Fall 2022

Metro

"It's so cool to see what the community can do when we come together to make things better for everyone."

What's inside

Metro | Our Big Backyard Parks and nature news and events

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If you picnic at Blue Lake or take your kids to the Oregon Zoo, enjoy symphonies at the Schnitz or auto shows at the convention center, put out your trash or drive your car – we've already crossed paths.

So, hello. We're Metro – nice to meet you.

In a metropolitan area as big as Portland, we can do a lot of things better together. Join us to help the region prepare for a happy, healthy future.

Metro

If you have a disability and need accommodations, call 503-220-2781, or call Metro's TDD line at 503-797-1804. If you require a sign language interpreter, call at least 48 hours in advance. Activities marked with this symbol are wheelchair accessible:

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Pets policy
To protect plants, wildlife and people, Metro does not allow pets at most regional parks and natural areas. Pets can damage sensitive habitat and threaten wildlife the region has worked to protect. In natural areas where pets are not allowed, people see more wildlife and get closer to it. Seeing-eye dogs or other service animals are allowed. Please bring cleanup materials.

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Share your nature and win!

Winner: Laurie Frajola, Beaverton

This was taken on a nature trail in the Bethany area near our home in Beaverton. I was walking on the path when this red-tail flew past me and landed on a nearby roof. As I was taking this picture of the hawk, I had no idea it was about to be dive-bombed by a scrub jay!

Finalist: Karen Galloway, Portland

I love walking after the rain to see where and how raindrops linger and reflect. I was out this past June and found this on a tree-filled shortcut path from my southwest neighborhood onto the Jackson Middle School property.

Finalist: Natalie Maciukenas, Portland

I was walking in my neighborhood after a strong rainstorm and nearly stepped on this snail slowly making its way across the path. I loved how the rain gives a glossy sheen to everything, including its beautiful shell.

Submit your photo

Win an annual parking pass, a full-day picnic shelter reservation at Graham Oaks or Scouters Mountain nature parks, a tennis court session, or a round of golf for four people including cart at Glendoveer Golf and Tennis Center.

To enter, submit a photo taken at a park or natural area in greater Portland – your friends and family, a view of wildlife or a sunset, for example. Include a 50-word description of your experience. Where were you? What were you doing? What captured your attention?

The winner will appear in this space. By submitting a photo, you consent to Metro's future use and publication of your photo. Send your photo and description by November 15 to: **ourbigbackyard@oregonmetro.gov**

Like what you see?

Sign up for the print edition of the quarterly magazine, change your address or save paper by switching to a digital subscription. Email *ourbigbackyard@oregonmetro.gov* or call 503-797-1545.

On the cover: The third of the Three Elders, created by a team led by Bobby Mercier, at Chehalem Ridge Nature Park watches over the high point of the park, the Mampaɬ Trail overlook, which offers a view of the former Tualatin Kalapuya village. The statue is lined with dentalium, tusk shells that served as the Indigenous peoples' oldest known currency. *Photo by Cristle Jose.*

Metro parks and nature proposed local option levy

This November, the Metro Council is referring to voters Metro's parks and nature proposed five-year local option levy, which if passed would provide funds to restore natural areas, operate parks, and support nature education and stewardship across greater Portland.

The proposed measure would continue an existing tax passed by voters and would not raise current tax rates. The first Metro parks and nature operating levy was passed by voters in 2013 and was subsequently renewed by voters in 2016.

If the proposed measure passes, the levy would continue to provide Metro funding to address water quality, restore fish and wildlife habitat, and connect people with nature across more than 18,000 acres of parks, trails and natural areas.

If the proposed measure passes, the proposed levy would maintain the current property tax rate of $0.096 per $1,000 of assessed value – $24 annually for the owner of a home with an assessed value of $250,000 – for an additional five years, beginning in 2023. If the proposed measure passes, the levy would raise approximately $19.5 million annually.

If the proposed measure does not pass, funding for these parks and nature programs would expire in June of 2023 and the annual tax rate would decrease.

Proposed levy program areas

If the proposed measure passes, the following program areas would be funded:

Habitat restoration and land management
If the proposed measure passes, at least 40% of levy funding would pay for Metro's ongoing work to restore and maintain habitat on land it has acquired over the course of three decades through three voter-passed bond measures.

Regional park operations
If the proposed measure passes, at least 35% of levy funding would support visitor services, maintenance and facility improvements at Metro's parks, trails, natural areas and cemeteries, so they are more welcoming, safe and inclusive, and meet or exceed standards for accessibility.

Community-led education
If the proposed measure passes, at least 15% of levy funding would continue to provide resources (financial and programmatic) to communities to support efforts to increase connections with nature. This includes culturally specific interpretive programs, materials and events, as well as grant funding for non-profit organizations for projects that support climate resilience, racial equity and access to nature.

