



# NC Integrated Report Assessment Process

July 12, 2017

*NCDP Scientific Advisory Council  
Department of Environmental Quality  
Division of Water Resources*



## *Outline*

- Integrated Report Review
- Assessment Process
- Application

## *The Integrated Report*

- Required under Sections 303(d) and 305(b) of the Clean Water Act
- Summarizes the water quality status of waterbodies
- Compares water quality data to existing standards
- Requirement to report every even-numbered year

# *Integrated Report – Assessment Categories*

**1** Meeting criteria

**2**

---

**3** Inconclusive

---

**4**

**Criteria exceeded**

**303(d) List**

**5**

# *Integrated Report – Assessment Categories*

1 Meeting criteria

All assessed waters  
receive a category  
assignment

303(d)

## *Standards and Assessment Methods*

- Standards approved by NC and EPA
- Assessment Methods for 303(d) purposes approved by EMC
- EPA uses guidance and NC standards to review 303(d) list
- EPA has ultimate approval of 303(d) list

## *Current 303(d) Assessment Process*

- Assessment Criteria in **Category 5** or 303(d)
  - Defined 5-year data window
  - $N > 9$
  - Greater than 10% exceedance of numeric standard
  - Greater than 90% statistical confidence that numeric standard is exceeded in at least 10% of samples
- What if parameter/waterbody does not meet these requirements?
  - Less than 10%: Category 1 – meeting criteria
  - Greater than 10% but less than 90% statistical confidence: Category 3 – inconclusive

## *Numeric Criteria Assessment Methods*

### Example

- Example-Dissolved Oxygen
- Standard-.... “is not less than 4.0 mg/l”
  - N=60
  - 10 samples less than 4 mg/l or **16.7%** exceedance
  - Confidence in 10% exceedance=**92.65**
- Assessment Unit (water body) assessed as **Exceeding Criteria**
- Assessed in **Category 5** for Low Dissolved Oxygen- 303(d) Listing



## *How are Assessment Units (AU) Defined?*

- Stations are assessed independently
- Applied statewide
- If there are multiple stations in one assessment unit:
  - If stations result in same assessment decision, AU is not split
  - If there are differences in resulting assessment (where there are multiple stations in 1 AU), AU is split
    - Due to changes in water quality, or
    - New stations have been added
- This has been the procedure since 2004

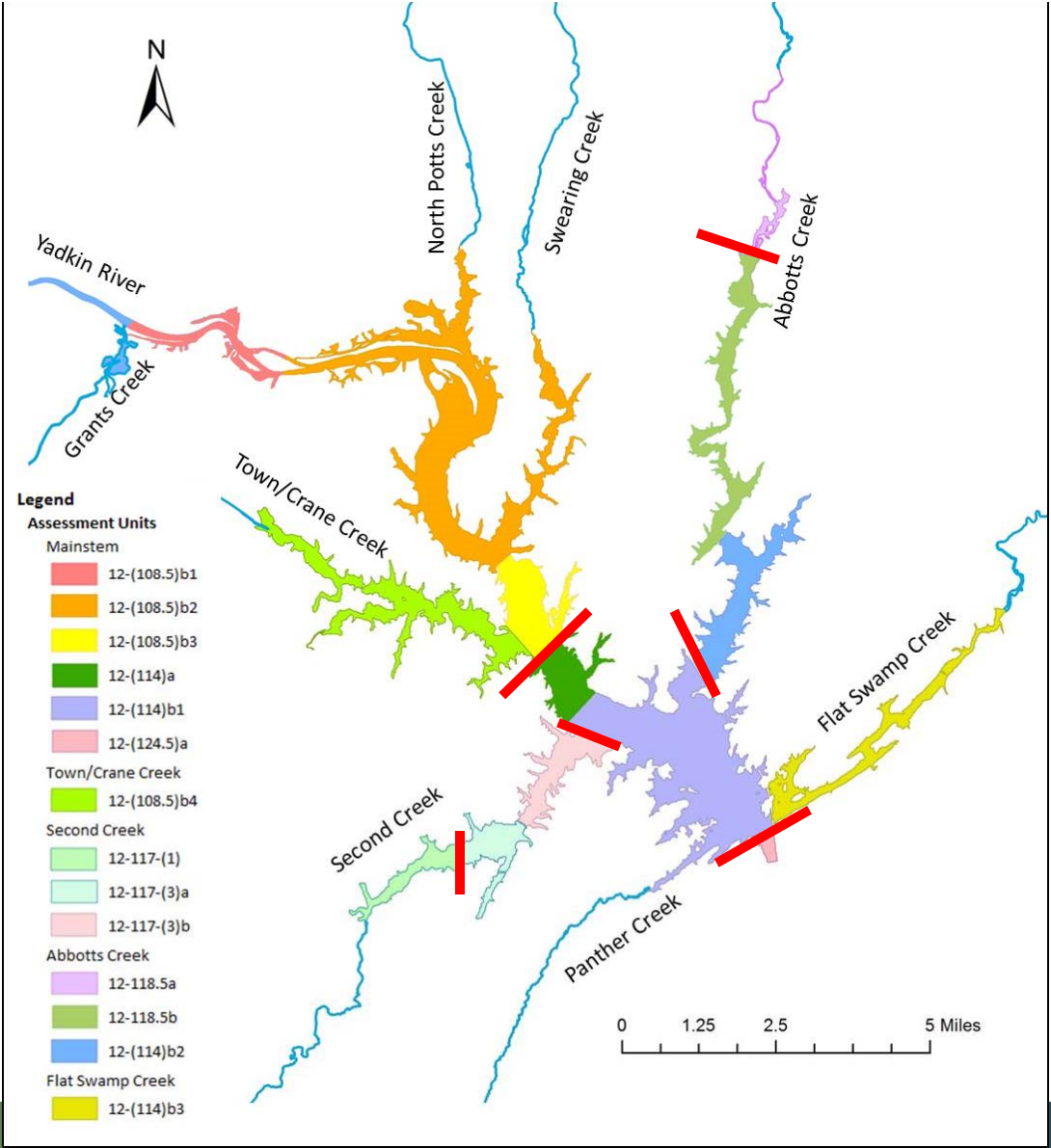


## *Why is this method used?*

- 303(d) list is a public information document with regulatory implications
- Most standards do not contain a spatial component
- **Provides transparency for public, easily reproducible**
- Identifies potential “hotspots” – guides research/planning activities
- Avoids having to make arbitrary decisions
- Avoids having to impair or rate inconclusive larger areas than necessary
- Acknowledges where waters are meeting criteria



# High Rock Example



## *What happens when a water is 303(d) listed?*

- Prior to TMDL / delisting / some other action
  - Permitted discharges may be required to monitor effluent for parameter of concern
  - If permitted discharge wants to expand, effluent concentrations may be limited to hold the current load for parameter of concern



## *What does 303(d) listing mean for application of a TMDL or Strategy?*

- Short answer: not much
- TMDLs or other similar strategies are not based on only one 303(d) listing or the data that was used for that 303(d) listing
- Compliance points are based on modeling, not the AU designations
- Management actions (such as TMDL) are based on prioritization where there is a real need for action and are usually based on a longer period of record
- Not a consent decree state – we can focus TMDL development where it is needed



*Thank you. Questions?*



*Department of Environmental Quality*

