Sept. 19, 2018  9 a.m. – 4 p.m.
Grange Insurance Audubon Center
505 West Whittier Street
Columbus, Ohio
Background

Having well-trained, qualified operators is crucial to safe and effective operation of Ohio’s water and wastewater treatment plants. According to research over the past several years, including the 2010 Water Sector Workforce Sustainability Initiative Report by the Water Research Foundation (Denver, CO) it is estimated that 30 to 50 percent of the water/wastewater workforce could retire within the next 10 years. As a matter of public interest, it is important for states to better understand the potential implications of this trend and work to avoid or mitigate a possible shortage of certified operators.

Proposal

On Sept. 19, 2018, Ohio EPA and the Ohio Water Development Authority (OWDA) convened stakeholders at a one-day summit to discuss the challenges associated with developing and retaining qualified plant operators in Ohio and identify strategies to address these challenges.

The goals of the summit were to:

- Convene (and facilitate networking between) a statewide group of key stakeholders and solution providers including municipalities, educational institutions, governmental policy makers and regional assistance providers.
- Share information about the status of the certified operator workforce in Ohio, as well as some efforts at the state, regional and local levels to address this issue.
- Generate ideas that may help produce/retain operators.
- Facilitate the creation of volunteer groups to work on developing and implementing these ideas.

Summit Outcomes and Deliverables

Based on attendee feedback, many appreciated this first-time opportunity to network with others within their region or specialty area that are working on this subject. Through a brainstorming session, attendees generated ideas in the following categories:

- Marketing the Profession
- Educational Opportunities
- Succession Planning
- Other Opportunities and Barriers

Many attendees also volunteered to serve on implementation teams to further develop and implement proposed ideas.

To facilitate the creation of implementation teams, this document along with the names of the attendees that volunteered to participate on the teams will be shared with all summit attendees. It is envisioned that these implementation teams will continue to look for solutions that help produce and retain operators. It is requested that the implementation teams regularly share their recommendations with Ohio EPA and OWDA.

Details and supporting information are provided in the appendices.
Appendices

A. Agenda

B. Attendee List

C. Brainstorming Ideas by Topic
   1) Session #1: Marketing the Profession
   2) Session #2: Educational Opportunities
   3) Session #3: Succession Planning
   4) Session #4: Other Topics

D. Volunteer List for Follow-Up Activities (by Topic)

E. Presentations
   1) Program Background and Survey Results – Andy Barienbrock, Ohio EPA Division of Drinking and Ground Waters
   2) Apprentice Ohio – Becky DeMatteis, ODJFS
   3) City of Akron Apprenticeship Program – Brian Gresser, Akron Water Reclamation
   4) Building Bridges to Careers (Washington County) – Tonya Davis, BB2C
Appendix A – Agenda
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9 a.m.</td>
<td>Registration</td>
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<tr>
<td>9:30 a.m.</td>
<td>Introduction/Welcome</td>
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<tr>
<td></td>
<td>Alauddin Alauddin, Assistant Chief, Ohio EPA Office of Environmental Education</td>
</tr>
<tr>
<td>9:40 a.m.</td>
<td>Keynote Address</td>
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<tr>
<td></td>
<td>Craig W. Butler, Director, Ohio EPA</td>
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<tr>
<td>10 a.m.</td>
<td>Present State</td>
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<tr>
<td></td>
<td>Program Background and Survey Results – Andy Barienbrock, Manager, Ohio EPA Division of Drinking and Ground Waters</td>
</tr>
<tr>
<td></td>
<td>Apprentice Ohio – Becky DeMatteis, ODJFS</td>
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<tr>
<td></td>
<td>City of Akron Apprenticeship Program – Brian Gresser, Akron Water Reclamation</td>
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<tr>
<td></td>
<td>Building Bridges to Careers (Washington County) – Tonya Davis</td>
</tr>
<tr>
<td>11 a.m.</td>
<td>Networking Break</td>
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<tr>
<td>11:15 a.m.</td>
<td>Brainstorming Sessions</td>
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<tr>
<td></td>
<td>Session 1: Marketing the Profession</td>
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<td></td>
<td>Session 2: Educational Opportunities</td>
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<td></td>
<td>Session 3: Succession Planning</td>
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<td></td>
<td>Session 4: Other Topics</td>
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<tr>
<td>12:15 p.m.</td>
<td>Lunch</td>
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<tr>
<td>1 p.m.</td>
<td>Report Back: Discussion of Solutions and Next Steps</td>
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<tr>
<td></td>
<td>Ken Heigel, Assistant Director, Ohio Water Development Authority</td>
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<tr>
<td>3 p.m.</td>
<td>Closing Remarks/Adjourn</td>
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</table>
Appendix B — Attendee List
<table>
<thead>
<tr>
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Appendix C — Brainstorming Ideas by Topic
Brainstorming Ideas by Topic

Session 1 – Marketing the Profession
The tables discussed different ways to market the profession of being a water or wastewater operator. The following are the most popular ideas that surfaced after 10 minutes of brainstorming (entire list provided at the end of this section).

Top Marketing Ideas
- Social media
- High school access-promote in high schools
- Tours/open house of facilities
- Need to introduce/make people aware of job duties
- Videos on social media
- Middle school lessons/tours
- Career tech schools
- Reach out to people who care about the environment
- Value of public services/fulfilling a passion
- Target students in technical fields

Some of these topics were discussed in more detail.

