

The background of the slide features a dense pattern of vibrant green leaves, likely from a tree, filling the upper two-thirds. The lower third shows a close-up of light blue water with gentle ripples. A semi-transparent white rounded rectangle is centered over the image, containing the text.

Inland Bays Pollution Control Strategy, Draft 3

Revisions Made and the Path
Forward

30 August 2006



Agenda

- Review History of Pollution Control Strategy (PCS) Development
- Review Revisions to the Latest Draft PCS
 - Agriculture
 - Wastewater
 - Nutrient Budget
 - Stormwater
 - Buffers
 - Effective Date
- Review the Path Forward



Inland Bays Timeline

- 1969 – Governor Peterson Commissions Study
- 1982 – Inland Bays Study Group
- 1983 – Inland Bays Task Force
- 1983 – Decisions for Delaware
- 1984 – Inland Bays Monitoring Committee
- 1988 – Inland Bays Estuary Program
- 1988-90 – Intensive Monitoring Program
(created the TMDL baseline)
- 1995 – Comprehensive Conservation &
Management Plan
- 1995 – Center for the Inland Bays Created
- 1998/2004 – TMDLs developed



History of PCS Development

- 1998 – Inland Bays Tributary Action Team (TAT)
 - Convened by Center for the Inland Bays
- 1999 – Joined with TMDL Advisory Committee
- 2000 – TAT Public Outreach
 - Held 7 public forums
 - Distributed thousands of issue books
- 2000, 2001, 2002 – TAT sent three sets of recommendations for the PCS to DNREC
 - Addressed wastewater, development, stormwater
 - Silent on agriculture

