La Salle University

The “Green” Mile:
How our Correctional Systems can Promote Sustainability and Conservation

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Abstract

The U.S. criminal justice system is designed to protect the innocent and hold those who violate the rights of others accountable with due process of law, though not without great costs to both the American taxpayer and the natural environment. This research probes deeply into how the Sustainability in Prisons Project (SPP) and other innovative correctional systems and partnerships throughout the United States established programs designed to offset the ecological footprint of correctional facilities, restore important ecological habitats, reduce financial strain on the taxpayer, and provide inmates with marketable vocational skills and connections to causes beyond the secure perimeter of their facility. Additionally, this research will inform recommendations to the Pennsylvania Department of Corrections (PA DOC) as well as the Bucks County Correctional Facility (BCCF) with respect to implementation of measures to promote sustainability and conservation within their respective facilities. Drawing on in-depth qualitative interviews with industry leaders at the state level, site visits and interviews with county officials, as well as peer-reviewed articles from the field, this research will provide the reader with a comprehensive overview of the current state of sustainability and conservation programs within the correctional industry, and how the correctional systems serving our communities in the Commonwealth of Pennsylvania might weave sustainable operations into their in the future planning.
Introduction

While this research does not intend to analyze the merits or drawbacks of the manner by which justice is applied in the United States, it is important to first consider the breadth and scope of the issue and why it is important that correctional systems seek to reduce their financial and environmental impact. To understand the need for the establishment of sustainable practices that ease the burden of the penal system on the environment and the taxpayer, it must first be noted the extent to which the burden exists. According to Peter Wagner and Wendy Sawyer in the publication *States of Incarceration: The Global Context 2018*, at this time the United States incarcerates its citizens at a rate that overshadows those of countries throughout the rest of the world, with 698 incarcerated persons per 100,000 citizens. Many U.S. states incarcerate their citizens at rates that far exceed the national average, such as the state of Oklahoma, which as of 2018 has the highest rate of incarceration in the country with 1,079 incarcerated persons per 100,000 citizens (Wagner and Sawyer, 2018). The Commonwealth of Pennsylvania also incarcerates its citizens at a rate that exceeds that national average with 792 incarcerated persons per 100,000 citizens (Wagner and Sawyer, 2018), despite reducing its prison population in 2018 by approximately 1,000 inmates, equivalent to one facility (PA DOC, 2019). For further emphasis, if one would consider U.S. states in the broader picture of incarceration rates amongst countries worldwide, 23 U.S. States would have the highest incarceration rate in the world, and 32 of them would have higher incarceration rates than El Salvador, the country with the next
highest rate of incarceration globally at 614 incarcerated persons per 100,000 citizens (Wagner and Sawyer, 2018). Since we are avoiding an evaluation of the efficacy of this policy of incarceration with respect to crime rates and quality of life measures for our citizens, the importance of this information as it applies to this research is that the U.S. currently has over 2.4 million incarcerated persons in the care of federal, state and local government, making the costs of incarceration, parole and probation the second fastest growing federal budget item behind Medicaid. The Commonwealth of Pennsylvania currently spends approximately $42,727.00 annually per inmate (PA DOC, 2019), costing approximately $168.00 annually for every resident.

In addition to the growing financial costs of incarceration, the facilities that house inmates are immensely demanding of resources and as a result produce a substantive negative environmental impact. The consumption and utilization of mass amounts of energy resources is often exacerbated by the inefficiency of the facilities themselves. Using the Pennsylvania Department of Corrections (PA DOC) as a microcosm, four of the 25 currently operating state detention facilities were opened prior to 1950, with State Correctional Institution (SCI) Huntington having first opened its doors in 1889 and SCI Rockview in 1912. Between 1992 and 1996, the PA DOC built and opened an additional eight facilities across the commonwealth. (PA DOC, 2019) Along with the continued expansion of facilities under the supervision of the department of corrections is the well-established fact that

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correctional facilities use more water and electricity and produce more waste per capita than do citizens in free society.

As a societal trend, this concept that some refer to as “mass incarceration” is a relatively recent phenomenon with the number of incarcerated persons in the US increasing seven fold between the years of 1970 and 2003, and doubling from 1990 to the present time (Wagner and Sawyer, 2018). In recent years, citizens and government alike have taken great interest in the issue of managing the environmental and financial impact of what is often referred to as the “correctional industry” – often with the emphasis on reducing or off-setting the environmental impacts of the facilities themselves. During the Obama administration, the U.S. saw the force of federal law applied to take aim at this issue through Executive Orders 13514 – *Federal Leadership in Environmental, Energy and Economic Performance* and 13693 – *Planning for Federal Sustainability in the Next Decade* (Moran and Jewkes, 2014). In essence these federal executive orders mandated that all federal agencies draft and execute policies aimed at reducing the greenhouse gas footprint of the federal government by requiring agencies to measure and reduce greenhouse gas pollution from federal activities, improve efficiency, increase use of renewable energy, reduce water consumption and purchase energy-efficient and environmentally preferable goods and materials. This has resulted in massive efforts by the Department of Justice (DOJ) to work toward compliance with these orders and similar legislative efforts in their federal correctional facilities and
detention centers, while also acknowledging the social responsibility of the industry to reduce its environmental impact (Moran and Jewkes, 2018).

Shortly after Executive Order 13514 was introduced, the US Department of Justice released two pertinent publications to outline their goals for meeting the criteria for compliance, the Strategic Sustainability Performance Plan and The Greening of Corrections: Creating a Sustainable System, outlining a framework and rationale for these efforts as well as specified and measurable goals, such as the goal for facilities to achieve zero-net energy consumption by 2030. The Greening of Corrections paints the picture of a win-win scenario where correctional facilities will not only become less of a financial burden on the citizenry but also acknowledge their responsibility to promote sustainable environmental practices. The opening paragraph of the Greening of Corrections publication states,

We believe that the path to sustainability is not only technically feasible for correctional facilities but also critical as it allows us to reduce our costs of doing business, assist in making our communities more sustainable, help our inmates to reintegrate into society in a productive and meaningful way, and ultimately ensure that we are preserving our environment now and for generations to come. (DOJ, NICIC, The Greening of Corrections, 2011)

As these trends toward sustainability within correctional systems began to gain momentum at the federal level, it has trickled down to state and municipal governments. Several states, notably Washington and Illinois, saw similar legislative and administrative efforts at the state government level. In Washington State, Governor Jay Inslee signed into law Executive Order 18-01 – State Efficiency and Environmental Performance (SEEP) – on January 16, 2019. This order mandates
emissions reduction initiatives in all state run facilities such as ensuring the use of clean electricity, zero-emission vehicles, preferable purchasing and other facility-focused policies. (Washington State, Officer of the Governor, 2019). In the State of Illinois, the *Green Governments Illinois Act of 2007* similarly caused state departments including the Illinois Department of Corrections (IDOC) to implement policies and procedures designed to promote sustainability (State of Illinois, General Assembly 2007).