Social media
Use social media to market the career by interviewing an employee or sharing information about employees on Facebook to create local celebrities.

Middle school lessons/tours
Schools should do tours of water and wastewater plants as early as 4th grade. Consider giving virtual tours which can be shown in the classroom. Expose the profession early as children are only aware of a few professions at that point in life (for instance, their parents and grandparents). Earlier exposure also teaches the value of drinking water and wastewater.

Reach out to people who care about the environment
In order to attract people who would not consider the field, share the impact the profession has on the environment as a critical way to help.

Target students in technical fields
The operation of treatment plants is changing to be computer centric. Consider advertising to career tech schools. There are a number of different groups who would be interested. For example, 4H, boy and girl scouts, high school students (STEM), community colleges, technical career center for both high school and adult learning.

Partner with Youngstown State University
Partner with Youngstown State University and their environmental science students. Students in high school can also receive dual credit. You need to find a professor who is eager to do it. The city of Warren allows students to come in and use the plant lab, so they expose the students (both high school and college) to the field. The students and professors are interested as they get out of the classroom.

Websites for facilities/municipalities
Create a website for the facility or municipality to garner interest and awareness.

College credit
Encourage that community colleges are an avenue to fix the problem. It’s important to partner with career tech and community colleges. Find out where the need is and start to compile where the programs are. Using college credit plus is key and talking to high schools about this profession. Ohio Department of Higher Education plans to have a more concerted effort to include this field into the curriculum.
Offering online courses, so they can get a certificate and contact hour credit. Montgomery County works closely with Sinclair Community College by opening up facilities for their classes. This is not only offered to their employees but the public as well. It helps that they come to the facility and sit beside operators. Columbus State has offered water and wastewater certificates and a two-year degree for 25 years and Zane State College has had courses since the 1970s. Work with municipalities to do tours and develop the courses.

**Video game technology**

The treatment plants are very computerized now. The younger generation is computer savvy and use their phones. Advertise the positions as very technical. Potentially use video game technology to garner interest.

**Partner with regional local development districts**

This is an opportunity to promote workforce development in local development districts.

**Marketing to displaced workers**

In Appalachian region there are a lot of coal-fired power plants and there is funding assistance for displaced workers and coal miners. Power plant workers may have skills that they can move to water plants. Some of these facilities have an NPDES permit or deal with water treatment in some fashion. When contacted by local officials and agencies who complain about loss of jobs and workforce then share this profession as a possible transition to another career.

**Session 1 — Initial Brainstorm List**

- Be aware of employee needs
- Who should we target? A variety of skills are needed so seek out
- Make people aware of the job duties or a day in the life
- Advertise the importance of the work
- Market on social media
- Videos on social media
- Promote in high schools
- Career days with high schools
- Tours/open house of facilities
- Booths at fairs, industry festivals and/or conferences
- Market/promote to other organizations
- Market/promote to mayors/council
- Market to Veterans services
- Reach out to county leadership
- Outreach to social groups (church, youth groups, adult groups) like the 4H club, boy and girl scouts, Moose, Eagle
- Working with Ohio Means Jobs and other organizations
- Talking with students at community colleges like Sinclair Community College
- Partner with county for student workers
- Partner with Youngstown State or other universities/colleges
- Message box in bills/fliers
- Use Akron’s program as a template
- In demand jobs week (statewide recruitment event, municipalities to tour)
- Begin discussing the profession early in school. Give middle school lessons/tours.
- Co-program with Metropolitan Sewer District
- Websites for facilities/municipalities
- Work on improving the image—similar to first responders
- Training recognized as high school graduation credential
- Advertise the technical side of the field
- Make students aware of college credit options
- Inform the high school counselor of the career option
- Advertise at career tech schools/educational service centers
- Advertise the impact the job has on environment
- Recession proof employment
- Career path-entry level to operator/administration
- Move to other cities/states with education/certification, jobs exist in every community
- Value of public service and/or fulfilling a passion
- Use video game technology to attract the younger generation
- Partner with local development districts (LDD)
- Develop resources for parents to understand the field
- Market to displaced workers such as coal workers
- Do more outreach to women
- Market success stories
- Start mentoring programs
- Shadowing with peer training
- Connect to the "some college no degree" population
Session 2 – Educational Opportunities

During the second session of brainstorming, tables discussed different educational opportunities which exist for water and wastewater operators. This included ideas on apprenticeships, internships, degrees and certificates (entire list provided at the end of this section). Here are the most popular ideas.

**Top Education Ideas**

- Two-year programs
- Middle and high school programs
- Apprenticeship programs
- Vocational programs
- DW and WW in curriculums
- Partner with OTCO, AWWA, watershed groups, metroparks, SWCDs, OWEA, WEF
- Classroom tours
- Career center
- Credit flex
- Well-rounded education
- OIT as high school credit
- Employee reimbursement for education costs
- Need for chemistry, math and biology
- Events at treatment facilities
- Akron program

The following topics were discussed in greater detail.

**Credit flex for high school students**

High school students can get college credit in high school. Internship codes that can be used and internship credit while in class. Credit flex is an awesome opportunity for high school students to get credit through on-the-job site training and equate it to management system class or physics class. If you have a student that goes to the treatment plant with their parent then the student could test out of the environmental management course.