Proposed measure priorities

If the proposed measure passes, the Metro Council has identified the following priorities for levy funds:

- Habitat: Improve habitat and habitat connectivity for plants, fish and wildlife at Metro's parks and natural areas.
- Water quality: Improve water quality and water quantity at Metro's parks and natural areas.
- Resilience: Manage Metro's parks and natural areas to withstand hotter summers, extreme weather and wildfire.
- Climate adaptation: Work with local, state, federal, tribal and nonprofit partners to plan for regional climate adaptation and resilience.
- Native plants: Protect and restore culturally significant native plants in partnership with tribal nations and greater Portland's Indigenous community.
- Accessibility: Improve the accessibility of Metro destinations for people of all ages and abilities.
- Inclusion: Ensure that Metro visitors of all backgrounds can access a variety of nature experiences relevant to their interests.

- Workforce equity: Increase the prosperity of historically marginalized workers and communities through levy funding.
- Contractor equity: Build capacity and experience of contractors from historically marginalized communities through projects at and with Metro.
- Engagement and accountability: Serve communities through inclusive, transparent and accountable engagement.
- Education: Design collaborative and culturally relevant education, including work with educators from historically marginalized communities.

Oversight

If the proposed measure passes, the levy would be the foundation of the annual operations budget for Metro's Parks and Nature department.

If the proposed measure passes, Metro would continue to publish the Parks and Nature Annual Report inform the public on how levy spending compares to the proposed program allocations. Metro would also continue to produce an annual financial audit conducted by an independent public accounting firm that would include local option levy expenditures.

Election day is
Tuesday, Nov. 8

oregonmetro.gov/futurefunding

Willamette Cove

The Metro Council took a big step towards cleaning the upland portion of Willamette Cove when it voted unanimously to remove all moderately contaminated soil from Willamette Cove.

Story by Cory Eldridge

The Metro Council took a big step towards cleaning the upland portion of Willamette Cove when it voted unanimously to remove all moderately contaminated soil from Willamette Cove. The decision sets the direction of this years-long project that will eventually see the former industrial site open to the public as part of the Willamette River Greenway.

“Our region looks to us to take bold action to get to the root of problems, not just look for superficial, easy fixes. Metro looks years and even decades into the future and is acting on what this region needs,” said Metro Council President Lynn Peterson. “That’s true in our work to create permanent, affordable housing. It’s true in our work to protect and strengthen nature to make our region resilient to climate change. And it’s true here at Willamette Cove, where we have the opportunity to not just do a good job but do a great job that will benefit the entirety of the region for generations to come.”

The decision was praised by advocates and community members who had long called for the moderately contaminated soil to be removed from the site, rather than gathered and buried in an engineered container. Regional tribes consulted by Metro also urged removal of all moderately contaminated soil.

Bob Sallinger, Audubon of Portland’s conservation director, praised the decision. “I think this is a really, really big deal,” he said. “The community has been working to recover and restore the north reach of the Willamette literally for decades and decades and decades.”

Sallinger said those efforts have been slow, but that Willamette Cove offers the opportunity to “create a vision for that area, one that is healthy and vibrant and safe.”

"We have the opportunity to not just do a good job but do a great job that will benefit the entirety of the region for generations to come."

Removing the soil will cost more than consolidating it onsite, largely because of increased fuel, labor and disposal costs from hauling the soil. A recent report estimated that the cleanup would cost about $17.5 million. However, that estimate is very rough and will change as the cleanup design process gets underway. The Council decided that removing the soil was worth the extra cost.

The North Portland property lies between St. Johns Bridge and the Burlington Northern Railroad Bridge. Its 27-acre site is separated from the St. Johns neighborhood by 50-foot cliffs, creating a riverside refuge away from the city. The upland curves around its namesake cove. It’s filled with Oregon white oaks and madrone, along with a few signs of its industrial past.

For all its beauty, it can’t be stressed enough that Willamette Cove is not safe to visit.

Photos: Willamette Cove is currently closed to the public because contamination at the site is dangerous to people and pets. When the clean up is complete, the entire property will be safe for people to visit.

The soil is filled with toxic metals and dioxins, which can have profound long-term effects on human health. There’s a reason Metro and the Port of Portland are cleaning the site.

Metro and the Port of Portland are partnering on the cleanup of the upland portion of the cove, which starts at the riverbank and goes inland and is overseen by DEQ, the Oregon Department of Environmental Quality. The State of Oregon, City of Portland and the Port are designing the in-water cleanup, which is overseen by the federal Environmental Protection Agency.

The cleanup is still years away, and it’s not clear when the site will be opened to the public. The cleanup is likely to alter the terrain, which in turn would affect where future amenities like a trail or benches would be placed. The decision to remove the soil gives planners a clearer idea of what the site will look like after cleanup.

In turn, the decision on soil removal allows Metro to begin a meaningful engagement process where community members will be able to influence the activities and amenities available at Willamette Cove.

Ultimately, Metro will create a space that provides people access to nature and gives plants and animals the space they need to thrive. It’s something Metro has done successfully at Smith and Bybee Wetlands Natural Area in North Portland, and at Chehalem Ridge and Newell Creek Canyon nature parks, which opened last year. .