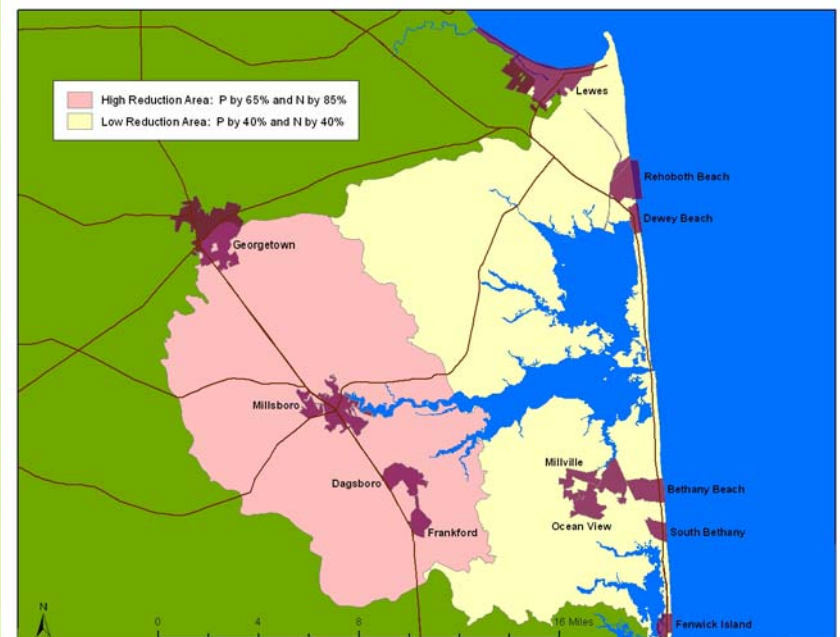


History of PCS Development

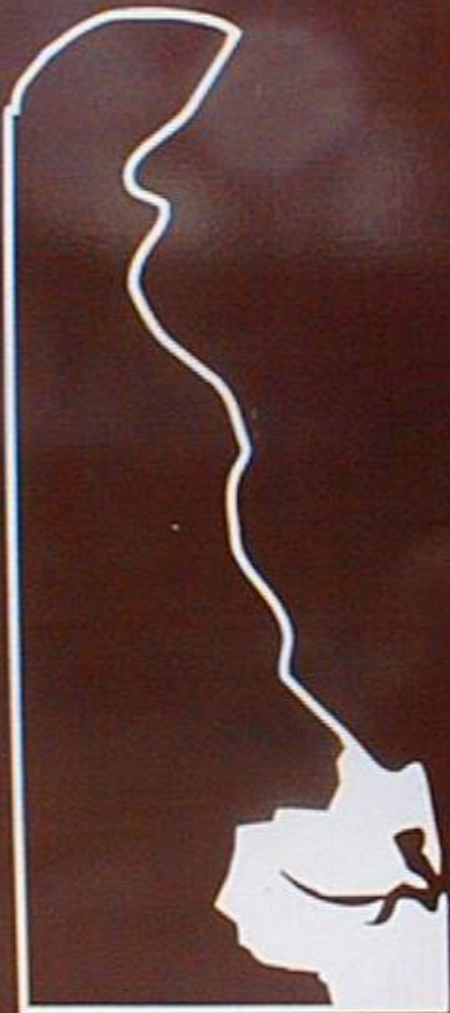
- 2002-2004 – Agriculture PCS workgroup
- 2004 - 2006
 - December '04: IB elected officials briefed
 - January & February '05: 1st draft taken to workshop
 - March – May '05: Several organizations briefed, changes made
 - May '05: 2nd draft taken to workshop; House Natural Resource Committee briefed
 - June '05: Senate Concurrent Resolution passed, Secretary committed to meeting with “The Coalition”
 - August '05 – July '06: Department meets with “The Coalition”

Inland Bays TMDLs

- Systematic elimination of all point sources of nutrient loading
- Remove 40-85% nonpoint N
- Remove 40-65% nonpoint P
- 20% reduction in atmospheric deposition of N via Clean Air Act
- Implementation through a Pollution Control Strategy







**The waters of the Inland Bays
may contain organisms that
could be harmful to your health.**

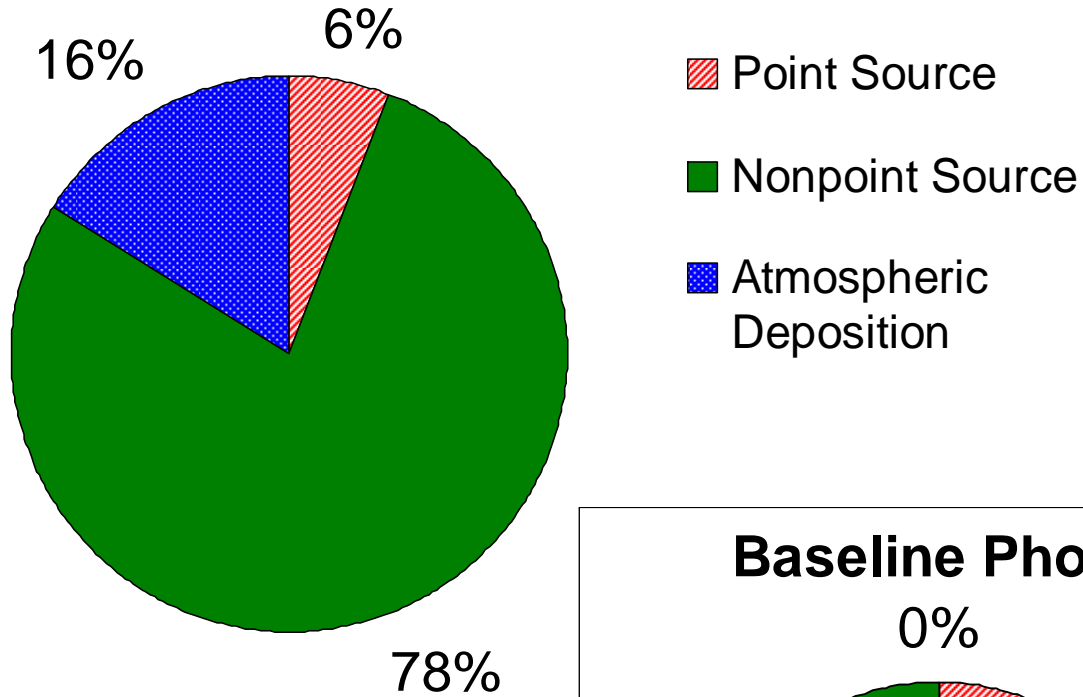
**Swimming could result in an
increased risk of rashes, infections
or gastrointestinal distress,
especially during and after
rainfall.**

