

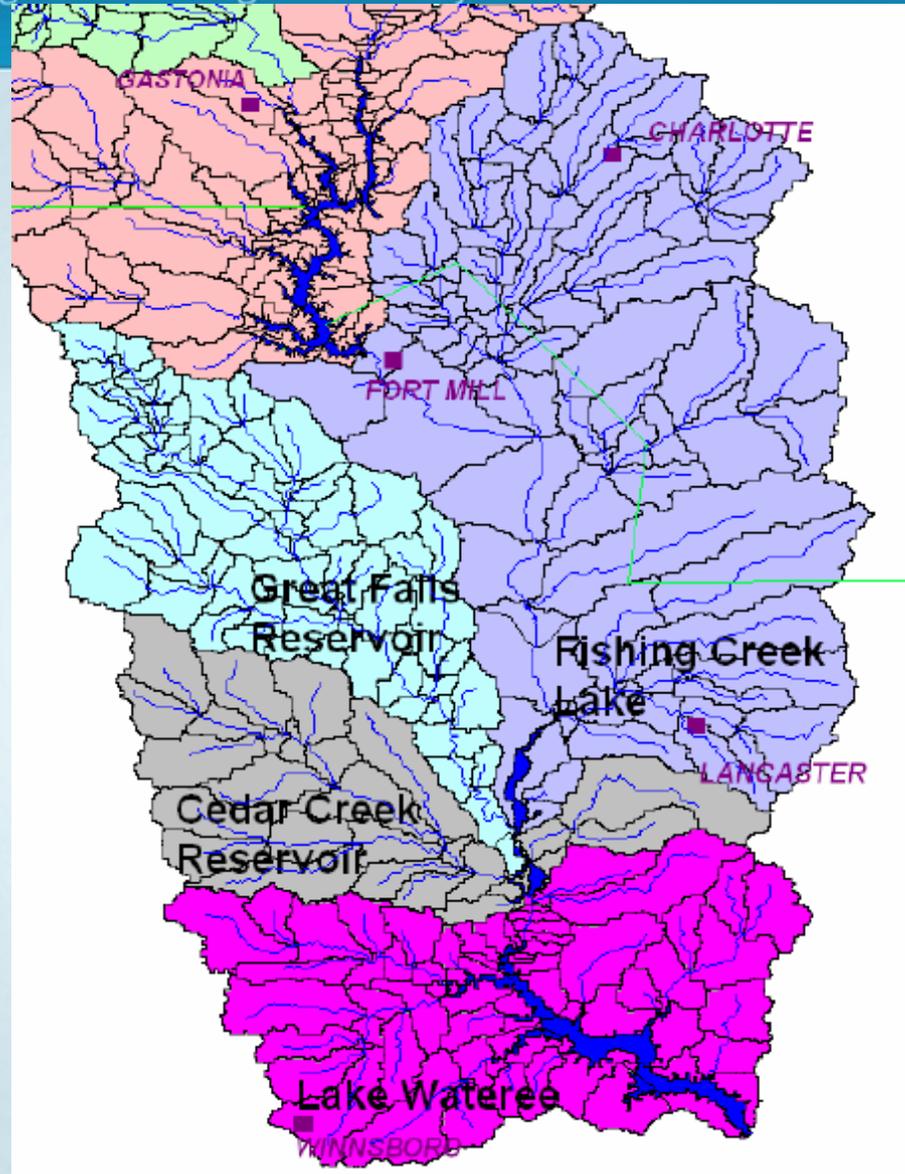


Lower Catawba Basin Nutrient TMDL Update

South Carolina Department of Health and Environmental Control

Promoting and Protecting the Health of the Public and the Environment

Lower Catawba Basin





Background

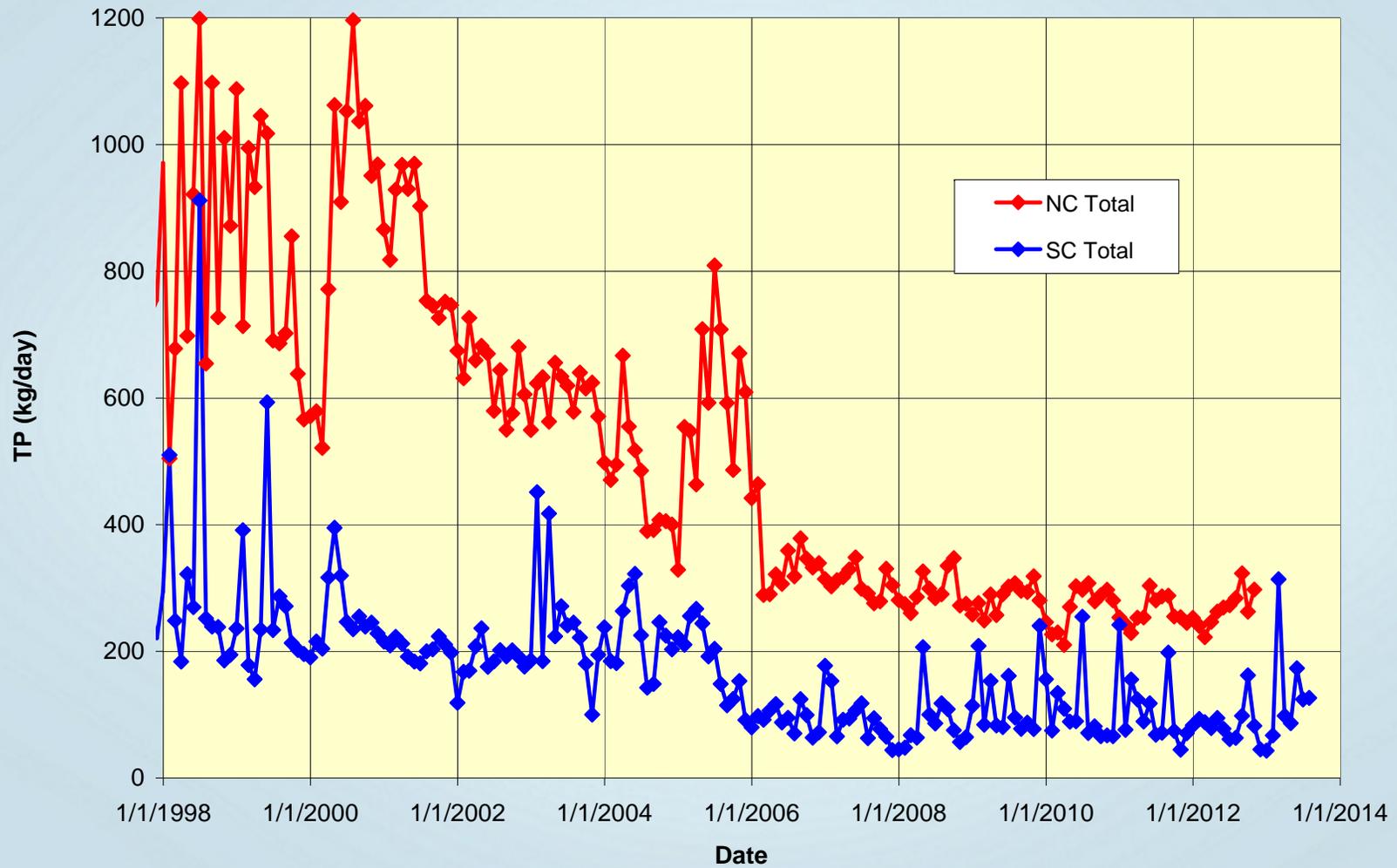
- History of nutrient overload
- Effects expressed in SC lakes
 - Impaired water quality: Phosphorus, Nitrogen, Chlorophyll, pH, Dissolved Oxygen
 - Increased DO depletion in bottom waters
- Water quality management concern since at least 1990s
 - Modeling studies (Duke, USC, SCDHEC, NCDWQ, et al.)
 - SC numeric nutrient criteria (2001)
 - NPDES permitting
 - SCDHEC begins limiting Phosphorus in permits (2001)
 - Settlement agreement SCDHEC, NCDWQ, Charlotte (2002)
 - NC NPDES Phosphorus load reductions (2006)



