

The Sustainability in Prisons Project is a partnership between The Evergreen State College and the Washington State Department of Corrections. Our mission is to bring science and nature into prisons. We conduct ecological research and conserve biodiversity by forging collaborations with scientists, inmates, prison staff, students, and community partners. Equally important, we help reduce the environmental, economic, and human costs of prisons by inspiring and informing sustainable practices.

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The Sustainability in Prisons Project An Overview 2004–12



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An Overview (2004–12)



Carri J. LeRoy, Kelli Bush,
Joslyn Trivett, and Brittany Gallagher
Washington State Department of Corrections &
The Evergreen State College

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An Overview (2004-2012)

Carri J. LeRoy, Kelli Bush, Joslyn Trivett,
and Brittany Gallagher
The Evergreen State College





THE SUSTAINABILITY IN PRISONS PROJECT

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Cover photos: Taylor's checkerspot butterfly by an inmate at Mission Creek
Corrections Center for Women, all others by Benj Drummond. Title page photo
by Benj Drummond.

CONTENTS

Preface.....v

Contributors ix

Acknowledgementsx

Chapter 1. Sustainability in Prisons Project Organization and Network.. 1

Chapter 2. Bringing Sustainability and Science to the Incarcerated 25

Chapter 3. Washington State Department of Corrections 41

Chapter 4. Sustainable Operations at the Washington Department of
Corrections 45

Chapter 5. Conservation Projects: A Year in Review 63

Chapter 6. Education: Lectures, Workshops, and Job Training..... 71

Chapter 7. Evaluation of SPP Programming 81

Chapter 8. Media Coverage of the SPP 87

Chapter 9. Tips for Success..... 93

Contact Us 99

SPP Partners 101

Figures

Figure 1.1 SPP-WA organizational structure 22

Figure 1.2 Organization of SPP-WA partnerships with corrections centers
and team partners..... 23

Figure 1.3 Sample SPP National Network structure 23

Figure 1.4 Sample SPP National Network structure including multiple
institutions and partnerships 24

Figure 2.1 SPP components and outcomes 36

Figure 2.2 Stakeholder interest in SPP programs..... 37

Figure 4.1 Average pounds of waste from WDOC prisons 53

Figure 4.2 Transportation fuel consumption in gallons per offender per
day 54

Figure 4.3 Energy consumption in KWH per offender per day 56

Figure 4.4 Energy conservation project: Airway Heights Correction Center 57

Tables

Table 2.1 Mosaic of SPP activities 29

Table 3.1 Washington DOC Quarterly Fact Card 42

Table 4.1 Numbers at a glance as a percentage of prison population per day 47

Table 4.2 Comparison of resource use between similar corrections centers 62

Table 6.1 Summary of education activities at SCCC in 2011-2012 73

Table 6.2 Summary of education activities at WCCW in 2011-2012 74



Graduate Research Assistant Dennis Aubrey and Inmate Butterfly Technician Carolina Landa examine a Taylor's checkerspot butterfly under a magnifying lens. SPP Staff Photo.

PREFACE

Carri LeRoy

It is a professional highlight of my career to co-direct the Sustainability in Prisons Project with Dan Pacholke, Director of Prisons, Washington State Department of Corrections (WDOC). This project is a unique and powerful partnership between the WDOC and The Evergreen State College (TESC). It has created beneficial collaborations between these two institutions and a variety of federal, state, and local governmental and non-governmental agencies. We have brought science and nature into western Washington prisons and seen glowing results. It is from this promising beginning that I envision a productive expansion of the SPP approach.

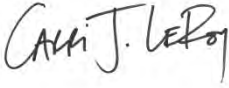
The successes realized by the Sustainability in Prisons Project (SPP) are many-fold and promise innumerable future rewards. To date, the SPP has inspired students from across the country to attend TESC, provided graduate students with opportunities to oversee large-scale conservation efforts, motivated offenders to return to school,

saved the state of Washington several million dollars in cost-avoidance and cost-savings, and preliminary evaluation results indicate that among SPP participants fewer offenders are returning to prison after one year post release. In addition, the work of the SPP has allowed for successful reintroduction of hundreds of endangered frogs and butterflies and hundreds of thousands of rare prairie plants. The prison-based rearing facilities are sometimes award-winning, sometimes state-of-the-art, but always staffed with nurturing and creative offenders, WDOC staff, and TESC students who are united under the common goal of life preservation and restoration. In addition to aiding the rehabilitation of native organisms and habitats, our combined efforts aim to help rehabilitate people living behind bars and enrich their future lives.

As we look forward to a future with a National SPP Network, we hope to share information that will shape nascent SPP programs, build a cohesive network model, learn from collaborative evaluation programs, and motivate one another to reduce the environmental, economic, and human costs of prisons. We hope to encourage a creative, grass-roots model, and at the same time provide an overarching, flexible network structure and guidelines that will motivate institutions and geographic regions to work toward collaborative environmental and social goals. As new SPP programs develop, we offer recommendations that may limit liability and highlight strategies for progress.

This book is intended as an in-depth overview of the Sustainability in Prisons Project as of August 2012. We hope to give new partners insight into the SPP's successful organizational structure and a look back at the history of SPP-WA. Although our evolution was relatively gradual, I sincerely hope that using SPP-WA as a model for future programs will allow new regional and state-level SPP programs to develop rapidly. A collaborative National SPP Network will be to the benefit of offenders, students, corrections institutions, science and sustainability partners, and our broader communities. We hope that

in the future prisons may be seen as places where truly meaningful contributions can be made.

A handwritten signature in black ink, reading "Carri J. LeRoy". The signature is written in a cursive, flowing style. The first name "Carri" is written with a large, stylized 'C' and a small 'i'. The middle initial "J." is written with a large 'J' and a period. The last name "LeRoy" is written with a large 'L' and a stylized 'R'.

Carri J. LeRoy

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ACKNOWLEDGMENTS

The Sustainability in Prisons Project is a partnership with many collaborators. Each partner plays a valuable role in SPP's successful science and sustainability programs. The individual contributors are too numerous to list here, but we would like to note the agencies and organizations they represent.

Contributors assist with a wide variety of tasks including administrative work, scientific oversight, funding and collaboration on grant proposals, education and training, technical expertise, communications support, project dissemination, outreach, research, facilities maintenance, data tracking, and project evaluation. Without the dedication and passion of agency and organization staff, the work of the SPP would not be possible. We extend a sincere thank you to the many partners and staff who have supported the SPP.

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Former SPP staff and students
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*An Oregon spotted frog (*Rana pretiosa*) sits on the hand of an inmate technician at Cedar Creek Corrections Center. Photo by Benj Drummond.*

CHAPTER 1

Sustainability in Prisons Project Organization and Network

Kelli Bush, Carri LeRoy, and Nalini Nadkarni

The Essential Components of SPP

Our mission is to bring science and nature into prisons. We conduct ecological research and conserve biodiversity by forging collaborations with scientists, inmates, prison staff, students, and community partners. Equally important, we help reduce the environmental, economic, and human costs of prisons by inspiring and informing sustainable practices.

THE SPP NETWORK – BACKGROUND

It is our goal to share the principles and practices of the Sustainability in Prisons Project (SPP) across the U.S. and throughout the world. Since 2005, the Washington SPP (SPP-WA) has inspired

similar corrections projects in California, Oregon and Utah. Prison administrators from all western states have expressed interest in adopting SPP activities.

Our vision is that these new SPP organizations will be part of a National SPP Network that will facilitate synchronized programming, evaluation, and dissemination. The SPP Network will also build a set of science, conservation and sustainability research projects that increase the possibility of large-scale restoration and coordinated funding. Network members may include prisons, jails, re-entry programs, and conservation, education and sustainability organizations.

Although each state and corrections institution is unique, our experiences lead us to put forward Five Essential Components for new programs to fit the successful SPP model. We recognize that the priority and order of installation may differ in each state or county, depending on external and internal factors.

1. Bringing nature “inside”

Lectures, workshops, conservation projects and other opportunities to work with living things and opportunities to contribute (OTC) to outside communities and ecosystems

- endangered species and/or ecological restoration projects
- conservation lectures and workshops
- canine and feline rescue programs
- beekeeping
- horticulture programs which contribute food to facility operations or charities

2. Engagement and education

Science and sustainability education for underserved audiences, green job training, skills development for a variety of employment

options; this includes education and engagement of incarcerated students, college students, Washington Department of Corrections (WDOC staff) and the broader community

- sustainable operations and conservation projects – education regarding how and why these actions are taken
- incorporation of job skills and certifications
- emphasis on the importance of tasks and OTCs – i.e., how involvement influences and contributes to the broader community and/or restoration effort

3. Safe and sustainable operations

Goals include water, energy, and waste reduction and other conservation initiatives. Reduce, reuse, repurpose, and recycle materials whenever possible. Increase prison safety by providing programs that reduce offender idleness and engage offenders in pro-social activities. Example initiatives include:

- rainwater catchment, effluent reuse systems or other water conservation projects
- Energy Service Company (ESCO) projects, alternative energy and other energy mitigation strategies
- green purchasing and procurement
- zero waste garbage sorting centers, on-site composting and vermicomposting systems
- bicycle and wheelchair restoration programs

4. Partnerships and collaborations with multiple benefits

A truly collaborative approach where each contributor has an important role, establishing partnerships between correction center(s), incarcerated individuals, education institution(s), and conservation, sustainability, community, and/or science

organizations as a vehicle to accomplish program objectives. SPP programs benefit:

- incarcerated individuals
- students and/or education organizations
- conservation, sustainability, and/or science organizations or initiatives
- correction centers and corrections center staff
- communities and/or ecosystems

5. Evaluation, dissemination and tracking

- coordinate to provide a comprehensive evaluation program (with approved human subjects review)
- disseminate information regarding SPP programs to other SPPs, the public, WDOC and other SPP partners, funding sources, media, etc.
- establish data systems to track progress on targeted goals such as energy use, waste reduction, water conservation etc.

BENEFITS OF JOINING THE SPP NETWORK

The SPP Network will support and encourage open dialogue, contributions of ideas, and the advancement of these model concepts locally and at new program sites. In addition, protocols, best practices, media materials, media-guidance, site visits, collaborations, funding opportunities, breakthroughs, and funding sources for new programs will be shared with and among SPP Network members.

HOW THE SPP NETWORK OPERATES

We are creating a tiered sustainability scale that will provide incentives for further expansion of science and sustainability

practices in corrections centers across the country. New programs can work toward Green, Bronze, Silver, Gold or Platinum SPP levels by enhancing program adherence to the Five Essential Components of SPP. The SPP Network will provide a set of standards for each level based on the three major components of SPP programming: Education, Conservation/Research, and Sustainable Practices.

Sustainability in Prisons Project – Current Staff

Carri J. LeRoy, Ph.D.

SPP Co-Director

Member of the Faculty, The Evergreen State College

Dr. Carri LeRoy is a Member of the Faculty at The Evergreen State College and a Co-Director of the Sustainability in Prisons Project. As a stream ecologist, she is fascinated by interactions between forests and streams and has studied riparian systems in Washington, Arizona, and Utah for the past 10 years. Dr. LeRoy has published over 25 scientific research articles with students and collaborators in the fields of stream ecology, ecological genetics, riparian forest ecology and prairie plant community dynamics. She is particularly excited to be bringing cutting-edge ecological research into prison environments and collaborating with incarcerated individuals and Department of Corrections staff on these projects. She has received grants from the USDA and NSF and has received an award from the Society for Freshwater Science. Her interests in non-formal education are based in her experience with environmental and place-based education and her desire to facilitate environmental stewardship in broad audiences. Carri received a Masters in Sustainable Communities and a Ph.D. in Biology from Northern Arizona University.

Dan J. Pacholke

SPP Co-Director

Director of Prisons, Washington State Department of Corrections

A long-time officer and administrator of the Washington State Department of Corrections, Dan Pacholke co-founded the Sustainability in Prisons Project with Dr. Nalini Nadkarni of The Evergreen State College. In 2003, while serving as the superintendent of the Cedar Creek Corrections Center, Dan implemented many cost-saving conservation initiatives involving both offenders and corrections staff. Activities ranged from recycling, vermicomposting and rainwater catchment systems to beekeeping, horticulture and an organic garden that supports the prison's food services. Later, as the superintendent of the Stafford Creek Corrections Center, he initiated large-scale sustainable operations to lessen the financial and environmental impacts of the facility's 2000 inmates, 600 staff and expansive 210-acre site. As the agency's Deputy Director of Prisons, Dan formalized the Sustainability in Prisons Project through an unprecedented cooperative agreement with Dr. Nadkarni at Evergreen in 2008. Today, he spearheads sustainable operations system-wide as the Director of Prisons and advances rehabilitative educational programs such as K-9 Rescue in which inmates train troubled dogs for adoption. Dan is a graduate of The Evergreen State College.

Nalini M. Nadkarni, Ph.D.

SPP Senior Advisor

Director, Center for Science and Math Education, University of Utah

The Director of the Center for Science and Math Education at the University of Utah, Dr. Nadkarni was a founder of the Sustainability in Prisons Project and Co-Director until 2011. Since 1985, she has conducted forest canopy research on four continents, mainly in Costa Rica and in Washington State, supported by the National Science Foundation and the National Geographic Society. Her awards include a Guggenheim Fellowship and an Aldo Leopold Leadership Fellowship. In 1994, Nalini founded the International Canopy Network to foster communication among canopy researchers, educators and conservationists. While teaching and publishing 85

scientific articles and three books, she identified the need for scientists to reach – and in turn learn from – non-traditional audiences beyond academia. Toward that end, she established the Research Ambassador Program to help scientists convey their ideas and research results to such groups as faith-based communities, urban youth and incarcerated men and women. Nalini's work has been highlighted in numerous scientific journals, popular magazines, television documentaries and conferences such as TED (Technology, Entertainment, Design). She lives with her biologist husband in Salt Lake City, Utah and is working to develop a new prison program in collaboration with the Utah Department of Corrections.

Kelli M. B. Bush

SPP Program Manager

The Evergreen State College

Kelli Bush has been the Sustainability in Prisons Project Program Manager since 2010. She has helped to build and expand the SPP and is responsible for the daily operation of the program. Her long-time passion for all things growing has inspired her professional, academic, and personal pursuits. Kelli's previous professional experience was with Washington State Parks, where she demonstrated her dedication to stewardship of natural resources through grant writing, ecosystem restoration, arboricultural consultation, and environmental planning. During her time at State Parks she routinely worked with incarcerated individuals to accomplish various conservation projects; an experience she found very rewarding. After receiving an A.A.S. degree in Horticulture from Spokane Community College, Kelli transferred to the Evergreen State College where she received her B.A. in Agriculture Ecology in 2002. She is an International Society of Arboriculture Certified Arborist, and Certified Tree Risk Assessor, Master Gardener, and has over 15 years of horticulture related experience. She is pleased to bring her education and experience to the Sustainability in Prisons Project; a unique opportunity to tend to and grow an organization that simultaneously addresses social and environmental issues.