While the concept of penal labor in the US is as old as prisons themselves (and was perpetuated by the 13th amendment to the U.S. Constitution), today's prisons seek to institute programming that works toward meeting a societal need while giving inmates valuable work experience that they can bring back to their communities upon release. While the efforts of the correctional industry to promote sustainability and ecological conservation through policies and procedures are a primary focus, prisons are also “greening” with respect to inmate programming designed to promote environmentally friendly practices and procedures within the facility while providing inmates with marketable and employable skill sets to assist with reentry and recidivism reduction efforts. Several correctional systems in states across the U.S. have emerged as thought-leaders and models in the movement toward greener and sustainable operations. This research will examine those systems and their programming in order to inform the recommendations for the PA DOC and BCCF.
Methodology

The goal of this research is to evaluate existing activities within correctional systems that seek to reduce the financial and environmental burden of the incarcerated population and the facilities that house them while providing inmates with vocational opportunities that are also restorative and support the community reentry process. The use of this information is to observe themes and successful practices that can provide a framework for systems who have not employed the inmate population toward the goal of sustainability and conservation, namely those systems most directly impacting the communities in the commonwealth of Pennsylvania. The methodology used to inform this research was conducted largely through in-depth qualitative interviews with individual facilitators of sustainability and conservation programs within correctional systems. Being an emerging trend, there is little reliable quantitative data regarding the outcomes of these programs, a problem further hindered by the reluctance of correctional facilities to provide access to information regarding inmates and their participations in various forms of programming. With these things considered, the most meaningful information was derived through phone calls and in-person meetings with program facilitators and through the use of open-ended lines of questioning regarding various aspects of their program. Through these interviews I sought to gain an understanding of the relationships and partnerships that are required in order for departments of correction or individual facilities to successfully establish programming that replicates those examined through this study, as well as the benefits to the inmate.
and corrections professionals. A total of four qualitative interviews were conducted both in person (2) and by phone (2) with professionals from the Sustainability in Prisons Project (SPP) representatives from both Evergreen State College and the Washington Department of Corrections, an in-person interview and site visit at Bucks County Correctional Facility, an in-person interview with two staff Sergeants at the Bucks County Correctional Facility. A request for an interview with AgriIndustries was declined, and a request for an interview with the Roots to Reentry program went unanswered. This selection of interviewees will provide critical information to understand the workings and benefits of successful programs while understanding the capacity of both Bucks County and the Commonwealth to pursue both sustainability and conservation initiatives, providing valuable vocational experience to inmates while reducing the financial and environmental impact of the correctional system on the Bucks County and Pennsylvania taxpayer.

Program Identification

Through this research it has become apparent that conservation and sustainability efforts are being driven both from the grassroots level, by way of partnerships between correctional systems and community nonprofits, and the administrative, state and federal levels by way of legislative action and departmental policy. While state governments are finding ways to reduce their costs and environmental footprints, correctional systems themselves are uniquely positioned to produce and mobilize a sizeable workforce at little to no cost. According to Chris Idso of the Doerner
Washington State Department of Corrections (WA DOC), correctional facilities exist based on the assumption that prison personnel alone are not sufficient for successful operation of a facility, and facility staff must instead oversee the efforts (cooking, cleaning, maintenance, etc.) of the inmates themselves to operate the facility. In addition, Idso spoke to the focus in corrections on offering inmate programming that provides for the building of marketable skills to support the successful reentry of inmates into the community (Idso, 2019). These two forces have over time spawned programming that has evolved from historically popular crop farming and gardening, to highly technical vocational certification processes for inmates to aid in their successful reentry to the community. Due to this dual focus, inmate programming information is often readily available and promoted on the respective departmental website. By navigating the publicly available information for state departments of corrections, current inmate programming is often easily identified and information regarding program output or outcome is commonly available by way of annual report.

While states near and far have implemented operations or offer inmate programming meeting the focus of this research, with any degree of inquiry into this topic one will quickly become acquainted with SPP in Washington State, as they are the standout, model and industry-leading program in both sustainability and conservation within correctional systems. Due to this, much of this research will seek to glean information from this program and its staff that can be applied to systems correctional systems elsewhere, namely in the Commonwealth of Doerner
Pennsylvania. In addition to SPP, this research will provide an overview of efforts being conducted in the Illinois Department of Corrections (IDOC) and New Jersey Department of Corrections (NJDOC).

**Sustainability in Prisons Project (SPP)**

SPP is a pioneer program with humble beginnings in 2003 as a partnership between Evergreen State College, and the Washington State Department of Corrections (WA DOC). SPP Education and Outreach Manager Joslyn Trivett of Evergreen State College confirmed that SPP is the first organization of its kind, “particularly where the science education and ecological project meet.” Trivett acknowledged that there have been many agricultural efforts such as gardens and crop farming historically within correctional systems, as well as inmate programming seeking to combine vocational skill-building exercise with academic content, however SPP is unique in its focus on ecological conservation, science education and sustainable operations. While the critical partnership between WA DOC and Evergreen State College is implied, Joslyn noted that other partners were instrumental in providing the strategic support necessary for SPP to grow. Some of the other partners who were important to the successful establishment and growth of SPP include: The Nature Conservancy, Center for Natural Lands Management, The U.S. Air Force (and other major landowners in critical habitat, in-house experts), a variety of faculty, scientists and wildlife experts (Trivett, 2019). SPP would continue to expand its ever-fluctuating number of partnerships to include a multitude of environmental
organizations and community nonprofits with shared goals and values. Many of the goals shared between SPP and its partners are founded upon the needs of the community partner that can be provided by or through a particular program at SPP. A surface-level analysis of the organization’s website affirms the culture of collaboration within SPP. Partner organizations are specifically listed, credited and thanked.

