



Modeling Sustainable Practices

BY NIALL DUNNE

As we approach the 50th anniversary of Earth Day this April, the Arboretum partners have renewed their commitment to creating a greener future in a number of key ways. One of them is modeling sustainability in its horticulture practices. I recently spoke to UW Botanic Gardens Horticulture Manager David Zuckerman to get some specifics on how his staff applies the tenets of sustainable gardening in their daily activities.

Soil Care

“Probably the most crucial sustainable practice we employ here is mulching our planting beds and around trees,” says David. “It provides so many

benefits, from weed suppression to moisture retention to protecting roots from disturbance. With a few exceptions—such as the use of granite and gravel for some of our dry-adapted Australian and New Zealand flora—we mulch deeply with arborist wood chips. As the chips slowly decompose over time, they create a beautiful organic horizon supporting a great diversity of soil fauna, which provide nutrients and other benefits to our plants.”

Water Use

“We have cut back dramatically on our water use over the years. The majority of our automatic irrigation infrastructure is now under Seattle Park’s MAXICOM central control system. It uses our on-site rain gauge and is also linked to Jefferson Park’s weather station. Data is collected to determine how much supplemental water the plants need. There’s a leak-detection system, too! In areas of the Arboretum that don’t have an automated system, we have switched from using impact sprinklers that blanket large areas to more efficient rotary sprinklers, which have the added benefit of a gentler, more subtle delivery. We also used drip lines for some ‘off-the-grid’ areas, such as for the newly planted conifers along the Broadmoor fence. And we use soil probes to test soil moisture levels.

Right Plant, Right Place

“This is something we’ve practiced here for a long time, going back to Brian Mulligan, who modified the original taxonomic design of the Arboretum so that our plants were sited where they’d perform well. In recent years, we’ve shifted away from taxonomic to ecologically focused displays, such as Pacific Connections. We also closely monitor new plantings, and if they are struggling or not well established after a three-year period, we reassess. This may result in relocation or other measures. Of course, as all gardeners know, you’ve got to work with what you’ve got—and we’ve got quite a lot of less-than-ideal soils. In some cases, such as with our Holly Collection, we create berms for plants that don’t like wet feet.

Integrated Pest Management and Resistant Cultivars

“We use best management practices when it comes to tackling plant pests and diseases, which means using chemical controls only as a last resort. We’ve cut back dramatically on the use of pesticides and herbicides. Really, the only regular fungicide spraying we do now is for the older flowering cherries on Azalea Way, which are susceptible to blossom brown rot fungus. As a historic Olmsted Park, we’re locked into maintaining these old cherries. The good news is that as the old cherries decline or die, we are replacing them with brown, rot-resistant cultivars, such as the Yoshino cherry and *Prunus* ‘Pink Flair’. The use of disease-resistant cultivars is another staple of sustainable horticulture. For example, our beautiful Port Orford cedars have been hard hit by *Phytophthora* root rot. As a solution, we’re trialing the new resistant-rootstock Guardian™ Series of *Chamaecyparis lawsoniana* developed by Oregon State University, and so far, so good.

Fostering Wildlife

“The biodiversity of the Arboretum’s plant collection and natural areas fosters a rich variety of insects, birds and other animals. The

restoration work we’re doing on Arboretum Creek will enhance this web of life. In addition, when aging trees become a hazard to visitors, our arborists will often recycle them into nurse logs or snags, both of which provide tremendous habitat for wildlife. As Larry Hubbell explains elsewhere in this issue [see page 3], we welcome wildlife here and leave it up to natural predators to control problem herbivores, such as the rabbits.”

Weed Control and Equipment

“For weed control in the Arboretum, we mainly rely—as mentioned—on mulching. We don’t use glyphosate anymore, as per Parks’ policy. We recently trialed a new machine that kills the tops of weeds using a hot foam that’s non-toxic and biodegradable, but it’s very expensive. We’re also looking at the new generation of flame weeders. In terms of our utility vehicles, we’re also moving in the right direction: Our fleet is a combination of electric, biodiesel and conventional.” And, we’ve just been awarded a Campus Sustainability Fund grant for an electric cargo bike! Gardeners on bicycles...now picture that!” ☺

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Earth Day at the Arboretum

While celebrating 50 years of Earth Day this April, we’ll also be celebrating the 15th birthday of our annual work-service day, “Earth Day in the Arboretum.” It was born out of an earlier collaboration between the UW Botanic Gardens and the Student Conservation Association, who co-hosted an Earth Day event for several years at the Union Bay Natural Area. In 2005, the venue switched to the Arboretum, and Seattle Parks and Recreation joined the partnership.

“For the most part, the work has been weeding and mulching, which are of course highly valuable to the health of our plant collec-

tions,” says David Zuckerman. “But there have been a few more ambitious projects over the years, too, including the installation of several sets of stairs and trail install and resurfacing. Also, the volunteers have worked with our native plant propagation program, salvaging sword ferns and processing them into containers. They’ve also helped plant the ferns and other natives in a few restoration sites.”

Until recently, the volunteer pool consisted only of high school students. In 2017, however, the Arboretum Foundation joined the team and has been helping recruit volunteers from all walks of life. This year’s event was originally scheduled for Saturday, April 25 but has been postponed until summer 2020, due to concerns about the Covid-19 virus outbreak. Visit arboretumfoundation.org/events/earth-day-arboretum for the latest event updates, and then join us to help restore the Arboretum!