**For your health and safety, please
swim at beaches with lifeguards
where the water quality is tested
weekly. For information on beach
water quality or to report illnesses
resulting from contact with these
waters, please call 1-800-922-WAVE
or visit www.dnrec.state.de.us**

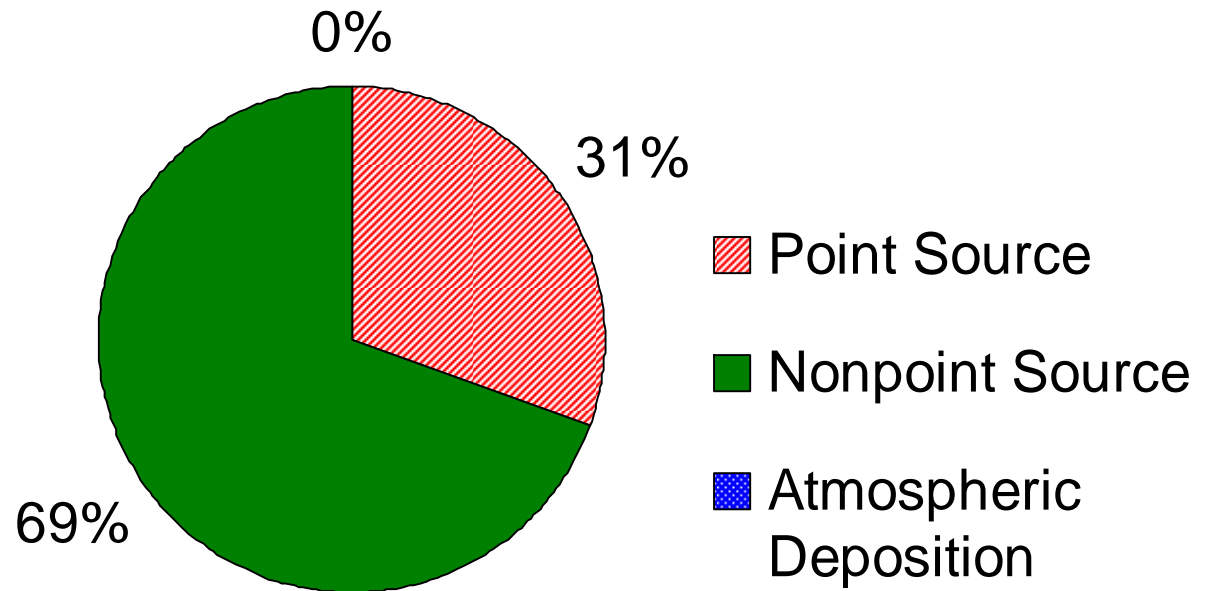


The Problem

Baseline Nitrogen Load (kg/d)



Baseline Phosphorus Load (kg/d)





Agricultural BMP goals

- Nutrient Management Plans
- Manure Relocation
- Grass Buffers
- Forested Buffers
- Wetland Restoration
- Cover crops
- Water Control Structures



Agricultural BMP goals

- Nutrient Management Plans
 - 53,827 acres



Agricultural BMP goals

- Manure Relocation
 - 2005: 20,347 tons relocated
 - Estimated only an additional 562 tons require relocation!!!



Agricultural BMP goals

- Grass Buffers
 - 2005: 54.5 acres
 - GOAL: 1772 acres
 - Additional needed: 1718
- Forested Buffers
 - 2005: 209 acres
 - GOAL: 3246 acres
 - Additional needed: 3037



Agricultural BMP goals

- Wetland Restoration
 - 2005: 29 acres
 - GOAL: 4175 acres
 - Additional needed: 4147 acres



Agricultural BMP goals

- Cover crops
 - 2005: 3056 acres
 - GOAL: 37637 acres
 - Additional needed: 34,581 acres



Agricultural BMP goals

- Water Control Structures
 - 2005: 1530 acres treated
 - GOAL: 1980 acres treated
 - Additional needed: 450 acres treated



