

# ***Metedeconk River Watershed Protection & Restoration Plan***

***NJDEP 2018 Barnegat Bay Watershed  
Water Quality Restoration Grants  
Public Information Session***

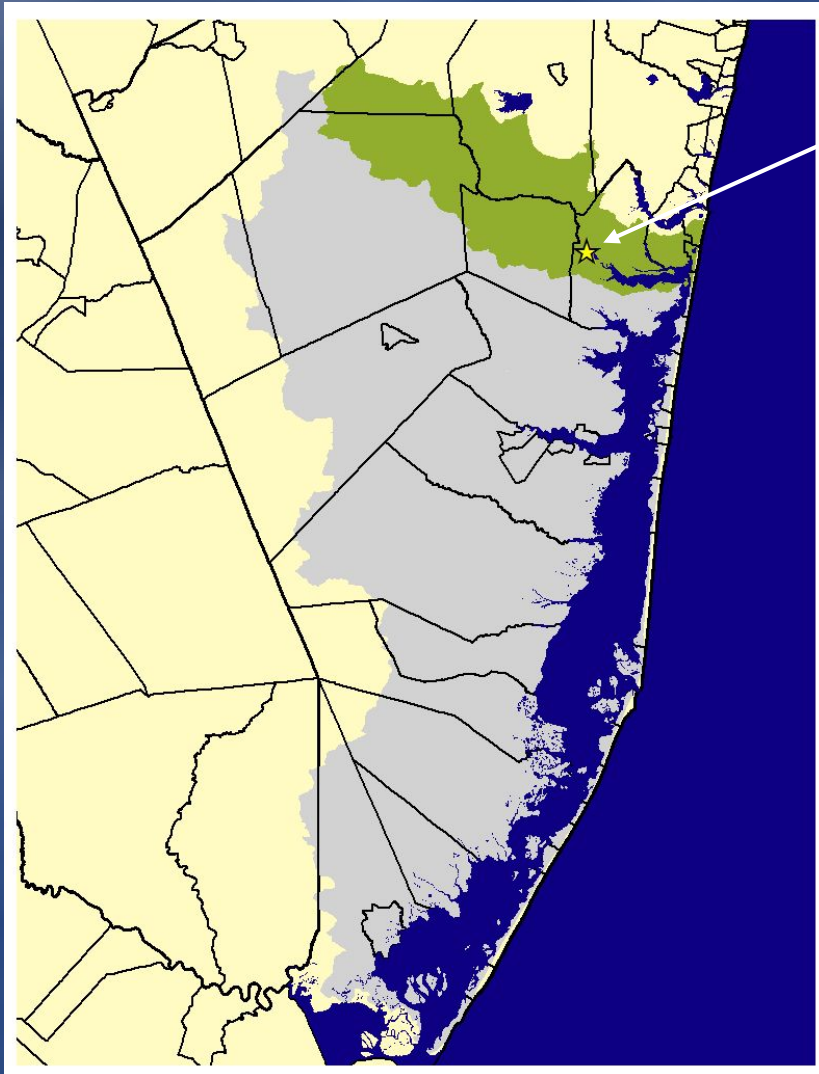
# ***Brick Township MUA***

- **Metedeconk River is BTMUA's primary water supply source**
  - **Supplies approximately 70% of total source water**
  - **Brick Reservoir filled from Metedeconk River intake**

