



National Water Sector Workforce Convening

November 14-15, 2018

Post-Convening Synthesis

Background

There is an important and ongoing national discussion around workforce needs and opportunities in the water sector. At present, the water sector faces significant challenges recruiting, retaining, and developing a prepared workforce to deliver the critical services that protect public health and support the vitality of our communities, natural environment, and economy.

Since 2017, a coalition of collaborating organizations, which include the U.S. Environmental Protection Agency and a number of major water sector associations, has gathered to discuss workforce development in the sector. During these discussions, participants voiced significant interest in a national convening about workforce needs and opportunities for the water sector. In response, the collaborating organizations formed a Workforce Development Convening Steering Committee to guide efforts and provide input and feedback on Convening topics and approach. (See Appendix C) The following provides an introduction to the Convening's development and format as well as a synthesis of participant discussions during the two-day Convening.

Purpose and Structure

The National Water Sector Workforce Convening was held on November 14-15, 2018 at Alexandria Renew Enterprises in Alexandria, Virginia. Recognizing that water sector workforce challenges have been well-characterized and discussed, and that numerous organizations are engaged in relevant work to identify and address these challenges more fully, this Convening aimed to build on, and avoid duplication of, existing efforts, while providing an opportunity to bring new perspectives to the issues and collaboratively define a series of actions that could be taken at the national level to advance solutions. The Workforce Development Convening Steering Committee identified the following as key objectives for the Convening:

- Set the stage for sector partners to develop an action agenda/strategy in response to gaps and opportunities identified during the convening.
- Deepen our collective understanding of current workforce initiatives and the opportunities they present for leveraging and scaling efforts in the water sector.
- Establish a framework for effectively communicating workforce efforts to utilities and other partners.

The discussion sessions at the Convening were organized around “five elements of an effective water sector utility workforce program” which include: Strategic Workforce Planning; Recruitment; Retention; Competency; and Building Community as well as a session dedicated to the work being done in a similar sector, transit, and a session devoted to identifying next steps. David Ross, Assistant Administrator for Water at the U.S. EPA and Eileen O’Neil, Executive Director at the Water Environment Federation kicked-off the two-day Convening with opening remarks welcoming the participants and emphasizing the importance of and their organization’s support for taking concrete actions to address water workforce challenges. Each session included presentations as well as small group and full plenary discussion. The Convening included over 75 participants with a mix of professional backgrounds from within and outside of the water sector including workforce and human resource development experts, adult education and training professionals, Federal and state agencies, and utility executive managers. An agenda [Appendix A] and complete roster [Appendix B] is included at the end of this synthesis.

Water Sector Action Areas

During the two-day Convening, participants identified six key potential Action Areas that could be taken at the national, state, and regional levels to address water sector workforce challenges. These Action Areas were as follows:

- New Information Resources
- Platform(s) to Facilitate Information Exchange
- Partnership Facilitation
- Sustainable Funding for Workforce Development
- Marketing Campaigns
- Blueprint for Replication

The following synthesis provides a high-level characterization of the key themes and associated findings identified by participants during the two-day Convening. They do not represent a consensus among the participants.

Action Area 1: New Information Resources

During the two-day Convening, participants identified new resources that, if created, could help to advance practice in the sector related to workforce. Some of the identified new resources pertain to a specific Element of the Five Elements while other new resources could aid practice across Strategic Workforce Planning; Recruitment; Retention; Competency; and Building Community. Some of the new resources exist at the utility or local level and participants indicated a desire to modify or model new resources to make them applicable in a broader context.

Elements of an Effective Utility Workforce Framework

During the convening, substantial interest was expressed in developing a framework to help guide utilities through the process of implementing the elements of an effective workforce program (this was compared to the existing Effective Utility Management framework). This framework would include key entrance and

exit ramps and best management practices. Care should be taken to ensure the framework is accessible to small and non-networked utilities. Participants pointed to the value of visual guides, such as the one used by the City of Atlanta during their presentation (Convening Presentation Slide Deck: Slide 15). During the discussion, participants discussed potential framework elements (e.g., recruitment, self-actualization, retention, education, and internships). Participants also discussed the need to pilot test any framework that would be developed prior to broader dissemination within the sector. Discussions expanded on some of these elements, including:

Strategic Workforce Planning Guide: Participants emphasized that while there exists an abundance of examples and recommendations on effective methods to address workforce challenges, the industry lacks a cornerstone guide for how to approach strategic workforce planning. For this reason, convening participants discussed that the creation of a guide describing steps needed would help utilities develop a plan to ensure sufficient staffing in mission-critical categories. Elements of the guide may include: needs assessment, recruiting and retention strategies, training opportunities and ways to partner with outside organizations. The Guide could also help utilities consider many of the other areas listed below and include links to more specific materials currently available. Discussions noted that any guide or similar products developed to support strategic workforce planning should be scalable for use among small, medium, and large utilities.

