAL TRUST

\$72,000

Two-year renewal to continue supporting our Equity and Inclusion Plan that provides a strategic road map for increasing diversity, equity and inclusion into the Council’s organizational structure, operations, marketing and communications.

**THE MINTESKI FAMILY
FUND OF THE OREGON
COMMUNITY FOUNDATION**

\$30,000

Supports our volunteer program.

CLEANUP VOLUNTEERS (Continued)

(Continued from page 1)

Many thanks to our partners for their collaboration and support:

- North Clackamas Parks & Recreation District
- Portland Parks & Recreation
- SOLVE
- Sunset Garbage Collection
- Hoodview Disposal & Recycling
- Bureau of Environmental Services
- American Rivers
- The Milwaukie Shirt Company
- Overland Park Coalition

Also a big thanks to our funders:

- The Mintkeski Family Fund of the Oregon Community Foundation
- The Autzen Foundation
- Clackamas County Water Environment Services
- Portland General Electric



And thanks to our fantastic local raffle donors:

- Next Adventure
- Oregon Zoo
- Roosevelt’s Terrariums
- Wallace Books
- The Hollywood Theatre
- Red Pine Acupuncture
- Townshend’s Tea company
- Target Clackamas
- Kids At Heart Toys
- I’ve Been Framed-Discount Art Supplies
- Artist & Craftsman Supply SE Portland
- Milwaukie Shirt Company
- Tasty N Sons, 3808 N. Williams, Portland, Oregon
- Lan Su Chinese Garden

Special thanks to Coava Coffee Roasters for supplying biodegradable burlap sacks as some of our garbage bags—they’re porous and allow water to drain which makes for a lighter and greener trash pick-up experience.



Breakfast and lunch treats would not be possible without our food donors:

- Walmart
- Costco
- Safeway
- Souplantation/Sweet Tomatoes
- Organically Grown Company
- Spielman Wholesale Bagels
- Little T American Baker
- Crema Coffee + Bakery
- American Family Video and Espresso
- Carco (for propane grillin)



Dams, Ponds, And Temperature—Results From A Summer of Monitoring

- Noah Jenkins



A typical beaver dam, which allows water to flow through it, may not increase stream temperature.

Regular readers have undoubtedly been waiting expectantly to find out what we learned from last summer’s foray into inline pond research; we will disappoint you no longer! JCWC staffers deployed temperature loggers up- and downstream of eight human-made ponds throughout the Johnson Creek watershed in summer 2018; meanwhile, our partners at the City of Gresham did the same with five beaver ponds (some in 2016, some in 2018), providing us with the chance to compare and contrast our results.

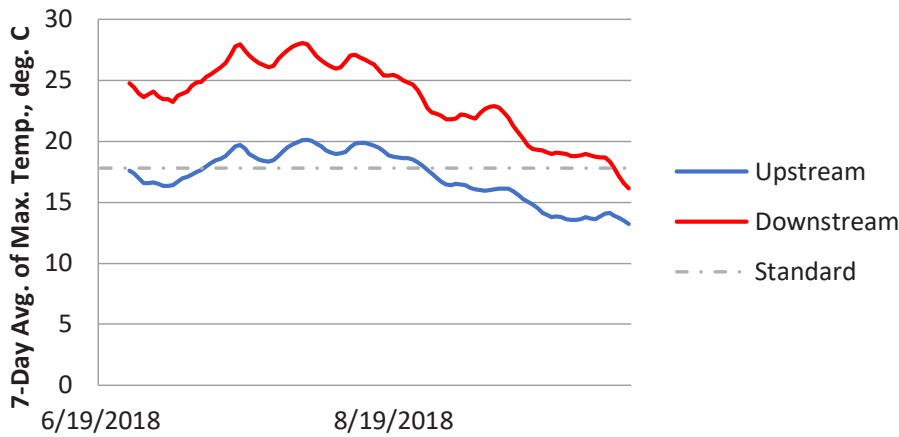
What did we find? Every human-made pond we looked at raised the temperature of the stream; the maximum daily increase ranged from 1.7° C to 8.6° C (about 3 to 14.5° F). Two of the ponds were located close to headwaters areas (one on Hogan Creek, the other on mainstem Johnson Creek); in both cases, the stream above the pond was below the 17.8° C temperature standard for the entire summer, while the water coming out of the pond was above the standard for 54 (Hogan) and 96 (Johnson) days. In two cases—on Hogan and Kelley Creeks—we monitored two ponds that were quite close together; in both instances, the second pond added very little heat. Taken together, these results might suggest that “the first pond is the worst pond,” in terms of temperature increase.

