INTRODUCTION

Looking ahead to the next decade of sustainability at Portland State University

TEN YEARS AGO PORTLAND STATE UNIVERSITY moved systems innovation—economic, environmental, and social—to the center of its strategy with the launch of a Graduate Certificate in Sustainability. A few months later, the University established the Center for Sustainable Processes and Practices (CSP2) with $100,000 in seed money to fund sustainability-related research proposals.

A decade beyond that initial investment—thanks in part to the transformative gift from the James F. and Marion L. Miller Foundation that arrived in 2008—PSU has emerged as a national leader for sustainability in higher education, attracting faculty, students, and senior staff who share the values of educational excellence, innovation, stewardship, and resilience. The Institute for Sustainable Solutions (ISS), formerly CSP2, has established itself as the central portal for sustainability excellence at PSU, serving as a hub for cross-disciplinary research, education, and community engagement all aimed at solving many of society’s most complicated challenges—in Portland and beyond.

ISS, like the University as a whole, is looking ahead to the next decade by developing a strategic plan that further clarifies the Institute’s role, its place at PSU, and its long-term work as an instigator of innovation, unlocking unmatched educational and research opportunities to advance economic, social, and environmental health in the region.

It's a time of transition for ISS, with former director Jennifer Allen stepping aside to pursue exciting new teaching, research, and community engagement opportunities with PSU’s Mark O. Hatfield School of Government. Vice President of Research and Strategic Partnerships Jonathan Fink, who formerly served as director of Arizona State University’s Global Institute of Sustainability before coming to PSU, has stepped in as interim director.
ISS has successfully leveraged its investment from the Miller Foundation, attracting more than $60 million in additional sustainability-related funding to the University. Because of the support provided by ISS, PSU has become known for nationally significant sustainability research and a magnet for energetic junior faculty with related interests. PSU is home to the National Institute for Transportation and Communities, one of five National University Centers from the U.S. Department of Transportation, bringing in over $3 million per year to study sustainable city development. PSU is also a key member of new National Science Foundation-funded research network that has garnered $12 million to study city resilience to climate and weather extremes.

ISS is also at the center of an exciting new partnership with the Portland Bureau of Planning and Sustainability, an effort to link the research assets of the University with the needs of the region as it carries out its climate action plan. The Portland Climate Action Collaborative leverages funding from the Miller gift and other sources to craft lasting partnerships with city agencies in an effort to truly “Let Knowledge Serve the City” as PSU’s motto exhorts.

As an effective leverage point for accessing the resources of the University, the Institute for Sustainable Solutions is planning well into the second decade of sustainability at PSU, with program innovation to support student success, interdisciplinary research, and positive impact in the community that will continue to improve the quality of life for the broader Portland community—and beyond.
ISS Highlights from 2014-15

ENHANCING THE STUDENT EXPERIENCE:

SUSTAINABLE NEIGHBORHOODS INITIATIVE
The Sustainable Neighborhoods Initiative (SNI), which connects students and faculty with groups of community organizations in long-term partnerships to advance sustainability at the neighborhood scale, was operating across four neighborhoods in 2014-15. By the end of the academic year, close to 800 students in 44 classes taught in 18 different disciplines were engaged in projects to advance sustainability across Portland. The four SNI neighborhood partners—the South of Market EcoDistrict, Foster Green, Living Cully, and the Lloyd EcoDistrict—engaged students on a range of projects including knocking on doors and talking to neighbors about the Malden Court Community Orchard project, planning and support for a community event to canvas the local environment known as the Cully Critter Cruise, and construction of the 4th Avenue Parklet in the SoMa EcoDistrict.

SUSTAINABILITY INTERNSHIP PROGRAM
The ISS-funded Sustainability Internship Program continues to offer career-forming experiences for students and this year grew to 28 positions. New partners included the Boise and Concordia Neighborhood Association, Living Cully, Oregon Environmental Council, and PSU’s own Developmental Origins of Health Strategy Collaborative and Impact Entrepreneurs. In January, the Portland State University Bookstore announced a $40,000 gift that will support eight new sustainability internships for the 2015-16 academic year, expanding the program even further. Those new internships will comprise the Climate Action Collaborative Internship Cohort, a newly developed initiative in which interns will be placed with the Portland Bureau of Planning and Sustainability and with other organizations to provide support for the integration of climate action goals across the city.

