Nothing Compares
NORTH CAROLINA

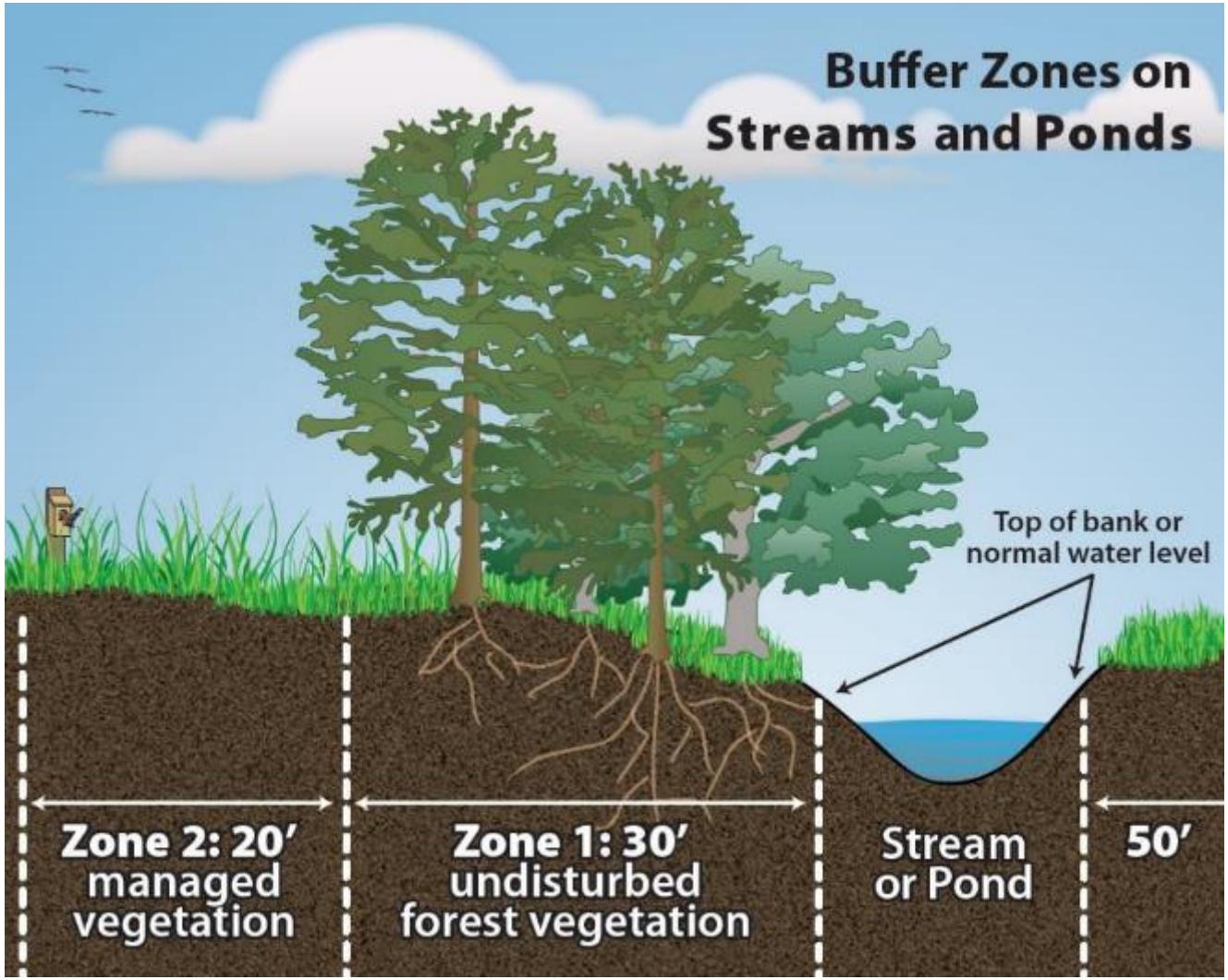
Department of Environmental Quality

Buffer Requirements on Intermittent Streams

What is a Riparian Buffer?

