

Here at the Oregon Garden we strive above and beyond creating beautiful landscapes for humans to enjoy. We want to make sure that a diversity of plants and animals can thrive here as well!

We try to minimize our use of resources and to use renewable, non-toxic resources as often as possible. We strive to not only reduce our impact on the environment, but to help clean up ecosystems by integrating the needs of people and wildlife.

Take a walk around to see all the innovative ways in which the Oregon Garden is demonstrating **environmental, economic, and social sustainability.** Each feature on our self-guided tour is marked with this sign:



**Green Guide
Stop**

For more information on many of these projects, please visit www.SPROutOregon.org



Our Earth-Friendly Oregon Garden

A Self-guided GREEN Tour



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Just follow the footprints...

1. Sustainable Parking Lot
2. Raingarden
3. The Tram
4. Pump Station Green Roof
5. Botanical Burrito & Floating Nursery
6. Barley Straw Algae Control
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11. Rediscovery Forest
12. Silverton Market Garden
13. Living Wall
14. Oak Grove
15. Drought-Tolerant Garden
16. Lower Wetland Interpretive Trail
17. Compost Area and Edible Garden



----- Suggested GREEN tour route

1: Sustainable Parking Lot

Check out the landscaped buffer strips in the *Main Parking Lot* to learn about a collaboration of SPROut and OSU – using drought-tolerant plants to filter pollutants from parking lot run-off. Here you can get ideas on which attractive plants require a minimum of water, fertilizer and maintenance. Our researchers are collecting data to compare characteristics of non-irrigated versus occasionally-irrigated sections of the landscape.

2: Raingarden

Across from the *Visitor Center* you'll notice a rocky "stream bed" in front of the *NREC building*. This raingarden captures water as it drains from the rooftop and diverts it from stormdrains. In time, more raingardens will be built at the end of the building to allow the rain to slowly infiltrate back to the groundwater. Raingardens are one way to reduce the impact of stormwater on our streams! Also, check out the lobby inside the building for a series of interpretive panels about some of the research and educational programs which operate out of the garden. Don't forget to peek around the back of the NREC building to see the green roof atop the tool shed!

3: The Tram

Our tram runs on natural gas, a cleaner-burning, non-toxic alternative to gasoline. Propane-powered vehicles produce fewer greenhouse gases than gas or diesel vehicles.

4: Pump Station Green Roof

Gardens on roofs? Visit the pump station in the *A-Mazing Water Garden* to see for yourself – a mix of drought-tolerant plants growing on top of a building! Eco-roofs can perform many environmental benefits: reduction of storm-water run-off, improvement of water quality of roof run-off; replacement of habitat lost when the structure was built, reduction of energy costs inside the

building and extension of the roof's life-span. Besides that, green roofs transform what would be drab structures into colorful oases.

5: Botanical Burrito & Floating Nursery

Take a stroll through the *A-mazing Water Garden* and notice the floating willow arbor — you're looking at a floating wetland garden! Botanical burritos are actually plant fiber tortillas (i.e. coir fabric) wrapped around wetland plant seedlings. The burritos are set in nursery flats which are placed in flotation structures in constructed wetlands. As you can imagine, plants sure flourish in our nutrient-rich wetland water!

6: Barley Straw Algae Control

In the filter trough atop the *A-Mazing Water Garden* water wall are logs of barley straw wrapped in coconut fiber netting. SPROut has partnered with OSU's Crop and Soil Science Department to research the use of barley straw to control algae. The theory that decomposing barley straw reduces algae growth in ponds and wetlands is extremely attractive because the process is completely natural and cannot harm fish, plants or people. Visit www.barleyworld.org for more information.

7: Plant Information Team

Need help identifying that particular plant? Around the bend to the right from the *A-Mazing Water Garden* you'll come across the volunteer-run PIT information booth. PIT is open 11-3 PM on Fridays, Saturdays, Sundays and holidays from Memorial Day weekend through the end of September. Volunteers have been The Oregon Garden's lifeblood since its founding and are key to our long-term sustainability.

8: Upper Wetlands

Retrace your steps back past the *Bosque* and the *Comifer Garden* and you'll come across the upper wetlands. Here at the Oregon Garden we use treated wastewater to irrigate our plants.

As much as 700,000 gallons of water daily enter the top of the wetlands from the City of Silverton's treatment facility. As the water moves through more than 17 acres of ponds, the plants both lower the temperature and remove excess nutrients (excellent fertilizer!).

Years of monthly water quality testing of these ponds have shown a decrease in excess nitrate and phosphorous concentrations from where the water enters the garden to where it gets released. When the water re-enters the watershed at Brush Creek, the nutrient concentrations are almost non-detectable — and thereby safe for our fish friends.

Wetland ecosystems are teeming with biodiversity — you may spot critters such as red-winged blackbirds, herons, wood ducks, native frogs and dragonflies. Be sure to visit both the *Upper* and *Lower Wetland Interpretive Trails*!