While State legislation would eventually support and even mandate some of the activities conducted, SPP did not begin as an effort of compliance with a legislative initiative; instead SPP grew organically through small-scale partnership, initially within the confines of a single correctional facility known as Cedar Creek Corrections Center. The Superintendent of the facility, Dan Pacholke, constructed a water catchment and composting center on prison grounds by way of spare materials. His intention was to reduce operational costs for the facility while providing inmates with meaningful work. Simultaneously, Dr. Nalini Nadkarni, a professor at nearby Evergreen College, had established contact with Cedar Creek by requesting inmate assistance with her native moss project, and Cedar Creek was pleased to oblige. (Sustainability in Prisons Project, 2019). The early successes of these modest activities would serve as the foundation for what would become an internationally recognized model sustainability and conservation program within a correctional system.
The mission of SPP is to empower sustainable change by bringing nature, science and environmental education into prisons. The mission promises of SPP are fulfilled through a myriad of innovative programs that include environmental education and training (of the inmate population), conservation, sustainable operations, community contributions and restorative nature (Sustainability in Prisons Project, 2019). Each of these programs work to further a component of the mission and can be adapted to meet specific environmental or community-based needs.

**Facilities and Incarcerated Partners**

Correctional facilities are uniquely positioned to give back to their communities in several ways: a) by the provision of goods and services to the community or community based agencies at reduced cost due to the price of inmate labor b) the provision of important educational opportunities for emerging professionals from Universities, such as students from Evergreen State College, and c) developing marketable vocational skills within the inmate population, aiding in their successful reentry to the community. SPP’s programs are designed for and are largely dependent on the inmate population for their successful operation, and are offered to inmates at facilities depending upon the specific capacity and interest within that facility. Mr. Idso explained in detail how the WA DOC makes decisions regarding how programming will be provided at particular facilities. Idso discussed that it is largely a matter of interest and willingness on behalf of corrections department staff as well as regulations, protocols and the availability of inmates in that specific
Idso elaborated, "...so it’s feasibility and willingness, as well as the restrictions placed on the inmates. Camps are good for programs that need daily attention as the inmates have less restriction on their movements and behaviors. If you wanted to do a nursery in a secure facility, you’ll need to have irrigation inside the fences." Idso went on to discuss how the prison camps are most commonly the host sites for the ecological conservation activities such as Oregon Spotted Frog Rearing, which requires significant daily oversight, due to the facilities protocols are less restrictive of the movement and availability of inmates, and has not attempted to implement animal or insect care programs at any of the secure facilities.

With respect to the matter of interest, Idso explained that the programming at each facility develops from within, and programs are not pushed or forced on facility staff beyond those elements that are dictated by legislation. When a facility expresses a specific interest for program development, Idso facilitates the process. In addition to interest from the facility, programming can also be contingent upon the needs and interests of community partners. Idso described an instance where they attempted to implement at tilapia farming program at a facility, but ultimately determined that the program was not sustainable as it was incurring more costs than the facility was saving on the purchase of fish. Idso then alerted his partners at Evergreen to the associated greenhouse that is now in disuse. It was determined that the Evergreen side of the partnership had a simultaneous need to implement a wetland grass mat project that could be done in the greenhouse, so the wetland grass mat project became a product of opportunity.
Trivett also confirmed from the Evergreen perspective that the decision-making regarding program offerings at each facility is largely an organic process, and relies largely upon feasibility and interest. Ms. Trivett went on, “both sides of the partnership are broadcasting programs that you could have, should have…. many factors go into deciding what actually happens. Very often there’s more interest than capacity to provide. It is not one partner’s shortcomings more than the others. The demand for this type of programming is just so high.”

When it comes to selecting individual program participants from the inmate population, Idso expressed that interest and willingness on behalf of the inmate participant is the primary qualifier for the program. Inmates are required to participate in a work program, but have some element of choice, such as working in the cafeteria or on a cleaning crew. Idso also discussed personality attributes and individual considerations that can determine whether or not an inmate is a good candidate to work in SPP programs. “It doesn’t take more than one or two guys to disrupt or destroy a program…. So we are looking for someone who has modeled a behavior over a course of times that shows that he or she will not create problems and can act appropriately” he said. Other factors in the selection of inmate partners include seniority, criminal history and security concerns. Idso mentioned that prisons can be unpredictable places, and the availability of inmates is subject to change at any given moment, so all program activity is conducted based on the assumption that any inmate could become unavailable at any time, so contingency
plans are an important component and there is cross-training within the program for purposes of succession.

Trivett also spoke to the characteristics of inmate partners desired for the programming, and how these characteristics can vary dependent upon the nature of the program. In general, desired qualities regardless of the program type favor a willingness to learn over experience having done similar work in the past. Given the cooperative aspect of the programs, a strong inmate candidate will have the propensity for teamwork. Trivett also noted that due to facility and inmate-specific considerations, as well as SPP providing only a small proportion of the overall jobs and student opportunities within the facilities, these participation decisions are more commonly made independently by the Department of Corrections, in whom Evergreen College trusts greatly in making these decisions. The process can be competitive in that there is more interest than availability, speaking to the reputation SPP has established amongst the inmate population and correctional staff.

