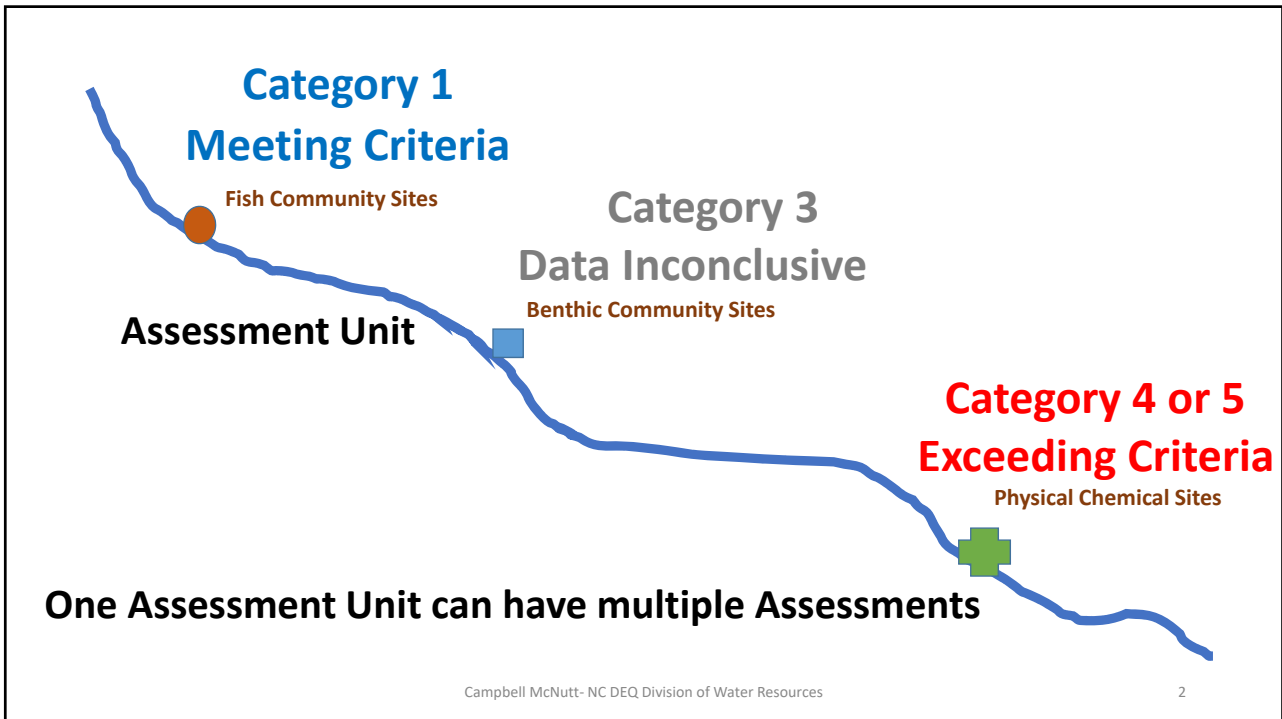




Cam McNutt March 15, 2017 WRR1

## *Alternative Approaches to Water Quality Restoration Planning*



## Integrated Reporting

- **Exceeding Criteria --Category 4 or 5 (Impaired)**
  - 1,500 in draft 2016 IR
    - Poor or Fair benthos or fish community ratings
    - Greater than 10% of samples exceeding a numeric standard
- **Meeting Criteria-- Category 1**
  - 14,500 in draft 2016 IR
    - Good or Excellent benthos or fish community ratings
    - Less than 10% of samples exceeding a numeric standard
- **Data Inconclusive—Category 3**
  - 2,000 in draft 2016 IR
    - Not Rated benthos or fish community ratings
    - Less than 90% confidence in 10% exceedances