**Industry partnership**

Industry partners can be a private entity like a commercial lab or a municipality. It would be anyone teaching a certain set of skills, like a pre-apprenticeship. There is some liability and they are taking them with their liability insurance. There are challenges to hiring anyone under 18 because of child labor laws but there are caveats under the Ohio Revised Code on apprenticeships and that's what they help with, child labor and wages. ORWA is creating apprenticeship program which is a two-year program with 2,080 hours and 180 classroom training. There is an increase in income as they go through the program. Hopefully they stay with the system but if they travel then they have a certain level of professional experience. The pay back will be good for them because they will have this industry specific training.

**Internal apprenticeship program**

Montgomery County realizes they cannot hire people that have all the licenses which are required. They bring them in with a lower pay and they give them everything they need to be licensed. They can become an OIT and can start their career there. The county partners with Sinclair and has an internship program. If they have gone through the certificate program, which shows interest, then we hire them. The county pays for any fees associated with them wanting to grow, which helps with their succession planning. As long as they are a county employee the county pays their fees. If they are a field person, then the county will get you all the tools to become an operator. City of Columbus has started OIT jobs allowing them to step into a job critical in forming the pipeline.
Session 2 — Initial Brainstorm List

- Develop middle and high school programs
- Vocational programs
- Classroom tours
- Career center
- Apprenticeship programs
- Credit flex
- Two-year programs
- Well-rounded education
- Hiring firms
- Non-traditional outreach to CBI students
- Industry partnership
- Training info directly to operator
- Training with correctional facilities
- DW and WW in curriculums
- Mandatory classes in 6th and 12th grades
- Need better way to inform folks about education opportunities
- Internal apprenticeship program/develop current county/municipal employees
- Develop more local certification programs
- Scholarship programs
- Employee reimbursement for education costs
- Grants from Ohio EPA
- Waiving test fees for veterans or disadvantaged groups
- Continuing education program
- Two-week crash course prior to test
- Need for chemistry, math and biology
- Schools with successful programs—have grads promote programs

- Partner with OTCO, AWWA, watershed groups, metroparks, SWCDs, OWEA, WEF
- Tailor education pathway for WW and DW careers
- Events at treatment facilities
- Engage school administration to push subject
- Utilities visit the schools
- Present at high school administrator’s state conference
- Use the Akron program as a template
- Develop successful training examples
- Allow education to be stackable (certificate to associate, etc.)
- Online training/education
- Mini online training/classes at technical schools for HS — develop statewide model/template
- Starting advanced college credit plan program in high school-8th grade
- Pairing online training with test
- Contact hour training to SE Ohio
- Offer local training options (SE Ohio)
- Practical and low-cost training
- 9-12 month certificate program
- Blended courses (online, lab work, field work at plant)
- Internships
- SMEs (subject matter expert) educate others
- Develop progressive career pathway (low to higher level workforce)
- Employers should provide financial incentive for programs
Session 3 – Succession Planning
The third session covered succession planning which garnered some innovative ideas including the following (entire list provided at the end of this section).

Top Succession Planning Ideas
- Planning for budget and personal retirement is key.
- Unions can get in the way. Unions need to be more flexible.
- Mentorship and training opportunities.
- Cross-training distribution, treatment, streets, different shifts responsibilities.
- Pay rates.
- Retirees are coming back — not sustainable.
- Difficulty for small communities/small communities are territorial.

The following led into some good discussions.

Statewide apprentice program
The Department of Education sees two different levels of apprenticeships: pre-apprenticeships which leads to full apprenticeships. The expectation is that the training would be uniform. The different regions may have different needs but focus on Apprentice Ohio as the statewide apprenticeship program, but each school has its own pathway. If you are thinking of having your own program then ORWA may have pointers as they have been through the process.

Communication between trade associations
Recommend trade associations communicate and keep each other informed.

Cleveland’s apprentice program
Use Cleveland as a model for a successful succession planning and apprenticeship program. They use the program for all the trades. They have mentors, shadowing and progress.

Ohio WARN non-emergency assistance
Consider a mutual aid system for water and wastewater facilities. You can coordinate with many organizations under the umbrella of shared resources. Ohio WARN is set up for emergencies and expanding it to non-emergencies would be beneficial. It has been used in other non-emergency situations. It is free to become a member but you have to sign an agreement. You could consider seeking out reimbursement if you do let a situation get to emergency.

Challenges to obtaining Class IV licenses
Obtaining Class IV is challenging, and no one wants to pursue a Class IV because they lose the overtime work. City of Columbus started Class IV mentorship program. What are the incentives? The lower levels make more because of OT.

Cross-training for management roles
It is important that they understand their value, so they are more comfortable passing knowledge along. Opportunities exist when a manager goes on vacation and gives them opportunity to see if the job is for them. They can tell who has worked out of class before and those who haven’t.