Julie Vanneste

Sustainability Coordinator

Washington State Department of Corrections

Julie has been the Sustainability Coordinator for the Department of Corrections Since 2008 and is responsible for leading the agency's sustainability planning and reporting efforts. She loves coming to work every day to help coordinate and direct all the enthusiasm and great ideas in the WDOC to further its efforts toward environmental and social responsibility. Julie touches nearly every aspect of the WDOC's facilities and operations: She helps find ways to reduce landfill costs, increase energy efficiency, decrease fuel consumption, reduce clothing costs and reduce prisons' impact on the environment. Julie doesn't think of herself as a "Mary Poppins" figure of sustainability that swoops in with all the answers but rather a collaborator and coordinator, connecting people and ideas across prisons, agencies and organizations. Prior to working for Corrections Julie worked as an Oil Spill Contingency Plan Manager for Washington's Department of Ecology. She earned her bachelor's degree from The Evergreen State College, and her Masters from the University of St Andrews, Scotland.

Carl Elliott, MES

SPP Conservation and Restoration Coordinator

The Evergreen State College

Carl brings more than two decades of professional experience to the Sustainability in Prisons Project. Including routine appearances on KUOW's Weekday as its "Radio Gardener," Carl has served in wide-ranging roles to advance sustainable agriculture and horticulture. He has helped The Nature Conservancy with ecological restoration activities at Shotwell's Landing Nursery and Glacial Heritage Preserve and has taught many classes on organic gardening for Seattle Tilth. He was also a founding board member of Seattle Youth Garden Works, which trains homeless children and other at-risk youth in skills for employment and healthy living. Today, Carl applies his long-time passion for plants to helping corrections centers

establish or improve gardens and horticultural programs inside prison fences. He is inspired by the inmates' eagerness to learn and the vigor they bring to their work. With a B.S. from Evergreen, Carl is aiming his graduate studies at the research and restoration of threatened plant life in the glacial outwash prairies of South Puget Sound through the Graduate Program on the Environment at Evergreen. He began as the Conservation and Restoration Coordinator in 2011 and is working to expand plant propagation work to a variety of prisons in Washington State.

Dennis Aubrey

SPP Graduate Research Assistant, MES Candidate

The Evergreen State College

Dennis Aubrey is a graduate student in the Graduate Program on the Environment at Evergreen. He coordinates the Taylor's checkerspot butterfly rearing project at Mission Creek Corrections Center for Women. He is also carrying out a forest canopy research project characterizing and comparing seasonal moisture and temperature variation in arboreal vs forest floor soils in the Quinault rainforest area of Olympic National Park. Dennis has been exploring most of his life, amongst other things hiking the Pacific Crest Trail and bicycling the Pan American Highway. Now he is focusing his skills and determination on academics, aspiring to have a meaningful impact on the world. He sees the Sustainability in Prisons Project as a means to that end.

Evan Hayduk

SPP Graduate Research Assistant, MES Candidate

The Evergreen State College

Born and raised in the lush valleys of western Washington, Evan's lifelong commitment to plants started early. The earliest photographs show Evan working alongside his father with a plastic rake or shovel, most likely doing more harm than good in what was to become an award-winning backyard garden. His childhood summers were not spent away at summer camps, but rather trimming hedges, weeding, spreading mulch and growing vegetables.

Returning to the Northwest after receiving a B.S. in Political Science from Santa Clara University, Evan worked two years with the Washington Conservation Corps, an AmeriCorps program, restoring riparian areas and maintaining backcountry trails in Olympic National Park. A season at Webster's Forest Nursery and two summers at the Mt. Rainier greenhouse have prepared Evan for the Graduate Program on the Environment at Evergreen and the Sustainability in Prisons Project at Evergreen. He hopes to bring his love of life, past experience, and strong back to enhance the already thriving prairie and riparian plant programs at SPP.

Brittany Gallagher

SPP Graduate Research Assistant, MES Candidate

The Evergreen State College

Brittany is the Education and Evaluations Coordinator for the SPP. She has worked in environmental education since graduating from the University of Wisconsin-Madison in 2004. As an AmeriCorps volunteer on Whidbey Island, Washington, Brittany helped to lead Adventure Education expeditions and start a non-profit work-training program for teens. She interned at the Institute for Children's Environmental Health in Freeland, Washington, organizing educational activities and conferences. As a US Peace Corps Volunteer in Niger, Brittany taught science and worked with community groups on agroforestry and development initiatives. Brittany spent a year researching public perceptions of the environment and community-based adaptation to climate change at the University of the South Pacific in Fiji as a Rotary International Ambassadorial Scholar. She has returned to the Pacific Northwest as the Sara Bilezikian Fellow for Social Justice and a student in the Graduate Program on the Environment at Evergreen. Her interest in the connection between social and environmental issues led her to the Sustainability in Prisons Project, where she coordinates evaluations activities as well as a monthly lecture series held at two Washington prisons.

Andrea Martin

SPP Graduate Research Assistant, MES Candidate

The Evergreen State College

Andrea grew up in the small town of Sweet Home, in Oregon's Willamette Valley. She spent more time daydreaming about big cities than she did hiking or fishing, and moved to San Francisco after high school to pursue World History and Women and Gender Studies at San Francisco State University. It was only upon living in such a crowded place that she finally began to appreciate the green spaces she had grown up in. After several backpacking trips and a year in West Africa, Andrea moved on to trail work, leading teenage trail crews and teaching environmental education in Oregon, Washington, California, Montana and Wyoming. She returned to academia in 2011 and is currently a student in the Graduate Program on the Environment at Evergreen, where she is to expanding her teaching skills and making and observing new connections between people's lived experiences and the natural world. With SPP, Andrea is the lead on the Oregon spotted frog program at Cedar Creek Corrections Center. She is excited to be part of such an innovative and important project. In her free time she likes to do yoga, run, and crochet everyone she knows a scarf.

Joslyn Rose Trivett

SPP Conference Coordinator

The Evergreen State College

Joslyn Trivett moved from Vancouver, British Columbia to study ecological science at The Evergreen State College. After graduating in 1994, she pursued a career in restoration ecology. She worked for the wetland mitigation monitoring program at the Washington State Department of Transportation, the Revegetation and Wilderness Monitoring crews for Olympic National Park, and she ran restoration planting projects and nursery operations for Sound Native Plants in Olympia, Washington. At the same time as beginning to raise a family, her focus shifted to the realm of social psychology. She became a Crisis Line volunteer at The Crisis Clinic of Thurston and

Mason Counties, joined the training team, and contributed to major staff projects and committee work. In 2011 she obtained a Master's in Human Development, specializing in Leadership in Education and Human Services from Pacific Oaks College in Pasadena, California. She has volunteered her knowledge with numerous community organizations, including Native Plant Salvage Project, Family Support Center of South Sound, and South West Olympia Neighborhood Association. She brings her mix of ecological and social expertise to SPP to coordinate the first national conference for the Project. Looking to her future with SPP, she is excited to create a study to further characterize prisoners' experiences with the Project.

Sustainability in Prisons Project Roles

The roles described below are a general outline of tasks included in SPP team members' duties. Not all contributions are reflected here; many others play an important part in establishing and maintaining science and sustainability programs. These roles are particularly important to the success of conservation projects. Nearly all of the positions described are part-time (most half-time or less). Faculty and students at TESC and staff at WDOC have other academic and job commitments. It is the goal of the SPP to leverage staff time and other resources through partnerships, student engagement, and inmate participation. These roles are often slightly modified as needed to fit a particular project or institution.

SPP CO-DIRECTOR (TESC)

- work collaboratively with WDOC SPP co-director to determine organization goals and objectives
- present SPP programs to a wide range of audiences/venues including: conferences, colleges/universities, state agencies, media outlets, professional organizations etc.)
- communicate with SPP co-director (WDOC) and SPP staff
- participate in formal and informal security and safety training

- initiate contacts and introduce new SPP programs
- mentor students in academic work
- supervise SPP program manager
- interact with and inform TESC faculty and administrators of SPP activities
- finalize reports
- implement visioning and synthesis activities
- prepare grants and other funding requests
- prepare material for publications and develop outreach materials as needed
- respond to inquiries from media, students, partners, corrections administrators and others
- assist with problem solving as needed
- assist SPP with access to TESC resources as appropriate

SPP CO-DIRECTOR (WDOC)

- work collaboratively with TESC SPP co-director to determine organization goals and objectives
- present SPP programs to a wide range of audiences/venues including: corrections audiences, conferences, community events, other state agencies, conservation groups, media outlets, professional organizations, etc.)
- communicate with SPP co-director (TESC) and SPP staff
- initiate contacts and introduce new SPP programs
- supervise SPP/WDOC sustainability coordinator
- communicate with WDOC staff and administrators regarding SPP's mission and project goals
- assist with problem solving as needed

- review progress and final reports
- implement visioning and synthesis activities
- respond to inquiries from media, students, corrections administrators and others
- seek support to fulfill identified SPP program needs
- assist SPP with access to WDOC resources as appropriate

SPP SENIOR ADVISOR

- participate in SPP planning and visioning activities
- present SPP programs to a wide range of audiences/venues including: corrections audiences, conferences, other state agencies, media outlets, conservation groups, professional organizations, etc.)
- collaborate with SPP-WA and National SPP Network to identify, support and/or prepare grant proposals or other funding opportunities
- respond to inquiries from media, students, corrections administrators and others
- advise and support SPP-WA and National SPP Network as needed
- establish SPP-UT

SPP PROGRAM MANAGER

- coordinate project planning and implementation activities
- implement visioning and synthesis activities
- manage program budget and provide directors with regular updates
- approve and request purchases

- identify, prepare and implement grants, contracts and other funding proposals
- track and monitor SPP program progress
- report “deliverables” to funding sources, WDOC, and other agencies
- write reports, project protocols, web content and material for publications
- coordinate and participate in media events with WDOC staff and other partners
- present SPP programs to a wide range of audiences/venues including: corrections audiences, various conferences, other state agencies, media outlets, community events, professional organizations, conservation groups, etc.
- develop SPP outreach and organization structure and planning materials
- coordinate and participate in WDOC security and safety training
- train and supervise SPP staff and student research assistants
- coordinate and prepare agendas for weekly team, monthly leadership and other meetings
- respond to inquiries from media, students, corrections administrators and others
- communicate and coordinate with project partners (agencies and organizations) to accomplish common goals
- work with SPP team and other partners to identify and problem solve program related issues
- provide oversight for project website, contribute content
- provide oversight for program evaluation activities
- initiate and implement new projects

SUSTAINABILITY COORDINATOR FOR THE DEPARTMENT OF CORRECTIONS

- liaison with other state agencies and organizations representing sustainability initiatives
- responsible for all WDOC sustainability planning and reporting efforts
- provide leadership and guidance for specific projects
- responsible for compilation and analysis of statewide sustainable operations data
- serve as WDOC project manager on sustainability initiatives
- identify and share best practices among prisons
- help maintain WDOC Sustainability websites and ensure that information is updated frequently
- provide sustainability training and expertise to environmental staff, capital project managers, institutional personnel, executive management, and other stakeholders
- recommend new procedures, processes, or equipment modifications where appropriate to improve sustainability goals
- assist in the development of WDOC sustainability policies, energy conservation programs, water conservation programs, and sustainable design guidance for capital projects.

SPP STAFF

Staff is added as needed and as funding is available i.e. native plant production program.

- lead specific projects or events
- supervise student interns or research assistants as needed

- track, monitor and report project progress (including budget as needed)
- meet regularly with program manager and partners
- participate in weekly SPP team meetings
- track supply needs and submit order requests
- write reports, project protocols, web content and material for publications
- when applicable coordinate training of inmates, provide relevant education materials, and act as intermediary between inmates and the science/conservation community
- communicate with WDOC project lead and SPP program manager regarding project status, technical difficulties, and any behavior issues as needed
- work with the SPP team and partners to identify and problem solve project related issues
- other duties as assigned

SPP GRADUATE RESEARCH ASSISTANTS

- assist with project planning
- coordinate training of inmates, provide relevant education materials, and act as intermediary between inmates and the science/conservation community
- assist with management of inmate technician crew, including helping WDOC project lead with interviews, hiring, and performance evaluation
- coordinate and provide project specific workshops and lectures
- monitor progress “on the ground”
- work with team to identify and problem solve project related issues

- develop SPP outreach materials
- conduct background research
- write- protocols, web content, and publications
- participate in WDOC security and safety training
- track supply needs and submit order requests
- communicate with WDOC project lead and SPP program manager regarding project status, technical difficulties, and any behavior issues
- assist project scientist with related lab and field work
- assist with grant proposals
- collect, enter, & analyze data
- administer lecture and conservation project surveys; enter data

COLLABORATING PROJECT SCIENTIST

These are partners for conservation and education projects e.g. rearing butterflies or growing native plants.

- develop protocols and targets
- measure and monitor animal/plant health
- present collaboration with SPP at conferences, working group meetings, and other events as relevant
- write and assist with publications
- coordinate release/out-planting
- assist with problem solving and consultation
- identify, support and/or prepare grant proposals or other funding opportunities that support SPP
- provide research assistant with training, resources and guidance regarding program implementation and research as needed

- provide inmates with training, lectures, workshops and education resources as needed
- provide technical expertise
- update SPP staff regarding changes or new developments in species recovery or restoration efforts

WDOC PROJECT LEAD

- recruit, hire, and supervise inmates
- ensure day to day quality control
- assign inmate technicians project tasks as needed or as requested by SPP and/or collaborating scientist
- coordinate with research assistant/project scientist to accomplish project goals, allow visit access and assist with problem solving
- communicate purchase needs with research assistant
- address inmate behavior issues
- communicate on a regular basis with research assistant, SPP program manager and WDOC project supervisor regarding general project status and any requests or inquiries from partners, media, students or others
- provide inmates with relevant and acceptable learning materials which have been supplied by project partners
- represent the collaborative program as needed with approval from WDOC supervisor
- help arrange clearance for items and equipment needed for the Project
- help arrange for visitor background checks as needed

WDOC PROJECT SUPERVISOR

- act as WDOC point of contact for interactions among institutions (e.g., WDOC, TESC, WDFW) for agreements, purchasing, security clearances, facility maintenance, and training/lectures
- provide mechanisms for security and safety training to SPP participants
- assist with problem solving regarding program and/or any behavior issues
- facilitate communication and cooperation among prison WDOC staff for: planning, implementation and maintenance of programs
- represent WDOC interest in project to the WDOC, the public, media, and inmates
- coordinate security/media clearances with SPP staff and WDOC public information officer

Organizational Structure

Organization charts (Figures 1.1 and 1.2) reflect current SPP-WA structure and examples of how future projects in other states or counties may fit within a National SPP Network structure. In Washington, SPP-WA is co-directed by the Department of Corrections (WDOC) and The Evergreen State College (TESC). Co-Founder of the SPP and former Co-Director Nalini Nadkarni serves as the SPP-WA Senior Advisor. The work of SPP-WA is highly collaborative with contributors from the WDOC, TESC and many partner organizations. The organization charts provided below do not include all SPP contributors.

