

Delineating Conservation Practices in a Nutrient Impaired Watershed: High Rock Lake Watershed, NC.

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Introduction

A large portion (High Rock Lake watershed) of another river basin (Yadkin-PeeDee) is currently under rulemaking and agriculture is considered to be a significant source of the nutrients since 30% of land use is agricultural (Figure 1).

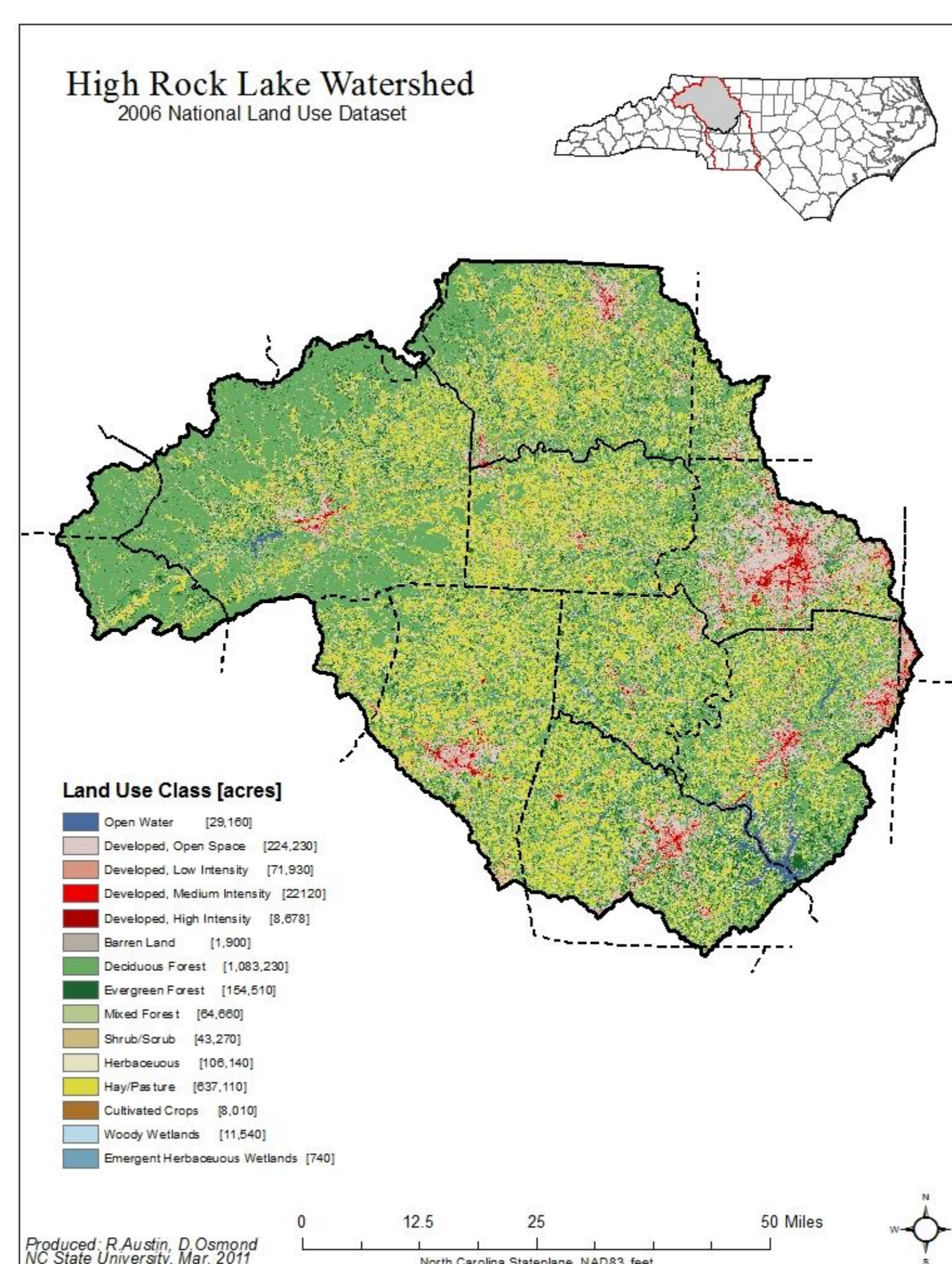


Figure 1. High Rock Lake Land Use

Objective

Delineate agricultural practices in the High Rock Lake watershed to better inform the rulemaking process relative to agricultural conditions.

Methods and Materials

On-the-ground Area Frame Sample of agriculture:

- computerized
- used census blocks
- rural filter (> 10 acres and acres > people)
- census blocks aggregated to ~ 300 acres
- 352 sampling sites (figure 2)

Field and farmer survey:

- cropping systems
- nutrient application rates
- soil testing frequency
- nutrient behavior
- animal numbers and stocking rates
- use of conservation practices such as riparian buffers, conservation tillage, and other practices.