Extensive soil sampling is underway in both the upland and in-water sections of Willamette Cove.

Once this data is collected, Metro and the Port can create detailed cleanup plans, which are due to DEQ in spring 2024.

Parking lots become gardens

Depave and Centennial School District use Metro grant to create school gardens and nature playgrounds.

Story by Rebecca Koffman

Bumblebees, their back legs heavy with orange pollen, hum among lupine spires at Powell Butte Elementary School's nature playground. The leaves of young trees glow green against a backdrop of dark clouds. A gravel path winds across a bridge and around a stage and a rain garden. There are logs for climbing and boulders for scrambling. There's a large drum set and flower-shaped chimes for playing tunes. Permeable pavers provide gathering space and reduce stormwater runoff.

In 2020, this nature garden was an expanse of crumbling asphalt. The transformation is the work of local nonprofit Depave in collaboration with the Centennial School District, which serves portions of Gresham and East Portland.

"It's so cool what the community can do when we come together to make things better for everyone."

This playground is part of a project to replace asphalt with active greenspaces at three centennial school: Powell Butte, Oliver and Patrick Lynch. These schools serve some of the most diverse neighborhoods in all of Oregon. Each qualifies for federal Title 1 funding to support large numbers of students from low-income families.

The work to build nature playgrounds at the schools was helped by $42,000 from Metro's Nature in Neighborhoods grants program. The grants support projects that connect people to nature, improve water quality and protect wildlife habitat. They're designed to support communities of color and those who may have had barriers accessing Metro grant funding in the past.

Depave was awarded the grant at the end of 2019. Work to rip up and replace 7,400 square ft of asphalt at Powell Butte Elementary was slowed by the pandemic, said Katya Reyna, Depave's program director.

And there were other obstacles during the buildout. The trees, shrubs and other native plants are looking great, she notes, even though many of them went into the ground just before last year's heat dome. It's testament to the importance of native plants as the region faces more extreme weather.

Depave, Reyna said, focuses on projects in neighborhoods that have been historically disenfranchised. These areas tend to have more asphalt, fewer trees and are significantly hotter than more affluent neighborhoods. Shade refuges like this green schoolyard, which is open to the public on weekends, play a crucial role in park-deficient East Portland.

"The kids feel they own a piece of it," says Powell Butte Elementary Principal Marin Miller.

Some of their faces are on the mural, they participated in the garden design, helped with weeding projects, grew ladybugs and butterflies in their classrooms. The space is used as an outdoor classroom where kids learn about pollinators and other wildlife. The drum set and flower chimes are a big favorite with the kids. "We have one student who uses a wheelchair. He zooms out here every day to play 'Mary Had a Little Lamb,'" Miller says

"It's so cool to see what the community can do when we come together to make things better for everyone," adds Miller.

At Oliver Elementary, their garden project was completed this year. Altogether, 3,900 square feet of asphalt was removed. The design was changed during the buildout when the school district announced that the elementary school would be converting to a middle school in fall, 2022.

Clockwise from left: The Depave and Centennial School District project started with a gray expanse of cracked concrete behind Powell Butte Elementary School in East Portland. The finished garden included a nature play area.

Some play elements were replaced by additional seating spaces for the new middle schoolers to hang out at. The new space also includes rain gardens and a stage. Depave is helping the school secure funding for a mural and futsal court.

Patrick Lynch Elementary held a depaving event in mid July, with community members lending a hand on the project. Other Depave events need volunteers. The pavement, Reyna explains, will be precut into slabs so that volunteers can use prybars to remove it. "We'd love to have folks come out to help us rip up that asphalt," says Reyna. "It's very satisfying."

Salmon habitat by helicopter

METRO AND THE GREATER OREGON CITY WATERSHED COUNCIL TEAM UP TO CREATE LOGJAMS IN NEWELL CREEK.

Story by Rebecca Koffman
Photography by Fred Joe

Few people ever see the bottom of North Newell Creek Canyon Natural area. Even though the property lies just across State Route 213 from one of Metro's newest parks, Newell Creek Canyon Nature Park, it's not exactly welcoming to visitors. Unlike its nearby neighbor, it's not a park, but rather property that Metro owns as part of its conservation efforts.

There are no trails, and no easy entry points. To get to the creek, you have to scramble and slide down a steep slope through sword fern, stinging nettle, brambles, fallen branches and mud.

Normally, it's peaceful down there under a canopy of trees, listening to the birdsong mix with traffic noise from the nearby highway. But on a recent day in July, both sounds were drowned out by the roar of twin turbine engines as a red-and-white Vertol helicopter with two large rotors appeared above the trees—and dangling from it, a 260-foot cable ending in a hook that carried two 30-foot logs, roots and all.

The chopper hovered above a curve in the stream marked on either bank by colored flags, then descended fast, the force of the rotor wash making the trees and the conservation construction crew in the creek bed sway.

