

# Regulatory Background

A white egret stands in a body of water, its long neck curved upwards. The background is a clear blue sky and a distant shoreline with green vegetation. The water is a deep blue, and the egret's reflection is visible in the shallow water.

**Mike Randall**  
**Department of Environmental**  
**Quality**  
**NC Division of Energy,**  
**Mineral and Land Resources**  
**[mike.randall@ncdenr.gov](mailto:mike.randall@ncdenr.gov)**  
**(919) 807-6374**

**Photo by Vance Miller**

# Regulatory Background

- Federal Clean Water Act
  - Safe Drinking Water Act
  - National Estuary Program
  - Coastal Zone Management Act
  - North American Wetlands Conservation Act
  - Endangered Species Act.
- State Programs or Rules

It is important to develop partnerships with federal, state, and local agencies to ensure that your management plan fully considers these programs.



# National Pollutant Discharge Elimination System (NPDES)

- NPDES address point sources of pollution (Wastewater)
- NPDES permits also cover general discharge over an area
  - Construction sites
  - Industrial sites (industrial activities)
- Municipal Separate Storm Sewer Systems (MS4s)

Permits issued due to stormwater should be identified in the management plan and the management plan should consider incorporating retrofits or restoration efforts at sites or within local governments with NPDES



# Impaired Waters

- CWA establishes use designation classifications and existing uses
- Waters are IMPAIRED if they are degraded
- Each state is required to have a list of designated uses
  - Examples include shell fishing, swimming
- States are required to list the impaired water body on the Section 303(d) list

It's important to identify the designation of the waterbody(s) and what the existing uses are and incorporate reaching, maintaining, or exceeding standards for the existing use classification within a management plan.



# North Carolina

- DEQ Division of Water Resources is responsible for surface water use classification
- Local governments are able to implement more stringent land or water protection regulations



It is important to confer with local agencies when determining a water body's uses.

**North Carolina Primary Use Classifications**

|            |   |
|------------|---|
| <b>SA</b>  | Commercial Shellfishing   |
| <b>SB</b>  | Class SC and Primary Recreation in tidal salt water                 |
| <b>SC</b>  | Aquatic Life, Secondary Recreation, and Fishing in tidal salt water |
| <b>SWL</b> | Coastal wetlands  |

**Supplemental Use Classifications**

|                   |  |
|-------------------|--|
| <b>HQW</b>        | High Quality Waters                                  |
| <b>ORW</b>        | Outstanding Resource Waters                          |
| <b>NSW</b>        | Nutrient Sensitive Waters                            |
| <b>CA</b>         | Critical Area  |
| <b>UWL</b>        | Unique Wetland                                       |
| <b>+, @, #, *</b> | Special Designations (variable based on river basin) |

**EPA Standard Water Quality Reporting Categories used by most States**

|                                |  |
|--------------------------------|--|
| <b>Category 1</b>              | All designated uses are supported; no use is threatened  |
| <b>Category 2</b>              | Available data and/or information indicate that some, but not all of the designated uses are supported   |
| <b>Category 3</b>              | There is insufficient available data and/or information to make a designated use support determination   |
| <b>Category 4<br/>IMPAIRED</b> | Available data and/or information indicate that at least one designated use is not being supported or is threatened, but a TMDL is not needed (three subcategories 4a, 4b, 4c exist within Category 4) |
| <b>Category 5<br/>IMPAIRED</b> | Available data and/or information indicate that at least one designated use is not being supported or is threatened, and a TMDL is needed; required to be listed on the 303(d) list                    |

# Total Maximum Daily Load (TMDL)



- Section 303(d) of the CWA requires states to develop TMDLs for impaired waters
- A TMDL is the total maximum daily load of a given pollutant that a water body can receive and still meet water quality standards
- The TMDL accounts for all pollutant sources (point, nonpoint, and background), a margin of error, and the potential for future growth
- The TMDL findings help devise action plans necessary to meet water quality standards by identifying and quantifying the individual sources contributing to a particular water quality problem



# Total Maximum Daily Load (TMDL)

- The EPA maintains a database of water quality assessments and TMDL information
- Each state maintains its own list of completed TMDL studies
- TMDL studies are costly, time consuming, and ultimately result in the necessity of an developing a watershed management plan
- Proactive communities can take measures and develop watershed management plans for waters that have a completed TMDL or are on the 303(d) list

There is a potential to prevent further ecological, health, and economical damage. Successful watershed management plans can mitigate the need for a TMDL study.

