

**Los Angeles County Safe, Clean Water
Program**

**Recommendations for the Utilization of Measure
W
Workforce Development Funds**

FINAL MEMO

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I. INTRODUCTION

Los Angeles County voters passed Measure W in November 2018 creating the Safe, Clean Water Program (SCWP). The SCWP will generate up to \$300 million per year, providing ongoing funding for green stormwater infrastructure (GSI) that can reduce pollution, improve water resilience, and benefit disadvantaged communities, while also creating construction and permanent maintenance jobs. The SCWP's Implementation Ordinance states that SCWP will also provide funds for "local workforce job training, which will provide certification classes and vocational training at the community level for the construction, inspection, operation and maintenance of Stormwater or urban runoff management and multi-benefit projects, including instruction of applicable design concepts."

In order to inform the Safe, Clean Water Program's workforce component, Conservation and Natural Resources Group (CNRG) engaged Estolano Advisors (EA) to develop a menu of workforce development options for the Los Angeles County Department of Public Works (DPW) to consider as they build out the program. This report includes three (3) main workforce development program options that align with SCWP goals. This report also discusses potential demand-side strategies where the County could play a role in increasing the demand for GSI training and create a standard for high-quality GSI-related jobs.

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II. RESEARCH PROCESS

EA completed a comprehensive qualitative research process that included gathering and analyzing information from the Department of Public Works, local workforce development stakeholders, and existing literature related to green stormwater infrastructure (GSI) workforce training. EA met with DPW and Los Angeles County Flood Control District (FCD) staff, carried out 12 interviews with local and national workforce experts, and authored a comprehensive literature review that identified training programs, workforce models, and other GSI resources that can be leveraged to create a stable, qualified workforce needed to meet the upcoming demand for the construction, inspection, and operations and maintenance of SCWP projects. EA collected and reviewed GSI workforce information from a wide variety of sources across the country – content experts, research and program evaluations, workforce training programs, and more.

This section provides an overview of this research process and the key takeaways that have informed the three SCWP workforce program options, discussed in Section III. Potential Workforce Development Program Options of this final report.

1. Project Tasks

a. Kick-Off Meeting with Public Works

On September 12, 2019, EA and CNRG staff met with staff representatives from DPW and FCD. Meeting participants reviewed and discussed the scope, timeline, and overall goal of the project: to develop recommendations for the most effective use of Measure W workforce funds in order to meaningfully prepare workers for Measure W-related jobs. The group determined this would include identifying potential workforce pathways, current gaps in local workforce development, and best practices from similar successful workforce programs. It was also important to DPW that EA identify current workforce development programs or services that could be leveraged for the benefit of the SCWP, whether locally or beyond.

b. Interviews

EA completed 12 interviews with local and national experts in GSI workforce training during the research process. Their perspectives assisted EA in identifying gaps and opportunities in the local workforce ecosystem, documenting workforce development best practices, and pinpointing potential job-training pathways and program models. Experts came from positions related to workforce development, green infrastructure and stormwater, education, and program management. Often, interviews led to further GSI research, other useful resources, or additional expert contacts for further exploration.

TABLE 1. GSI AND WORKFORCE EXPERT INTERVIEWS

Organization	Interviewee(s)	Date
College of the Canyons, Water Technology	Regina Blasberg	October 14, 2019
Council for Watershed Health	Eileen Alduenda Jason Casanova	October 28, 2019
Laborers Local 1309	Peter Santillan	October 22, 2019
Laborers Local 300	Ernesto Pantoja Francisco Arrizon Mike Rubio	October 23, 2019
Long Beach Conservation Corps	Kayla Kelly-Slatten	November 6, 2019
Los Angeles Alliance for a New Economy (LAANE)	Lauren Akhiam Nichole Heil	September 26, 2019
Los Angeles Conservation Corps	Bo Savage Alex Lopez	November 1, 2019
Los Angeles County Workforce Development, Aging and Community Services (WDACS)	Caroline Torosis	October 15, 2019
National Green Infrastructure Certification Program (NGICP)	Adriana Caldarelli	November 1, 2019
San Francisco Public Utilities Commission (SFPUC)	Todd Kyger Ben Poole	January 22, 2020
State Building and Construction Trades Council of California	Chris Hannan Anne McMonigle	October 22, 2019
Worker Education & Resource Center, Inc. (WERC)	Diane Factor Steven Simon	October 23, 2019

c. Literature Review

In addition to interviews, EA authored a literature review that identified training programs, workforce models, and GSI resources that could be leveraged to support the creation of a stable, qualified workforce needed to meet the upcoming demand for the construction, inspection, and operations and maintenance of SCWP projects. EA gathered and reviewed 34 reports, articles, and other publications related to GSI and workforce development. EA also researched and reviewed numerous GSI training and curriculum resources, certification program websites, and workforce development program websites. Table 2 provides a list of local programs in the Los Angeles region that EA identified.