The swinging logs narrowly avoided the surrounding trees as the pilot positioned the logs between the two sets of flags and then pressed a button to release them.

They crashed down into the stream with admirable precision.

These were the first logs placed by the helicopter in a project to build 36 logjams that will serve as shelter for endangered native fish populations and improve water quality in the 66-acre natural area that includes the confluence of Newell and Abernethy creeks.

The project is a partnership between Metro, who provided $250,000 in funding, and the Greater Oregon City Watershed Council, who secured $176,000 in grant funding from the Oregon Watershed Enhancement Board.

Brian Vaughn, senior natural resource scientist at Metro, was on site to manage the work and coordinate contractors.

These included Columbia Helicopters, whose team would safely place over 100 logs and bundles of brush in the creek that day; Biohabitats, responsible for building a staging area for the helicopters to pick up logs as well as constructing the four logjams on Abernethy Creek; and Inter-Fluve, who do modeling, engineering and design for freshwater restoration projects like this.

Vaughn explained that helicopters are used to place logs in Newell Creek because the canyon walls are too steep for land vehicles. Excavators will build jams along larger Abernethy Creek, which is easier for land vehicles to access.

Altogether, he said, jams will be built along 5,800 linear feet (about one mile) of the creeks. This winter, shrubs and trees will be planted along the banks, to help shade and cool the water.

Salmon need cool water

In the canyon, after the helicopter dropped each load, fisheries biologist Mackenzie Butler and ecologist Emily Alcott—both from Inter-Fluve—waded into the creek to check that the logs and brush bundles were optimally placed to provide cover for fish to hide in and around. Logjam designers consider the life stages of fish that use them, what time of year they will be there and how they use them.

"Smaller, younger fish generally need smaller areas to hide between lots of small branches," Alcott explained. "Bigger fish need cover over deeper pools."

Newell Creek originates near Clackamas Community College, flows through the nature park and a culvert under Highway 213 to the natural area, where it joins with larger Abernethy Creek. Abernethy Creek then flows into the Willamette River about one mile below Willamette Falls.

Together the creeks are crucial geography for the recovery of coho salmon, steelhead, cutthroat trout and Pacific lamprey that spawn and live in these waters as juveniles before making their way to the ocean for part of their lives.

The logjams help form deep pools and riffles and trap the sediment and gravel that salmon need for spawning. Fish also use logjams to hide from predators and from water that is too warm or flowing too fast.

“Newell Creek has temperatures that are about 4 degrees colder than Abernethy Creek during the summer months, and the Willamette is generally even warmer,” said Alcott. “This makes Newell an important cold-water escape for fish in summer.”

Alcott is an expert on how rivers move and change over time and on how landforms, water and sediment interact. (Her official title is “fluvial geomorphologist.”)

Her aim is to build “logjams that work with the river, to improve habitat immediately but also to provide habitat that the river continues to build on as it moves and changes.”

To do this, she tries to imagine how Newell Creek would have behaved before logging and urbanization, when it still had large trees along its banks, and some of those trees were uprooted by floods or landslides and ended up in the river, forming natural logjams.

“Jump-starting” nature

Unfortunately, for many years humans viewed logjams as inconvenient or unsightly debris that needed to be cleared out.

Logging and development have also decreased the number of trees available to fall into rivers. As a result, young fish are finding shelter scarce. That’s why human-made logjams are necessary.

“We can’t wait 50 years for a tree to grow, get washed into the stream and do its important structural work,” said Jonathan Soll, science and stewardship manager at Metro.

Logjams, he explained, create more complex stream channels that cool and oxygenate the water.

In last year’s heat dome, temperatures in Abernethy Creek upstream of Metro’s properties reached 82 degrees. Generally, temperatures above 64 degrees are considered lethal to salmon.

“We need to jumpstart those processes because the salmon can’t wait,” Soll said. “The salmon have told us that there are big problems by the decline of their populations.”

These fish, he continued, are fundamental to the lifeways of the region’s Indigenous communities and tribes.

“Tribes and Indigenous community members have made it clear [to us] that one of their very highest priorities for Metro to invest in is salmon, steelhead, trout and lamprey,” Soll said. “By doing this work we are honoring our commitment to them and to Metro’s core mission to protect clean water and wildlife habitat.”

