

# 2019 CCMP ADDENDUM: MONITORING INVENTORY AND NEEDS ASSESSMENT FOR THE DELAWARE ESTUARY

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Delaware Estuary Program (DELEP) Overview

The Comprehensive Conservation and Management Plan (CCMP)

### **ASSESSMENT AND REPORTING**

Technical Report for the Delaware Estuary and Basin (TREB)

TREB Overview

Environmental Indicators

1. *Watersheds and Landscape*
2. *Water Quantity*
3. *Water Quality*
4. *Sediments*
5. *Aquatic Habitats*
6. *Living Resources*
7. *Climate Change*
8. *Restoration*

Baseline CCMP Tracking

Tracking Process and Participating Organizations

Performance Measures & Key Deliverables

*Clean Waters*

*Strong Communities*

*Healthy Habitats*

### **MONITORING COORDINATION AND TRACKING**

CCMP Monitoring Approach

Annual Work Plan and GPRA Reporting

Regional Monitoring and State of the Estuary Reporting

Future Monitoring Approach (annual meetings of STAC/MACC, State of the Estuary reporting, monitoring workshops)

**INVENTORY OF CURRENT LONG-TERM MONITORING PROGRAMS (2019 Baseline Monitoring Inventory activities to be labelled with corresponding CCMP strategies)**

1. Water
  - 1.1 *Nutrients*
  - 1.2 *Water Quality*
  - 1.3 *Inorganics*
  - 1.4 *Organics*
  - 1.5 *Chemical/Chemistry*
  - 1.6 *Toxicity*
  - 1.7 *PCBs/Pesticides*
2. Living Resources
  - 2.1 *Animals*
  - 2.2 *Vegetation*
  - 2.3 *Microbiological*
  - 2.4 *Biological*
3. Habitats
  - 3.1 *Physical*
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  - 3.6 *Geology*
  - 3.7 *Buffer*
  - 3.8 *Atmospheric*

NOAA Environmental Response Management Application (ERMA) and the Delaware Estuary Monitoring Inventory

**PRIORITIZATION OF FUTURE MONITORING**

Engagement of Monitoring Experts for Gap Analysis

Pre-workshop Monitoring Survey and Baseline Monitoring Inventory

Monitoring Workshop Summary and Results

Monitoring Workshop Participant Recommendations

Integration of Monitoring Expert Input

Prioritization and Ranking of Monitoring Parameters (e.g., living resources, habitat, water monitoring)

CCMP and TREB Action Comparison Matrix

CCMP-TREB Strategy Nexuses

TREB Outliers & Potential Future CCMP Needs

**GAP ANALYSIS SUMMARY** (Analysis will include review of monitoring workshop and survey results compared against CCMP v TREB matrix to produce list of priorities. To be completed by PDE staff with peer review from STAC and EIC)

**PRIORITIZATION OF MONITORING NEEDS** (Section to include 'top ten' list of future monitoring needs determined through Gap Analysis and prioritization using 2006 White Paper on Status and Needs of Science in the Delaware Estuary approach)

### REFERENCE DOCUMENTS

APPENDIX A: Delaware Estuary Monitoring Inventory (available as Excel Worksheet download or Google Sheets link)

APPENDIX B: Monitoring Survey and Workshop Results Summary Report (March 2019)

APPENDIX C: NOAA ERMA Delaware Estuary Monitoring Inventory layer

APPENDIX D: 2019 Revised CCMP for the Delaware Estuary

APPENDIX E: 2017 Technical Report for the Delaware Estuary and Basin (TREB)

APPENDIX F: 2019 Baseline Monitoring Inventory

APPENDIX G: CCMP versus TREB Action Comparison Matrix