TABLE 2. GSI-RELATED CONSTRUCTION TRAINING PROGRAMS – LOS ANGELES

Organization/Agency	Program
Workforce Development/Apprenticeships	
Los Angeles/Orange Counties Building and Construction Trades Council	<ul style="list-style-type: none"> ➤ MC3 Pre-Apprenticeship Training <p>Partners:</p> <ul style="list-style-type: none"> • Antelope Valley College • Anti-Recidivism Coalition • Coalition for Responsible Community Development • Flintridge Center • Long Beach City College • Los Angeles Southwest College • Los Angeles Trade and Technical College • Los Angeles Unified School District • Los Angeles World Airports • PVJOBS • San Gabriel Valley Conservation Corps • YouthBuild Charter School of California • Women in Non-Traditional Employment Roles (WINTER)
Laborers Local 300 and Local 1309	<ul style="list-style-type: none"> ➤ Construction Apprenticeship ➤ Cement Mason Apprenticeship ➤ Landscape and Irrigation Apprenticeship ➤ Trainings for green construction awareness, pipe laying, abatement, and remediation
Los Angeles County (WDACS)	<ul style="list-style-type: none"> ➤ Construction Training pathways
Los Angeles and Long Beach Conservation Corps	<ul style="list-style-type: none"> ➤ Construction ➤ Land Management ➤ Community Beautification ➤ Habitat Restoration ➤ Parks and Trails Development and Maintenance
Los Angeles Metro	<ul style="list-style-type: none"> ➤ Workforce Initiative Now – Los Angeles (WIN-LA) Construction Program
Certification Trainings	
California Stormwater Quality Association	<ul style="list-style-type: none"> ➤ Qualified Stormwater Pollution Prevention Plan Practitioner (QSP) ➤ Qualified Stormwater Pollution Prevention Plan Developer (QSD) ➤ Qualified Industrial Stormwater Practitioner (QISP)
Envirocert International, Inc.	<ul style="list-style-type: none"> ➤ Certified Professional in Erosion and Sediment Control (CPESC) ➤ Certified Erosion Sediment, and Stormwater Inspector (CESSWI) ➤ Certified Professional in Stormwater Quality (CPSWQ) ➤ Certified Professional in Municipal Stormwater Management (CPMSM) ➤ Certified Professional in Industrial Stormwater Management (CPISM)
National Ready Mixed Concrete Association	<ul style="list-style-type: none"> ➤ Concrete Green Building Certification ➤ Concrete Sustainability Professional Certification ➤ Environmental Professional Certification ➤ Pervious Concrete Contractor Certification
Stormwater ONE	<ul style="list-style-type: none"> ➤ Stormwater Management for Construction Activities ➤ California Construction General Permit Training

2. Key Research Takeaways

a. GSI workforce training must connect to full-time employment or continuing education opportunities

The SCWP has a stated goal of “promoting green jobs and career pathways,” with a focus on local job training and creation.¹ A career pathway is a continuum of services, beginning with outreach to the targeted communities, enhancement of work readiness and soft skills development (e.g. how to dress for the job, show up to work on time, talk to an employer or customer, etc.), remedial skill building (e.g. literacy, basic math), specific skill building (e.g. training programs, apprenticeships, on-the-job training), and finally placement in a job with upward mobility. A job seeker may need to return to these services as he or she progresses up the career ladder. Any GSI-related training program should have a direct connection to full-time employment or continuing education, as well as access to the “wrap around” services needed to ensure a job seeker’s success.

Our research indicates that certification programs or GSI-specific workforce training and apprenticeships are most valuable when they directly connect to apprenticeships or public sector entry-level jobs. An effective, results-oriented Southern California-specific training program can draw on a variety of existing GSI curricula in the region while coordinating with Los Angeles-based service providers.

b. GSI workforce initiatives should leverage existing program resources

Even with the vast expansion of green infrastructure investments throughout the country, often little to no funding is allocated to workforce development programs or job skills training. This creates a barrier to entry for hard-to-employ job seekers who need additional supportive services to successfully enter the workforce. Even with limited funds, municipalities can leverage existing municipal resources (e.g. workforce development boards to provide case management) or partner with local organizations (e.g. AmeriCorps programs or landscaping nonprofits) who can assist in expanding training opportunities that can lead to further employment.

c. Quality Operations and Maintenance (O&M) is crucial to successful green stormwater infrastructure projects

Much of the literature EA reviewed emphasizes the need for the inspection, operation, and maintenance of GSI projects, and underscores the need for a qualified workforce to ensure that GSI infrastructure works properly. Common barriers to O&M best practices include lack of designated staff, poor design for easy maintenance, lack of enforcement, unawareness from owners, and insufficient funding. This was echoed in our interviews with stormwater experts (LAANE, Council for Watershed Health, NGICP). Under-maintained or failing projects, which can require significant repairs, essentially eliminate

¹ Safe, Clean Water Program Implementation Ordinance. <https://safecleanwaterla.org/wp-content/uploads/2019/07/Implementation-Ordinance-2019-07-24-1.pdf>

the cost-effectiveness of green infrastructure and create unsightly projects that may undermine public support of GSI.