STUDENT SUSTAINABILITY CENTER
In 2014-15, the Student Sustainability Center (SSC), which was launched (as the Sustainability Leadership Center) in 2008 to provide co-curricular learning opportunities for students, completed the first year of its five-year strategic plan, including its name change which became official in August. Major accomplishments included participating on the host committee and helping to bring the national Association for the Advancement of Sustainability in Higher Education (AASHE) conference to Portland. Eleven representatives presented sessions based on the SSC at the conference. The SSC coordinator also co-authored an article in the Journal of Sustainability Education on the SSC framework for learning outcomes and assessment.
Student Sustainability Center students completed over 4,000 service hours this year—engaging students in projects including hosting campus sustainability events, completing waste audits, designing marketing materials, and others. According to a recent analysis, SSC events and programs see attendance of some 21,000 students per year.

**LIVING LAB**

In its first full year of operation, the Living Lab initiative, which links student projects to campus sustainability needs, has matured into a platform where sustainability challenges are met with new ideas, where students are gaining valuable experiences, and where educational and operational goals are achieved simultaneously. One of the more notable Living Lab projects from the year was the Waste Audit Living Lab Experience project, affectionately called WALL-E. The project team successfully completed more than 10 waste sorts with classes over the course of the year, sorting close to 4,000 pounds of trash while collecting valuable data for the Campus Sustainability Office about the University’s waste streams. Over the course of the year WALL-E staff and students developed curriculum for faculty to incorporate lessons from waste sorts into their classes. WALL-E will continue in the coming year with support from University Studies. Four University Studies faculty will be integrating WALL-E in their classes over the course of the year.

**STUDENT STORY**

**Alejandra Zamudio**

A first-generation college student, Alejandra Zamudio signed up for the Sustainability Volunteer Program where she built upon her past experiences with initiatives including Village Building Convergence and the restoration of the PSU Oak Savannah by lending her expertise to the Cultural Sustainability Map. The map, created by the Cultural Sustainability Task Force, is designed to highlight the cultural centers and resources on campus that can help make students from diverse backgrounds feel more at home at PSU. The map, published last summer, is now available across campus and was presented in a poster session at the AASHE conference. In a post published on the ISS Solutions Blog, Zamudio wrote: “Social and cultural issues are often overlooked when we talk about sustainability, which is a mistake because when we focus on social issues in sustainability, we can connect with many people who may not be aware of the impact broader sustainability issues have on them or on those around them.”
EXPANDING RESEARCH AND FACULTY EXCELLENCE

URBAN SUSTAINABILITY ACCELERATOR
The ISS-funded Urban Sustainability Accelerator (USA) renewed its support from the Summit Foundation, landed a $352,000, two-year contract for work with the Sacramento Area Council of Governments, and recruited two new city regions—which pay $30,000 each for the program—to tap its expertise in sustainable development. In July 2015, USA hosted its third convening of city planning teams participating in the annual program. This year, the USA is shifting its focus from mid-sized cities to larger regions including Sacramento, California; Lansing-East Lansing, Michigan; and Reno-Sparks, Nevada. The USA, which has developed a robust network of 100 urban sustainability experts both on campus and throughout the greater Portland region, is also extending its expertise internationally including engagements with officials from China, Vietnam, Canada, Japan, and a delegation from several countries in Europe.

TREC
Reflecting its expanding geographic reach, the ISS-supported Oregon Transportation Research and Education Consortium changed its name this year to TREC, the Transportation Research and Education Center for Portland State University. TREC’s core funding of nearly $3 million per year results from the award to PSU of the National Institute for Transportation and Communities (NITC), one of five U.S. Department of Transportation University Transportation Centers (UTC).

ECOSYSTEM SERVICES
Interdisciplinary research on ecosystem services remains strong at Portland State, anchored, as for the past several years, by two National Science Foundation-supported projects:

» The Integrative Graduate Education and Research Traineeship (IGERT) on Ecosystem Services for Urbanizing Regions; and

» The Portland-Vancouver Urban Long-Term Research Area project (ULTRA), designed to better understand how differences in local and state levels of governance and policy affect the resilience of both social and ecological landscapes.

