



People and Nature: Our Future is in the Balance

National Wildlife Federation

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Washington State University Pullman, Washington Spring 2003, Landscaping

BACKGROUND

Campus Profile

Washington State University (WSU) is one of the top 50 public research universities in the US with its flagship campus in Pullman, three urban campuses in Spokane, the Tri-Cities and Vancouver and 10 regional learning centers throughout Washington State. WSU offers over 250 fields of study in 10 colleges, including a nationally-recognized University Honors College, and a large Graduate School. Founded in Pullman in 1890, WSU is the state's land-grant research university enrolling more than 18,000 undergraduate and graduate students at the Pullman campus, with more than 21,000 students statewide, including growing numbers in distance degree programs.

Set among the rolling hills of the former Palouse Prairie, WSU is one of the largest residential campuses west of the Mississippi. About half of the student body lives on the 620-acre campus situated against the nearby backdrop of Moscow Mountain and the wooded foothills of the northern Rockies bioregion. Students interested in conservation biology, wildlife ecology, endangered species conservation, environmental science and natural resources find ample opportunity for education and field studies with the 1,200+ faculty by using the extensive on-campus research facilities and other outdoor laboratories, such as the 800-acre Smoot Hill Ecological Reserve

The WSU Native Plant Nursery is a new campus and community ecology project (Going Wild at WSU) initiated by faculty and undergraduate and graduate students taking WSU's restoration ecology course. The project was initiated partly to respond to the challenges of conserving and restoring native Palouse Prairie, widely recognized as one of the most endangered grassland ecosystems in North America. Students work in teams to develop on-campus greenhouse and nursery facilities and demonstration botanical gardens, and to grow native plants for use in restoration projects on naturalized campus landscapes and those of surrounding communities and private landowners.

Work is accomplished throughout the year using a combination of individual student and class projects, students hired for the summer and graduate student research projects. Faculty members and a permanent greenhouse manager contribute technical advice for greenhouse operations and coordination for propagation efforts and on-going field restoration projects. Student teams solicit, design and implement restoration projects on both public and private lands that involve restoration of Ponderosa pine forests, bunch-grass prairies, streams and wetlands.

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GOALS & ACCOMPLISHMENTS

Goals

The immediate goal of the WSU Native Plant Nursery project is to construct the additional greenhouse facilities and growing plots needed to propagate a wide variety of trees, shrubs, grasses and wild flowers characteristic of Palouse Prairie, Camas Prairie and other meadow-steppe and shrub-steppe ecosystems of the Columbia Plateau in eastern Washington. Seed collections and donations of plant species from local sources have been used to start the foundation collection of native plants; however, additional plant materials must be collected and propagated over several years to build the substantial volume of materials needed to support large-scale restoration efforts.

One of the student projects in the WSU Native Plant Nursery is to grow bulbs to restore more widely the beautiful flowers of common camas (*Camassia quamash*), an important food plant for the region's original native peoples. Prior to Euro-American settlement, camas meadows and prairies formed dense, dark-blue carpets that first appeared to be lakes to early explorers like those in the Lewis and Clark expedition. Camas bulbs were so valuable that root foods probably formed over 50% of the diet of native people and bitter conflicts were fought over access to prime camas meadows when white land settlement restricted traditional land use.

The WSU Native Plant Nursery will sponsor teaching and research on restoration ecology and will provide a source of native plant materials to support campus and community efforts in small and large-scale restoration of Palouse Prairie and other naturalized habitats, such as rain-fed gardens and urban landscaping. The nursery also will support the conservation and restoration of several rare plant species and make both technical information and plant materials available to regional nurseries and landowners.

The new WSU Arboretum and Botanical Garden is now being designed and created on campus and the Native Plant Nursery will help support and maintain this important public feature of Washington State University. Substantial numbers of visitors come to the WSU campus each year and through botanical gardens, demonstration plots and other educational tools, this project will greatly advance efforts to increase public understanding and support for conserving biological diversity. The ultimate goals of this project are to contribute significantly to 1) the long-term conservation of biological diversity in the Palouse bioregion and 2) the scientific understanding and development of sustainable agricultural, urban and rural landscapes in arid western environments in the Pacific Northwest.

Accomplishments

Student work crews are planting the foundation stock of native plant materials and constructing an additional shade house and outdoor propagation plots adjacent to our existing campus greenhouse facilities. Seed collection, seed processing, storage, propagation and planting activities will be conducted throughout the year. Studies to determine appropriate propagation

and restoration techniques are being conducted to provide the technical information for a draft *Handbook of Palouse Prairie Restoration*.

The first crop of camas plants has been produced in our greenhouses and several teaching demonstration gardens have either been planted or designed for future planting on the central part of campus when additional materials become available. Students have established important contacts with local conservation groups and botanical experts and the first major, large-scale restoration project has been designed for a local landowner wishing to restore a Palouse Prairie environment that will contain a restored camas meadow. All of the short-term goals of this project are being met and a greater number of students, faculty and the public are becoming aware of the value of this education, research and conservation effort. We are regularly receiving offers of cooperation, donated seeds and plant materials and technical assistance.

Washington State University does not yet have a formally recognized green campus policy, but is moving rapidly in that direction. WSU is actively engaged in new programs and projects for energy conservation, composting, recycling, transportation management, sustainable agriculture and natural resources and zero-waste campus events. The campus community now turns out for Cougar Pride Days in spring to refurbish flower beds, improve landscaping and clean and beautify our campus.

Challenges and Responses

One of the biggest initial challenges of this project has been designing the annual work cycle needed to maintain this facility and native plant production while relying primarily on student contributions and class-driven restoration ecology projects during the academic year. Our solution has been to design an annual work plan that uses primarily volunteer, work-study, undergraduate and graduate students during the academic year, with several paid student positions utilized to carry the heavy work load during the summer. As the number of formal restoration projects increases with cities, public agencies and private landowners, we will begin to generate additional external financial support to meet the facility and labor expenses of the project as it grows. Research grants will provide support for major student research activities.

ENGAGEMENT & SUPPORT

Leaders and Supporters

This project has generated a number of initial positive contacts with private landowners, regional employees in the Natural Resources Conservation Service, local conservation districts and several conservation organizations, including the Palouse Clearwater Environmental Institute and the Palouse Prairie Foundation. We expect the number of cooperators and participants to increase rapidly as written information and our websites are expanded during the coming year. All interested university students will be able to participate in this project through the WSU Community Service Learning Center. WSU faculty have recently proposed the formation of a new School of Natural Resources & Environment (www.snre.wsu.edu) with broad-reaching efforts in the ecological, environmental and natural resource sciences; the native plant project will help engage faculty and students from many disciplines across campus.

Funding

This project is funded in part by an endowment from The Mariposa Foundation and private individuals making contributions to support undergraduate education at Washington State University. The Department of Natural Resource Sciences contributes additional support by providing facilities, greenhouse supplies, equipment and other materials for the project at our 60-acre E.H. Steffen Teaching and Research Center on the Pullman campus.

National Wildlife Federation's Campus Ecology Program

The NWF Campus Ecology Program has provided us with examples, inspiration and technical information to better organize our diverse student and faculty efforts in campus ecology and sustainability at WSU. We appreciate being part of a growing national community of like-minded university and college campuses working towards the betterment of humanity through economic, social and ecological sustainability and the long-term conservation of the natural world.

CLOSING COMMENT

In short, we're "*Going Wild at WSU*".