**Environmental Education**

As noted by Trivett, SPP founded the intersection of where corrections, science education and the ecological project meet. The environmental education program is central to SPP’s mission and provides a variety of course offerings including Roots to Success, which provides an overview of critical environmental issues, train-the-
trainer certification for inmates to become program instructors, a speaker workshop series and the opportunity for completion of related community college courses. SPP’s devotion to education goes beyond the above listed opportunities; education is a “golden thread” throughout every SPP program. When discussing the educational project, Ms. Trivett, focused in on some of the more general educational opportunities that are designed to generate interest in SPP and provide valuable educational credentials for inmates such as community college credits, which in general have more interest than availability amongst the inmate population. Trivett also explained how SPP operates in a leadership capacity in the educational programs and while they will contract with experts, these programs are largely based around the SPP/WA DOC partnership. Ms. Trivett additionally emphasized the benefits of the Workshop Series, which brings guest speakers from various community partners in conservation to three prison facilities on a monthly basis, serving the dual purpose of serving the mission of the program while connecting inmates to the community in a diverse way. Trivett proudly stated that “there are some really smart nerds in prison and why shouldn’t’ they have something to study?” In the State of Washington, inmates have the unique opportunity to not only study, but to apply their knowledge and skills by making real contributions to science and community.
Conservation

The real contributions to ecological and environmental conservation make SPP a unique and impressive program to examine. The conservation program gears its efforts to respond to real-time environmental deficits by protecting and conserving important natural resources, and utilizing inmates both as technicians and pupils of the program. Some important conservation work done through SPP has been the butterfly and pollinator program, various nurseries to restore vegetative habitat, a spotted frog and western pond turtle rehabilitation program, as well as a composting with bugs program. During the interview with Trivett, she lauded the successes of the butterfly rearing initiative housed at Mission Creek Corrections Center for Women, located in Belfair, WA. This initiative is a joint effort between SPP, the Oregon Zoo, and the Washington Department of Fish and Wildlife to rear and release the federally endangered Taylor’s Checkerspot Butterfly at specified restoration sites. Joslyn described this program as being “extremely hands on... [participants] are trained to handle the caterpillars and butterflies, weigh them... It is extremely technical.” The Oregon Zoo is separately running and duplicate program and there is much correspondence in order to fine-tune protocols and strategies. In addition to the Butterfly program are the Beekeeping and Beekeeping Education programs that have been part of SPP’s mission since its inception. In just a few short years, SPP went from having beekeeping programs in three facilities to eleven facilities, and in turn over 300 incarcerated persons have achieved certifications in beekeeping. Trivett confirmed the benefits of this program, and her
great enthusiasm about the program is clearly contagious amongst the participants given the way that the programs have taken root in all but one facility. While noting the practical benefits and contributions of the conservation program to science, she again draws attention to the benefit of the inmate participant to channel energy in a productive and meaningful way when stating “the things that happen to a human when they start keeping bees are extraordinary.” The beekeeping and pollinator programs are concrete examples of how correctional systems can harness the capacity of the inmate population to address environmental deficits.

*Sustainable Operations*

The Sustainable Operations program employs the inmate population in meeting the goals of Executive Order 18-01 to reduce the environmental impact of facility operations statewide. In coordination with efforts of the SPP sustainable operations program, every facility in the Washington State DOC has implemented sustainable operations in ways that fit the specific attributes of the facility and the supervising staff (WA DOC, 2019). Sustainable operations include waste sorting, composting and recycling, gardening, energy and water conservation and green purchasing, and every state operated correctional facility in Washington has implemented these practices. The WA DOC operates 12 prison facilities and 12 work-release facilities, occupying over 7 million square feet of conditioned space and housing an average of 19,000 incarcerated persons. The Capital Programs division of the DOC, of which Idso is the Assistant Director, evaluates energy usage and implements energy
reduction operations such as facility and systems maintenance and improvements, energy audits and subsequent improvements, high performance facility development, alternative energy investments and conservation initiatives. The efforts of the Capital Program division have contributed to a 24\% reduction in total energy consumption in the last ten years, as well as maintaining a slight annual decrease in energy consumption per incarcerated person. Proactive maintenance, lighting improvements, and renewable energy contracts were the highlights of fiscal year 2018 for energy reduction initiatives (WA DOC, 2019).

Simultaneously the WA DOC has reduced the amount of waste being diverted to landfills by 20\% since 2011 (WA DOC, 2019). This has been done mostly through the sorting and appropriate management of waste streams coupled with the “preferable purchasing” of durable reusable products over disposable products when possible. In addition to the facilities having been successful in reducing both energy consumption and waste, the amount of waste per incarcerated person per day is also decreasing, although at a slower pace.

Community Contributions

The Community Contributions Programs serve the dual purpose of bonding the inmate to the community while cultivating partnerships with nonprofits that have identified a need for a tangible product that can be assuaged or reduced through a partnership with SPP. Keeping with SPP’s values to reduce waste, these programs
focus on the restoration or repurposing of high impact items such as wheel chairs, bicycles and computers that can in-turn be made available to underserved populations or other needs-based service providers at a reduced cost or for free. This scale and benefits of this program are clearly evidenced by the output statistics of this program. From July 2017 -2018, SPP provided over 4,300 refurbished computers to the local school district at cost, donated almost 850 refurbished bicycles and wheelchairs as well as quilts to homeless shelters, garden-grown produce to food banks and other activities that meet a community need and provide for meaningful work for inmates seeking to repay their debt to society (Sustainability in Prisons Project, 2019). These are considered high mission-impact activities as they encompass the full mission of SPP by serving the needs of the community; reducing environmentally detrimental waste such as metals and electronics; reducing costs for other divisions of government; providing meaningful work and reentry skills for inmates; and utilizing the inmate population and community partners so that the costs of incarceration are offset by productivity. Trivett confirmed these benefits in her interview when she discussed how the Community Contributions program partners with various food pantries and distributors to receive the proceeds and surpluses generated by SPP’s gardening operations. One such example of a partner is the Emergency Food Network located in Lakewood, Washington, whose mission is to “provide Pierce County with a consistent, diverse and nutritious food supply so that no person goes hungry.” The Emergency Food Network delivers of 13 million pounds of food annually to 76 food pantries. This is an important partner to the success of the program as they are able
to distribute produce generated by SPP to pantries based on need, thus also reducing instances of waste. While the prisons themselves may utilize some of what they’ve yielded, equitable distribution is paramount within the facility, sometimes causing full yields to be donated. Trivett referred to the example that if the yield of lettuce at a particular prison is not sufficient to provide the entire inmate population with salad, then the lettuce yield will be donated to a community partner for distribution. Trivett also noted that despite the consideration that the gardening programs do not always directly offset the costs of providing food for inmates, the benefit to the prison and the participant is the opportunity to give back to the community and connect to the world beyond the confines of the facility in a meaningful and important way, also noting that this can be restorative as many inmates acknowledge that they’ve done harm to their community. Idso confirmed this when acknowledging the efforts of the gardening programs that may in some ways offset food costs, but further explained that “inmates are on a very structured meal plan so they don’t need 8,000 pounds of zucchini in June”, which provides the opportunity for the restorative aspect of the work. Idso’s vision was to teach incarcerated persons the skills necessary to properly care for something, and with his background and experience in agriculture, Chris understood that horticulture is safe and productive way to teach someone about caring for a lifecycle while being able to give back to their community. His vision has since become an impressive reality.
Trivett further explained that the community contributions program serves as the basis for many of SPP partnerships with outside nonprofits, another example being Harvest Now and their “seeds to prisons” program. Harvest Now, a national nonprofit that seeks to alleviate hunger and improve health in underserved communities and correctional facilities, benefitting the wellbeing of both the grower and receiver of fresh produce. The Seeds to Prisons program partners with SPP to provide seeds for the cultivation of produce within the gardening programs at WA DOC facilities, further reducing the costs of operation for the gardening program. Facilities then donate back a portion of the yield previously as previously agreed upon by contract for distribution to those who need assistance with food security by Harvest Now.