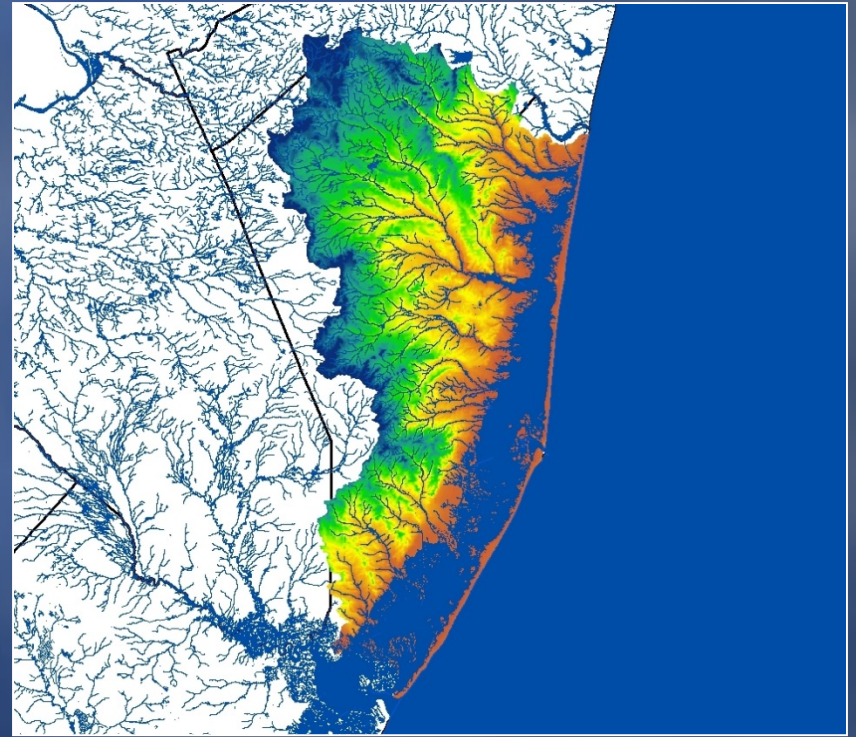




# BTMUA and Metedeconk Watershed in Relation to the Barnegat Bay Watershed



BTMUA



# ***Metedeconk River Watershed Protection & Restoration Plan***

## **Project Overview**

- **Funded by the New Jersey Department of Environmental Protection's Watershed Restoration Program**
  - **\$666,000 grant from NJDEP**
    - **\$200,000 for plan development**
    - **\$466,000 for implementation of highest-priority projects identified in the plan**
  - **\$91,500 BTMUA in-kind match (staff time, project management, lab testing, education and outreach program)**



## *Project Overview (cont'd)*

- **Main project goals:**
  - **Preserve the Metedeconk River as a viable water supply source for the region**
  - **Protect the health of the Barnegat Bay estuary**
  - **Reduce NPS pollution, eliminate water quality impairments, address TMDL's, and attain compliance with the surface water quality standards throughout the watershed**
  
- **Project results in formal plan**
  - **Strategy for Metedeconk watershed protection & restoration**
  - **Prioritized listing of projects/management actions that can be carried out by any of the stakeholders**



# ***Past Metedeconk Watershed Protection Efforts***

## **□ BTMUA**

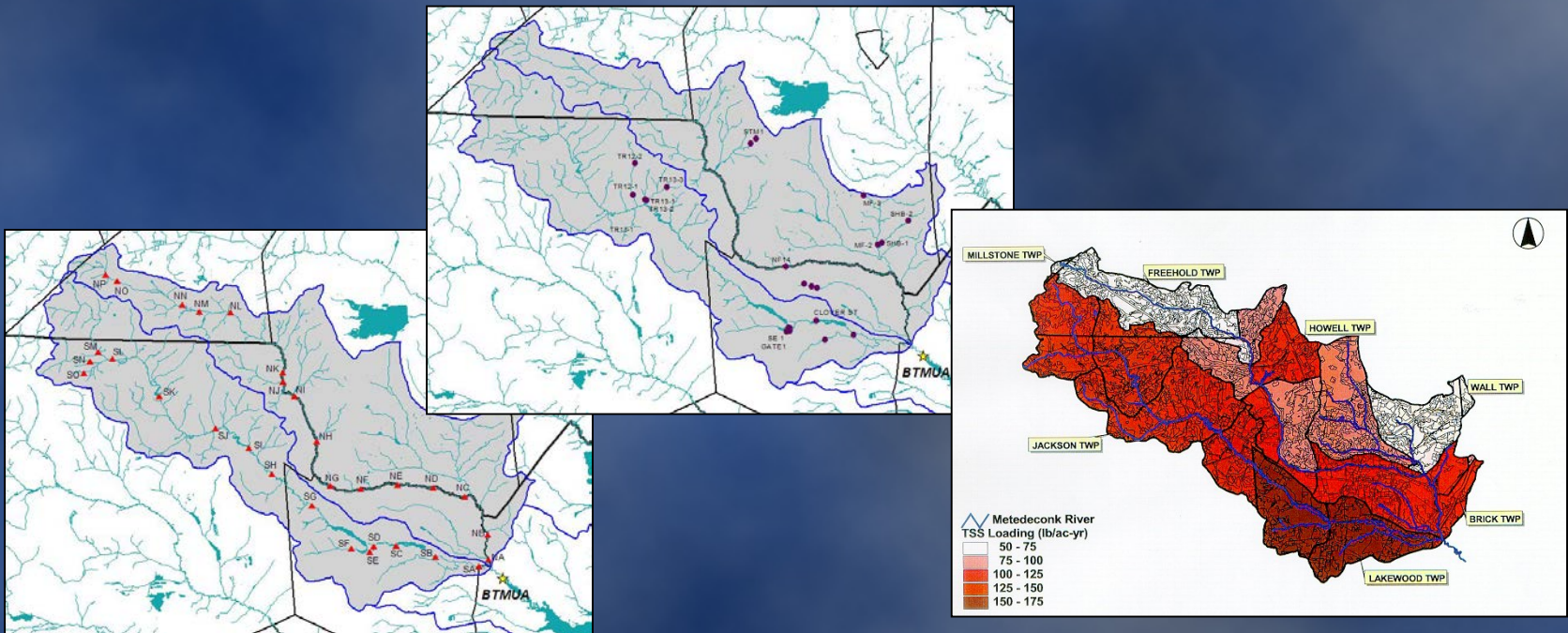
- Preliminary Metedeconk River Watershed Study (1989)**
- Metedeconk River Watershed Management Plan Phase I: Watershed Characterization and Preliminary Analysis (2000)**
- Trust for Public Land Source Water Stewardship Project (2003)**

