

The Sustainable Rivers Program



A Joint Program with the US Army Corps of Engineers and The Nature Conservancy

Benefiting rivers, communities and the nation.

Julie DeMeester, The Nature Conservancy

History of the Sustainable Rivers Program

1998- 2002: TNC approached the Corps to modify flows on the Green River, KY. Together, they determined they could modify flows to enhance fish spawning, maintain flood control, and increase the recreation season

A 2002 MOU with TNC and the Corps launched the nationwide Sustainable Rivers Program!

“The goal of the SRP program is to improve the health and life of rivers by modifying reservoir operations to achieve ecologically sustainable flows while maintaining or enhancing other project benefits.”

2006: For the first time in history, the operating procedures at the Green River Dam were officially changed solely for ecological benefits

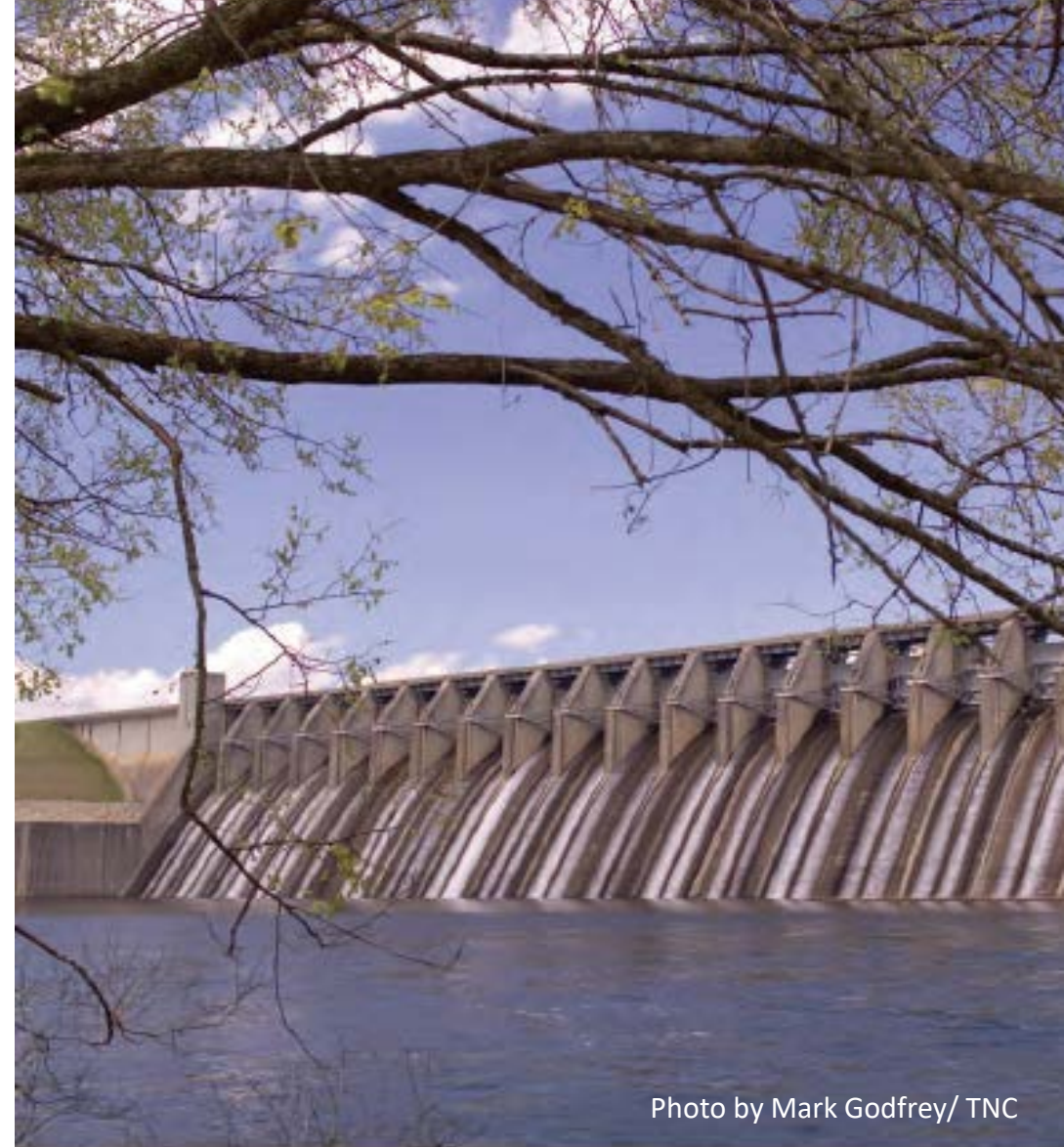


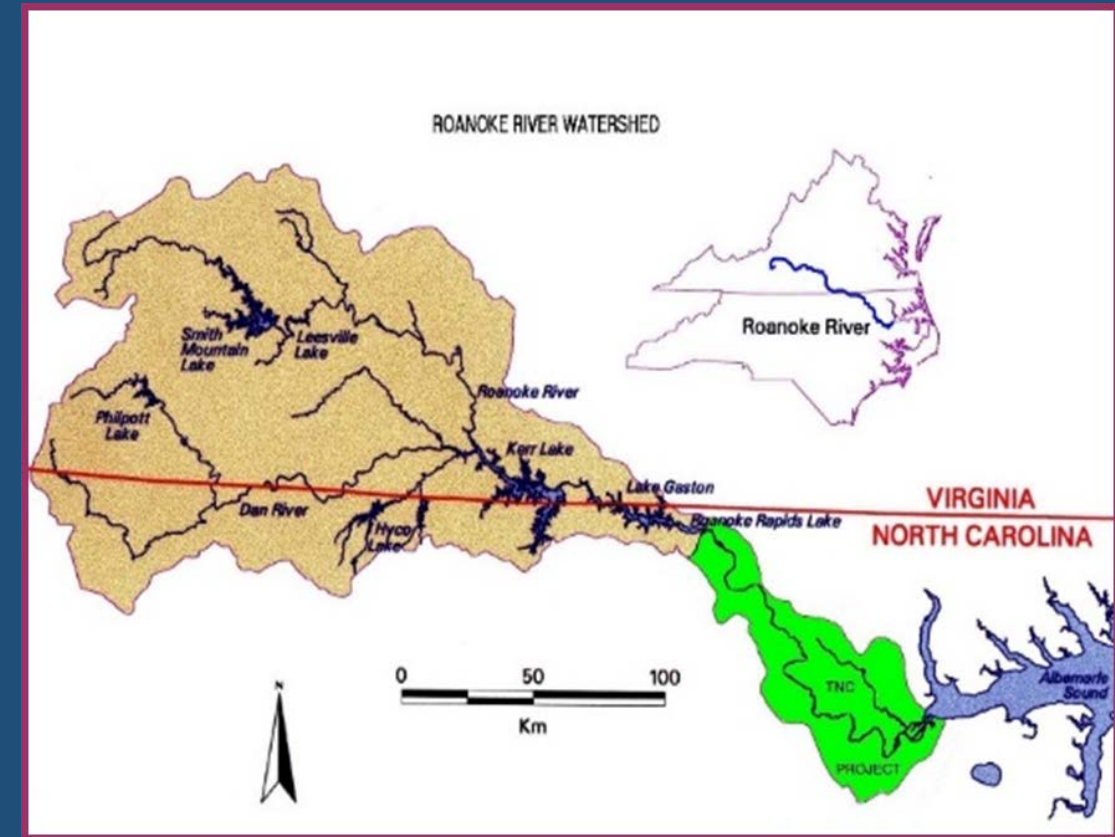
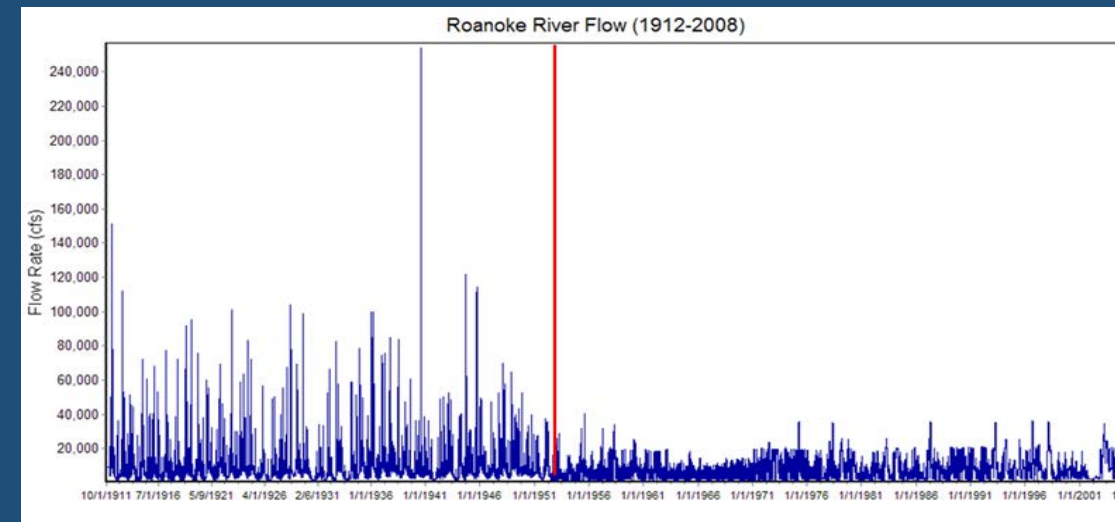
Photo by Mark Godfrey/ TNC