Wastewater

- Substantively equivalent to earlier draft
 - Some details moved to appendices and permit conditions
- Performance standards for all sizes of on-site wastewater treatment and disposal systems
- Compliance and inspection program
 - Inspection at sale (only an impact for 1st 3 years of the inspection program)
 - Concerns of cost to owners with low and fixed income



Wastewater

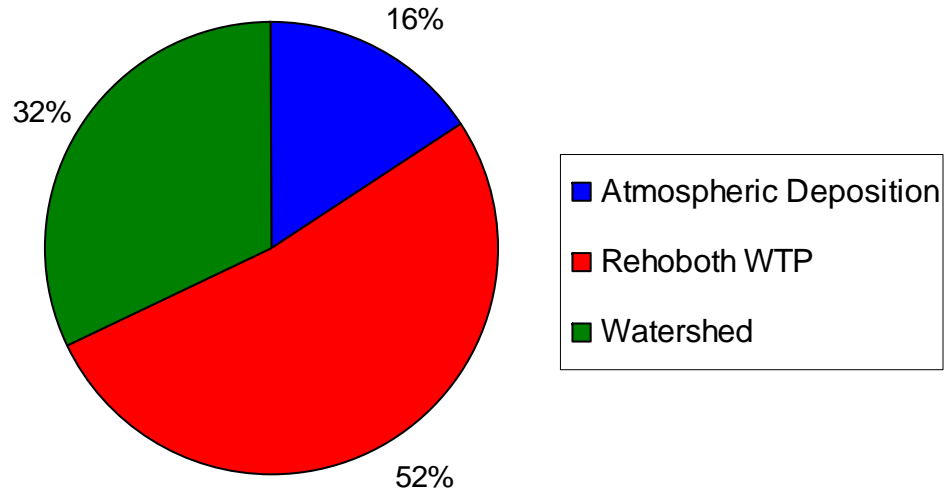
- No new drainfields within 100 feet of a tidal water, tidal wetlands, perennial streams or ditches, or ponds in-line with a perennial water course on lots created after promulgation of the regulation
- Still concern about impacts on small systems



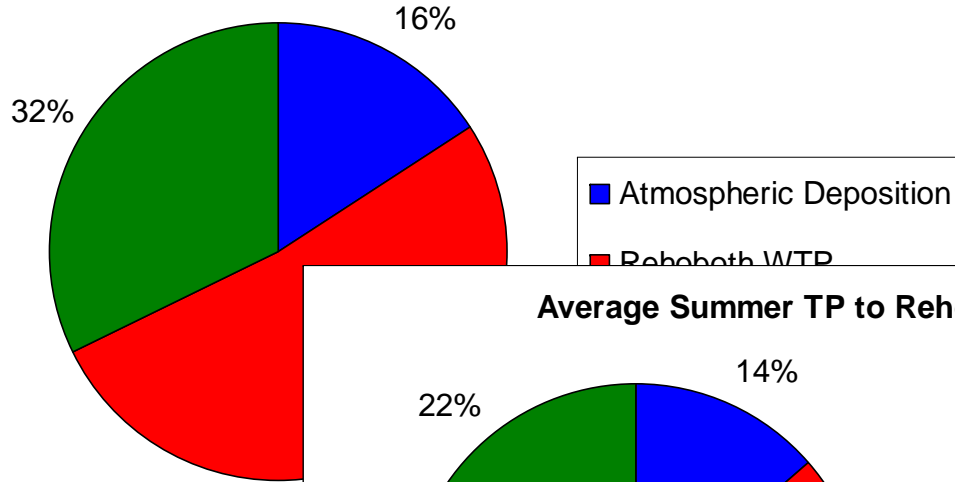
Wastewater – Point Sources

- Stress the importance of the systematic elimination of the point source discharges
 - **Rehoboth wastewater treatment plant discharge******
 - **Millsboro wastewater treatment plant**
 - A portion of the Lewes wastewater treatment plant load