Knowledge Transfer: Throughout the discussions, participants placed emphasis on the knowledge transfer element of effective workforce planning. Participants discussed the development of a best practices list as well as tools to bolster this critical workforce element.

Culture: Participants identified the need to provide a breakdown of the steps needed to modify corporate culture to increase attractiveness to potential new employees and retain current staff. Participants discussed that USDA's Cultural Transformation Initiative may provide a starting point for this content which includes: creating champions to drive change, establish metrics, engage employees, and tackle one step at a time to avoid burnout.

Competency: Participants discussed, at length, the value of creating occupational specific core competency "modules." Participants discussed that the competencies within these modules should go above and beyond state requirements to help utilities develop a prepared workforce.

Community Partnerships: Participants acknowledged the value of community partnerships to increase awareness and attractiveness of water sector employment and discussed that a roadmap be developed to outline steps that can build relationships between utilities, their boarder community, and educational institutions. Aspects of this element may include steps to integrate plans with community values as well as outreach templates and key messages/talking points. Due to variance across states, participants also discussed the need for state-specific components to the partnership element.

Case Studies

Throughout the sessions, participants discussed the value of case examples to inform utilities about how peer water service providers have integrated workforce planning and implementation into their day-to-

day operations and future planning initiatives. Participants noted that case examples should address the different utility internal structures, capacity, and needs. Participants believed that short, concise case examples of 2-3 pages with links to more detail could provide a valuable resource and should be distributed by national associations and federal partners.

Standardization

Throughout the Convening, participants emphasized the need for standardization across all elements of workforce planning and implementation. Specific ideas for standardization included: universal metrics for training and development, such as the determination of standard job categories (e.g., Level 100, 200, 300) and associated needed competencies and standard needs assessments for federal agencies. Participants discussed that job categories be standardized and updated within the Department of Labor to reflect advancements in job roles and universal descriptors.

Recognition Program

Participants discussed developing a recognition program to promote those achieving workforce planning and implementation excellence and staff preparedness in the water sector. Such a program would help to promote actions that advance excellence in workforce management and help small, medium, and large water sector utilities transform their operations over time. Participants discussed the possibility of modelling a program on other successful recognition programs, such as the Utility of the Future Recognition Program.

Retention Needs Assessment

Participants discussed the benefits of a sector-wide needs assessment to be conducted at a national level to determine turnover rates and causes. This needs assessment will help the water sector develop responses to identified needs and increase retention.

Professional Development Enhancement

Participants discussed the actions described below to enhance professional development opportunities for staff through the following activities:

Increase Accessibility of Trainings: The location, cost, and time burden that training and professional development opportunities impose can often be a barrier many utilities and employees cannot overcome. Participants discussed that more organizations look to provide online options or reduced or no-cost training and development options.

Leadership Training: Participants discussed the value of leadership development across water sector staff to promote the awareness of career advancement opportunities and ensure that leaders at all levels are equipped to effectively manage teams and projects. Participants discussed providing promising talent the opportunity to attend leadership meetings, such as local board or council meetings, to observe the discussion and negotiation of policy issues. Participants discussed that national level actors, such as EPA or associations, could provide either the training itself or funding for the development of leadership training for the sector. Participants acknowledged that many water sector professionals are unable to devote time to trainings that do not receive Continuing Education Units (CEUs). One participant discussed

that associations or individual utilities may try to advocate for the reevaluation of relevancy criteria of education credits at the state level to include leadership and human resource trainings.

Summary of Priorities

Of the actions summarized above, Participants highlighted the following as relevant priority areas for future action:

- The creation of a guide describing steps for utilities to undertake to develop a strategic workforce plan to help recruit, retain, and train staff in mission-critical categories.
- The development of an Elements of an Effective Utility Workforce Program Framework.
- The development of a knowledge transfer best practices list and associated tools.
- The creation of core competency “modules” above and beyond state requirements to help utilities develop a prepared workforce.