While funding for both of these long-term programs is coming to a close, the initiatives have given rise to a strong foundation of expertise on core topics including urban forests, green infrastructure, marine reserves, disaster resilience, forest governance, water systems, and many others. Ecosystems services work at PSU is heavily informed by the University’s many community partners and shaped by the region’s unique needs. For example, in October 2014, ISS hosted a second well-attended Research to Action symposium on ecosystem services. The Research to Action format of short presentations followed by interactive discussions has proven effective in spurring research collaborations across departments and between PSU and community partners. Following the October symposium, Willamette Partnership, Clean Water Services, and PSU faculty jointly created a research project to explore the outcomes of Clean Water Services’ tree planting efforts in Washington County, the results of which quantified avoided health care costs in addition to the other better-known values of an urban tree canopy. Clean Water Services is using the information to build new partnerships for tree planting and restoration with sister agencies working on transportation, public health, and land use.
DEVELOPMENTAL ORIGINS STRATEGY COLLABORATIVE
The Developmental Origins Strategy Collaborative (formerly called Food is Hope, Food is Health) is led by Larry Wallack, former dean of the PSU College of Urban and Public Affairs and is focused on promoting health equity among populations that have historic, endemic health issues due to external factors. In partnership with ISS, the collaborative has held quarterly meetings with community partners and is developing action plans for work related to health equity, including a region-wide scan of related policies, projects, and programs in the region. In August, the collaborative hosted a “Best Babies Zone” event, launching an effort to reduce infant mortality and racial disparities in birth outcomes and improve birth and health outcomes by mobilizing communities to address the social determinants that affect health. This fall, the collaborative will hold a seminar on social capital—what it is, how it can be used, and its role as a mediator of the impacts of toxic stress. In partnership with Washington County, the collaborative will also produce a white paper on Social Capital 101.

NEW CERTIFICATE PROGRAMS
ISS has been involved in the development of a number of new interdisciplinary PSU certificate programs including:

» The newly minted Graduate Certificate in Energy Policy and Management unites areas of energy policy and management expertise across the University into a cohesive program. Graduate courses from Public Administration, Urban Studies and Planning, Economics, Engineering Technology Management, and Systems Science come together to prepare students for careers in energy—an important cornerstone of the regional and global economy.

» The innovative Undergraduate Certificate in Sustainability, developed by the Institute for Sustainable Solutions and housed in the College of Liberal Arts and Sciences, is under discussion at the college level and should move to the Faculty Senate later this year. The proposed certificate, developed in collaboration with a University-wide “credit for prior learning” initiative supported by the Provost’s office, is designed to give all students a flexible and easily identifiable pathway to earn a sustainability credential.

» The Food Systems Certificate, approved in October 2015, will similarly take an interdisciplinary approach. The certificate will be housed in the Public Administration Division of the Hatfield School of Government, but will draw on a range of disciplinary foundations including community health, urban studies, business, and sustainability.
As mentioned above, the Portland Climate Action Collaborative has emerged as a deep partnership between Portland State University and the city of Portland’s Bureau of Planning and Sustainability (BPS) to jointly develop research projects that address climate change mitigation and adaptation goals. Initiated in 2013 and supported by funds from the Miller gift and $50,000 from the Bullitt Foundation, the goal of the collaborative is to produce research that is immediately applicable and relevant to the city that also provides meaningful research and education opportunities to PSU. ISS and BPS together define priority projects, match them with researchers within the University, identify the necessary deliverables, draft budgets, and seek outside funding for support. In the coming year, the collaborative will be extended with new and continuing research, a symposium to share project results, and intern and classroom programs related to collaborative projects. In addition, ISS is engaged in discussions with other Portland city agencies to explore how the collaborative model could be applied more broadly. PSU is now promoting this model of collaboration beyond Portland to the Coalition of Urban Serving Universities and the Urban Sustainability Directors Network. This fall ISS received $75,000 from the Bullitt Foundation to expand the Portland Climate Action Collaborative model.

The following research topics were taken on this year:

- Urban Heat Island/Air Quality
- Valuing Green Infrastructure
- The Local Food Economy
- Participatory Mapping
- Green Loop Analysis
- Flooding on the Willamette

FACULTY STORY

Thad Miller

Thad Miller, assistant professor of urban civic ecology at Portland State University, marries scholarship with community engagement resulting in truly impactful classes and readily applicable research. His work to link sustainability science to social action, policies, and socio-technical change is motivated by a desire to better connect research with solutions for better societal outcomes. Last December, Miller published Reconstructing Sustainability Science, which has the potential to become a cornerstone text for sustainability programs and curriculum development. This spring, Miller was named an executive team member of a prestigious, international Sustainability Research Network supported by the National Science Foundation—one of just two in the country—led by Arizona State University. The multidisciplinary $12 million project will involve some 50 researchers at 15 institutions assessing urban resilience to extreme weather events. Miller’s national star is on the rise and he is an example of a young faculty member who chose to come to PSU four years ago because of the University’s reputation for sustainability.
ISS ADVISORY COUNCIL

In March, PSU announced a 22-member Institute for Sustainable Solutions Advisory Council, which includes community and University leaders with expertise in environmental stewardship, sustainable business, social equity, and systems design. The council’s role will be to provide perspective on emerging issues; give input on program development including ways to align PSU’s sustainability programming with the needs of business, nonprofit, and government sectors; and help identify areas where ISS can broaden its impact in communities across Portland and throughout the Pacific Northwest.