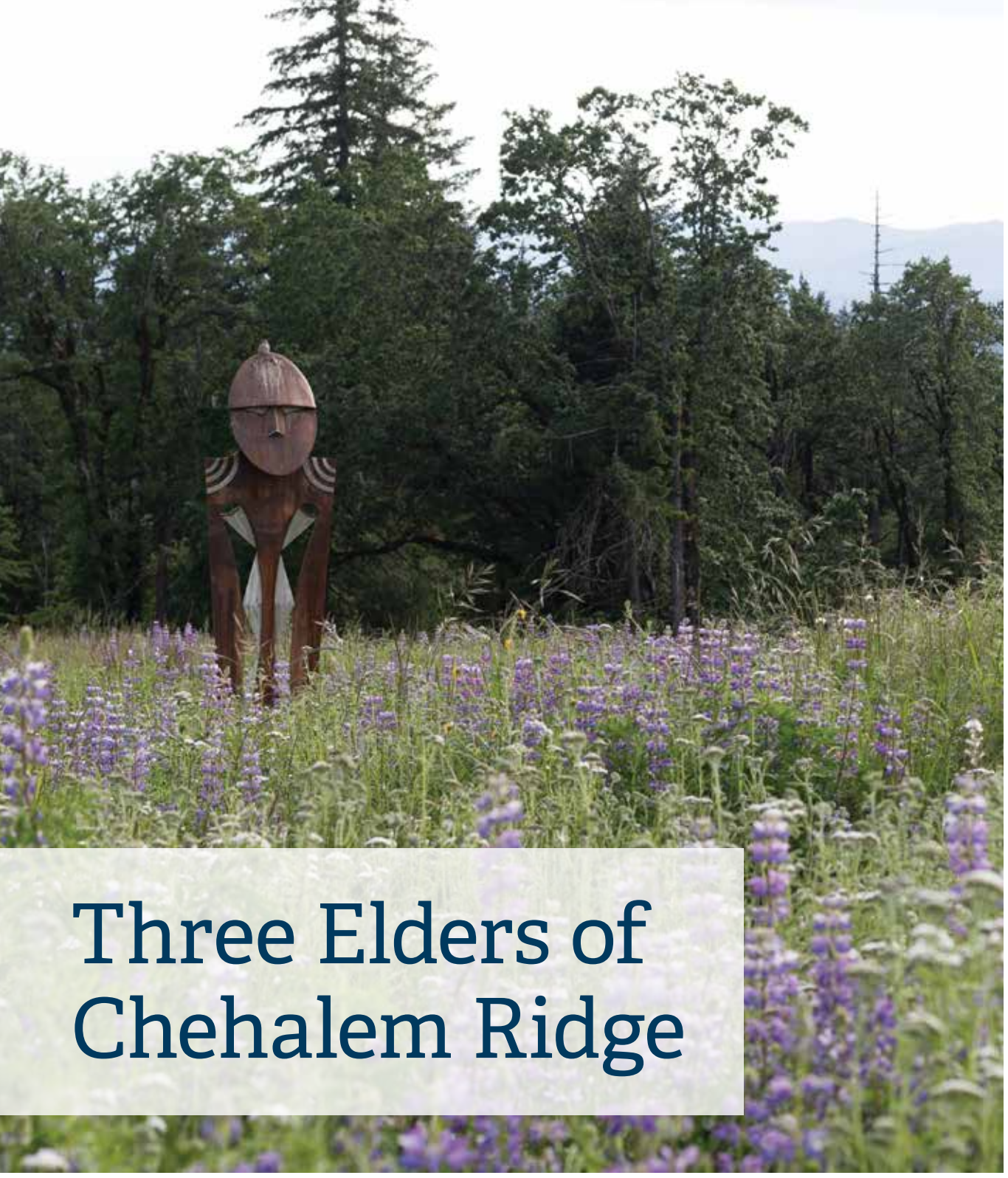
Clockwise from opposite page: Conservation crew members watch as a log is lowered into Newell Creek. The red and orange hook connecting the log's cable to the helicopter's cable can be seen just above the log. Logs with root balls await placement. The Vertol helicopter carrying its payload of trees through Newell Creek Canyon. A crew member prepares a cable to attach to the helicopter. Conservation crew members navigate the brush down in the canyon.

Tom Gaskill, executive director of the Greater Oregon City Watershed Council, came to the canyon to watch the helicopter at work. “Coho numbers are pretty good this year,” he said, “so now is a great time to improve habitat.”

And not just for fish: “Improving the health of the creeks is a benefit for all the wildlife in the canyon.” These include insect pollinators, red-legged frogs, birds, black-tailed deer, coyote, beaver and other creatures who call the natural area home.

“Oregon City is growing very rapidly,” Gaskill said. “If we can get in front of that growth, ultimately we all benefit from a healthier watershed.”

“This,” he said, gesturing towards the canyon, “is the kind of thing we need to be doing more of.”



Three Elders of Chehalem Ridge

Story and photography by Cristle Jose

Upon entering the trail network at Chehalem Ridge Nature Park, visitors are welcomed by a tall, slender figure sculpted in metal. Its silver-colored arms stretch down the edges of its body, ending with open hands – a gesture to welcome all visitors to the site.

It is one of the Three Elders, a series of statues created and installed in partnership with members of the Confederated Tribes of Grand Ronde.

Whenever Metro creates a new park, a certain amount of construction funding is set aside for site-specific artwork. In the case of Chehalem Ridge, an advisory committee decided to work in partnership with the tribe to write the call for artists and select an artist.

"This is our tribe's ceded territory," explained Bobby Mercier, who served as both cultural advisor and lead artist for the project. "And so, it's kind of fitting that tribal members get to put our art back in our own place, especially over the tops of our own villages."