A riparian buffer is a strip of forested or vegetated land bordering a body of water

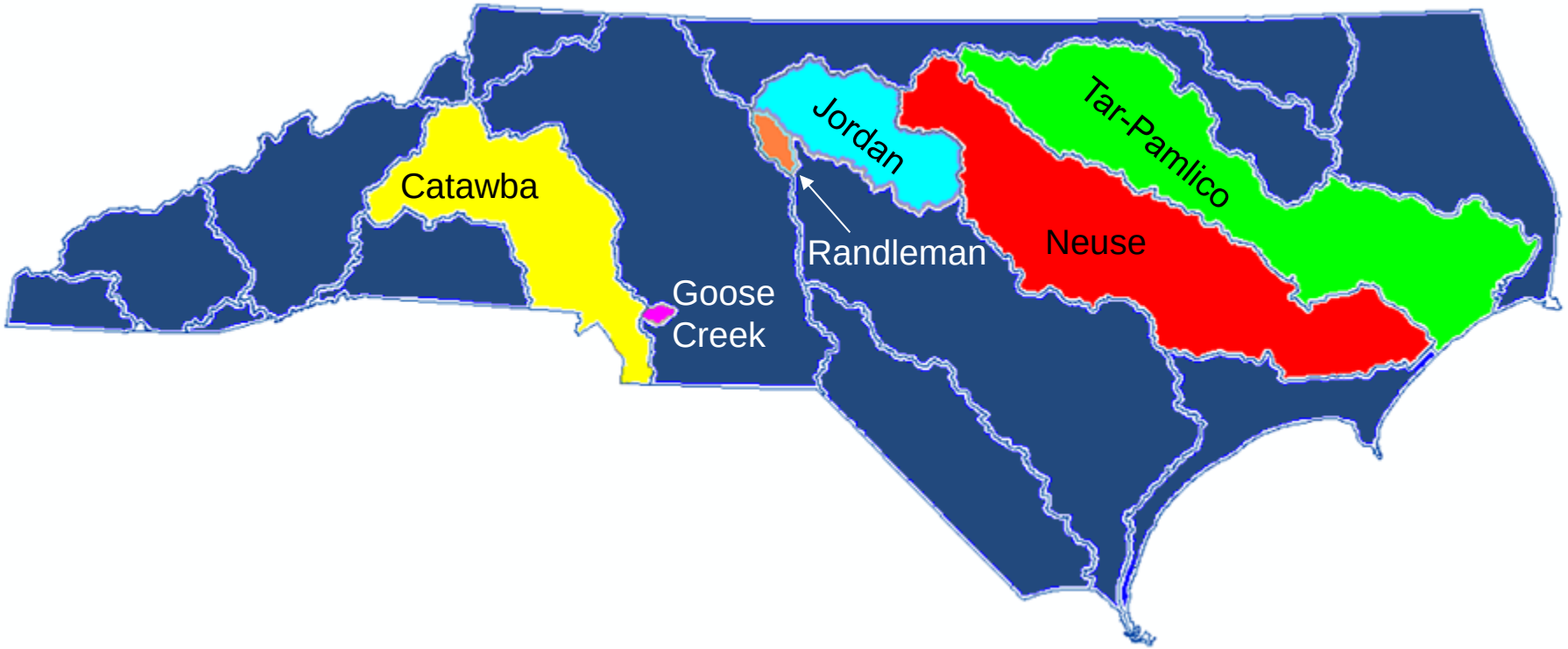
Buffer Zones



Buffer Functions

- Landscape stabilization
- Water quality – trapping of nutrient & sediments
- Organic input into streams
- Thermal function – Shading of stream

Management Strategies



Neuse River Basin
(Jul. 22, 1997/ Aug. 1, 2000)

Randleman Lake Watershed
(Apr. 1, 1999/Jun. 1, 2010)