Session 3 — Initial Brainstorm List
- Statewide apprentice program
- Municipality needs to be interactive
- Buy-in needs to happen from top and bottom for implementation
- Having the right conduit to share information among communities
- Communication between trade associations
- Work with the local area workforce development
- Short video clips (similar to what was done for nursing associations)
- Communication start early (middle school)
• Provide training after-school program and guarantee some employment that requires commitment from students
• Use Cleveland as a model for Ohio succession planning apprentice program
• Research topic for students
• Cross-training distribution, treatment, streets, different shifts responsibilities.
• Include training with emergency responders
• Develop detailed but straight-forward SOPs
• Employee involvement with asset management foster leadership
• Apprenticeship (Columbus, Findlay, Mason)
• Unions need to be more flexible
• Contract negotiations
• Be more open to sharing resources
• Asset management
• Inner utility agreements to share equipment
• Ohio WARN
• Mutual aid agreements for more than just emergencies
• Targeted intern programs for those positions of need or near retirement
• Share personnel ‘floaters’
• Increase pay rates
• Bonuses for self-professional development for all positions
• Education benefits for the incumbent workers with bonuses promotions, etc.
• Regionalization is key. Local control needs to be understood with possible cooperative agreements.
• Continue professional development opportunities for advancement.
• Use continued education opportunities on the pay rate.
• Mentorship and training opportunities
• Shadowing
• Awareness in the utility to know where you are with staffing so you have time to adjust
• Funding for training before retirement
• Partner with another group to help allocate cost
• Regionalize the management of the plant
• Duplication of services can’t last
• Hard to overcome territorial issues
• Need to overcome political divide to shared services
• Incentivize the move
• Internal development of people

• Retirees are coming back which is not sustainable
• Maintaining class 4 licenses is challenging
• Small communities are territorial
• Require training to develop employees for succession planning
• Have a written plan
• Have money to commensurate to promotion
• Become in-house consultant to mentor replacement
• Flexibility to promote candidates after and before transition occurs
• Go from full-time to part-time after retirement
• Working out of class in higher position to learn skills
• Asset management: accurate record-keeping and contingency plans for next operator
• Mentorship/leadership programs statewide or with other states
• Getting people into management and educating those on the management skills
• Embracing technology, automated systems, technical background of staff need to understand process + tech
• Training staff for changes in technology
• National licensing—reciprocity move to and from any state
• Mandate number of operators funded by local government through property taxes
• Planning ahead for budget and personnel retirement is key
• Getting existing personnel to pay forward. Provide their knowledge before they leave.
• Asset management: recognizing operators are an asset.
• Getting people out of silos.
• Growing your own experience.
• Practice interviewing skills with personnel.
• Speed monitoring
• Open up strategic planning to all staff. Engage everyone to help break down union barriers.
• Succession planning should be an ongoing process
• Identify skill sets ahead of time
• Develop team concept
• Making existing management feel secure for future planning
• Dual path succession planning: some people are not management material, find them opportunities that do not involve management
Session 4 – Other Topics

The fourth session was a catch-all to gather any other ideas that attendees may have to help with recruiting or retaining water and wastewater operators. Here are some of the top ideas (entire list provided at the end of this section).

**Top Other Ideas**

- Talk to management and elected officials to see the value of operators.
- Increase visibility of the active work being done/raise awareness/marketing.
- Won’t take responsibility for low pay, increase pay, increase pay for lower licenses.
- People don’t want the responsibility of being ORC or not enough pay for the responsibility.
- Incentives for small communities to come together and hire operators for regional approach.

The following ideas were discussed further.

**Small communities should consider a regional approach**

If eliminating facilities by connecting smaller communities is not an option, then find a way to regionalize management and oversight of small systems and villages. This can lead to cost savings and improvements in operations.

**New idea for funding the water industry**

To raise money for the water industry, consider proposing bottled water tax to promote water industry.

**State auditor may need more oversight on water rates**

Enterprise money that is coming in needs to stay in water and wastewater accounts. There are many small communities who have not had a rate increase in decades. The asset management requirements are anticipated to help keep money in the correct funds.

**Training and resource providers working together (OTCO, OWEA, RCAP, OAWWA)**

All organizations’ goals are the same so working together to ensure there are training opportunities makes sense. Many are membership-driven so there is competition but can continue to look for ways to work together.

**Session 4 Brainstorm List**

- Unions provide assistance rather than ultimatum for licensure. Certification takes precedence over seniority in unions.
- Talk to management and elected officials to see the value of operators.
- Legislation to protect the position (state level)
- Find most qualified candidates
- Reduce nepotism
- Recognize industry recognized credentials
- Reach out to farms or locals looking for a steady day job
- Reach out to rural kids
- Increase visibility of the active work being done/raise awareness/marketing
- Gopro of minor repair onto YouTube
- Develop high school commercial through OEEF
- Training by county administrators for communities
- Pull out people from comfy positions to key position in smaller communities
- Funding for training and education
- People don’t want the responsibility of being ORC or not enough pay for the responsibility
- State auditor may need more oversight on water rates
- Rate increases
- Sewer and water fees are not for water and sewer but are more for police and parks
- Won’t take responsibility for low pay, increase pay for lower licenses
- Obtain Operator in Training designation, all you need is time, so you are an attractive applicant
- Employees in cities need to attend career fairs
- Training providers need to work together (OTCO, OWEA, RCAP, OAWWA)
- Need opportunities after schooling
- Need to advertise career opportunities
- Make sure all training opportunities are in one spot (website)
- Make EPA website more user friendly
• Contact hours for things like this make this more worthwhile
• Loosening up regulations on what is considered contact hours
• Respect for operators by employer, including mayors and councils
• Address public perception of water quality (bottle vs tap)
• Statewide bottle water tax, funding goes to statewide program to promote operators
• Incentives for small communities to come together and hire operators for regional approach
• More bottle filling water fountains in public places
• Combining water and wastewater systems
• Shared resources for cooperatives and various systems
• Promote the success of our systems
• Raise awareness of these services and life lines
• Lack of legacy with family careers
• Marketing to keys sectors
• Learn from other sectors and the creative efforts to attract people
• Industry leads, strategic planning like today
• Marketing to: some college no degree, incarcerated, K-12, community college, OTCO, veterans, farmers, 4H/scouts, females
• Market to new collar workers
• Increase communication skills
• Is state willing to put together a grant fund?
• Financial incentives/bonus as operators get their licenses
• Increase baseline salary

