April 2017 NPDES Branch Chiefs meeting in Chicago
Objective: maintain NPDES permit program integrity & enhance capacity building with state programs
Conducted State questionnaire (in coordination with ACWA) in summer 2017
ACWA distributed the State questionnaire to its membership.

61 total responses from 44 states, Puerto Rico and D.C.

- How CRITICAL is the skill to your NPDES program?
- How BENEFICIAL would additional training in this skill be?
Critical Skills Validation

38 Skills included in State Questionnaire

50% rated “Extremely” to “Very” CRITICAL

42% “Very” to “Moderately” CRITICAL

8% “Moderately” to “Minimally” CRITICAL

36. Using variances
37. Applying federal requirements (e.g., ESA, NEPA, NHPA, CZMA)
38. Vessel permitting
Most Critical Skills
(average across all States)

1. Developing WQBELs (including TSD, WQS, anti-deg., TMDLs, etc.) (4.6 out of 5)
2. Executing the overall permit development process (including understanding flexibilities within permitting) (4.5)
3. POTW permitting (4.5)
4. Industrial wastewater permitting (4.4)
5. Developing and reviewing RPAs to determine need for WQBELs (4.4)
6. Reviewing permit applications (4.3)
7. Establishing proper monitoring and reporting requirements (4.2)
8. Managing data for permit development (4.2)
9. Developing TBELs (including ELGs and BPJ analyses) (4.1)
10. MS4 permitting (4.1)
11. Industrial stormwater permitting (4.1)
12. Understanding the relationship between State and Fed. Regs. (4.1)

“Competency in all of these elements is critical in regulating pollutant discharges to protect water quality.”
– Oswald Inglese Jr., Connecticut Department of Energy and Conservation
<table>
<thead>
<tr>
<th>Least Critical Skills</th>
<th>Criticality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing state program grants (including work plan development)</td>
<td>3.3</td>
</tr>
<tr>
<td>EPA's permit quality reviews (PQRs)</td>
<td>3.3</td>
</tr>
<tr>
<td>Long-term financial planning for wastewater and stormwater programs</td>
<td>3.3</td>
</tr>
<tr>
<td>Hydraulic modeling</td>
<td>3.1</td>
</tr>
<tr>
<td>Asset management for wastewater and stormwater programs</td>
<td>3.1</td>
</tr>
<tr>
<td>Reasonable assurance modeling for stormwater management</td>
<td>3.1</td>
</tr>
<tr>
<td>CAFO Permitting</td>
<td>3.0</td>
</tr>
<tr>
<td>Using variances</td>
<td>2.9</td>
</tr>
<tr>
<td>Applying other federal requirements (e.g. ESA, NEPA, NHPA, CZMA)</td>
<td>2.8</td>
</tr>
<tr>
<td>Vessel Permitting</td>
<td>2.0</td>
</tr>
</tbody>
</table>
Most Critical Skills

- Establishing proper monitoring and reporting requirements
- Developing WQBELs (including TSD, WQS, anti-deg., TMDLs, etc.)
- Developing TBELs (including ELGs and BPJ analyses)
- Characterizing effluent and receiving waters
- Communication and messaging with states
- Communication and messaging with dischargers
- Using negotiation and conflict resolution skills
- Requesting additional or clarifying information
- Understanding relationship between state and federal regulations
- POTW permitting
- Understanding & executing overall permit development process (including flexibilities within permitting)
- Developing and reviewing RPAs
- Reviewing permit applications
- MS4 permitting
- Industrial stormwater permitting
- Establishing proper monitoring and reporting requirements
- Managing data for permit development
- Developing TBELs (including ELGs and BPJ analyses)
- POTW permitting
- Industrial wastewater permitting
- Understanding relationship between state and federal regulations
- Reviewing permit applications
- Industrial stormwater permitting
### Skills with Top Training Needs for States
(average across all States)

<table>
<thead>
<tr>
<th>Skill Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Developing WQBELs (including TSD, WQS, anti-deg., TMDLs, etc.)</td>
<td>4.1</td>
</tr>
<tr>
<td>2. Executing the overall permit development process (including understanding flexibilities within permitting)</td>
<td>4.0</td>
</tr>
<tr>
<td>3. Statistical analysis in the permitting process</td>
<td>3.9</td>
</tr>
<tr>
<td>4. Industrial wastewater permitting</td>
<td>3.9</td>
</tr>
<tr>
<td>5. POTW permitting</td>
<td>3.9</td>
</tr>
<tr>
<td>6. Developing TBELs (including ELGs and BPJ analyses)</td>
<td>3.8</td>
</tr>
<tr>
<td>7. Reviewing mixing zone studies and conducting mixing zone analysis</td>
<td>3.7</td>
</tr>
<tr>
<td>8. Using compliance schedules</td>
<td>3.7</td>
</tr>
<tr>
<td>9. Using negotiation and conflict resolution skills</td>
<td>3.7</td>
</tr>
<tr>
<td>10. MS4 permitting</td>
<td>3.7</td>
</tr>
<tr>
<td>11. Developing and reviewing RPAs for WQBELs</td>
<td>3.7</td>
</tr>
</tbody>
</table>

**Note:**
- “Very” Critical
- “Moderately” Critical
“Most Critical” Training Needs
(average across all States)

Critical Skills
- Reviewing permit applications
- Establishing proper monitoring and reporting requirements
- Managing data for permit development
- Industrial stormwater permitting
- Understanding relationship between state & federal regulations

Training Needs
- Developing WQBELs
- Executing overall permit development process
- Industrial wastewater permitting
- POTW permitting
- Developing TBELs (including ELGs and BPJ analyses)
- MS4 permitting
- Developing and reviewing RPAs