## **□ OTHERS**

- NJDEP TMDLs (fecal coliform, total coliform, phosphorus)**
- Phase I Diagnostic – Feasibility Study of Lake Carasaljo (Lakewood Township, 2005)**
- Barnegat Bay Comprehensive Conservation and Management Plan – Barnegat Bay NEP (2004)**
- Barnegat Bay NEP Strategic Plan 2008-2011 (BBP, 2008)**
- Barnegat Bay 2020 – A Vision for the Future of Conservation (Trust for Public Land; 2008)**

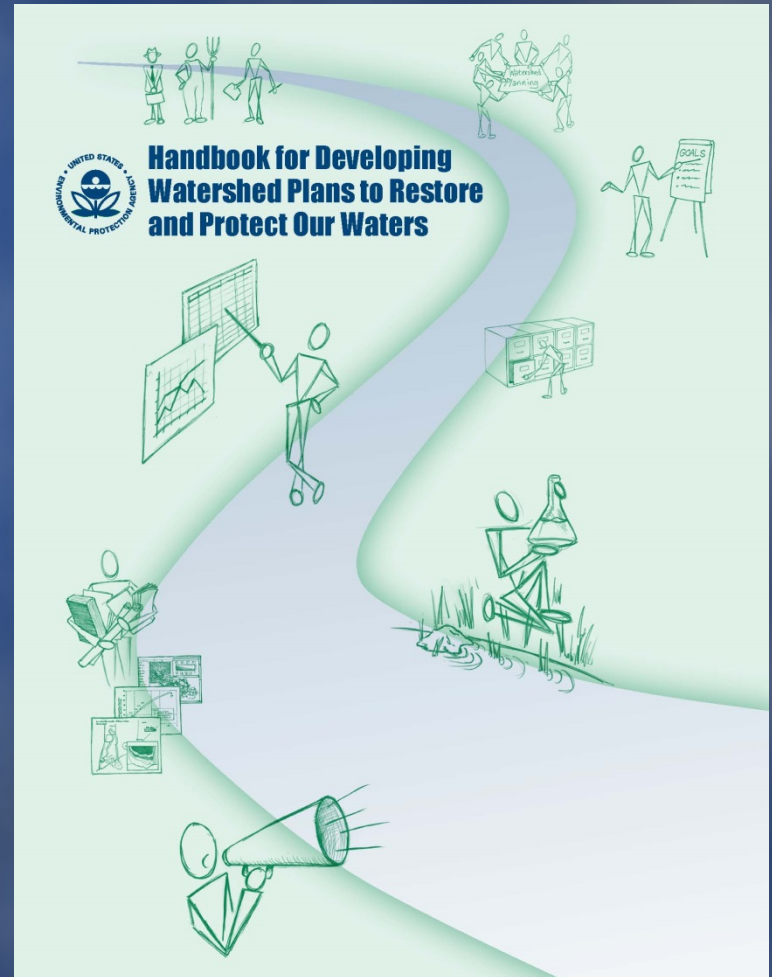
# Water Quality Monitoring

- Extensive water quality database dating back to ~1998
  - Samples collected throughout the watershed
  - State-certified lab onsite
  - Readily enabled BTMUA to evaluate/update water quality trends



