

Project Name: Developing PWSA's Strategic Plan for Stormwater**Project No.: 2020-025-OPS****TASK 5: Workforce Development Recommendations****May 11, 2022****Introduction**

The PWSA's green stormwater infrastructure program offers an opportunity to provide multiple benefits to the Pittsburgh community, including development of green jobs for maintenance of the green infrastructure that has been created. In this way, green infrastructure can not only provide functional stormwater capture and provide green amenities to the community, but also provide new job opportunities for community members as well.

Philadelphia and Camden's PowerCorps programs, and DC Water's Green Infrastructure Training program are three examples of utilities hiring young men and women from the local community to help develop and maintain green infrastructure. In addition, The Corps Network has been very active in creating Civilian Climate Corps, with a similar mission, across the nation.

Discussion

There are several key components to developing a successful green infrastructure maintenance job program for the community. First, it is essential to develop a partnership with trusted community non-profit groups who can work with the utility to identify candidates from the community for the maintenance program. For example, Philadelphia, Buffalo and Reading are using Educationworks while Camden is using Hopeworks.

These community non-profits are skilled at vetting community candidates, helping to train them for general work circumstances (as in many cases, this may be the candidate's first job) and also training them for the specific green infrastructure maintenance work as well. In addition, these community groups are also able to provide life skills training, such as how to be prepared for work, to write a resume, go on an interview, or even individualized counseling. In Philadelphia and Camden, for example, the PowerCorps programs very specifically, and intentionally, focused on at-risk youth, between 18 and 26, to not only create a green infrastructure maintenance cohort but also to help save individual lives as well.

Second, it is also important to have very specific green infrastructure creation and maintenance knowledge on the training team. The aforementioned community non-profit groups have generalized job training skills but usually lack the specific green infrastructure experience needed. Philadelphia had this knowledge and wherewithal, collectively, within its own Water Department and Parks Department. In Camden, where resources were much more limited, the utility partnered with external partners, Rutgers University, the New Jersey Conservation

Foundation and the New Jersey Tree Foundation, to provide the technical assistance needed for green infrastructure maintenance job training. In both cases, the "train the trainer" approach was often used in which the green infrastructure expert would train the community job training expert, who would then incorporate the learned knowledge into the training of the community maintenance cohort. In addition, both Philadelphia and Camden adopted the strategy of hiring PowerCorps alumni to help with the job training, and life skills counseling, for subsequent cohorts.

Both Philadelphia and Camden saw the PowerCorps jobs as stepping stones in the careers of the cohort members, not final destinations. For this reason, both adopted rolling plans for six month cohorts in order to positively impact as many young people as possible. Therefore, job placement services toward the end of the six month duration for the cohort are absolutely essential to the success of the program. Cohort members are provided with complete job placement services, including assistance with resume writing and interview techniques. Job placement success is one of the most important yardsticks for measuring the overall success of the green infrastructure maintenance program. Educationworks, for example, has reported a 90% job placement record for its work in Philadelphia.

The aforementioned plan to rotate the cohorts out every six months, ensures a steady flow of new community members that can benefit from the green infrastructure maintenance program. It is also important to find funding for new green infrastructure projects not only to realize additional stormwater capture, and flooding reduction, benefits, but also to create additional job opportunities for the green infrastructure maintenance cohort. The State Revolving Fund program (PennVest in Pennsylvania) offers very attractive funding for green infrastructure projects in combined sewer communities like Pittsburgh. Specifically, the SRF program offers very low interest rates, and some principal forgiveness, plus 30 year payback periods, resulting in very low annual debt service for funded projects. In addition, FEMA's Building Resilient Infrastructure and Communities (BRIC) program offers grants for resiliency projects, including green infrastructure.

Lastly, there are also opportunities for funding to supplement the cost of the green infrastructure maintenance cohort itself. Both Philadelphia and Camden received AmeriCorps funding that significantly offset the cost of both the salaries of the working cohort and also the cost of the community non-profit's services. As mentioned above, the Corps Network also provides, on a state by state basis, funding for Civilian Climate Corps whose work includes green infrastructure but also can include other climate resiliency work such as flooding abatement, solar panel installation, etc.

