

“Fungi are so obviously important to ecology.”



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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.

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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.

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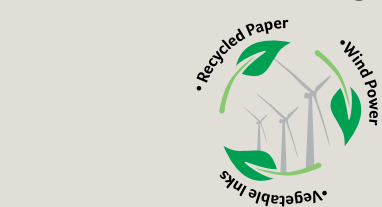
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Pets policy

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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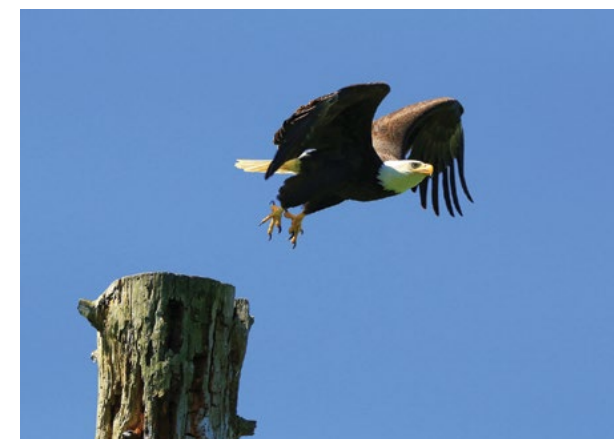
Winner: Patti Bright, Southeast Portland

"I was walking in Powell Butte Nature Park in Gresham, looking for the reported owl. As I rested on a log, I heard the familiar 'who cooks for you' call from the barred owl. It flew from its nest to a stump of an old tree. We stood and stared at each other for 10 minutes!"



Jamar Taylor, Portland

"While walking around Fernhill Wetlands, I thought this great egret was casually flying off until I noticed it was being harassed by a red-winged blackbird."



Patricia Kolberg, Troutdale

"I was paddleboarding the Columbia Slough in May. I love to see the huge diversity in birds that live there. This eagle landed and hung out for a while. I told my friend, 'I want to hang out a minute and see if he takes off,' and he did."

Submit your photo

Win an annual parking pass, a full-day picnic shelter reservation at Graham Oaks or Scouters Mountain nature parks, or a choice between a tennis court session or 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 between October 1 and November 1 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: When the autumn rains begin, mushrooms emerge. But they are just the most visible part of vast fungal networks. Turn to p. 4 to learn more. Photo taken at River Island Natural Area by Kristina Prosser.

Get involved

CLASSES AND EVENTS



FRI. SEPT. 27

Star Party

Join Metro and Rose City Astronomers for an evening of fun activities and star-gazing. Come prepared to let your eyes adjust to the darkness to better see the stars. If clouds obscure the sky, this event may be canceled.

Glendoveer Golf Course
7:30 to 9:30 p.m.
Free. Parking: free
All ages
Difficulty: easy

SUN. OCT. 13

Our winged neighbors during fall migration

Join local nature educator Gladys Ruiz on a journey to discover Scouters Mountain Nature Park and explore the ways that we each have forged a relationship with birds. This outing will focus on migration and the ways that this shared behavior highlights the connection between wildlife and people, diving into the universal drive to adapt and thrive in different environments.

Scouters Mountain Nature Park
10 a.m. to 12 p.m.
\$6/person, fee waivers available. Parking: free
Registration required
Ages: high school, adults
Difficulty: moderate

FRI. OCT. 25 SAT. NOV. 1 SUN. NOV. 17

Mushroom hikes

Discover the fascinating and weird world of mushrooms! Join local mushroom guide Leah Bendlin on this hike. Learn about the ecological roles of fungi, their forms and how they eat and reproduce. Enjoy hands-on exercises and learn how to identify mushrooms. Field guides will be provided.

A morning and afternoon hike are scheduled at each site. Please choose one. The morning hike runs 9:30 to 11:45 a.m. and the afternoon hike runs 12:30 to 2:45 p.m.

Fri. Oct. 25 Oxbow Regional Park.
Parking: \$5 car/\$7 van or bus

Sat. Nov. 2 Chehalem Ridge Nature Park.
Parking: free

Sun Nov. 17 Mount Talbert Nature Park.
Parking: free.

\$6/person, fee waivers available.
All ages
Registration required
Difficulty: easy

FRI. OCT. 25

Batty blitz at Killin Wetlands

Participants help map and track the story of Killin Wetlands in an "ecoblitz" using the mobile app iNaturalist to record the plants and animals – and hopefully bats – present during National Bat Week. The event will take place around sunset and participants will be able to keep an eye out for bats sweeping low over the wetlands. Participants should have the iNaturalist app loaded on their phone or mobile device before attending.