## *Project Overview (cont'd)*

- **Plan must follow USEPA watershed plan guidance**
- **Nine (9) minimum elements of watershed plans:**
  1. **Identification of causes of impairment and pollutant sources**
  2. **Estimates of load reductions expected**
  3. **Description of NPS management measures needed**
  4. **Technical and financial assistance needed**
  5. **Public information/education component**
  6. **Schedule for implementation**
  7. **Interim measurable milestones**
  8. **Criteria to determine whether load reductions are being achieved**
  9. **Water quality monitoring component**

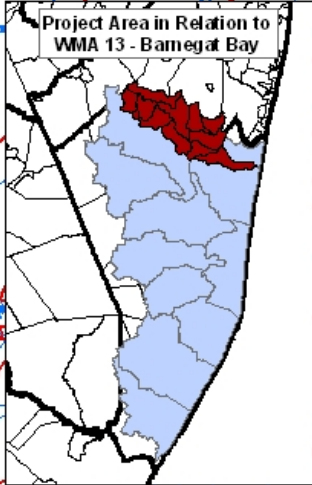
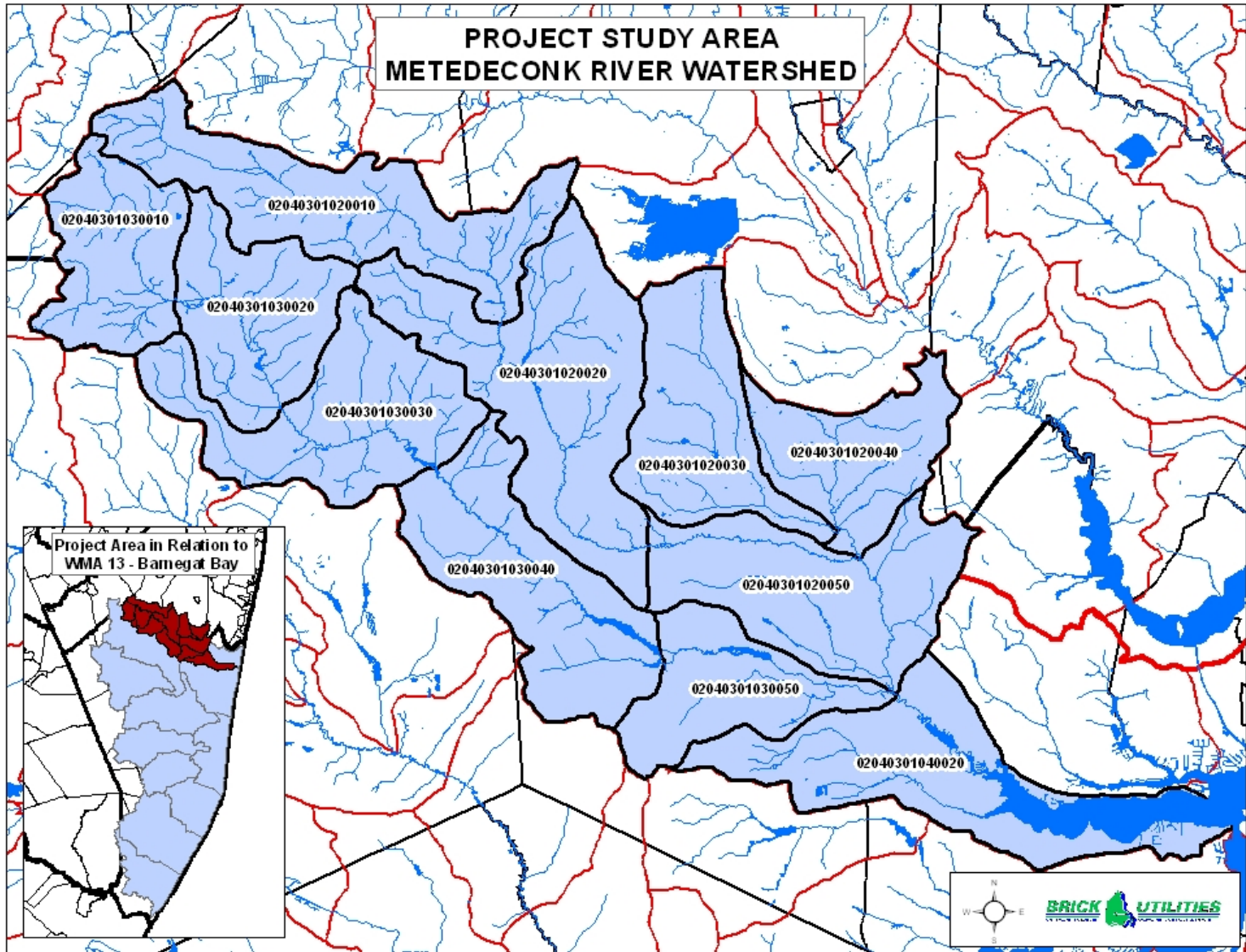