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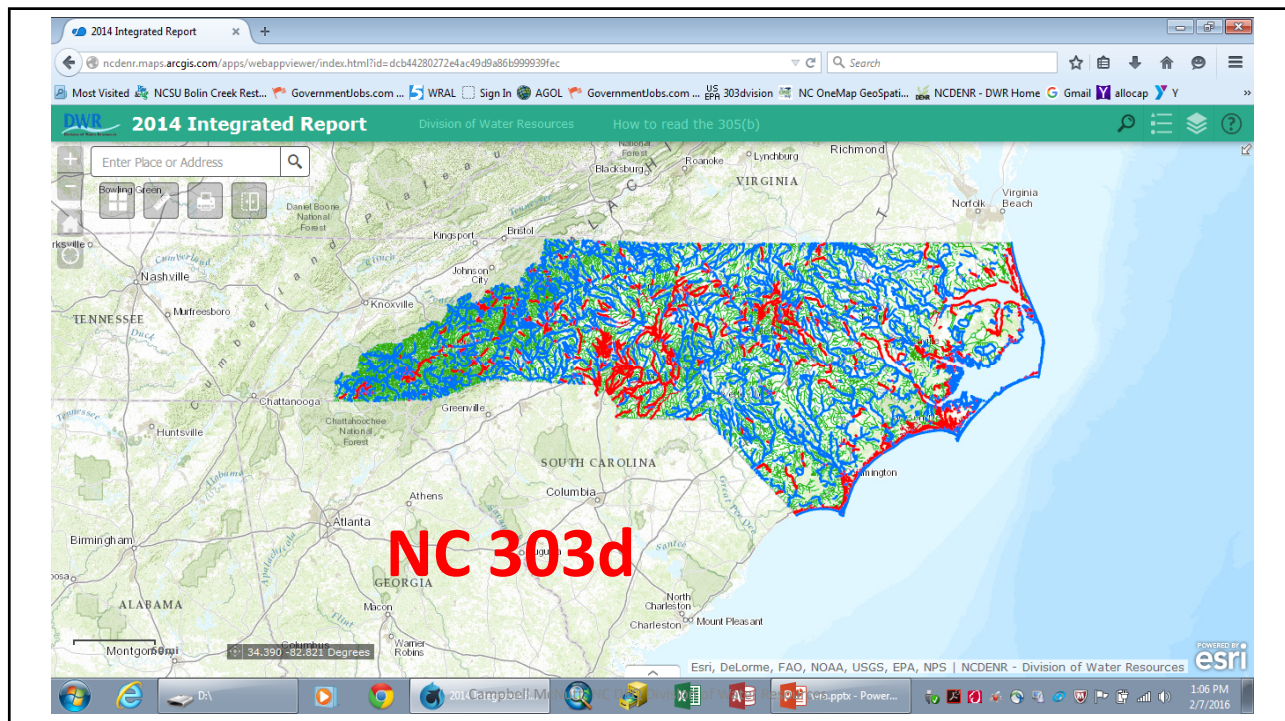
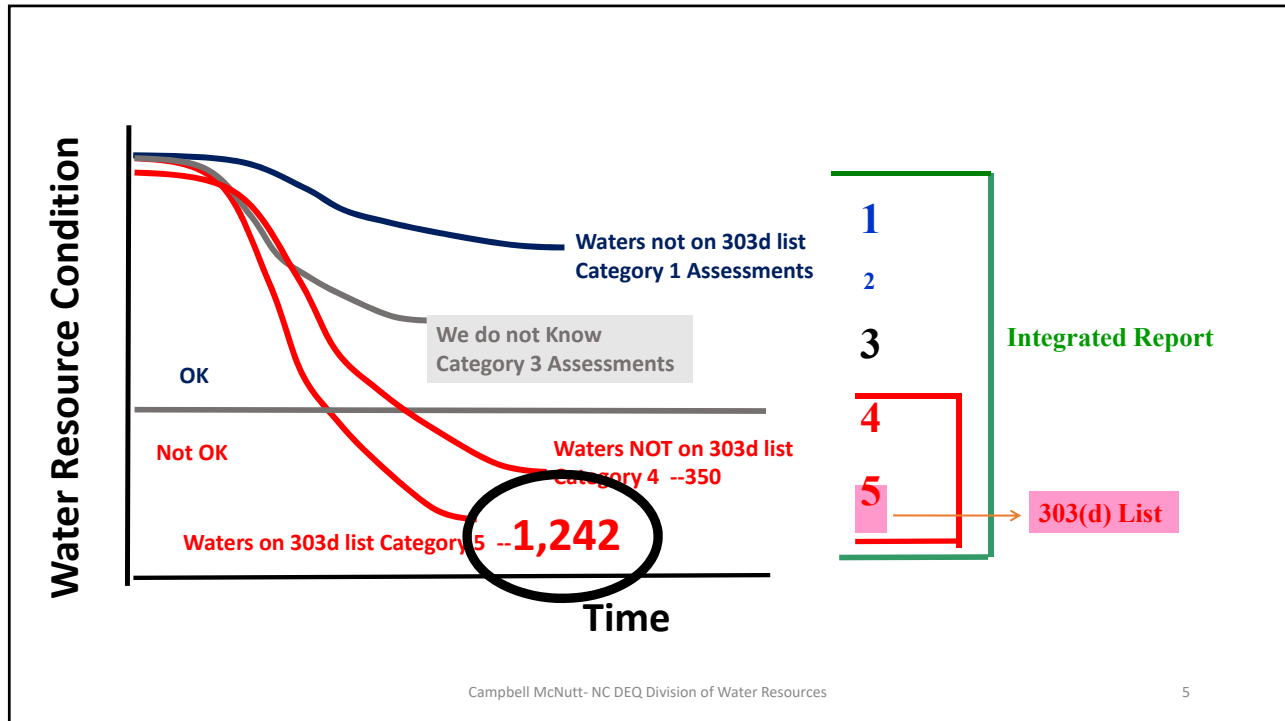
3

## Category 4 vs. Category 5

- Both assessment Categories **Exceeding Criteria**
- **No difference Water Resource Condition**
- Category 5 requires a “PLAN” per CWA
  - TMDL
  - Management Plan
- Category 4
  - “PLAN” completed/not required- but Water Resource Condition has not yet changed

