Revising the CCMP for the Delaware Estuary
WHERE?

THE DELAWARE RIVER BASIN INCLUDES PA, NJ, DE, AND NY

Actions feasible and appropriate for the CCMP include those:

- Largely within the lower Basin
- A good fit with NEP values – science, collaboration, innovation, balance, strategic investment
- Non-regulatory
WHO?

THE PARTNERSHIP FOR THE DELAWARE ESTUARY

VISION

Working together for clean water, thriving fish and wildlife, and abundant recreational activities in and around the tidal Delaware River and Bay to support people, communities, and a robust economy.

PARTNERS

- Delaware Department of Natural Resources & Environmental Control
- New Jersey Department of Environmental Protection
- Pennsylvania Department of Environmental Protection
- Philadelphia Water Department
- Delaware River Basin Commission
- U.S. Environmental Protection Agency
- PDE
- Many more!

Photo Credit: Amy Baldwin, White Clay Creek
WHAT?

**ORIGINAL PLAN**
- Land Use Management
- Toxics
- Water Use Management
- Education & Involvement
- Habitat & Living Resources

**REVISED PLAN**
- **Clean Waters**
  - Nutrient Pollutants
  - Other Pollutants
  - Sustain Flow
- **Strong Communities**
  - Resilience and Access
  - Engagement
- **Healthy Habitats**
  - Wetlands
  - Forests
  - Fish & Shellfish
HOW DID WE GET HERE?

Core Elements

- Listening Sessions
- Climate Vulnerability
- Expert Input
WHERE ARE WE GOING WITH THIS?

Draft CCMP

• Fall 2017: Draft descriptions of actions

Public Input

• Winter 2017 / Spring 2018: Draft released

• Spring / Summer 2018: Comments compiled, draft updated

Final Review

• Fall 2018 / Winter 2019: CCMP sent to graphic design

Published CCMP
WE NEED YOUR HELP

1. Take a look at the ‘core elements.’ They contain proposed actions to focus on over the next 10 years.

2. Give us your feedback on:
   ◦ Are these strategies supportive of other goals you’re aware of? In conflict with any?
   ◦ Are there ways we could make them more supportive? Build stronger partnerships?
   ◦ Did we miss anything important to you or others you’re aware of?
   ◦ Are there potential partners or innovative new things you’re aware of that we might not be?
# CLEAN WATERS

## W1: Reduce Nutrient Pollution and its Impacts

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W 1.1</td>
<td>Promote innovative infrastructure-related improvements to reduce pollutants from point-sources</td>
</tr>
<tr>
<td>W 1.2</td>
<td>Support innovative planning and design practices to reduce nutrients from stormwater and agricultural runoff through promotion, education, and implementation</td>
</tr>
<tr>
<td>W 1.3</td>
<td>Promote land use planning by local municipalities that prevents, reduces, and/or more efficiently manages stormwater runoff to prevent non-point source pollution</td>
</tr>
<tr>
<td>W 1.4</td>
<td>Provide outreach and information to property owners to assist in reducing non-point sources of nutrients</td>
</tr>
<tr>
<td>W 1.5</td>
<td>Conduct research and monitoring on nutrient impacts in the Estuary for biological and ecological endpoints</td>
</tr>
</tbody>
</table>
CLEAN WATERS

W1: Reduce Nutrient Pollution and its Impacts
# CLEAN WATERS

## W2: Reduce Other Pollutants and their Impacts

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W 2.1</td>
<td>Conduct outreach and technical assistance programs to reduce non-point sources of contaminants</td>
</tr>
<tr>
<td>W 2.2</td>
<td>Promote the identification, cleanup, and revitalization of contaminated sites</td>
</tr>
<tr>
<td>W 2.3</td>
<td>Support adaptive management and reporting of pollution reductions</td>
</tr>
<tr>
<td>W 2.4</td>
<td>Coordinate and promote research and monitoring efforts (chemical, physical, biological) associated with the causes of water quality impacts throughout the Delaware Estuary</td>
</tr>
<tr>
<td>W 2.5</td>
<td>Conduct and coordinate (where appropriate) education, research, monitoring, and communication about fish and shellfish consumption to protect human health</td>
</tr>
<tr>
<td>W 2.6</td>
<td>Improve, sustain, and enhance spill communication and response with Delaware Estuary partners</td>
</tr>
</tbody>
</table>
CLEAN WATERS

W2: Reduce Other Pollutants and their Impacts
## CLEAN WATERS

### W3: Sustain Flow for Drinking Water and Ecosystems

<table>
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<tr>
<th>Strategy</th>
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<tbody>
<tr>
<td>W 3.1</td>
<td>Inform and collaborate with decision makers and water resource managers to ensure the mainstem Delaware River flow meets the needs of the Delaware Estuary</td>
</tr>
<tr>
<td>W 3.2</td>
<td>Conduct research and monitoring on water quality and habitat requirements of estuary-dependent species</td>
</tr>
<tr>
<td>W 3.3</td>
<td>Promote water conservation and efficiency by utilities</td>
</tr>
<tr>
<td>W 3.4</td>
<td>Provide outreach and technical assistance to promote water conservation and infiltration by residential and commercial users and communities</td>
</tr>
<tr>
<td>W 3.5</td>
<td>Promote and assist in implementing the Regional Sediment Management Plan</td>
</tr>
</tbody>
</table>
CLEAN WATERS