EA has identified O&M as the most likely job pathway for growth as part of the SCWP. The occupations involved in O&M for GSI do not generally require much in the way of new training curricula. For the most part, the skills required to install various GSI practices are like those required generally in landscaping and construction. Most importantly, quality O&M ensures GSI can function properly, yield water quality benefits, meet compliance standards, provide environmental benefits, and more.

d. GSI maintenance jobs are an accessible pathway for hard-to-employ populations

Multiple reports acknowledge the accessibility of GSI jobs and their importance for offering pathways to workers who may not have advanced education, who are previously justice-involved, or otherwise part of under- or unemployed populations. Unlike the planning, design, and administrative positions related to green stormwater infrastructure, GSI maintenance tasks are similar to general landscape maintenance tasks with some supplemental knowledge that can be learned fairly easily without an advanced degree.

Nationally, construction jobs related to the installation of GSI projects pay higher than operations and maintenance jobs. O&M jobs are often near minimum-wage paying jobs, with public sector and union jobs often being higher-paying. However, O&M jobs are a crucial entry point for many workers who can then access advancement opportunities through additional experience and training.²

e. Municipalities are unable to confidently project the demands for GSI jobs

Green infrastructure remains an emerging field. We were unable to identify any specific job titles or classifications that focus exclusively on green infrastructure tasks. Few GSI workers complete solely green infrastructure work, which makes the workforce hard to isolate and characterize. Industries such as construction and landscaping often expand worker responsibilities to include GSI as it is easily learned, rather than hiring new, specialized workers. The slow adoption and implementation of GSI in some cities can be a result of the lack of knowledge about resources and jobs required to install and maintain green infrastructure projects.

² American Rivers (April 2013). Jobs for the Future

III. POTENTIAL WORKFORCE DEVELOPMENT PROGRAM OPTIONS

Measure W's investments in GSI create a demand for a workforce trained with the skills required to construct, operate, and maintain projects over time. Though a modest portion of Measure W funds are earmarked for workforce development,³ the County can amplify the impact of those funds by partnering with existing workforce programs and encouraging coordination between other public agencies managing major infrastructure programs.⁴ Furthermore, any public investment in job training should result in high road jobs that pay workers a family sustaining wage. Investing in a skilled O&M workforce is essential to maximizing the environmental, economic, and social benefits promised by the SCWP.

This section outlines EA's recommendations for potential workforce development investments. They are separated as "supply" and "demand" side recommendations. Supply-side recommendations focus on developing a local workforce with the skills needed to tackle the O&M needs of the future. Demand-side recommendations focus on actions the County and other relevant contracting entities can take to drive the need for skilled workers.

1. Green Stormwater Infrastructure Entry-Level Job Training Program

Program Description: A workforce development program that gives individuals experience in the operations and maintenance of green stormwater infrastructure projects and leads to permanent job in the public sector

Ownership: DPW

Partner(s): Workforce development service provider partner (program management, case management), GSI educational instructors (technical training), local community partners (recruitment)

Estimated Length of Program: 6 months to 1 year

Examples of Similar Programs:

- WERC Preparing Los Angeles for County Employment (PLACE)
- International Brotherhood of Electrical Workers (IBEW) Local 18 and Los Angeles Department of Water and Power (LADWP) Utility Pre-Craft Trainee (UPCT) Program

³ No less than 20% of FCD's 10% administrative fund is allocated to educational programs, including workforce development. ("Revised Water Resources Core Area Los Angeles Region Safe, Clean Water Program Implementation Ordinance and Establishment of Committee Members, July 30, 2019. <https://safecleanwaterla.org/wp-content/uploads/2019/08/SCW-July-30-2019-Board-Package.pdf>.)

⁴ "Motion by Supervisors Sheila Kuehl and Hilda L. Solis: Leveraging and Coordinating Green Infrastructure Funding: Creating the WHAM Committee," December 3, 2019. <http://file.lacounty.gov/SDSInter/bos/supdocs/142249.pdf>

Assumptions:

This program would train individuals in preparation for entry-level public sector jobs with the County. This recommendation is intended to fit within the scope of the County’s existing workforce training providers, such as the WERC PLACE Program. A program like PLACE already provides program management and soft skills, while DPW would oversee providing the on-the-job training for the entry-level position.

This programmatic option would also require the County to estimate and plan for the recruitment and hiring of additional maintenance workers, or other related positions within the County, once the training period is completed. The Pacific Institute authored a Sustainable Water Jobs Report that lists the variety of stormwater management occupations necessary for the operations and maintenance of projects which the County can consider as potential placements. These occupations are listed below in Table 3.