Action Area 2: Platform(s) to Facilitate Information Exchange

Throughout the discussions, convening participants discussed the challenge that siloed information poses to workforce practice in the sector. Participants expressed interest in developing accessible, touchstone information platforms(s) by which the water sector workforce community could raise awareness and access information across the five elements of an effective water sector utility workforce program. The following provide a summary of discussed types of platforms to advance information exchange in the sector.

Conferences

While there exists robust utility, state, and national examples of innovative workforce activities, many water sector players remain unaware of these workforce advances. Participants identified conferences as a potentially impactful way to reach audiences and raise awareness on current workforce needs as well as elevate understanding of activities currently underway. Discussions included:

Existing Conferences: Capitalize on existing conferences, such as Water Week or the Utility Management Conference, to further raise awareness on current workforce needs as well as promote workforce-related initiatives and legislation.

Workforce Specific Conferences: Workforce-specific conferences to bring individuals across the water sector together to share best practices, learn information on current activities, and identify new opportunities to address workforce challenges.

Regional Conferences: Conferences at the regional level to enable more participation from a wide variety of audiences and create a dialogue among utilities, state agencies, and other water-related organizations to tackle regionally-specific issues.

Partnership Recognition: Conferences may provide an opportunity to highlight key partnerships in the workforce space (e.g., BAYWORK, AmeriCorps), and participants discussed providing public recognition at conferences to these organizations.

Engaging HR: Participants emphasized the need to include Human Resources staff in any future convenings or conferences to discuss innovative practices. Participants noted that it may be advantageous for water sector professionals to participate in existing HR conferences. Specific topics discussed include:

- Identifying room for flexibility in position requirements to potentially open up opportunities for career progression for non-traditional candidates (e.g., reevaluating the “need” for a bachelor’s degree as a requirement for some positions).
- Discuss options for reducing the amount of time needed between identifying a staffing need to successfully filling the position. Participants noted that differences may exist depending on the governance structure of a utility (e.g., municipal department, service authority, cooperative) and likely would have an impact on HR policies.

Workforce Website

Participants highlighted that while there exists an abundance of information on workforce related activities, such as case examples, templates, and reports, the industry lacks a central, web-based site to access the information. This lack of an informational hub results in inconsistent access to information, often through one-off online queries or word of mouth. Seekers of this online information face difficulty ascertaining the source, credibility, or accuracy of the information. For this reason, convening participants discussed that action be taken at the national level to revitalize or create a website to help individuals navigate and access information related to the water workforce. Participants noted that the Work for Water website may be an existing mechanism for this action item. Discussed actions included:

Media Archive: The website should include a video archive of workforce- related webinars and trainings to act as a reference for attendees and a knowledge resource for future viewers. Participants emphasized that the type of media collected should include the full range of format preferences across audiences, including videos, social media, etc. Participants identified the need to move existing materials into electronic, mobility accessible formats to increase attractiveness to younger generations and overall audience accessibility.

Webinar Series: Participants expressed an interest in the creation of a webinar series devoted to recruitment and development to be housed on the website.

Calendar of Events: The website should include information on upcoming events on related workforce topics (such as workforce strategic planning) including workshops and webinars across the country.

Gallery of Good Ideas: The website should include a library of ideas and programs related to, among others, recruitment and candidate development. Participants did not believe that there needed to be any one format for good ideas, such as case examples, links, or videos, but that the creation of this library would require an upfront assessment of existing information (e.g., NACWA Compendium, EPA Case Examples). Participants stressed that any library should be curated and regularly updated to ensure relevancy and should only be created in concert with the assignment of administrative duties to a specific organization to avoid out of date information, broken links, etc.

Competency Clearinghouse: The website should include a clearinghouse of training materials, resources, and examples related to job-specific competencies. There is a further discussion below in the “New Information Resources” section of the specifics of and need for the development of these materials.

Action Area 3: Partnership Facilitation

A key aspect of convening participants’ discussion focused on the need for national facilitation of partnerships to connect utilities with partners to increase learning and reduce the high administrative burden utilities face in identifying, administering, and continuing partnerships. Participants emphasized the important role national actors could play in acting as the facilitator to establish, support, and grow partnerships across the sector. The following is a summary of the types of facilitation participants discussed to advance collaboration and partnership across the sector.

