



Photo: City of Newark

# Wells of Opportunity: Training Residents and Prioritizing Local Hiring for Water Infrastructure Projects in Newark

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Issued by the Jersey Water Works Combined Sewer Overflow Committee



## Acknowledgments

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## About Jersey Water Works

[Jersey Water Works](#) is a collaborative effort of many diverse organizations and individuals who embrace the common purpose of transforming New Jersey's inadequate water infrastructure by investing in sustainable, cost-effective solutions that provide communities with clean water and waterways; healthier, safer neighborhoods; local jobs; flood and climate resilience; and economic growth.

The goal of the Jersey Water Works Combined Sewer Overflow Committee is to have municipalities and utilities adopt innovative CSO Long Term Control Plans with cost-effective solutions that meet or exceed permit requirements and provide multiple community benefits. One of the committee's 2020 projects entails developing recommendations and resources that will encourage local hires from environmental justice communities for water workforce jobs, link local residents to stable careers through job training programs, and connect utilities and unions to these training programs to find qualified workers. This report directly informs and supports this project.

Jersey Water Works welcomes all interested individuals and organizations that commit to supporting and advancing the shared purpose and goals. Members are invited to join any of the [collaborative's four committees](#). To become a member and join one or more of the committees, [please sign up here](#).

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## Introduction

In the face of generational demands for water infrastructure investment, along with relatively high levels of unemployment, the City of Newark has instituted training programs to help bolster its water workforce. This report, produced by the Jersey Water Works CSO Committee, is broken down into the following sections:

- *Newark's Lead Service Line Apprenticeship Program*: This section describes the special apprenticeship program that was created to supply qualified residents for Newark's fast-moving lead service line replacement program.
- *Newark's Green Infrastructure Training Programs*: Both programs described were created partly in anticipation of the city's combined sewer overflow (CSO) Long Term Control Plan (LTCP), which is expected to feature green infrastructure projects and will begin implementation in 2021.
  - Ironbound Community Corporation Green Infrastructure Training Program
  - Newark Green Works

These programs can serve as models for other cities throughout New Jersey, and even the nation, that also seek to benefit from both training and prioritizing their local workforce to tackle water infrastructure challenges.

## Background

Newark is the largest city in New Jersey with a population of approximately 282,000. It has a diverse population; less than 50% identifies as non-Hispanic white. According to 2019 one-year Census estimates, it has an unemployment rate of about 9%, which is about twice as high as the national unemployment rate, and it was reported in 2017 that Newark residents held [fewer than one-fifth](#) of all jobs in the city, with those jobs tending to be at the low end of the pay scale. In recent years, the city has made national headlines with its [lead in drinking water crisis](#), as its lead levels became the highest recorded by a large water system in the U.S. It is also one of 21 New Jersey cities that has a [combined sewer system](#), which is responsible for combined sewer overflows (CSOs). These overflows, which occur during rain events, result in raw sewage entering nearby waterways and localized flooding that contains both sewage and stormwater.

In 2017, the New Jersey Institute for Social Justice (NJISJ) released a [report](#) that shows the economic disparity between Newark residents and the large corporate workforce that commutes to Newark from elsewhere. The report found that Newark residents hold fewer than one-fifth of all jobs in the city and that those jobs tend to have relatively low pay. Additionally, in 2015, Newark had a higher unemployment rate compared to the statewide rate and a poverty rate that was twice the national average. Since Newark's population is about three-fourths Black and Hispanic, this local hiring issue disproportionately impacts people of color.

Since Mayor Ras Baraka took office in 2014, his goal has been to ensure that Newark projects employ local residents and that residents are trained appropriately beforehand. In 2015, the Newark City Council passed the [First Source Employment Ordinance](#), which requires contractors doing business with the city to hire residents and facilitates training opportunities that prepare residents to work for companies in Newark as well as on city projects. In 2017, following the release of the NJISJ report, Mayor Baraka launched a formal initiative, called [Newark 2020](#), which aimed to connect 2,020 of the city's unemployed to full-time living wage jobs by the year 2020, a goal that was met early. Since 2015, the Water and Sewer Utilities Department has participated in the local hiring initiative; the lead service line apprenticeship program, created in 2019, boosted their efforts.