TABLE 3. STORMWATER MANAGEMENT OCCUPATIONS – OPERATIONS & MAINTENANCE
Pacific Institute – Sustainable Water Jobs Report (2013)

<p>OPERATIONS AND MAINTENANCE <i>e.g. landscape and drainage systems maintenance</i></p>	<ul style="list-style-type: none"> • Crop, Nursery and Greenhouse • Farmworkers and Laborers • General and Operations Managers • Landscaping and Groundskeeping Workers • Maintenance and Repair Workers, General • Operating Engineers and Other Construction Equipment Operators 	<ul style="list-style-type: none"> • Pump Operators Septic Tank Servicers and Sewer Pipe Cleaners • Water and Liquid Waste Treatment Plant and System Operators
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Lastly, the County should not train entry-level workers unless it can guarantee permanent employment and should do its best not to train more workers than there are permanent positions for. As an alternative, DPW could consider developing the program in partnership with a union apprenticeship program, or similar, that would manage the participant training for each position and link them with high-road job opportunities, whether public or private, once they have completed the program.

Program Overview:

This strategy is based on workforce development programs that give individuals work experience that leads to stable, well-paid, unionized public sector employment. One example is WERC’s PLACE program, which prepares county residents with high barriers to employment for positions within LA County departments. Another example is the Utility Pre-Craft Trainee (UPCT) program, developed by the International Brotherhood of Electrical Workers Local 18 in partnership with LADWP, which trains future utility workers for public sector jobs within LADWP.

Some experts have surfaced a similar strategy for SCWP to build a workforce pipeline for GSI projects, emphasizing the expectation that any program would ideally lead directly to an apprenticeship or other unionized County or public sector jobs. The County would work with a workforce development service provider to provide the opportunity for

a full-time, entry-level, earn-and-learn training program. The service provider would provide case management and soft skills training for participants, while DPW would provide the technical on-the-job training for the operations and maintenance of GSI projects.

Such career pathway programs can be effective for high-need individuals, who often have barriers to good employment. A successful career pathway job placement program for individuals with barriers starts with vacant positions already identified for placement and ensures that recruitment and training efforts focus on specific competencies identified by the employer. To this end, it is indispensable for such a program to develop strong relationships with employers and recruitment partners who work with job-seekers with barriers to employment (i.e. reentry/formerly-incarcerated, homeless or at-risk, transition age youth, etc.).

Stipends are another critical component of these programs for individuals with barriers to good employment. High-need individuals may be unable to sustain themselves financially during the period during training and before employment. Without stipends, many trainees are forced to leave training for other jobs—a decision based on short term needs, but typically without longer-term prospects. Based on the structure of the GSI entry-level job training program, other County funding sources could be leveraged to ensure participants receive compensation for training.

Intensive case management is a critical component of a career pathway job placement program for individuals with high needs. Case management involves providing job seekers with the robust supportive services that have shown documented positive outcomes in enabling high-need individuals to be successful in the workplace. Interviewees consistently brought up case management as a persistent need, particularly for those that are hard to employ. EA recognizes that WDACS and other training programs often already offer case management services. These existing programs should be leveraged or coordinated with SCWP training in order to support job-seekers' success. Case management should not be simply referral- or linkage-based. Rather, in addition to helping connect high-need workers to services, intensive case management includes at least six months of frequent job and life coaching contact for all participants, to help navigate new and often uncomfortable work situations, improving job performance and long-term job retention.

Amended Option – Entry-Level Training with Rotation Opportunities:

The County could also consider working with multiple County departments to craft a workforce program that trains workers by exposing them to operations and maintenance work across multiple County departments. Participants would spend multiple weeks with each department or agency doing a variety of GSI maintenance-related tasks in order to gain experience and skills in preparation for a public sector job.

Los Angeles County already has a similarly structured job training program, with the LA County Administrative Intern Program. Full-time administrative interns perform rotational analyst assignments in various County departments. Adding a “blue collar” internship or fellowship pathway could provide an enriching experience for those who are interested in entering a County trade pathway.

Other examples include the previously mentioned LADWP UPCT program, a pre-apprenticeship program offered for entry-level workers in order to gain career skills in a variety of utilities work including water, power, and support services. This program connects participants to further apprentice or journey-level training. Another example is the San Diego County Water Authority's Regional Internship program. Interns from local community colleges spend eight weeks with four different agencies learning about the regional water system: Water Treatment, Wastewater Treatment, Systems Operations, and System maintenance. These rotation models could be replicated with DPW and other Los Angeles County departments such as Parks and Recreation, FCD, Parks and Open Space District, etc.

Implementation Steps:

1. DPW engages WHAM Committee ⁵ to establish priorities, goal alignment, and to develop a proposal for potential workforce training program
2. DPW engages external County stakeholders from the public sector, unions, workforce programs, and Board of Supervisor offices to discuss proposed program
3. Review initial round of approved SCWP projects and potential job opportunities for existing and future County projects. Also review approved Measure H, Measure A, and Measure M projects for aligned project work
4. Based on approved and expected project types from Measures W, H, A, and M, identify potential career pathways for participants and specific job classifications based on the demand for entry-level O&M jobs and required skills.
5. Craft workforce development program standards and curriculum
 - a. Identify existing GSI curricula or training programs to use as a model, or determine need for the development of a new curriculum
 - b. Engage GSI experts to identify specific skills and competencies needed to carry out O&M for SCWP projects
 - c. Develop and/or refine GSI training curriculum by engaging educators, trainers, and/or experts
 - d. Determine certification process or program, if any, or appropriate partnership with apprenticeship program
 - e. Explore certification recognition at the State level
 - f. Develop soft- and remedial-skills program and intensive case management