The SPP-WA is growing in Washington State and the ellipses on both sides of Figure 1.2 reflect that growth to new WDOC institutions in Washington State. The current SPP-WA program will work to support the development of new teams and programs in other

regions across Washington and outside the state. While the priorities and needs of each corrections center will vary, each team will be guided by the SPP Essential Components, and supported with resources and consultation services provided by the existing program and the newly developed network.

The National SPP Network structure could be visualized as linked and collaborating SPPs (Figure 1.3), and then expanded to represent the unique partnerships of each SPP program (Figure 1.4). These preliminary relationships will likely evolve as new relationships are built with new corrections programs, rehabilitation programs and scientific partners expand.

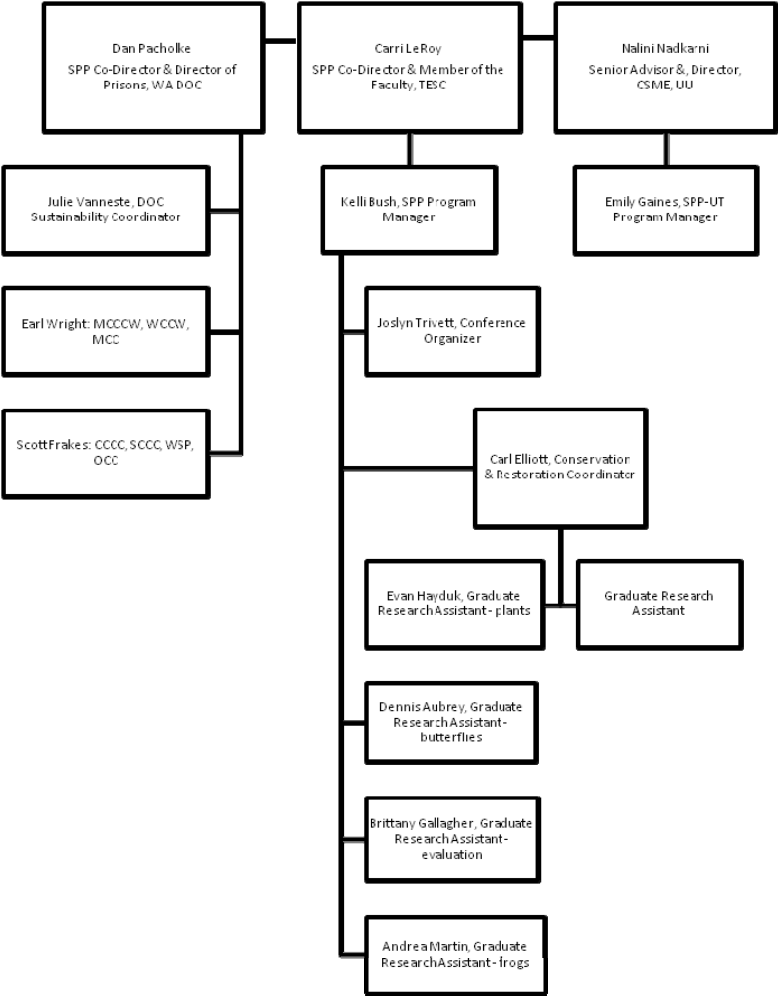


Figure 1.1 SPP-WA organization structure (focused on SPP staff; does not include detail on conservation, prison, or community partners)

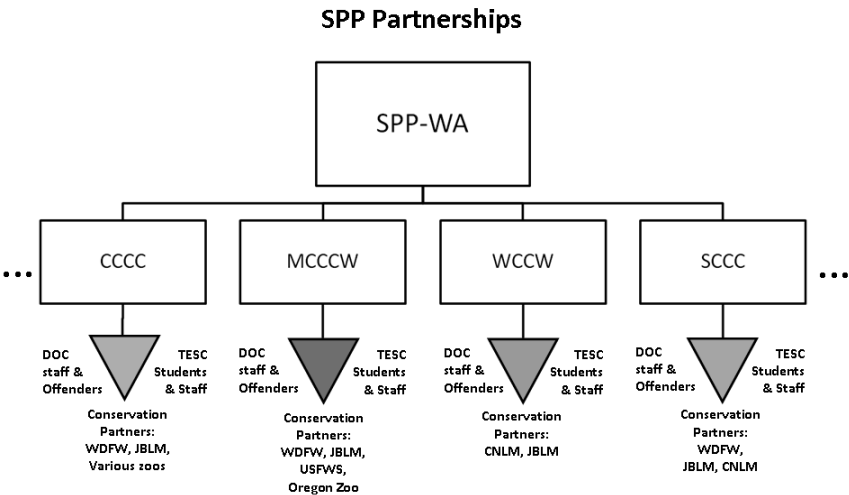


Figure 1.2 Organization of SPP-WA partnerships with corrections centers (rectangles) and team partners (triangles); ellipses indicate expansion to other WA corrections centers

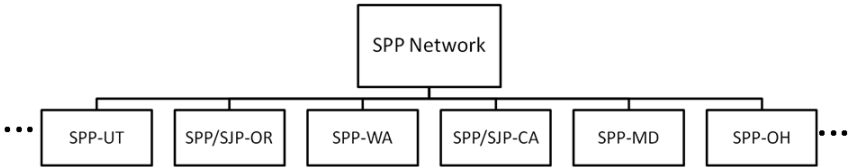


Figure 1.3 Sample SPP National Network structure

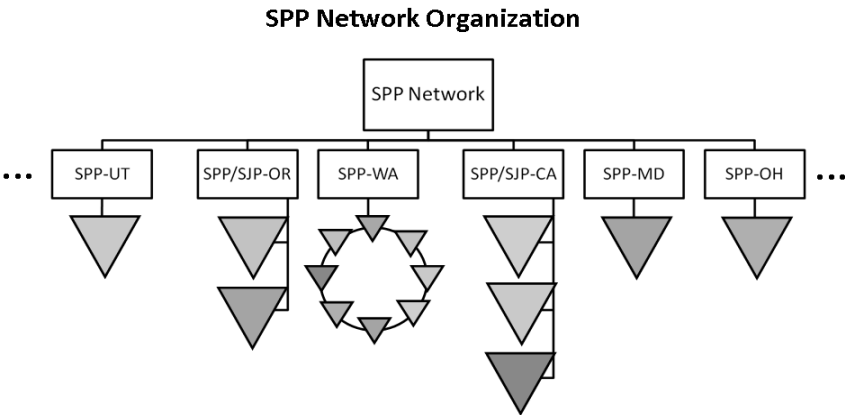


Figure 1.4 Sample SPP National Network structure including multiple institutions and partnerships



An inmate on the SPP conservation nursery crew tests potting soil mix. Photo by Benj Drummond.

CHAPTER 2

Bringing Sustainability and Science to the Incarcerated: The Sustainability in Prisons Project

Nalini M. Nadkarni and Dan J. Pacholke; modified from 2011 original for *Values in Sustainable Development*, Jack Appleton, editor. Forthcoming by Routledge, 2013

Abstract

Since 2004, our interdisciplinary team has explored how scientists and sustainability experts can engage incarcerated populations in ways that benefit ecology, conservation biology, and corrections communities. The large and growing population of prisoners in our country, nearly 1 in 100 adults, has little or no access to natural ecosystems, sustainability practices, nor to traditional science education through institutions such as science museums. This population is disproportionately comprised of underrepresented

minorities, and in general, a low level of formal education. We initiated an innovative program in Washington State, the Sustainability in Prisons Project (SPP), which has successfully connected science and sustainability to prisons in Washington State through lectures, workshops, and direct involvement of inmates with conservation research such as captive rearing of endangered animals and plants. These activities were undertaken to support the goals of improving offenders' attitudes toward and knowledge of ecological concepts and sustainable practices, reducing recidivism in corrections centers, and enhancing opportunities for offenders once they re-enter their communities. In addition to improving offender behavior and opportunities, the Project has sought to reduce the carbon footprint and costs of prison operations. The program has been successful at the prison- and state level, and we now wish to expand these activities to the national level by gathering representatives of science, sustainability, and corrections institutions to consider the challenges and benefits of this work.

Introduction

Scientists and sustainability experts tend to seek answers to their questions through collaborations with people of similar background, culture, and education. They also tend to disseminate their work to audiences who hold similar values and share common vocabularies. However, there is an increasing need for scientists and sustainability experts to both engage non-scientists in the practice of research, and to communicate their work to those who are "outside the choir" (Leshner 2008, Holdren 2010).

Although public engagement and involvement in sustainability efforts are typically viewed by the scientific community as at best a duty, and at worst, a burden, certain activities that engage the public have also been viewed as a benefit to the scientist. For example, the growing field of citizen science and sustainability has demonstrated that non-trained citizens can carry out aspects of data collection and reduction of energy use with rigor if they have the guidance and

interest of a scientist or sustainability expert. However, citizen-implemented projects nearly always include those who, even if they do not hold higher degrees in science, are already interested in ecology, nature, or an aspect of conservation or sustainability. A great challenge for science and sustainability educators is to engage those who do not share such backgrounds, and who come from other backgrounds and ethnic groups, without a previous interest in the scientific endeavor.

Background

INCARCERATION, SCIENCE, AND SUSTAINABILITY

The U.S. corrections population, those in jail, prison, on probation or on parole, totals 7.3 million, or 1 in every 31 adults. Of these, nearly 2.3 million adult American men and women are serving terms inside prisons (PEW center, 2011). Taxpayers spend \$62 per day per inmate. The rate of inmates returning to prison is 51.8%, higher than any other country in the world. Ethnic minorities make up a disproportionate amount of this population; about 65% are African American or Latino, although they make up only 25% of the total population. African-American adults are four times as likely as whites to be under corrections control. These individuals are literally locked away from contact with scientists and nature, rendering incarcerated people the most underserved and underutilized audience for science engagement in our country.

Incarceration, however, need not preclude participation with science and sustainability. Since 2005, an innovative, interdisciplinary project in prisons in Washington State, the SPP, has shown that with minimal resources, scientists can raise the awareness of the importance of science, sustainability, and nature in this population (www.sustainableprisons.org, Ulrich and Nadkarni 2008, Bhattacharjee 2008). They can also inspire inmates to consider and plan for a future profession or further education in science. With some notable exceptions, prisons offer limited educational

opportunities. Yet many inmates wish to forge new lifestyles and professions after release; these individuals make excellent candidates for outreach and training in science and sustainability.

A trend that has been noted in prisons as well as other institutions where individuals have limited access to nature and the world (e.g. assisted living centers, mental institutions) is the positive power of working with growing plants and animals. Horticultural therapy and activities involving training of guide dogs, for example, have been shown to reduce aggression, increase patience and social contacts, and enhance empathy for other living things (Grinde and Patil 2009, Weinstein et al. 2009, Lee et al. 2009). These are exactly the characteristics that are valued by corrections administrators who wish to reduce violence, increase social interactions, and ultimately, bring down rates of recidivism.

To fulfill the multiple goals of bringing science to an underserved audience, reduce violence and recidivism, enhance sustainability, and to provide scientists with a new set of collaborators, scientists from The Evergreen State College (TESC) and corrections administrators with the Washington State Department of Corrections (WDOC) forged a partnership, the SPP. Its mission is to “bring science and nature into prisons. We conduct ecological research and conserve biodiversity by forging collaborations with scientists, inmates, prison staff, students, and community partners. We help reduce the environmental, economic, and human costs of prisons by inspiring and informing sustainable practices.”

This began as a single ecology research program in 2004. This was funded by a small portion of a National Science Foundation (NSF) Communicating Research to Public Audience (CRPA) grant supplement. The program was implemented in a single minimum security prison to learn how to grow moss *ex situ* to help reduce collecting of moss from old-growth forests for the horticulture trade. The program engaged ten inmates to carry out moss horticulture experiments that taught them about botany, experimental design,

and the scientific process. It provided new scientific knowledge for the ecologist (which species of mosses grew fastest under which watering regimes). It also showed prison administrators that inmates exhibited good behavior and had “different conversations” in the prison yard. One of these inmates co-authored a peer-reviewed paper, delivered a paper on the prison research at the 2008 annual meeting of the Ecological Society of America, and has since gone on to graduate school in molecular biology (Ulrich and Nadkarni 2008).

Over the next three years, the SPP was funded by a contract with the WDOC to expand to four other prisons (both men and women’s prisons; minimum to maximum security levels). In that time, different educational, conservation, and sustainability programs have been placed under the general umbrella of the SPP, and a wide variety of collaborating partners have joined the Project to create the mosaic of activities described in Table 2.1.

Table 2.1. Mosaic of SPP activities

Prison Name (Abbreviation)	Num./gender of inmates	Security Level	SPP Activity
Cedar Creek Corrections Center (CCCC)	500/male	Minimum	Recycling, Composting, Water, Gardens, Orchards, Bees, Tilapia, Dogs, Frogs
Stafford Creek Corrections Center (SCCC)	2000/male	Medium, Maximum, Supermax	Recycling, Composting, Gardens, Bees, Lectures, Prairie Plants, Birdboxes, Dogs
McNeil Island Corrections Center (MICC)	2300/male	Medium, Maximum	Gardens, Lectures

Washington Corr. Center for Women (WCCW)	1700/female	Medium, Maximum; Supermax	Recycling, Gardens, Lectures, Dogs
Mission Creek Corr. Center for Women (MCCCW)	300/female	Minimum	Composting, Gardens, Lectures, Dogs, Butterflies

EDUCATION PROGRAMS

The positive results of this preliminary collaboration led to the implementation of a lecture series, “Sustainable Living, Sustainable Lives.” This effort brought scientists and sustainability experts to the prison for monthly lectures. Scientists, prison staff, and inmates sat side by side, learning about topics that ranged from recycling to brown bear ecology. Since 2005, the following educational activities have occurred:

- More than 90 lectures have been held at five prisons, with more than 2400 inmates and 280 staff attendees
- More than 75 scientists and sustainability practitioners from more than 35 organizations, agencies, and universities provided lectures and presentations
- Nearly 30 workshops have been held on topics including gardening, composting, soil science, butterfly biology, bee-keeping, and arboriculture.

In addition to education of inmates, the SPP has been responsible for the instruction and support of graduate students. Twelve students in the Masters of Environmental Studies Program at TESC, a two-year professional degree that emphasizes environmental policy, have been directly engaged with the SPP for internships and their thesis work. They have provided the logistical and educational support for the conservation programs, serving as critical intermediaries between collaborating scientists from partner agencies and the

inmates. They also organize and implement the lecture series and workshops.

CONSERVATION BIOLOGY EFFORTS

The success of the moss-growing program provided a precedent for other scientists to work with inmates. Conservation biologists at the Washington State Department of Fish and Wildlife provided expertise and a framework for inmates to captive-rear the endangered Oregon spotted frog (OSF). Four other captive-rearing facilities in Washington State were raising these animals for restoration of the dwindling populations in the wild. Inmates received training from herpetologists and their work resulted in the largest populations with the lowest mortality; they won the “Best Captive Rearing Facility Award” in 2009 and 2010.

