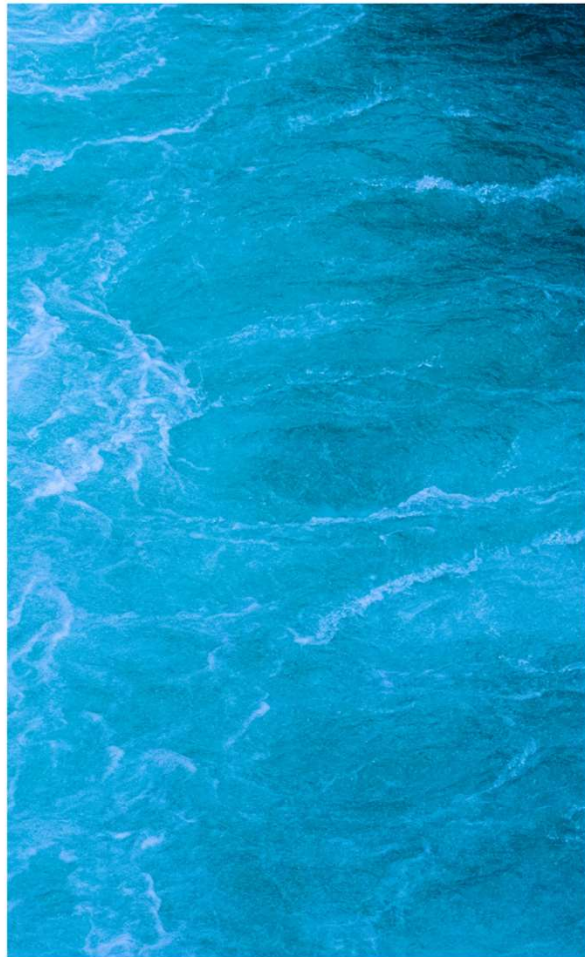


4C2A

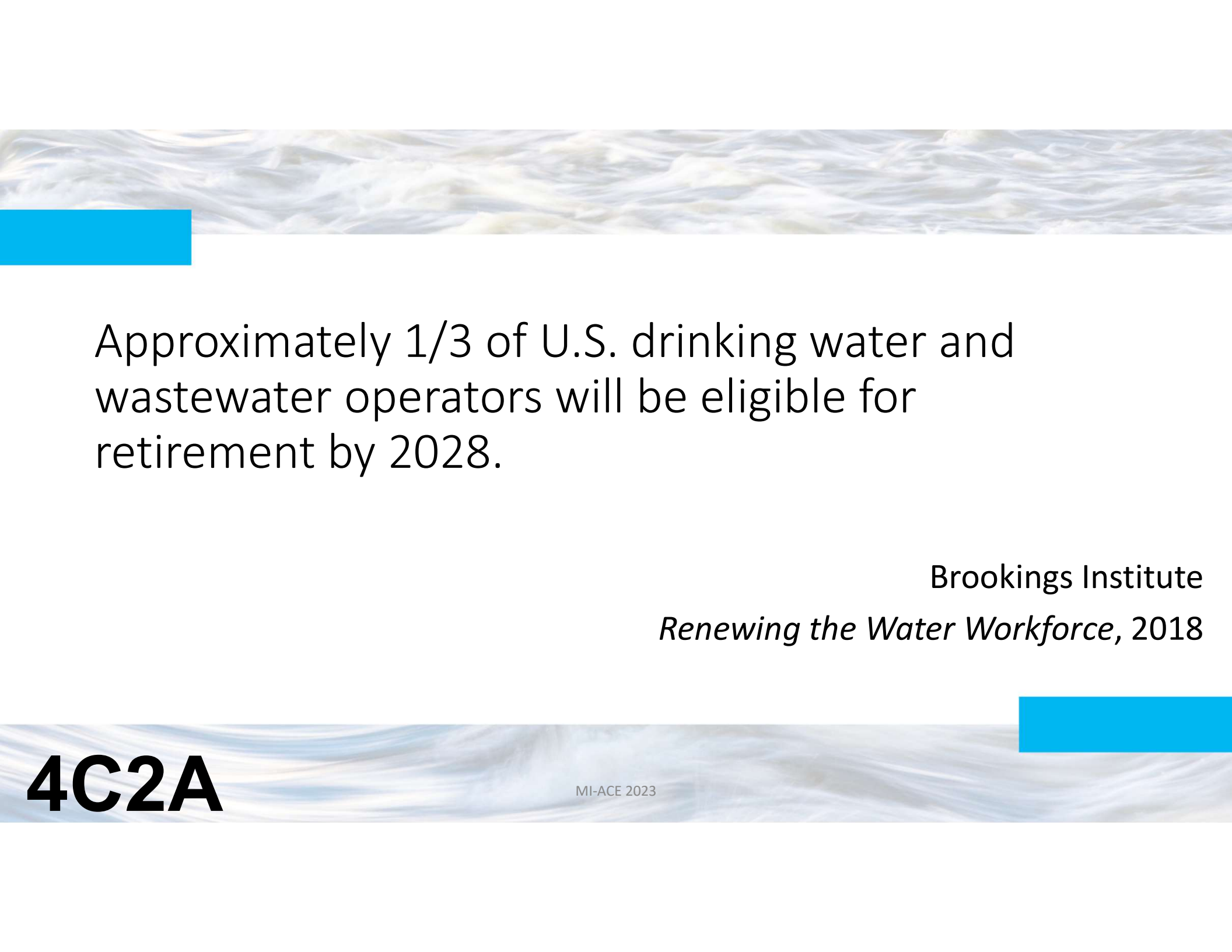



The Deep End

Learning to Swim—Not Sink!—in the Water Industry



85th Annual Conference & Exhibits



Approximately 1/3 of U.S. drinking water and wastewater operators will be eligible for retirement by 2028.