Eight Initial Focal Rivers



The Roanoke River in NC

- 1990s: conservation groups recognized that prolonged flooding from 3 dams was hurting the downstream 75,000 acres of high quality floodplains
- 1994: TNC and partners initiate development of a **flow model** and studies of hydrology, geomorphology and vegetation
- 1996: the USACE Wilmington completed an Appraisal Report that indicated a Section 216 Study was needed
 - A 216 study is used to “review the operation of projects.... with recommendations on the advisability of modifying the structures or their operation, and for improving the quality of the environment in the overall public interest.”
- 2000: USACE launched 216 Study – TNC official stakeholder in the process



The Roanoke Success

- 2010: USACE begins development of Alternatives Formulation Briefing Document. TNC and Resource agencies petition for inclusion of “Run of River Proposal”
- July 2015: 216 Study concludes, USACE Summary Report recommends environmental flow alternative as basis for Kerr Reservoir Water Control Plan revision
- November 2015: Kerr Revised Water Control Plan & Environmental Assessment released
- June 2016: Record of Decision approving Revised Water Control Plan issued from USACE South Atlantic Division



Expanding the Sustainable Rivers Program

- 2014: The Corps' Environmental Advisory Board suggested that the number of rivers in the program increase from 8 rivers to 20 rivers by the year 2020.
- 2016: TNC introduced the concept of including the Cape Fear River in SRP
- The concept has been well-received at the Corps to initiate the Cape Fear River into the SRP