• Utilize director to be more involved and participate in chambers of commerce and other programs
• Bring workforce from other states
• Outreach campaign, statewide billboard
• Eliminate or reduce the operator testing fees
• Have a strategic plan, 5- to 10-year outlook
• Have a contingency plan for worst-case emergencies
• Funding is needed for OM
• Improve operator training materials
• Establish adequate rates to fund OM and salaries
• Value of the service of water and wastewater needs to be communicated to public and council members
• Is technology advancing too quickly?
• Conduct labor audit? Do we need programmers, electricians and instrumentation techs?
• Catch 22, can’t earn license until employed and vice versa
• Make it easier?
• Getting by issues some have with testing, giving extra credit for operation experience, hands-on component to testing
• Getting more hands-on experience as part of training
• Unbury information for Jobs Ohio resources
• Deferral of education cost for working in underserved areas
• Issues with recruitment compared to retention
• Promote benefits, job security, peers, transferrable skills, etc.
• Match outreaches to audience to relate better
• Who delivers the message matters, hearing it from important people
Appendix D — Volunteer List for Follow-Up Activities (by Topic)
### Marketing the Profession

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<td>Buckeye Hills Regional Council</td>
<td>Development Director</td>
<td>740-376-1028</td>
<td><a href="mailto:bretallphin@buckeyehills.org">bretallphin@buckeyehills.org</a></td>
</tr>
<tr>
<td>Kelly</td>
<td>Barron-Holcomb</td>
<td>Hocking College</td>
<td>Program Manager (Water/Wastewater Management)</td>
<td>740-753-6275</td>
<td><a href="mailto:barron-holcombk@hocking.edu">barron-holcombk@hocking.edu</a></td>
</tr>
<tr>
<td>Jeff</td>
<td>Bates</td>
<td>Columbus State Community College</td>
<td>Professor</td>
<td>614-287-3652</td>
<td><a href="mailto:jbates@csc.edu">jbates@csc.edu</a></td>
</tr>
<tr>
<td>Ryan</td>
<td>Curtis</td>
<td>Ohio Department of Education</td>
<td>Program Specialist</td>
<td>614-644-5924</td>
<td><a href="mailto:ryan.curtis@education.ohio.gov">ryan.curtis@education.ohio.gov</a></td>
</tr>
<tr>
<td>Steve</td>
<td>Heimlich</td>
<td>Ohio American Waterworks Association</td>
<td></td>
<td>419-707-2222</td>
<td><a href="mailto:sheimlichalmu@gmail.com">sheimlichalmu@gmail.com</a></td>
</tr>
<tr>
<td>Cheryl</td>
<td>Rice</td>
<td>Ohio Department of Higher Education</td>
<td>Assoc. Vice Chancellor</td>
<td>614-466-6000</td>
<td><a href="mailto:crice@highered.ohio.gov">crice@highered.ohio.gov</a></td>
</tr>
<tr>
<td>Ann</td>
<td>Gliha</td>
<td>OTCO</td>
<td>NE Training Coordinator</td>
<td>216-392-6041</td>
<td><a href="mailto:ann@otco.org">ann@otco.org</a></td>
</tr>
</tbody>
</table>

### Succession Planning

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Organization</th>
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</tr>
</thead>
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<td>Steve</td>
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</tr>
<tr>
<td>Sherry</td>
<td>Loos</td>
<td>Ohio Rural Community Assistance Partnership</td>
<td>State Coordinator</td>
<td>330-677-3438</td>
<td><a href="mailto:smloos@wsos.org">smloos@wsos.org</a></td>
</tr>
<tr>
<td>Chris</td>
<td>Moore</td>
<td>City of Springfield</td>
<td>Service Director</td>
<td>937-525-5800</td>
<td><a href="mailto:cmoore@springfieldohio.gov">cmoore@springfieldohio.gov</a></td>
</tr>
<tr>
<td>Dana</td>
<td>Moore</td>
<td>City of Wadsworth</td>
<td>Water Treatment Superintendent</td>
<td>330-335-2832</td>
<td><a href="mailto:dmoore@wadsworthcity.org">dmoore@wadsworthcity.org</a></td>
</tr>
<tr>
<td>Kim</td>
<td>Riddell</td>
<td>Ohio Water Environment Association</td>
<td>OWEA President-Elect</td>
<td>419-223-1362</td>
<td><a href="mailto:kim.riddell@alloway.com">kim.riddell@alloway.com</a></td>
</tr>
</tbody>
</table>
## Training