# Newark's Lead Service Line Apprenticeship Program

When the City of Newark gives out major contracts that feature a lot of construction, the goal is for the unions that represent the city and the construction trade to have Newark residents that are demographically representative of the city, according to Newark's Water and Sewer Utilities Department Director, Kareem Adeem. On a typical construction project in Newark, there are normally three to four city residents working. The Water and Sewer Utilities Department set a goal to increase the number of city residents working on construction projects, so the lead service line replacement program featured an emergency contract with specific language that required employers to hire a minimum of 45 Newark residents. For the two larger contracts, which each replace 1,000 to 5,000 lead lines, the minimum requirement was 12 residents each. For seven smaller contracts, which replace 500 lead lines each, the minimum requirement was three residents each. The contracts also included affirmative action requirements, specifically a goal of at least 25% of the contract award performed by MBE (Minority Business Enterprise) and 7% WMBE (Women and Minority Business Enterprise).

Both the Office of Affirmative Action and the Water and Sewer Utilities Department assisted contractors in meeting the resident hiring goals. They did this by setting up the apprenticeship program, recruiting participants so that the contractors were presented with enough qualified individuals, and vetting the individuals to ensure that they could do the job. The Department of Water and Sewer Utilities got permission from the New Jersey Department of Labor to allow local unions to host the special apprenticeship program and offer training classes ahead of schedule. The classes were needed in a timely manner to fill the need of the lead service line replacement program, which began in March 2019 and was accelerated in September 2019 to be completed within 24 to 30 months.

## Program Logistics

The union, Heavy and General Construction Laborers Local 472, funded and hosted three apprenticeship classes to train Newark residents over a two-week period. The free class sessions lasted eight hours a day for a total of 10 days. In order to complete the apprenticeship, participants could not be late or miss a day. The city worked with the local unions and provided transportation for the first class to go to and from the training site. Training included safety procedures, how to use a saw or jack hammer, and excavation-related activities. It should be noted that the City of Newark, though instrumental in facilitating this program, did not provide the funds for the training.

In addition to being open only to Newark residents of color, the program required the following of applicants:

- A valid driver's license
- A high school diploma/GED
- Physical fitness
- Pass a drug test
- Pass a standardized basic skills test (math and English)



Just over 50 people went through the apprenticeship program and about 35 passed and got jobs. At least two-thirds (about 30) were unemployed prior to beginning the program. Some of the program participants were Newark residents who were already working, but after going through the program, they were able to earn union rates. In total, 60 Newark residents were employed on the first 10 to 12 contracts, 35 of which came from the apprenticeship program. The other 25 were union members who were not previously working and were hired by contractors directly. The contractors include UTCA members: Montana Construction, Underground Utilities Corp., and Roman E&G Corp.

## Legislative Support

Newark's Essex delegation to the New Jersey State Legislature supported Newark's Water and Sewer Utilities Department in pushing to make sure the New Jersey Department of Labor assisted in expediting class offerings by the unions. The Essex delegation is proud of the Water and Sewer Utilities Department's work and its commitment to not only push the lead service line replacement program, but also to educate and communicate with residents the entire process and how it will move forward.

## Program Benefits

As a result of this program, there are more people of color in the union representing the communities where the work is being done. By focusing on minority residents, the apprenticeship program has a clear benefit in terms of equity, contributing to a more representative workforce. Beyond this, there are several other social and economic benefits that these types of programs can promote.

### *Keeps money in the community*

Ultimately, the economic impact of the program is clear—it puts money back into the community. Water and Sewer Utilities Department Director Kareem Adeem believes that if Newark is spending about \$100 million per year on construction throughout the city, the goal should be to make sure that some of that is returning to the city. Most of the Newark residents who participated in the program were either previously unemployed or working minimum wage. As they begin working on these city projects, they receive a significant increase in pay. As they stay in Newark, and thus, shop locally and pay rent/mortgages, more money stays and circulates within the city.

