



Donna Matrazzo
The Writing Works

19300 NW Sauvie Island Rd.
Portland, OR 97231
(503) 621-3049
matrazzo@msn.com
www.donnamatrazzo.com

The Sustainability Center of Metro

Graham Oaks Nature Park
Interpretive Signs/Text

IN1. Orientation

Restoring a Native Landscape

**Two hundred years ago, oaks
spread across this terrain. Watch as they return.**

Before this land was logged and farmed, it was a rich habitat where birds flocked, mammals prowled and camas bloomed. Metro has planted 150,000 native trees and shrubs, and more than a hundred million seeds of wildflowers and grasses. Over time, these will recreate historic oak and pine woodland and savanna, and replenish wetlands and conifer forests.

Already, biologists discover the improved landscape attracting species that favor oaks and prairies, like the dainty Western bluebird.

Explore the edges

Wildlife thrives where one habitat touches another. At Graham Oaks, streams slice through woodlands. Houses border wetlands. Keep your eyes and ears open for the unexpected.

IN2. The Shape of Oaks to Come

The Shape of Oaks to Come

Less than eight percent of native Oregon white oak landscape has survived in the Willamette Valley. Graham Oak's renewal includes 15,000 newly-planted oaks.

Oak savanna emerges before you. This type of grassland, where oak trees are spread widely apart, is one of the rarest plant communities on earth. In the distance, a dense woodland rises, helping oak-dependent wildlife species to rebound.

An Oregon white oak takes 100 years to mature. Today's park visitors will never experience the fully-grown restoration. It is a legacy for your grandchildren's grandchildren.

caption adjacent to solitary oak tree: Oregon white oak / *Quercus garryana*

Why are trees in rows?

Young oaks become well-rooted and thrive if they don't have to compete with weeds. Rows allow land managers to mow down invasive plants. Because not every planted tree survives, those that remain eventually create a natural pattern.

Caption accompanying illustration:

Graham Oaks?
Where are the oaks?

IN3. A Park for Posterity

A Park for Posterity

At the end of the Oregon Trail, the Willamette brought opportunities to enterprising rivermen who operated ferries and steamships. Like Alphonse Boone of Boone's Ferry, John Graham established Graham's Ferry, and also ran a mail delivery steamboat, the Hoosier. Lily Ann, daughter of John and Clementine, married Marion Young, and in the 1880s they purchased this site.

Charlotte Lehan, former mayor of the City of Wilsonville, is the seventh generation of the Youngs. She recalls her mother's stories of hops, filberts, corn, potatoes and grass crops that the family farmed.

Sidebar: In the 1950s, the Young farm and adjoining acres were sold to the state. Development options included a National Guard maintenance facility and two women's prisons. A landfill proposal triggered Dorothy Young Lehan to activism. Charlotte inherited her mother's doggedness. Beginning in 1989, she cajoled, testified, organized, advocated, and campaigned. Finally, in 2001 the legacy site was purchased and permanently protected by Metro through voter-approved natural area funds.

"I believe this land was meant to remain pretty much as it was when we found it. Now we have finally done that." — Charlotte Lehan

IN4. Growing a Taste for Urban Farms

Growing a Taste for Urban Farms

Students from kindergarten through high school literally dig in to raise fruits and vegetables

The lessons at CREST are delicious. Planting a tiny seed that becomes leafy kale. Biting into a kiwi for the first time. Plucking ripe almonds from a tree. Many urban youngsters have never seen where food comes from. When students tend the organic gardens, orchard, beehives and greenhouse here, they learn how to grow things at home.

Volumes of food generated almost year-round show students the cycles of life and possibilities of sustainable agriculture. Buying food from nearby farms supports the local community while reducing pollution and greenhouse gases.

In smaller type:

The Center for Research on Environmental Science and Technology (CREST) is funded and operated by the West Linn-Wilsonville School District.

Sidebar:

The Outdoor Classroom at Graham Oaks

CREST students make the most of the park's living laboratory. Through Metro's Adopt-a-Plot program, they plant wildflowers and native shrubs, weed and mulch, and document their sites' progress. Young people learn the basics of scientific inquiry conducting studies, and monitoring wildlife and water quality. The park's environmental opportunities offer fertile ground for the next generation of land stewards.

IN5. Native American

Living with the Land

For native peoples, oaks are "the tree of life"

Almost every inch of the Oregon oak has served a purpose in local native peoples' traditional way of life. Bark was used for medicine and tanning hides. The curve of burls made them ideal as bowls, cups and ladles, while straight branches found use as bows and tools. Trunks were the foundation for buildings, and the basis for drums. Oak's hard wood fueled fires for cooking and keeping warm, while leaves were burned as tinder. Acorns became bait, toys, jewelry and musical instruments. Oaks were important sustenance, along with hunting deer and elk, fishing for salmon, steelhead, lamprey and trout, and gathering cattail roots and mushrooms. Native peoples set intentional fires, creating open grasslands that increased the oak's abundance.

Sidebar:

Acorns are highly nutritious and contribute to good health. Dried and stored in baskets and granaries, acorns provided food through the lean months of winter. Modern tribes continue the tradition of gathering acorns in the fall. Harvested acorns might be cooked or ground and pressed into cakes, known as "making acorn."

IN6. Oh, to Live in an Oak (Oak Protection)

Oh, to Live in an Oak

For wildlife, oaks are a four-season food mart and apartment complex.