W3: Sustain Flow for Drinking Water and Ecosystems

New Jersey’s Ambient Groundwater Quality Monitoring Network

Legend:
- Natural
- Undrilled
- Drilled
- Diamond-Corried

Photo Credit: USACE

7/24/2017
Location:
RM 71

Normal July Location:
RM 70

Photo Credit: DNREC

EPA WaterSense
## STRONG COMMUNITIES

### C1: Increase Community Resilience and Access

<table>
<thead>
<tr>
<th>Strategy</th>
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<tbody>
<tr>
<td>C 1.1</td>
<td>Restore working waterfronts</td>
</tr>
<tr>
<td>C 1.2</td>
<td>Provide tools and technical assistance to waterfront communities &amp; partners to improve economic and environmental resilience</td>
</tr>
<tr>
<td>C 1.3</td>
<td>Protect and enhance natural areas and public access</td>
</tr>
<tr>
<td>C 1.4</td>
<td>Connect people to natural areas and waterfronts in the Delaware Estuary</td>
</tr>
</tbody>
</table>

Photo credit: Joe Hengel, Philadelphia, PA
STRONG COMMUNITIES

C1: Increase Community Resilience and Access
## STRONG COMMUNITIES

**C2: Improve Public Awareness and Stakeholder Engagement**

<table>
<thead>
<tr>
<th>Strategy</th>
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<tbody>
<tr>
<td>C 2.1</td>
<td>Through marketing and communications, build awareness for the Delaware River and Bay</td>
</tr>
<tr>
<td>C 2.2</td>
<td>Utilize events to increase stewardship and engage new people and communities</td>
</tr>
<tr>
<td>C 2.3</td>
<td>Develop and promote programs that engage teachers and schools in stewardship of the Estuary</td>
</tr>
<tr>
<td>C 2.4</td>
<td>Develop and promote programs with local communities and partners that foster volunteer stewardship and experiential learning</td>
</tr>
<tr>
<td>C 2.5</td>
<td>Publish and share outreach materials and scientific results</td>
</tr>
<tr>
<td>C 2.6</td>
<td>Engage key stakeholders to coordinate science and management of the Estuary</td>
</tr>
<tr>
<td>C 2.7</td>
<td>Assess impacts of outreach</td>
</tr>
</tbody>
</table>
STRONG COMMUNITIES

C2: Improve Public Awareness and Stakeholder Engagement
## HEALTHY HABITATS

**H1: Prevent Wetland Loss**

<table>
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<tr>
<th>Strategy</th>
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<tbody>
<tr>
<td>H 1.1</td>
<td>Establish clear baselines for wetland conditions and track changes over time</td>
</tr>
<tr>
<td>H 1.2</td>
<td>Restore, enhance, and manage wetlands for maximum health and resilience</td>
</tr>
<tr>
<td>H 1.3</td>
<td>Develop and implement natural and nature-based techniques to stabilize and restore eroding shorelines and build and protect wetlands, infrastructure, and other key resources</td>
</tr>
<tr>
<td>H 1.4</td>
<td>Protect, enhance, and improve non-tidal wetlands</td>
</tr>
</tbody>
</table>
HEALTHY HABITATS

H1: Prevent Wetland Loss
# HEALTHY HABITATS

## H2: Stem Forest Loss

<table>
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<th>Strategy</th>
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</tr>
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<tbody>
<tr>
<td>H 2.1</td>
<td>Inventory, map, and increase connectedness and resilience for forests</td>
</tr>
<tr>
<td>H 2.2</td>
<td>Promote good stewardship practices by local partners for the health and sustainability of forests</td>
</tr>
<tr>
<td>H 2.3</td>
<td>Protect and manage high value and threatened forests</td>
</tr>
</tbody>
</table>

Photo Credit: Carol Tersine, Green Lane, PA
HEALTHY HABITATS

H2: Stem Forest Loss

Photo Credit: Carol Brightbill, French Creek, Green Lane, PA

Photo Credit: Carol Brightbill, Schuylkill River, East Coventry, PA

Photo Credit: Shaun Bailey, Bellevue State Park, Wilmington, DE
# HEALTHY HABITATS

## H3: Increase and Improve Fish and Shellfish Habitat

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H 3.1</td>
<td>Inventory, map, and enhance habitat critical for fish and crabs</td>
</tr>
<tr>
<td>H 3.2</td>
<td>Restore oyster beds and productivity in and around the Delaware Bay</td>
</tr>
<tr>
<td>H 3.3</td>
<td>Inventory, restore, and manage mussel populations</td>
</tr>
<tr>
<td>H 3.4</td>
<td>Protect and restore horseshoe crabs and their habitat</td>
</tr>
<tr>
<td>H 3.5</td>
<td>Manage and improve rare, endangered, invasive, or otherwise important species in the Delaware Estuary</td>
</tr>
</tbody>
</table>

Photo credit: Shaun Bailey
HEALTHY HABITATS

H3: Increase and Improve Fish and Shellfish Habitat
Public/Partner Feedback

- Are these strategies supportive of other goals you’re aware of? In conflict with any?
- Are there ways we could make them more supportive? Build stronger partnerships?
- Did we miss anything important to you or others you’re aware of?
- Are there potential partners or innovative new things you’re aware of that we might not be?

Photo Credit: Mark Houlday, Lewes, DE
What to do about...

- Internal agency feedback – PDE has compiled and will share to take into consideration in written comments
- Missing strategies – coming soon, or should PDE draft?
COMPREHENSIVE CONSERVATION MANAGEMENT PLAN REVISION:
EIC/SC/IAR TIMELINE
Questions?

Jennifer Adkins
Executive Director
JAdkins@DelawareEstuary.org

Connecting people, science, and nature for a healthy Delaware River and Bay