CASCADIA ECOSYSTEM SERVICES PARTNERSHIP (CAESP)

» ISS has continued to capitalize on relationships established through the Cascadia Ecosystem Services Partnership (CaESP), which was funded in part by a grant from the Bullitt Foundation. This partnership has established ISS as a go-to organization in the region for convening, research, and education on ecosystem services topics. This year CaESP supported:

» A collaboration with Willamette Partnership, Upstream Public Health, Oregon Healthiest State, and the Intertwine Alliance to develop explicit links between health and nature and initiatives to pursue in Oregon.

» ISS staff facilitation of two large stakeholder meetings and follow-up on the integration of ecosystem services into natural resource planning in the Rogue Basin.

» Key members on the advisory committee for the University of Washington Northwest Environmental Forum as that organization re-envisions itself as the premier convening body for regional conversations and action on complex environmental issues.

SUPPORT FOR THE REGION’S FORESTS

ISS tapped research expertise in spatial analysis and decision support to help assess the condition of watersheds for the 24 million acres of federal lands managed under the Northwest Forest Plan. The plan originated in 1994 as a response to the listing of the northern spotted owl as an endangered species, as well as imminent listings of a number of salmon species. An assessment of the plan’s effectiveness is required every five years, and PSU faculty, led by Sean Gordon, research assistant professor with ISS, helped to design the methods and write up the results of the 20-year assessment published in 2015.

In addition, Rebecca McClain, research assistant professor with ISS, completed the first phase of a report on the development of the Blue Mountains Forest Stewardship Network, which focuses on five collaborative groups in the Blue Mountains region of eastern Oregon and southeastern Washington, an area that includes four national forests as well as other federal, state, tribal, and private forests and rangelands.

ISS ADVISORY COUNCIL Members

» Jennifer Allen, former ISS director and associate professor of administration, PSU Hatfield School of Government
» Susan Anderson, director, City of Portland Bureau of Planning and Sustainability
» Nik Blosser, president, Celilo Group Media
» Clark Brockman, principal, SERA Architects
» Darrell Brown, professor of accounting, PSU School of Business Administration
» Rich Canaday, retired business and real estate attorney
» Ben Duncan, chief diversity and equity officer, Multnomah County; board chairman, OPAL Environmental Justice Oregon
» Christine Ervin, consultant and speaker, former U.S. Assistant Secretary of Energy
» Jon Fink, vice president for research and strategic partnerships, PSU
» Jill Fuglister, program officer, Meyer Memorial Trust
» John Gordon, Pinchot Professor Emeritus and former dean, Yale University School of Forestry & Environmental Studies
» Tom Kelly, CEO, Neil Kelly
» David Kenney, president and executive director, Oregon BEST
» Thad Miller, assistant professor, PSU Toulan School of Urban Studies
» Bob Packard, partner, ZGF Architects, LLP
» Peter Paquet, wildlife and resident fish manager, Northwest Power and Conservation Council; director, Watershed Management Professional Program, PSU Hatfield School of Government
» Sean Penrith, executive director, The Climate Trust
» Judith Ramaley, President Emerita and Distinguished Professor of Public Service, PSU
» John Russell, founder, Russell Development Company
» Jill Sherman, partner, Gerding Edlen
» Steve Whitney, senior program officer, Bullitt Foundation
» Darcy Winslow, managing partner, The Academy for Systemic Change
EVENT HIGHLIGHTS

» **Winona LaDuke**: On the evening of October 22, 2014, some 1,000 students, staff, faculty, and community members gathered in the Stott Center main gym—the largest event space on PSU's campus—to hear a keynote talk from activist, economist, environmentalist, and two-time Green Party vice presidential candidate Winona LaDuke. The keynote event, free to campus and community members, was the largest ISS-supported event in recent memory, capping off a day of events that celebrated national Campus Sustainability Day and PSU’s Portland State of Mind celebration.