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## DEQ DWR Commitment

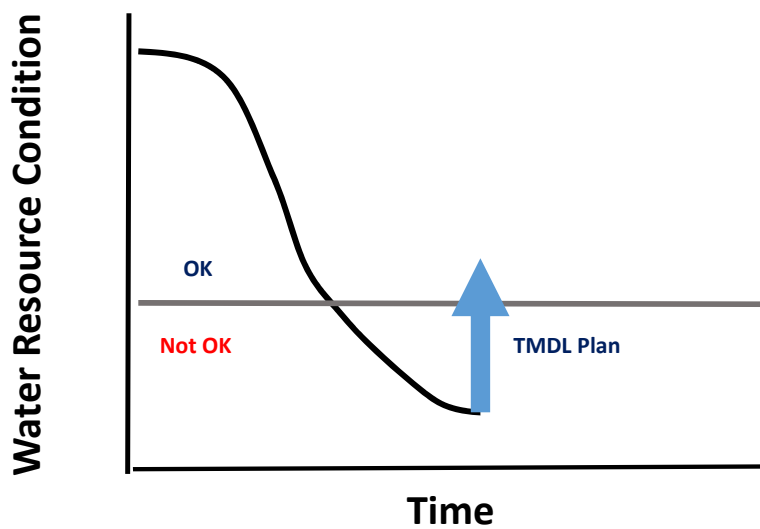
- Develop Restoration or Protection Plans for 58 waters
- Scheduled through 2022
- Protection Plans associated with State Parks
- Some TMDLs- associated with permitted facilities
- Priority Plans

**EPA WQ 27**

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## Total Maximum Daily Loads –TMDL **Category 4t**



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## 4t TMDLS

- Sets a pollutant reduction target
- Parameter specific -20% reduction in turbidity needed
- Requires EPA approval to move from Category 5 (303d waters)
- 322 TMDL assessments (AUs with a TMDL for at least one parameter)
- **92 are in Category 1t (most without documented implementation)**
- TMDLs more appropriate for permitting
- **Most Category 5 Assessments are not related to permits**

## Alternatives to TMDL Development

- **4b Management Strategy**
- **5r Priority Plan or 9-element plan**
- **4c Hydrologic Alteration Dam (if time)**

## 4b Demonstrations

- Plan to implement a Pollution Control Strategy
- Requires EPA approval to move from Category 5 (303d waters)
- Requires robust schedule of implementation (rules and money)
- Regular updates to EPA (track implementation success)
- There are 22 AUs under 4b demonstrations
- Examples in NC include
  - Falls Lake Nutrient Management Strategy
  - **Little Alamance Creek- Burlington**
  - McDowell Creek- Charlotte
  - Ore Knob- EPA superfund

## 5r (5-alt) Demonstration- New

- Priority Plan, Watershed Restoration Plan or 9-Element Plan
- Priority Plans do not have \$\$ and Rules
- Required for 319 and other funding sources
- **Delays TMDL development**
- EPA does not approve the Priority Plan –still in Category 5
- EPA does determine if the Plan will count toward DWR commitment

1

2

3

4

5

5r

## Resource Planner

- Rapid development and update of watershed plans
- Web map based information
- Integrates information from existing tools and new tools into the watershed plan
- **Improve stakeholder education and communication**
- Improve project tracking and improvements
- **Measures UPLIFT at project level temporal and spatial scales**

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## Sources and Conveyances Information Tracking

**How it gets there**

**What it is**

Conveyances

Type	Gully
Flow	
Rain	
Source	
Strength	
Note	
Method	
Coll_by	
Attachments	None

Source

- Sprayfield
- Construction
- Unknown
- Road
- Bridge
- Harvesting
- Industrial
- Commercial
- Impound
- Field
- Parking
- Urban/Sub

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1:37 PM 2/7/2016



# Value Estimating and Return on Investment

Communicate in \$\$\$\$

Plan\_ID: Demo1 Plan\_Name: Bolin Creek

**Priority Plan Valuator**

Feet: 154,959.0

BioFunc%: 25

PhyChemFunc%: 25

GeoFunc%: 10

HydraulicFunc%: 15

HydrologyFunc%: 10

RipFunc%: 10

PlanArea\$: \$2,749,205

Ref\$: \$15,937,533

Deba\$: **(\$13,188,328)**

Value Date: 3/21/2016

**Implementation Plans**

Plan_ID	Imp_ID	Imp_Name
demo1	imp1	Arboretum 319
Imp_Description: Vegetated conveyance project at arboretum		
demo1	imp2	Baldwin Park Stream Restoration
Imp_Description: Stream restoration, including changes in channel cross-section, re		
demo1	imp3	
Imp_Description:		
demo1	imp4	
Imp_Description:		
Demo1		
Imp_Description:		

Record: 1 of 4

Track implementation in \$\$\$\$

## 4c Demonstrations (New- Kind of)

- Current NC use of **Category 4c**
  - Exceeding Criteria and a dam or hydrologic alteration is the proximal reason for **Exceeding Criteria**
  - Requires EPA approval when moving from Category 5
  - Currently NC has 12 4c assessments
- **EPA guidance is encouraging greater use of 4c to identify waters where hydrologic alteration is a concern**
- NC is working through the an assessment method that may be used by 2018