<table>
<thead>
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<th>Organization</th>
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<th>Phone</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Brandon</td>
<td>Fox</td>
<td>Ohio Water Environment Association</td>
<td>SE Section Delegate</td>
<td>614-645-3138</td>
<td><a href="mailto:bdfox@columbus.gov">bdfox@columbus.gov</a></td>
</tr>
<tr>
<td>Steve</td>
<td>Heimlich</td>
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<td></td>
<td>419-707-2222</td>
<td><a href="mailto:sheimlichalmu@gmail.com">sheimlichalmu@gmail.com</a></td>
</tr>
<tr>
<td>Franco</td>
<td>Lucarelli</td>
<td>Ohio American Waterworks Association</td>
<td>Director of Utilities (Warren)</td>
<td>330-841-2710</td>
<td><a href="mailto:flucarelli@warren.org">flucarelli@warren.org</a></td>
</tr>
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</tr>
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</table>

## Shared Services

<table>
<thead>
<tr>
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<td><a href="mailto:bretallphin@buckeyehills.org">bretallphin@buckeyehills.org</a></td>
</tr>
<tr>
<td>Dave</td>
<td>Douglas</td>
<td>U.S. Dept of Agriculture - RD</td>
<td>Director, Community/Water &amp; Environmental Programs</td>
<td>614-255-2391</td>
<td><a href="mailto:david.douglas@oh.usda.gov">david.douglas@oh.usda.gov</a></td>
</tr>
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</tbody>
</table>
Appendix E — Presentations
Ohio Water and Wastewater Operator Workforce Development Summit

September 19, 2018

Andrew Barienbrock, Manager
Division of Drinking and Ground Waters
Operator Certification Program Background

- Ohio’s Water and Wastewater Certification Program was established in 1935
- 14 Classifications
- Exams
  - Historical
  - Modern Day
- Workforce Initiatives
  - Operators as Professionals
  - Veterans
  - Career Resources tab on website
Water Operators Eligibility for Retirement

- Eligible for retirement < 5 yrs: 59
- Eligible for retirement 6-10 yrs: 22
- Eligible for retirement > 10 yrs: 19

# Eligible for retirement < 5 yrs  # Eligible for retirement 6-10 yrs  # Eligible for retirement > 10 yrs
## Water Operator Outlook by District

<table>
<thead>
<tr>
<th># of years until retirement</th>
<th>NWDO</th>
<th>NEDO</th>
<th>CDO</th>
<th>SWDO</th>
<th>SEDO</th>
<th>Overall</th>
<th>Overall %</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>75</td>
<td>118</td>
<td>84</td>
<td>152</td>
<td>65</td>
<td>494</td>
<td>21.9%</td>
</tr>
<tr>
<td>6-10</td>
<td>75</td>
<td>91</td>
<td>86</td>
<td>98</td>
<td>77</td>
<td>427</td>
<td>18.9%</td>
</tr>
<tr>
<td>&gt;10</td>
<td>242</td>
<td>224</td>
<td>256</td>
<td>393</td>
<td>218</td>
<td>1333</td>
<td>59.1%</td>
</tr>
<tr>
<td>Total</td>
<td>392</td>
<td>433</td>
<td>426</td>
<td>643</td>
<td>360</td>
<td>2254</td>
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Wastewater Operators Eligibility for Retirement

- # Eligible for retirement < 5 yrs: 56
- # Eligible for retirement 6-10 yrs: 25
- # Eligible for retirement > 10 yrs: 19
## Wastewater Operator Outlook by District

<table>
<thead>
<tr>
<th># of years until retirement</th>
<th>NWDO</th>
<th>NEDO</th>
<th>CDO</th>
<th>SWDO</th>
<th>SEDO</th>
<th>Overall</th>
<th>Overall %</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;5</td>
<td>111</td>
<td>168</td>
<td>44</td>
<td>126</td>
<td>66</td>
<td>515</td>
<td>24.6%</td>
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<tr>
<td>6-10</td>
<td>88</td>
<td>148</td>
<td>40</td>
<td>86</td>
<td>41</td>
<td>403</td>
<td>19.2%</td>
</tr>
<tr>
<td>&gt;10</td>
<td>249</td>
<td>295</td>
<td>94</td>
<td>364</td>
<td>177</td>
<td>1,179</td>
<td>56.2%</td>
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<tr>
<td>Total</td>
<td>448</td>
<td>611</td>
<td>178</td>
<td>576</td>
<td>284</td>
<td>2,097</td>
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</table>
### Statewide Water Operator Wages

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Min</th>
<th>Max</th>
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<tbody>
<tr>
<td>WD1</td>
<td>$22.50</td>
<td>$8.30</td>
<td>$45.90</td>
</tr>
<tr>
<td>WD2</td>
<td>$25.79</td>
<td>$15.00</td>
<td>$41.32</td>
</tr>
<tr>
<td>WSA</td>
<td>$19.75</td>
<td>$14.50</td>
<td>$27.00</td>
</tr>
<tr>
<td>WS1</td>
<td>$22.89</td>
<td>$8.50</td>
<td>$48.69</td>
</tr>
<tr>
<td>WS2</td>
<td>$24.98</td>
<td>$15.75</td>
<td>$45.00</td>
</tr>
<tr>
<td>WS3**</td>
<td>$27.56</td>
<td>$9.40</td>
<td>$50.96</td>
</tr>
<tr>
<td>WS4</td>
<td>$37.52</td>
<td>$15.00</td>
<td>$61.00</td>
</tr>
</tbody>
</table>

