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Creating the Water Workforce of the Future

Webinar Series
Jim Horne, U.S. EPA Office of Wastewater Management

February 18th, 2020

Speakers
- Julia Beck – Vice President of Networks, Project WET Foundation
- April Lopez – Water Conservation Education Specialist, El Paso Water
- Cindy Busche – Environmental Education Manager, Boise WaterShed Education Center
Webinar Logistics

- This webinar is being recorded
- Participants will be in listen-only mode
- To submit a question, use the Q&A function
- Presenters will monitor these questions and respond to as many as possible during the “Q&A” session at the end of the presentation.

- Webinar slides and recording information will be sent out to all participants following the webinar
1. Please indicate the sector that you work in:

- Utility
- State or Local Government
- Federal Government
- Consultant
- Academia/Educator
- Other
2. How familiar are you with Project WET?
   - Very familiar
   - Somewhat familiar
   - Not at all

3. Have you been involved in K-12 or teacher education in your community in the past?
   - Regularly
   - Occasionally
   - Once or twice
   - Never
The Global Leader in Water Education
Project WET

Advances water education to understand global challenges and inspire local solutions.
How does water education impact the world?

Check out our YouTube Video
Why do water education?
Studies conducted in 2008-2010

- Less than half of US respondents were very familiar with 14 water-related terms (e.g. groundwater)
- Only 28% of SC respondents could identify the correct definition of a watershed
- Only 38% of NC respondents knew that stormwater flows to the nearest waterway
- 30% incorrectly thought that stormwater is treated prior to discharge in NC
Do you know where your water comes from?

Huffington Post Survey (2018):

• Only 21% of people know “very well” where water comes from

• 49% of people under 30 did not understand where their water comes from
Water is part of everything
Why Project WET?
People learn better when having FUN!
Job Readiness

Develop skills for workplace:

- Think critically and independently
- Problem-solve
- Collaboration
- Communication
- Perseverance
Children more likely to choose a career by “doing” than being told to be _____ (NYU, Princeton)

Professional mentorship is important (Phillips Charitable Foundation)
Project WET Core Beliefs

Water is for all water users.

Water connects us all.

Water resources are managed.

Water depends on personal responsibility and action.
Educate on ALL Topics of Water

- Chemical and Physical Properties
- Quality
- Watershed Health
- Quantity
- Health, Sanitation & Hygiene
- Water Systems
The Project WET Foundation

Networks
- USA (68)
- International (25)

Other Partners
- WASH
- Corporate

Customized Programs
- Employee engagement
- Watershed specific

Project WET Foundation

Other Partners
- WASH
- Corporate
2018 Impact

2.5 Million

820K+

USA Impact

PARTNERS
68

EDUCATORS TRAINED IN 2018
8,450

EDUCATORS USING PROJECT WET IN 2018
26,410

STUDENTS EDUCATED
792,303
New Educators Trained in 2018

- Pre-service/University: 29%
- Formal (K-12): 54%
- Non-formal: 17%

Utilities, Corporations, Nature Centers

N = 8,450
Project WET Curriculum and Activity Guide 2.0

- 64 activities on all topics of water
- Hands-on lessons
- Learning through discovery
- Correlated to educational standards
- Vetted by educators and experts
Educator Guides

Special Topic and Derivative Guides

Getting Little Feet Wet (Early Childhood)

Discover a Watershed Series

Conserve Water & Arizona

WOW (The Wonders of Wetlands)

Conserve Water

Floods Series

Healthy Water, Healthy People

Water, Sanitation & Hygiene

Healthy Water, Healthy People

Water, Sanitation & Hygiene
Kids in Discovery Series (KIDS)
Spanish Language

Guides and KIDS Booklets
New Hampshire (NH Dept. Environ. Serv.)