Similarly, the SPP engaged a non-profit conservation group, The Nature Conservancy, and biologists at the Joint Base Lewis-McChord, which promotes an ongoing effort to restore relict prairie communities. Inmates at another prison have grown ca. 500,000 plugs of 16 species of prairie plants each of three years for out-planting in the prairies. Bird conservationists have benefitted from inmates building 500 bird boxes for the western bluebird and the purple martin. The most recent program involves women at a minimum security prison trained to rear the endangered Taylor’s checkerspot butterfly for release at Joint Base Lewis-McChord.

Overall, for the five prisons, the following has resulted from conservation programs:

Oregon Spotted Frogs

- In 2009 and 2010, inmates successfully raised 149 frogs with a mean survivorship of 77%;
- OSFs raised in prisons were consistently larger than those raised by area zoos;

- In 2011, field surveys revealed new frog egg masses, evidence that captive-reared frogs are reproducing. In addition, to reduce rearing costs and energy involved with shipping, offenders raise crickets needed to raise frogs;

Native Prairie Plants

- In 2009-2011, inmates raised 515,000 native plants of 16 species for South Sound prairie habitat restoration;

Butterflies

- A team including female inmates will rear Taylor's checkerspot butterflies, a federal candidate for endangered listing, in a new custom rearing facility;

Bird Boxes

- Inmates have constructed 500 bird boxes for the endangered western bluebird and purple martin.

SUSTAINABLE OPERATIONS

The social climate of Washington State was conducive to instigating sustainable operations in all state agencies, including the WDOC. The Governor decreed that sustainability of water, energy, and materials was to be encouraged in all possible ways. Cost-savings, always a goal of corrections departments, was also a driver in reducing use of materials and shrinking the energy footprints of its facilities.

The initial sustainability lectures at the SPP prisons inspired the implementation of a variety of sustainability programs: organic gardens, worm composting, recycling sheds, water catchment containers, and beekeeping. By installing ultra-low-flow toilets, Cedar Creek Corrections Center (CCCC) has saved more than 250,000 gallons of water each year. CCCC recycles more than 2000 pounds of paper and 4300 pounds of carton per month. Stafford Creek Corrections Center uses push-blade mowers to reduce gas use. Based on data from internal tracking by the Department of

Corrections staff from 2005 to 2010, sustainable operations have resulted in:

- Reduced solid waste to landfills by 30%
- Increased diversion to recycling by 90%
- Increased food waste diversion to composting operations by 90%
- Decreased facility heating and energy consumption by 8%
- Reduced all transportation fuel consumption by 25%
- Increased biodiesel use by 9% from 2009-2010
- Reduced total carbon emissions by 40% from 2009-2010.

PARTNERSHIPS AND COLLABORATORS

The following diverse institutions have collaborated with the SPP: Amphibian Ark; International Society for Arboriculture; Northwest Trek; Center for Natural Lands Management; The Nature Conservancy; Oregon Zoo; Point Defiance Zoo and Aquarium; Woodland Park Zoo; U. S. Fish and Wildlife Service; US Army Joint Base Lewis-McChord; Washington Department of Fish and Wildlife; Washington Department of Natural Resources.

MEDIA FUNDING

Attention from the popular and scientific media has been remarkable. In addition to numerous articles in the local and regional press, the SPP has been featured multiple times on National Public Radio, the AP wire, on regional public television, CNN, and on PBS NewsHour. The Project has been featured in greater depth in national magazines, including Discover, Mother Jones, and Miller-McCune. The scientific media has also disseminated this work; one inmate was featured as a “Newsmaker” in the journal *Science* and was senior author on a paper published in a peer-reviewed environmental science journal. The SPP has been featured twice on the splash page of the NSF website. In 2010, Nadkarni was awarded

the National Science Board's prestigious Public Service Award, for her efforts in outreach to non-traditional public audiences, with the SPP as the premier example. Chapter 8 has an extensive list of media reports on the Project.

PROJECT BENEFITS

Thus, incarcerated audiences, though seemingly unreachable and unteachable, have proven to be interested, capable, and desirous of science education and sustainability practices. Scientists and sustainability experts view benefits as: 1) directly engaging and raising scientific awareness and appreciation in a hitherto underserved public audience (evaluations of prisoners showed significant science content integration); 2) potentially gaining new scientific insights from an audience with fresh eyes; 3) producing large numbers of endangered plants and animals for much-needed restoration work; 4) fulfilling Broader Impacts for NSF grant requirements in powerful and visible ways; and 5) potentially recruiting new students to scientific study; some offenders expressed a keen desire to pursue such work after release.

Benefits for the corrections community include: 1) direct cost-savings (e.g., growing vegetables and honey); 2) occupying inmates with topics other than dissatisfaction with their condition; 3) providing job skills after release; and 4) improving the image of prisons in the larger community; intense positive media coverage provided a sense of pride and accomplishment for prisons, the latter a sector of society that rarely receives public approval.

EVALUATION OF PAST WORK

Formal evaluation of the work to date was performed by a consultant (David Heil, LLC). Portions of the Executive Summary are below:

From May to September, 2009 David Heil & Associates, Inc. (DHA) conducted an evaluation of the SPP using both qualitative and quantitative data collection methodologies designed to obtain input

from multiple audiences (scientists, offenders, and officers). The evaluation explored outcomes and participant feedback related to two major components of the SPP: the ongoing lecture series for offenders at corrections center staff and three Ecological Research and Conservation (ERC) Programs. The evaluation also examined stakeholder perspectives of the overall SPP, including the sustainable practices programs.

The data collection strategies included *Pre- and Post-Lecture Surveys* and lecturer interviews related to the Lecture Series; *Pre- and Post-Program Surveys* related to the ERC Programs; and offender and staff interviews related to the lecture series, the ERC Programs, and ongoing sustainable practices efforts at the prisons. A graduate student at TESC supported this work by assisting in the development of data collection tools, coordinating the collection of survey data, and conducting the lecturer interviews. Details on the data collection strategies are described in Chapter 7.

As the first comprehensive evaluation of the SPP, an important purpose for the evaluation was to describe the SPP model. Data from the evaluation, along with discussion with program staff, suggest that the four major components of the program each have a different reach within the corrections center (Figure 2.1). The prison-wide sustainability efforts have the broadest reach across the center; the lecture series reach a smaller group of individuals who are eligible to attend based on their behavior and who choose to attend based on their interest; the ERC programs reach a very small group of offenders (typically 10-15) who are selected to participate; and finally, planning activities involve a very small group of administrators, staff, and students.

Some of the key evaluation findings relate to outcomes of the SPP lecture series and ERC Programs. Both types of programs appear to result in increased awareness of the impact of their behaviors for participating offenders. For those who attend the lectures, this may simply mean that they better understand the impact of their

personal choices on the environment. For those who participate in the more intensive ERC programs, this understanding of the impact of their behavior is also tied to a sense of ownership and responsibility for their work. These results suggest that the ties between environmental responsibility and personal and professional responsibility are an important element of the SPP. As the program moves forward efforts should be undertaken to enhance these outcomes and to further explore their implications.



Figure 2.1 Sustainability in Prisons Project components and outcomes

The diverse perspectives reflected by the stakeholders in the SPP present a challenge to program development efforts to design a cohesive set of program activities. Nonetheless, the comprehensive program approach, including the lecture series, intensive ERC Programs, and efforts to support prison-wide sustainable practices is already working to support these diverse goals, and focused program development efforts will help to ensure ongoing success in these areas. Although the Project must be deliberate in efforts for expansion, stakeholders universally agree that the sustainable practices should continue to expand. Both offenders and prison staff provided recommendations for expanding the lecture series and ERC

Programs and developing additional SPP programs. As SPP staff undertake these efforts, it will be essential to involve the stakeholders described in Figure 2.2 in these efforts to ensure that the program reflects their diverse interests.

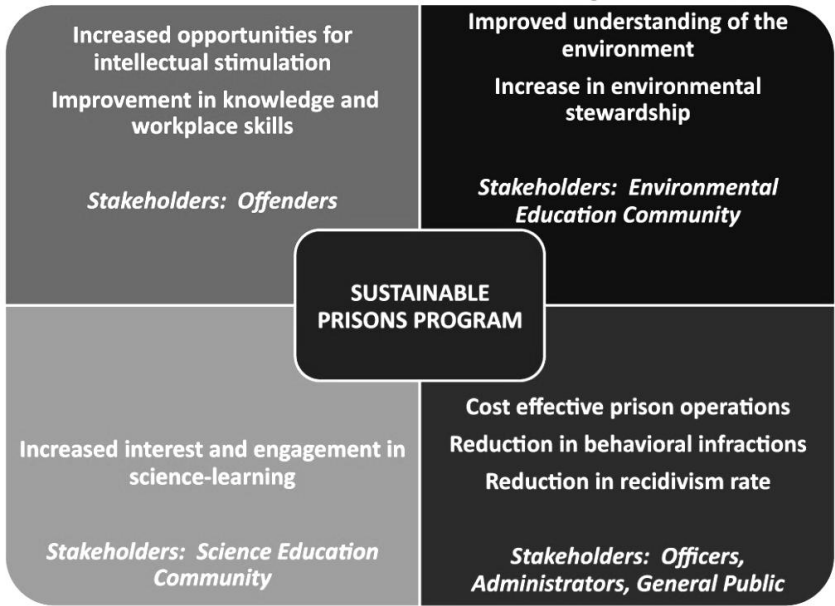


Figure 2.2 Stakeholder interest in Sustainability in Prisons Project programs

Future Work

NEED FOR EXPANSION

In addition to the media presence of the SPP, members of the Project have presented results of the work to date at professional meetings and conferences in the areas of both ecology and corrections. For example, Nadkarni organized a Symposium at the 2009 Ecological Society of America meeting on the Project, which was well-received. One of the inmates who had been involved in the sustainability work gave a talk in this symposium. Pacholke, the Washington State Director of Prisons and co-director of the SPP, and Nadkarni were

invited to give a presentation on the SPP to the Western Regional meeting of Association for State Corrections Administrators. At the end of the presentation, in response to the question of how many Superintendents and Directors were interested in having an SPP-like project in their facilities, every hand in the room was raised, evidence of unanimous support for this project.

As the SPP has matured, project staff have received numerous queries from scientists and corrections staff in other states on how they might implement a similar collaborative program in their home states. These include corrections administrators, corrections staff, inmates, families and friends of inmates, ecologists, and conservation biologists. They have come from 14 states and three countries.

In response to the problems and interest described above, in 2012, we propose to gather representatives from academia and corrections to consider the pathways to relate what we have done in Washington State to other parts of the country. This will be a critical step to move toward a national initiative of science and sustainability activities in prisons. Conference work will be assessed to create formative and summative evaluations of the Conference activities.

This Conference, and other gatherings that grow from this work, will bring together partners who can provide novel interactions that will benefit ecologists, conservationists, corrections administrators and an underserved science education audience, incarcerated men and women. Our experiences over the past decade have demonstrated that positive outcomes can result for each of the stakeholders. There is great interest on the part of scientists and corrections communities, and this program will be a key model and link to bring public engagement of science and for sustainability to the eyes of scientists, corrections people, and the general public.

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An inmate sits in his cell at Stafford Creek Corrections Center. Photo by Benj Drummond.

CHAPTER 3


Washington State Department of Corrections: An Overview

Dan J. Pacholke and Julie Vanneste

The Washington Department of Corrections (WDOC) is the third largest agency in Washington State with a \$1.8 billion biennial operating budget and employs approximately 8,400 men and women. The WDOC is responsible for managing all adult prison facilities and supervising all adult offenders residing in our communities. See Table 3.1 for more detailed information on the current prison population and facilities.

The prisons, work release facilities, and community field offices are located throughout the state. Each plays a vital role in supporting successful re-entry of the many offenders who will be released from confinement, as well as supports those residing in the community under the WDOC's jurisdiction.

Table 3.1 Washington DOC Quarterly Fact Card

	
Quarterly Fact Card	
June 30, 2012	
Facts about Offenders in Confinement	
Number of Prison Facilities	12
Number of Work Releases Facilities	16
Total Offenders in Confinement	17,697
Offenders in prison	92.6% 16,395
Offenders in work release	3.9% 685
Offenders in out-of-state rented beds	0.0% 0
Offenders in in-state rented beds	3.5% 617
Prison and Work Release Operational Capacity	16,855
Total operational capacity in prisons	16,176
Operational capacity in work release capacity	679
Percent of Population to Operational Capacity	
Total Prison Confinement Percent of Operational Capacity	101.3%
Work Release Percent of Capacity	100.8%
Gender	
Male	92.5%
Female	7.5%
Race	
White	71.5%
Black	18.9%
American Indian	4.3%
Asian	3.7%
Unknown/Other	1.6%
Hispanic Origin	11.8%
Average Age	37.8
Citizenship	
United States	94.8%
Mexico	2.7%
Other	2.5%
Length of Sentence	
Less than Two Years	15.5%
Two to Five Years	23.9%
Five to Ten Years	20.4%
Over Ten Years	24.8%
Life with the possibility of Parole or Release	11.8%
Life without Release	3.6%
Avg. Length of Stay for Offenders Released in the past year	24.2 mo

Community Supervision services are delivered from 125 field offices, community justice centers, and Community Oriented Policing (COP) shops, across the state. The WDOC operates 15 work release facilities statewide designed to ensure offenders have employment and housing opportunities when released to communities. The WDOC operates 12 prison facilities. Eight of these facilities have a

range of custody levels including maximum, close, and medium security. In addition, the WDOC operates four stand-alone minimum-security forest camps. These minimum-security facilities house offenders scheduled for release to the community within 48 months.

The WDOC is required to provide health care, programming, treatment, correctional work programs, housing, and nutrition services for incarcerated offenders.

The age of the facilities range from the 120 year-old Washington State Penitentiary to the recently completed Coyote Ridge Corrections Center, the first LEED® Gold prison campus in the world. The WDOC's headquarters office and Correctional Industries (CI) headquarters are located in Tumwater and both occupy LEED® certified buildings.

The WDOC currently focuses most of the sustainability data collection efforts on the 12 prison facilities. This is logical given the prisons segment represents the WDOC's largest consumer of resources. The second most significant resource consumer is Correctional Industries. However a majority of the industry activity is captured within facility reporting as Correctional Industries activities are housed within prison facilities.

With the aim to dramatically increase our focus on sustainability, the WDOC has partnered with The Evergreen State College since 2004, creating the Sustainability in Prisons Project. The WDOC's goal for the partnership is to reduce the environmental, economic, and human cost of prisons by training staff and offenders in sustainable practices and to manage facilities in a way that aligns with these values. The Sustainability in Prisons Project believes that these ideals are complementary. Progress toward one goal yields progress toward the other.



An inmate groundskeeper at Stafford Creek Corrections Center uses a push lawnmower, saving on fuel costs. Photo by Benj Drummond.

CHAPTER 4

Sustainable Operations at Washington State Department of Corrections

Julie Vanneste, modified from 2012 original

Sustainable Operations Commitment: To reduce the environmental, economic, and human costs of prisons.