Mercier's artistic team chose the theme of the Three Elders to tell a story of people's connection to the land. The stylized forms are minimalistic, though each has a collarbone, a sternum, and a belly button – signified by a round circle that represents a connection to mothers and other ancestors.

Each figure bears the same expressionless face and sloped forehead.

"Traditionally you would see a lot of our old-timers that come from high-ranking people—their heads would be flattened," Mercier said. "We put that in our art form to recognize our ancestry, of the ranks that we come from."

As well as recognizing past generations, the project helped strengthen future generations: Mercier's son Nakoa was able to participate in an apprenticeship program that Metro piloted during the project. The apprenticeship gives people the opportunity to learn the process of working with government employees to create art for the region.

It's kind of fitting that tribal members get to put our art back in our own place, especially over the tops of our own villages.

"I'm very grateful my son was able to be a part of that," Mercier said during the park's dedication ceremony. "When you can bring in young people and have them experience that and how to work with [Metro] and how to work with other companies, and see all the different steps they get to go through, so that one day when they're full-blown artists and doing things, they have all that stuff under their belt, that's a good [thing]."

The two Merciers and former Grand Ronde staff member Adam McIsaac designed and installed the metal figures.

"Each one of us decided to take one [figure] and put our little spin on one of the traditional stories that come from this area, from our Tualatin and Kalapuya people," said Mercier.

The second figure stands along the Ammefu Trail – a short detour off Timber Road. It displays three large wapato (arrowhead) leaves on its chest. The leaves recognize the Wapato people in the area and represent the story about the creation of Wapato Lake and how it was dammed by the Frog People.

The third figure watches over the high point of the park, the Mampał Trail overlook, which offers a view of the former Tualatin Kalapuya village. The statue is lined with dentalium, tusk shells that served as the Indigenous peoples' oldest known currency. This piece continues the traditional story of how Coyote tricked the frogs into letting him drink from their lake by paying them with fake dentalium that he carved out of deer bone. Coyote then smashed the dam to release the water for everyone to drink, creating rivers and streams that still nourish the region today.

Field guide

GRAHAM OAKS NATURE PARK

Rising above an expanse of prairie, a lone tree's gnarled branches reach in every direction. This heritage oak has been a witness to the history of this land, one filled with the complex relationship between people and place.

Nestled in the suburban landscape of Clackamas County, Graham Oaks Nature Park offers a glimpse into prairie habitats once common across the Willamette Valley. Now, they cover only about 2 percent of their original range.

Oak prairies reflect the communities they support. The Kalapuya and other Indigenous peoples have cared for this land for thousands of years. Before European colonizers arrived, they regularly used seasonal fires to maintain vast open spaces for hunting and gathering practices. The fires also supported a rich diversity of native wildflowers that continue to draw unique pollinators from across the region.

Along the southwest edge of the park, pockets of towering old-growth Douglas fir trees invite visitors into a shaded world of steep canyons blanketed in dense ferns and native shrubs. Woodpeckers can often be heard in the dappled sunshine canopy.

On the eastern flank of the park, songbirds flock to a wetland oasis filled with insects and flowers. Springtime brings the omnipresent sound of young frogs. Restoration work has increased the amount of water flowing to Arrowhead Creek, creating new habitat for sensitive species, such as northern red-legged frogs.

Returning to the prairie, birds flit about the sentinel oak tree. They come for shelter when winter storms blow through, and they find insects for food in the crooks and crannies of the bark. Like the gnarled branches of this heritage oak, Graham Oaks Nature Park knits a quilt of habitats for local wildlife and people.

Graham Oaks Nature Park

11825 SW WILSONVILLE ROAD
WILSONVILLE

DIRECTIONS
From Interstate 5, take exit 283 and head west onto Southwest Wilsonville Road. After a mile and a half, turn right into the park. Park at the entrance; parking is not allowed at nearby schools. Wilsonville SMART bus line 4 serves the park's main entrance.

KNOW WHEN YOU GO
Open 6:30 a.m. to sunset. Bicycles and on-leash pets are allowed on the Ice Age Tonquin Trail but not the rest of the park.

AMENITIES
Restrooms, picnic shelter, parking for six bicycles at park entrance. Much of the park is wheelchair accessible, although some trails are more challenging.
oregonmetro.gov/grahamoaks

Be on the lookout!


RUBBER BOA


WESTERN GRAY SQUIRREL


WESTERN BLUEBIRD


WHITE-BREASTED NUTHATCH

Season-by-season highlights

SUMMER: Take the family for a bike ride along the first five miles of the Ice Age Tonquin Trail. Along the way, discover the scablands, rich wetlands and ponds left by the Ice Age Missoula floods. In Graham Oaks, enjoy a leisurely ride through the restored prairie on a wide, paved trail.

FALL: Stroll along the Legacy Creek trail and enjoy the brilliant reds of vine maple leaves in the changing forest. As the trail rejoins the prairie, search for the hidden wonders of oak galls. These large, round and vaguely apple-like structures are caused by chemicals injected by larva of certain gall wasps. Once a main source of ink, oak galls continue to fascinate botanists and artists.