• Paired educators and water utility workers together as mentors
• Advertised specifically for water utilities and educators
• Lara Hooper: Lara.Hooper@des.nh.gov
Ohio (Ohio EPA)

Addresses shortage of water utilities operators:
• water professionals’ associations
• career tech high school centers

Developed online career pathways
• students and parents
• high school classes needed for particular jobs, including water operators and utilities directors.

Project WET: Who Works for Water?
“Urban Waters”
Dennis Clement:
dennis.clement@epa.ohio.gov
South Carolina
(Greenville County Soil & Water Conservation District)

- lunch and learn for local water utility employees (using WET)
- partner with a local municipality public works dept. on rain barrel workshops and water quality education
- career days to teach about conservation jobs
- offer a paid internship position for college juniors, seniors, or recent graduates
Project WET in Your State

www.projectwet.org/where-we-are

Contact your PWET Coordinator today!
Julia Beck

Julia.Beck@projectwet.org
Public Education – Key Element Building the Career Pipeline

April Lopez
Water Conservation Specialist
El Paso Water
City of El Paso TX
Approach to Reduce Consumption

**Effective outreach and education programs**
- Gaining public support

**Regulatory tools**
- Conservation ordinance
- Plumbing code

**Supply side conservation**
- Improve system efficiencies

**Tried and true conservation programs**

**Financial incentives**
- Rate structure
- Rebates and incentives
Water conservation has reduced per person consumption by 35%.

<table>
<thead>
<tr>
<th>Year</th>
<th>GPCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>205 gallons per person per day (GPCD)</td>
</tr>
<tr>
<td>Current</td>
<td>128 GPCD</td>
</tr>
<tr>
<td>2030</td>
<td>125 GPCD (Target)</td>
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Water Conservation Ordinance Adopted

January 23, 2020  El Paso Water
TecH$_2$O Water Resources
Learning Center

- Opened in 2008
- Project WET Host Facility
- Educate more than 40,000 people per year
Educational Outreach

Water Quality
Ask the Bugs
Project WET & School Visits

Colegio Teresiano
International visitors

Blue Planet

Is There Water on Zork?
Educator Workshops
El Paso Water in the Community
Because of our educational efforts, El Paso Water’s Conservation Program is leading a 35 percent reduction in per person water consumption.

Click here to watch our video.
Employees: our most valuable asset
BOISE WATERSHED EDUCATION CENTER
BOISE WATERSHED EDUCATION CENTER

Mission: educate people of all ages to protect and conserve precious resources for future generations

- Opened in 2008
- Public-private partnership
- Educate 28,000+ people per year
Project WET Activities
BOISE WATERSHED & PROJECT WET

• 2017 became host site for Project WET
• Offer teacher professional development workshops
Project WET in the community
WATER RENEWAL FACILITY TOURS

Tony Harmon, West Boise Water Renewal Operations Coordinator

Click here to watch our video.
College Student Internships
• Provides teacher certification preparation coursework for future science and math teachers.
• Paid internships at Boise WaterShed.
• Interns learned to teach two Project WET activities to 2nd grade students.

• Research study
• How does participation in the field trip impact knowledge of STEM careers?
• How does participation in the field trip impact interest in STEM careers?
Survey:
• Administered to 535 students before and after the field trip.
• Five-point scale using smiley faces.

Results:
• Informal educational experiences for young children can help develop vocational awareness and interest.

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<thead>
<tr>
<th>Knowledge</th>
<th>Interest</th>
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<tbody>
<tr>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>3.07</td>
<td>3.87</td>
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<tr>
<td>3.17</td>
<td>3.78</td>
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</table>
CONCLUSION

• K – College Environmental Education is an effective tool in workforce development
• Partnering with Project WET can have far-reaching impacts on career awareness and interest.
Question & Answer

Please submit text questions using your webinar dashboard
Closing Poll #1

On a scale of 1-10, with 10 being the best score and 1 being the worst, how would you rate today’s Webinar?
Closing Poll #2

Finally, what other topics would you like to see covered in subsequent webinars?

Please type a brief response in the questions box.
Thank you!