Union wages are significantly better compared to the earnings from working directly with a company. When they began working for the unions on city projects, they received a significant increase in pay, earning about \$26 per hour and average eight hours of overtime, which pays \$39 per hour. Take home pay for union workers can be about \$1,700 to \$1,800 a week, depending on deductions.

### *Sets up residents for a career*

Though in this case, the apprenticeship program was created to fill the need for a specific project, helping residents join the union sets them up for a lifelong career path in construction, which includes opportunities both in and outside of Newark. The goal for someone who goes through an apprenticeship program is to land a permanent position with the contractor. The work they do goes beyond individual projects, as they may be with the contractors for 15 to 20 years. The skills that they learn in the training and on the job are transferable within the general labor and construction field. As they work on the initial project, such as the lead service line replacement, they have the opportunity to prove that they already had certain skills and showcase the skills they have learned.

Even though some of the lead service line contracts have ended, some employees who went through the apprenticeship program are working on other projects, some in the city and some outside. For example, one of the contractors for the lead service line replacement program, Underground Utilities, moved on to a water main project in the city of Hoboken and brought two Newark residents along. Roman E&G Corp. went on to do paving jobs in Princeton and brought along three of the apprentices. Another contractor, Montana Construction, which has other construction projects around the city and state, hired about six of the Newark residents, who are now doing sewer repairs on another project. Those employees, who were trained to do utility work on the lead service line project, were able to work on sewer pipes given the transferable skills.

As apprentices work on utilities, doing excavation and construction work, they get to learn and understand the trade. For example, someone who was hired just to do saw-cutting can also learn how to lay down asphalt, compact a trench, or landscape. If employees need other training, then during their down time, when work slows down, they can go back to union hall and get certified on other equipment (e.g., explosives for highways, bridges, and tunnels). Throughout their career, they may be motivated to elevate themselves from an entry level worker to a foreman or an equipment operator. Though they may be a member of a particular union, they work closely with other union members on a crew site, and are exposed to different types of careers inside the heavy construction industry. Additionally, networking opportunities on a construction site allow them to move to different unions.

For example, the Local 472 laborers usually work alongside the Local 825 heavy equipment operators/engineers. The latter positions are some of the top paid laborers in the construction industry. Someone working side-by-side with an operating engineer who wishes to transfer to that union could have an advantage because they have at least some exposure to the equipment and know what type of work it is. Additionally, the existing union members, working closely with the interested party on a crew site, can attest to their work ethic and vouch for them being observant and hard-working and thus, an excellent candidate to transfer to some of the complementing unions.



### *Sets up residents for job stability*

Even during the pandemic, the residents who went through the apprenticeship program were still working and thus still able to provide for their families. One of the benefits of being employable in the water utility sector is that there is always work to do because access to safe water is a necessity. Most of the Newark residents who completed the apprenticeship program are either still working on lead service line replacement with general contractors/subcontractors or working on a job through the union elsewhere. Since these residents are now in the union, they can go to other sites and work on any project that the union participates in. As work slows down or when the program eventually ends, these Newark residents will still have plenty of work to do.

### *Builds community trust*

There was one man in the program who was on a crew that replaced his own lead service line. Hiring local talent allowed the crews to comfortably work in areas where the residents and those workers were familiar with one another. The crews had an easier time entering a house to do work because they had people on the workforce who knew the occupants and were familiar with how to get into contact with them. In this case, community trust gives them one less thing to worry about. Additionally, some contractors attended community meetings and brought workers with them to address residents, which increased community engagement and receptiveness.

### **Program Replicability**

The success of the apprenticeship program proved that these types of programs can be accomplished not only in Newark, but elsewhere. Even though Newark is going to be finished with its program sometime next year, the rest of the state will continue to replace lead service lines. Several cities have not started their replacement programs yet, so the Newark residents that have been trained may have the opportunity to bring their skills and experience to other parts of the state.

