



Credit: Mark Houlday  
Lewes, DE

# CCMP Expert Workshops

## Preliminary Results and Next Steps

# CCMP Core Elements

## Clean Waters

Toxics	Reduce toxic pollution and its impacts
Nutrients	Reduce nutrient pollution and its impacts
Flow	Sustain flow for drinking water and ecosystems

## Strong Communities

Community Resilience and Access	Increase community resilience and access
Public Awareness and Engagement	Improve public awareness and stakeholder engagement

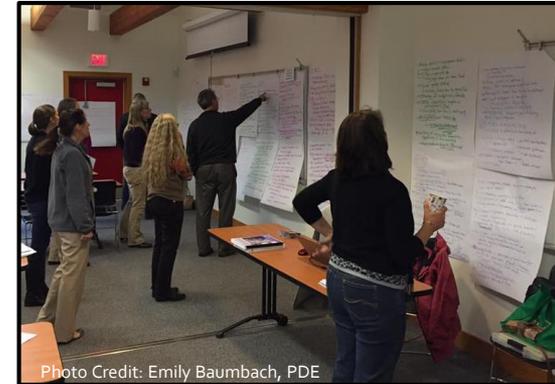
## Healthy Habitats

Wetlands	Prevent wetland loss
Forests	Stem forest loss
Fish and Shellfish	Increase and improve fish and shellfish habitat



# Workshop Schedule

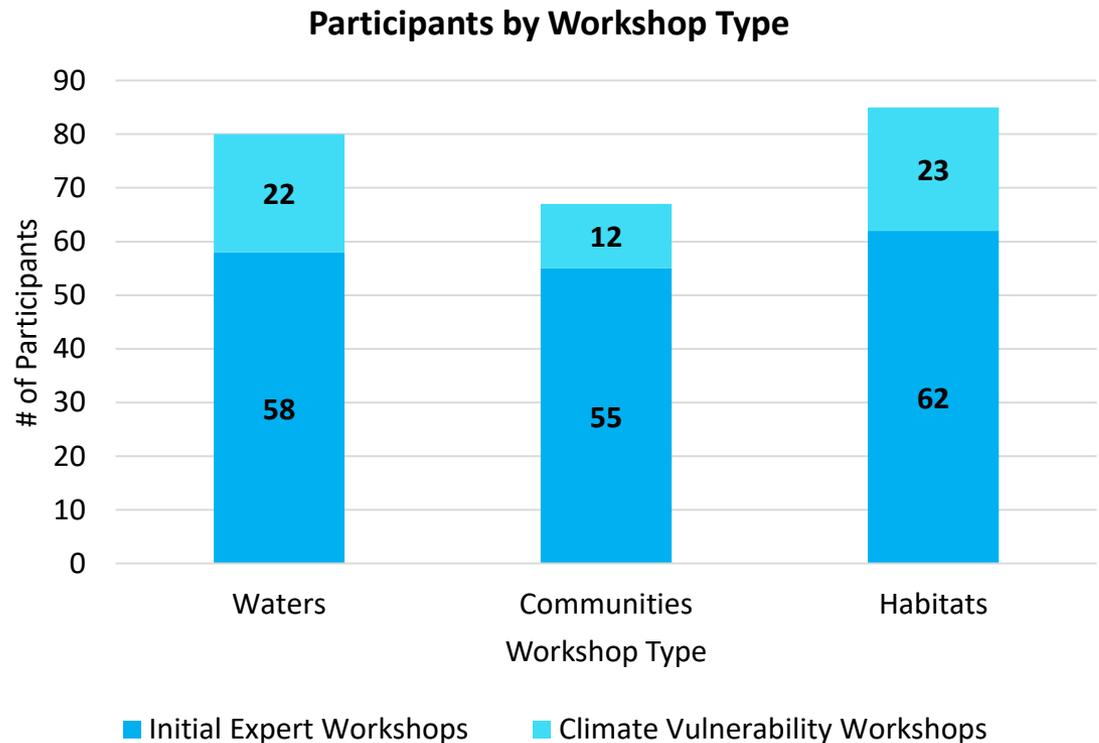
- Webinar: 11/7 *Recording available online*
- Healthy Waters (1): 11/17 DRBC; West Trenton, NJ
- Healthy Waters (2): 12/7 St. Jones Reserve; Dover, DE
- Healthy Waters (3): 1/10 CCMUA; Camden, NJ
- Healthy Communities (1): 1/31 Heinz Refuge; Philadelphia, PA
- Healthy Communities (2): 12/8 Cumberland County College; Vineland, NJ
- Healthy Communities (3): 1/11 St. Jones Reserve; Dover, DE
- Healthy Habitats (1): 2/1 Mont. Co. Comm. Coll.; Bluebell, PA
- Healthy Habitats (2): 11/29 Abbotts Mill Nature Center; Millford, DE
- Healthy Habitats (3): 1/9 PSEG EERC; Salem, NJ
- Climate Vulnerability Workshops:
  - Healthy Habitats: 3/21 Ashland Nature Center; Hockessin, DE
  - Strong Communities: 3/28 PSEG EERC; Salem, NJ
  - Clean Water: 3/30 DVRPC; Philadelphia, PA



