

Nutrient Management Strategies & The Role of EEP Nutrient Offsets

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February 4, 2009

The Big Picture

- Why Nutrient management strategies
- What strategies are comprised of
- Role of EEP offset credit program

Why we have Nutrient Mgt. Strategies

- Reduce inputs Nitrogen & Phosphorous
- Address water quality problems
 - Algae blooms
 - Decreased oxygen levels
 - Fish kills and diseases
 - Chl-a standard violations
 - Waterbody Impairment & NSW designation

North Carolina River Basins with NMS



Why we have Nutrient Mgt. Strategies

- Neuse and Tar-Pam Estuary Impairment
 - Designated a Nutrient Sensitive Water (NSW)
 - High profile algae blooms and fish kills 80-90's
 - Water Quality Modeling performed
 - 30% reduction in N needed (Neuse)
 - 30% reduction N, no increase in P (Tar-Pam)
- NMS developed through rulemaking
 - 1998 (Neuse)
 - 2000-2001 (Tar-Pam)

Why we have Nutrient Mgt. Strategies

- Jordan Lake and Falls Lake
 - Not meeting WQ standards (Chl-a Impairment)
 - Designated NSW
 - EMC Required to Act
 - HB 515 & SB 981
 - Jordan NMS going through 2009 G.A.
 - Falls Lake NMS development underway
 - High Rock Lake modeling next

Review of Existing & Proposed NMS Neuse, Tar-Pam, Jordan

- Strategies call for reductions from:
 - Point source
 - Stormwater
 - Agriculture
- Also include:
 - Riparian buffer protection and mitigation
 - Nutrient management training for applicators

Agriculture Controls

Neuse, Tar-Pam, Jordan

- Ag community collectively reduce N loss
 - P goals in Tar-Pam and Jordan
- Land based accounting
 - Nitrogen Loss evaluation worksheet (NLEW)
- Local strategies including
 - BMPs
 - Fertilization rate changes
 - Crops shifts

Riparian Buffer Protection

Neuse, Tar-Pam, Jordan

- Existing 50' vegetated buffers adjacent to waterways are protected
- Existing uses in buffer can continue
- Change in use must establish buffer
- Tables of allowable practices

Nutrient Management

Neuse, Tar-Pam, Jordan

- Fertilizer applicators (Turf and Ag)
 - Take state sponsored NM training
- Homeowners & business owners not subject
 - Hired applicators are subject.

Stormwater Rules

Neuse, Tar-Pam, Jordan

- Neuse & Tar-Pam
 - New Developments nutrient export targets
 - 3.6 lbs/ac/yr N (Neuse)
 - 4.0 lbs/ac/yr N & 0.4 lbs/ac/yr P (Tar-Pam)
- Jordan Stormwater Rule similar except:
 - All local governments subject
 - Nutrient export targets for each arm of lake
- Stormwater requirements implemented through local programs

Stormwater Rules cont..

Neuse, Tar-Pam, Jordan

- Stormwater export goals achieved through
 - Site design
 - Onsite Best Management Practices (BMPs)
 - Off-site offset option (EEP & Private Banks)
- Developers can “buy down” nutrients through EEP offset program
 - Must first achieve onsite export nitrogen thresholds

Point Source Rules

Neuse, Tar-Pam, Jordan

- Loads allocated to existing dischargers
- New and expanding offset new load
- Trading allowed for flexibility
- Neuse & Jordan can offset loads by participating in EEP nutrient offset program

Recap

- EEP Offset Program one of the tools available under the NMS
- Provides cost effective means to achieve strategy reduction goals
- Program availability
 - Stormwater (Neuse, Tar-Pam, Jordan)
 - Point Source (Neuse, Jordan)
 - Likely option for Falls and High Rock Lake

More Information

DWQ NPS Website

<http://h2o.enr.state.nc.us/nps/>

- Strategy overviews
- PS & NPS rules, fact sheets
- Stormwater local programs, ordinances
- Stormwater Export Calculation sheets

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