Killin Wetlands Nature Park
5 to 7 p.m.
\$6/person, fee waivers available. Parking: free
Ages: 16+
Registration required
Difficulty: easy

Register for events at oregonmetro.gov/calendar or call 503-220-2782
Children must be accompanied by adults

SAT. OCT. 26

Ivy removal at Glendoveer

Join Metro for a day of tending our shared natural spaces. Participants will help remove invasive ivy. Tools and refreshments will be provided.

Glendoveer Golf Course and Nature Trail
10 a.m. to 1 p.m.
Free. Parking: free.
Registration required
All ages
Difficulty: Easy

FRI. NOV. 1

Cemetery tending at Lone Fir

Participants will clean headstones, learn about symbols found on headstones and support litter pickup. Refreshments, tools and gloves provided.

Lone Fir Cemetery
10:30 a.m. to 1:30 p.m.
Free. Parking: free
Registration required
All ages
Difficulty: Easy

SAT. NOV. 9

Fall planting day at Howell Territorial park

Participants will plant native species and help tend to the space. Warm beverages will be provided.

Howell Territorial Park
11 a.m. to 2 p.m.
Free. Parking: free
All ages
Registration required
Difficulty: Easy

SAT. NOV. 23

Fall planting day at Chehalem Ridge

Join Metro for a day of stewardship and planting at Chehalem Ridge Nature Park. Refreshments, tools and gloves provided.

Chehalem Ridge Nature Park
10:30 a.m. to 1:30 p.m.
Free. Parking: free
All ages
Registration required
Difficulty: Easy

Willamette Cove survey

Weigh in on the designs for the future nature park at Willamette Cove. The survey is open through October.

oregonmetro.gov/cove



Marvelous mycology

Metro explores the potential of fungi to help protect and restore nature

By Rebecca Koffman. Photos by Jeffrey Lee, Kristina Prosser and Hannah Schragger



Metro's Native Plant Center is full of visible life – after all, it's where Metro grows plants it uses to restore and maintain its parks and natural areas. But tucked into a shady spot of the small forest near the garden beds, a very different form of growth is taking place. It doesn't look like much – just patches of dirt and wood chips surrounded by stumps and logs.

Metro Parks and Nature staff are a year into a pilot project on mycology, the scientific term for the study of fungi. And much like the organisms they're cultivating, to truly understand their work, you need to go deep beneath the surface.

The project started in spring of 2023, when a few alder trees were removed at Borland. Alder, as it happens, is a great medium for growing fungi.

Jeffrey Lee, a natural resource technician at Metro, saw an opportunity. He and two colleagues – natural resource specialist Kristina Prosser and plant scientist Hannah Schragger – set up seven fungi-growing test beds. They implanted – “inoculated” is the technical term – fungal spawn into chips, stumps and logs. The spawn came from seven types of native fungi including oyster, turkey tail and Oregon reishi.

It might be years before any mushrooms appear. But growing mushrooms is not the goal. Instead, Lee, Prosser and Schragger are interested in what's happening deep within the inoculated wood. There, threadlike fungal strands are spreading, forming an ecologically valuable, ever-expanding network.

They see all sorts of potential for fungi to help native plants and animals thrive, prevent soil erosion, reduce wildfire risk, build healthy soil,

promote forest diversity, provide medicine and food, and connect people to the land in culturally meaningful ways.

First, though, they have to better understand these potentially powerful partners.

Following the fungal clues

Prosser – who, like Lee, is on Metro's land management team – is always looking out for fungal species when she's in the field, both to record their quantity and diversity and to increase fungus literacy among conservation staffers. She's also attuned to what's going on from an ecological standpoint. Fungi, she explains, have beneficial relationships with many plants and animals and help to promote ecological diversity.

Schragger, who primarily works at the Native Plant Center, has also developed an interest in fungi. “People like me who work in a related realm, like with plants, are realizing that fungi play an essential role in how plants function,” she says.

For these reasons, Metro Parks and Nature is considering how to incorporate fungi into site conservation plans. These policy documents set out a vision for conserving natural areas based on historical and current habitat as well as other factors like equity and climate change. Right now, they focus mainly on plants and animals.

Fungi – which are neither plant nor animal, but their own separate kingdom – can show what may have been on a site before it was farmed or logged. “Fungi offer clues to what we are restoring to,” Schragger adds.

“There's a mushroom that I am very fond of: the *Laricifomes officinalis* or quinine conk,”

Above: Coral fungi peek through the forest floor at Gabbert Butte Natural Area.

Prosser adds. “It's rare and primarily grows in old growth forests. Occasionally, I'll find it on sites like in the East Buttes. When I see it, I look up and imagine what was once there.”