WINTER: Watch northern harriers glide across the landscape on a crisp, clear morning. These unique raptors have disc-shaped faces similar to owls that allow them to use hearing as well as sight when hunting. Identify them by their low flight above open lands and distinct white rump patch that's obvious in flight.

SPRING: Listen for the sounds of frogs during breeding season along the Arrowhead Creek trail. These peeps belong to Pacific chorus frogs. Formerly known as tree frogs, these tiny creatures range from bright green to dusky brown, but all share dark masks across their eyes.

Canary grass clear-out

Photo: Looking out over the expanse of almost 55 acres of nothing but reed canarygrass at Coffee Lake Creek Wetlands

In the next year Metro will begin a wetland restoration project at Coffee Lake Creek Wetlands in Wilsonville.

The purpose of the work is to boost biodiversity and improve water quality in two main ways. First, by changing the way water moves around the site.

Right now, Coffee Lake Creek mainly flows through a channel, which doesn't let the water spread to the wetlands, where natural processes can cool and clean it.

The second is by converting the entire site from one covered in a single invasive grass – reed canary grass – to one with a wide variety of native trees, shrubs, flowers, sedges and rushes.

This boost in plant variety will increase the food sources and habitats available to fish and wildlife for foraging, breeding, resting, nesting and hiding from predators.

In contrast, the reed canary grass that currently smothers the site forms thick thatch mats and can grow to over six feet in height, making the area impenetrable to other plants.

The grass also greedily sucks up water, a precious resource in wetlands that wetland-dependent fish and wildlife need to survive.

Reed canary grass is one of, and maybe the most, widespread invasive weed in greater Portland's wetlands. If you drive most any road near farmland, you'll see reed canary grass growing in just about every ditch along the roadway.

Like a lot of invasive plants, the aggressive non-native form of canary grass was brought here by European colonizers, who planted the fast-growing grass to feed cattle and reduce erosion. Many plants were brought to Oregon in similar ways, but reed canary grass really took off, to the detriment of native plants and habitats.

Fortunately, restoration scientists have figured out a variety of effective ways to transform inhospitable reed canary grass flats to flourishing plant communities that support an abundance of birds, fish, frogs, pollinators and more.

Check out future issues of Our Big Backyard to follow the project.

Beaver dam gone bust: Water flows from the lake at Killin Wetlands Nature Park through a crack in a beaver dam complex.

When the plug pops

The rare peat wetland habitat at Killin Wetlands Natural Area is recovering slowly but surely thanks to a restored little lake. But this year the lake suddenly started draining. What happened?

Story by Andrea Berkley

Killin Wetlands Nature Park, which lies outside of Banks in Washington County, is one of the few remaining peat wetlands in the region, and up until this past spring, was most notable for the expansive ponded water forming a large wetland lake across the 641-acre nature park and natural area.

But earlier this year, the lake started to shrink.

Visitors who enjoy the park and natural area for walking and birding, and neighbors who drive by the wetland complex daily, certainly noticed. Metro received many calls from concerned visitors and neighbors wondering what changed the lake so dramatically in such a short period of time.

Was Metro letting water out of the wetlands, we were asked.

It's a fair question. Metro controls water levels in Smith and Bybee Wetlands Natural Area to benefit plant and animal communities, and Metro often removes small dams from creeks in natural areas to improve water quality and fish and wildlife habitat. But not at Killin Wetlands.

We had a guess what was going on, but we wanted a clear answer as much as our keen-eyed visitors.

Metro staff investigated on foot and using a drone and confirmed the suspected cause. Spring rains brought record water to the region and proved too much for the humble beaver dam complex that forms the natural "bathtub plug" of the wetland lake.

The beaver dams failed. A permanent water gauge in the wetlands indicate the failure likely occurred in spring 2022, when water levels in the wetland lake show a sudden drop.

It appears the beaver family maintaining the dams have either left the area, or the dams were simply not able to handle the unusually high-water levels of the growing lake.

The de-watering of the peat wetlands is concerning for a number of reasons. If the site remains dry, the slow process of peat soil re-building will pause and the peat basin will once again begin emitting carbon into the atmosphere rather than serving as a carbon sink. Drier conditions will permit the expansion of reed canary grass into the wetlands (see reed canary grass sidebar). Open water habitat that waterbirds use for breeding, wintering and migrating will be significantly reduced, and turtles and amphibians will have much less open water for cover and breeding.

So what do we do when a natural process (beaver dam failure) is threatening other natural processes? For now, we are in a waiting period to see if the beaver become active in the area and re-build. Longer term, we may explore options that lend the beaver a hand (or a paw?) by installing beaver dam analogs, which can assist dam formation by providing a solid structure on which beaver can build. Staff are monitoring the area to check for beaver activity and are consulting with the Oregon Department of Fish and Wildlife to determine if any further actions are needed.