» **AASHE**: In October, PSU served as a host institution for the Association for the Advancement of Sustainability in Higher Education (AASHE) 2014 National Conference. PSU was ubiquitous throughout the program with 40 keynote, plenary, workshop, and session speakers—not to mention close to a dozen posters, and a heavily attended tour of the campus—representing the wide range of PSU sustainability leadership.

» **Fulbright Visit**: Early in 2015, the Institute for Sustainable Solutions was contacted by the U.S. Department of State about hosting a seminar on civic engagement for 137 Fulbright graduate students from 66 countries. The Fulbright program chose PSU after reading about the Sustainable Neighborhoods Initiative. On a sunny Friday afternoon in March, after getting a 30-minute briefing on the SNI over lunch, the students boarded buses for tours to three of the partner neighborhoods.

» **Eighth Annual PSU Sustainability Celebration**: ISS and its partners across campus hosted the 8th Annual Sustainability Celebration in May, welcoming 200 attendees to the Smith Memorial Student Union Ballroom for a formal program, with ample time for visiting the second annual Project Showcase. The showcase featured 44 research programs, student initiatives, and class projects addressing the social, environmental, and economic health of the PSU and Portland community.

PARTNER STORY

**South of Market EcoDistrict**

The PSU Institute for Sustainable Solutions continued its support of the SoMa (South of Market) EcoDistrict, providing the volunteer steering committee with a graduate assistant for administrative help and providing additional support to construct a student-designed parklet near the food carts on Southwest 4th Avenue. When raising funds to purchase the building materials for the parklet proved challenging, ISS, the PSU Foundation, and the School of Architecture launched a successful crowdfunding campaign. During spring term, a class of 22 architecture students taught by ISS Fellow B.D. Wortham-Galvin, constructed the parklet pieces and installed them over the course of Memorial Day Weekend in front of the food carts across from PSU’s engineering building. On June 1, Portland Mayor Charlie Hales joined PSU President Wim Wiewel, students, and officials from SoMa to cut the ribbon and officially open the 4th Avenue Parklet, a now-beloved feature of the neighborhood.
FINANCIAL SNAPSHOT

MATCHING SUPPORT FOR THE MILLER CHALLENGE GRANT
PSU makes a habit of surpassing the Miller Foundation’s challenge to match its annual $2.5 million gift, and this year was no exception. Over the past fiscal year, PSU secured $12,573,094 in sustainability-related support.

Sources of Matching Support for Miller Foundation Challenge Grant
2014-15

- Federal Gov’t: $5,284,064
- Individual Donors: $2,153,588
- Local Gov’t: $1,130,845
- Corporations: $392,540
- Other: $2,361,937
- Foundations: $1,250,119
ISS BUDGET
The 2014-15 Institute for Sustainable Solutions budget was $3.5 million—$2.5 million from the Miller gift, augmented by program grant funding, funds allocated from the previous fiscal year, and resources from the University that were committed along with the Miller gift. The budget includes the following category allocations:

**Enhancing the Student Experience: $1 million**
Programs include curriculum development for sustainability education, the funding of graduate fellowships, internships, travel funding, career counseling, and the programs of the Student Sustainability Center.

**Expanding Faculty and Research Excellence: $1.5 million**
Included in this category is the support for faculty positions and research in key areas of sustainability as well as ISS staff and operations expenditures. Examples of research support include grant matching funds, research stimulus awards, and targeted strategic investments.

**Expanding Community Engagement: $1 million**
Includes funding of community programs such as Impact Entrepreneurs and the Cascadia Ecosystem Services Partnership, outreach to local, regional, and international partners, hosting community events related to sustainability, and ISS development and communications programs.
LOOKING AHEAD TO 2015-16

With three years of funding from the Miller Foundation remaining, ISS is planning its next phase and working to increase its value as a cross-campus connector, trusted community partner, and a beacon for attracting resources to PSU’s sustainability-related work. ISS has gone through an extensive visioning and planning process over the past year in order to build a framework of goals and values around the areas of the student experience, community engagement, research, and organizational sustainability that will be the foundation of the Institute’s identity and work in future years.

The sustainability framework is vital for developing lasting solutions to society’s most vexing problems, and for ensuring all beings within that society have an equitable opportunity to live healthy lives. Sustainability demands interdisciplinary connections, external partnerships, and innovation to challenge the established structures and norms of higher education.

ISS is a connector and accelerator for this movement at PSU. To continue this work, ISS is working hard to clarify and articulate its role within the University and in the community and secure long-term funding for its programs.