Mycorestoration – the potential of partnering with fungi to heal the land

Mention fungi, and many people think of mushrooms. Mushrooms are actually the fruiting body or reproductive part of fungi. The web of threads that spreads within the fungi's food source (soil, wood or other organic matter) is called the mycelium. It's usually out of sight. You may have seen it as a green or white fuzz on a lemon left too long in a fruit bowl. This mycelial network takes nutrients from the soil or wood or other food source and releases other nutrients into it.

“The mycelium is where the magic happens,” Prosser says. “The water-holding capacity, the erosion control, the nutrient exchange.” This is what the test beds are all about. “We want to learn the mechanics of dealing with fungi. The potential uses are so exciting.”

In Colorado, Prosser says, “they are chipping and inoculating logging slash [debris] with oyster mushrooms. They are finding that it decomposes significantly faster than wood not treated with fungi. This reduces fire risk and puts nutrients back into the soil. They're finding that, in areas that have been hammered by heavy logging equipment, they can reestablish plants much faster. The mycelium also holds moisture, so it provides water to the new plants.”

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Clockwise from top: Honey mushrooms; “gregarious” mushrooms grow in clusters; artist conk; lichen agaric; Metro employees create fungal host logs; Kristina Prosser helps build fungal test beds at Metro's Native Plant Center; bonnet mushrooms; a shaggy mane emerges from leaf mold.



From left: Metro employees work on inoculating a log with fungal spores during a workshop; many mushrooms emerge with closed caps before spreading their gills to release spores; oyster mushrooms at Kingfisher Natural Area.



Photos courtesy of the Oregon Zoo.

Living with wildlife: Cougars

By Metro Staff

Oregon is home to more than 6,000 cougars. Also known as pumas or mountain lions, they range throughout the state, including the greater Portland region. Even so, cougar sightings are rare. They are reclusive by nature and usually avoid people. Keep reading for some safety tips to help you live peacefully with Oregon's largest wild cat.

At home

Cougars are carnivores. Their primary food source is deer, though they will also hunt other mammals and birds, including livestock and pets. Taking steps to discourage wildlife from staying at your property – like deer-proofing your garden and not leaving food out – will make it less attractive to cougars. So too will securing any livestock.

Cougars are most active at dawn and dusk, so be extra cautious during these times. Keep pets sheltered overnight and feed pets indoors.

Installing motion-activated lights around your property can help to discourage cougars.

At a park

When cougars are spotted at Metro Parks, staff issue an alert on the park's webpage and post signs at the park. This is to let visitors decide if they are comfortable visiting the park. However, it is reasonable to assume that cougars may be present at any large park or natural area, even if they have not been seen by humans.

Cougars will avoid heavily frequented areas. It is unlikely a cougar would be seen at picnic shelters, trails, playgrounds, parking lots or anywhere where people congregate.

If you're hiking or recreating in a more isolated part of a park, keep these safety tips in mind:

- Pay attention to your surroundings: avoid using headphones, keep an eye out for animal tracks and scat (poop), and look around you regularly.
- Make noise, or sporadically speak when hiking.
- Stay far away from cubs and report any sightings to park staff.
- Don't camp or hike alone.
- Consider carrying bear spray, but first learn how to use it properly and don't let it give you a false sense of confidence.

If you do encounter a cougar:

- If you see a cougar from a distance, calmly leave the area. Do not run, as that may trigger the cougar's instinct to chase prey. The cougar will likely leave if it's spotted by a human.
- If you encounter a cougar at close proximity, stay calm. Do not turn your back to the cougar. Do not run.
- Pick up any small children, but do so without bending down or turning your back on the cougar.
- Cougars are generally skittish animals. You can try to scare it away by making yourself look large. Raise your arms, make loud assertive noise (not screams), clap your hands and throw objects.
- Maintain eye contact with the cougar.
- Make sure there is an escape route for the cougar before you attempt to scare it.



- Be aware that cougars will sometimes charge, growl or bare their teeth as an intimidation tactic. Try to stay calm and do not run.
- If there is a secure place nearby – a vehicle or a shelter, for instance – slowly back away toward it.
- If attacked, fight back with whatever is at hand (without turning your back). People have used rocks, jackets, garden tools, tree branches and other objects to turn away cougars.

If you are at a Metro park and see a cougar, please let park staff know. If you are in another location, report the sighting to the Oregon Department of Fish and Wildlife at **503-947-6000**.

continued from page 4

Fungi could also help to stabilize riverbanks and to clean up decommissioned roads. "A web of mycelium in the soil is like throwing a net over the riverbank to hold it," Prosser says. And mycelium can uptake pollutants, she explains. "Oyster mushrooms break the hydrocarbon bond in oil," offering possibilities for cleaning up roads and other sites.