# Workshop Results

**232 Total Participants**

- **175** Initial Workshops
- **57** Climate Workshops

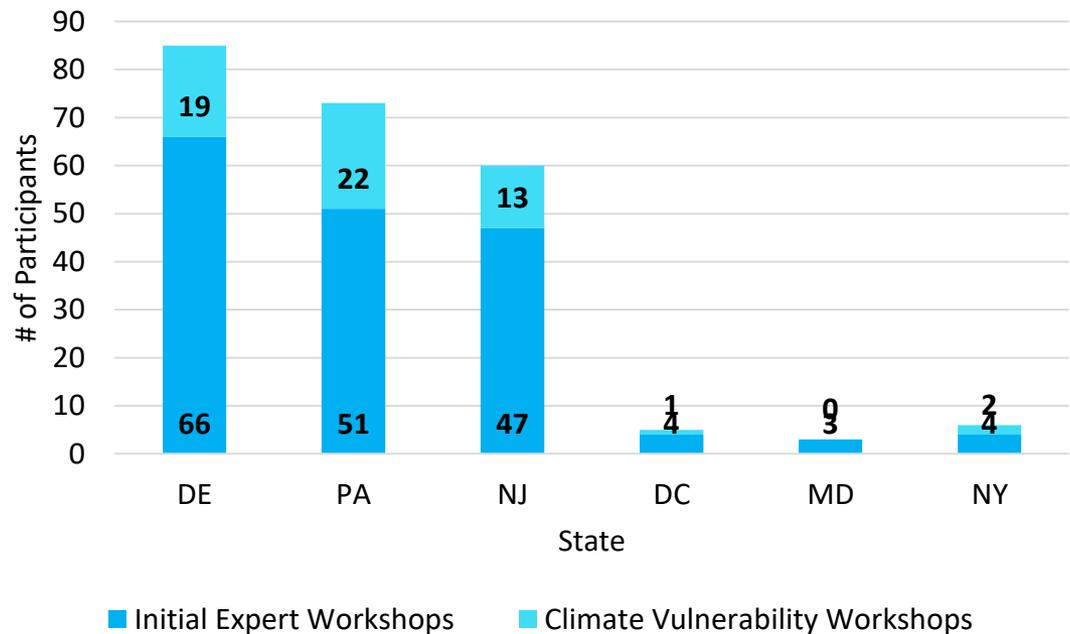


# Workshop Results

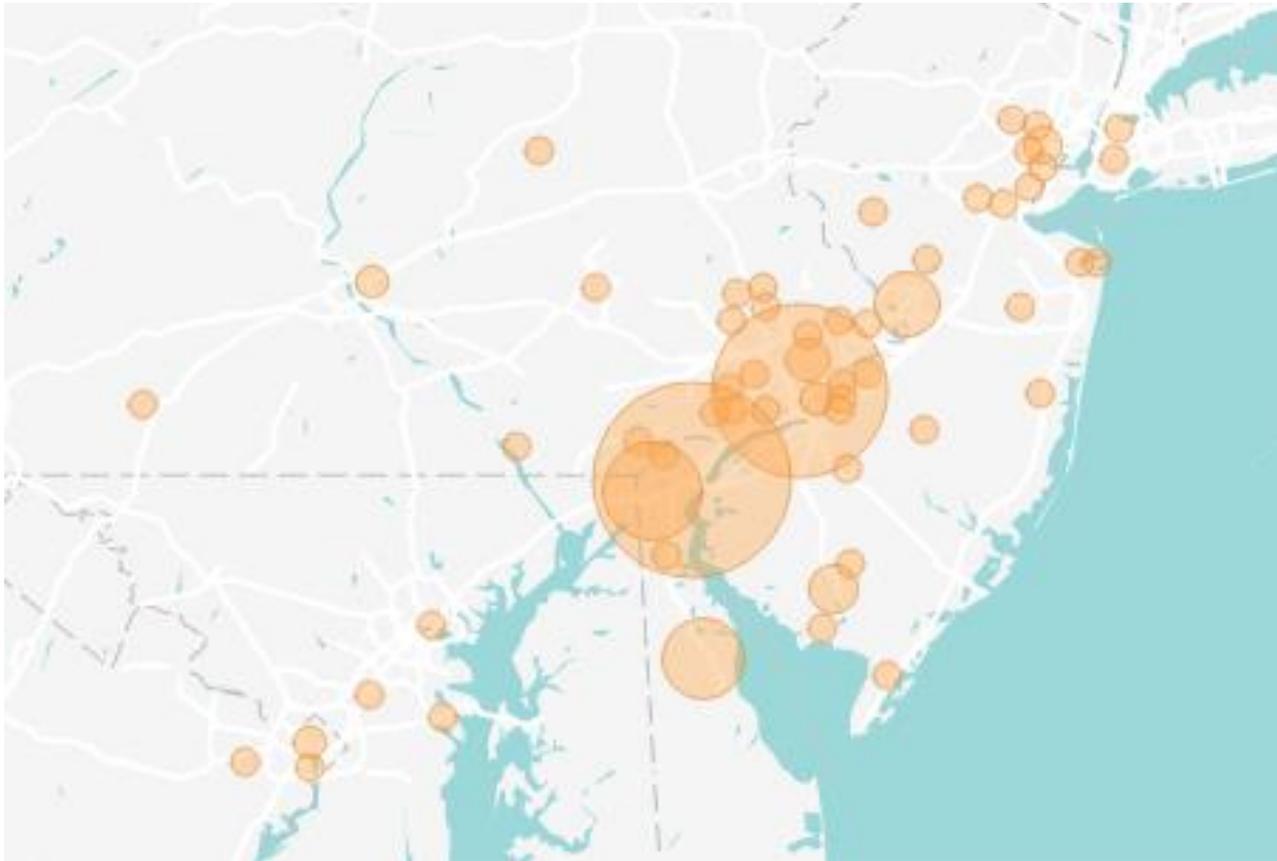
## Participants by State

- 85 DE
- 73 PA
- 60 NJ
- 5 DC
- 3 MD
- 6 NY

Workshop Participants by State



# Workshop Results



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# Workshop Participants

Academy of Natural Sciences of Drexel  
Bayshore Center at Bivalve  
Berks County Conservation District  
Berks Cty, Planning Commission  
Betsy's Cape Shore Salts  
Burlington County SCD  
Camden County  
Coalition for the Delaware River Watershed  
CU Maurice River  
Delaware Bay Shellfish Council  
Delaware Center for the Inland Bays  
Delaware County Planning Dept.  
Delaware Division of Fish & Wildlife  
Delaware DNREC  
Delaware Forest Service  
Delaware National Estuarine Research Reserve  
Delaware Nature Society  
Delaware River and Bay Authority  
Delaware River Basin Commission  
Delaware Riverkeeper Network  
DNREC