Brookings Institute
Renewing the Water Workforce, 2018

4C2A

MI-ACE 2023



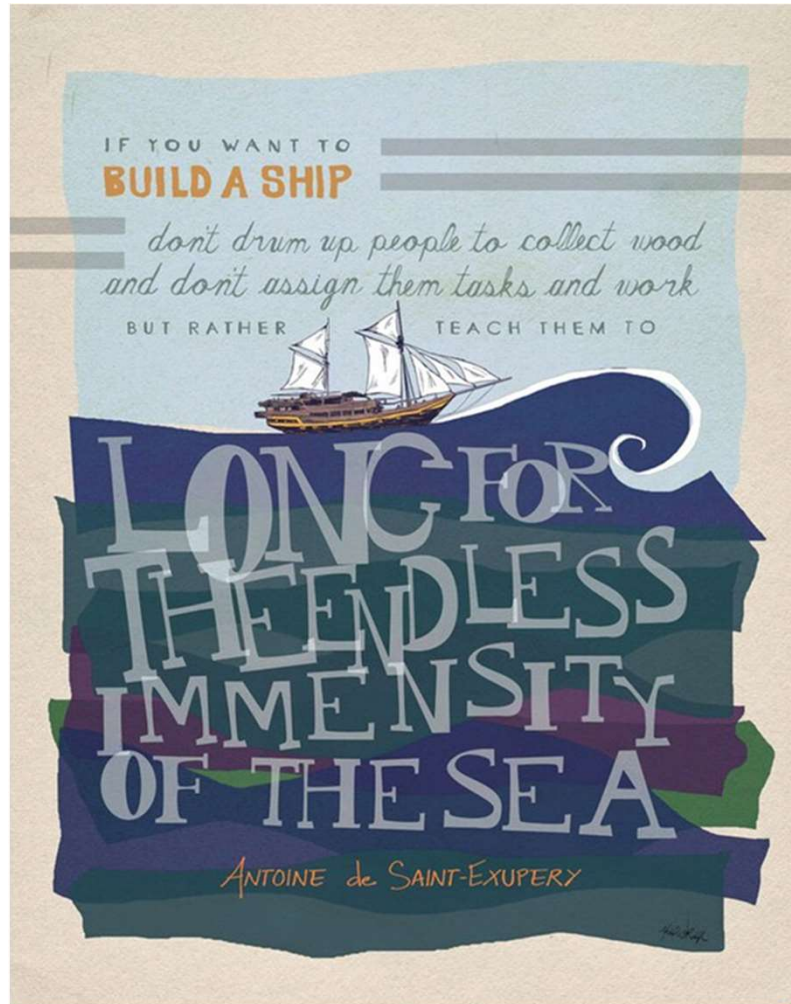
IF YOU WANT TO
BUILD A SHIP

*don't drum up people to collect wood
and don't assign them tasks and work
BUT RATHER TEACH THEM TO*



LONG FOR
THE ENDLESS
IMMENSITY
OF THE SEA

ANTOINE de SAINT-EXUPÉRY



Incorrect Questions (IQ)

Examples:

Customer Service Rep: Why don't customers follow instructions?

Salesperson: Why are our prices so high?

Management: When am I going to find good people?

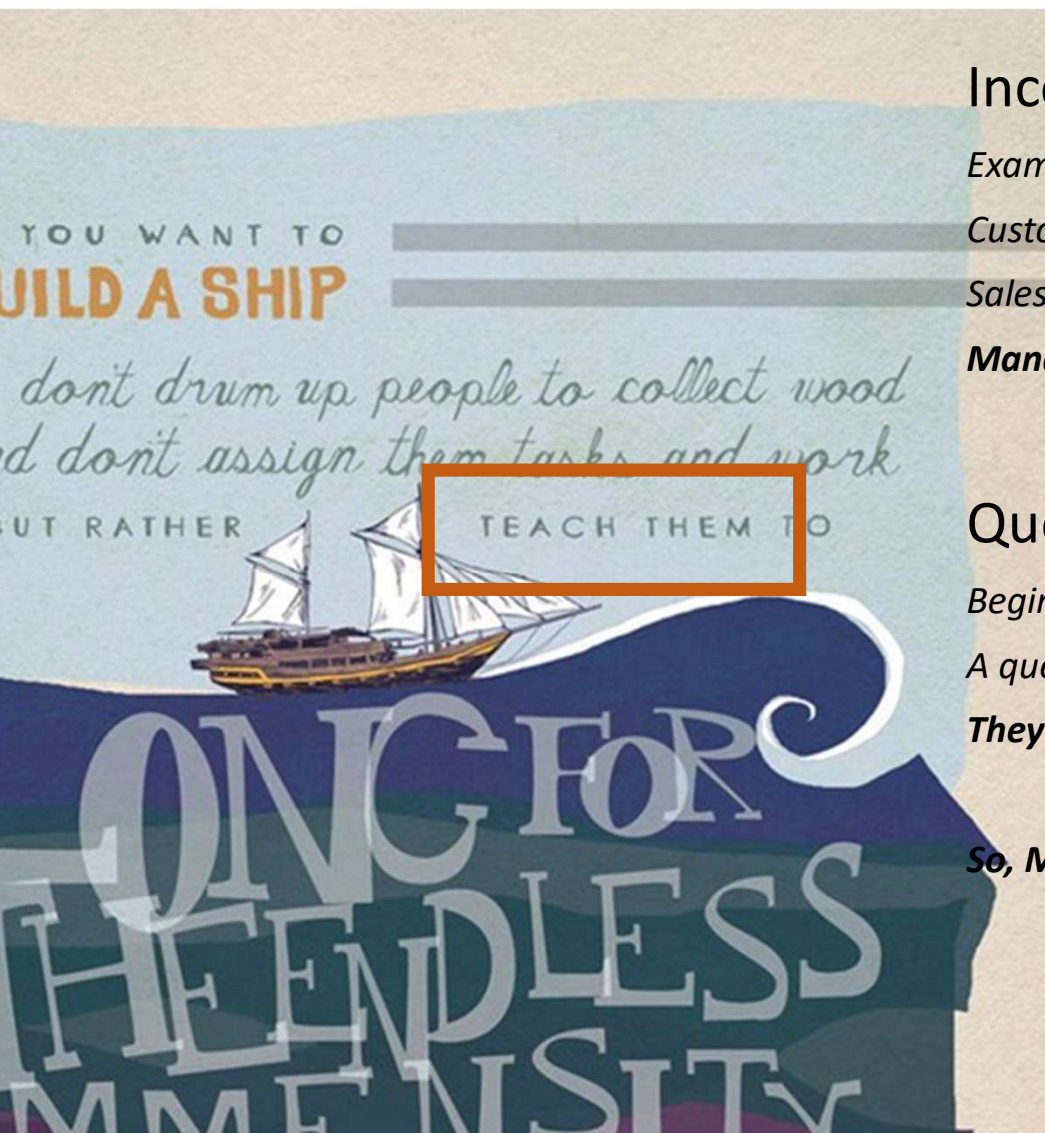
Question behind the Question (QBQ)

