

Clean Water Act – 303(d) and 305(b) Report

303(d) Listings/Delistings

305(b) Integrated Report

Evaluate Attainment of Water Quality Standards

- States required to submit to EPA every 2 years
- 303(d) list / delisting requires public comment and EPA approval
- Integrated Report - No requirement for public review or EPA approval

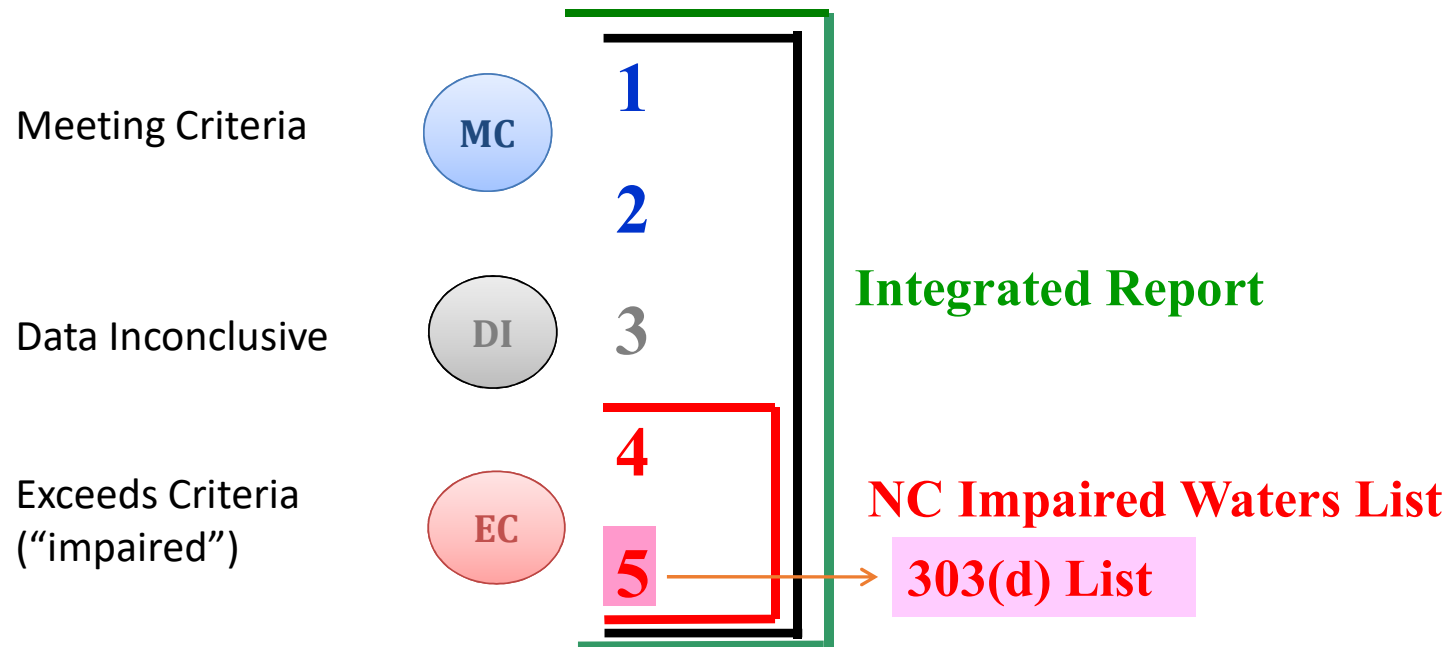
Draft 2018 303(d) List and Draft 2018 Integrated Report

Section 303(d) Clean Water Act requires states to list water bodies that do not meet water quality standards and require development of a Total Maximum Daily Load (TMDL) or management strategy.

DWR Public Comments Requested by January 18, 2019

- Draft 2018 303(d) list of Impaired Waters
- New EMC 303(d) listing and delisting methodology
- DWR's 2018 Integrated Report includes all waters
 - Falls Lake – Category 4 because it has management strategy

Integrated Reporting (IR) Categories



Changes for 2018 303(d) and IR

1. Updated data window: 2012-2016
2. Added new delisting methodology (increased rigor for delisting)
3. Added process for expanding small datasets
 - if < 10 obs expand window additional 5 years (2007-2016)
 - i.e. 10 obs in 10 years now OK
4. New methods for numerical assessment
 - easier to get on the impaired list
 - harder to get off the list
5. Assessment Unit (segmentation) issue review

- Chlorophyll concentrations are variable
Temporal, Spatially, Flow dependent, and Climate dependent
- Chlorophyll concentrations are not precise.
- Reservoirs are not natural lakes and reservoirs typically have upstream to downstream concentration gradients.
- Coves, Arms, or tributaries of reservoirs
can both receive from and contribute to the mainstem depending on flow, dam operations, morphology and hydrology.