**One Village indicated they paid their WS3 and WW1 operators $5.63 an hour. This is less than minimum wage. These values have been taken out of the average calculation.**
## Average Water Wages by District

<table>
<thead>
<tr>
<th></th>
<th>NWDO</th>
<th>NEDO</th>
<th>CDO</th>
<th>SWDO</th>
<th>SEDO</th>
</tr>
</thead>
<tbody>
<tr>
<td>WD1</td>
<td>$22.30</td>
<td>$23.69</td>
<td>$21.90</td>
<td>$23.75</td>
<td>$20.67</td>
</tr>
<tr>
<td>WD2</td>
<td>$25.51</td>
<td>$26.70</td>
<td>$28.87</td>
<td>$26.31</td>
<td>$23.03</td>
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<tr>
<td>WSA</td>
<td>$16.64</td>
<td>$19.88</td>
<td></td>
<td>$17.48</td>
<td>$22.15</td>
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<tr>
<td>WS1</td>
<td>$22.55</td>
<td>$22.58</td>
<td>$21.46</td>
<td>$23.71</td>
<td>$19.46</td>
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<tr>
<td>WS2</td>
<td>$23.11</td>
<td>$26.22</td>
<td>$23.10</td>
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<tr>
<td>WS3**</td>
<td>$25.98</td>
<td>$29.51</td>
<td>$31.10</td>
<td>$28.00</td>
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<td>WS4</td>
<td>$32.30</td>
<td>$39.75</td>
<td>$39.98</td>
<td>$38.02</td>
<td>$34.30</td>
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</tbody>
</table>

**One Village indicated they paid their WS3 and WW1 operators $5.63 an hour. This is less than minimum wage. These values have been taken out of the average calculation.**
Statewide Wastewater Operator Wages

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>WC1</td>
<td>$23.71</td>
<td>$15.03</td>
<td>$41.32</td>
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<tr>
<td>WC2</td>
<td>$24.84</td>
<td>$15.86</td>
<td>$33.40</td>
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<tr>
<td>WWA</td>
<td>$18.80</td>
<td>$15.00</td>
<td>$26.08</td>
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<tr>
<td>WW1**</td>
<td>$21.45</td>
<td>$10.30</td>
<td>$33.37</td>
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<tr>
<td>WW2</td>
<td>$22.90</td>
<td>$9.40</td>
<td>$38.00</td>
</tr>
<tr>
<td>WW3</td>
<td>$26.70</td>
<td>$14.33</td>
<td>$63.00</td>
</tr>
<tr>
<td>WW4</td>
<td>$36.35</td>
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<th>SWDO</th>
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</tr>
</thead>
<tbody>
<tr>
<td>WC1</td>
<td>$25.06</td>
<td>$24.91</td>
<td>$22.32</td>
<td>$23.06</td>
<td>$21.40</td>
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<tr>
<td>WC2</td>
<td>$25.19</td>
<td>$26.98</td>
<td>$22.22</td>
<td>$24.53</td>
<td>$20.44</td>
</tr>
<tr>
<td>WWA</td>
<td>$16.06</td>
<td>$19.18</td>
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<td>$17.48</td>
<td>$21.94</td>
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<tr>
<td>WW1**</td>
<td>$22.64</td>
<td>$21.83</td>
<td>$20.94</td>
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<td>$18.27</td>
</tr>
<tr>
<td>WW2</td>
<td>$22.47</td>
<td>$23.65</td>
<td>$22.19</td>
<td>$23.29</td>
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</tr>
<tr>
<td>WW3</td>
<td>$27.96</td>
<td>$26.63</td>
<td>$28.30</td>
<td>$27.60</td>
<td>$23.25</td>
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<tr>
<td>WW4</td>
<td>$29.08</td>
<td>$38.11</td>
<td>$38.01</td>
<td>$39.64</td>
<td>$25.21</td>
</tr>
</tbody>
</table>

**One Village indicated they paid their WS3 and WW1 operators $5.63 an hour. This is less than minimum wage. These values have been taken out of the average calculation.
Questions?

Andy Barienbrock, Manager
Operations, Resiliency and Certification
Division of Drinking and Ground Waters
614-728-1216
Andrew.barienbrock@epa.ohio.gov
Registered Apprenticeship: A Proven Workforce Strategy

Becky DeMatteis – Program Support Supervisor
ApprenticeOhio
Contractual agreement with sponsor, apprentice, and the state

Involves technical skills & theoretical knowledge

Structured on-the-job training & supplemental related instruction (classroom)

Employment and wages
PROGRAMS IN WATER TREATMENT

Water Systems Operation Specialist

Wastewater Systems Operation Specialist

4000 Hours On-the-Job Training

288 Hours Related Instruction
COMMUNITY COLLEGES

Columbus State
Washington State
Marion Technical
Stark State
Sinclair
Edison State
Lorain County Community College
Cuyahoga Community College
Rhodes State
North Central State
On average, apprentices who complete their program earn $60,000/yr upon graduation.

Earn while you learn. Become an apprentice.
BENEFITS FOR VETERANS

Earn while you learn. Become an apprentice.

Resources

Below are several resources that you can use to get more information about apprenticeship and apprenticeship opportunities.