Outcomes

While SPP is not the solitary example within the correctional industry promoting sustainability or conservation, they are with certainty the most robust, comprehensive, innovative and intentional. Where similarly aligned organizations do exist, they often have a more limited capacity and can or do not provide the broad spectrum of programming needed to make significant strides toward sustainability or make great contributions to conservation like SPP. SPP and its partners have continued to build upon the strong base established by its founders and continue to raise the bar in each area of its mission delivery. In speaking with
SPP staff, and reviewing annual reports and information releases, SPP without question successfully delivers on each of its mission promises.

When asked about evaluating program outcomes, Trivett noted that SPP's work is not evidence-based, and discussed challenges that exist with structuring the research for these programs within the correctional environment, such as the lack of an applicable control group. Trivett focused on the therapeutic and restorative benefits of the program, stating that most

“[People] don’t consider that what goes on with an incarcerated person [post-release] is AN outcome, but it is not THE outcome. What are the contributions to science? The community? Ecology? Individuals who have come to prison who wouldn’t have otherwise contributed and learned about culture? It is the quality of overall experience…. I’ve learned so much about environmentalism by going to prison. I am an outcome…. This is not charity work – this is partnership all the way around. This model isn’t specifically about prison – this is about those who are warehoused by our culture and providing them with opportunities to do something meaningful. Then there are people who don’t think like me so that I’m challenged to do new things and see things in a different way. The best science is done when you have an inter-disciplinary team.”

Idso advised that SPP has been working to generate and analyze data related to recidivism, and discussed the importance of such data to secure ongoing funding and support. According to Idso, many programs, including SPP, place an emphasis on developing vocational readiness upon an inmate’s release into the community and the importance of capturing those outcomes. Idso referred to a “career navigator” position at Evergreen State College that in cooperation with the Department of Licensing helps to build pathways to employment for inmates upon their release. Inmates can achieve proficiency certificates in specific vocational
skills. “This is huge because those inmates coming out of Stafford Correctional Facility can run a home depot.” With such efforts being made, there is a strong effort agency-wide to drive data, but not without challenges with respect to resources. Idso explained that the grants supporting the programs are restricted to program activities and would not support a program evaluation process, making the DOC reliant upon their partners to generate and implement the evaluation process.

When asked about benefits of SPP programming for corrections staff, Idso described a variety of perspectives within the corrections community relating to how inmates should experience incarceration. Idso described implementing corrections programming as a “tricky element” that can at times be met with resistance when going beyond the most fundamental mission goals of ensuring the safety of staff, inmates and the community. The garnering of this staff support is critical for the success of the program, in that if there is not investment on behalf of the counselors and officers overseeing the units in the facility, the program becomes unmanageable due to severed access to the inmates population. When met with a difference of ideology, staff can agree that idle time for inmates is problematic, which is a helpful element in garnering support from staff. Idso summarized his approach by explaining “…they [inmates] could all be sitting back in the day room playing dominos and giving you grief…but if you let them come to me, I will employ and supervise 140 of them… they come back tired. Idle time is negative and this cuts down on negative and unnecessary activities.” According to Idso, staff members in the facilities often identify the benefits of SPP’s programming in short time, both as
an aid in managing the inmate population and in the real-world stories of successful reentry for inmates supported by SPP. Idso described a revolving door where inmates come and go, and it can be satisfying to staff to learn of positive outcomes for former inmates.

“Stories come back about former inmates that aren’t on the corner selling but now he’s working on bicycles, gardening, or doing something positive that was facilitated through the program. This makes them [inmates] employable. Many of them have never been employed – they don’t know how to work – this teaches them how to start and complete something. Staff can see this...” said Idso.

When asked which program he would keep in funding could only support one, Idso responded without hesitation “Definitely the restorative nursery.” Idso went on to describe the program as “hands-on” and commented on the streamline of high-quality master’s students that become involved with the inmates, connecting them with the community.

Chris reflected on an evolving perspective on inmate programming, and referred to the bicycle restoration program that was initially challenged to garner support but now boasts five separate bicycle shops across the DOC. Through the successes of the program and program participants, SPP is seeking to change perspectives and attitudes about the mission of the correctional system. “If there’s a prison in your state that is in a newspaper headline – they did something wrong. We are trying to change that”, he said.
The Contagious “Greening” of Corrections

As SPP’s programming began to expand and gain notoriety, other states and correctional systems began to examine and implement programming with like goals to reduce the environmental footprint of state-operated facilities, reduce the financial burden on the taxpayer and provide applicable vocational training for inmate participants to assist in their community reentry upon release. What makes SPP especially unique is their dedication to ecological and environmental conservation, going far beyond the worthy goal of offsetting the footprint of the facility and providing a service to the community – they actively and affirmatively provide for the betterment of the ecological environment through powerful partnerships. For every state government that has begun to address the challenge of sustainability there exist an equal number of models and methods by which goals are being achieved. This research will briefly examine two successful alternative models of promoting sustainability and conservation within correctional systems.