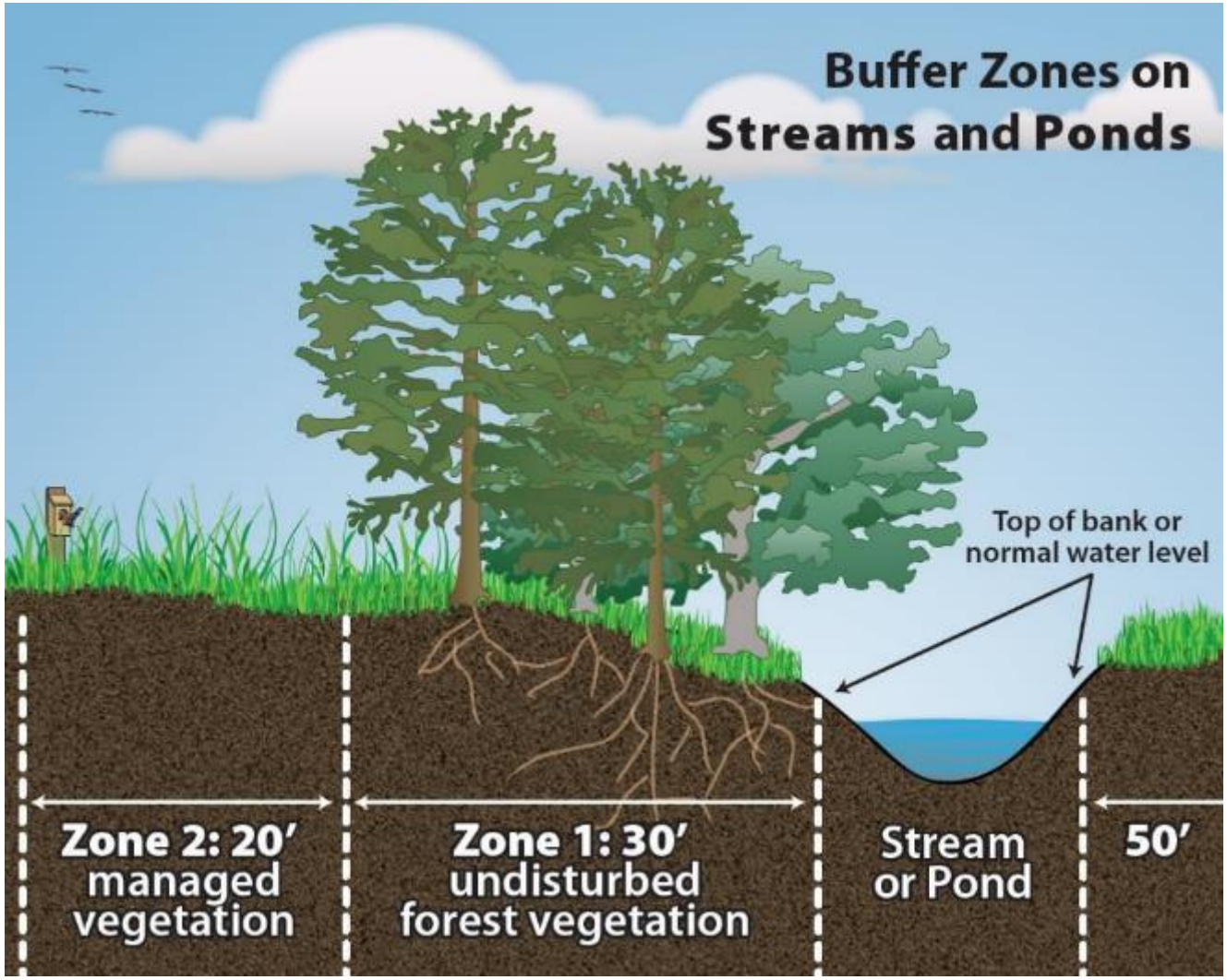
Tar-Pamlico River Basin
(Aug. 1, 2000)

Catawba River Basin
(Jun. 30, 2001)

Goose Creek Watershed
(Feb. 1, 2009)

Jordan Lake Watershed
(Aug. 1, 2009, Sept. 1, 2011)