Environmental Consulting Services, Inc.  
Exelon Corporation  
First State National Historical Park  
Fishery Investigations  
Independence Seaport Museum  
John James Audubon Center  
Kleinfelder  
Maurice River Township  
National Fish and Wildlife Foundation  
National Wildlife Federation  
Natural Lands Trust  
New Jersey Audubon  
New Jersey Conservation Foundation  
NJDEP  
NOAA  
Normandeau Associates, Inc.  
PA Environmental Council  
PA Horticultural Society  
PA Sea Grant  
Pennsylvania DEP  
Partnership for the Delaware Estuary

Pennsylvania Environmental Council  
Philadelphia Water Department  
Pinchot Institute for Conservation  
Pinelands Preservation Alliance  
PSEG  
Sovereign Consulting Inc.  
The Academy of Natural Sciences Drexel U  
The Nature Conservancy  
The Wetlands Institute  
Tidewaters Gateway Partnership Inc.  
TTF Watershed Partnership  
U.S. Fish and Wildlife Service  
University of Delaware, Del Geol Survey  
Ursinus College & DCVA  
US EPA (Region 2, Region 3)  
US Fish & Wildlife Service  
USDA Natural Resources Conservation Service  
USFWS  
West Chester University  
Wetlands Research Services  
WRA/DRB

**70 Organizations**



# Key Topics

## Initial Expert Workshops

- Green Jobs
- Oyster restoration
- Climate Change
- Green Infrastructure
- Effectiveness of BMPs
- Experiential learning
- High schools and universities
- Advocacy education
- Municipalities and the agriculture community
- Value of ecosystem services
- Databases and inventories
- Prioritizing/targeting places
- Storytelling



Photo Credit: Spencer Roberts, PDE

# Workshop Series: Climate Vulnerability Assessment

- **Purpose:**

1. *Reflect on progress made in previous CCMP Expert Workshops*
2. *Provide additional feedback on draft objectives and strategies*
3. *Assess the impacts of climate change to draft strategies through a vulnerability assessment*



# Workshop Series: Climate Vulnerability Assessment

- **Risk Identification:** Review potential risks through evaluating climate change stressors
  - *Warmer Summers*
  - *Warmer Winters*
  - *Warmer Water*
  - *Increasing Drought*
  - *Increasing Storminess*
  - *Sea Level Rise*
  - *Ocean Acidification*
  - *Salinity Change*
  - *Other*
- **Risk Analysis:** Rank risks on a qualitative scale to review effects on associated strategies by factoring in the following parameters:
  - *Consequence*
  - *Likelihood*
  - *Spatial Extent of the Impact*
  - *Time Horizon*

Being Prepared for Climate Change  
A Workbook for Developing  
Risk-Based Adaptation Plans



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# Climate Vulnerability Assessment Worksheet Example

## Elements:

- Organizational Strategy
- List of Climate Stressors (vetted by participants)
- Risks (vetted by participants)
- Ranking, a-c, of severity of each column
  - a: non-existent, mild; unlikely, site-specific, happening in the future
  - b: moderate; somewhat likely; regional; 10-30 years
  - c: severe; very likely; happening everywhere; occurring now