The Washington State Department of Corrections (WDOC) has pursued sustainable facilities since 2003. This pursuit can be summarized by three main goals and dividends:

1. Cost containment | Cost avoidance | Reduction in spending
2. Therapeutic value | Opportunity to contribute | Opportunity to change
3. Rebranding of Corrections as an asset to the community | Engaging the community in the corrections agenda

All goals contribute to the WDOC's mission of reducing recidivism and improving public safety.

All three goals have also paid dividends to the WDOC along the way. We have achieved documented cost savings. Early data show evidence of positive and lasting effects of sustainability-related programs on offender behavior. In addition, we have cultivated mutually beneficial partnerships with colleges, other state agencies, federal organizations, wildlife groups, animal rescue organizations and even zoos.

The WDOC worked over several years toward sustainability goals that were both inspired by executive order and internal WDOC challenges. The WDOC has largely met or exceeded the goals where technology and funding has allowed; our tracking shows that where goals could be met by operational and behavioral changes, the WDOC has achieved its goals. This is a testament to the outstanding commitment the WDOC and its staff have to sustainability, and being good stewards and community partners.

Among prison facilities statewide, from 2005 to 2010 the WDOC has:

- reduced solid waste to landfills by 30%
- increased diversion to recycling by 89%
- increased food waste diversion to composting operations by 90%
- decreased potable water use by over 100 million gallons annually
- decreased facility heating and energy consumption by 8%
- reduced all transportation fuel consumption by 25%
- reduced total carbon emissions by an estimated 40% from 2009 to 2010

Table 4.1 Numbers at a glance as a percentage of prison population per day

	2005	2009	2010	
Waste Reductions				
Waste to Landfill	2.44	2.25	1.58	lbs
Energy Reductions				
Direct energy use	68.89	67.84	64.29	kwh
Water Reductions				
Potable water use	147.5	141.5	114.5	gals
Transportation Fuels Reductions				
Transport fuels used	0.10	0.08	0.07	gals

Sustainability and low cost programming

One of the goals of the Sustainability in Prisons Project (SPP) is to reduce the human impact of prisons. The WDOC recognizes that a sustainable vision includes the social wellbeing of the community and ties directly to its core mission, public safety. Toward this, the WDOC has encouraged and facilitated the emergence of numerous projects that can best be described as programs that elevate the human spirit.

From these efforts the WDOC expects to realize progress on all fronts of sustainability while supporting its core mission, public safety.

The programs range from energy conservation and waste reduction, vermiculture and domestic animal rescue and rehabilitation, wheelchair and bicycle repair, to rearing endangered biota for restoration projects across the state. The origins of this broad spectrum of sustainability programs active in the facilities also vary

from the humble suggestion of a corrections officer to complex multi-agency partnerships.

All projects take departmental support, collaboration, and passion. The programs also have another thing in common. They are initiated and operate at low or no cost to the facility or to the state.

Thus far, progress toward reducing the human cost of prisons is measured anecdotally. But these anecdotes and offender interviews are encouraging. Engaging offenders in sustainability programs is successful if it improves the mood of just one offender for just one hour, ideally increasing the likelihood for further positive educational and therapeutic experiences and lessening the occurrence of behavioral problems in the facility, and re-offense once released to the community.

Raising the Bar: Adding Annual Goals

In 2010 the WDOC realized unprecedented success in transportation fuel reductions credited to an internally imposed goal to decrease fuel consumption by 20% within the year. The response to this goal was astounding. All facilities met or exceeded this goal except for one facility whose data was mingled with that of external users. This is both an illustration of the complexities of data collection and the power of setting specific goals.

Beginning in 2010 we defined annual short-term object goals. Annual target goals were devised to answer the need for more meaningful goals as original sustainability goals were met and approaches to sustainability matured. In place of blanket reduction percentage goals, target goals were thought to be more responsive to both the needs and abilities of the facilities. Addressing and achieving these within a one-year period is moving the WDOC toward its long-term goals.

Operational Target Goals

The following are goals set by the WDOC.

Toxics: Wherever possible, purchase environmentally preferred products and always manage wastes in accordance with state regulations.

Energy: Achieve a maximum consumption rate of 45 kWh per offender per day in minimum-security settings and 60 kWh per offender per day in higher custody settings.

Water: Achieve a maximum consumption rate of 115 gallons per offender per day in minimum-security settings and 130 gallons per offender per day in higher custody settings.

Waste: Achieve a maximum generation rate of no more than 1.5 pounds per offender per day in minimum-security settings and 2.2 pounds per offender per day in higher custody settings.

Transportation Fuel: Maintain reductions achieved in 2009.

Secrets for Success: Keeping our Eye on the Ball

Government Management Accountability and Performance (GMAP) is the tool that helps Washington State agencies measure, improve and report their performance. The WDOC's Prisons Division uses monthly GMAPs adapted and modified from the Governor's template to keep our eye on the ball and ensure successful sustainability efforts. The use of performance management protocols both ensures continued attention and analysis of issues. It also supports attention to data management, development of action plans, and prompts follow-through and reporting.

Facilities are asked for quarterly feedback in the form of questions based on data previously collected, and reflective of each facility's activity. The questions are posed to the facilities to focus attention on desired outcomes or goals. The facilities respond, articulating

what their current activities are and why the data look as they do. The use of quantified information in this process is used to ground the conversation in an equitable language and set of facts.

USE OF PERFORMANCE MANAGEMENT TOOLS IN THE PRISONS DIVISION

- Opens efficient communication between all levels of staff as stakeholders in an issue; encouraging collaboration, planning, action, and accountability.
- Displays timely and accurate data reflective of an issue so targeted questions can be asked and responded to using concrete information to both set targets and inform decisions.
- Rewards candor in identifying and diagnosing performance barriers, as well as creativity and commitment to overcoming them. It is OK to identify missed targets, but it is even more important to know why you missed targets and then to develop a plan to address the missteps.
- Compels the creation of action items or plans coupled with compulsory reporting within 6 months. (Action items should include items that can be implemented prior to next report.)
- Promotes sharing of best practices among facilities and stakeholders.
- Leverages the competitive nature of superintendents.

New Data Collection and Management Tool

WDOC management has seen the value of, and correlation between data management and performance management. The use of data or high quality standardized and quantified information is used both to set goals and standards of performance as well as inform decisions.

Early data collection was challenged by lack of reporting mechanisms and not by a lack of commitment. The WDOC was a leader in dedicating staff time to facilitate and support sustainability

initiatives. The WDOC hired its first sustainability coordinator in 2003 and laid the backbone for the data collection system which continues to support the sustainability initiatives.

The WDOC invested staff time into upgrading the sustainability data management system. This new system makes the compilation and analysis of data significantly less labor-intensive and also makes available an interactive tool for management and facility staff to view and analyze the progress of their sustainability efforts.

Sustainable Purchasing: Conserving our Resources

It is often thought that there are two major ways of reducing negative human impact on our ecosystems and environment. The first approach is through environmental management. The second approach is through the management of resource consumption.

As a large consumer and purchaser of resources and products, the WDOC has a powerful role to play in encouraging the development and market for sustainable goods and services. By engaging vendors with the WDOC's sustainability goals, and boosting consumer demand for more sustainable products, the WDOC contributes to the global conversation on sustainable responsibility and deepens its strategic integration into WDOC operations. At the same time, there is always a tension between buying sustainable products and making sure the WDOC gets value within its budget.

The WDOC was recently awarded a technical assistance grant which provided the services of sustainable purchasing experts and a workshop session to help further the WDOC's sustainable purchasing goals. In this session the WDOC identified new purchasing goals and began writing a new Sustainable Purchasing Plan.

BENEFITS REALIZED BY THE WDOC'S PURSUIT OF SUSTAINABLE PURCHASING

- fewer hazardous products: improving worker safety, reducing regulatory liability and lowering disposal costs
- energy-efficient and water-conserving products: saving natural and financial resources
- waste reductions at facilities through purchase of reusable, refillable, more durable and repairable products
- Contributions to the creation of a strong market for recycled materials thereby “closing the loop” in the recycling process and ensuring its viability.

FURTHER SUPPORT

The State statute RCW 43.19 compels purchases to be considered based on environmental reasons including its recycled content, energy saving performance and lifecycle costing.

Solid Waste

Goal: The annual goals for 2010 challenged facilities not to exceed 2.2 pounds per offender per day at higher custody facilities and 1.5 at lower custody facilities.

Progress: All but two facilities met this goal within the year. The state average is 1.49 pounds per offender per day. The EPA reports general nonhazardous household waste generated per US citizen per day to be about 4.3 pounds for 2009.

Continuous Progress: WDOC has achieved a 30% decrease in total solid waste generation from 2005 levels. When normalized as a relationship to offender population, solid waste generation was measured to have decreased by 45% from 2004.

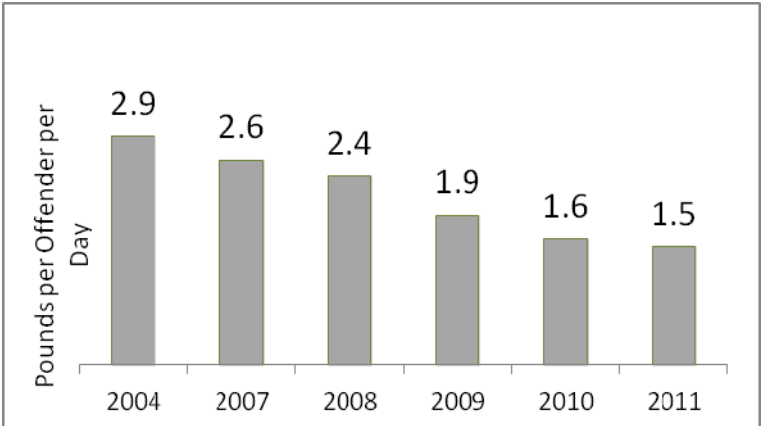


Figure 4.1 Average pounds of waste from WDOC prisons

Reuse and Repair

Facilities save money and create programs by recognizing the value in broken or surplus materials and then applying innovation and skill. For example, Cedar Creek Corrections Center built its compost facility out of mostly found materials. The medical equipment repair program at the Monroe Corrections Complex has saved the WDOC over \$125,000 in costs to repair or replace durable medical equipment such as wheelchairs and walkers.

Recycling

As a direct result of better solid waste management the WDOC saw recycling rates increase by 47% since 2005. As the WDOC’s solid waste reduction program and green procurement program matures, it hopes to see recycling rates decrease in direct correlation with decreasing overall waste generation.

Diverted food waste increased in overall tonnage by 47% from 2005 to 2010. In addition, and as an indicator of overall waste reduction, food waste as a percentage of weight per offender decreased from 2005 by 2%. By the end of 2011 all facilities either will be diverting

their food waste to on-site composting facilities or to local community-operated facilities.

According to the EPA less than 5% of the average American’s waste is recycled annually. WDOC is recycling at an average rate of 6%. This does not include waste which is diverted to compost.

Transportation Fuels

Goal: Maintain reductions achieved in 2009. All new vehicle purchases must be hybrid vehicles unless the duty level of the vehicle is not available in a hybrid design. New maintenance vehicles will be all electric where feasible, exceptions to be documented by superintendents and identified in GMAP (Government Management Accountability & Performance) reports.

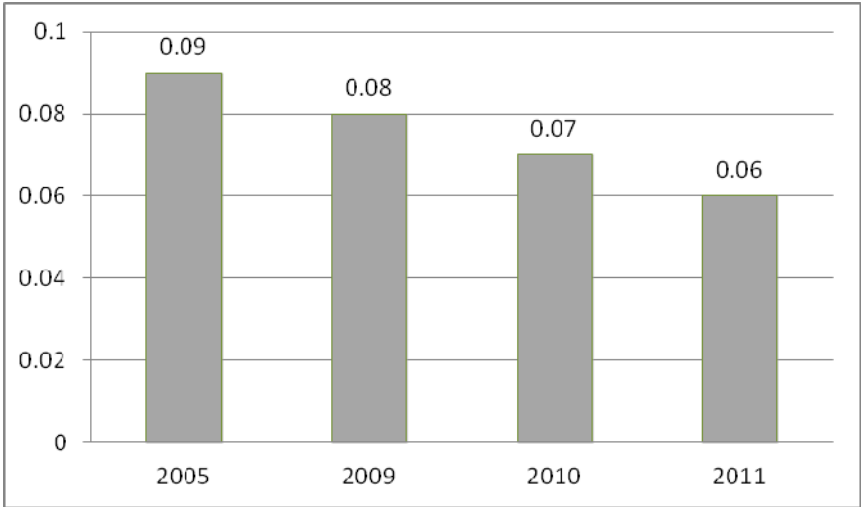


Figure 4.2 Transportation fuel consumption in gallons per offender per day

Progress:

- **Diesel Use:** Decreased by 59% between 2009 and 2011 and 61% percent between 2005 thru 2010.

- **Gasoline Use:** Increased by 20 percent from 2009 to 2010. Although ground was lost from the previous reduction achieved in 2009 a 7% decrease from 2005 to 2010 remains.
- **Biodiesel Use:** Biodiesel consumption displacing standard diesel use was increased by 42% from 2009.

Water

Goal: Achieve a maximum consumption rate of 115 gallons per offender per day in minimum-security settings and 130 gallons per offender per day in higher custody settings.

Progress: Potable water consumption has decreased by 22% between 2005 and 2010 measured as a percentage of offender population. During this period we closed one major facility while opening another and increased our offender population statewide.

Water conservation efforts through repairs and retrofits to existing systems are sometimes seen as difficult to pay for. When evaluating the financial feasibility of a project, the return on investment is expected to be achieved within 10 years. Because this resource is significantly cheaper than the costs of infrastructure and fixtures, the time it takes to pay for water conservation projects often exceeds the desirable payback period.

Despite the challenges of funding major infrastructure retrofits, the WDOC has been proactive and successful in its water conservation efforts. The WDOC has limited landscape irrigation, added more drought-tolerant and native plantings to landscaping, installed rainwater collection tanks and repaired steam lines as necessary. All major renovations and new construction are fitted with low-flow fixtures. Despite the challenging environment, use of these fixtures has not resulted in increased plumbing difficulties.

Energy

Goal: Achieve a maximum consumption rate of 45 kWh per offender per day in minimum-security settings and 60 kWh per offender per day in higher custody settings.

Results: WDOC achieved a 10% reduction in energy use as a percentage of offender population from 2005 to 2011. Four out of the eight higher custody facilities have met this annual goal. Not surprisingly, it is the newer facilities which have reached or are reaching the goal and the older facilities which are struggling. Only one out of the four minimum camps has met the goal.