Begin questions with what or how (not why, when, or who)

A question should contain an "I" not they, them, or you;

They should focus on action: "What can I do?" and "What can we as a team do?"

So, MI-AWWA, what can we do about renewing our workforce?



Incorrect Questions (IQ)

Examples:

Customer Service Rep: Why don't customers follow instructions?

Salesperson: Why are our prices so high?

Management: When am I going to find good people?

Question behind the Question (QBQ)

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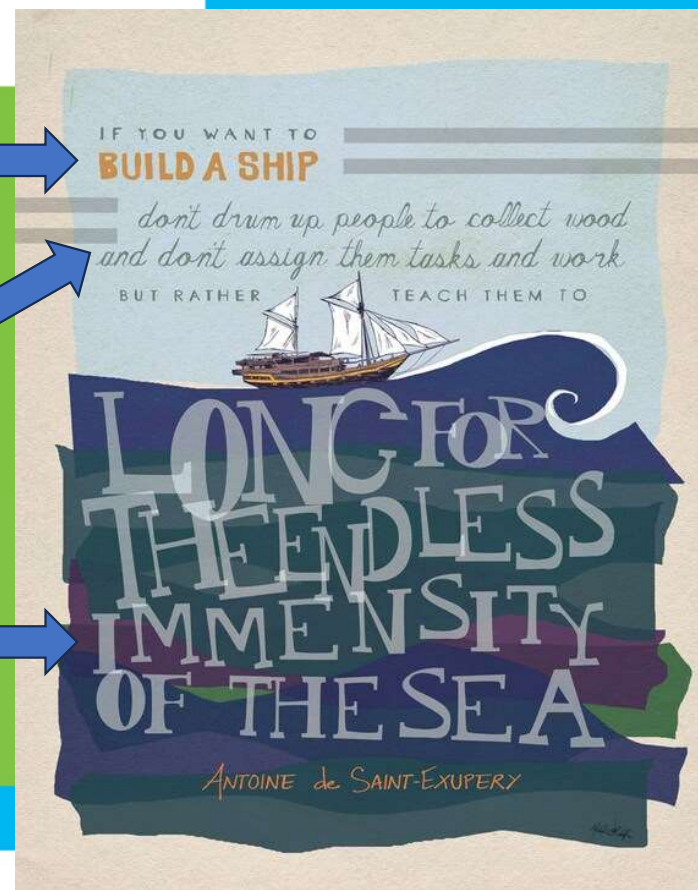
They should focus on action: "What can I do?"

So, MI-AWWA, what can we do about renewing our workforce?

If we want successful organizations, sustainable workforces, Water 2050 etc.

We can't just hire people and throw them in the deep end.

We must give them the tools and guidance to help them find their purpose in the big picture, to be passionate about water, to build a fulfilling career.



IDEA:

Create a specific YP
& College Age Training series
to serve as a CRASH
COURSE for entry level
employees.

Technical & Non-
Tech
(Business)

Educators WHO:

Hosts/Virtual capabilities

Audience - Students
- post grads
- CELs/PDHS
- YPS

EGL - approve CELs

Execution Step 1

~~Discuss~~ Discuss with YP
chair & ANWA staff
for guidance

Send survey to YP
for topic ideas
Brainstorm potential educators
Senior ANWA?
old YP alumni.