But before any of that, the team must master the basics: Where do they source mycelium? Can they get the mycelium to spread? What types of materials do they need to grow it? How do they prepare them? What are the costs and logistics of larger-scale projects out in natural areas? How do they measure success?

The seven test beds are starting to provide some answers.

Putting mycorrhizal fungi to work

Land restoration often involves replacing invasive weeds with native plants, but those plants can sometimes struggle. "We use best practices for mowing and herbicide spraying, but we are looking deeper into the soil, to look at fungi, at the microbiome of life in the soil," says Prosser. "How can we promote that to help plants flourish and forests be more diverse?"

Mycorrhiza may hold an answer. Mycorrhizal ("fungus-root") fungi partner with the roots of plants and trees, growing within and among them and exchanging nutrients in relationships that are beneficial to both. "There is concrete evidence that plants and forests are connected underground by mycelia and mycorrhizae," Schragger says. "A Douglas fir might be connected to all its neighbors through these networks exchanging phosphorus and nitrogen."

These plant-fungus partnerships may offer clues why certain native plants, such as red huckleberry, can't be grown in nurseries. "We know that in nature it grows on decaying wood, which is a moisture and fungi sink," Schragger says. "So at this point we are hypothesizing that there is a mycorrhizal connection that might allow us to put that on our landscapes more effectively."

"We are doing a small experiment with Portland Bureau of Environmental Services," Schragger says, "to see if we can propagate or replicate the root-connected mycorrhizal fungi that does those beneficial nutrient exchanges at the plant root level. We went out and scooped up

native soil from four of our natural areas where we are going to do future plantings. We put it in a sterile environment and then put a fast-growing crop on it to build lots of biomass. What you end up with in the soil is spores from the mycorrhizal fungus. The idea then is to treat the new plants with something beneficial from the site you're about to plant it on."

The end result: A sort of site-specific fungal supplement for the plants. The supplement can be a powder sprinkled on plants or a slurry that a plant's roots can be dipped in. The mycorrhizal supplements will be used on plants this coming winter, with the aim of boosting planting success.

"It lets us connect a bit more with the ecological complexity," Lee says. "It gives us the chance to be more intentional with how we plant."

Lee, Prosser and Schragger hope these projects are just the start of a program to incorporate fungi into their work.

"Fungi are so obviously important to ecology," Schragger says. "They offer another way to understand the systems we are tasked with managing."

in what I was doing. They knew about turkey tail, they knew about reishi – it's called the 'mushroom of immortality,' it's good for the immune and circulatory systems and many other things."

Lee reached out to Metro's community engagement and stewardship team, which runs events for community members at Metro parks and natural areas. The fungi work resonated with them, and they are now planning to host some log inoculation workshops with community groups. "Not necessarily to harvest mushrooms on the property," Lee explains, "but with the idea that it's an opportunity for people to connect with nature in a way that is culturally relevant to their lives and experiences."

Bringing people into the picture

"There are a lot of communities around like my own," says Jeffrey Lee, who is a second-generation Chinese American. "I grew up with traditional East Asian medicine. I was used to my Grandma giving me soups with reishi and turkey tail mushrooms. It has made me think a lot about the stigma surrounding fungi. That can put up barriers for folks who want to access mushrooms for food and medicine."

Recently, Lee was inoculating logs with mycelium at Glendoveer Golf Course. "At that site, you get a lot of trail users, many of them Vietnamese or Chinese," he says. "A lot of them were very interested



Restoring Coffee Lake Creek

By Andrea Berkley



The natural area offers a front-row seat to see Metro's conservation work in action.

A year ago, Coffee Lake Creek Natural Area appeared lush and green but was actually an ecological wasteland covered with weeds. This year it will be bare and brown, undergoing preparation to become a wetland again. Next year, thanks to improved water flow and new plantings, it will be on its way to becoming a multicolored, diverse, healthy ecosystem — closer to its historic condition.

Metro has been working toward the restoration of the Coffee Lake Creek Natural Area for years. The site sits at the southern end of a 2.5-mile-long chain of natural areas along Coffee Lake Creek. Other sites have been restored, and now it's Coffee Lake Creek Natural Area's turn.

Unlike many restoration projects, you'll be able to see its transformation, because the once-and-future wetland is circled by roads with sidewalks. Wilsonville's new Tivoli Park runs along SW Coffee Lake Drive, and the Ice Age Tonquin Trail borders the restoration site.

The restoration project aims to increase biodiversity and improve water quality in two main ways.