Curiously, we found some evidence that these temperature increases may dissipate rapidly. In two cases (on Kelley Creek and Johnson Creek), we happened to have temperature loggers in place—as part of another study. They were a short distance (less than ¼ mile) downstream from the ponds we monitored; in both cases, temperatures were substantially lower at the downstream location than at the pond outlet, and anywhere from 1/3 (Kelley) to more than 3/4 (Johnson) of the temperature increase caused by the pond had attenuated. Any aspiring graduate students seeking a project should look into this further!

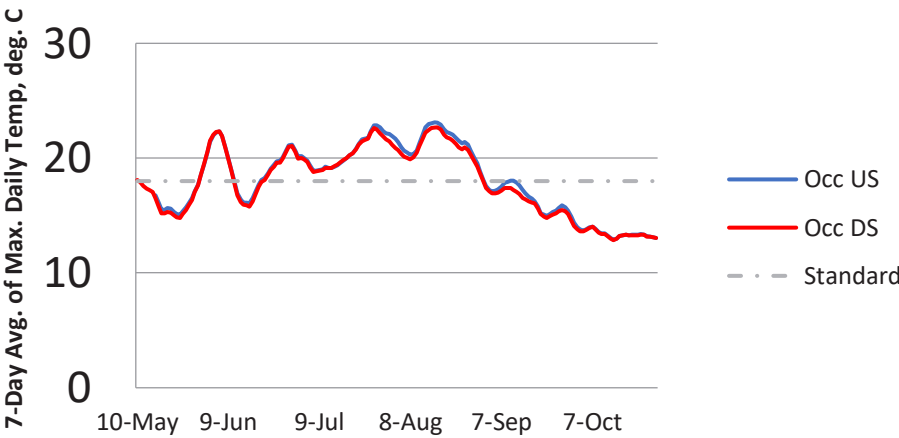
The results for beaver pond monitoring were quite different from those detailed above. Temperatures below these ponds increased by 0.5° C or less; two of the ponds actually decreased stream temperature! It should be noted, though, that these ponds were all on the (already warm) mainstem; beaver ponds on Errol Springs Creek, monitored by the City of Portland, did cause a significant increase in temperature there, so we cannot let these buck-toothed ecosystem engineers off the hook entirely.

Overall, our research efforts provided some tentative answers to basic questions (“Are inline ponds increasing stream temperatures, and by how much?”), and opened the doors to many future research questions. Science, in a nutshell!

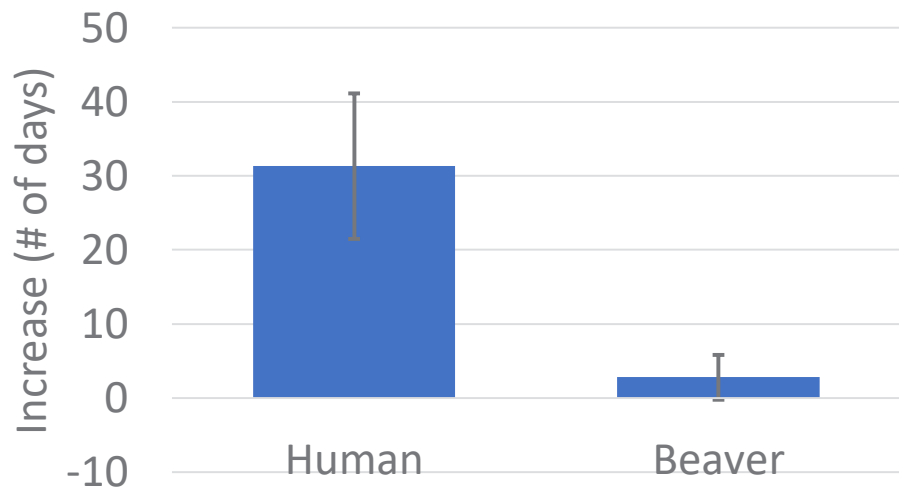
Butler Creek Pond (Human-made)



JC @ Occhiuto (Beaver dam)



Increase in Days Above Temperature Standard



Spillover dams like the one that creates this pond make for higher downstream temperatures.

When Wishes Come True...

- Cathy Geiger, JCWC

Artist Danielle DeMuro with completed mural.



This past summer JCWC was able to work with a local artist, Danielle DeMuro, to create a watershed nature scene on the shipping container that holds our restoration tools. When JCWC moved from our old office in Milwaukie into the Woodstock location, we purchased an old shipping container and located it next to Errol Heights where it soon was covered with graffiti.

Then along came Danielle! She is a student at Pacific Northwest College of Art (PNCA), where she studies Art and Ecology. As part of a class project she wanted to work with an environmental nonprofit and paint a mural that would both showcase nature and help educate the community. And did we have a big need for that! At PNCA she heard good things about JCWC from some of our prior in-

terns – it's good to have friends in the right places.

After 40 hours and some interesting challenges like painting on a container is that it isn't a flat surface, and was 8 feet high by 40 feet wide and don't forget the wind factor – no easy task. But Danielle was up to the challenge and she will continue to provide any maintenance for the next 2 years as part of the funding agreement with Regional Arts & Culture Council's Public Art Murals program where she received \$2,000 towards this project, which includes an anti-graffiti coating for the mural.