Skills-Building Partnerships

Throughout the discussion, participants expressed significant interest in working with labor programs that cater to targeted populations as a way to expand the reach of water workforce recruitment efforts. Workforce agencies, such as AmeriCorps and Department of Labor’s Women in Non-Traditional Employment Roles (WINTER) program, provide the water sector an existing structure with developed programs to effectively recruit and develop new water workforce candidates. These programs provide a structure for utilities to ensure that new candidates develop needed skills while providing candidates with career relevant education work experience. Participants noted that existing programs, such as PowerCorps Philadelphia and PowerCorps Camden, provide robust examples of how this program could be modelled.

Skills-Transfer Partnerships

Participants acknowledged that many potential water sector candidates may come to the sector with valuable skills and knowledge from previous employment, such as veterans. Participants identified both the need to make these candidates aware of their transferability to water sector jobs as well as provide targeted training to apply those skills within a water sector context. Participants discussed focused outreach to veterans through partnerships (e.g., Veteran’s Affairs), further development of existing programs (e.g., AWWA’s Veteran’s Initiative), and the creation of new targeted efforts, such as a boot camp to immerse veterans in water sector issues and practical experience.

Highschool Partnerships

Participants raised the importance that high school aptitude testing can play in future career choices for individuals and discussed that work be done to determine if water sector careers (e.g., water operators) are currently listed as career options in aptitude tests. If so, participants expressed interest in determining the frequency of water sector employment results. If water sector careers are not currently a potential outcome of aptitude testing, participants discussed that an effort be made to include water sector careers in high school aptitude tests.

Local Partnerships

During discussions, participants emphasized the importance of collaboration at the local level to increase awareness of water sector workforce needs and partner with local workforce actors to grow recruitment

efforts. Local boards, such as investment boards and workforce boards (e.g., American Job Centers), were identified as potentially valuable partners for expanding outreach efforts and utilizing existing relationships with potential employees. Participants identified CareerOneStop.org, which contains a directory of all workforce development boards that support federal, state, and local workforce development programs under the U.S. Department of Labor, as a valuable resource to connect with these boards. Additionally, participants spoke to the value of engaging city councils and local governments to increase their knowledge of the importance of water services overall and the workforce needs for the sector.

Peer to Peer Learning

Throughout the discussions, participants acknowledged that numerous utilities have established workforce planning and implementation programs and indicated substantial interest in advancing peer to peer learning opportunities across the sector. Participants discussed national actors act as facilitators for the peer to peer partnerships by establishing relationships with clear guidelines, roles, and stated goals for the partnership. As many partnerships may involve higher capacity utilities acting as peer mentors to lower capacity utilities, participants discussed that national actors create MOU templates or formal arrangements to facilitate non-competitive collaboration. To address legal and safety considerations of participation, convening participants discussed a review of existing mutual aid agreements that allow operators to cross state lines in a state of emergency as a resource for guidance. Participants identified existing programs, such as the EPA Hub Initiative and Utility of the Future as potential mechanisms for a workforce-focused partnership. Participants also discussed the value of targeted, pilot peer-to-peer learning on each of the elements of an effective workforce program (e.g., peer-to peer learning for recruitment or retention).

Professional Development Networks

Participants identified a number of national professional development networks as potential partners to increase awareness of the water sector, foster peer-to-peer learning, and learn from decision-makers outside of the water sector. Participants identified the Urban Sustainability Directors Network and the International City/County Managers association as two potential opportunities for involvement. In a similar vein, participants discussed the value of creating a network within the water sector to allow water sector professionals to learn from one another, such as an employee exchange across utilities or internally across departments.

Regional Partnerships

Throughout the discussions, participants spoke of the value of regional partnerships to elevate practice and advance workforce efforts through a shared understanding of the challenges and identification of opportunities to address those challenges (e.g., Bayworks). Participants discussed that national actors act as the facilitator to help incubate regional partnerships by creating the structure for collaboration and providing the on-going support needed to launch and maintain such an effort.

Operator Certification Partnerships

Convening participants discussed the long-time interest of many in the water sector to establish national operator certification requirements and create a basis and system for reciprocity among states related

operator credentialing. This interest was driven, at least in part, by the belief that enhancing the portability among states of operator credentials will increase the attractiveness of the sector as an employer. Discussion signaled the need to engage key partners across the sector to explore how existing reciprocity among some states could act as a platform to expand reciprocity to a nationwide footing.

Action Area 4: Campaigns

Throughout the two-day Convening, participants spoke of the importance of increasing community awareness of the value of water sector services as well as the availability and attractiveness of water sector employment. The following is a summary of the types of campaigns that were discussed to raise awareness.