The first is by changing the way water moves around and through the site. Since the site was ditched and drained for farming in the 1800s, Coffee Lake Creek has flowed

through a straight channel that doesn't let water spread to the wetlands, where natural processes could cool and clean it. Metro is removing the ditch and changing the site from a flat field to a site with ponded areas, raised hummocks and shallow swales. This will allow water to slowly meander through the site, supporting native plants, insects, fish and wildlife that need a variety of habitats. Water will stay on site longer and filter into groundwater.

Restoring natural water flows to this site will provide water-logged conditions that slow plant decomposition, allowing peat, a special type of soil, to build. Peat is nature's most effective way of taking carbon out of the air and storing it long-term, but this process only works if peat remains wet. When a peat wetland dries out, like Coffee Lake Creek Natural Area has, the carbon in the peat is released into the atmosphere as carbon dioxide.

By returning the natural area to its past, water-logged self, Metro can reverse that process so the wetland can store carbon once again.

The second restoration approach being used at the site is to remove the reed canarygrass that covers the entire site and replace it with a wide variety of native trees, shrubs, flowers, sedges and rushes, the natural vegetation that was found at this location prior to European American colonization and farming.

Reed canarygrass is an aggressive invasive species that smothered the site in thick thatch mats and grew to over 6 feet in height. Native

Above: Before restoration, an agricultural drainage ditch channeled water out of the wetland, parching native plants and leaving invasive reed canarygrass to take over the site.

plants had no space to grow and most wildlife was excluded. The grass also greedily sucked up water, which helped dry out the wetlands. After the project, the dramatic increase in plant variety will increase the food sources and habitats available to fish and wildlife for foraging, breeding, resting, nesting and hiding from predators.

While Metro began some of this work in August, most of the construction will take place next summer. Metro will use excavators and other big construction equipment to remove the ditch, contour the ground, create mounds and dig pools. Next comes planting. Over the next two winters Metro will plant more than 120,000 plants and approximately 7,000 pounds of seed. This will include more than 100 species of plants. Restoration crews will keep a close eye on the natural area for the next few years to maintain and establish the young plantings and replant as needed.

After returning Coffee Lake Creek's water to the floodplain and allowing it to move as it historically did, the wetland will heal. Over time, plants, bugs, frogs, fish, birds and even new peat soil will show up. Plantings will go from tiny seeds and small plants to towering cottonwoods and willows in some areas, and expanses of colorful blooms like camas, wapato and popcornflower in others. The plant communities will support diverse food chains.



Visitors overlooking the site can expect to see wildlife ranging from large animals such as bald eagles down to small insects such as dragonflies and water striders.

You'll be able to get close to this process thanks to the pathways and pocket parks surrounding the site. Metro's restoration, in turn, is possible thanks to the people of greater Portland supporting nature.

Above: Given time, the site can be restored to a thriving wetland like Heritage Pine Natural Area, where Metro has been working for more than a decade.

Funding for the project is provided by the Metro 2019 Parks and Nature bond measure, the U.S. Fish and Wildlife Service North American Wetland Conservation Act, and the Oregon Watershed Enhancement Board.

Future residents



Ducks and other waterfowl

Waterfowl such as American wigeon, mallard and northern pintail travel through the area but have not been able to use the site for breeding or feeding due to its degraded state. After restoration, the site will provide open water, shrub cover for safety, insects and plants such as cattail, bogbean and duckweed for waterfowl to eat.

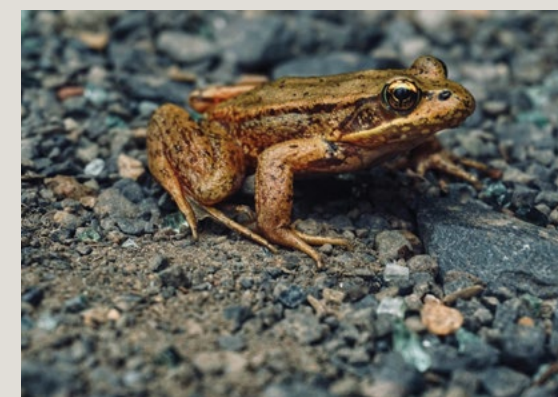


Songbirds

Birds like willow flycatchers, red-winged blackbirds and barn swallows are expected to use the restored site, feeding on insects produced in the wetlands. These and other songbirds will nest in shrubs like red-twig dogwood or Geyer willow.

Northern red-legged frogs

Frogs are indicators of wetland health. Frogs throughout the world are facing challenges including loss of wetland habitat and disease. The northern red-legged frog is facing similar challenges in Oregon. These frogs require shallow water ponds that stay wet into spring and contain the right types of plants to attach their egg masses. The project will create these ponds. Plantings of native sedges, rushes and grasses such as soft-stem bulrush and rice-cut grass will provide excellent egg mass attachment material.