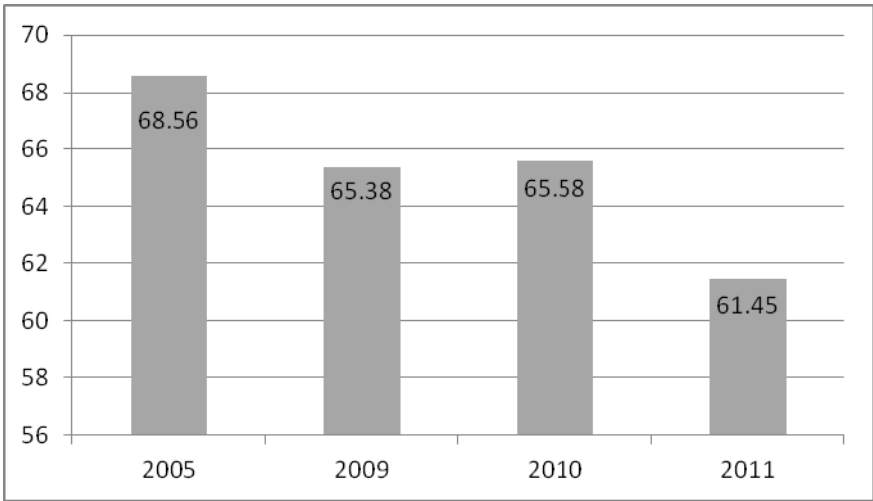


Figure 4.3 Energy consumption in KWH per offender per day

Energy costs associated with the operations of prison facilities are significant. The Capital programs division is constantly engaged in evaluating and facilitating energy reduction measures such as:

- facility and systems maintenance
- energy audits and resulting upgrades
- high performance construction

- alternative energy investments
- promoting conservation behaviors

Paying for Energy Conservation

Energy service company (ESCO) projects are a very cost-effective process for completing energy upgrades to aging buildings and a means to use utility savings to pay for the project costs. In 2010 alone the WDOC received \$550,000 in utility incentives from energy conservation projects. Without the use of ESCO contracts the WDOC initiates and completes smaller scale conservation projects by working directly with the utility utilizing incentives to help pay for upgrades to lighting and electronics.

The significant energy reduction achieved within the year at the Airway Heights Correction Center was the result of energy upgrades to air-handler units and repairs to steam-lines. All facilities are encouraged to conduct energy audits to identify areas such as these where the projects indicate a favorable cost benefit analysis.

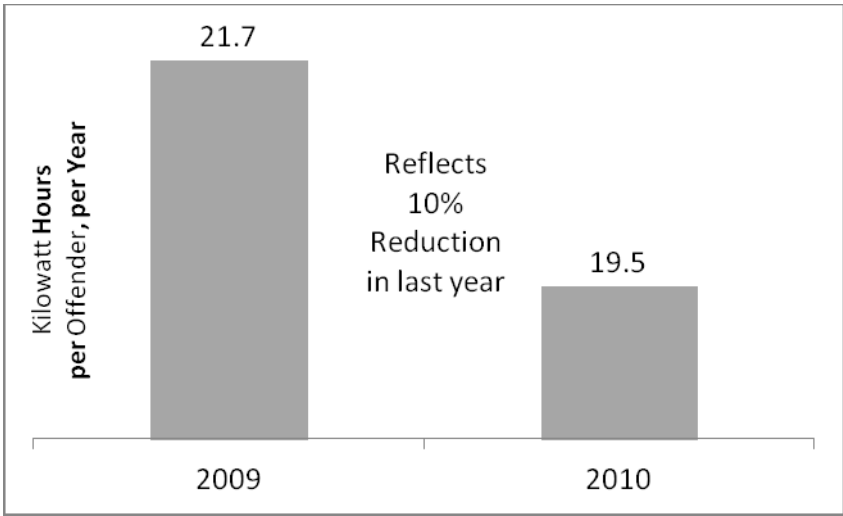


Figure 4.4 Energy conservation project: Airway Heights Correction Center

LEED

In 2004, WDOC established a sustainability goal to design and construct new buildings to Leadership in Energy and Environmental Design (LEED) Silver standards. The following year, in 2005, the state Legislature passed a new law requiring LEED Silver standards for state-funded building projects.

When managing the construction, renovation and repair of a facility, WDOC engineers are mindful of the impact their choices have on the environment. In their professional capacity they automatically evaluate the lifecycle costs of project components ultimately choosing the most sustainable from the choice of floor coverings to heating and cooling systems. For example, 75% of the new Coyote Ridge Corrections Centers floors are polished concrete to avoid the use of carpet or vinyl which would need to be periodically disposed of, ultimately resulting in less maintenance, product consumption and waste.

The WDOC has established itself as a national and world leader in the building of sustainable and energy-efficient prison facilities. The WDOC now has 40 LEED buildings completed, including the nation's first LEED Gold Prison Campus.

Sustainable Food Service

Sustainability and food service are natural partners at the WDOC. The facility food managers are passionate about food and its source and actively engage themselves in improving the sustainability of the facilities.

Farm to Prison Pilot Project: The benefits of implementing a successful pilot program of sourcing of produce from small Washington farms is a lengthy list and includes:

- waste reduction

- carbon emission reduction
- support for sustainable farming practices
- support for local economies
- creation of diversified market for small farms
- development of community partnerships
- offender job training and opportunities
- educational and health opportunities

During the first year of the pilot, the two test facilities realized a 26% cost savings in produce purchased through the pilot project.

Food-waste Diversion: Offenders compost food from the kitchen to create a closed-loop operation.

- One prison alone saves \$60,000 each year just by diverting its food waste from the local landfill.
- All but two facilities divert food waste to compost programs either on site or to local commercial facilities. The remaining two will be diverting by the end of 2012.

Eliminating Styrofoam: The elimination of styrofoam dining ware from the facilities was an objective that involved more than product selection. Because of the cost difference between styrofoam and compostable-disposable dining ware, great consideration had to be given. In order to afford the compostable-disposable products WDOC had to ultimately reduce the overall use of disposable dining ware. Using less disposable dining ware made it possible to afford the more expensive, environmentally-preferred compostable products.

Benefits to Offenders

Two-fold meaningful activities reduce occurrence of negative outcomes and save money. Sustainability programs provide low cost meaningful activities and employment for offenders. This is

especially important during these financially difficult times when funding for offender programs has been cut. It is well-documented that offender idleness contributes to an increase in offender violence.

The existence of the numerous sustainability programs such as wheelchair repair, beekeeping, gardening, and compost operations, yield meaningful jobs, job training, and incentives for good behavior, add a therapeutic value, and a calmer overall environment.

STAFFORD CREEK CORRECTIONS CENTER WASTE MANAGEMENT CASE STUDY

Stafford Creek Corrections Center spent \$168,000 for solid waste disposal costs in 2008. In 2011, after instituting new waste management protocols—facilitated in part by the completion of an on-site waste sorting center and an on-site composting operation—the facility spent \$53,000. The average daily population remained consistent at nearly 2,000 offenders.

Of the approximate 1,200 tons of waste generated in 2011, only 383 tons were sent to landfill. The majority of the waste is now managed through diversion to recycling options or to the on-site composting facility. Additional cost avoidance (savings) was achieved through waste management practices which include severe reduction of trash can liners used and the recovery of state-issued items found in the waste stream.

Trashcan liner reduction: The implementation of waste sorting centers made it apparent that the use of garbage can liners made waste sorting less efficient. The trash liner came to be viewed as an item purchased simply to be thrown away. The reduction of trash liners is one example of “pre-cycling”, a term coined by Stafford Creek Corrections Center staff and routinely used at the facility. It is also an illustration of how facility personnel have adopted the “rethinking” concept, one of the four R’s of the reduce, reuse, recycle,

rethink mantra. Over \$50,000 has been saved by halting the use of trashcan liners in the waste stream.

Recovered property: Approximately \$75,000 worth of state issued items such as bed linens, clothing, and dining ware was recovered from the waste stream during the waste sorting center's first year. While this amount of inventory is no longer reaching the waste stream due to strategies implemented up-stream to curb this behavior, the effect is still the same. Attention to items thrown in the garbage realized an actual savings apart from waste service related expenditures. The facility's waste management practices have significantly reduced the amount of new state issued property being lost and then repurchased.

Attention to items thrown in the garbage realized an actual savings of \$165,000 and an additional estimated savings of \$75,000 annually. The bigger success is the sustained culture change cemented through these successes and the celebration of the results.

CASE STUDY FOR HIGH PERFORMANCE BUILDING

Quantifying the advantage of high performance construction is a difficult task within the portfolio of WDOC prison buildings given that:

- Each building is unique.
- The WDOC's portfolio of LEED buildings are dispersed among a number of prison facilities.
- The WDOC lacks the resources to track buildings individually and no two buildings are enough alike to permit comparison.

However, the new Coyote Ridge Corrections Center and the Airway Heights Corrections Center share a remarkable number of similarities making a campus-to-campus comparison of building performance plausible. They also represent a nearly twenty year difference in building construction technology and materials. Both campuses are:

- in a similar climate
- of similar size
- same custody levels
- have minimum custody camps
- similar industries operating on campus

Using the average difference between these facilities and state wide average energy costs and the utility rates of Airway Heights for the analysis

- energy costs would be about \$460,000 less per year
- water costs would be about \$53,000 less per year
- wastewater costs would be about \$460,000 less per year
- total cost savings ~ \$978,000 per year

Table 4.2. Comparison of resource use between similar corrections centers

Data from calendar year 2011	Coyote Ridge Corrections Center	Airway Heights Corrections Center
KWH per Offender per Day	41.13 kwh	63.06 kwh
KWH per Square Foot	10.77 per sqft	21.32 per sqft
Gallons of Potable Water per Offender per Day	96.57	186.78

Comparison using energy data for all sources converted to kilowatt hours and displayed as a percentage of offender population and square footage of conditioned building space; comparison of water consumption displayed as percentage of offender population per day.



*A Taylor's checkerspot butterfly (*Euphydryas editha taylori*) lays eggs on golden paintbrush (*Castilleja levisecta*) during an oviposition preference study undertaken at Mission Creek Corrections Center for Women. SPP Staff Photo.*

CHAPTER 5

Conservation Projects: A Year in Review

Dennis Aubrey, Brittany Gallagher, Kelli Bush, Carl Elliott, and Andrea Martin

Taylor's Checkerspot Butterflies

A new Taylor's checkerspot (*Euphydryas editha taylori*) butterfly rearing facility was constructed in collaboration with the SPP at Mission Creek Corrections Center for Women (MCCCW) in 2011. MCCCW is a 305-bed minimum security prison in the Tehuya State Forest on Washington's Kitsap Peninsula. The rearing facility is located outside the prison fence, and is housed in a prefabricated 24 ft x 10 ft greenhouse with UV-transmitting glass panels. An interior partition creates two rooms: a 16 ft x 10 ft main room for primary rearing activities, and an 8 ft x 10 ft secondary room for tasks such as early season plant care and breeding. A crew of two to five inmate butterfly rearing technicians is selected from the general population

by an application and interview process. The project is directly overseen by a graduate student from The Evergreen State College (TESC) and a project supervisor from MCCCW.

General training is provided by the Oregon Zoo, and a training surrogate, the painted lady butterfly (*Vanessa cardui*) was used for inmate technicians to learn butterfly husbandry techniques. This species was chosen for its tolerance of a wide range of rearing conditions and its short life cycle. This allowed inmates to practice several complete life cycles using the Taylor's checkerspot protocol developed at the Oregon Zoo, before working with the endangered checkerspots themselves.

The Taylor's checkerspot (*Euphydryas editha taylori*) is a Washington state-endangered species and is a candidate for listing under the federal Endangered Species Act. In March 2012, 755 *E. e. taylori* caterpillars were delivered to MCCCW by Oregon Zoo staff. Six hundred of these were released onto 13th Division Prairie at Joint Base Lewis-McChord later that month and the remaining 155 were kept for breeding.

All aspects of the first rearing season were highly successful, including breeding activities. Males and females were crossed according to specific lineage pairings designated by staff at the Oregon Zoo to preserve genetic diversity. Seventy-two mating introductions were made, with 32 of these resulting in a successful pairing. From these, 3515 eggs were laid and 3395 successfully developed into healthy caterpillars and entered diapause, a survivorship rate of 96.6%.

A novel research project was also carried out at the facility, examining host plant choice by female checkerspots. This work is showing that they prefer to lay eggs on two native plants, harsh paintbrush and Washington state-endangered golden paintbrush, over the exotic but well-documented host English plantain. This finding has the potential to alter restoration practices for the

butterfly and possibly unite the recovery efforts for both it and the golden paintbrush.

The first season of rearing Taylor's checkerspot at MCCCW was an overwhelming success, underscoring yet again the value of incarcerated persons as conservation and research partners. The inmate technicians at MCCCW were meticulous, careful, and tireless in their efforts. They took ownership of the project, innovated new techniques that are being added to the rearing protocol at the Oregon Zoo, and talk glowingly about the transformative value of the work in their own lives and rehabilitation.

Native Plant Conservation Nursery

In 2011, SPP native plant production occurred at two facilities. The first facility is Stafford Creek Corrections Center (SCCC) located just outside Aberdeen, Washington. SCCC is a minimum, medium and maximum security facility with 1,936 offenders. Within the facility's secure perimeter are 4,600 square feet of protected growing space and 2,400 square feet in a climate-controlled greenhouse. Nearly all of the labor for production at SCCC is provided by inmates at the corrections center under supervision of a WDOC staff person. SPP provided an increased presence at SCCC this year in response to staff requests. Our aim was to reduce the work load on facilities staff and provide adequate support to make the conservation nursery a success. SPP staff and graduate students made weekly visits throughout the year to assist grounds staff and the inmate crew.

The second native plant conservation nursery site is Shotwell's Landing Nursery, a Center for Natural Lands Management (CNLM) facility located on the Black River near Littlerock, WA. In cooperation with CNLM, SPP undertook the management of plug production at Shotwell's in January 2012. Shotwell's is the regional processing center for seed and plants used in the restoration of South Puget Sound Prairies. The nursery includes 4,800 square feet of protected growing space. Labor at this site is provided by SPP staff, CNLM staff,

student interns, volunteers, and WDOC community work crews from Cedar Creek Corrections Center (CCCC). Integrating the SPP into the regional restoration network improves program efficiency and creates more opportunities to provide restoration training to inmates. The SPP and the CNLM plan to develop training curriculum for the WDOC community crews in the near future.

From July 2011 to December 2011 the two nurseries combined produced and delivered 200,000 plants for restoration projects in south Puget Sound. A total of 150,000 were grown at SCCC and 50,000 were grown at Shotwell's Landing. From December 2011 to May 2012 170,000 cells were sown at SCCC and 102,000 were sown at Shotwell's Landing. The 272,000 cell total is 20% over projected production. We estimate a delivery of 250,000 plants for fall 2012. Plants will be installed on restoration sites in Thurston and Pierce Counties and this is projected to be the largest restoration planting to date.

The next stage of expansion involved adding a new nursery site. The SPP and CNLM have secured funding through November 2013 to establish a new nursery facility at Washington Corrections Center for Women (WCCW) in Gig Harbor. The new site will have capacity to produce an additional 90,000 plants each year. Early 2012 has been a productive time of planning and discussion with staff at WCCW. The nursery will be constructed in September and October 2012. Inmate and staff training will begin in September 2012 with production starting November 2012.