Metro has worked for two decades to restore the peat wetlands at Killin. We won't ever take for granted how much we have been helped by a beaver family that kept the hole plugged.

How to avoid food waste over the holidays

Story by Arashi Young

The holidays can be a joyous time to bring people together, share memories and break bread over a large holiday feast. But big dinners can have big environmental and financial impacts when uneaten food is thrown away.

The US Environmental Protection Agency estimates that food is the largest category of material in landfills. Food releases methane gas as it decomposes, contributing to climate change. Food waste costs money too, Oregon's Department of Environmental Quality estimates that each household in the state loses $1,800 a year in wasted food.

With a little bit a planning for your holiday meal, you can make sure your guests are stuffed but your trash can is not.

Prepping for dinner

Aim to feed your guests well without leaving you with a fridge full of leftovers - that means figuring out the right portions for each guest. Check out this party planning portion calculator for your next meal: **savethefood.com/guestimator**. The calculator will adjust for bigger or smaller appetites and multiple side dishes and desserts.

Look in your fridge and pantry first to make sure you don't already have needed ingredients. It's helpful to label foods so you know what should be eaten first. When grocery shopping, make a list and stick to it.

After the feast

The best way to avoid a fridge full of leftovers is to send the meal home with your guests. Ask them to bring their Tupperware to dinner, loan them yours or repurpose cleaned salsa or yogurt containers that they can later recycle. Many secondhand stores have inexpensive food storage containers, great for giving away after a big meal.

If you still have leftovers, make use of your freezer; meats, soups, cooked vegetables, breads and pastries freeze very well. Foods will stay fresher for longer in airtight containers. If you are tired of eating the same meal for days on end, repurpose the leftovers into new meals.

Creative ways to use leftovers

Turkey

Substitute turkey wherever you would use chicken such as enchilada filling, nachos, chili, BBQ sandwiches or a pizza topping.

Turkey noodle soup is a post-holiday tradition for many. Boil the carcass until the meat falls off the bones and then strain the mixture. Then add cooked noodles, carrots, celery, onions, herbs and salt and pepper to taste. Adding gravy to any holiday soup will add creaminess.

Mashed Potatoes

Yesterday's mashed potatoes can be tomorrow's breakfast hash. Form the potatoes into patties and fry in butter to make potato cakes.

Photos, clockwise from top: Chorizo and eggplant supper by Jules CC BY 2.0 license. Cranberry relish by Jake Yazici. Leftover sandwich by Chris Roth CC BY-NC-ND 2.0 license. Homemade chicken broth by Ambar Espinoza.

Mashed potatoes make great appetizers as a filling for stuffed mushrooms. Use up even more leftovers when substituting stuffing as a breadcrumb topping.

Squash

Pureed squash (butternut, acorn, pumpkin, sweet potato) pairs well in an autumn risotto. For something a little spicier, add curry powder, onions, garlic and coconut milk to cooked and pureed squash and you'll have a simple, but flavorful soup.

Cranberry Sauce

Add leftover cranberry sauce and orange zest to a muffin recipe to create tangy and tart morning pastries.

Cranberries make an elevated appetizer when added to a wheel of brie cheese and wrapped in a sheet of puff pastry.

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Illustration by Zoe Keller

Above, on and in Killin Wetlands

The watery habitats at Killin Wetlands Nature Park provide homes to birds, mammals, amphibians and reptiles. Beaver play a crucial role in creating deep ponds (check out page 10 to see what happens when a dam fails). Salamanders and frogs lay their eggs in the still waters. Migratory birds feed on the plants and insects growing there. So do Roosevelt elk coming down from the mountains in the summer. And turtles hang out with the beavers all year round.

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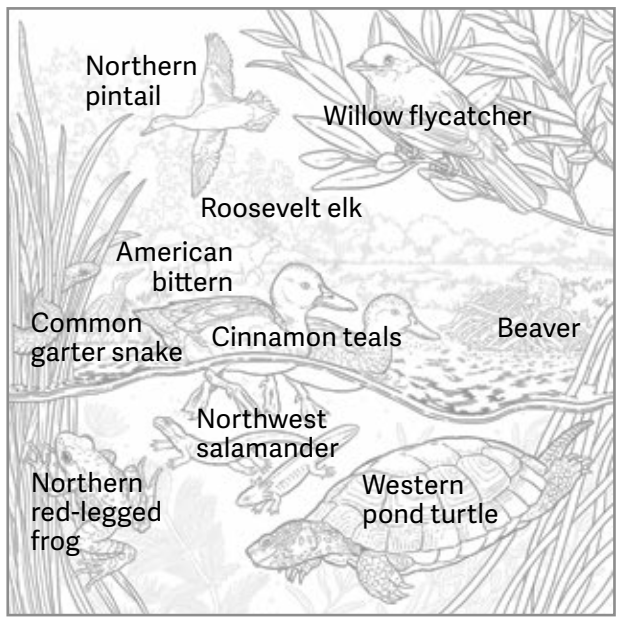

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