⁵ The County Board of Supervisors passed a motion on December 3, 2019 to “initiate a process to regularly convene the leaders of the departments and agencies leading the implementation of measures W, H, A, and M, as well as the Chief Sustainability Officer and the Director of the Department of the Public Health, or her designee, as a committee, to be known as the ‘WHAM Committee’ for the purposes of creating efficiencies across programs.” <http://file.lacounty.gov/SDSInter/bos/supdocs/142249.pdf>

6. Solicit qualified workforce development program provider through competitive bid for the administration of the program (if applicable)
7. Solicit qualified GSI training expert(s) through competitive bid for GSI-specific on-the-job training (if applicable)
8. Recruit first cohort for the GSI training program
 - a. Based on first round of SCWP projects, identify number of entry-level positions for first cohort – cohort size must be determined by the actual demand for County workers
 - b. Determine outreach for recruitment, any target or priority populations
 - c. Engage community-based organizations in SCWP project areas that can help with outreach to job-seekers
 - d. Carry out interview process
 - e. Accept first cohort to training program
9. Implement training program curriculum and case management
 - a. Pre-program training and orientation
 - b. Participants connected with a case manager for the duration of the program and at least 6 months beyond
 - c. Participants begin GSI on-the-job training

2. Green Stormwater Infrastructure Training Certification for County Workers

Program Description: A green infrastructure training or certification for current County maintenance and GSI-related workers. A GSI certification can ensure workers have the skills necessary to maintain native landscaping and other relevant stormwater Best Management Practices.

Ownership: DPW

Partners: GSI experts and/or training program (program instructors), curriculum experts (curriculum developers), regional horticulturalists and/or arborists (content experts)

Estimated Length of Program: Individual curriculum modules between 1.5 and 4 hours

Assumptions: This recommendation assumes maintenance for SCWP regional projects is largely carried out by County workers. In reviewing the literature, EA found that some municipalities or agencies did not identify a need for a significant number of new workers as part of their GSI O&M efforts, or they lacked public funding for workforce training as part of the local investment in GSI. Instead, they upskilled current staff members to provide O&M for local GSI projects.

Examples of Similar Programs:

- LA City Sanitation (LASAN) and Los Angeles Trade Technical College Green Stormwater Infrastructure Academy (LATTC)
- Council for Watershed Health GSI training for Los Angeles Unified School District (LAUSD) facilities staff

Program Overview:

If County GSI projects will be maintained by County workers, those staff members should be equipped with current training to carry out their maintenance work properly. Therefore, another strategy that experts have presented, and that is supported by EA's research, is the potential for short-term GSI training for existing County workers. A set of curriculum modules would provide the adequate training to carry out GSI O&M tasks. The County should consider this training for other departments, including Department of Parks and Recreation, in order to extend the coordination of GSI efforts.

This strategy does not envision an onerous training for workers; rather, it focuses on ensuring that incumbent workers have access to training to keep their skills current and provide them greater flexibility in their career advancement. The County could use a variety of curricula from across the country, or the National Green Infrastructure Certification Program (NGICP) model, to create a specialized GSI training tool that would enable existing staff to earn a professional certification. For example, Council for Watershed Health's GSI maintenance program for LAUSD trains facilities staff at 16 schools that have green stormwater infrastructure elements on campus grounds.

Additionally, the Green Stormwater Infrastructure Academy partnership between LASAN and LATTC carried out a pilot training program for LASAN staff to develop green infrastructure O&M skills. LASAN field workers and maintenance staff were able to participate in a 4-day training with classroom and field training sessions and earn a LASAN and LATTC certification as an O&M professional for Green Infrastructure facilities. The ultimate goal was to design a program for young adults from communities across Los Angeles in order to build a pipeline to fill the demand for skilled workers.

Implementation Steps:

1. DPW engages internal stakeholders and unions representing related workers ⁶ to discuss goals for certification training, program development process, and program structure
2. Review initial round of approved SCWP projects and potential O&M opportunities for existing and future County projects
3. Based on approved and expected project types, identify existing job classifications that are related to GSI operations, inspection, and maintenance
4. Craft certification program standards and curriculum
 - a. Identify existing GSI curricula or training programs to use as a model, or determine need for the development of a new curriculum

⁶ The American Federation of State, County and Municipal Employees (AFSCME) and Service Employees International Union Local 721 (SEIU 721) represent many LA County workers.