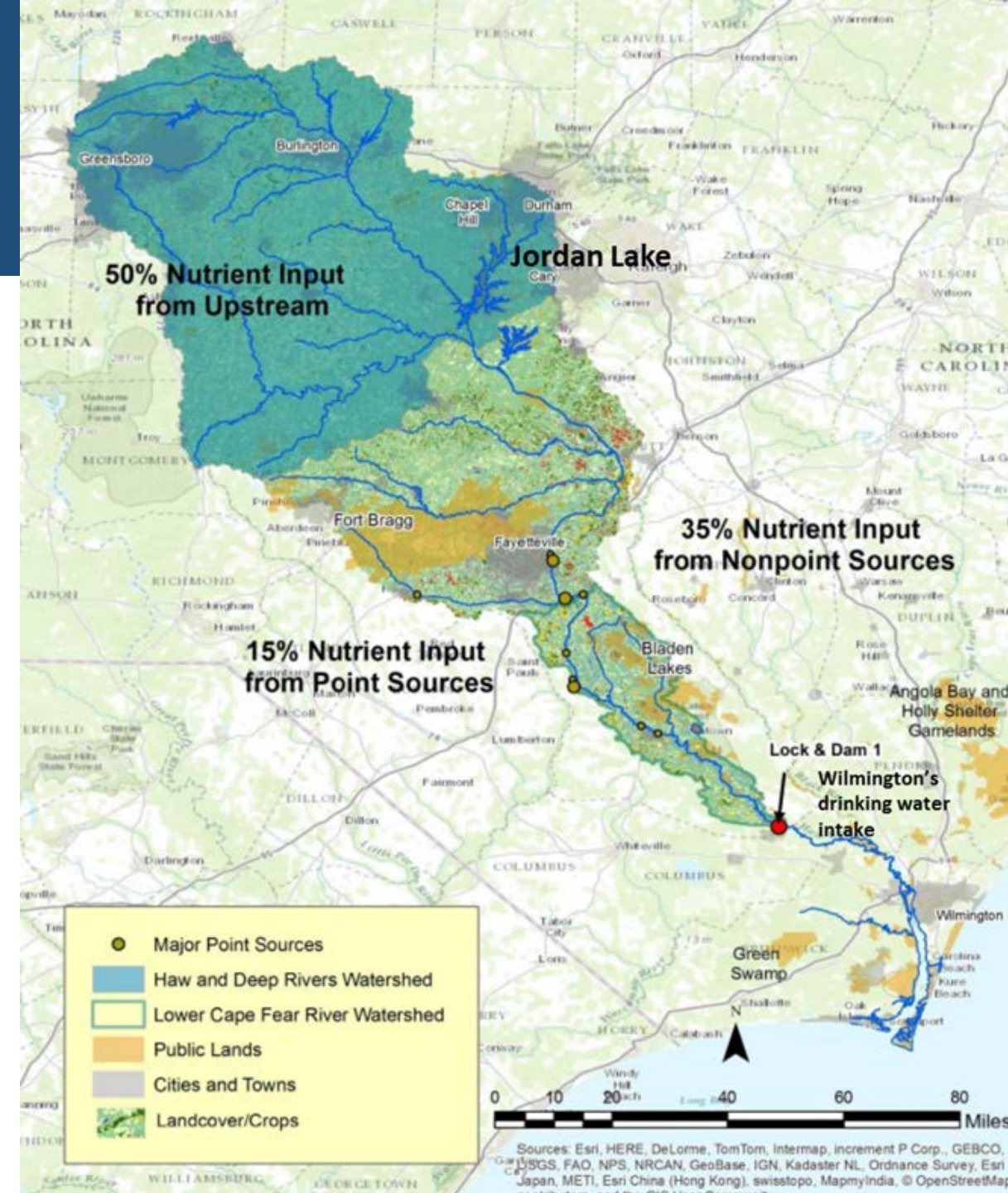
The Corps Jurisdiction in the Cape Fear

- Reservoir management of Jordan Lake
 - Provides drinking water to >300,000 people
 - Significant nutrient issues
 - Many drinking water users below Jordan Lake
- Operation of 3 Lock and Dams
 - Rarely used for navigation
 - A significant barrier to diadromous fish
- Dredging



Ongoing Issues in the Basin

- Growing drinking water and resource needs
- Nutrients and water quality
- Increased susceptibility to storms
- Diadromous fish need to reach their spawning habitat
- 2 million users in the basin and that number is growing