Illinois Department of Corrections

The Green Governments Illinois Act of 2007 is the legislative catalyst for what the Illinois Department of Corrections (IDOC) would eventually dub their Sustainability Initiative, which officially launched on Earth Day of 2012 (IDCO, 2019). Through this initiative the IDOC has prioritized sustainable operations by instituting policies that promote the conservation of energy resources, recycling
operations and the reduction of waste, sustainable gardening operations, and the pursuit of self-sufficiency in an effort to reduce taxpayer burden, promote offender access to vocational training opportunities and offset the negative environmental impacts of IDOC operations. The IDOC harnesses the strengths of the inmate population in their efforts by incentivizing green operations with conduct rewards and credentials for vocational work. A product of this initiative has been the establishment of waste streaming, composting and recycling operations at multiple facilities. These operations fall under the auspices of Illinois Correctional Industries, and include an industrial plant that recycles on behalf of several additional IDOC facilities located at Menard Correctional Facility, not only reducing cost associated with waste management but providing marketable job skills for inmate participants. In addition to enhanced waste management practices, numerous facilities within the IDOC employ a variety of sustainable operations including gardening programs that provide for inmate and staff meals, water catchment and rainwater harvesting, use of zero-impact vehicles (including one electric vehicle that alone saved the facility $3,000.00 in a two year time period, saving over 1200 gallons of gasoline), as well as a community contributions program that provides products made from excess wooden pallets to community nonprofits, such as dog houses, wall art, and outdoor furniture. While largely an operating within the confines of the IDOC, individual facilities have developed partnerships with post-secondary institutions. (IDOC, 2019)
State correctional agencies are commonly rich in at least two critical commodities in promoting sustainable practices: land and labor. Such is the case at The New Jersey Department of Corrections (NJDOC), whose AgriIndustries program operates nine facilities (including six dairy and crop farms, and two processing plants) throughout the state, producing meat, produce and dairy. The goal of AgriIndustries is to provide for the culinary needs of the NJDOC as well as supply other state government departments at a subsidized cost. The beneficiaries of NJDOC’s AgriIndustries include the Department of Human Services, the Department of Military and Veteran Affairs, the Juvenile Justice Commission, and ARC Mercer which serves individuals with disabilities, although facilities affiliated with any branch of state, county or municipal government are eligible to be customers (NJDOC, 2019). Most impressive about AgriIndustries is that it is a completely self-sustaining operation and has no budgeted or appropriated funds, generating approximately $11.5 million annually in revenues, despite providing their consumers with substantial savings. In addition to cost-savings, reentry is a primary benefit of AgriIndustries, providing approximately 120 inmates daily with job training and experience in all areas of milk and food production and technology. AgriIndustries is a benefit to the taxpayer of New Jersey as it is not only a self-sustaining program but helps to reduce the costs of additional government agencies, as well as reduces waste associated with wholesale food distribution. AgriIndustries is active in the farming and environmental communities, but lacks
the mission to affirmatively address environmental or ecological conservation (NJDOC, 2019).

Themes and Results

Several themes deserved of consideration have emerged throughout the examination of SPP as well as additional programs with goals to promote sustainability and conservation within correctional systems, both those that are covered within the scope of this document and those not mentioned. Based upon the qualitative research conducted with SPP staff and examination of additional programs, these themes represent important objectives or guidelines for systems seeking to institute sustainable operations and “green” initiatives.

An important highlight gleaned from the research is the emphasis placed on establishing multidisciplinary partnerships with organizations that share strategic goals and have the capacity to contribute to the success of the program. Both Idso and Trivett spoke particularly highly of various partners and their critical role in the successful implementation and growth of SPP, and SPP’s public information and communication focuses on collaboration. For SPP, these partners included landowning and land conservation organizations, fish and wildlife services and various university faculty and field experts. While examining the IDOC and their sustainability initiative, a strategic goal of the sustainability plan is to leverage and grow their partnerships with universities and nonprofits and strengthen
connections to the community. The research yields that correctional systems have great opportunity and mutual benefit from partnerships with colleges and universities.

Another theme that emerged from the research is the facility-specific approach to implementing sustainable operations and conservation programs at individual facilities. Given that correction facilities exist in various conditions and the facilities themselves each have unique characteristics and levels of security dependent upon the inmate population housed at the facility. As Idso mentioned the example of how a maximum-security facility in the WA DOC is not likely to offer the restorative nursery program for inmates due reasons of feasibility, and similarly that a county facility is unlikely to host such a program as many of the inmates will not be housed there long-term and there is often a lack of real-estate.

Additionally, it can be concluded from both SPP interviews as well as through the examination of the IDOC Sustainability Initiative that the factor of human interest both from staff and inmates is a central of shaping the programming development within each facility. The history of SPP itself is a tale of how individual ideas and interests helped to spawn a partnership that would take on a life of its own and develop into a nationally recognized corrections program. Both Idso and Trivett commented on the factors affecting this organic process of program development in specific facilities and stressed the importance of corrections staff supporting and investing in the program initiatives to the successful implementation of the
program. It appears from the research that the most effective way to facilitate sustainability and conservation program development in correctional systems is to provide a broad “menu” of program goals, and then provide the technical and administrative support to the visions and goals of the individuals who will be most responsible for successful program operation in those facilities.