According to David Muhammad, manager of Newark's Office of Affirmative Action, this program can and should be used as a model, especially as development continues throughout the city and the rest of the state. For example, the Port Authority of New York and New Jersey has \$5-6 billion in capital improvement and uses the same unions that Newark uses. Looking ahead, the demand for laborers will increase, especially as older workforce members are retiring. Since the bulk of the new projects are going to be concentrated in Essex County and the greater North Jersey region, Newark is able to make the case for having special training classes that will allow workers to be ready as soon as the projects start.

Newark officials hope that this program, which has multiple benefits, can be replicated not just in Newark, but also throughout the state in other cities. These programs restore money to the community and, by employing some community members, bestow a name and face to the projects that ultimately make the city more prosperous. Members of the community can see their fellow residents working on the project and appreciate that the city gave local residents the opportunity to land a stable, well-paying job.

*To learn more about the lead service line replacement apprenticeship program...*

Sponsors have promoted the program on social media and through videos:

- [Lead Service Line Replacement Apprenticeship](#) (City of Newark)
- [Lead Service Line Training](#) (City of Newark)
- [Newark Lead Service Line Replacement Project](#) (LIUNA Local 472)

Various articles and blog posts have been written about the initiative:

- [Newark Residents Offered Chance to Replace Lead Lines](#) (Tapinto)
- [Newark employs local residents in effort to replace lead water pipes](#) (News 12)
- [More than half of Newark's lead service lines are replaced as crews work through COVID-19 crisis](#) (City of Newark)

## Future Apprenticeship Programs

Moving forward, the City of Newark will likely create additional apprenticeship programs. When Newark's CSO Long Term Control Plan (LTCP) is finalized and implementation begins, it will need workers for general construction projects as well as green infrastructure projects. The LTCP is going to require a significant financial undertaking and, like with the lead service line replacement program, the City wants to ensure that Newark residents are benefitting from the investment.

Additionally, the City anticipates a water meter replacement program that will aim to replace 30,000 meters. This will provide an opportunity for plumbers and pipe-fitting unions to host plumbing apprenticeship programs and ultimately hire local residents. As the older workforce retires, the City of Newark can take advantage of the opportunity to continue pushing for its workforce to be included in apprenticeships and thus, the unions that provide the laborers to do critical work in the city. Due to the retiring workforce, there are plans to explore partnerships with the private sector as well as local institutions to ensure that Newark residents will be employed in upcoming jobs.

# Newark's Green Infrastructure Training Programs

## Ironbound Community Corporation Green Infrastructure Training Program

The [Ironbound Community Corporation](#) (ICC) green infrastructure (GI) training program was created due to the anticipation of green infrastructure work throughout Newark, as well as the nearby cities of Hoboken and Jersey City. In July 2018, ICC applied for a U.S. Environmental Protection Agency environmental workforce development job training grant and subsequently, was awarded the grant in September 2018. The goal was to train 60 unemployed low-income residents for positions in various environmental fields. The initial proposal included different types of training that participants would have to take, but it was ultimately narrowed to green infrastructure due to the demand for GI systems in cities like Newark and the projected employment growth demands that would provide valuable opportunity for the city's community members. As of 2019, ICC runs a green infrastructure training program, with the National Green Infrastructure Certification Program (NGICP) as the certifying body.

### Program Logistics

The program is open to Essex County residents who have a high school diploma or equivalent and accepts re-entry residents and non-U.S. citizens. The program is targeted to unemployed or under-employed residents who do not have prior knowledge of environment-related fields. Participants who are in the process of pursuing high school equivalency are allowed to enroll in training, but are not be able to take the qualifying test for the program until they earn the equivalency. To recruit participants, ICC sent email blasts with flyers, asked partner organizations to do the same, and posted on social media. It also publicized the program at orientation sessions for its other various programs and city events within Essex County.