BY

Spring 2023

Step 2

Schedule locations, educators,
topics for training series

Advertise @ MI-ACE

Sell subscription

end of
2023

FALL 2023

Step 3

Execute trainings
ask for feedback on
topics, educator, take
aways

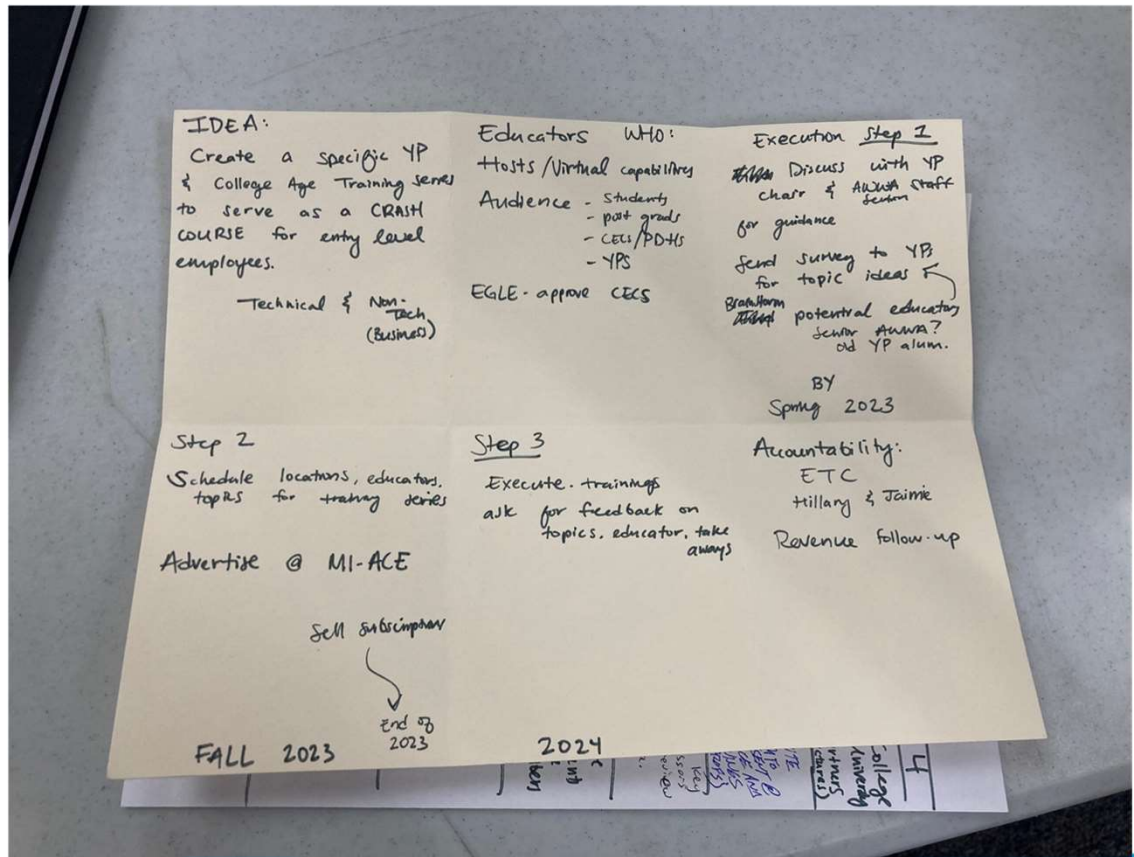
Accountability:

ETC

Hillary & Jaime

Revenue follow-up

2024





Survey

Survey

Thinking back to the beginning of your career in the water sector, what were some things that you wish you had known?

How many different jobs there are in water or that are related to water

Key sources of industry information: Act 399 Admin Rules, AWWA Standards, Recommended Practices for Water Works, etc.

How getting active in a professional organization would contribute to my professional growth

Less theory, more practical information

Survey

Is there anything that would have made your entry into the water sector easier than it was?

A good mentor in the industry

Knowing you aren't going to learn everything immediately

People around me to bounce ideas and problems off

Field/construction observation

Having a repository for industry information or where to look would have been invaluable



Survey

Is there anything that would have made your entry into the water sector easier than it was?

Knowing why I was doing what I was doing instead of just being told to do it and not knowing why, the rules behind it, etc.

Survey

If you currently, or have in the past, been supervising or mentoring individuals that are new to their career in water, what are some things that you wish they were better prepared for?

Basic, general
knowledge of the water
cycle and treatment

Where to find reference
materials and resources

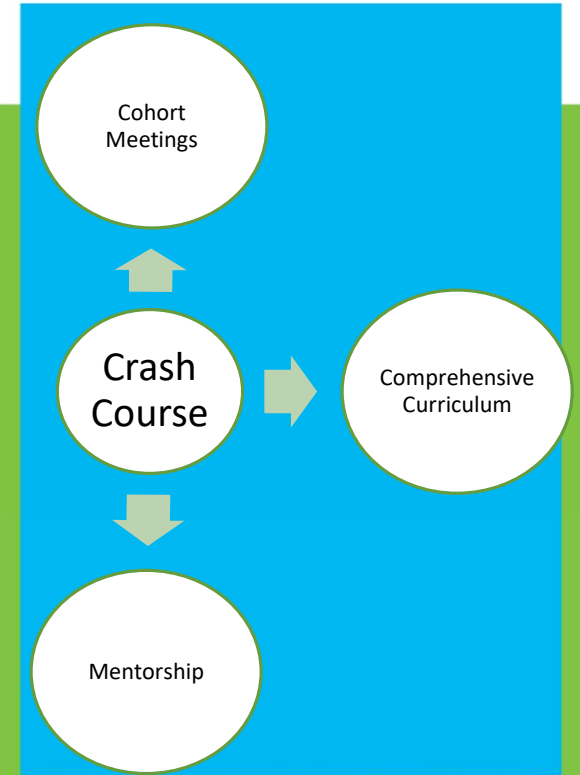
Communication Skills

Basic industry overview

Familiarity with regulations
and standards

Things this program needed:

- In person, cohort-style sessions, to start forming a network with other new professionals
- Provide a foundational overview of the industry and tools to develop soft skills
- Taught by instructors who are committed to educating new professionals and can boil down very complex topics