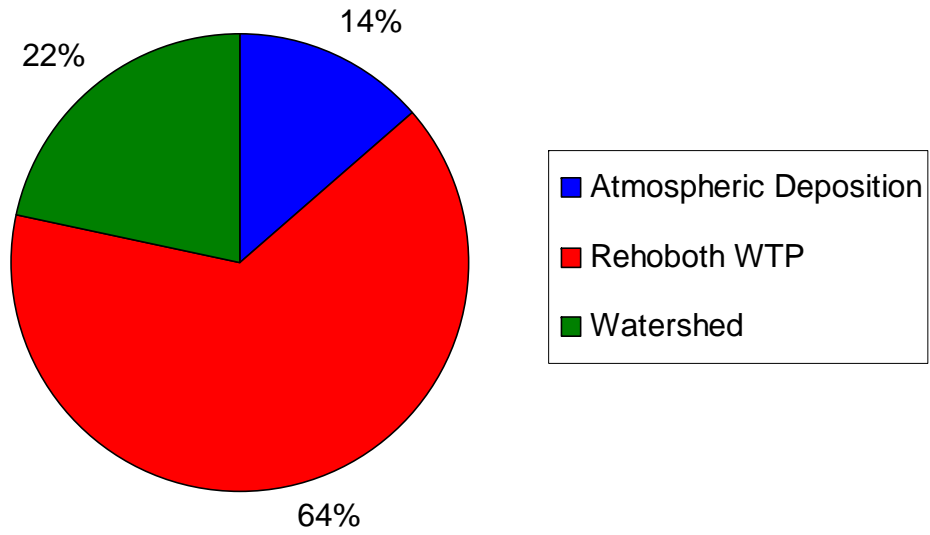
Annual Average TP to Rehoboth Bay



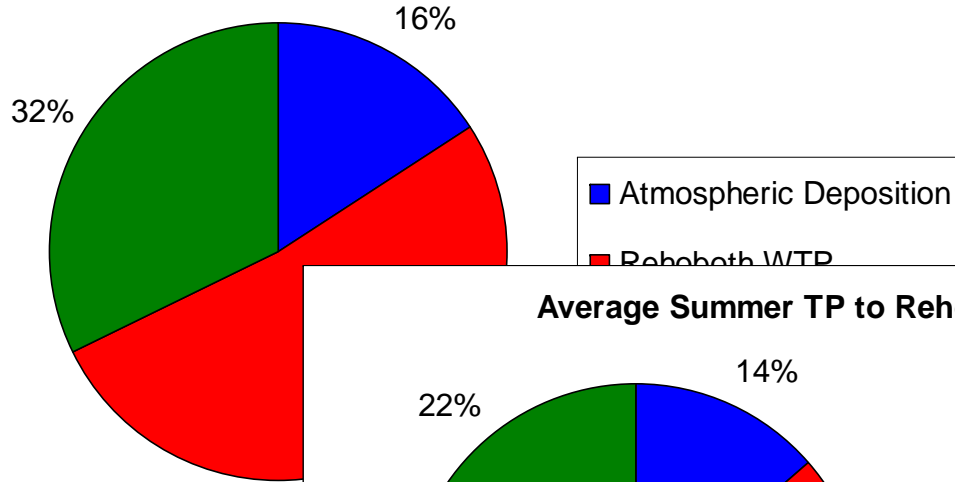
Annual Average TP to Rehoboth Bay



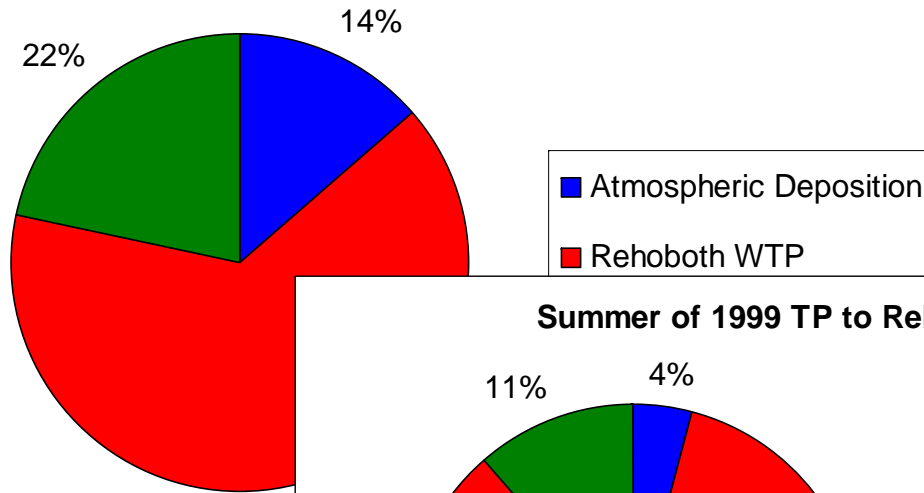
Average Summer TP to Rehoboth Bay



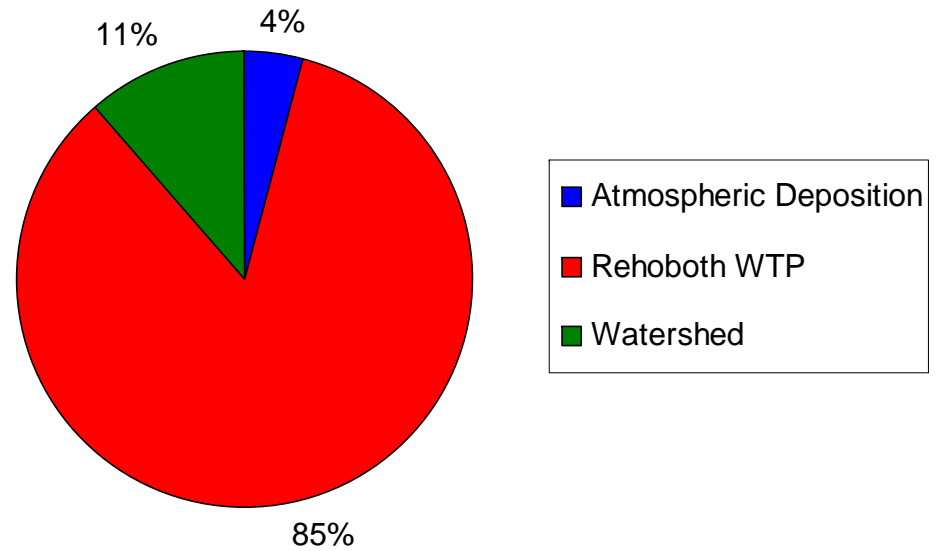
Annual Average TP to Rehoboth Bay



Average Summer TP to Rehoboth Bay



Summer of 1999 TP to Rehoboth Bay





Wastewater – Point Sources

- Stress the importance of the systematic elimination of the point source discharges
 - **Rehoboth wastewater treatment plant discharge**
 - **Millsboro wastewater treatment plant*****
 - A portion of the Lewes wastewater treatment plant load



Nutrient Budget – Protocol

- **Best Management Practices added as well as a feature to give credit for off-site improvements**
- **Department will inform developers and local governments of its availability during the Preliminary Land Use Service (PLUS) process**
- **Department's Watershed Assessment Section will complete a budget for each project in the watershed subject to PLUS. Results will be available upon request.**