Though the grant for the program was approved in 2018, ICC didn't launch the training immediately. Within ICC, the Financial Opportunity Center and Environmental Justice Team worked together to prepare participants. The Financial Opportunity Center helps bridge the employment gap by teaching basic skills such as literacy and math. Three months prior to taking the GI training, residents took math and literacy tests. Afterwards, some participants also trained in OSHA HAZWOPER and some received solar panel installation training. The GI portion of the program was the longest and happened last. There is a minimum of 35 hours required to earn the NGICP credential, but the ICC program ended up consisting of about 50 hours to ensure that participants had enough experience with the hands-on portion, which is not required for NGICP certification. Though ICC was not able to provide program participants with a stipend, it allowed flexibility for those who were working, holding classes in the evenings on weekdays and on Saturdays as well. Investment in each individual participant was incorporated in the training.

The program received funding in January 2019 and intended to start in the spring of 2019. It conducted recruitment and hosted multiple orientations that tried to familiarize residents with GI. In July 2019, the contextualized bridge program was provided for those who needed it. The program officially launched in August 2019 with participants finishing the course content in October. Participants took trips to various sites and finished with the exam in November 2019. In total, 18 out of 22 participants completed the program. A few missed classes and were not able to attend the makeup sessions. ICC anticipates having another cohort in the spring of 2021, which

is open to those who missed classes during the first cohort. The cohort will most likely start in July 2021 to accommodate enough outreach.

The program took place over three to four months and included the certification minimum of 35 hours. ICC added 15 hours of instruction, five of which were in-class, and eight to 10 of which were hands-on. The hands-on component was not necessary for the NGICP certification but ICC added it because of its value. The staff salaries came from another source of funding which is why ICC was able to add on the hands-on component.

Within the Financial Opportunity Center, residents receive professional development skills training. They are able to receive more individualized employment and career coaching, including resume writing and mock interviews. They also do research on career ladders and identify the positions they are qualified for. The Financial Opportunity Center hosts different workshops and focuses on recruitment events or job fairs in the field. Residents are able to take advantage of case management services even after they become employed. The goal is to keep in contact and connect with residents for the next three years after they complete the training. The GI program was the first time ICC made sure that technical training was paired with the professional development services. This was the first opportunity to train folks in-house and pair them with the other services that ICC offers. In addition to technical skills, program participants also receive financial coaching, learning general financial literacy and how to budget. They are also able to learn about income support and ICC can help them connect to rent relief, get to interviews, renew licenses, and address other barriers to employment.

## **Program Funding**

In addition to winning the EPA grant, ICC also leveraged funding from Bridges to Career Opportunities through the Citi Foundation. It leveraged funding for the contextualized bridge and the Financial Opportunity Center paid for a portion of the funds for ICC staff to become trainers. In total, the program costs \$10-12 thousand, which includes payment for trainers, a \$45 NGICP book for each participant, and \$5-10 worth of supplies for each participant. From the first cohort, there are about eight members who are currently employed doing GI-related work.

## **Lessons Learned**

Program staff recommend that others who strive to replicate a similar program incorporate workforce development services and allow for a sufficient timeline. They found that the technical aspects of green infrastructure can be difficult to teach, especially to those who have not been in school for an extended period of time, and the material may be a lot for residents to absorb, as some learn differently than others. Additionally, program staff stress the importance of including the optional hands-on component, when possible, to accompany classroom learning.

## Newark Green Works

Newark Green Works is a paid green infrastructure (GI) training program that is administered by the [Newark Workforce Development Board](#) and is part of the [Newark 2020](#) initiative. The [National Green Infrastructure Certification Program](#) (NGICP) is the certifying body. The original program was designed in response to resident feedback about maximizing community benefits associated with adoption of the City's CSO Long Term Control Plan, which will feature some green infrastructure construction and maintenance. The training program design combined classroom experience with applied learning by engaging program participants in designing and building a rain garden in honor of the former Water and Sewer Utilities Department director, Andrea Adebowale-Hall, who passed away in 2018. One of the desired outcomes was for the template request for proposal (RFP) for green infrastructure projects to include language that prioritizes contractors or employees who have gone through the NGICP certification process.