# ***Project Tasks***

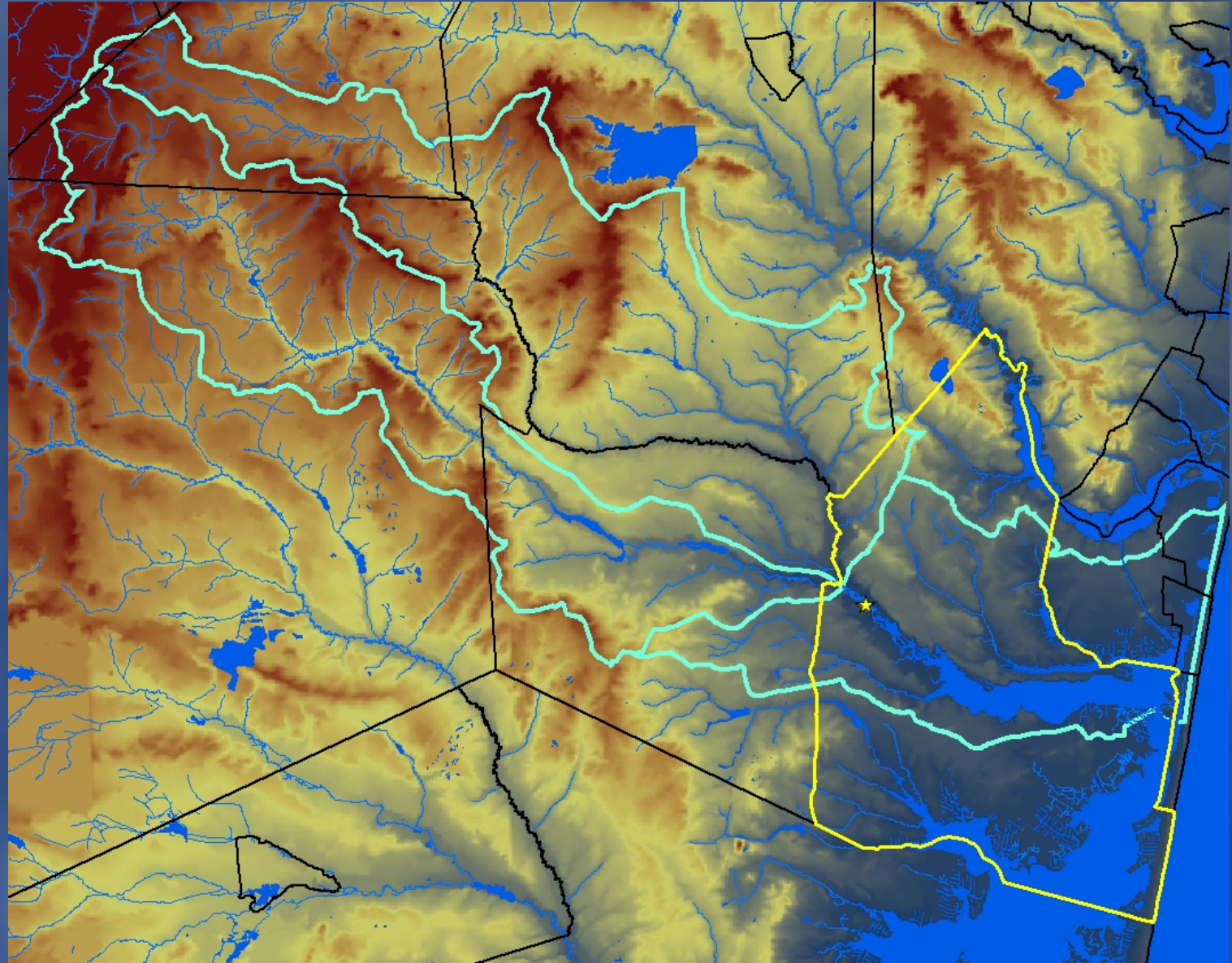
- ❑ **Task 1 - Stakeholder Advisory Committee**
- ❑ **Task 2 - Visual Assessment Project Plan (VAPP)**
- ❑ **Task 3 - Watershed Technical Analysis**
- ❑ **Task 4 - Set Plan Objectives**
- ❑ **Task 5 - Identification of Watershed Management Strategies**
- ❑ **Task 6 - Education and Outreach Program**
- ❑ **Task 7 - Quality Assurance Project Plan (QAPP)**
- ❑ **Task 8 - Development of the Metedeconk River Watershed Protection and Restoration Plan**
- ❑ **Task 9 - Development of Conceptual Design Plans**
- ❑ **Task 10 - Final Report**
- ❑ **Task 11 – Plan Implementation (Phase 2, scope of work)**