Value of Water: National Campaign

During discussions, participants emphasized that workforce challenges mirror some of the larger challenges faced in the sector. Specifically, participants discussed the challenges of attracting workers to a sector when many are unaware of the ways in which water sector services protect public health and support the vitality of our communities, natural environment, and economy. Substantial interest was indicated in placing further emphasis on current value of water communications efforts to increase general public awareness of the value of the water sector as a whole and to help raise the profile of employment possibilities within the sector.

Water Sector Employment Campaign

Throughout the two-day convening, participants spoke of the lack of community recognition of the attractiveness and availability of water sector employment as one of the main challenges to recruiting new staff. At present, there lacks a clear picture of what water sector work encompasses, such as those that exist for doctors, teachers, and firefighters. In addition to the lack of clarity, advanced skills positions, often compete with the technology industry. Participants discussed a campaign to increase awareness not only on the availability of employment but also to emphasize the wide variety of jobs within the water sector and the potential opportunity for advanced level positions to interact with innovative technologies and software.

Regional and Grassroots Campaigns

Participants discussed not only the need for increased marketing of the water sector and employment, but also discussed potential tactics for these campaigns at the regional and grassroots level. At both the regional and grassroots level, participants discussed strong, targeted outreach to high schools and community colleges. Activities may include taking teachers to tour plant facilities, providing curriculums for incorporating water sector information in science courses, and discussing with teachers what skills sets may indicate a student's affinity for water sector employment. Participants spoke to the role national actors could play in producing materials, such as a messaging package or example curriculum, to encourage and strengthen these efforts.

Action Area 5: Programs to Consider for Blueprinting and Duplication

Throughout the two-day Convening, participants acknowledged the abundance of quality workforce efforts and activities that are happening across the nation and discussed that these programs be blueprinted and duplicated for transfer and replication in other regions and organizations. [See Appendix D] includes a list of the program areas and initiatives that were mentioned as possible candidates for replication. A number of Convening participants discussed the importance of identifying and blueprinting programs as an important action item to pursue among the overall list of potential action items.

Action Area 6: Identifying Sustainable Funding for Workforce Development

Throughout Convening discussions, participants emphasized the challenge that variance in the availability of funding and future funding security can pose to developing and sustaining a robust workforce program and a prepared water sector workforce. Participants acknowledged that many of the action items discussed throughout the convening rely on sustainable funding and discussed that work be done to catalog existing funding resources and identify potential sources of new funding, such as foundation grants and university endowments. Participants also stressed the importance of developing a coordinated funding strategy for the federal family to ensure adequate funding to advance workforce development in the sector.

Workforce Initiatives in Related Sectors

During day one of the convening, a representative from the Transportation Learning Center presented on the approach the transit sector has taken to address workforce challenges in the industry. Transit, as an infrastructure industry, shares many of the same core challenges as the water sector, and there was general sense among Convening participants that the transit sector has advanced its workforce efforts in a manner that can provide important lessons learned for the water sector. As such, participants expressed interest in learning from the transit sector and coordinating efforts where there was a great deal of overlap. The following section includes the specific action items identified by Convening participants.

Cross Sector Action Area 1: Amplify Infrastructure Voice

Throughout Convening discussion, participants emphasized that workforce challenges faced by the water sector are emblematic of a larger infrastructure workforce challenge and that a coordinated effort across infrastructure sectors provides a valuable opportunity to amplify individual sector voices and increase national awareness. Participants expressed interest in engaging with other industries, such as transit, to identify the types of jobs that exist across infrastructure sectors and leverage outreach and human resources to promote those jobs available to vocational high schools, community-colleges, community-based organizations, and foundations.

Cross-Sector Action Area 2: Establish A Learning Partnership Between Water/Transit (and possibly Other Sectors)

Convening participants acknowledged that the transportation sector has developed a robust sector-wide workforce program, and participants expressed substantial interest in engaging the transit sector as a

learning resource to advance the state of workforce planning and implementation for the water workforce. The following action items were identified by participants to effectively engage and learn from transportation activities:

Needs Assessment: Conduct a water sector needs assessment as the first step in a potential water/transit partnership. This sector-wide assessment would be conducted at a national level to better understand what value a consortia model, such as the Transportation Learning Center, may bring to the water sector.

Learning Model: A formal relationship for structured learning could be developed to help the water sector learn from the transportation sector. Participants identified the following transit sector areas of activity as valuable learning opportunities for water: national competency curriculum development, cross-training, certified training, and apprenticeship programs. Additionally, participants emphasized the value of learning from transportation's advanced training technologies, such as e-learning and hands-on training. Access to the details of program components, such as who is responsible for developing content and hosting web learning may help clarify the needed roles and responsibilities to incorporate these aspects into a water workforce program.

