



Key EPA Internet-Based Tools for Watershed Management

In-Depth Level Course Tutorial

Section Two: Water Quality Standards

Full document available at

<http://www.epa.gov/owow/watershed/wacademy/epatools/>

**Assessment and Watershed Protection Division
Office of Wetlands, Oceans and Watersheds
U.S. Environmental Protection Agency**

2. Water Quality Standards

Water Quality Standards define the goals for a waterbody by designating its uses and defining criteria to protect those uses. They also establish provisions to protect water quality with anti-degradation policies and specific caveats on implementing standards such as low-flow variances or mixing zones.

This section explores the following:

- Locating waterbody classifications or designations in a state
- Locating a particular waterbody of interest and its classifications
- Water quality standards criteria of selected parameters (such as fecal coliform, dissolved oxygen or arsenic)

2.1 Open the [Water Quality Standards Home Page](#). State-specific waterbody classifications and definitions can be found through this page.

2.2 On the map click **North Carolina**.

2.3 Click: [Section .0300, Classifications and Water Quality Standards Applicable to Surface Waters and Wetlands of North Carolina \(PDF\)](#) (25 pages, 2.1 Mb)

North Carolina has different classifications for its waters. The letters **WS-I, C**, and so on, describe different uses supported by each classification that must be protected by the water quality standards code.

How is WS-IV different from WS-I?

What are two sensitive activities supported by Class C waters?

For this next example, **Crowders Creek** in North Carolina is the chosen waterbody of interest. It is in the **Catawba Watershed** in western North Carolina. Crowders Creek is on the border between North and South Carolina in the mountainous piedmont physiographic region.

2.4 Click the **Back** button to close out of the Section .0300 document. Scroll down to this link and click it: [Catawba River Basin: Classifications and Water Quality Standards \(PDF\)](#) (38 pages, 2.3 Mb)

- 2.5 Click the binoculars tool in the Adobe Reader to search. In the search text box type in **Crowders Creek** and click **Search**.
- 2.6 Result listings appear on different pages. Confirm that you are on page 35 of 38.

Toward the bottom of page 35, Crowders Creek is described as, "From source to North Carolina-South Carolina state line."

What is Crowders Creek's classification? _____

Finding specific water quality standards for this Classification (or Designated Use):

- 2.7 Click the **Back** button and return to the [North Carolina Repository of Documents](#).
- 2.8 Select and click the link: [Section .0100-.0200, Classifications and Water Quality Standards Applicable to Surface Waters and Wetlands of North Carolina \(PDF\)](#) (130 pages, 895 K)

This is known as the *Red Book* because it contains the Standards for North Carolina waters. This document might be slow to load. Do not click the Back button while it is loading; otherwise, the document will have to reload.

- 2.9 In the hyperlinked table of contents, click: **15A NCAC 02B .0211 FRESH SURFACE WATER QUALITY STANDARDS FOR CLASS C WATERS**
- 2.10 Confirm that page 24 of 130 is displayed. Page 24 lists the criteria that will support Class C designated uses. Use the **Zoom In** tool (the plus button) to read the page more easily.

What is the numeric criterion for Dissolved Oxygen?

Trout waters: _____

Non-Trout waters: Daily Average: _____


Non-Trout waters: Instantaneous Value: _____

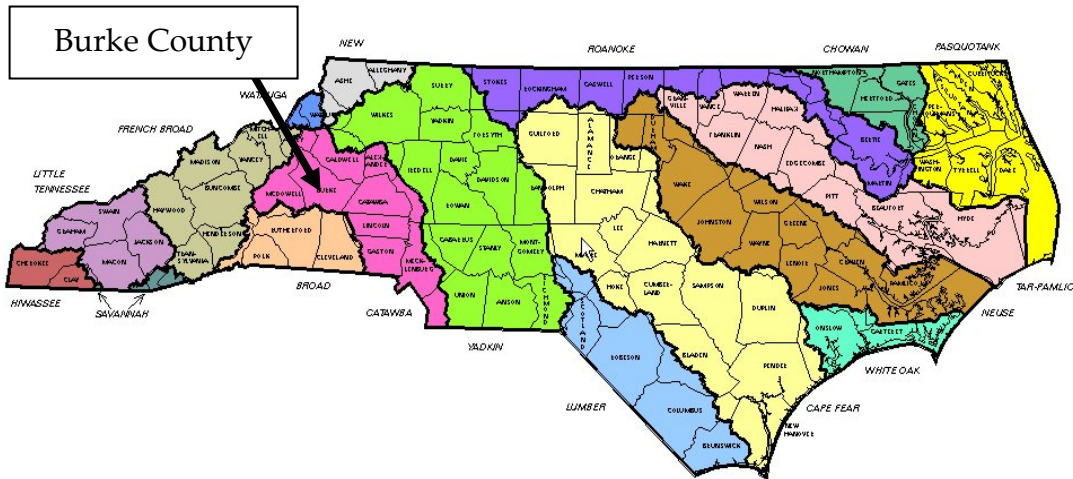
What is the numeric criterion for Fecal Coliform? _____

- 2.11 Scroll back to the top of the document. On page 3 of 130, click the link in the box for North Carolina's [Summary Tables of Numeric Water Quality Standards](#).

2.12 Under Classification Information section, click **Find Your Waterbody's Classification**.

2.13 Click **Go!** next to **Clickable basin map to hydrologically sorted list**.

List all waterbodies in <input type="text" value="Broad"/> Basin sorted <input type="text" value="Hydrologically"/>	<input type="button" value="Go!"/>
List all waterbodies in <input type="text" value="Alamance"/> county, hydrologically	<input type="button" value="Go!"/>
List all waterbodies in <input type="text" value="03-01-01"/> subbasin, hydrologically	<input type="button" value="Go!"/>
Clickable basin map to alphabetically sorted list	<input type="button" value="Go!"/>
Clickable basin map to hydrologically sorted list	<input type="button" value="Go!"/> 
Short Descriptions of Stream Classifications (see Rules for longer descriptions)	<input type="button" value="Go!"/>
Descriptions of Special Designations	<input type="button" value="Go!"/>



2.14 Click **Burke County**. **Note:** From the earlier example, the Catawba River Basin is east of Burke County.

2.15 Find **Crowders Creek** in this document (starting on page 37).

What is the class designation for Crowders Creek? _____

2.16 Click the **Back** button until you return to the [Classification and Standards Unit](#) homepage.

- 2.17 Under the Surface Water Standards Information section, click **NC Redbook Standards Table**.
- 2.18 Verify that the **Dissolved Oxygen** and **Fecal Coliform** standards found through the EPA site match North Carolina's summary table.
- 2.19 Go to the [State, Tribal and Territorial Standards](#) page. This site provides links to all available state, tribe and territory sites related to water quality standards.