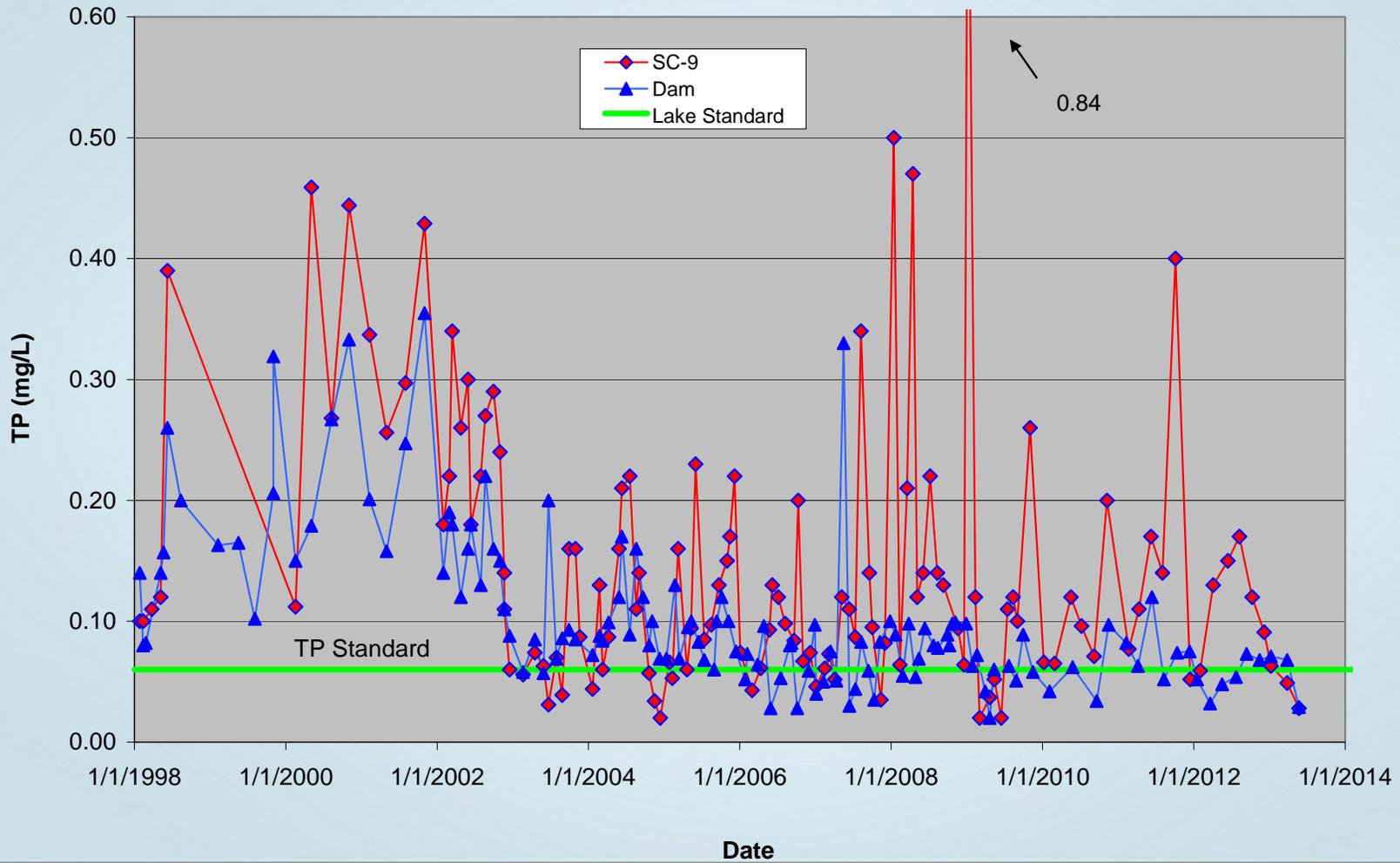
Background (cont.)

- SCDHEC TMDL effort
 - Additional modeling, stakeholder meetings, model review, technical comments (2005-2008)
 - TMDL development paused
 - Other projects
 - System changing/model updates needed
 - Declining resources

Total Phosphorus Loads Discharged into Lower Catawba Basin - Fishing Creek Reservoir from Major NC & SC Dischargers