Cross Sector Action Area 3: Leverage Core Skills Overlap

As components of the larger infrastructure industry, both water and transit share a set of core job functions (e.g., engineers, electricians, machinists). Participants spoke to the transferability of skills and identified the opportunity to standardize requirements across specific job functions and expressed interest in transferring the levels of learning established by the transit sector (e.g., Levels 100, 200, 300). By creating transferability across the sectors, participants discussed the possibility of sharing coursework, instruction guides, and internships across the sectors. Participants acknowledged that these job categories may be less transferable at higher levels. Participants also discussed the opportunity to collaborate on managerial and leadership-focused development courses to prepare future leaders within both industries, particularly as management and leadership skills were viewed as highly similar between the two sectors.

Building an Action Agenda

During the last two-hour session of the Convening, participants reviewed, discussed, and further vetted opportunities and action items identified during the previous sessions. As part of the session, participants were asked to identify which of the action items they saw as their top three relatively important opportunities. In full plenary, participants were asked to share their sense of priorities as well as their rationale for their selection. From this exercise, the following action areas were identified by Workforce Convening participants as relatively more important for development and implementation, among the many overall action items discussed (note these are linked back to the related Action Area description provided earlier in this document):

These items are ranked by the number of participants indicating a high interest in seeing the action area move forward

- Relative Importance Ranking 1: [Elements of an Effective Utility Workforce Program Framework](#) (24 Participants)
- Relative Importance Ranking 2: [Value of Water National Campaign](#) (18 Participants)
- Relative Importance Ranking 3: [Establish A Learning Partnership Between Water/Transit \(and Possibly Other Sectors\)](#) (12 Participants)
- Relative Importance Ranking 4: [Peer to Peer Learning](#) (12 Participants)
- Relative Importance Ranking 5: [Identifying Sustainable Funding for Workforce Development](#) (11 Participants)
- Relative Importance Ranking 6: [Partnering with Labor Development Organizations/Targeted Outreach](#) (11 Participants)
- Relative Importance Ranking 7: [Programs to Consider for Blueprinting and Duplication](#) (5 Participants)
- Relative Importance Ranking 8: [Platform\(s\) to Facilitate Information Exchange](#) (4 Participants)
- Relative Importance Ranking 9: [Amplify Infrastructure Voice](#) (4 Participants)

Appendix A: National Water Sector Workforce Convening Agenda

AGENDA

Day 1: November 14	
8:00	Registration and Continental Breakfast
8:30	Welcome, Introductions, and Agenda Review <ul style="list-style-type: none"> • David Ross, Assistant Administrator for Water, U.S. EPA • Eileen O’Neil, Executive Director, Water Environment Federation
9:00	Topic 1: Strategic Workforce Planning at Utilities <ul style="list-style-type: none"> • Presentations: <ul style="list-style-type: none"> ○ Andrada Butler, City of Atlanta, GA ○ Kevin Gertig, City of Fort Collins, CO • Review of background research to date on strategic workforce planning (Ross) • Table Discussion: <ul style="list-style-type: none"> ○ What lessons-learned and practices come out of these examples relative to identifying the important elements of effective work force planning at the utility level? ○ What are effective transfer mechanisms to share and encourage replication of these planning practices? ○ What collaborative actions could be taken by national organizations to better motivate and enable uptake of these practices?
10:00	Break
10:15	Topic 1: Strategic Workforce Planning at Utilities (Continued) <ul style="list-style-type: none"> • Display and discuss table results <ul style="list-style-type: none"> ○ Nominated table provides detailed report out using projected template information ○ Other tables weigh in to round out discussion
11:00	Topic 2: Workforce Initiatives in Related Sectors <ul style="list-style-type: none"> • Presentations on key workforce initiatives from other sectors that intersect/overlap with water sector workforce needs/interests) <ul style="list-style-type: none"> ○ Xinge Wang, Deputy Executive Director, Transportation Learning Center • Participant Q&A • Table Discussion <ul style="list-style-type: none"> ○ What activities and lessons learned in this sector suggest about additional water sector opportunities for workforce development? ○ What leveraging or collaborative opportunities exist? • Display and discuss table results
12:15	Lunch (Provided Onsite)
1:00	Topic 3: Workforce Recruitment and Candidate Development <ul style="list-style-type: none"> • Quick Review: Landscape of current recruitment-related initiatives (Ross Strategic) • Table Discussion: <ul style="list-style-type: none"> ○ In light of the utility, regional partnership, state, and national level activity in this area, what important gaps, if any, need to be addressed in our water sector workforce recruitment efforts?