- b. Engage GSI experts to identify specific skills and competencies needed to carry out O&M for SCWP projects
 - c. Develop and/or refine GSI training curriculum by engaging educators, trainers, and/or experts
 - d. Determine certification process or program, if any, and explore certification recognition at the State level
5. Solicit qualified GSI training expert(s) through competitive bid for GSI-specific on-the-job training (if applicable)
6. Implement GSI training program with scheduled staff trainings
 - a. Between 4 and 12 modules, ranging from 1.5 to 4 hours
 - b. Final exam or qualification test to earn certification

3. Green Stormwater Infrastructure Training Certification for Private Contractors

Program Description: Certification requirements for County contractors to ensure expertise in maintaining green infrastructure that meets County standards.

Ownership: DPW

Partners: County-approved GSI training provider, private contractors

Estimated Length of Program: Dependent upon structure

Assumptions: This recommendation assumes inspection, operations, and/or maintenance for SCWP projects is carried out by privately contracted workers for either regional projects (County), local return projects (Cities), or both.

Example of Similar Program: San Francisco Public Utilities Commission (SFPUC)

Program Overview:

Projects carried out utilizing local return funding (municipal projects funded by 40% of the total revenue of SCWP) will likely be constructed, designed, and maintained by a private sector workforce, and managed by a variety of agencies (small cities, water districts, etc.). As such, it is harder to set consistent standards for privately contracted GSI project workers. Additionally, should a project owner choose to contract out inspection, operations, and maintenance of SCWP projects, there should be a variety of workforce standards and requirements for companies that are contracted to carry out that work.

Therefore, a third potential strategy is a mandated GSI certification for private contractors carrying out the inspection, operations, and/or maintenance of GSI projects. Experts have suggested that one way to ensure expertise in maintaining GSI that meets the County's standards is to develop certification requirements for private contractors

(whether prime or subcontractors). Companies who become certified should also be in compliance with the attendance requirements of the program and meet set job standards outlined by the County (recommended job standards are described in Section IV. Demand-Side Considerations.)

The County or a County-approved program would provide the trainings for contractors. The trainings would be attended and completed by field staff member(s) from each company (e.g. laborers, landscapers, inspectors, etc.); however, the certifications would be associated with the contracting companies that the field staff work for. Ideally, eligible companies would also be required to participate in the trainings every three to four years to keep their GSI certification current and to address turnover within company staff.

The SFPUC currently requires contractors to attend green infrastructure trainings in order to be qualified to pursue specific contracts to construct or maintain green infrastructure that is built, owned, or operated by SFPUC. There are four core GSI trainings required for qualification, and some additional one-off trainings required for specific types of GSI projects. All of these trainings are provided free of cost to contractors. Staff notes that this strategy has made a large impact for certified small business contractors by allowing them a more equal playing field based on their ability to pre-qualify for the same GSI projects as larger firms.

Implementation Plan:

1. DPW engages internal stakeholders to discuss certification requirements
 - a. Engage GSI experts to identify skills and competencies required
 - b. Job quality standards
 - c. Wage standards
2. Review initial round of approved SCWP projects and existing County projects that will need GSI maintenance
3. Craft certification program standards and curriculum
 - a. Engage GSI experts to identify specific skills and competencies needed to carry out O&M for SCWP projects
 - b. Engage educators, trainers, and GSI experts to develop training program
 - c. Or, solicit external GSI certification training providers
4. Determine contractor approval process
5. DPW engages contractor stakeholders to discuss County proposal for a pre-qualified contractor list ⁷

⁷ EA reached out to a list of stormwater contractors provided by DPW during this project with limited feedback (Appendix B). Contractors who did respond were either 1) not interested in pursuing GSI O&M work, 2) overwhelmed with the introduction of new and hypothetical information, or 3) were not interested in discussing any potential workforce requirements. EA recommends that the County carry out a robust engagement process with contractors once a proposal is actually developed, a process that is beyond this project's scope. Additionally, the list of contractors should be targeted – focused on companies that work more specifically on GSI construction and O&M rather than larger infrastructure projects.

6. Announce new training and job standards for County SCWP O&M contractors
7. DPW outreaches to qualified contractors and hosts informational meetings about new requirements; work with **local contractors' associations** or unions

IV. DEMAND-SIDE CONSIDERATIONS

Any investments in the GSI workforce must also be coordinated with a set of “demand-side” strategies. These are public sector policies and practices that incentivize the hiring of workers with specified training or certifications. These incentives, whenever possible, should apply to not only a public agency’s direct hires, but also to the practices of their contractors and subcontractors. Below are some opportunities to help drive demand for a qualified GSI workforce.

1. Pre-qualified list of contractors for private contracts

The County should create a pre-qualified list of prime contractors who meet stated requirements for GSI operations and maintenance work. Municipalities or project developers who elect to use private contractors for O&M can and should refer to the contractors on the County pre-qualified list to ensure that they hire contractors that have the requisite experience to perform the work (e.g. applicable certification(s) and are responsible employers (e.g. pay living wages and benefits). Creating a list of certified private employers also streamlines workforce development partnerships and opportunities for placing training program graduates into full-time, quality jobs.