9: Oregon Garden Resort

Continue up the hill and learn about how the *Oregon Garden Resort* is working toward sustainability. The hotel features an environmentally-conscious linen program, in-room soap and lotion dispensers to save packaging and low-flow shower heads and toilets. The restaurant makes an effort to source food locally and seasonally, and composts all food scraps on-site. Energy-efficient light bulbs are used whenever possible.

10: Hybrid Poplar Trees

On the southern side of the *Rediscovery Forest* you'll come across a grove of towering poplar trees. If you can believe it, these trees were planted as recently as 2001! Can the fantastic growth rate of these trees be put to work to reduce the nutrient load of wastewater while protecting groundwater? Absolutely! In collaboration

with CH2M Hill and the Woodburn Wastewater Treatment Plant, SPROut is evaluating the effectiveness of irrigating these poplars at high rates as a way to reduce the nutrient load of groundwater. When the trees are fed more water than they need, the theory is that the hydraulic pull of the poplars' extensive root system will take up the extra nitrogen in the water as fertilizer, leaving the excess water for clean groundwater recharge.

11: Rediscovery Forest

Take a stroll through the shady forest canopy of this former Christmas tree plantation — turned wildlife habitat. The *Rediscovery Forest* now serves as an educational resource for school children to learn about sustainable forestry practices as well as forest ecology.

12: Silvertown Market Garden

Follow the tram path back through the *Rediscovery Forest* to the *Silvertown Market Garden* for ideas on how to grow lots of organic food in small spaces. Make sure to check out the Square Foot Garden Demo, the Straw Bale Garden, and the “Lasagna” layered garden.

The *Silvertown Market Garden* uses a range of different methods to improve soil fertility without using chemicals, including companion planting, raised beds and generous mulching. Organic fertilizers we apply include bone meal, fish meal, blood and feather meal, and ground mineral dust. The garden also uses local dairy manure on the raised beds and local hazelnut husks as mulch (great for slug control!).

Throughout the Oregon Garden Integrated Pest Management techniques are used to encourage and discourage insects without the use of chemicals. In the Market Garden, radish plants were successfully used as an attractant for flea beetles last year. In past years nematodes and ladybugs have been introduced as controls.

The average plate of food in the U.S. travels an estimated 1,500 miles from farm to plate, using massive amounts of fuel and packaging. Growing your own food and supporting local organic farmers is one of the most important ways you can be environmentally sustainable!

13: Living Wall

Check out our latest eco-art addition to the *Children's Garden*: plants growing vertically! Planting living walls is one strategy to maximize green habitat, especially in densely-packed urban settings or home environments. Other benefits include insulation, storm water filtration and improvement of air quality. And besides that, they're pretty and unique — can you see the butterfly design the plants form? And take note of another exciting metamorphosis: the Children's Garden is in the process of being transitioned over to completely organic practices, including the use of compost tea!

14: Oak Grove

Native species tend to be excellent wildlife attractors, as well as requiring a minimum of water and maintenance. Stroll through the *Oak Grove* to experience the towering Oregon White Oak trees, whose conservation was ensured by a generous grant from the Grand Ronde Indian Tribe. Since Native species are often pushed out by invasives such as Himalayan blackberry and scotch broom, controlling invasive plant and animal species in the garden is an ongoing effort. For the past two years we have been working with the US Department of Agriculture to introduce a seed-eating beetle on the scotch broom. Look down and see the *Lower Wetlands*, the twelve acres of constructed ponds through which water flows before being released into Brush Creek. SPROut is partnering with a landowner 4 miles downstream whose stretch has been influenced by increased flow from the garden. Inspired by the garden's constructed wetlands, the landowner decided

to put a conservation easement on her property and is working on invasive species control and wetland restoration.

15: Drought-Tolerant Garden

Look for this little garden up the tram path and behind the *Original Farm House*. In conjunction with OSU Extension, this project showcases interesting plants which require little or no water and have year-round appeal.

16: Lower Wetland Interpretive Trail

Attention bird-watching enthusiasts: access the *Lower Wetlands* here! Make your way past the *Pavilion*, exit the garden near *Tram Stop #3*, and follow the road down to the garden entrance. The 0.8-mile loop begins to the left and skirts twelve acres of lower wetland ponds.

17: Compost Area and Edible Garden

Continue on the tram path past the *Rose Garden*, the *Garden Green*, and the *Pavilion* and soon you'll end up at the *Home Demonstration Garden*. Learn how to turn your food and garden scraps into black gold in the Compost Area, where you can find all sorts of compost bin designs. Composting not only reduces the amount of waste going into landfills, but helps replenish your soil with fertility. Also check out the Edible Garden, another of the *Home Demonstration Gardens*.

What steps can you take to incorporate sustainability into your own life?