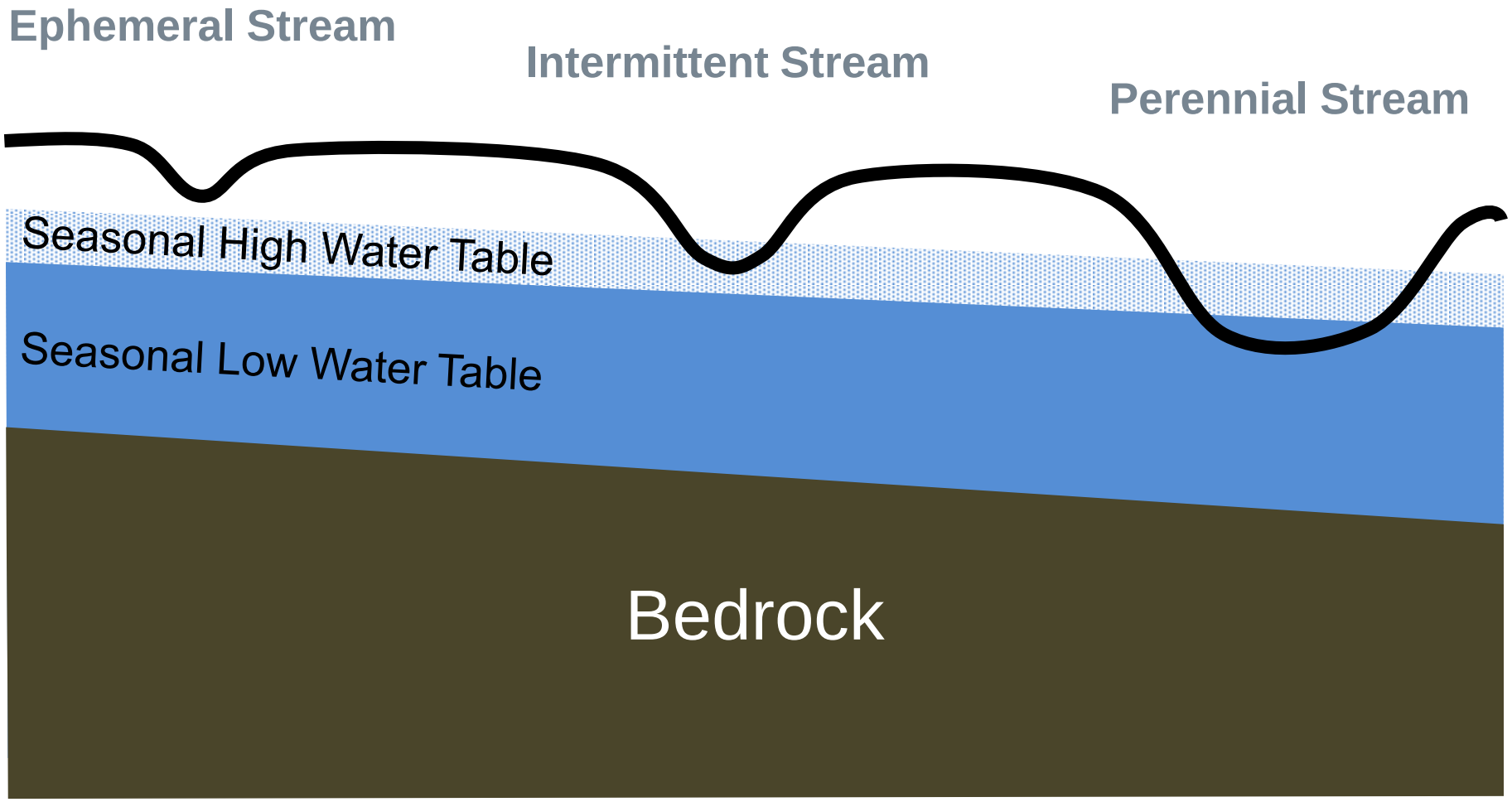
Neuse and Tar-Pam: 50-Foot Buffers



Why are there buffers in the Neuse and Tar-Pamlico River Basins

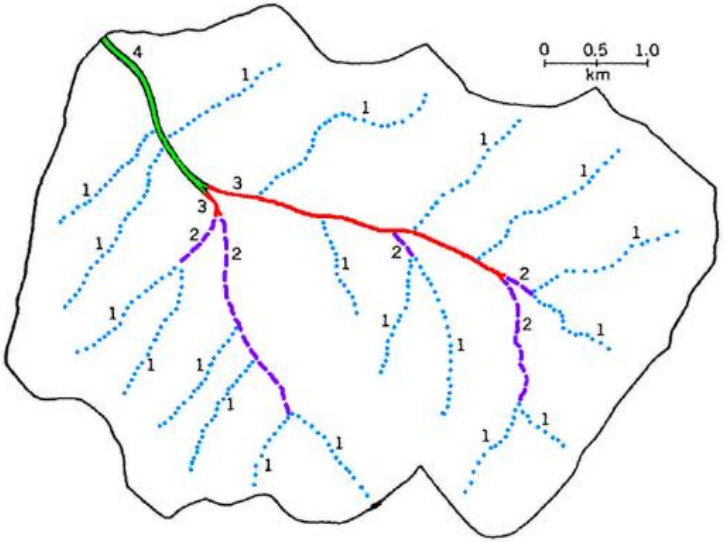
- Legally mandated as part of Neuse and Tar-Pam nutrient management strategies.
- Existing buffers must be maintained out to 50 feet on both *perennial* and *intermittent streams* in those basins
- Buffers are intended to trap nitrogen and phosphorous in stormwater runoff before it can enter the stream
- Neuse and Tar-Pam Rules contain list of activities that exempted, allowed, or prohibited in the buffers
- EMC waiver needed for activities that are not authorized