In addition to the green infrastructure certification described earlier in this section, contractors seeking to get on a County pre-qualified list should also demonstrate the following:

1. Occupational Safety and Health (OSHA) Training: All onsite workers must complete a requisite OSHA course
2. Proof of participation in partnerships with qualified workforce development organizations that support apprenticeships in the O&M field
3. Minimum Standards for Wages and Benefits
 - a. Wages comparable to current wages for public employees performing similar work
4. Hiring Pool
 - a. Participation in the County’s Local and Targeted Hire Program

2. Fund Transfer Agreements

Fund Transfer Agreements (FTAs) refer to the contracts between FCD and a project developer or municipality for the transfer of SCWP funds. These agreements are an opportunity to codify standards for a qualified workforce. The County is in the process of finalizing the language of these transfer agreements. Such agreements, if drafted thoughtfully, can contain clearly defined standards relating to contractor responsibility, such as applicable certifications, trained workforce, living wages and benefits, participation in the County’s Local and Targeted Hire Program, etc. Suggestions for provisions to consider for FTAs are detailed below:

1. FTAs should encourage that project developers use the County operations and maintenance services
2. If the County operations and maintenance services are not used, the project developer should select a contractor from a Pre-Qualified List (described earlier in this section)
3. FTAs should allow project developers to “bundle” the operations and maintenance needs of multiple projects in order to create efficiencies in contracting with the County operations and maintenance staff or a pre-approved contractor

3. Coordinate Efforts between Measures W, H, A, and M

Considerable overlap exists in the knowledge, skills, and abilities required to design, construct, and maintain the projects funded under Measures W, H, A, and M. Mo Administering agencies are similarly responsible adjoining workforce development funds and/or initiatives to ensure projects are carried out properly. For example, Measure A’s Youth and Veteran Job Training program provides funds for jobs education and skills training, and certification and job placement services. Metro’s Workforce Initiative Now (WIN-LA) is Metro’s workforce development program that creates career pathways into the construction, operations and maintenance, administration and other professional services within the agency and throughout the transportation industry, along with soft skills training and other supports.⁸ Though Measure H lacks a workforce development component, homeless individuals fall under the category of “targeted worker” and subject to hire goals under most County-funded construction projects.

Internally, LA County should explore how to coordinate its workforce development funds and manage its entry-level and skilled job classifications across multiple departments (DPW, Parks and Recreation, FCD, Regional Parks and Open Space District, etc.) to support a workforce capable of constructing and maintaining multi-benefit projects. Several County departments and Metro have already begun to meet and discuss potential workforce development collaboration, and the Board of Supervisors has tasked the Chief Sustainability Office to coordinate W, H, A, M-related efforts and report back

on progress.⁹ This group should continue to meet and develop a workplan to track its progress. Specific steps can include the following:

1. Convene a workforce development committee to discuss County workforce development efforts
 - a. Representatives to the committee can include the following: Metro, LA County Department of Parks and Recreation, Regional Parks and Open Space District, Workforce Development, Aging and Community Services, LA County Flood Control District, LA County Department of Public Works, LA County Department of Human Resources, Supervisorial Offices, etc.
 - b. This committee may be tasked with developing tangible strategies for coordinating and aligning workforce development initiatives across all four measures
2. Develop a workplan to guide efforts
 - a. A workplan would include specific policies, programs, and projects where joint coordination and collaboration would provide clear benefits and efficiencies, with associated timelines for completion
 - b. Metrics for evaluating the effectiveness of workplan activities

V. CONCLUSION

Estolano Advisors recognizes the potential that the Safe, Clean Water Program has to create an impactful green stormwater infrastructure workforce development program that trains and provides workers quality jobs to ensure a sustainable future for Los Angeles County. EA has carried out a thorough research process, and further, has thoughtfully considered the planning and implementation of three different workforce development program options. Whichever program(s) and/or strategies the County should select, it should consider the best use of funds based on job demand and job quality. The use of Measure W funds for workforce training should aim to produce a workforce that possesses the skills necessary to construct, operate, and maintain stormwater projects. The program should create quality, stable, and impactful jobs in order to ensure quality, stable, and impactful stormwater projects.

⁹ Ibid.

VI. APPENDIX A

List of Terms

Certificate/Certification

In stormwater and other related fields, “certificate” and “certification” are often used interchangeably. In this memo, a certification refers to a professional credential that is awarded to an individual based on passing a state- or nationally-recognized exam related to a specific area of technical expertise. Experts that have proposed any type of certification as a workforce strategy note that there must be a demand for the skills built through the certification training, otherwise, it is a useless tool.

Green Stormwater Infrastructure

For purposes of this report, EA uses the term “green stormwater infrastructure” (GSI) to describe the types of projects that the SCWP aims to construct and support. Jobs for the Future, a national nonprofit, defines GSI specifically as using “alternative approaches to stormwater management to improve water quality protection and flood control in the face of climate change and sea level rise.”¹⁰

Green Stormwater Infrastructure Workforce

EA defines the term GSI workforce as “individuals who construct, inspect, operate and maintain green stormwater infrastructure.” This is based on the NGICP definition of the green infrastructure workforce as “individuals who install, inspect, and maintain green infrastructure systems.”¹¹ While our recommendations focus on the operations and maintenance of projects, whenever the term “GSI workforce” is utilized, we are generally referring to the full spectrum of jobs required to carry out GSI projects.