# CWA Section 319 Grant Program

- Section 319 establishes the Nonpoint Source Management Program
- Provides guidance for pollution management programs
- Provides grant money to support various activities
- Funds are awarded to the state by the EPA once the state's funding plan has been approved
- Final funding decisions are made by the state



# Section 319 Funding

- In North Carolina, 319 Funding is managed by the NPS Planning Section in DEQ Division of Water Resources (DWR)
- DWR announces Request for Proposal (RFP) on an annual basis
- The RFP will contain detailed requirements and guidelines
- In North Carolina plans must include the nine EPA watershed restoration plan elements



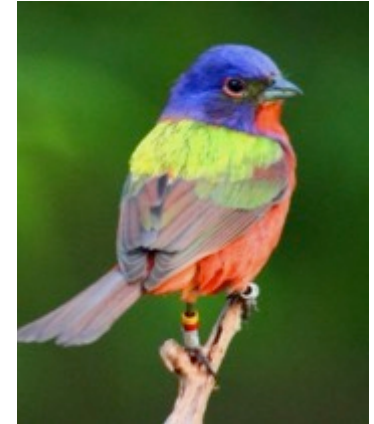
# EPA Guidance for Watershed Plans

- Handbook for Developing Watershed Plans to Restore and Protect Our Waters
- Detail guidelines
- Nine minimum elements that watershed plans must contain

It is useful to refer to the EPA handbook when developing a watershed management plan to gain a better understanding of each of the nine elements. There are a handful of states with state specific guides that include resources and regulation information specific to that state that should be utilized along with this guidebook

# Re-Categorizing Impaired Waters

- In the event that a TMDL study has not yet been completed, it is possible to develop a watershed management plan that is comprehensive and can result in the water body being re-categorized as **Category 4b**
- Impaired but have pollution control measures in place to resolve the pollution problems
- Do not require a TMDL
- EPA reviews on a case-by-case basis
- State policies to re-categorize water bodies must be stringent enough to justify that pollution control requirements are capable of improving water quality in a reasonable amount of time





### Six Elements to Meet Category 4b Categorization

|   |   |
|---|---|
| 1 | Identification of segment(s) and statement of problem causing the impairment(s)   |
| 2 | Description of the pollution controls and how they will achieve WQS, including a description of the pollutant loads needed to meet WQS and a description of the requirements under which the controls will be implemented |
| 3 | An estimate or projection of the time when WQS will be met  |
| 4 | Schedule for implementing pollution controls  |
| 5 | Monitoring plan to track effectiveness of pollution controls  |
| 6 | Commitment to revise pollution controls, as necessary   |

- In North Carolina, DWR regulates Category 4b categorization.
- In addition to including the six elements for re-classification, DWR requires that a number of additional requirements be met to demonstrate that re-categorization is appropriate.

# Shellfish Harvesting Water Quality Standards

- Shellfish are filter feeders
  - Concentrate bacteria
  - Stricter standards than for those for swimming advisories
  - Potential for serious health issues (shellfish are often eaten raw)
- Shellfish waters
  - If closed to harvest on a conditional or permanent basis
  - Classified impaired by DEQ and EPA

# National Shellfish Sanitation Program (NSSP)



- U.S. Food and Drug Administration (FDA) Regulate commercial shellfish sold for human consumption
- NSSP works in partnership with state sanitation agencies
  - Develop uniformity in sanitation regulation to minimize the risk of disease
  - NSSP sets minimum qualifications
  - Shellfish sanitation regulations vary from state to state



# North Carolina Division of Marine Fisheries (DMF) Shellfish Sanitation

- Monitor bacteria levels in coastal waters
- Authority to close waters to shell fishing and issue swimming advisories
- Over a thousand stations for shell fishing
- 240 stations for swimming



## North Carolina Shellfish Sanitation Growing Area Classifications

|  |  |
|--|--|
| <b>Approved</b>                                      | These areas are always open to shellfish harvesting and close only after rare heavy rainfall events such as hurricanes. The median fecal coliform Most Probable Number (MPN) or geometric mean MPN of water shall not exceed 14 per 100 milliliters, and the estimated 90th percentile shall not exceed an MPN of 43 per 100 mL for a five-tube decimal dilution test.   |
| <b>Conditionally Approved-Open Shellfish Areas</b>   | Sanitary Survey indicates an area can meet approved area criteria for a reasonable period of time, and the pollutant event is known and predictable and can be managed with a plan. These areas are open to harvest much of the year, but are immediately closed after certain sized rainfall events.  |
| <b>Conditionally Approved-Closed Shellfish Areas</b> | Sanitary Survey indicates an area can meet approved area criteria during dry periods of time, and the pollutant event is known and predictable and can be managed with a plan. This growing area classification allows harvest when fecal coliform bacteria levels are lower than the state standard in areas that otherwise might be closed to harvesting. These areas are regularly monitored to determine if temporary openings are possible. |
| <b>Prohibited Shellfish Harvest Areas</b>            | Sanitary Survey is not routinely conducted because previous sampling data did not meet criteria for Approval or Conditional Approved. Area may also be closed as a matter of regulation due to the presence of point source discharges or high concentrations of boats with heads.   |



# Shellfish Closure Area Information

- Data is publicly available
- Source of historical and present day information
- Enables communities
  - Research and develop plans
  - Determine what waterways are impaired
  - Determine the extent the waterway is being affected
- Communities with multiple watersheds
  - Can determine the level of impairment
  - The number of years a waterway has been impaired
  - Develop a priority list of watersheds

# Discussion and/or Questions



**Conventional Approach to  
Stormwater Management**



**Volume Matching Approach to  
Stormwater Management**

**Why treat it if you can eliminate it?**