In addition to creating a green infrastructure maintenance workforce, as discussed above, PWSA could also consider creating an employment pipeline from Pittsburgh's communities into the utility. Bayworks in the San Francisco Bay area, is one outstanding example of this type of program. In this program, wastewater utilities partner together to create a curriculum for various jobs, with various entry points, needed at the utilities. The utilities then partner with local community colleges and technical schools who then teach the curriculum, creating a flow of potential replacement workers from the community into the utility. There are several other successful water workforce programs that have been implemented across the nation and some of them have been captured in a compendium of best practices developed by the Water

Environment Federation ([Workforce Development Compendium Provides a Menu of Best Practices \(wef.org\)](https://www.wef.org))



[WEF - Workforce Development Compendium Provides a Menu of Best Practices](https://www.wef.org)

For this reason, WEF has collected 21 case studies demonstrating the ways in which the best-in-class water utilities across the country have implemented innovation to optimize the performance of their water workforces.

www.wef.org

This compendium is a cookbook of successful practices that can be replicated/adapted by other utilities, such as PWSA. It also includes contact information if more information is needed.

Recommendations For Pittsburgh

1) Prioritize Green Infrastructure Maintenance In The Same Way As Grey Infrastructure

As with sewers, pumps or any type of grey infrastructure, the maintenance of green infrastructure will be critical to the success of the program. Maintenance of green infrastructure is not only essential to the functional capability of the green space to capture stormwater but also essential to the public perception of the efficacy of green infrastructure in general.

2) Seek Community Benefit Opportunities In Fulfilling Green Infrastructure Maintenance Requirements

Since green infrastructure maintenance is necessary in order to ensure and sustain the efficacy of stormwater capture, PWSA can realize additional triple bottom line benefit by looking for opportunities to create new jobs for the community, in a manner similar to PowerCorps Philadelphia and PowerCorps Camden, as described above

3) Seek External Funding In Order To Reduce Direct Costs Of A Community-Based Green Infrastructure Maintenance Program

As described above, both Philadelphia and Camden were able to obtain AmeriCorps funding to significantly defray the costs of their PowerCorps, community-based, green infrastructure programs. For example, Camden's AmeriCorps grant accounted for more than 50% of the total cost of the program. In addition to AmeriCorps, there is Federal funding for Civilian Climate Corps programs, including green infrastructure maintenance in combined sewer communities, like Pittsburgh

4) Identify Community Partners To Assist With Screening of Community Candidates And Provision Of Life Skills Training

The success of Philadelphia and Camden's community based PowerCorps programs was largely dependent upon successful identification of a community partner which could:

- work in the community to identify potential members of the community as candidates for the green infrastructure maintenance program

- undertake job screening to select the best candidates for the maintenance program. One purpose of programs like these is to help community candidates who might not have been able to find work previously....but also to ensure the overall success of the program. Thus, a balance must be struck between helping individual community members, protecting the success of the overall cohort and protecting the success of the overall program. Selection of the right community partner to assist in this aspect of the program is one of the most critical for overall success

- provide life skills training to the selected members of the green infrastructure maintenance cohort, including how to conduct oneself at work in general, and also specific and direct counseling assistance to cohort members as needed

- work with green infrastructure maintenance experts to help convey the specific job training skills needed for the work to the cohort members

- prepare the cohort members for a permanent work position through life skills training such as developing a resume and preparing for an interview and, most importantly, job placement assistance. The success of community based green infrastructure maintenance programs such as PowerCorps Philadelphia and PowerCorps Camden is not only measured in volume of gallons captured from green space but also measured in numbers of new jobs provided to community members and permanent job placement success.

5) Identify and Procure Green Infrastructure Maintenance Training Wherewithal

Most wastewater utilities lack the internal wherewithal to provide green infrastructure maintenance training. Therefore, in such cases, it must be procured externally as with the aforementioned community job training partner described above. Philadelphia partnered with the City's Parks Department to provide such training. Camden, lacking its own Parks Department, partnered with the Rutgers University Agricultural Cooperative Extension. In both cases, Philadelphia and Camden also supplemented the green infrastructure maintenance training with training on related stormwater management tasks, such as keeping storm inlets clean, leaf sweeping during autumn, etc. in order to maximize the benefits of the cohort and also widen the job experience for the cohort members. In the case of Camden, the PowerCorps members also provided general park maintenance and cleanup services as well, since the City does not have a Parks Department due to its economic constraints.

6) Utilize The Community Based Green Infrastructure Maintenance Team As A Team OF Ambassadors

Both the Philadelphia and Camden PowerCorps cohorts took great pride in considering themselves ambassadors for greening and cleaning their cities. They also took pride in going to schools and setting themselves up as examples to younger schoolchildren. This is an opportunity to build pride in the community members that we seek to help and also build additional community support for the overall stormwater management program.

Conclusion

PWSA's green infrastructure program not only provides stormwater capture and flooding mitigation benefits, and the benefits of additional green space for the community but can also provide important opportunities for meaningful employment for the Pittsburgh community. PWSA is to be commended for its investment in the quality of life of the residents it serves. Implementing a community based green infrastructure maintenance program, like the Philadelphia and Camden programs described above, can be transformative to the community members selected for the program, and for the community itself.