For me, I had the most fun with a sharpie tracing the whole design on the container using a projector at night! We are so happy that Danielle painted such a cool picture and hope that you can stop by and see it for yourself sometime.

INTERN SPOTLIGHT

Welcome To Our New Intern In The Bilingual Johnson Creek Program

My name is Melanie Yudin and I am seventeen years old. I go to Spring Mountain Christian Academy. I am the lead guitar player for the worship team.

My goal after high school is to go to Clackamas Community College for two years and then transfer to Portland State University, finish up with a BA in Business and a minor in Real Estate.

I am very excited to be working with Johnson Creek watershed to help the Slavic community to be more engaged in environmental education, outdoor access and teach the community about Johnson Creek.

I am very excited to develop leadership and community outreach skills and be educating and interacting deeply within my community.



Melanie Yudin, Speak Creek Russian language Intern

Меня зовут Мелана Юдин и мне семнадцать лет. Это мой последний учебный год в школе Spring Mountain Christian Academy. После окончания школы, я мечтаю поступить в колледж, а затем перевестись в Portland State University. Я очень рада работать с водоразделом Johnson Creek watershed, чтобы помочь славянскому сообществу быть более вовлеченным в экологическое образование, открытый доступ и рассказать сообществу об Джонсон Крик. Моя цель, развить лидерские качества и навыки работы со славянским обществом.



Tracing the image at night.



Danielle using 70+ spray cans to paint the container.

INTERN SPOTLIGHT

Big thanks to the Meyer Memorial Trust and East Multnomah Soil and Water Conservation District who support our Bilingual Johnson Creek Program.

Bilingual Johnson Creek interns create a brochure in their community's language and plan a bilingual nature-based event to introduce community members to Johnson Creek and Portland's natural areas. Through this program we work with paid youth interns from immigrant & refugee organizations in the watershed.

The Seasons And Our Staff Are Changing!



Drew and Tiffany recruit volunteers in the JCWC Office.

Tiffany Mancillas is our new Community Outreach Coordinator; she manages the community science program, bilingual Johnson creek program, and coordinates the council's outreach. She was born in northern California, and started living in Oregon while completing a B.S in Environmental Studies and has called Oregon home for the past 10 years.



Tiffany Mancillas
Community Outreach Coordinator
tiffany@jwcw.org

She began her career in the environmental field working with Lava Beds National Monument, Oregon Museum of Science and Industry, and has done varied work ranging from science educator, wilderness backpacking guide, to volunteer and program management. Most recently at Friends of Tualatin River National Wildlife Refuge she managed the environmental education program and coordinated bilingual Spanish-English events.

Drew Donahue is our new Confluence AmeriCorps member! Drew is a native Oregonian and has just recently moved back to Portland after spending four years away in college. In her new role as Outreach and Riparian Specialist, Drew will plan and implement riparian restoration projects, volunteer events, and environmental education for student groups from underserved communities.

Drew is a first-generation college student and received her Bachelor of Science in Environmental Studies from the University of Oregon. She completed her honors thesis with Hallett Lab looking at the ecological consequences of domestic pig grazing on the understory vegetation of a native oak woodland and completed the Riparian Restoration Environmental Leadership program. She is especially passionate about bringing the social sciences and natural sciences together and looks forward to teaching this to students from underserved communities.



Drew Donahue
Confluence AmeriCorps member
Outreach and Riparian Specialist
drew@jwcw.org



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PORTLAND, OR 97202

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Upcoming Events

For details and to sign up for any of these events, contact us at info@jcw.org or call 503-652-7477.



Habitat Restoration with Friends of Tideman Johnson

Sat, Nov 2nd, 9 AM - 12 PM
Tideman Johnson Park



Volunteer Appreciation Party

Fri, Nov 8th, 6 PM - 8 PM
JCWC Office, 4033 SE Woodstock Blvd.



Habitat Enhancement at Errol Heights

Sat, Nov 16th, 9 AM - 12 PM
Errol Heights



JCWC Board Meeting

Wed, Nov 20th, 5:30 PM - 6:30 PM
JCWC Office, 4033 Woodstock Blvd, PDX



Habitat Restoration with Friends of Tideman Johnson

Sat, Dec 7th 9 AM - 12 PM
Tideman Johnson Park



Watershed Wide Event

Sat, Mar 7th, 2020
Ten different sites in the watershed

Thank you Moda!

We would like to express our gratitude to Moda for printing our newsletters.



Johnson Creek
Watershed Council

4033 SE WOODSTOCK BLVD
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JohnsonCreekWC



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Cathy Geiger
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Chuck Lobdell
Restoration Project Manager

Tiffany Mancillas
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