Stormwater

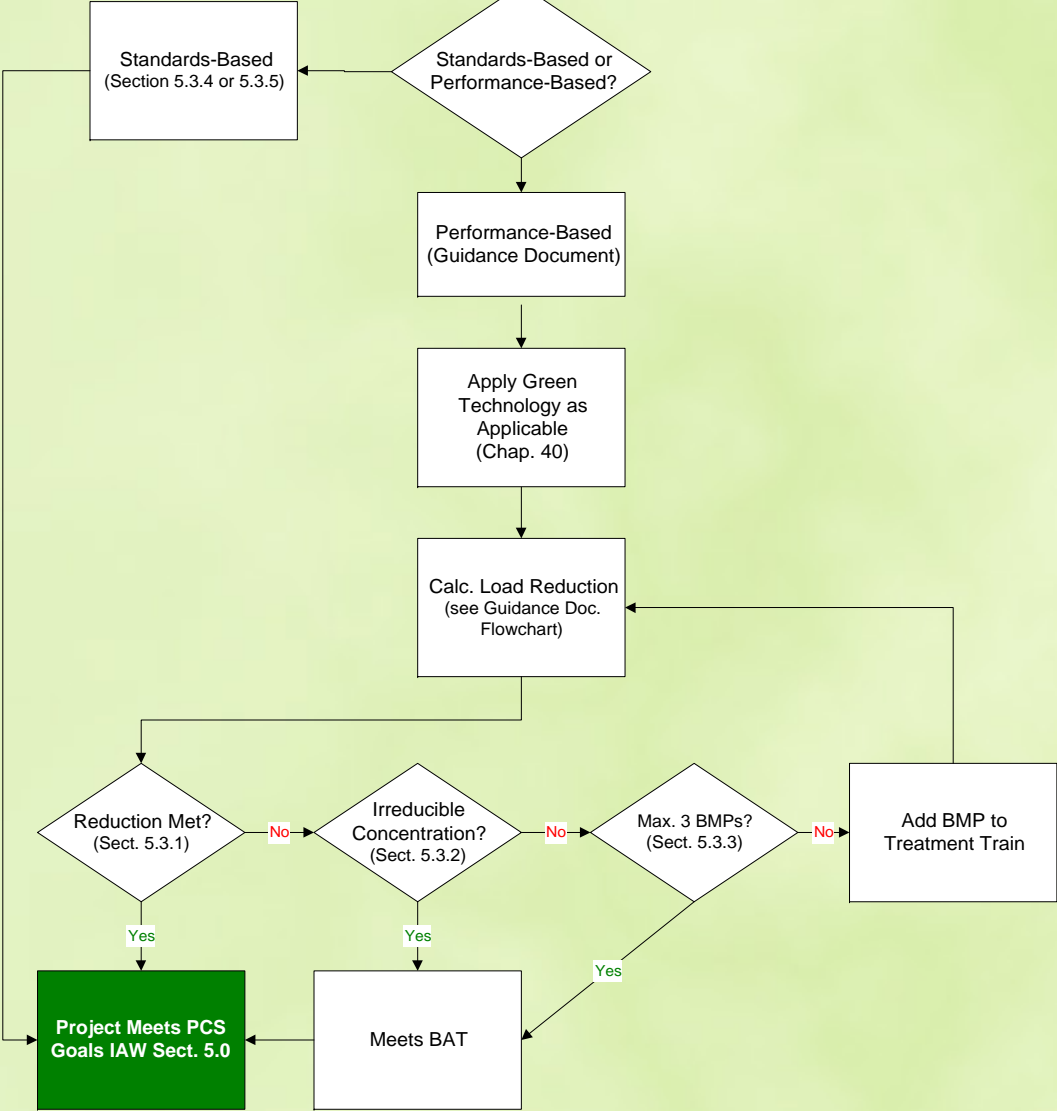
- **Section was enhanced and clarified**
- **Flexibility was added**
- **Provides more predictability**
- **Provides for stormwater review much earlier in the process**
- **5 ways for stormwater management to comply with the PCS**



Stormwater

- **5 ways for stormwater management to comply with the PCS**
 - **Complete a spreadsheet (analyzing developed condition pre- and post- use of BMPs) to determine:**
 - **If meet TMDL reduction percentages, OR**
 - **If achieve irreducible concentrations, OR**
 - **If use up to three practices in series, OR**
 - **Utilize average 100-ft buffers, OR**
 - **Utilize 30-ft buffers on intermittent streams and preserve 30% of existing forest**

Required TMDL Reduction
5.0 Sediment & Stormwater Controls
(Chap. 60)





Buffers

- **Required width of 50 feet**
- **Features requiring a buffer:**
 - Tidal waters
 - Tidal wetlands
 - Perennial streams and ditches
 - Ponds in-line with perennial streams and ditches
- **Estimated 1,027 miles of streams**
 - Over 641 miles (or 60%) of these waterways are ditches
 - 90% of the ditches are shown to have no adequate buffers
 - Although these numbers represent perennial and intermittent ditches, there is potential for real environmental improvement