A Learning Series Launching 2024

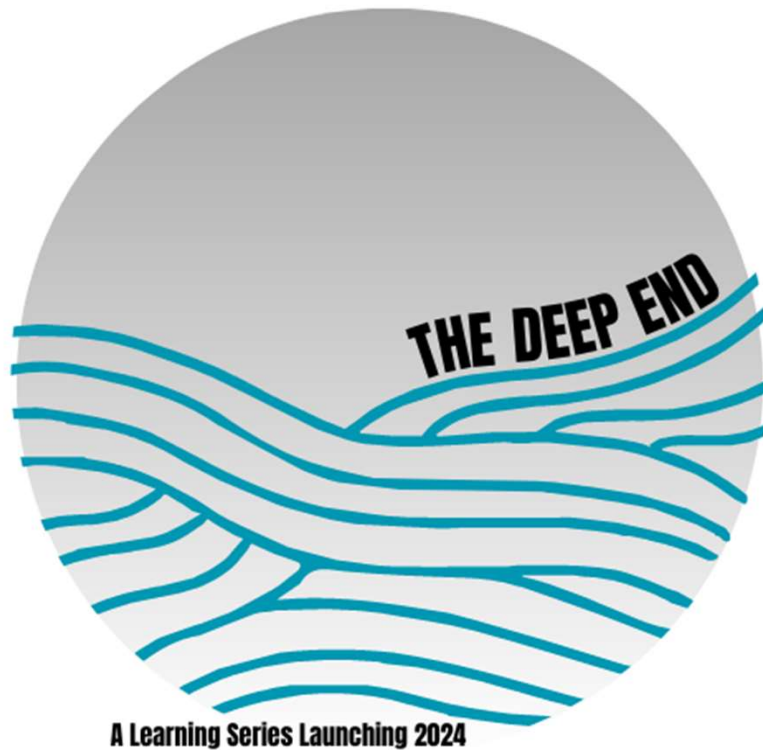
MI-ACE 2023



A Learning Series Launching 2024

THE DEEP END:

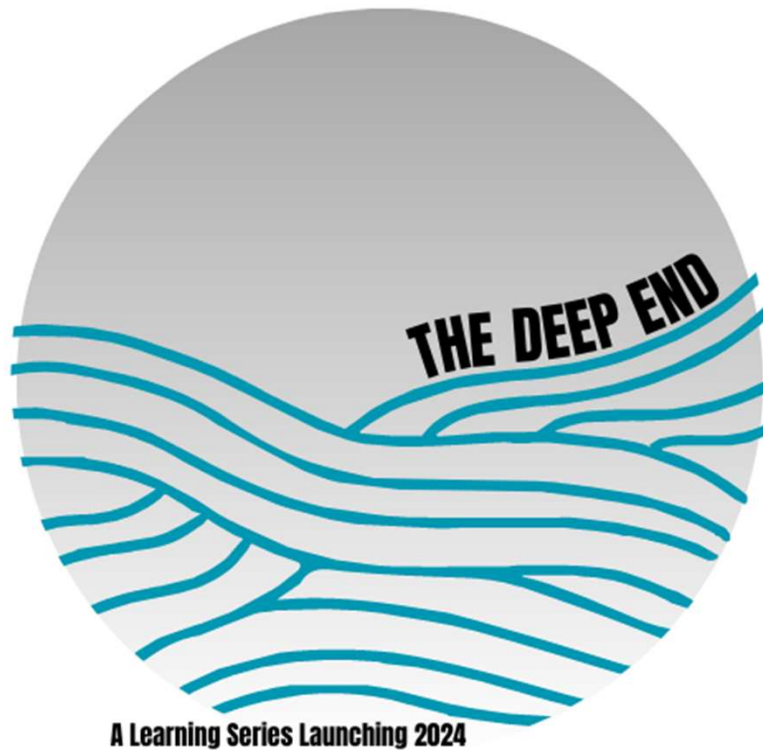
What? An in-person, cohort-style program



THE DEEP END:

What? An in-person, cohort-style program

When? Annual registration, with monthly learning sessions

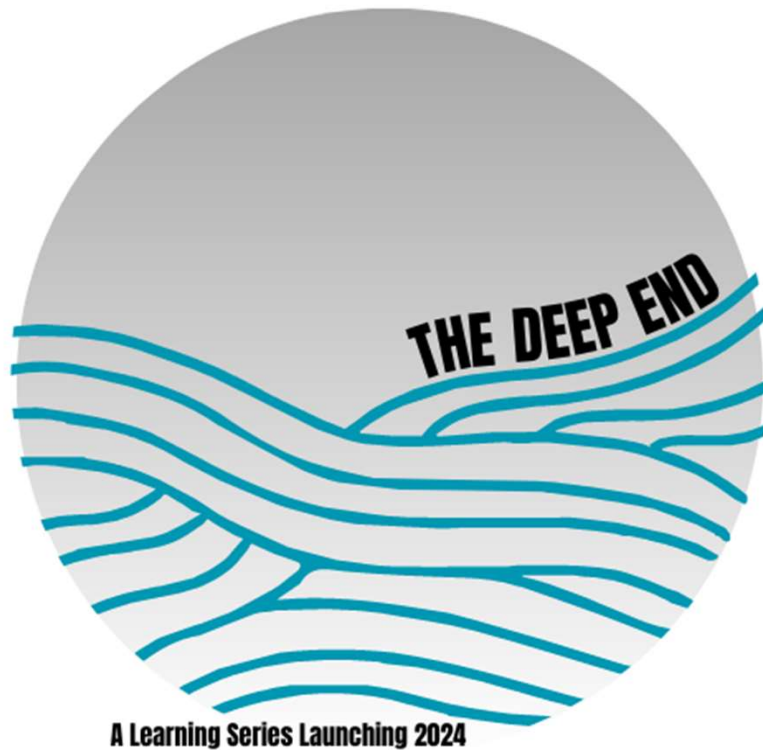


THE DEEP END:

What? An in-person, cohort-style program

When? Annual registration, with monthly learning sessions

Who? Catered to entry level employees



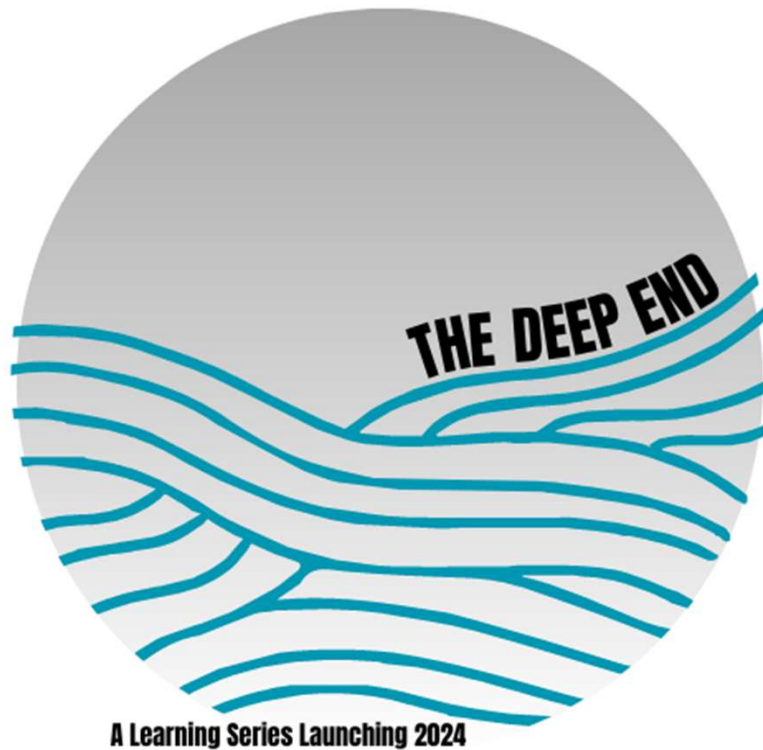
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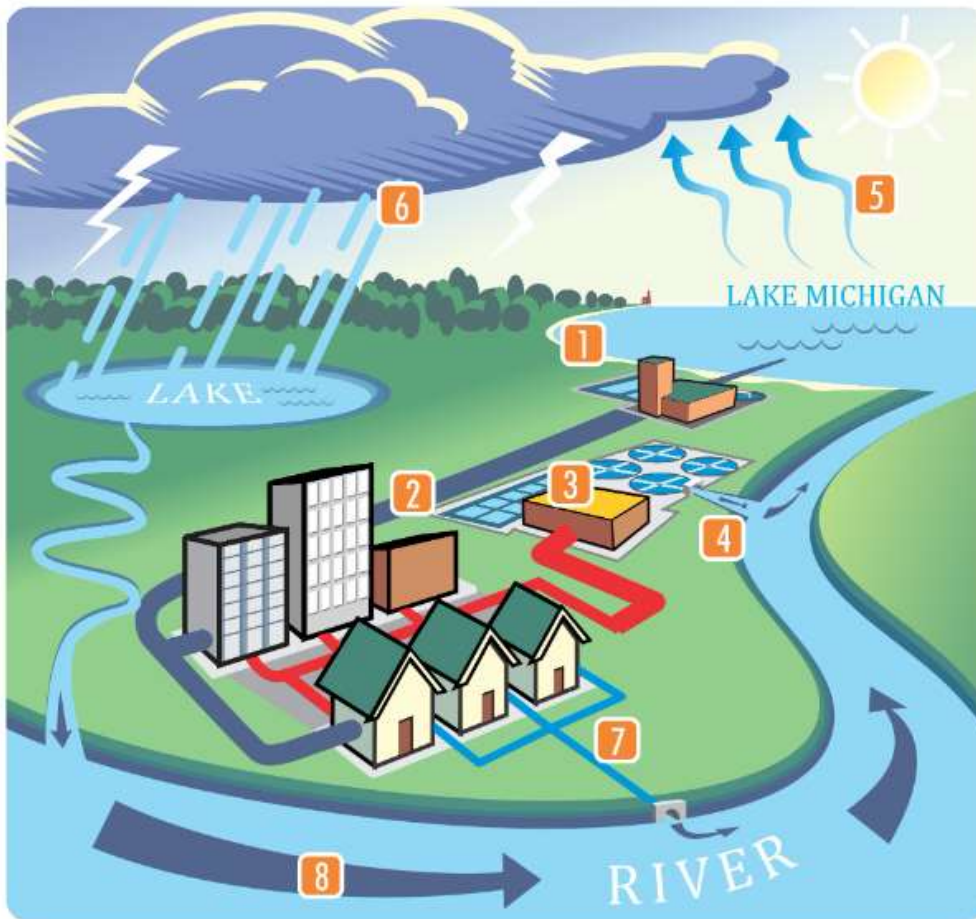
Where students would learn from and feel empowered by seasoned professionals, but they would also find support from each other as peers.



THE DEEP END:

This yearlong cohort would be a great **external training tool** for entry level employees, within the first year of employment **TO SUPPLEMENT** any **internal, job-specific onboarding and training**.

A Note to Management: This is an investment in your employees early on. The return on your investment is a prepared, informed professional that will renew the water workforce.



One Water

- 1 Lake Michigan Filtration Plant** - Water from Lake Michigan is cleaned and pumped to Grand Rapids
- 2 Homes and Businesses** - Water is used in homes and businesses and is placed into the sewer
- 3 Water Resource Recovery Facility** - The waste is removed from the water

- 4 Plant Effluent** - The disinfected wastewater flows into the Grand River
- 5 Evaporation**
- 6 Precipitation**
- 7 Storm Water Runoff** - Rain or snowmelt can run off picking up any pollutants
- 8 Rivers and Lakes** - Storm runoff collects in rivers and lakes



Cohort Program (The Deep End) course outline

Each item listed is a proposed session topic. Mentors would be required to lead instruction on one topic over the course of the year long program.