It's a bird, it's a plane...

By Hannah Erickson

On July 29, people in the Gresham-Troutdale area near Mt. Hood Community College stood gazing upward and pointing. The object of their attention: a twin-engine helicopter carrying 70-foot trees above Beaver Creek, which runs alongside the campus and through Metro's South Beaver Creek Natural Area.

Over the course of the day, 72 trees were placed in 23 different spots along the creek, creating logjams to benefit young fish like salmon, trout and lamprey. These fish need pockets of slower, cooler water with lots of hiding places so they have a safe and healthy place to grow.

Past land use practices removed trees from the creekside, so logjams have not been occurring naturally in the creek. While restoration efforts over the past decade have resulted in new trees, it will take many more years for those trees to grow old and large enough to fall into the water and create logjams. So Metro Parks and Nature created them artificially. A helicopter can place logs very precisely in designated spots on the creek without damaging the surrounding plant life.

Along with building logjams, Metro used trucks and heavy equipment to remove a concrete structure that was blocking fish passage from the creek.

Once considered too urbanized and polluted to maintain healthy fish habitat, Beaver Creek is an example of what can happen when organizations collaborate. In 2012 Metro, Multnomah County, SOLVE, East Multnomah Soil and Water Conservation District, and the Sandy River Watershed Council came together to form the Beaver Creek Conservation Partnership. Other partners in restoration work include Multnomah County, cities of Gresham and Troutdale, Mt. Hood Community College, Department of Environmental Quality, Portland Water Bureau, Oregon Department of Fish and Wildlife, private landowners and others.

Work has included replacing fish-blocking culverts, planting creekside vegetation, acquiring and restoring land along the creek, and conducting regular monitoring of water quality and fish populations. This should lead to cleaner water and healthier fish and wildlife populations. More work still needs to be done, and much of it will require significant funding to complete, but the progress so far shows that even highly urbanized waterways can be restored.

Field guide

LONE FIR CEMETERY



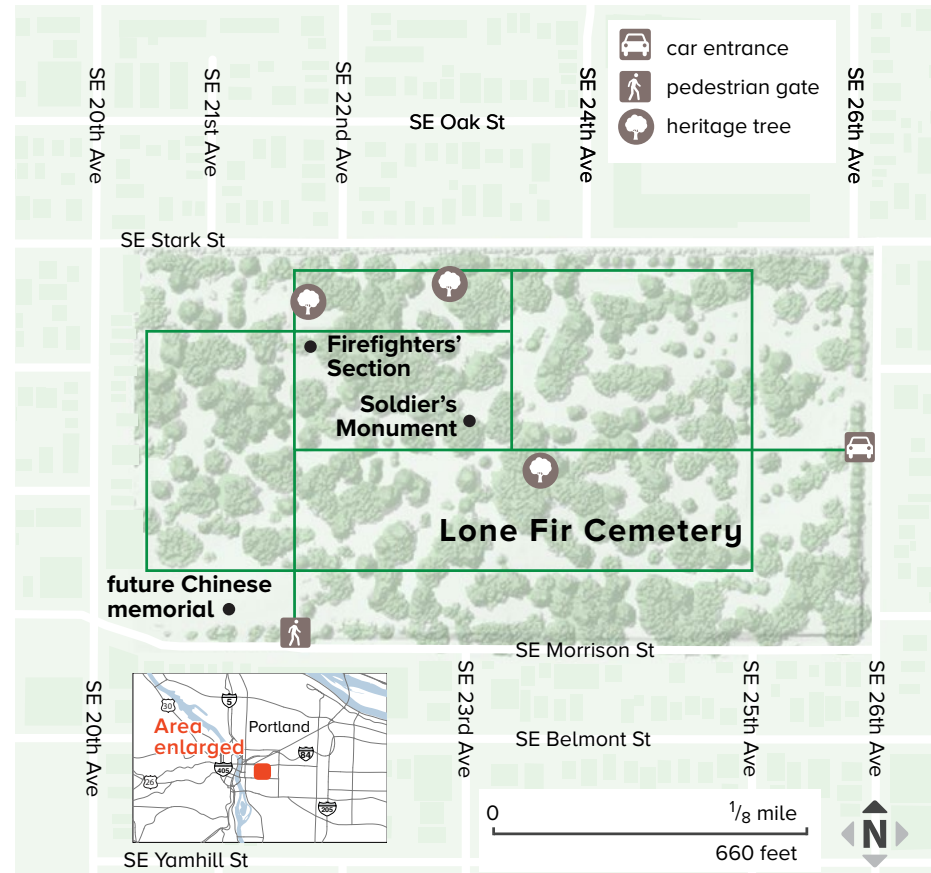
Nestled in Southeast Portland, Lone Fir Cemetery is more than just a cemetery. It's one of Oregon's most treasured historic places, a repository of stories spanning from the 19th century to the present day. It's also Portland's second-largest arboretum.