# PROJECT STUDY AREA METEDECONK RIVER WATERSHED





# Metedeconk Watershed



# The Stakeholder Process

## Metedeconk Stakeholder Advisory Committee

- Stakeholder Advisory Committee formed
- Participants enlisted through multiple avenues (formal letters, email lists, newsletter articles, press release, phone calls, references, etc.)
- SAC role:
  - Explore issues and local concerns
  - Guide plan development and prioritize problems and strategies
  - Provide critical analysis of the project's progress and direction
  - Six meetings held at key stages of project
- *Project team put considerable effort towards engaging the watershed stakeholders*





# ***The Stakeholder Process***

## ***Metedeconk Stakeholder Advisory Committee***

- **Most important was a *diverse and representative* group**

- Federal & State agencies
- Academia
- Municipal representatives
- Water/wastewater utilities
- Monmouth & Ocean Counties
- NGOs
- Barnegat Bay Partnership
- Agriculture
- Developers & businesses
- Interested citizens

- **Committee input vital to the success of project**

- **Result is plan built consensus that is broadly supported**

# Stream Visual Assessments

- 90 mi<sup>2</sup> Metedeconk watershed planning area
  - Difficult (or impossible) to identify all sites in need of stormwater BMPs or restoration
- NJDEP had found that field evaluation is more effective for identifying restoration sites than more sophisticated testing/modeling
- Stream visual assessments were used to provide a “sampling” of watershed sites for the plan
- Metedeconk visual assessment protocol customized from USDA/NRCS & Rutgers Extension Water Resources Program protocols
- Visual Assessment Project Plan approved by NJDEP
- SVAs were very effective in identifying restoration sites (add'l. sites came from stakeholders and BTMUA records)
- Interns assisted BTMUA staff with field work
- Plan includes additional SVAs on an ongoing basis





# Quality Assurance Project Plan (QAPP)

- QAPP is required for monitoring data collection
- Metedeconk watershed plan QAPP was designed to include:
  1. BTMUA's ambient water quality monitoring; and
  2. Wet weather monitoring of new stormwater BMPs to assess performance
- BTMUA designed QAPP to be easily updatable
  - Test parameters / methods / materials typically not expected to change – outlined in QAPP narrative section
  - Maps and sample sites will change (e.g., new BMPs installed, add/remove ambient sites, etc.) – listed as appendices to facilitate QAPP updates

# Education & Outreach Plan

- **Public education and outreach is critical component of watershed planning**
  - **Build awareness and stewardship for local water resources**
  - **Initiate action and/or behavior change**
- **Subcommittee formed for Education & Outreach Plan**
  - **Educators and local stakeholder organizations with highly regarded environmental programs**
- **The Metedeconk project team drew extensively from the group's collective experience and expertise to identify:**
  - **Target audiences**
  - **Important messages to be communicated**
  - **Best approaches to get messages across**
- **Metedeconk outreach work is closely linked in with Barnegat Bay Partnership Communication and Education Committee**



# Summary and Closing Thoughts

- **Metedeconk Watershed Plan is built upon previous BTMUA watershed monitoring and management work**
  - **Additional time and resources for watershed characterization and monitoring may be necessary in other watersheds**
- **The Barnegat Bay region has excellent resources and committed stakeholders to support watershed planning (BBP/NEP)**
- **Stakeholder involvement must continue beyond the planning phase into plan implementation**
  - **Plan implementation will be a long-term process**
  - **An organization that can take a lead role over the long-term is helpful**
- **BTMUA has had a great experience working with NJDEP staff on the grants and watershed planning & implementation process**
- **Implementation challenge: Sometimes BMP projects that appear straightforward have hidden obstacles that are not apparent without more detailed engineering and/or survey work**

# Questions?

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