- AU's ideally are related to limnology or geomorphology segments
- AU's ideally don't change based on variable concentrations
- AU's ideally can be related to management strategies
- Monitoring Stations should be representative of the AU
- All Stations within an AU should contribute to the Category decision
- Falls re-examination can help to educate decisions

2008

Two Segments

2002-2006

- Source to I-85
- I 85 to Dam

Entire Lake Impaired

2010

Three Segments

2004-2008

- Source to I-85
- I 85 -Panther Cr
- Panther Cr -Dam

2012

Three Segments

2006-2010

- Source to I-85
- 85 -Panther Cr
- Panther Cr -Dam

2014

Six Segments

2008-2012

- Source to I-85
- 85 -Panther Cr
- Panther-Ledge C
- Ledge Cr Arm
- Ledge Cr- Lick Cr
- Lick Cr -Dam

2016

10 Segments

2010-2014

- Source to I-85
- 85 -Panther Cr
- Panther-Ledge C
- Ledge Cr Arm
- Ledge Cr- Lick Cr
- Lick Cr Arm
- Lick Cr-New Light Cr
- New Light Cr Arm.
- Lower Barton C Arm
- New Light - Dam

2018

11 Segments

Lick Cr Arm to
New Light Cr Arm
Divided into 2 Segments
above and below Highway
50.

Falls Lake Assessment Units

Rule	2018 AU's	Stations	Description	2018 (11) Draft	2016 (10) Final	2014 (6) Final
	27-(1)	NEU013 FL85C	From source (confluence of Eno River Arm and Flat River Arm of Falls Lake) to I-85 bridge	4b	4b	4b
	27-(5.5)a	NEU013B	From I 85 bridge to Panther Creek	4b	4b	4b
UPPER	27-(5.5)b1	NEU0171B LLC01 FL6C FL10C	From Panther Cr to Ledge Creek Arm	4b	4b	4b
	27-(5.5)b2	LC01	Ledge Creek Arm	3b	3b	1b
	27-(5.5)b3	NEU018C NEU018E FL9C	From Ledge Creek Arm to Lick Creek Arm	4b	4b	3b1
	27-(5.5)b4a	LI01 LC1	Lick Creek Arm	4b	3b	
	27-(5.5)b4b1	FL50C	From Lick Creek Arm to Highway 50 Bridge	4b	1b	
	27-(5.5)b4b2	NEU019E	From Highway 50 Bridge to New Light Creek Segment	1b		
	27-(5.5)b4c	FL8C	New Light Creek Segment	1b	3b	1b
Lower	27-(5.5)b4d	NEU019L NEU019P NEU020D FLINC FL1C FL7C	From New Light Creek Seg. to Falls Dam	1b	1b	
	27-(5.5)b4e	FL11C	Lower Barton Creek Arm	3b	3b	-

Public Comment Opportunity

Public Comments due by [January 18, 2019](#)

On line Materials Include:

- Draft 2018 303(d) List
- 2018 303(d) Listing and Delisting Methodology
- Draft 2018 Integrated Report
- Integrated Report Category Assignment Procedure
- Raw Data
- Online Map

Next Steps / Timeline

1. 60 day public comment period ([January 18, 2019](#))
2. EPA submittal is required to respond to 303(d) comments only (not IR)
3. Return to EMC in March, Information Item, report on comments/responses 303(d) related
4. Submit 303(d) to EPA before end of March
5. Continue IR Process

DWR's NCDP Science Advisory Council

UPDATE

- EPA expects numeric standards for nutrients:
 - 2018 High Rock Lake
 - 2020 Albemarle Sound
 - 2021 Central Portion of Cape Fear River
- May 2015 –Nutrient SAC First Meeting
- **November 2018 most recent meeting** (~3.5 years)

SAC Objective

“The objective of the North Carolina Nutrient Criteria Development Plan (NCDP) Scientific Advisory Council (SAC) is to provide advice and recommendations to the NC Division of Water Resources (DWR) on site-specific nutrient criteria based solely on data and scientific judgments about pollutant concentrations and their effects.”

High Rock Lake
Albemarle Sound
Middle Cape Fear River

Goal

List water bodies that are impaired (protect uses)
Don't list water bodies that aren't impaired (\$\$\$\$!!!)

Problems

Even pristine systems can occasionally look impaired
due to natural (largely unmanageable) causes

Water quality data for many water bodies are sparse,
lots of uncertainty in determining whether they're impaired

Dr. Nathan Hall (NC NCDP – SAC)

SAC and NC's chlorophyll a standard

How to scientifically (reliably) define the relationship of chlorophyll-a to the protection of designated uses?

Missing, conflicting, or uncertain data and evidence to definitively answer “The Question”

What are the numeric chlorophyll-a thresholds for protecting aquatic life?

What are the numeric chlorophyll-a thresholds for protecting water supply?

What are the numeric chlorophyll-a thresholds for protecting recreation?

What are the appropriate chlorophyll-a thresholds for biological integrity?

Overly
Optimistic
Schedule

UPDATE

- New Facilitator (from TJCOG)
- Schedule for HRL -finish Chlorophyll criteria by December 3, 2018
- Final HRL document to CIC October 2019
- Discussions polarized based on idealistic vs data considerations
- **Data very limited showing chlorophyll effects on uses**
- **Data very limited demonstrating cause and effect relationships**
- Process and Framework discussions have been productive
- Episode Criteria vs Central tendency criteria debated
- Duration, Frequency, Magnitude, Spatial averaging, Impact Factors, pH, D.O., multi year averages, geometric means, toxicity, cyanotoxins.
- **Meeting two whole days – December 3, 4, 2018**
- Little Progress on consensus -
 - Several members highly resistant to “weakening” standard
 - Several members see no impairment of current uses in HRL
- Most listening to the few debate

Questions



Unrba