Lastly, it can be concluded from this research that instituting programs focused on community contribution and/or generating restorative services or products that benefit the community or environment are of the highest impact and mutual benefit for the agency as they can often self-sustain, they are an effective means of aiding in the reentry of inmates by vocational skill building and bonding inmates to the community, they serve a direct or indirect environmental or community need, and they serve to quickly develop new and strengthen existing ties and partnerships with community nonprofits and supporters. Beyond these direct benefits of community contributions programs, there is an opportunity for the correctional system to gain visibility and interact with the public community in a positive manner and one where the message can be designed and controlled to benefit the agency. As Idso mentioned, if there is a correctional facility in your area that has been written about in the press, it is likely that agency had committed some type of oversight or infraction. It is a secondary benefit of programs of this design to help assuage or improve community relations.
Transferability and Readiness

When inquiring into the compatibility of the criminal justice systems in the Commonwealth of PA and the states in which these various programs exist, it can be established that it is common for states to have similar structures and protocols with respect to county and state detention facilities and the manner by which inmate programming can be applied based on the capacities and purposes of the specific facility and the propensities and management of the inmate population. With respect to the transferability of SPP’s programming within the Commonwealth of PA, Idso confirmed that the sentencing structures remanding inmates to either state correctional institutions or county jails in Washington State are similar to that of Pennsylvania, as well as describing similar security specific facilities to those of the PA DOC. In Washington, any offender sentenced to a period of incarceration exceeding one year will serve their sentence within the state prison system, which very closely mirrors that of PA. Correctional systems at the state and county level generally subscribe to a uniform structure allowing for transferability of programming between systems.

The Bucks County Correctional Facility (BCCF) has already began to explore opportunities to promote sustainability within the jail and community corrections centers. BCCF operates a sustainable garden and composting program at the Men’s Community Corrections Center (CCC), a medium and low security facility located the southwest of the main jail facility on the 320+ acre campus. The Gardening program
was first implemented in 2014 on a small scale and has since expanded to over 15,000 sq. ft. and produced over 13,000 pounds of vegetables and herbs in 2017. A site visit and interview was conducted with Sgt. Ron Lorenz and Sgt. William Crouthamel of BCCF who oversee the garden and composting operations, during which both Lorenz and Crouthamel took turns explaining the purpose and workings of the gardening program. Beginning each year in late April, Lorenz and Crouthamel begin employing 4-6 inmate workers from the kitchen operations program at the CCC for five days per week in the garden, commonly beginning early in the morning in an effort to subvert rising temperatures as the spring yields to Summer. The earliest stages of preparing the ground include tilling and planning and testing of soils for purposes of crop rotation, as Crouthamel explained was necessary to ensure the plot has adequate nutrients to produce the desired crop. BCCF has established a relationship with a local wholesale nursery that provides the program partially grown plants for a reduced cost, and a partnership with the Pennsylvania State University (PSU) to review soil samples and assist with crop planning. When the garden is left unattended on weekends, technology has allowed for timer-activated irrigation that ensures the gardens receive the necessary water. Both officers discussed the requirement for inmates to participate in a job at the facility, where they complete an application to work in a choice of several programs including the bread program, garden program, and grounds keeping. The gardening program does not offer any vocational certifications, however it can provide credit hours for those who are required to participate in community service hours as a result of their sentence, and the kitchen program offers a “ServeSafe” certification.
that is proctored by Lorenz. The garden produces a yield of tomatoes and cherry tomatoes, zucchini, several peppers, cucumbers, squash, lettuce, kale, beans, garlic, herbs, and even asparagus, they proceeds of which nicely offset the costs of feeding the inmate population at the CCC and BCCF. Composting is a waste-reduction strategy employed at BCCF that not only compliments the gardening program, but also is cost-effective by its reducing outgoing waste by 1200lbs to 1500lbs per month. At this time, the gardening program in particular does not have any established partnerships with nonprofits, and all proceeds from the garden are placed into food circulation at the facilities. At BCCF, participation in the gardening program is limited to the male inmate population at the CCC due to circumstances surrounding feasibility and inmate supervision. The gardening and composting program highlights BCCF’s interest in pursuing sustainable operations at their facility as well as the capacity of the facility with respect to land and resources to pursue sustainable operations in a meaningful way.

While county jails present challenges to some of SPP’s programs, Trivett spoke to SPP’s having developed and enjoyed great professional partnerships with county systems such as the Salt Lake County Metro Jail in Utah and the Santa Clara County Jail in California. She conveyed that the county systems are best suited for a limited number of programs provided through SPP. She stated, “[at the county level it is] “mostly gardening programs where participants can engage and disengage quickly...bring nature inside the area.” Trivett also indicated that the county systems are better suited for the sustainable operations work such as sorting the
waste stream or focusing on water sustainability than they are for the more training intensive conservation programs. Idso confirmed that SPP partners with county facilities and certain program activities occur in them, but the feasibility of most programming is largely hindered by a lack of real estate required at the county jails. He recounted having visited some of the county jails and it is common for them to have an element of gardening, but nothing as formal as what they’re able to accomplish at the state facilities. All of this speaks to the transferability of certain activities to county correctional facilities outside of Washington.

The PA DOC is a massive institution based on any standard of comparison, in a given day housing approximately 47,370 inmates in 25 facilities across the commonwealth, costing taxpayers approximately $117.00 per inmate per day (PA DOC, 2019) compared to WA DOC that spends approximately $106.00 per inmate per day with an average daily total of 17,841 in custody (WA DOC, 2019). While it is difficult to quantify the total costs of programming for SPP as the Evergreen State College budget and that of the DOC remain severed from each other, the Evergreen side of the partnership appropriates approximately $574,000.00 annually, all of which is supported by grants and gifts (Sustainability in Prisons Project, 2019). The 2018-2019 PA DOC budget appropriates $52.4 million to vocational and educational training for inmates and 82.4 million on Pennsylvania Correctional Industries (PCI), showing evidence of a propensity to invest in programming (PA DOC, 2019). PCI is a division of the PA DOC whose mission

“...employs inmates to produce a variety of items that are available for sale to non-profit organizations and government entities located throughout

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Pennsylvania. PCI jobs provide inmates with basic work skills and ethics. PCI is self-sustaining through the sale of PCI products and services, and receives no money from the General Fund, saving public tax dollars.” (PA DOC, PCI, 2019).

PCI conducts a variety of operations including but not limited to a clothing and garment factory, soap and detergent plant, a print/sign/license plate factory, and a wood shop. PCI, in addition to the implementation of a community work program that provides labor support to community nonprofits through the DOC, provide further evidence that the PA DOC is interested in programs that reduce costs of the correctional system to the taxpayer and contribute goods or services back to the community (PA DOC, 2019).