Different Stream Types



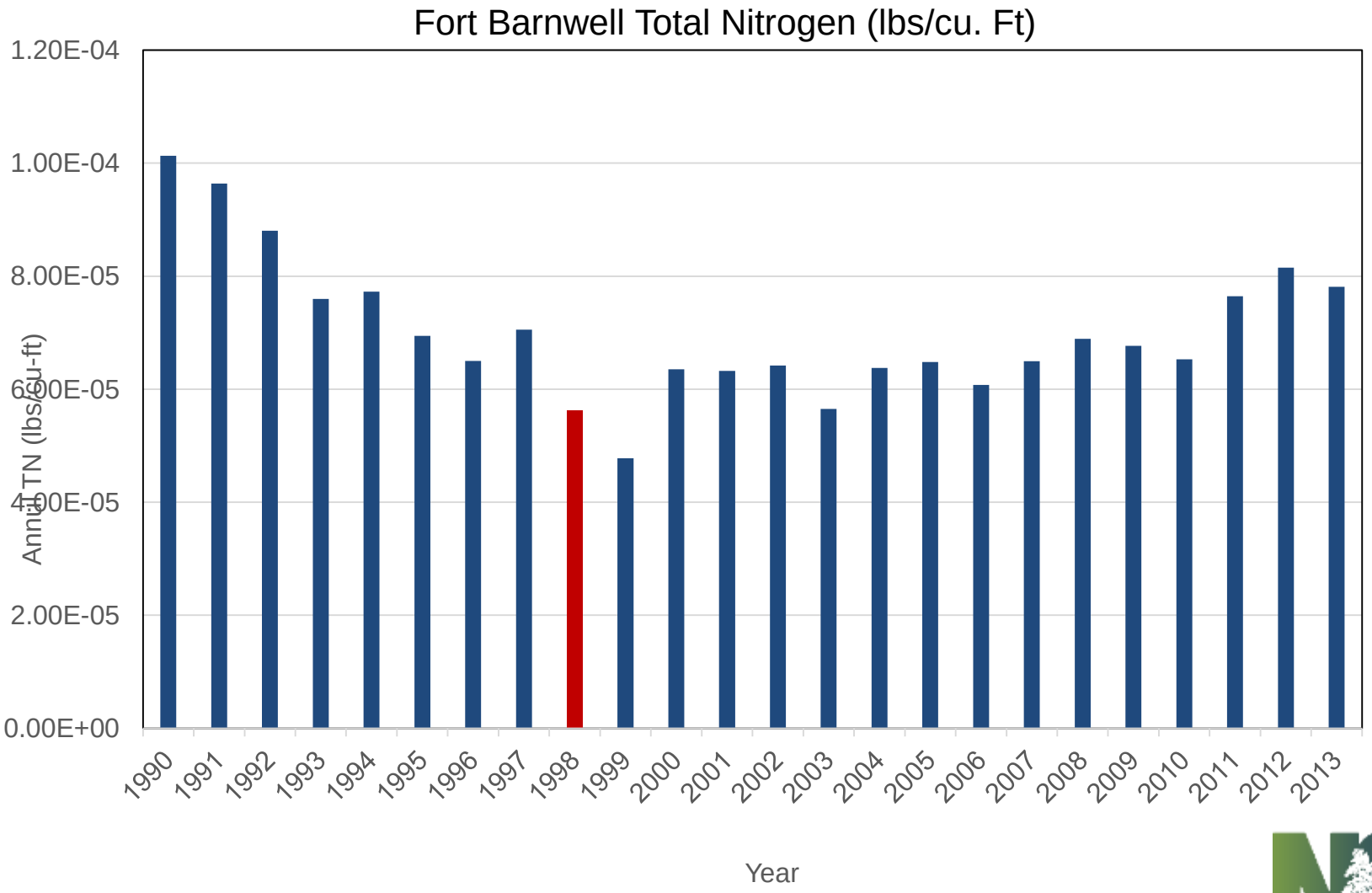
Intermittent & Headwater Streams in Neuse and Tar-Pam

- Headwater streams (intermittent and small perennial streams) comprise 75-90% of total stream miles
- 4975 miles of int. streams in Tar-Pam
- 98 sq miles of buffers on int streams in Tar-Pam
- 6949 miles of int. streams in Neuse
- 137 sq miles of buffers on int streams in Neuse