High Rock 2012
Distribution of Target SUs
(Draft)

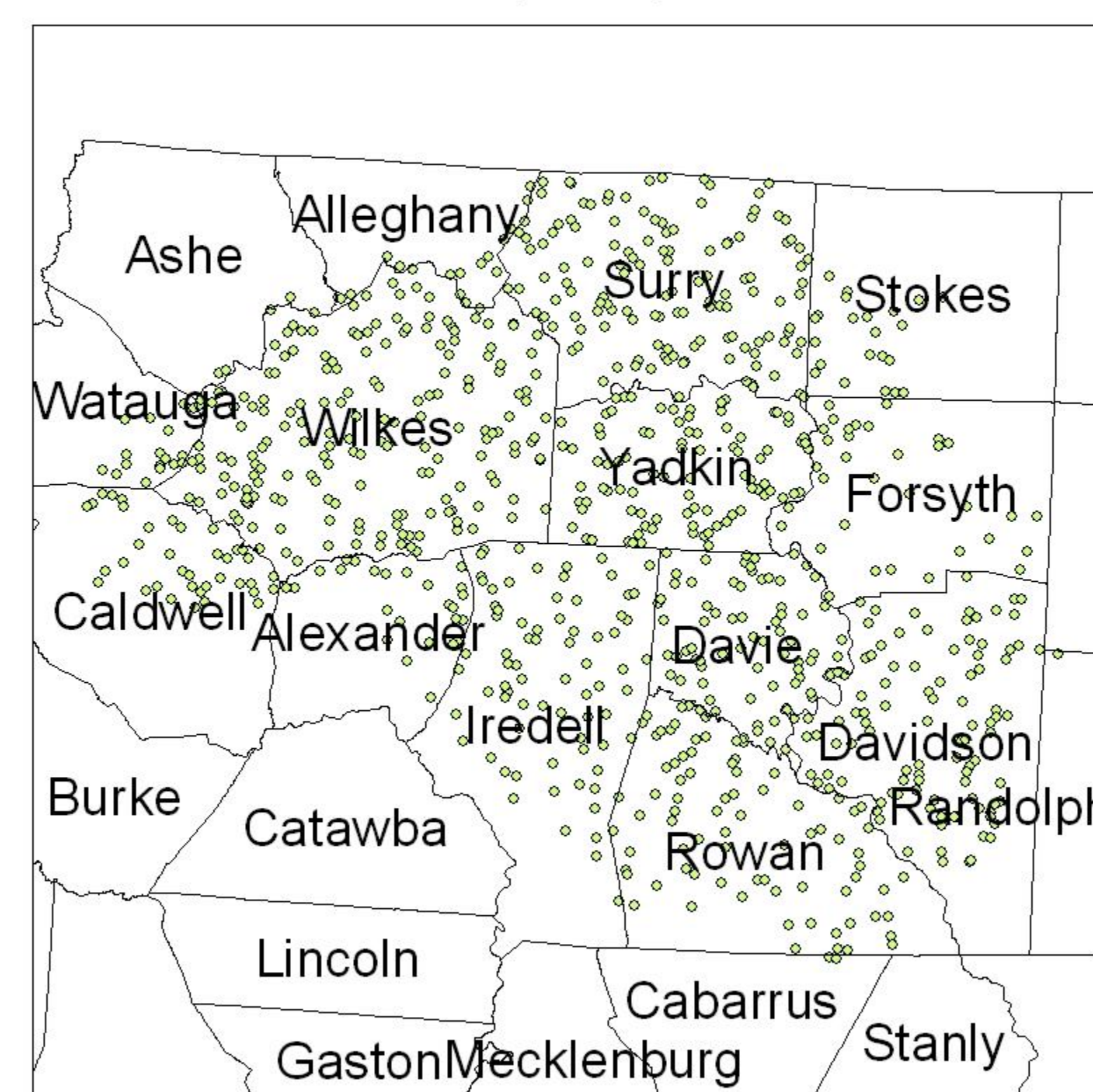


Figure 2. High Rock Lake Watershed Agricultural Sampling Sites

Results

Analysis of data have been delayed due to the US government shutdown; therefore we only have preliminary results developed based on reviewing every data entry (field).

Preliminary Conclusions Based on Pre-Statistical Analysis

- There are many landowners tending small acreages (<10 acres).
- These on-the-ground surveys provided significantly more data than USDA Agricultural Survey or Census data and are invaluable for modeling work.
- Agriculture represents low inputs and low sediment losses due the large amount of pasture and low fertilizer inputs.
- The government shutdown slowed down and affected our ability to provide timely scientific analysis.

Acknowledgements

Funded by the NC DENR 319 USEPA pass through funds. We would like to thank all enumerators and landowners who helped with this survey.