Before starting the program, the City of Newark sought to learn from partner cities that were further along in the GI training process, such as Philadelphia and Buffalo, NY. As they did this technical peer exchange, they examined the cities' implementation of GI as part of CSO permit compliance, focusing on specific points of interest, such as the response to community needs. For example, Newark officials took into consideration how residents expressed concern about localized flooding, not just the end-of-pipe challenge, and the desire to maximize the creation of green spaces and local jobs. Similarly to the lead service line replacement program, given that millions of dollars are being spent on infrastructure improvement, the City government wants to ensure that Newark residents benefit economically through job creation.

As the city builds more green infrastructure, they will need contractors to perform maintenance. Thus, Newark intends to maximize the number of program participants in these relevant industries so they can get jobs through the city. Ideally, once completing the program, the participants would be hired full-time by a contractor with whom Newark does business—or by the Water and Sewer Utilities Department itself. Though the program is intended to lead to full-time opportunities, the timeline is uncertain given the hiring freeze as a result of COVID-19.

### Program Logistics

The program is open to residents who are 18 years or older and have a high school diploma or equivalent. The City of Newark targets programmatic outreach to the re-entry community; young individuals who have not finished their undergraduate degree, especially in STEM education; and seasonal workers who do landscaping work. The City coordinated various types of outreach to recruit participants including:

- Coordinating with partners/programs that worked with re-entry residents to reach those who would be interested in earning the GI credential as well.
- Reaching out to relevant groups to disseminate program information to their contact lists, such as Newark DIG.
- Contacting residents who had attended community meetings about stormwater and asking them to help spread the word.

- Reaching out to gardeners who work on community gardens in Newark.

Newark Green Works' first cohort started in July 2020 and will sit for the test this October; the next program will occur in Winter 2021. Though participants have to meet a minimum of 35 hours before sitting for the test, the program ultimately offered about 80 hours, including make-up classes and a period of time for employer visits. Half of the program consists of technical lectures and the other half consists of professional development such as resume preparation, mock interviews, and meeting with potential employers. Some participants also receive their OSHA 10 certification through the program.

Additionally, the program facilitates connections between participants and potential employers. For example, the Newark Green Training Program Advisory Committee, which is comprised of employers in both the water and utility space, was established to support the placement of the graduates. The program also features "Career Connection" sessions that allows participants to meet with certain companies, including but not limited to: J Fletcher Creamer; Qunnections Management; Hackensack Meridian; ASG, Inc.; Middlesex Water Company; PSEG; and New Jersey Resources.

The initial design of the program was proposed as a combination of in-person classroom learning and fieldwork. Due to the COVID-19 pandemic, the program transitioned to an all-virtual setting. The program also accommodated participants' schedules, as the majority of them had day jobs and thus, preferred the training to occur on weekday evenings and weekends. Though not originally part of the program design, this flexibility was allowed for the unique situation.

The first cohort consisted of 13 Newark residents; four of which are City employees who were trained in engineering and went through the program as peer mentors. Since there were no in-person sessions for this first program, it was important to offer tutoring options for re-entry participants who may need more help with test prep. The added benefit of training City officials is that when the City starts building GI, they have in-house staff who understand GI needs.

## Program Funding

The City won a grant from [The Funders Network](#) through its Partners for Places grant making program in partnership with Urban Sustainability Directors Network. Partners for Places is designed to do a matching service; if the City's sustainability office finds a local philanthropic partner to contribute to a sustainability project, then Partners for Places will match what the partner gives. The City received match funding from the local Victoria Foundation, which focuses on environmental programming, as well as [Career Works](#), a subset of Newark Alliance, which is a new philanthropic arm of industry partners who wish to see more workforce development that serves their industries. For Career Works, this program was an expansion upon their typical issue areas, which are focused on logistics, transportation, healthcare.