1. Introduction to Working in Water
 - a. Human water cycle, where do you fit in?
2. One Water – Water Treatment (include a tour element)
 - a. SDWA, Treatment processes and technology, lab testing
3. One Water – Distribution
 - a. Pipes (transmission mains, distribution mains, services) valves, pumps, high tanks, intro to hydraulics, community water supply permits (EDDY)
4. One Water – Collection
 - a. Pipes (Trunk sewers, force mains, laterals), lift stations, collection system permits (MIENVIRO)
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6. One Water – Stormwater and Source Water Protection
 - a. NPDES Permits, MS4 Permits, Source Water Protection Plans, Watershed Councils/Orgs (LGROW as guest speaker)
7. Business of Water
 - a. Rate setting, customer service and billing, purchasing, budgeting, grants, basic DWRF
8. Government Affairs
 - a. How things work at the local, state, and federal levels, review SWDA, CWA
 - b. Midwest Strategies as guest speaker
9. Career Planning
 - a. Professional development, goals, and opportunities, preventing being overwhelmed, navigating the work environment, and how to prioritize and organize
10. Communicating Effectively
 - a. How to talk to your boss, how to network, presenting in a professional setting
11. Introduction of Capstone
12. Capstone wrap up, reception/celebration/graduation



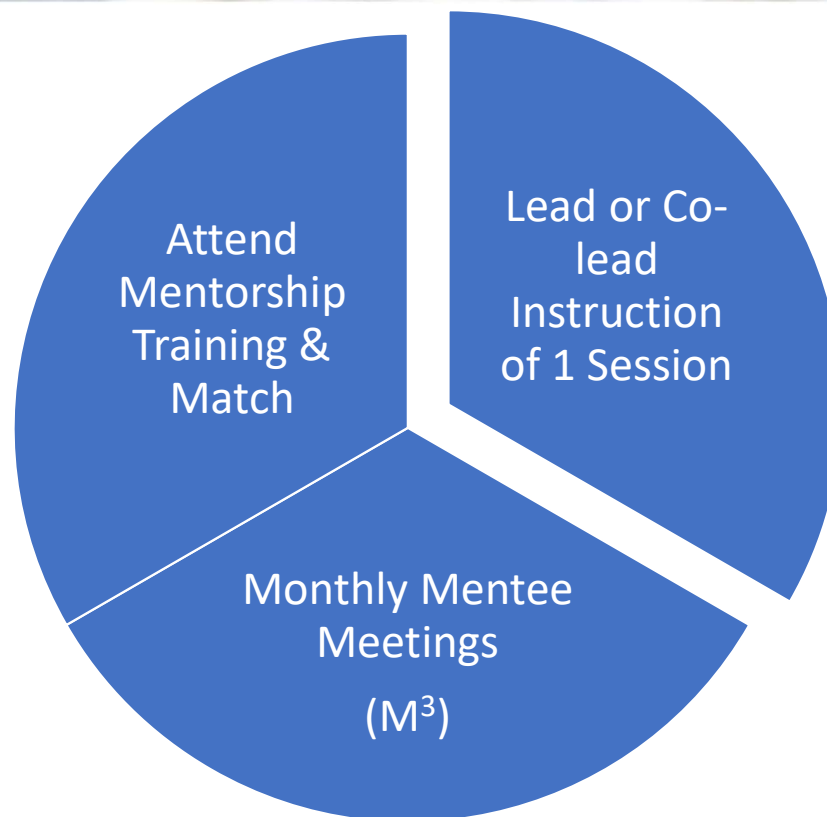
Session 1

Defining Water (Drinking Water, Wastewater, Storm Water)