With respect to the matter of feasibility of sustainable operations and ecological conservation initiatives at PA DOC facilities, many of them are uniquely positioned to host large-scale farming, nursery, or sustainability operations. While the majority of the DOC facilities have anywhere from 20 to 60 acres within the secure perimeter and around 200 acres outside the perimeter, several facilities own sizeable tracts of unimproved land or land currently cultivated for crop farming. The most notable DOC facilities with sizeable parcels of land include SCI Rockview, situated on over 4,200 acres, SCI Dallas on 1,307, SCI Muncy on 763 and SCI Camp Hill on 711 acres (PA DOC, 2019).

With consideration given to budgetary constraints, feasibility, interest and current practices, it can be concluded from this research that sustainability and
conservation programs such as those of SPP are readily transferable to the PA DOC and BCCF.

**Recommendations and Conclusions**

This analysis has shown how programs like SPP can operate sustainability and conservation programs within correctional systems that successfully reduce the environmental footprint of correctional facilities, reduce costs for the taxpayer, provide valuable goods and services that address real community or environmental needs, while providing quality vocational training opportunities for inmates to aid in their reentry to the community. Additionally, this research analyzes the current operational practices within the BCCF and the PA DOC to ascertain the feasibility, philosophical compatibility and potential partnership opportunities associated with implementing or expanding sustainable operations and ecological/environmental conservation programming. The sum of the information yielded through this research highlights not only the myriad of benefits resulting from programming like SPP and from partnerships like the one between Evergreen and WA DOC, but also areas of opportunity for the PA DOC and BCCF to replicate the successes of these programs to benefit the taxpayer, the environment, and the community.

The Commonwealth of PA is densely populated with nonprofit organizations, including hundreds of Universities. In fact, more than 63,000 nonprofit organizations operate in Pennsylvania, and nonprofit sector jobs account for 15% of
the workforce (PANO, 2019). A recommendation resulting from this research is for both BCCF and the PA DOC to use strategic the strategic planning process as an opportunity to examine current partnerships and identify and cultivate new partnerships focused on sustainability and conservation. There is great opportunity for both BCCF and the PA DOC to pursue strategic partnerships with nonprofit universities and other public charities. Specifically, BCCF should consider discussions and partnership with Delaware Valley University (DVU) located just a short distance away, an institution well known and recognized for attracting quality students in the natural sciences including conservation and wildlife management, environmental science, sustainable agriculture systems, agri-business and horticulture (www.delval.edu). While county jail facilities are not well suited to implement many of the technical ecological conservation programs such as SPP’s pollinator program, there is ample room for BCCF to continue to enhance sustainable operations at the facility. Partnering with DVU would offer BCCF the opportunity to tap into expertise at the University regarding sustainable operations, horticulture and conservation to enhance the gardening and composting efforts and pursue additional sustainable measures such as rainwater harvest to replace the current irrigation system that waters the garden, or possibly explore renewable energy sources.

Similarly the PA DOC has great potential to strategically partner with Universities, government organizations and nonprofits to enhance sustainable operations and implement high-level ecological conservation programming by leveraging
partnerships. With access to vast resources of land, inmate labor and finances at the DOC level, the DOC and potential partners have immense capacity to make key contributions to the field of environmental science and conservation. The PA DOC might consider discussions with the Pennsylvania State University (PSU) regarding a partnership focusing on conservation and sustainability projects. With SPP staff emphasizing the merits of the programs that connect inmates with the masters level students, a partnership with PSU becomes even more attractive as PSU provides masters programs in wildlife and fisheries sciences, systems engineering, plant biology, horticulture, energy, environment and food economics, ecology, agronomy, and many other pertinent areas of research. Furthermore, PSU often partners with government organizations such as the Pennsylvania Game Commission (PGC) as well as various nonprofit organizations to conduct studies relating to wildlife conservation and habitat restoration (www.psu.edu). The PA DOC should seek to establish a network of partnerships to promote inter-disciplinary cooperation and collaboration.

With respect to sustainable operations, the PA DOC and BCCF should conduct periodic facility condition assessments at each facility to determine areas where resource consumption can be reduced or where sustainability and conservation efforts can be focused. In addition, both BCCF and the PA DOC should survey staff at each facility regarding their levels of interest in participating in programs related to sustainable operations such as composting, water catchment, sustainable gardening, and other possibilities based upon the specific attributes of the facility. While
BCCF’s composting efforts are modest, they have shown to reduce the amount of waste being sent to the landfill. The DOC, given their dedication to vocational programming, has the opportunity to utilize the Correctional Industries program to implement improved recycling, waste streaming and preferable purchasing operations to substantially reduce the amount of waste generated in DOC facilities across the commonwealth.

With rates of incarceration in the U.S. and associated financial and environmental costs rising sharply in recent decades, both citizens and government have great interest in the creation of sustainable correctional systems. Correctional systems present both a unique array of challenges as well as opportunities, as evidenced by their ability to gather those who have wronged society and have them learn to make meaningful contributions to the world of science and their community from behind a secure perimeter. While some may dismiss the successes of programs like SPP as being unlikely to be feasible in most places and facilities, it is critical that all correctional systems use SPP as a model to design their own path toward sustainable operations, reducing costs of operation, and providing productive and meaningful vocation opportunities to assist inmates to better reintegrate and contribute to society. To paraphrase Idso, it is the goal of programs like SPP to change the public perception of corrections by effecting positive change and highlighting these contributions through visibility and partnerships, and it is in the best interest of the Commonwealth of PA and her municipalities, including Bucks County, to pursue sustainability and conservation within our correctional systems.

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Works Cited


**Interviews**

Telephone Interview
Joslyn Rose Trivett
SPP Education and Outreach Manager
Evergreen State College
April 25, 2019, 11:00 AM EST

Telephone Interview
Chris Idso
Assistant Director of Capital Programs
Washington State Department of Corrections
May 16, 2019, 3:00 PM EST

Site Visit and In-Person Interview
Sgt. William Crouthamel and Sgt. Ron Lorenz
Bucks County Department of Corrections.
Tuesday, July 16 2019, 2:00 PM EST