In 1854, J.B. Stephens sold his farm to Colburn Barrell. Stephens' father, Emmor, had died in 1846 and was the first person buried on the property. Barrell was a partner in a passenger steamship line between Portland and Oregon City. The steamship *Gazelle* exploded in April 1854, killing several people, including Barrell's business partner, Crawford Dobbins. Barrell set aside 10 acres of his property as a cemetery and buried the victims near Emmor Stephens. He named the cemetery Mount Crawford in honor of his friend.

By 1866, 20 more acres were added. Burial plots sold for \$10. Because of marshy ground, the city closed graveyards in what is now downtown. Many bodies were then re-interred at Mount Crawford. Barrell's wife, Aurelia, changed the name to Lone Fir Cemetery for the solitary tree standing on the site. The cemetery was eventually sold to Portland investors in 1866.

Today, Lone Fir is a wooded, landscaped arboretum in the heart of Portland with more than 700 trees representing 67 species. Most of the trees were planted as memorials to loved ones as long as 150 years ago. It is home to the last pioneer rose garden in Portland.

More than 30,000 people are buried at Lone Fir. Wander around and look for the graves



Lone Fir Cemetery

GETTING THERE
Lone Fir is located between Southeast Stark and Morrison streets and Southeast 20th and 26th avenues. Free parking along cemetery roads. TriMet bus 15 bus goes down Southeast Belmont and Morrison streets.

KNOW WHEN YOU GO
Open daily 7 a.m. to sunset. No pets. Please respect any services that might be taking place at the cemetery and families visiting graves of loved ones.

CEMETERY DETAILS
Benches; free flower vases provided at Soldier's Monument, with five water spigots along the main roadway. Lone Fir is open to new sales. If you are interested in purchasing a burial or cremation space: 503-797-1709 or oregonmetro.gov/cedeteries

of the founders with street names – Hoyt, Hawthorne, Lovejoy, Davis, Couch, as well as six Portland mayors and four governors. The lovely grounds, filled with trees that belie the cemetery's name, sustain the memory of military veterans, firefighters and mental hospital patients. It is the final resting place for people of diverse ethnicities and nationalities. Look for the graves of renowned activist Hattie Redmond and of Gus Waterford, Portland's first

Black firefighter; his grave is now marked, thanks to efforts by Madison High School students.

The southwest corner of the cemetery, labeled "Block 14" on cemetery maps, held the Chinese section of the cemetery during the late 1800s and early 1900s. In the 1950s, that portion of the cemetery was paved over to build a Multnomah County maintenance facility. Now, with input from community members, Metro is working to design and build a memorial at this site.

SUMMER: Longer days allow for evening events in the cemetery, from concerts to Shakespeare plays. Most performances take place near the Soldier's Monument.

FALL: Some may say the most beautiful time of year at Lone Fir is when the leaves have changed and a chill is in the air. Look for the three heritage trees: the bigleaf maple, incense cedar and Douglas fir, the cemetery's namesake. Every year in late October, Friends of Lone Fir Cemetery host a history tour or other event at the cemetery. Tickets often sell out quickly.

YEAR ROUND: The nonprofit organization Friends of Lone Fir Cemetery offers monthly tours of the cemetery, focusing on different topics like history and art.

Building green space into affordable housing



Story and photos by Lauren Everett

When voters passed the Metro affordable housing bond in 2018, its initial goal was to provide funding for the construction of at least 3,800 homes. Now, with almost all of the funding allocated to projects in some phase of development, the bond is expected to fund 4,700 new homes for about 14,000 people.

Racial equity is a core value shaping how these public dollars are spent. Because of this, developers who use Metro housing bond funds are required to carry out robust community engagement to inform the design and programming of each apartment community. These engagement processes include communities of color, seniors, households with low incomes, people with disabilities, immigrants and people who have experienced homelessness.

A common theme in these conversations is the need for outdoor spaces. "Again and again, communities tell us that trees, green spaces for gathering, and community gardens that foster connection will be important for the health and well-being of future residents," said Metro regional housing director Patricia Rojas. "Preserving mature trees and planting greenspaces will also help to keep the grounds cooler and store more carbon as the climate continues to warm."