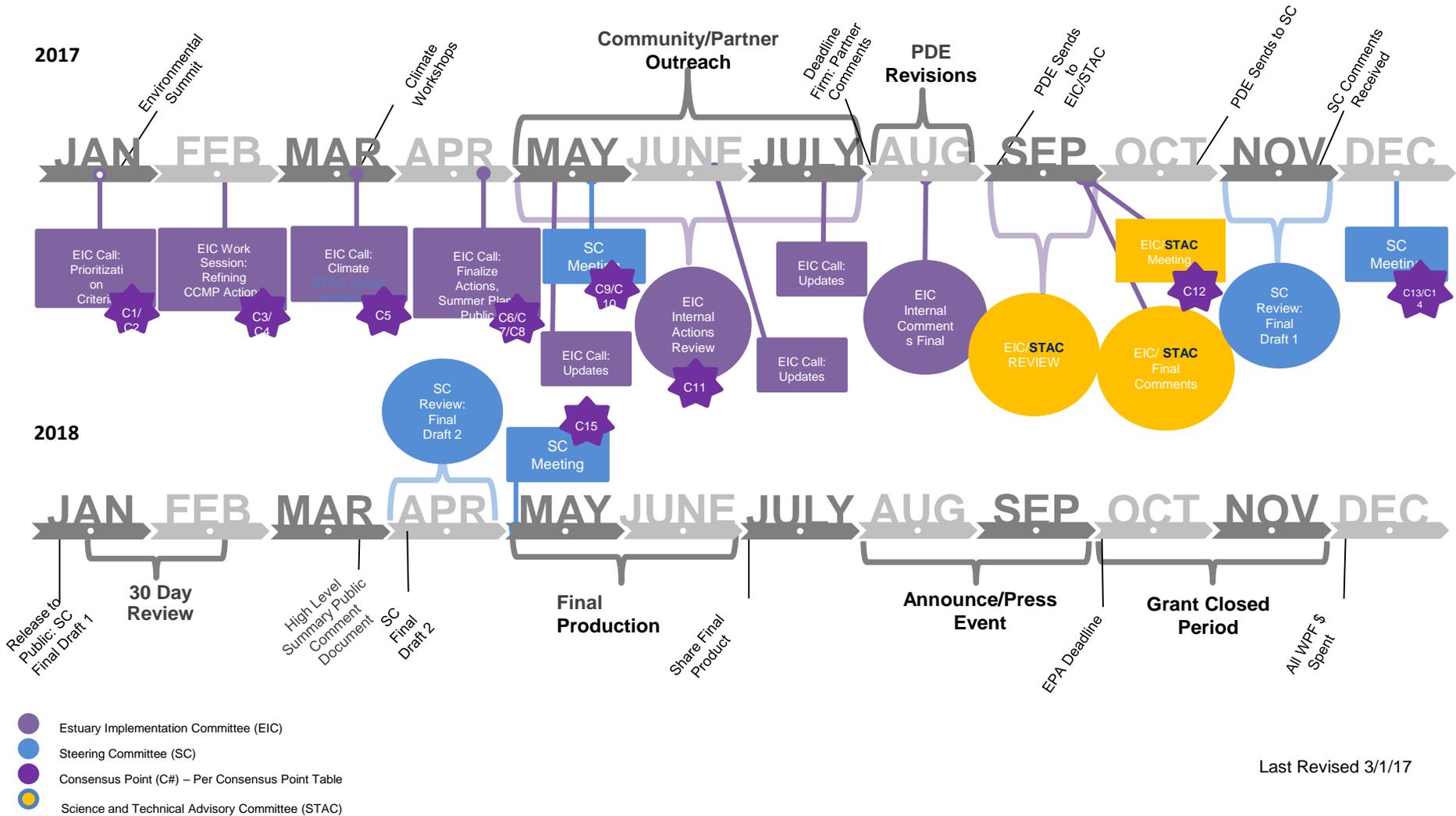
Goal W1: Reduce Toxic Pollution and Its Impacts - W1.1						
Organizational Strategies	Climate Stressor	Risk	Consequence (a-c)	Likelihood (a-c)	Spatial Extent of Impact (a-c)	Time Horizon (a-c)
W1.1 Conduct outreach and technical assistance programs to reduce non-point source of toxins and other hazardous substances	Warmer Summers	Increased number of high heat days may impact the days available for activities like storm drain marking and river cleanups	a	a	c	c
	Warmer Winters					
	Warmer Water					
	Increasing Drought					
	Increasing Storminess	May impact the days available for activities like storm drain marking and river cleanups	a	a	c	c
	Sea Level Rise					
	Ocean Acidification					
	Salinity Change					

# Next Steps

- **Climate Vulnerability Assessment Workshop Summary Document (April-May 2017)**
  - Will be posted on [ccmpexpertworkshops.eventbrite.com](https://ccmpexpertworkshops.eventbrite.com)
    - Can also view:
      - *Core Elements Document*
      - *Expert Workshop Summary*
- **Community and Partner Workshops (June-Sept. 2017)**
  - Invited workshops/meetings ( < half day)
  - Presentations at group-specific meetings
  - One-on-one meetings



# Comprehensive Conservation Management Plan Revision Timeline





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# Let's Collaborate

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