Private Contractor

In this report, private contractors are vendors that the County may enter into a contractual relationship with for the purchasing of goods and/or services.

¹⁰ Jobs for the Future. (2017). *Exploring the Green Infrastructure Workforce: A NatureWORKS Issue Brief*

¹¹ NGICP. (2016). *Body of Knowledge*.

VII. APPENDIX B

Contractor Outreach Script and Questions

I am reaching out to you as [Company] was listed as a potential contractor for a previous Los Angeles County of Public Works (DPW) stormwater capture project.

Our firm is working with DPW to explore options for a [Measure W – Safe, Clean Water Program \(SCWP\)](#) workforce element. As a part of this effort, we are seeking insight from LA County DPW stakeholders regarding potential County SCWP workforce strategies.

A potential strategy may include developing a pre-qualified contractor list for green stormwater infrastructure work, specifically operations and maintenance (O&M), by requiring specific training for the contracting agency's workforce.

We are hoping to understand the following:

- Does your company seek out bids for stormwater infrastructure projects? If so, are they related to the construction or operations and maintenance of stormwater projects?
- Do you feel your company is able to recruit and hire adequately-skilled workers to carry out green stormwater work? (If applicable)
- Has your company previously invested in any type of green infrastructure training for staff?
- Were the County to utilize a pre-qualification process for stormwater O&M projects, would your company seek out the training/hire trained workers in order to be able to bid on stormwater contracts?

Please feel free to respond to these questions in an email. Otherwise, I would be happy to find a time to chat in the next week. Please let me know if you have any questions.

Contractor Outreach List

LOS ANGELES COUNTY PUBLIC WORKS CONSTRUCTION DIVISION

Stormwater Capture Projects – Contractors Bidding List

(WMD0000109: Franklin D. Roosevelt Park Regional Stormwater Capture Project)

Contractor Name	Phone	Email & Contact	Outreach	Response as of Jan 24, 2020
Clarke Contracting Corporation	(310) 542-7724	Bob Clarke, clarkebobccc@yahoo.com	Email & Voicemail	None
Environmental Construction, Inc	(818) 449-8920	Eric Gamonal, estimating@environcon.com	Email & Voicemail	<p>Environmental Construction would not normally on operations & maintenance work. That said, Eric indicated that the company does whatever the specs call for in terms of sustainable practices. They have bought different materials or constructed things in a specific way for special projects.</p> <p>If a hypothetical training only required one or a few field staff from the company to go in order to be on the approved contractor list, it does not sound too onerous. Eric noted it would get complicated if everyone working on one project would have to complete the training since they hire many workers from unions, etc. However, Eric believes a training like this does seem more applicable to bids for operations and maintenance work.</p>
GMZ Engineering, Inc	(818) 287-5640	Ghazi Mubarak gmubarak@gmzeng.com	Email & Voicemail	None
Granite Construction Company	(661) 726-4447	Chris Ferguson chris.ferguson@gcinc.com	Email & Voicemail	None

Green Building Corporation	(818) 987-6059	Fred Heidarian fred@gbcla.com	Email & Phone Call	Remembers glancing at email. Would consider responding to email with thoughts related to green infrastructure training. Needs to look at more information, not just what was proposed on the phone
Griffith Company	(714) 984-5500	Katherine Lovetere klovetere@griffithcompany.net	Email & Voicemail	None
Kaveh Engineering & Construction, Inc	(714) 793-6655	Fred Bashardoost fred@kavehinc.com	Email & Voicemail	None
Lonerock, Inc	(949) 310-0804	Dragan Marjanovic dragan@lonerockinc.com	Email & Phone Call	"We have been working for 18 years, I'm not looking for someone to teach us how to work. Thank you, bye."
Los Angeles Engineering, Inc	(626) 454-5222	Jessica Geer jgeer@laeng.net	Email & Voicemail	None
Mehta Mechanical Company, Inc	(714) 512-2022	Jagat Mehta jay@aboutmmc.com	Email & Voicemail	None
Reyes Construction, Inc	(909) 622-2259	estimating@reyesconstruction.com	Email & Voicemail	None

<p>Shimmick Construction Company, Inc</p>	<p>(949) 333-1500</p>	<p>smills@shimmick.com</p>	<p>Email</p>	<p>“Speaking strictly about O&M contracts, Shimmick Construction does not typically seek out these types of contracts. We generally target new build & rehabilitation/ improvement heavy civil projects, of which there are sometimes stormwater components and sometimes not.</p> <p>I will note however, that in the past we have bid projects which required a full time QSD/QSP to be on staff. If my memory serves me right (though it may have been a couple years by now) that may have been for a LACDPW project. During the bidding phase we sent some engineers and project managers to training to get their certifications”</p>
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