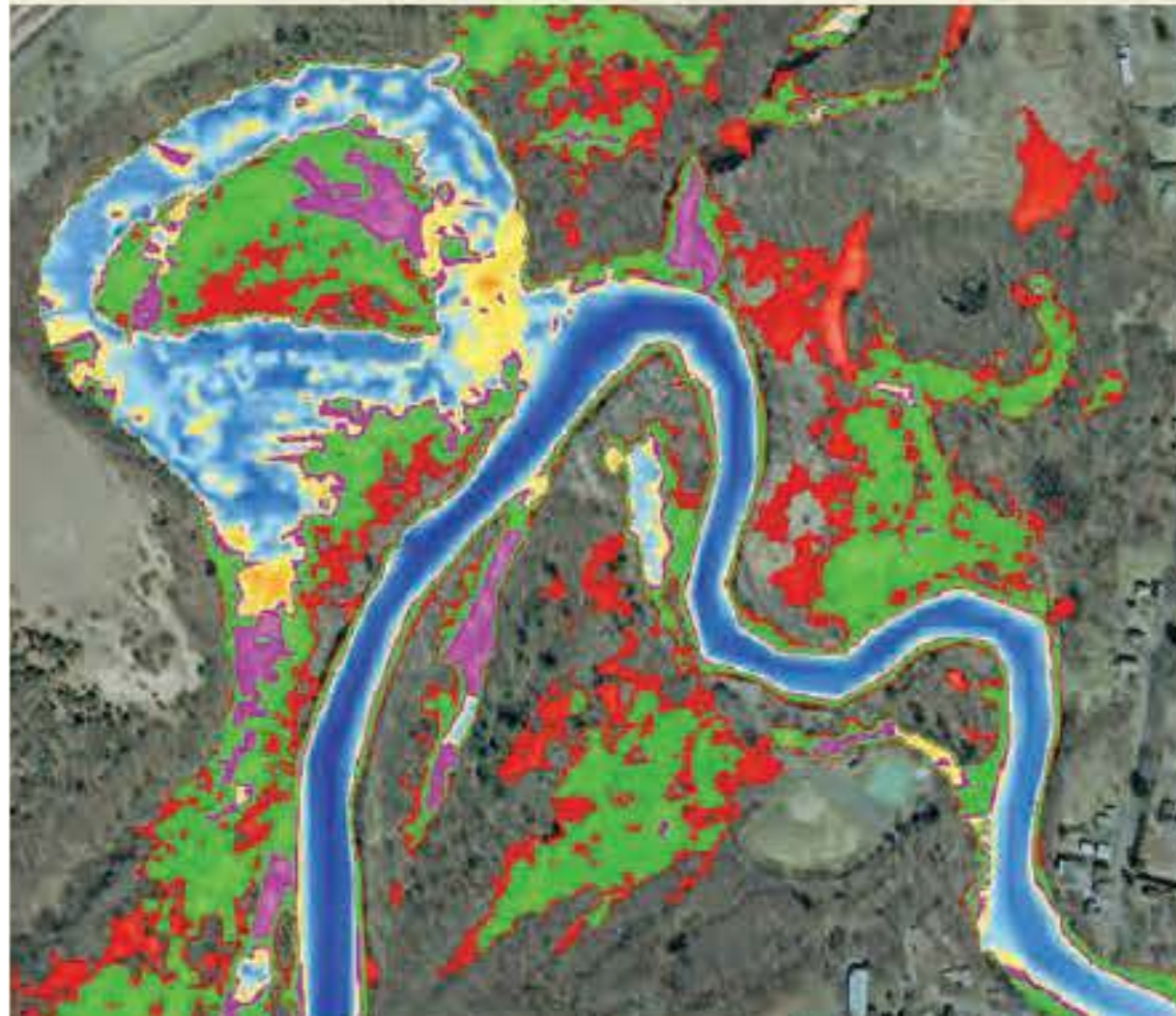


TNC and the Corps' Suite of Tools

Computer programs to help scientists, engineers and stakeholders evaluate potential water management scenarios:

- IHA: Indicators of Hydrologic Alteration
- HEC-EFM: Ecosystem Functions Model
- HEC-RAS: River Analysis System
- HEC-RPT: Regime Prescription Tool (developed jointly by Corps and TNC)
- HEC-ResSim and Riverware: Reservoir Simulation Models
- MDSWMS: Multidimensional Surface Water Modeling System

Simulated forest and plant communities.



A vertical photograph on the left side of the slide shows a sunset with a sky of orange, red, and purple clouds. In the foreground, there are silhouettes of trees and a wooden pier extending into a calm body of water.

Steps for the Next Year

- Introduce the Sustainable Rivers Program to groups throughout the basin
- Gather interested stakeholders
- Draft 1-3 years of project ideas and submit the first idea for Corps funding



Thank you!

To participate, contact:

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