	<ul style="list-style-type: none"> ○ Across the range of current activity, what programs/initiatives appear ripe for transfer and/or scaling up and how would/should this happen? ○ What collaborative actions could be taken by national organizations, including federal agencies, to increase adoption of these practices? <ul style="list-style-type: none"> ● Display and discuss table results
3:00	Break
3:15	<p>Topic 4: Workforce Retention</p> <ul style="list-style-type: none"> ● Two utility practitioner presentations: how have they approach boosting retention at their utilities (focus on workplace culture, human resource/professional development, etc.) <ul style="list-style-type: none"> ○ Mustaafa Dozier, DC Water ○ Todd Gardner, Bean Blossom Utilities (Indiana) ● Table Discussion: <ul style="list-style-type: none"> ○ What lessons-learned and effective practices come out of these examples relative to identifying the important elements of effective workforce retention practices at the utility level? ○ What are effective transfer mechanisms to share and encourage replication of these retention practices? ○ What collaborative actions could be taken by national organizations, including Federal agencies, to promote greater uptake of these practices? <ul style="list-style-type: none"> ● Display and discuss table results
4:45	Final Observations and Review Day 2 Plan
5:00	Adjourn

Day 2: November 15

8:15	Continental Breakfast
8:30	Agenda Review
8:45	<p>Topic 5: Workforce Competency</p> <ul style="list-style-type: none"> ● Quick Review: Landscape of current competency-related initiatives (Ross Strategic) ● Table Discussion: <ul style="list-style-type: none"> ○ In light of the utility, regional partnership, state, and national level activity in this area, what important gaps, if any, need to be addressed in our water sector workforce competency efforts? ○ Across the range of current activity, what programs/initiatives appear ripe for transfer and/or scaling up and how would/should this happen? ○ What collaborative actions could be taken by national organizations, including federal agencies to better enable uptake on these practices? <ul style="list-style-type: none"> ● Display and discuss table results
10:15	Break
10:30	<p>Topic 6: Building Community Partnerships</p> <ul style="list-style-type: none"> ● Two utility practitioner presentations: how have they approach community workforce-related partnerships (focus on utility program goals, partner relationships, and community benefits, etc.) <ul style="list-style-type: none"> ○ Andy Kricun, Camden County MUA ○ Catherine Curtis, San Francisco PUC ● Table Discussion:

	<ul style="list-style-type: none"> ○ What lessons-learned and effective practices come out of these examples relative to identifying the important elements of effective community work force building efforts? ○ What are effective transfer mechanisms to share and encourage replication of these practices? ○ What collaborative actions could be taken by national organizations, including federal agencies, to promote greater uptake of these practices? <ul style="list-style-type: none"> ● Display and discuss table results
12:15	Lunch (Provided Onsite)
1:00	<p>Topic 7: Building an Action Agenda</p> <ul style="list-style-type: none"> ● Review of action items identified during discussions (Ross Strategic) ● Table Discussion: <ul style="list-style-type: none"> ○ Looking back at the objectives for the convening, what recommendations would you make for the organizations that sponsored and participated in this convening to collaborate moving forward? ○ What additional actions items need to be added to the compiled list? ○ As you look across our discussion areas, what identified actions do you believe are most important to improving our workforce advancement efforts? ● Display, discuss, summarize results
3:00	Immediate Next Steps
3:30	Adjourn