The program proposed spending \$275,000 over two years, which includes money from the Department of Labor. Around \$25-30 thousand per year goes toward paying program participants living wages—\$20 to \$30 an hour, depending on the number of hours. The City also pays for a partnership with the national certifying body (NGICP), which costs \$20,000 per year and allows Newark to train 50 individuals per year. There is also some overhead money set aside for administrative tasks, as well as hard copies of materials and t-shirts. Though not necessary to run the program, the City intends to allocate a \$40,000 grant to work on apprenticeship in the future, though the timeline is uncertain due to COVID-19. It is also intentional about setting aside funding



(\$50-60 thousand) to build green infrastructure projects, which it has yet to spend, but is planning to allocate to the creation of the Andrea Adebowale-Hall Memorial Rain Garden. Like with the apprenticeship funds, this is not necessary for the running the GI training program itself.

## Lessons Learned

Newark officials were intentional about ensuring that the program design reflected lessons learned from other parts of the country. During the trip to Buffalo, NY, for example, Newark officials learned the importance of communications and marketing, specifically applying a strategy to help residents realize the benefit of green infrastructure projects that cause visual disruption (e.g., torn up streets) for a period, but help to address localized flooding and green job creation. The goal, they learned, is to have residents associate the construction branding with the work that will ultimately benefit the community.

Officials also know that the program should not just be lecture-based and that the hands-on component is critical. They moved forward with an all-virtual program this summer because they wished to offer options to help residents build a career path earning family-sustaining wages. Now, they are eager to find ways to make the field component work for the next cohort.

One source of inspiration for Newark Green Works was a short training that Hoboken hosted for housing authority residents to fill the need for construction projects that required maintenance. As the contractor field gets more familiar with GI, the hope is that Newark residents with this GI credential will be able to go to other cities as well, including Hoboken, Jersey City, and other CSO communities. Cities may struggle to find qualified people for different types of “green” jobs, so Newark residents would have an advantage in being able to fill the need in green stormwater management.

## Conclusion

By developing the training programs described in this report, Newark is addressing its water challenges and workforce challenges at the same time. With a relatively large portion of the water workforce set to retire within the next decade and major water infrastructure projects both in progress and in planning for the city, there is a huge opportunity for Newark, as well as similar urban areas in New Jersey, to tap into the potential of its underemployed or unemployed residents. Investing in training and prioritizing the hiring of the local workforce can benefit both the local government and the community it serves. By employing residents, the city may see increases in local spending and increasing trust in local government. For residents who receive a pay increase or otherwise more career stability, their quality of living will likely increase. The Jersey Water Works CSO Committee hopes that, as several municipalities tackle similar water and workforce challenges, sharing best practices like the ones outlined here and learning from one another will ultimately help communities in their work to maintain clean water, create local jobs, and achieve economic growth.



# Appendix

## Interviewees

### City of Newark

#### *Lead Service Line Replacement - Apprenticeship Program*

- Kareem Adeem, Director, Water and Sewer Department
- David Muhammad, Manager, Office of Affirmative Action
- Tiffany Stewart, Assistant Director & Attorney, Water and Sewer Department
- Shoshanna Page, Senior Policy Advisor and Communications Strategist

#### *Newark Green Works*

- Nathaly Agosto Filión, Chief Sustainability Officer
- Karen Gaylord, Director of Programs, Newark Workforce Development Board [*email correspondence*]

### Ironbound Community Corporation

- Melanie Reyes, Financial Opportunity Center Director

## Interview Questions

1. What is the history of the program (particularly, why/how it started)?
2. Who administers the program/handles logistics?
3. What are the funding sources?
4. What are the program logistics? (hours per day, program length, schedule, etc.)
5. How are residents recruited/notified of the program?
6. Who is the program targeted for and what are the prerequisites?
7. (If applicable) How many participants have successfully completed the program?
8. What are the transferable skills that program participants receive?
9. What are lessons learned or recommendations you would give to others who may want to start a similar program?