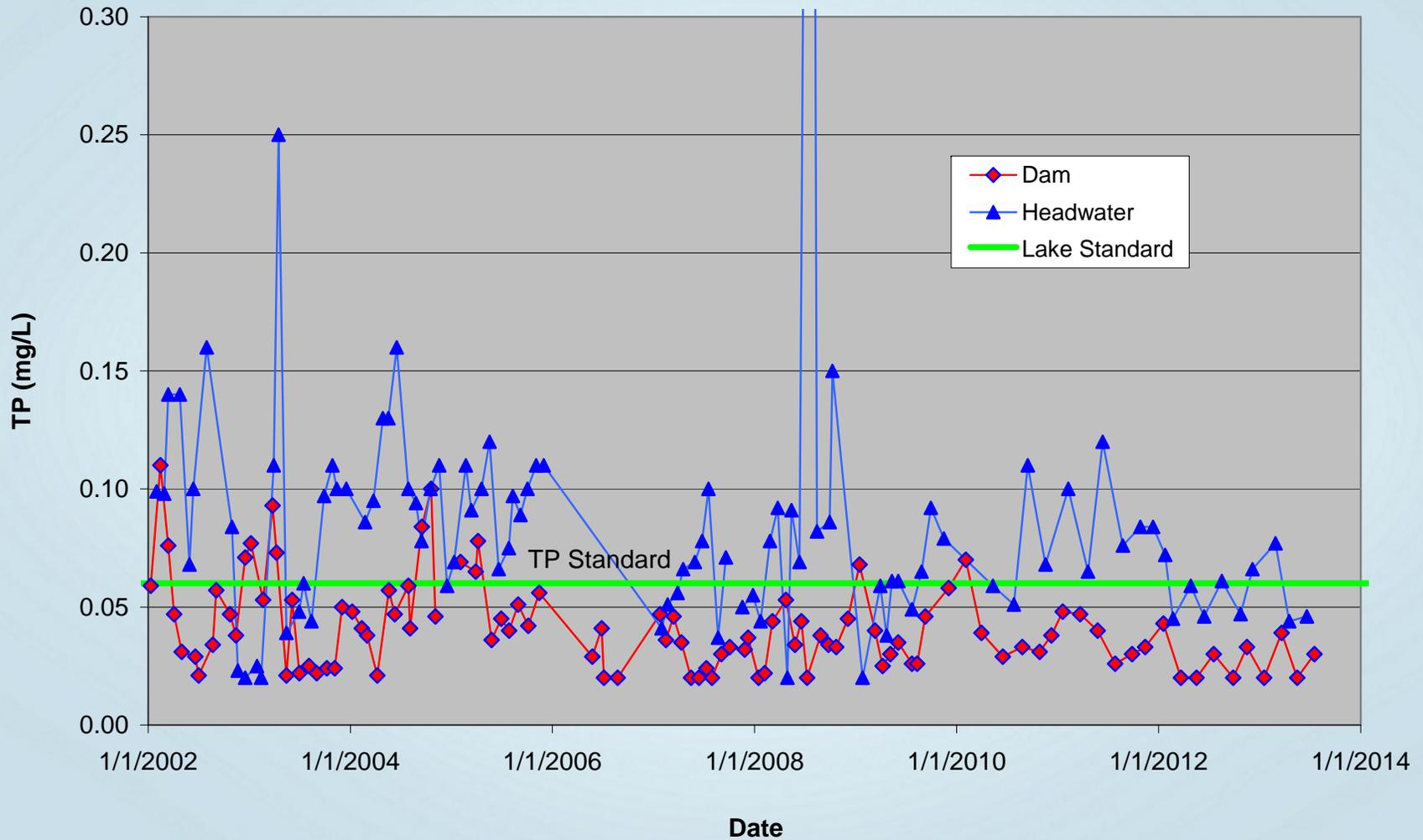


Total Phosphorus Concentrations in Fishing Creek Reservoir at SC-9 and at Dam





Total Phosphorus Concentrations in Lake Wateree at Headwater (Cedar Creek Reservoir TR) and at Dam





303(d) List of Impaired Waters

- 2012 List
 - Data 2006-2010 plus legacy sites
 - Lake Wylie, SC not impaired
 - Fishing Creek Reservoir: P, N, pH, chl-a
 - Great Falls Reservoir: P, N, chl-a
 - Cedar Creek Reservoir: P, N, DO
 - Lake Wateree: P, pH, DO
- 2014 List
 - Data 2008-2012 plus legacy sites
 - Draft for public comment February 2014



TMDL Development Resumed

- Model updates
 - EPA 319 NPS Grant funds used to contract Systech Water Resources, Inc.
 - Extend WARMF model to 2012 (completed June 2013)
 - Good response to our data requests
 - Model calibration (scheduled completion April 2014)



Looking Ahead

- Web page – coming soon
 - Information, reports, model files
- Stakeholder information meeting – Nov 19th
 - Rock Hill Operations Center
 - Email announcement soon
- Model calibration review – Jan-Feb 2014
 - Draft calibration report and model files available
 - Comments requested
 - Final calibration report – Apr 2014
- Stakeholder review and coordination – 2014-2015
 - Load Scenarios ➤ Allocations ➤ TMDL



Summing Up

- Significant Phosphorus reductions have been implemented by NC and SC facilities
- WQ improvements in SC lakes have occurred
- Goal of the current modeling effort is to determine what more is needed, considering all sources, to achieve WQ standards
- Coordination with NCDWQ and EPA Region 4 has begun and will expand to include stakeholders prior to drafting the TMDL
- Questions?



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- For more information
Wade Cantrell, Manager
303(d), TMDL, and NPS Section
SCDHEC Bureau of Water
(803) 898-3548
cantrewm@dhec.sc.gov

CONTACT US

www.scdhec.gov

(803) 898-DHEC (3432)



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