In March 2012, the SPP added a new Conservation and Restoration Coordinator staff position to the conservation nursery program. The position is jointly supported by the Washington Department of Corrections (WDOC), the CNLM, Joint Base Lewis-McChord (JBLM) Wildlife Division, and The Evergreen State College (TESC). The position facilitates expansion to new sites. The Conservation and Restoration Coordinator now supervises TESC graduate and undergraduate students and WDOC staff at the three nursery sites.

One of the primary goals of the SPP is to provide training to inmates. The majority of the training has been held at Stafford Creek Corrections Center (SCCC). Most training focuses on the conservation nursery, however, we provided additional workshops and advice on horticultural methods to assist inmate crews working in the corrections center gardens. More information about training programs is included in Chapter 5, *Education: Lectures, Workshops, and Job Training*.

Oregon Spotted Frogs

The SPP-led Oregon spotted frog (OSF; *Rana pretiosa*) conservation project has been in place at Cedar Creek Corrections Center (CCCC) since 2009. CCCC is a 480-bed minimum-security prison located in Capitol State Forest, southwest of Olympia, Washington. The frog-rearing facility is located just outside the prison fence, adjacent to the prison vegetable garden and greenhouse. “Frogga Walla,” as the facility is nicknamed, consists of six 300-gallon tanks in a shaded enclosure, four of which are used to raise frogs from egg to adult. The rearing facility also includes the “cricket shack,” where frog food and other project supplies are kept. Two inmate technicians, selected through a competitive application process, are charged with feeding the frogs, changing, cleaning, and maintaining the temperature of tank water, and keeping careful daily logs of the health and activity of the frogs. The project is overseen by a staff member at CCCC and a graduate student from The Evergreen State College (TESC).

The OSF is a state-listed endangered species and a candidate for federal listing. CCCC is one of four rearing institutions in the area raising OSFs, and its program is supported by the shared knowledge and experience of scientists and technicians at the other three institutions, all of which are zoos. Each year in late winter, eggs are delivered to CCCC from two donor sites. Inmates care for the tadpoles as they morph into frogs and grow to adulthood, when they are ready for release into suitable local wetlands. The frogs raised at the prison often reach maturity in a single season and are

consistently large compared to frogs from other rearing institutions. CCCC is also raising approximately half the crickets needed to feed the frogs, something unique to the prison. The cricket-rearing effort saves money, and it improves program sustainability by reducing the number of crickets that must be purchased and shipped from distributors across the country.

Initial training for inmate technicians was provided by scientists from Northwest Trek Wildlife Park and the Washington Department of Fish and Wildlife. Herpetologist Marc Hayes provides essential troubleshooting support and supervises research conducted at the prison. When a new inmate technician is hired, the more experienced inmate trains him on frog-rearing protocols, and the TESC graduate student provides training on data recording.

The OSF project at CCCC had an 84% survivorship rate in its first year. In 2010, similar success rates were yielded, with an 82% survival rate, and a total of 1,346 frogs released from all institutions combined. Eleven successful OSF egg masses were found at release locations in the spring of 2011, evidence that captive-reared and released OSFs are successfully reproducing in the wild. In the fall of 2011 and spring of 2012, more than 230 healthy CCCC frogs were released onto wetlands on Joint Base Lewis-McChord, east of Olympia. During the 2012 season nearly 300 frogs are being raised at the prison.

Inmate participation at scientific meetings and releases

Staff at the minimum security facilities such as CCCC and MCCCW have been very supportive of letting inmates attend off-site working group meetings, animal releases, surveys, and planning events. In each instance a custody officer, our WDOC staff contact, and someone from the SPP team have accompanied the inmate technicians. The inmates have been well-received as partners at each of these sites and events.

Taylor's Checkerspot Working Group meeting at Nisqually Wildlife Refuge – This meeting included representatives from all the rearing institutions as well as the recovery biologists from state and federal agencies. Graduate Research Assistant Dennis Aubrey gave a presentation on the captive rearing program at MCCCW and two of the inmate technicians attended and participated in discussion with the group.

Oregon Spotted Frog Working Group meeting at Port Blakely Tree Farm – This meeting included representatives from all rearing institutions as well as the recovery biologists from state and federal agencies. Graduate Research Assistants Sarah Weber and Dennis Aubrey as well as SPP Program Manager Kelli Bush attended and presented a summary of the rearing activities in 2011. Several times during the meeting, the inmates shared information with the group and had questions answered from other rearing professionals.

Oregon Spotted Frog release at JBLM – Former inmate technician Harry Greer attended the annual frog release in November 2011 while on work release. We do not currently have permission to allow incarcerated individuals access to JBLM, but Kelli Bush and Fish and Wildlife Biologist Jim Lynch wrote up a proposal to allow inmates access for working group meetings, releases, surveys, and planning events. This will not allow the inmate crews to work at JBLM, but will allow them to attend events. The request is currently under review, a lengthy process as it has to be reviewed by all divisions and eventually by the Garrison Commander.

Egg mass surveys at Rocky Prairie – Two inmate frog technicians attended OSF egg mass surveys with WDFW biologists and SPP Graduate Research Assistant Andrea Martin. This involved searching an active wetland breeding site. The inmates were enthusiastic about this opportunity and proved to be adept at finding egg masses.

Crews from CCCC at Shotwell's Landing Conservation Nursery – The SPP Conservation and Restoration Coordinator Carl Elliott has

been working with Community Corrections crews from CCCC. They are accompanied by a custody officer, and help with seed sowing, seed cleaning and other nursery tasks. Carl is planning a restoration and horticulture-related lecture for crew members and other inmates at CCCC to bring them an educational component of the SPP.



Inmates at Stafford Creek Corrections Center listen to a presentation given through SPP's Science and Sustainability lecture series. Photo by Benj Drummond.

CHAPTER 6

Education: Lectures, Workshops, and Job Training

Brittany Gallagher, Carl Elliott, Dennis Aubrey, Kelli Bush, Carri LeRoy, Nalini Nadkarni, and Jeffrey Muse

The SPP inspires and trains offenders and corrections staff through programs designed to improve prison sustainability while connecting participants to the larger world of scientific research and conservation. Taught by visiting scientists and sustainability specialists, educational programming has included multi-day workshops and job training programs. In 2011-2012, traditional classroom-type lectures and job-related training were the most frequently offered kind of educational programming provided by the SPP.

Lectures

The Science and Sustainability Lecture Series takes place at two Washington prisons, the Washington Corrections Center for Women (WCCW) and Stafford Creek Corrections Center (SCCC). Audiences typically consist of 20-40 offenders and several WDOC staff members. Lectures and workshops in the past have attracted more staff, and the SPP would like to renew its emphasis on staff training in the future. Lectures in 2011-2012 incorporated audiovisual materials, handouts, and sometimes live demonstrations and hands-on items for offenders to pass around the room and examine. Lectures are typically 90-110 minutes in duration, including time for questions from the audience. Recent topics have covered ecology, conservation, gardening, and climate change.

Before each lecture, SPP provides informal training for presenters via phone and email. Immediately before and after each lecture, offenders in the audience complete evaluative surveys to assess possible changes to their knowledge and attitudes toward science and sustainability (see Chapter 7).

Complementing each activity, the SPP provides library materials and/or information about educational and employment opportunities that offenders could pursue while incarcerated or after release. Educational activities in participating prisons are summarized below.

1) STAFFORD CREEK CORRECTIONS CENTER

Summary of educational activities 2011-2012

- Total attendance: approximately 391 inmates, approximately 28 staff. (Note: Due to participation in multiple activities, individual inmates and staff are often counted more than once.)
- 14 presenters, including ecologists, experts in organic gardening and native species, and specialists in alternative energy.

- 12 total topics; 7 topics with emphasis on prairie and riparian ecosystems.

Table 6.1 Summary of education activities at SCCC in 2011-2012

Date	Education or Training Topic	Presenter	Institution	Attendance: Inmates, Staff
7-20-11	Interactions Between Forests and Streams	Carri LeRoy, Ph.D.	Sustainability in Prisons Project, The Evergreen State College	41, 2
8-25-11	Human Changes to Puget Lowland Riparian Zones and Effects on Streams	Mindy Roberts	Department of Ecology	21, 2
9-29-11	Wetland Mitigation at the WA-DOT	Tony Bush	Washington Department of Transportation	26, 2
12-1-11	Prairie Restoration and Land Trusts	Sarah Hamman and Anita Goodrich	Center for Natural Lands Management	43, 2
12-15-11	Riparian Areas	Todd Zuchowski	Joint Base Lewis-McChord	38, 2
2-9-12	Energy and Biofuels	Steve Verhey	The Evergreen State College	37, 2
2-23-12	Fish, Frogs, and Fire	John Richardson	Joint Base Lewis-McChord	37, 2
3-15-12	Western Washington Native Plants	Amee Bahr and Ben Alexander	Sound Native Plants	33, 3
4-19-12	Noxious Weed Control in Western Washington	Dana Coggon	Kitsap County Noxious Weed Control	31, 3

5-17-12	Smokewater and Fire Effects on Prairie Plants	Carl Elliot	Sustainability in Prisons Project, The Evergreen State College	21, 2
6-21-12	Animal Track Identification Workshop	Jessica Moore	Northwest Trek Wildlife Park	40, 3
7-16-12	Black Soldier Flies in Composting and Closed-Loop Systems	Adam Oswald	(BSF hobbyist)	23, 3

2) WASHINGTON CORRECTIONS CENTER FOR WOMEN

Summary of educational activities 2011-2012

- Total attendance: approximately 204 inmates, approximately 12 staff. (Note: Due to participation in multiple activities, individual inmates and staff are often counted more than once.)
- 10 presenters, including research scientists, community members, a farmer, an artist, and a small-business owner.
- 10 total topics, from horticulture to biofuels to urban stormwater.

Table 6.2 Summary of educational activities at WCCW in 2011-2012

Date	Education or Training Topic	Presenter	Institution	Attendance: Inmates, Staff
8-2-11	Life Zones of Earth	Carri LeRoy	Sustainability in Prisons Project, The Evergreen State College	15, 2
10-11-11	Planning and Constructing a Rain Garden	Sarah Clarke	The Evergreen State College	23, 1

11-1-11	Herbalism	Emma Rose	The Olympia Free Herbal Clinic	38, 1
12-6-11	Climate Change	Ingrid Tohver	University of Washington Climate Impacts Group	26, 1
1-10-12	Energy and Biofuels	Steve Verhey	The Evergreen State College	15, 1
2-7-12	Sustainability and Biodiversity in Tanzania	Alicia LeDuc	Department of Commerce	31, 2
3-6-12	Noxious Weeds in Western Washington	Dana Coggon	Kitsap County Noxious Weed Control	22, 1
4-3-12	Organic Agriculture and Phenology	Lydia Beth Leimbach	Left Foot Organics	9, 1
5-1-12	Stormwater	Stokley Towles	The Evergreen State College	33, 1
7-10-12	Native Plant Identification Workshop	Anna Thurston	Advanced Botanical Resources, Inc.	15, 1

Job Training

TAYLOR'S CHECKERSPOT BUTTERFLY HUSBANDRY TRAINING

In February 2012, a lecture was given at Mission Creek Corrections Center for Women (MCCCW) by Idie Ulsh, the founding president of the Washington Butterfly Association. Her lecture, titled "A Natural History of Moths and Butterflies" was attended by 20 inmates. Two of the attendees were subsequently hired as technicians for the SPP's newest conservation program: the rearing of the Taylor's checkerspot butterfly (see Chapter 5). In 2011-2012, ten inmates at

MCCCW received training in husbandry techniques associated with the Taylor's checkerspot. This included captive rearing protocols developed at the Oregon Zoo, detailed record keeping for multiple life stages, as well as the use of microscopes and other lab equipment.

Training and mentoring is provided on an ongoing basis through weekly visits by the SPP graduate research assistant coordinating the program, as well as through periodic visits by professional biologists from the Oregon Zoo. Training and educational materials are also provided to the inmates on a wide range of related topics such as native plant identification, pollinators, nature writing, and general science and conservation. Inmates have shown a keen interest in learning everything they can by asking questions and initiating conversations across a broad spectrum of scientific topics.

OREGON SPOTTED FROG HUSBANDRY TRAINING

The Oregon spotted frog (OSF) program is well-established at CCCC. Typically at least two full-time inmate technicians work on the frog-rearing program. When a new technician is brought to the team, as was the case in 2012, the more experienced technician passes along essential rearing protocols and training. The SPP graduate research assistant provides training on data collection and, along with the scientist on board, assists with access to scientific information on the OSF and to resources needed for troubleshooting. Additionally, the SPP provides books, scientific articles and other educational resources so that technicians may learn about a broad range of sustainability and science topics.

NATIVE PLANT CONSERVATION NURSERY TRAINING

In 2011-2012, training was provided to more than 16 inmates working in the native plant conservation nursery program at Stafford Creek Correction Center (SCCC). Most instruction was focused on the conservation nursery; however, SPP also provided workshops and advice on horticultural methods that would assist inmate crews working in the corrections center gardens. The

instruction at SCCC was structured as a series of seven workshops conducted twice yearly, once during the fall/winter growing season and again in the spring. Offering the workshops twice a year allows all inmates on the crew equal access to training, regardless of their date of hire. Topics for the workshops include: introduction to the ecology and conservation of South Puget Lowland prairies, the foundations of ecological horticulture, plant propagation, soil and plant nutrition, integrated pest and disease management, and conservation nursery practices.

To supplement the workshops, SPP staff and graduate research assistants made weekly visits throughout the year to assist grounds staff and the inmate crew. These visits provide a more informal and hands-on opportunity for instruction. The time working with the inmate crews allows for a good exchange of ideas and creates a team atmosphere for the program.

Education and Training of SPP Students and Staff

GRADUATE AND UNDERGRADUATE STUDENTS

Internships with the SPP are available to undergraduate and graduate students at The Evergreen State College. Each graduate research assistant coordinates or supports an education or conservation program at one or more prisons. Through the internship, graduate students have the opportunity to engage in field research, work with scientists at local, state, and national conservation agencies, and give presentations at academic conferences. Graduate students also may choose to write their theses on topics related to their work with the SPP. Graduate students meet weekly with the SPP Program Manager to discuss each program's progress, address any issues, and identify opportunities for improvement and academic growth. Outgoing graduate research assistants typically overlap with the incoming hire for that position, and this allows for the training needed for consistency and continuity for the program.

Undergraduate students may be hired as interns with the SPP, and many choose to earn college credit for their work with the Project. In 2011-2012, undergraduate interns provided support to the Taylor's checkerspot butterfly program, the prairie plant conservation nursery, and the evaluations program.

PROTOCOLS

The SPP maintains a database of protocols that may be accessed by any staff member in need of training or troubleshooting. Protocols are available for many procedures necessary to keep the SPP's programs running. Examples of protocols include:

- updating the SPP website
- bringing a guest lecturer into a prison
- starting a composting program
- propagating prairie plants
- rearing crickets for endangered frogs
- purchasing and reimbursements

Staff members update protocol documents as needed. Protocols will be available to members of the National SPP Network.