- Statistical analysis in the permitting process
- Reviewing mixing zone studies and conducting mixing zone analysis
- Using compliance schedules
- Using negotiation and conflict resolution skills
“Most Critical” Training Needs
(average across all States)

- Developing WQBELs (including TSD, WQS, anti-deg., TMDLs, etc.)
- Executing the overall permit development process (including understanding flexibilities within permitting)
- Industrial wastewater permitting
- POTW permitting
- Developing TBELs (including ELGs and BPJ analyses)
- MS4 permitting
- Developing and reviewing RPAs for WQBELs
Skill 1: Developing water quality based effluent limits (WQBELs)

32 states, plus Puerto Rico and D.C., indicated that training for this skill would be “Very” to “Extremely” beneficial.
Skill 2: Executing the overall permit development process (including understanding flexibilities within permitting)

31 states, plus Puerto Rico and D.C., indicated that training for this skill would be “Very” to “Extremely” beneficial.
Skill 3: Industrial wastewater permitting

30 states, plus Puerto Rico, indicated that training for this skill would be “Very” to “Extremely” beneficial.
Skill 4: POTW permitting

27 states, plus Puerto Rico, indicated that training for this skill would be “Very” to “Extremely” beneficial.
Feedback from States

What are your preferred methods of training?

- In-person meeting in state offices (50 votes)
- Live webcast (45 votes)
- Recorded webcast (35 votes)
- In-person national meeting (30 votes)
- Technical assistance (20 votes)
- Distributed reading materials (15 votes)
- Call the Expert Hotline (10 votes)
- Webchat customer service/support (5 votes)

*State representatives were able to vote for more than one method
Feedback from States

How often do you think EPA should query states on their training needs?

- Once a year: 40%
- Once every couple of years: 56%
- Once every five years: 4%
Training Needs of the NPDES Program: a Region 1 Perspective

Ben Smith
Environmental Analyst
New England Interstate Water Pollution Control Commission
Who is NEIWPCC?

- Developed by an act of congress in 1947
- One of six interstate agencies
- NEIWPCC serves our member states individually and collectively by providing coordination, public education, research, training, and leadership in environmental management and protection.
- NEIWPCC has several workgroups that are organized around many environmental topics
**NEIWPCCC Workgroups**

- Currently have 15 workgroups

<table>
<thead>
<tr>
<th>Groundwater and Source Water Protection</th>
<th>Harmful Algal Blooms (HABs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Island TMDL</td>
<td>MA Wastewater Training Advisory Committee</td>
</tr>
<tr>
<td>New England Biological Assessment of Wetlands</td>
<td>Nonpoint Source Pollution</td>
</tr>
<tr>
<td>NPDES</td>
<td>Nutrient Criteria</td>
</tr>
<tr>
<td>Onsite Wastewater</td>
<td>Stormwater</td>
</tr>
<tr>
<td>TMDLs (Pollution Budgets)</td>
<td>Underground Storage Tanks</td>
</tr>
<tr>
<td>Wastewater Residuals</td>
<td>Wetlands</td>
</tr>
</tbody>
</table>

- Meet regularly throughout the year
- Address emerging issues and challenges based on the various workgroup initiatives
Annual meeting brings together state environmental agency employees, EPA, and NEI staff.

Additional meetings may be held on an as needed basis

Last workgroup meeting was held May 10, 2017

Topics of discussion included:

- Site-specific aluminum criteria
- Reasonable Potential Determinations
- NPDES Update Rule
Recent Trainings: Most Critical Skills

- Reviewing Dilution Studies and Granting Mixing Zones in NPDES Permits
  - September 6th & 7th, 2017
  - 2-day training covering dilution studies (i.e. mixing zone studies) and appropriate NPDES permit requirements
    - Regulatory fundamentals of mixing zones
    - Implementation of dilution factors in NPDES permits
    - Discussed important model inputs as well as how to read model output files
Recent Trainings: Least Critical Skills

- NEIWPCC Variance Workshop
  - October 3rd, 2017
- NPDES & WQS Workgroups
- Training highlighted variance basics, requirements, and practical implementation
- MassDEP provided a case study on the only variance in New England
- Consensus from the group was that variances would be difficult to implement in New England
Consistent with the results of the national survey

Development of water quality based effluent limits (WQBELs)

- Training would be “very” to “extremely” beneficial
- States feel capable of completing this skill yet additional training would help

Overall permit development

Communicate with states regularly to address the needs of the region
Future Plans

- NEIWPCC aims to hold the NPDES Permit Writers’ Course in late Spring 2018

Objectives

- Provide basic regulatory framework & technical considerations that support the development of NPDES Permits.
- 5-day training for new to experienced permit writers
- Training will be put on in coordination with EPA and PG Environmental
State Capacity Building

- Training is not the only means to improve state programs
- Regional communication is key to
  - Overcoming challenges
  - Fostering new ideas
  - Staying up-to-date with emerging issues in the field
- Regional workgroups offer an effective alternative to trainings
- Leveraging resources at a regional level allows for a cost effective benefit for multiple states
Is there any work similar to this being done in other regions?
What else would help improve your state’s program?
“Most Critical” Training Needs
(average across all States)

Most Critical Training Needs

Input on...
Critical Skills
Training Needs

Developing WQBELs
(including TSD, WQS, anti-deg., TMDLs, etc.)

Executing the overall permit development process
(including understanding flexibilities within permitting)

Industrial wastewater permitting

POTW permitting

Developing TBELs (including ELGs and BPJ analyses)

MS4 permitting

Developing and reviewing RPAs for WQBELs
For consideration...

How do we collaboratively build and maintain capacity over time?

How do we match up specific training needs with effective delivery methods?