Portland-based firm PLACE has designed the sites of three of the Metro housing bond's most expansive apartment communities. Though each complex has a different feel, they all feature abundant shared outdoor spaces anchored by trees that were already on the site. "Mature trees are a big win" on a project site, said PLACE principal Dylan Morgan. They provide natural shade and are an important element of resident amenities like open green space, playgrounds and community buildings.

PLACE works on both affordable and private-market housing, in addition to many other types of projects. What Morgan enjoys most about designing affordable housing sites is that the community engagement required for these projects often prioritizes welcoming and diverse common spaces in a way that market-rate housing developments don't always do.



Located just a stone's throw from busy Southeast 181st and Stark Avenues, Community Development Partners and Hacienda CDC's **Rockwood Village Apartments** is home to 225 households. About 400 kids live there.

The apartment complex wraps around a central commons holding raised garden beds, an urban farm, a playground, a community center and pedestrian pathways connecting a previously dead-end street. It's also home to Neighbors Park, a public park with a tall stand of mature Douglas fir trees.

During the project's community engagement process, people in the Rockwood neighborhood expressed a need for green spaces where people could gather and kids could play. This diverse neighborhood lacks spaces for youth and community programming. In addition to providing a cool, shady place to hang out on hot days, Neighbors Park hosts the YMCA's Summer Kids in the Park and Hacienda's Expresiones after-school program. The garden beds and food from the community farm are also shared with the wider community.

At the 150-residence **Nueva Esperanza** in Hillsboro, mature maple trees line a pedestrian path between one of the apartment clusters and an expansive lawn with a playground and dog park. The community center borders the other side of the lawn, creating a town-square feeling similar to Rockwood Village. Several smaller outdoor gathering areas are distributed across the property, offering with amenities like grills and a piñata pole.



From top: Neighbors Park at Rockwood Village Apartments, Las Flores Apartments, Nueva Esperanza. Photo of Las Floras courtesy of PLACE.

Local nonprofit organization Bienestar developed the property in partnership with Housing Development Center on land owned by the City of Hillsboro. When the development team first visited the site and saw the trees, they knew immediately that they wanted to incorporate them into the design.

PLACE worked to preserve as many of the trees as possible (some of them weren't healthy enough to remain) to form an alameda – Spanish for "tree-lined walk" – which is a common feature in Latin American towns and cities. Today the trees provide a canopy over the pedestrian path and natural cooling for adjacent homes.

Las Flores Apartments in Oregon City is another partnership between Hacienda and CDP. Like Rockwood, the 171-apartment complex envelopes a central green space with a public park and mature Douglas fir trees. In their human-centered design approach, the PLACE team focuses on how to accomplish the programming goals that emerged from community engagement, while separating parking and roads from spaces people use as much as possible.

Learn more:
oregonmetro.gov/housing

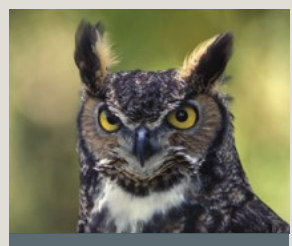
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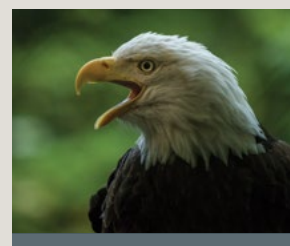
COOPER'S HAWK



DOUGLAS SQUIRREL



GREAT HORNED OWL



BALD EAGLE

Season-by-season highlights

WINTER: There is something striking about a walk through a historic cemetery on a clear, cold, winter day. The cemetery is open year round, so be sure to stop in and enjoy the serene surroundings. And if we are lucky enough to have snow, you might find someone cross-country skiing.

SPRING: It's the busiest time of year. Not only are the flowers blooming and the birds singing, but Portlanders are also returning to the outdoors after winter. Spring is the time of Mother's Day, Memorial Day and Qing Ming ("Tomb-Sweeping Day"), so the cemetery is full of fresh-cut flowers and lots of visitors. Each Memorial Day, the cemetery hosts an event with the local fire department to honor those who gave their lives in service to the country.

Color and discover!



Scurrying squirrels

Fall is a time to see squirrels collecting nuts and seeds to store for the winter. A squirrel can make thousands of caches each season! All this foraging and digging has an ecological benefit: It turns up the soil and spreads beneficial fungal microbes. Oregon is home to four native species of tree squirrel. In this region, the most common are the large western gray squirrel and the Douglas squirrel. (The nocturnal northern flying squirrel is rarely seen.) These native squirrels' numbers are dwindling due to habitat loss and competition from invasive squirrel species.

Want to keep up on all the seasonal changes at Metro parks and natural areas? Follow @OregonMetro on Instagram and Facebook or visit oregonmetro.gov/parks