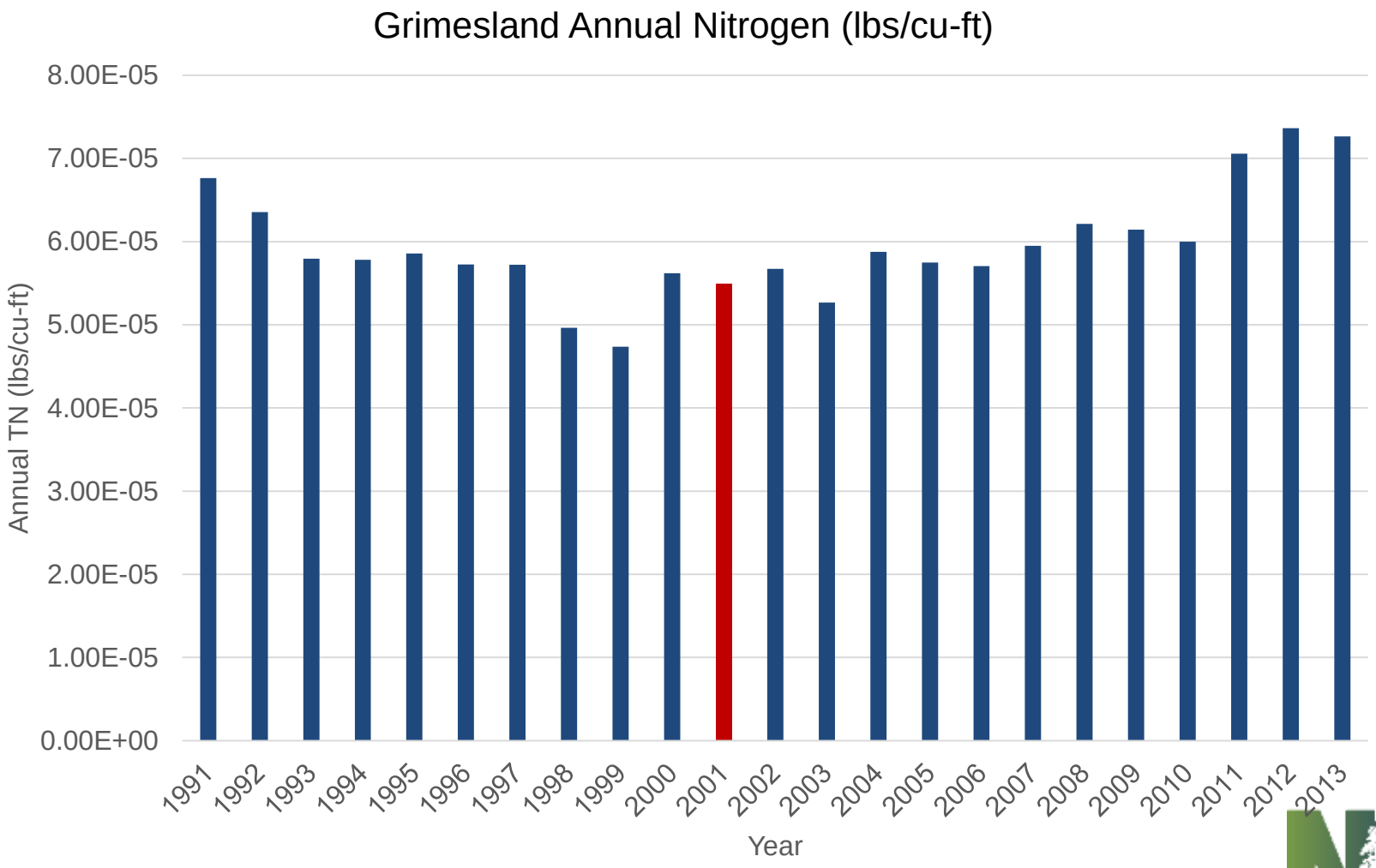


Do Buffers Work as Intended?

Neuse: Nitrogen Load / Flow (lbs/cfs)



Tar-Pam: Nitrogen Load/Flow (lbs/cfs)



Questions – Moving Forward

- Are buffers on intermittent streams a net benefit to NC's environment?
- Do they need to be 50 feet?
  - Will narrower buffers achieve the same result?
- Do they need to be woody vegetation for the first 30 ft.?
  - Can they be cleared?
  - Can they simply be vegetated?
  - Allowance for view corridors?
- Are they necessary for all development?
  - Single family residences vs commercial/industrial development