OTHER TRAINING AND EDUCATION FOR SPP STAFF

All SPP staff are invited to attend WDOC-sponsored trainings. In 2011-2012, SPP staff members attended Offender Manipulation Training and received education on the Prison Rape Elimination Act (PREA). Graduate research assistants, other staff, and volunteers working on conservation programs receive species-specific training as appropriate (e.g. PIT-tagging training for the Oregon spotted frog program, prairie plant propagation techniques, and butterfly rearing training).

Future Goals

With funding support from the National Institute of Corrections, we are developing a “Sustainability 101” curriculum that will be offered to WDOC staff and offenders. The curriculum will address why and how sustainability can be improved and provide specific information about how to get involved with programs at the local facility. We hope to build on the “101” level curriculum to offer more advanced sustainability and ecology-related education in the future.

We are also working toward offering science and sustainability certifications and related training programs for offenders. We plan to utilize existing certification programs acknowledged outside the prison, such as Master Gardener and Certified Arborist. In many cases offenders are already doing related work (i.e. gardening and forestry). A certification could reinforce the education components of the job training program and provide offenders with credentials that may help in a future job search.



Lecture attendees consider ideas for repurposing materials during a Science and Sustainability lecture hosted by the SPP. Photo by Benj Drummond.

CHAPTER 7

Evaluation of Sustainability in Prisons Project Programming

Brittany Gallagher, Mike Evans, Kelli Bush, and Carri LeRoy

The SPP evaluates its lecture series and conservation programs by: 1) conducting surveys of program participants and 2) maintaining databases of offender participation in SPP programs.

Surveying Lecture Series and Conservation/Sustainability Program Participants

Survey data are used to assess the quality of programs provided to incarcerated participants, and to adapt and improve those programs. All current survey questions are based on seven main objectives:

1. subject matter knowledge pre- and post-participation

2. level of interest and attitudes related to science and sustainability issues
3. job skills gained through participation in the SPP
4. quality of SPP recruiting, education, and training
5. possible effect of SPP programming on offenders' plans post-release
6. general program improvement opportunities
7. general interest in SPP programs and ideas for future lecture and conservation/sustainability program offerings

Surveys include true/false, multiple-choice, scaled, and open-ended questions. No questions about family, crimes, medical issues, or any other personal topics are included in either type of survey at this point. Participation is fully voluntary for all offenders.

Lecture survey results are cataloged at regular intervals. Conservation/sustainability program survey data are analyzed at the end of each calendar year. Following data analyses, the SPP staff members summarize findings, identify areas for improvement, and consider implementing program changes as resources allow.

THE SPP SCIENCE AND SUSTAINABILITY LECTURE SERIES

In 2011-2012, regular monthly lectures were given at two facilities, the Washington Corrections Center for Women (WCCW) and Stafford Creek Corrections Center (SCCC). The SPP lectures typically last 90-110 minutes, including time for questions. Lectures are delivered by visiting scientists or sustainability experts, and topics vary widely. Lecture attendance is voluntary; offenders sign up based on interest in the topic, custody level, and schedule availability.

Pre- and post-lecture surveys are used to assess knowledge retention and attitude change as a result of each lecture. Surveys are

anonymous, optional, and numbered so that pre- and post-lecture surveys match. The SPP Education and Evaluations Coordinator administers the surveys, which includes explaining the process and distributing and collecting surveys.

Pre-lecture surveys include two parts: 1) three questions designed to gauge participants' baseline knowledge of the lecture topic, and 2) questions designed to gauge participants' attitudes toward environmental issues in general and the lecture topic in particular. Post-lecture surveys include these two sections, plus several open-ended questions. The open-ended questions give participants the opportunity to provide feedback, make suggestions, and share their comments about the series in general.

Lecture survey data are entered into an Excel spreadsheet at regular intervals and analyzed at the end of each calendar year. Responses for questions assessing knowledge of the lecture topic on both the pre- and post- surveys are recorded as correct or incorrect. Responses to questions about attitudes toward environmental topics are recorded as a number (1-5). Responses for pre- and post-lecture surveys are then compared and analyzed.

THE SPP CONSERVATION/SUSTAINABILITY PROGRAMS

All Washington prisons working with the SPP offer offenders opportunities to work with conservation and/or sustainability programs. Sustainability programs include activities such as composting, recycling, and gardening. While sustainability programs may receive financial and consulting support from outside partners, they are primarily led by the WDOC or Correctional Industries staff.

Conservation programs that involve growing plants and raising animals require collaboration with agencies and experts beyond the WDOC. For each of the SPP's current conservation programs, there is a dedicated team that includes: SPP student interns, SPP Program Manager, Washington Department of Corrections (WDOC) supervisor, WDOC facility contact, at least one scientist, and

offenders. Some of the offenders and the WDOC staff are directly involved in experiments that determine the best protocols to raise and re-introduce target species—rare and/or endangered plants and animals. In this way, they are involved in generating valuable scientific data. In 2011-2012, offenders raised Oregon spotted frogs, Taylor’s checkerspot butterflies, and grew 50 different species of native prairie plants.

Conservation/sustainability program participants will be invited to complete surveys periodically. Surveys will be administered by the SPP Education and Evaluations Coordinator and/or a WDOC staff person.

Effective Data Outcomes

LECTURES

Offenders who sign up to attend the SPP lectures put their names on a “call-out list.” Offenders sign in to lectures on an attendance sheet, and their attendance is recorded in an SPP database. The WDOC evaluators collect data on these offenders and match them to the WDOC Offender Management Network Information (OMNI) to summarize demographics, risk level, and type of offense. These data can then be used to compare offenders who choose to attend one SPP lecture with those who attend many lectures, and also with the general offender population. Results offer insight into what works and what might be improved for future programming. The SPP receives summary data from the WDOC; no identifiable records are provided in order to keep participant information confidential.

The data collected thus far shows that offenders who attend more than 5 lectures are older (45.4 years of age) compared to the total offender population (37.8 years of age). They also have a higher percentage of life sentences (20.0% compared to 15.2%). Those offenders who attended at least one lecture are more representative of the total offender population based on risk level to reoffend, with 21.8 percent in the lower level compared to 19.7 percent in the

lower level of the total offender population. However, they have a much smaller percentage of violent offense types (50.8%) compared to the total offender population (70.4%). These data represent only a subset of the information the SPP has been able to gather on lecture series participants.

The SPP also works with the WDOC staff to examine the effects lecture attendance may have on rates of infractions, grievances, and medical services access among offenders still incarcerated, and on rates of employment and recidivism among those already released. As the SPP National Network grows, data from across the country will be combined and compared, lending more statistical power to our promising preliminary results.

CONSERVATION/SUSTAINABILITY PROGRAMS

Participation in conservation/sustainability programs is voluntary work detail for the incarcerated men and women who wish to take part. To qualify for work detail, all offenders must request a work position and go through an initial screening by the WDOC administrative counselors. After the screening, offenders can volunteer for a number of particular work details, including any open conservation or sustainability program positions. Applicants participate in a job interview to assess their work history, experience, ability to work in a team setting, and motivation. The WDOC staff members are responsible for all offender hiring and firing. The SPP conducts voluntary surveys of offenders selected for positions. Surveys include questions based on the seven objectives outlined above.

The names and WDOC numbers of offenders employed by the SPP Conservation Programs are kept in a Resource Program Management (RPM) database. We are working to expand this database to include offenders who have participated in broader sustainability work such as composting, gardening, and recycling and hope to have those data in the near future. With the help of the WDOC research staff, the SPP is able to compare data on offenders

who maintain employment in SPP programs with data on the general offender population. As with data for lecture participation, the SPP is interested in rates of infractions, rates of medical services access, grievances, recidivism, and employment. The SPP receives summary data from the WDOC; again, no identifiable records are provided in order to keep participant information confidential.

Preliminary data collected on conservation program participants indicates that the majority of participants are in prison for property crimes (30% compared to 18% of the total offender population). They are also at a higher risk to recidivate (78%). With the assistance of WDOC partners, the SPP is in the process of identifying the offenders involved in sustainability program work detail to increase our understanding of how this type of work affects offender recidivism and rates of post-release employment.

Future Research

The SPP has many goals for the expansion and improvement of our growing evaluations program. We would like to survey WDOC staff members who have been involved with the lecture series and with conservation/sustainability programs. We are interested in improving the pre- and post-lecture questionnaires we administer to guest lecturers, and we would like to survey the scientists who work on our conservation program teams. We would also like to evaluate how the SPP programming fits into the WDOC-defined “opportunities to contribute.” We are interested in creating a post-release survey program for former lecture attendees and conservation/sustainability program technicians. Additionally, we would like to investigate SPP-related changes in perceptions of prisons on the part of the media and the public.



A crew from CNN films at Stafford Creek Corrections Center. Photo by Carri LeRoy.

CHAPTER 8

Media Coverage of the Sustainability in Prisons Project

Kelli Bush, Joslyn Trivett, Brittany Gallagher and Dennis Aubrey

The Sustainability in Prisons Project has received worldwide attention in numerous newspapers, magazines, scientific journals and other media. The coverage has been positive without exception, and this has provided valuable support for the Project. Washington Department of Corrections communications staff and the SPP staff at The Evergreen State College work collaboratively to generate media interest and develop communication plans. Through media coverage we highlight the positive contributions of incarcerated men and women and elevate awareness of conservation, sustainability, and science issues.

The list below represents media coverage from 2011-2012 only. A complete list of articles, blogs, and other news pieces is available on

the Sustainability in Prisons Project website,
www.sustainableprisons.org/press-room/

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<http://www.kval.com/news/local/121061529.html>
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- May 2011, Good News, Andrew Price, *The Sustainable Prisons Project: Connecting Inmates with Nature*,
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- Jun 2011, Youth Leader Magazine, Shikha Nehra, *Nalini Nadkarni's Sustainable Prison Project: Bringing Life back into Prisons!*, <http://www.global1.youth-leader.org/2011/06/nalini-nadkarni-bringing-life-back-into-prisons-with-sustainable-prison-project/>
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- Jul 2011, Inhabitat, Helen Morgan, *Sustainable Prisons Project Connects Inmates to the Environment and More*,
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- Nov 2011, Grist, Claire Thompson, *Why Prison Inmates Make Great Conservationists*, <http://grist.org/animals/2011-11-02->

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- Jun 2012, Mother Nature Network, Andrew Schenkel, *14 Green Prisons*, <http://www.mnn.com/money/green-workplace/photos/14-green-prisons/eco-life-behind-bars>
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Biologist Mary Linders laughs during a chat with SPP Senior Advisor Nalini Nadkarni at SPP's annual celebration. Photo by Aaron Barna.

CHAPTER 9

Tips for Success

Kelli Bush, Julie Vanneste, and Dan Pacholke

Planning

- **Identify goals and objectives** including opportunities for resource savings, science and sustainability education programs, partnerships, data tracking, evaluation etc...
- **Identify actions** necessary to accomplish priority goals and objectives
- You won't be able to do everything all at once, but **start somewhere!**

Resources

- **Identify resource needs and priorities** and a plan for obtaining what you need

- **Use the resources you have** available whenever possible
 - **Recycle, reuse, and rethink** materials that you already have or can easily obtain (i.e. build a composting area or worm bins using scrap building materials)
 - Remember successful projects can be **low tech** and **inexpensive**
 - Include **staff** with interest and experience in areas such as gardening, beekeeping, building etc...
 - Include **inmates** with interest and experience in areas such as gardening, beekeeping, building etc...
- **Leverage your resources** through partnerships or consultations with education institutions, and conservation and community organizations
- Work with partners and agency/organization staff to **identify funding/donation sources**-- grants, foundations, materials donations, surplus materials and equipment etc...
- Identify and **eliminate what you may be buying only to throw away** e.g. Styrofoam, trash can liners, etc...

Scale

- **Start small:** use a small project to prove that you can be successful (include some level of data **tracking** or **evaluation** to measure and prove success)
- Create **model projects:** design projects to serve as demonstrations of successful implementation
- **Scale up** successful small projects to have a larger impact
- **Replicate** within the facility and at other facilities

Generate Interest

- Develop **outreach materials**: high quality photographs, a website, newsletters, handouts, business cards, social media, posters etc...
- **Present** and table at conferences, symposia, and community events
- Provide **science/sustainability education whenever possible**
 - **Invite guests** to come into the prison to provide lectures, workshops, and educational resources to educate inmates and staff on various sustainability and science topics
 - **Explain** the “problem” and “why or how we are addressing it” e.g. “water resources are scarce for garden expansion, consider using rain water catchment for the gardens, identify effective ways for staff and inmates to conserve, and provide education and resources to implement conservation measures.”
- **Encourage involvement** at every level
 - **Staff**: involve officers to administrators across a wide range of disciplines, provide acknowledgments, awards or incentives whenever possible
 - **Offenders**: engage offenders **as partners** in science and sustainability efforts; provide them with meaningful jobs, opportunities to contribute, and education
 - **Scientists**: invite scientists into prisons, encourage them to **see prisons as a resource** to help with challenging environmental issues, and to view prisons as a place for two-way learning
 - **Students**: provide opportunities for interesting and meaningful research, as well as leadership and learning opportunities

- **Community:** share work with the community through media stories, websites, participation at community events, social media, etc... Also consider projects with social and environmental benefits for the community (reduced resource use, saving taxpayer dollars, and/or ecosystem restoration)
- **Keep your eyes on the goal**
 - Continue to engage colleagues, staff, inmates, and partners
 - Define the actions necessary to accomplish your goals
 - Continually discuss defined goals, the actions necessary to achieve them, and timeline for project implementation/completion
 - **“Change the conversation”** at the institution; get staff and inmates thinking about and discussing science and sustainability and new and better ways to improve projects and programs
 - Encourage healthy competition among living units or institutions
- **Celebrate Success:** recognizing and publicizing a project launch or success of even small achievements will build and strengthen enthusiasm, commitment, and new interest.

Partnerships

- Identify the partners to help you reach your goals and objectives
- Try to **find common ground**: understand your potential partner’s goals and objectives (i.e. are they working to recover an endangered species, restore habitat, promote recycling in the county, etc...)
- Don’t “reinvent the wheel”: through partnerships, **leverage resources and expertise** (i.e. find partners with existing educational resources, curriculum or job training programs)

- Partner with an academic institution: **students can be a tremendous asset** to your program, assisting with plan development, education and training programs, evaluation, conservation projects and more!
- Make sure that partners, volunteers, and visitors receive proper **safety training** and briefing to work in the prison/jail environment

Tracking

- Develop individual **tools for tracking** (spreadsheets and/or databases) to measure program impact: levels of resource use (water, energy, waste), numbers of program participants, record details (i.e. date, time, presenters, topics) of conservation and education programs, media coverage, and outreach activities etc...
- Establish an **evaluation program**: use surveys, interviews, and records requests to evaluate the effectiveness of your program on participants (make sure to obtain proper **human subjects review** and other required approvals for evaluation)
- Use a **performance management tool** to add accountability: compare goals and objectives to actual accomplishments, report progress at regular intervals



Former Inmate Frog Technician Al Delp shows pride in his job with an addition to his cap. Photo by Benj Drummond.

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