Appendix B: National Water Sector Workforce Convening Participant Roster

Name	Organization
Adam Carpenter	AWWA
Allison Deines	WRF
Andrada Butler	City of Atlanta
Andy Kricun	Camden County MUA
Ben Stanford	American Water
Bill O'Connell	NRWA
BJ Howerton	Bureau of Indian Affairs
Bob Barles	EPA
Bonnie Gitlin	Contractor
Brian Bennon	Inter Tribal Council of Arizona
Carolyn Peterson	AMWA
Carrie Castille	USDA-RD, State Director, LA
Catherine Allen	OWM EPA
Catherine Curtis	San Francisco Public Utilities Commission
Cathy Davis	CKD Consulting
Chad Weikel	AWWA
Cheryl Davis	CKD Consulting
Chris McCord	Dept. of Health Office of Drinking Water
Cindy Goodburn	Cindy Goodburn Consulting
Connie Stevens	Alliance of Indiana Rural Water
David Williams	Solano Community College
Deirdre Mason	ASDWA
Desmond Barca	San Francisco Water Power Sewer
Edna Primrose	Water and Environmental Programs Rural Utility Service
Elizabeth Touns	Jewish Vocational Service
Elizabeth Williams	Central Carolina Technical College
Ellen Tarquinio	EPA
Haley Falconer	City of Boise
Jackie Jarrell	Charlotte Water
Jackie Rohosky	Georgia Quick Start Program
Jamie Davenport	Water and Environmental Programs Rural Utility Service
Jeanine Reckdenwald	South Central Connecticut Regional Water Authority
Jim Barsanti	City of Framingham, MA
Jim Horne	OWM EPA
Joseph Kane	Brookings
Karen Brandt	Maryland Center for Environmental Training
Karen Pallansch	Alex Renew Enterprises
Katie Spiker	National Skills Coalition
Kevin Gertig	Fort Collins Utilities
Kevin Kundert	RCAP

Kishia Powell	City of Atlanta
Larry Fabrey	PSI LLC Testing Services
LaVonda Pernell	USDA
Leslie Corcelli	OWM EPA
Leslie Temple	EPA
Mark Patrick McGuire	ACWA
Martha Shimkin	EPA
Matthew Reed	EPA
Mustaafa Dozier	DC Water
Nader Imani	Festo Didactic
Chris Hornback	NACWA
Neil Norris	Western Virginia Regional Authority
Pam Beckerman	City of Atlanta
Pam Cason	Gwinnett County Dept. of Water Resource
Pam Frugoli	DOL
Paul Bishop	Association of Boards of Certification (ABC)
Rob Greenwood	Ross Strategic
Robert Munro	Avon Lake Utilities
Roger Brown	DC Water
Ronnie Versher	San Francisco Public Utilities Commission
Sarah Shadid	Ross Strategic
Sharise Horne	Louisville MSD
Stan Griel	Rose State College
Steve Dye	WEF
Steve Harrison	WEF
Steve Terry	United South and Eastern Tribes
Steve Wilson	WaterOperator.org, Univ. of Illinois
Teji O'malley	Central Contra Costa Sanitary District
Tim Williams	WEF
Todd Gardner	Bean Blossom/Patricksborg Water (BBP Water)
Tom Groves	NEIWPCC
Tony Parrott	Louisville MSD
Xinge Wang	Deputy Executive Director, Transportation Learning Center
Zach Lowenstein	EPA

**Workforce Convening
Steering Committee
Appendix C**

Name	Organization	Title
Jim Horne, EPA, Chair		
Bill O'Connell	NRWA	Program Manager
Cheryl Davis	CKD Consulting	Consultant, Co-founder of B
David Williams	BACWA	Executive Director
Donna DiGianvittorio	South Central Connecticut Regional Water Authority	Vice President of Employee S
Jackie Jarrell	Charlotte Water	Operations Chief
Juliet Ellis	San Francisco Water Power Sewer	Chief Strategy Officer/Assista Affairs
Karen Pallansch	Alex Renew Enterprises	Chief Executive Officer
Kiesha Powell	City of Atlanta	Director of Watershed Mana
Paul Bishop	Association of Boards of Certification (ABC)	President/CEO
Tim Williams	WEF	Deputy Executive Director
Other Representatives		
Allison Deines	WRF	Director, Special Projects
Carolyn Peterson	AMWA	Director of Communications
Chad Weikel	AWWA	Grants, Education, & Workfo
John Albert	WRF	Chief Research Officer
Leslie Temple	EPA	Environmental Protection Sp
Nathan Gardner-Andrews	NACWA	Chief Advocacy Officer

Appendix D: Programs to Consider for Blueprinting and Duplication

Recruitment Programs

- D.C. Infrastructure Academy
- Norfolk County Agricultural High School – Water Focused Environmental Science Track

- Portland, Main Water District Apprenticeship Program
- Baltimore: Partnership with WEF and Big Brothers
- Emily Griffith's School: Get Into Water
- City of Atlanta Non-Traditional Recruitment Initiative
- PowerCorps (Philadelphia and Camden)

Peer-to-Peer

- Birmingham Water Works

Retention

- RCAP Operator Basic Training Series

Community Partnerships

- BAYWORK Workforce toolkit