- OhioMeansJobs is a proud partner of the AmericanJobCenter network.
- State Approving Agency for Veterans Training map and contact information of Ohio’s Area Consultants.
- Ohio State Apprenticeship Council Meeting Schedule for 2018
Our Mission

"...to approve education and training programs for veterans and their eligible dependents throughout the state of Ohio."

Contact Your Area Consultant

Area A: Melissa Tripplett | 614-387-2280
Area B: Bill Schroeder | 614-496-8719
Area C: Deborah Shinall | 614-907-2188
Area D: Kevin Edwards | 614-644-1213
Area E: Karol Scheetz | 614-486-4283

Large map & contact list
Follow @ApprenticeOhio
FROM HIGH SCHOOL TO HIGHLY SKILLED – AKRON’S UTILITIES INTERN PROGRAM

September 19, 2018
Drinking Water & Wastewater Operator Workforce Development Summit

Brian M. Gresser, P.E., WW4
Manager, Water Reclamation Services
Program Development

- Idea conceived at a utility manager’s retreat.
- Akron Public Schools.
- Multi-departmental involvement to define and create program.
Program Development

- Task identification
- Job description
- Compensation plan
- Civil Service Commission approval
- Child labor laws

UTILITIES INTERN

DEFINTION
This is an in-service training position designed to lead to a full-time entry level position in one of the operating divisions of the Public Utilities Bureau.

CHARACTERISTIC WORK
Assists skilled operations and maintenance employees of the Water Pollution Control, Water Supply and Utilities Field Operations Divisions. Assists skilled mechanics in overhauling and repairing pumps, valves, motors, piping systems, and other treatment plant equipment and systems. Assists in building repairs and cleaning. Assists in repairing water mains, installing and repairing water services, hydrants, and valves; building and repairing manholes and inlets; laying sewer pipe, cleaning and televising sewer lines; etc. Assists treatment plant operators in placing equipment in and out of service, hosing and cleaning equipment, monitoring process parameters, and performing routine process control tests. May assist engineers and other technical staff in taking samples, measuring distances, making sketches, entering information into personal computers, calculating volumes and areas, and gathering geospatial data for entry into the City's GIS system. Uses hand tools, pneumatic equipment, chain saws, mowers, etc., in the performance of assigned tasks. Performs related work as required.

MINIMUM QUALIFICATIONS
Completion of the 11th grade and enrollment in a high school or vocational school cooperative education program. Possession of a valid State of Ohio driver’s license.

Some knowledge of basic plumbing, electrical, and mechanical drive maintenance and safety procedures.

Ability to perform strenuous and/or repetitive physical tasks. Ability to work outside in inclement weather. Ability to make routine arithmetic calculations and tabulations. Mechanical aptitude. Ability to understand and follow oral and written instructions. Ability to establish and maintain effective working relationships with others.

Established: 7/20/2006
Program basics

- Akron Public Schools - College & Career Academies
- “Earn while they Learn”
- Academies include construction & building technology, HVAC, automotive technology, energy and environmental protection.
Program basics

- Must meet requirements including minimum gpa, attendance and progression towards diploma.
- Work begins end of Junior year, thru summer and Senior year.
- Students work 4-hour days when school is in session, full days in summer.
Selection process

- Orientation day / tours
- Students submit application and one-page letter why they are interested and where they would prefer to be assigned.
- Students interviewed in group-setting.
- Selection/placement by committee.
Mentoring

- Akron Public Schools conducted training for COA employees involved in program.
- Need to partner students with knowledgeable employees supportive of program.
- Students need direction, constructive feedback, and evaluation of learned skills.
Results

- Program is 12 years running.
- 51 students have entered the program.
- 34 students have been hired full-time.
- 27 former students are still employed by the utility.
Results

- wastewater plant operator
- water plant lead operator
- equipment operator II
- sewer service worker
- utilities maintenance mechanic
- utilities maintenance worker
Results

- Year long interview.
- Promote into an entry-level position.
- What do you want to do with your life?
Challenges

- The youth factor can go both ways.
- Driver’s license.
- Life skills.
- Sometimes feast or famine on applicants.
- Sufficient permanent openings?
Final thoughts…

- Program has been a win-win-win for the student, Akron Public Schools and the City of Akron.
- Student gains experience, application of learned concepts, compensation.
- APS placement of successful vocational students.
- City gains young, eager to learn staff, validated through a year-long interview.
QUESTIONS?

For more information, contact
BGresser@AkronOhio.gov
Our Goal:
To bridge the gap between education and employment

Our Mission:
To develop and facilitate community networks that support career development

Our Vision:
Successful Students, Prosperous Communities
BB2C Projects

- Family Career Awareness Day
- Job Shadowing
- Internship
- Student Ambassador
- Epicenter
  - Business Incubator
  - Makerspace
- Career Pathway Stories
- Discover Series
- Career Mentoring
- Problem Scenarios
Collaboration
Funding

General funding for BB2C projects
- Grants - Local, state, federal and private foundations
- Private donations
- School contributions
- Sponsorships
- Fee for services

OTCO Internships
- Money from municipalities
- Job and Family Services
Jared’s Journey

OTCO
Workforce Development
Patrick’s Meeting
System Intern Sites Since June

Village of Stockport
Village of Malta
Morgan-Meigsville
Village of Newport
City of Marietta