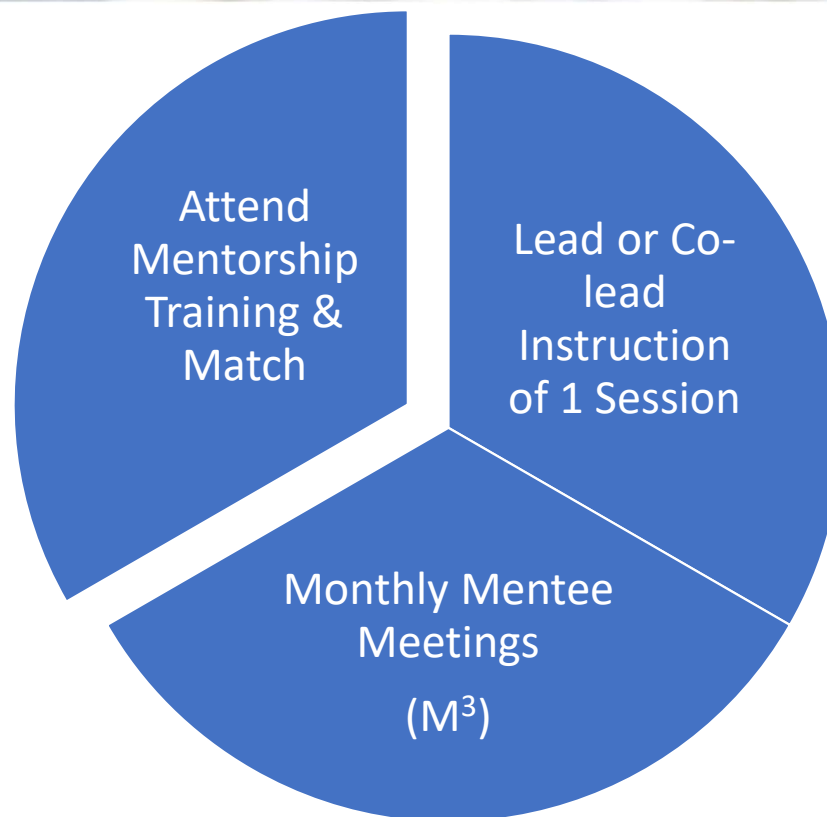
Mentorship Match



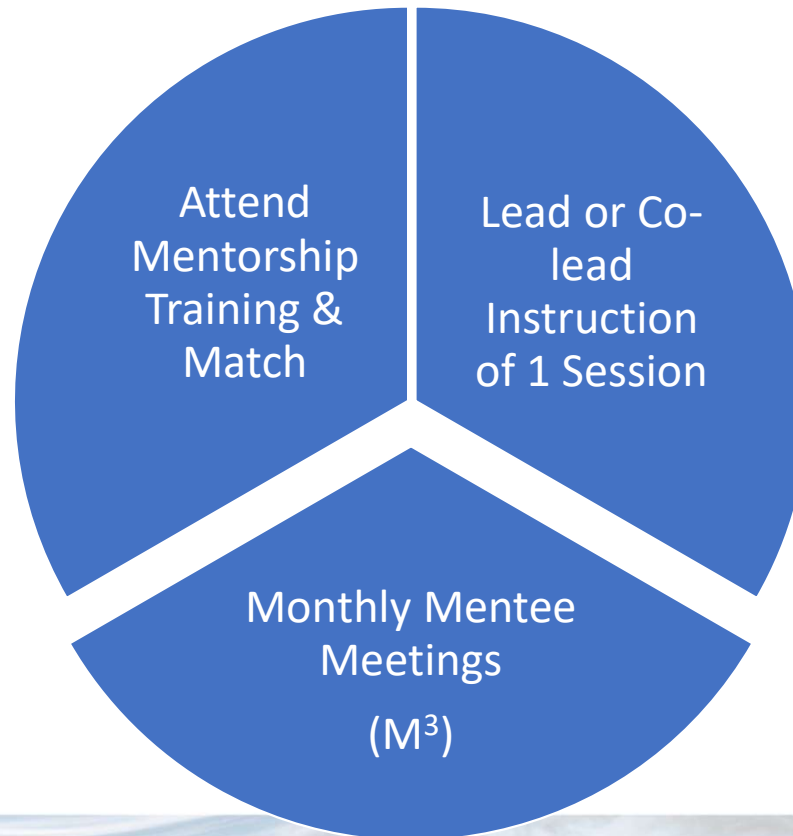
Mentors



Mentors



Mentors



Outside of classroom hours, dedicated to:

- Discuss course materials in further detail
- How they apply to the mentees' current job
- Suggest training or supplemental materials to further learning
- Be available to answer questions
- Or connect mentees with other professionals to discuss topics outside of mentor's subject expertise.

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Session 2 & 3 Drinking Water

Basic Treatment

Coagulation & Flocculation

Sedimentation

Filtration

Chlorination

Special Treatment (GAC, Reverse Osmosis)

Basic Lab Practices

Turbidity

Alkalinity

Hardness

Microbiology

Special Testing (PFAS, Cyanotoxins)



Tour Day
Of Plant

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Session 2 & 3 Drinking Water

Basic Distribution

Pressure Flow Hydraulics

Transmission, Distribution, Service Mains

Valve Selection

Pump Stations & Tanks

Basic Construction & Field Operations

Assembling Pipes and Fittings

Tapping Services

Valve & Pump Maintenance



Tour Day of
Pump Station
and High
Tank

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Session 7 & 8

Business of Water

Meter Reading

Rate Setting and Billing

Budgeting Basics

Grants and Federal/State Funding

Government Affairs

EPA, EGLE, Health Dept

Regulations of Water

Current Issues with Midwest Strategies



Visit to
Lansing

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Session 9 & 10

Career Planning & Soft Skills

Personal 5-Year Marketing Strategy

Preventing Overwhelm

Executive Functioning

Communicating Effectively

Engaging with Management

Networking

Presentation Skills



Program Fee
includes
entry to MI-
ACE 2024



What's Next

Applications are OPEN for both Students and Mentors

We will be working with mentors over the fall/early winter through Mentorship Boot Camp

Program is set to launch January 2024!





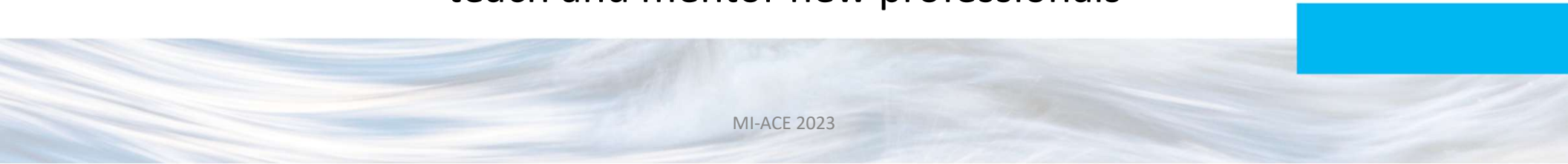
Exciting News

EGLE has approved the program for 1.4 CECs!

Invest in staff that already have licenses, that are ready to benefit from learning about how their job fits in with the rest of the industry

OR

Are interested in taking next steps as a leader, that might be willing to teach and mentor new professionals



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Create a specific YP
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to serve as a CRAI
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Technical & Non-
Tech
(Business)

Educators WHO:

Hosts/Virtual capabilities

Audience - Students
- post grads
- CEOs/PDAs
- YPs

EGLE - approve CEOs

Execution Step 1

~~Discuss~~ Discuss with YP
Chair & Aurora staff
for guidance

Send survey to YPs
for topic ideas
potential educators
senior Aurora?
old YP alum.

BY

Spring 2023

Step 2

Schedule locations, educators,
topics for training series

Advertise @ MI-ACE

Sell subscription

FALL 2023

end of
2023

Step 3

Execute. trainings
ask for feedback on
topics, educator, take
aways

Accountability:

ETC
Hillary & Jamie

Revenue follow-up

2024

MI-ACE 2023



A Learning Series Launching 2024

F6D5

MI-ACE 2023



Questions?

Rachel Zywczyński
rzywczyński@grcity.us

Want to become a mentor or
cohort member in 2024?

Deadline to apply: Friday, October 27th

Or visit:

<https://www.mi-water.org/the-deep-end>

F6D5

MI-ACE 2023