Abundant acorns feed dozens of species including jays, quail, woodpeckers, ducks, mice, raccoons and deer. Come autumn, birds and animals cache acorns for the winter ahead.

Feasts are hidden in the oak's craggy bark, where insects and their eggs provide enticing snacks for birds. Thick layers of moss on the branches harbor more insects, sometimes the only eating after a snowfall.

The oak's canopy shelters a variety of wildlife throughout its upper and lower reaches. Birds and small mammals use the tree canopy for cover, breeding and perching. When big branches fall off, large cavities are created, providing roomy space for nests and dens.

Sidebar:

Step back to save the tree

The elder oak is thought to be 150 to 200 years old. A mature oak's main support is its wide, shallow root system that extends out beyond the branches. Stepping on the soil compacts the root zone and will suffocate this tree. Please protect it – don't walk beneath the tree.

"If I had only one tree I could plant for a diversity of wildlife, it would be an Oregon white oak." –Mike Houck, urban naturalist

IN7. Conifer Forest

Venture into the wilds of a conifer forest

Pacific Northwest conifer forests are among the most majestic in the world. Their biological richness contains thousands upon thousands of species including birds, mammals, amphibians, reptiles, insects, fungi, shrubs, ferns, wildflowers, and a mosaic of evergreen and broad-leafed trees young to old.

Such conifer forests once blanketed the landscape from the lowlands of the Cascade mountains to the ridge of the Coast Range. This remnant has many of the characteristics of the ancient grand forests.

A few old Douglas-fir trees can be seen along the trail. Left on their own they can live 800 years or more. At about 100 years, Douglas-firs develop a deep, grooved bark that is a unique wildlife habitat. Insects bore homes within, providing food for many birds and amphibians like the rough-skinned newt.

Sidebar:

Rescued from an alien ivy invasion

Like a science fiction experiment gone bad, invasive English ivy smothered this conifer forest. Rapid-growing vines choked plants on the ground. Ivy climbed the trees, encircling the trunks, leaving nothing uncovered. Food for wildlife disappeared. A diligent, seven-year effort including many volunteers removed all the ivy. Native plants, trapped underneath, were released, once again free to grow and flourish.

IN8. Oak Woodland

Oak Habitats So Rare

In front of you are oaks in a grove. Their branches are curving and gnarled as they grow in a tight space, without sunlight reaching all around. Behind you is the elder oak. Its mushroom shape tells that it is an oak savanna tree, where oaks are far enough apart that branches can spread. These distinct types of oak habitat attract different species of wildlife.

As Metro's restoration recreates and expands both oak habitats, native birds and mammals will return to each.

The grassy oak savanna will provide a familiar home to the Western bluebird, and the Northern harrier hawk, easy to distinguish with its white rump as it flies low over open fields.

Bushy oak woodlands will harbor the acorn woodpecker and orange-crowned warbler.

Almost Hidden in the Oaks

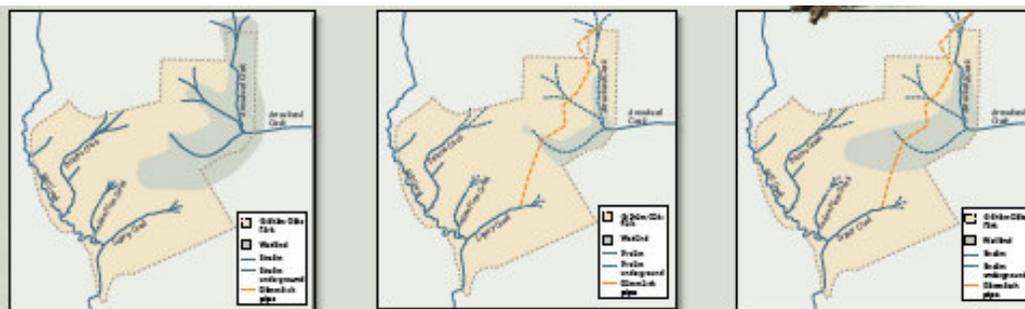
Some of the oak's tiniest or hardest-to-see denizens deserve a closer look. Thirty-five species of moths and butterflies use the tree's foliage. Dozens of species of microorganisms and several species of wasps are specifically adapted to the white oak's leaves, roots and woody parts.

"Even small stands of Garry (Oregon white) oak, sometimes even a single tree, may support populations of *Propertius duskywing*." –Robert Michael Pyle, lepidopterist

IN9. Water

The Saga of Five Creeks Or, what's this manhole doing here?

Glaciers, floods, volcanic eruptions and earthquakes shaped the Willamette Valley. At the site of Graham Oaks, the geologic episodes resulted in wetlands and five creeks—Arrowhead, Legacy, Pristine, Indian Plum, and Mill.



Five creeks once flowed freely on this site.

In the 1950's, an underground pipe diverted stormwater into Legacy Creek.

With restoration, the flow is more natural, expanding the wetlands.

When Dammasch State Mental Hospital was built in the 1950s, engineers diverted hundreds of acres of stormwater runoff from Arrowhead into Legacy Creek. Downstream, the fast-moving water gouged out a ravine and caused giant trees to topple.

Metro and the City of Wilsonville sought to restore the creeks' natural flow. Although surrounding development limits a complete reversal of the diversion, today's work amends it to the greatest extent feasible.

Below this manhole is the old Dammasch pipe that remains as part of the new system.

Sidebar/bubble:

The expanded wetlands create new habitat for sensitive species like the red-legged frog.