Buffers

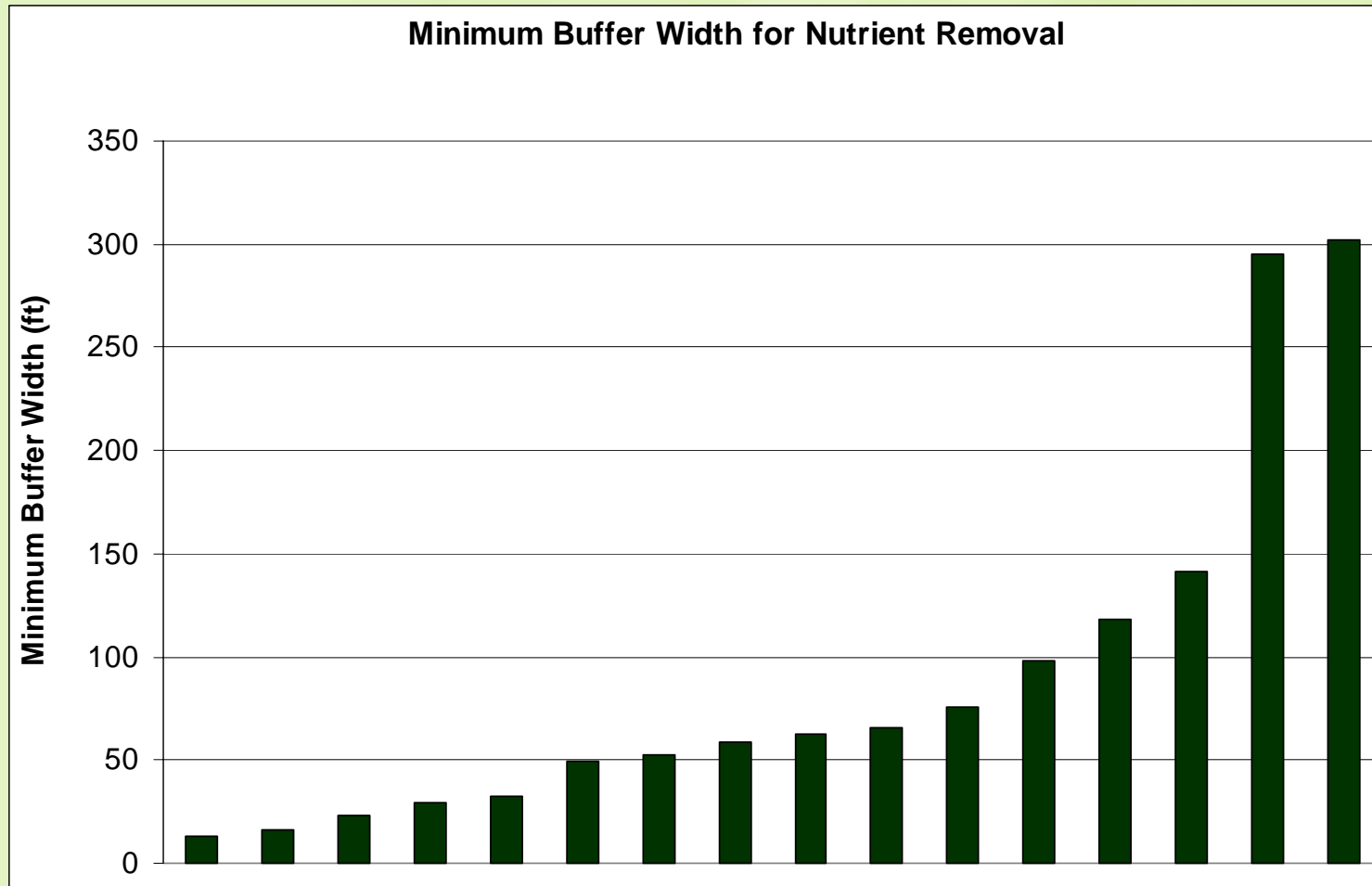
- **Vegetation recommendations**
- **Allow for stormwater features, if buffer located in community property**
- **Allow for impervious paths within portions of buffers**
- **Buffer may be on private property**



Buffer

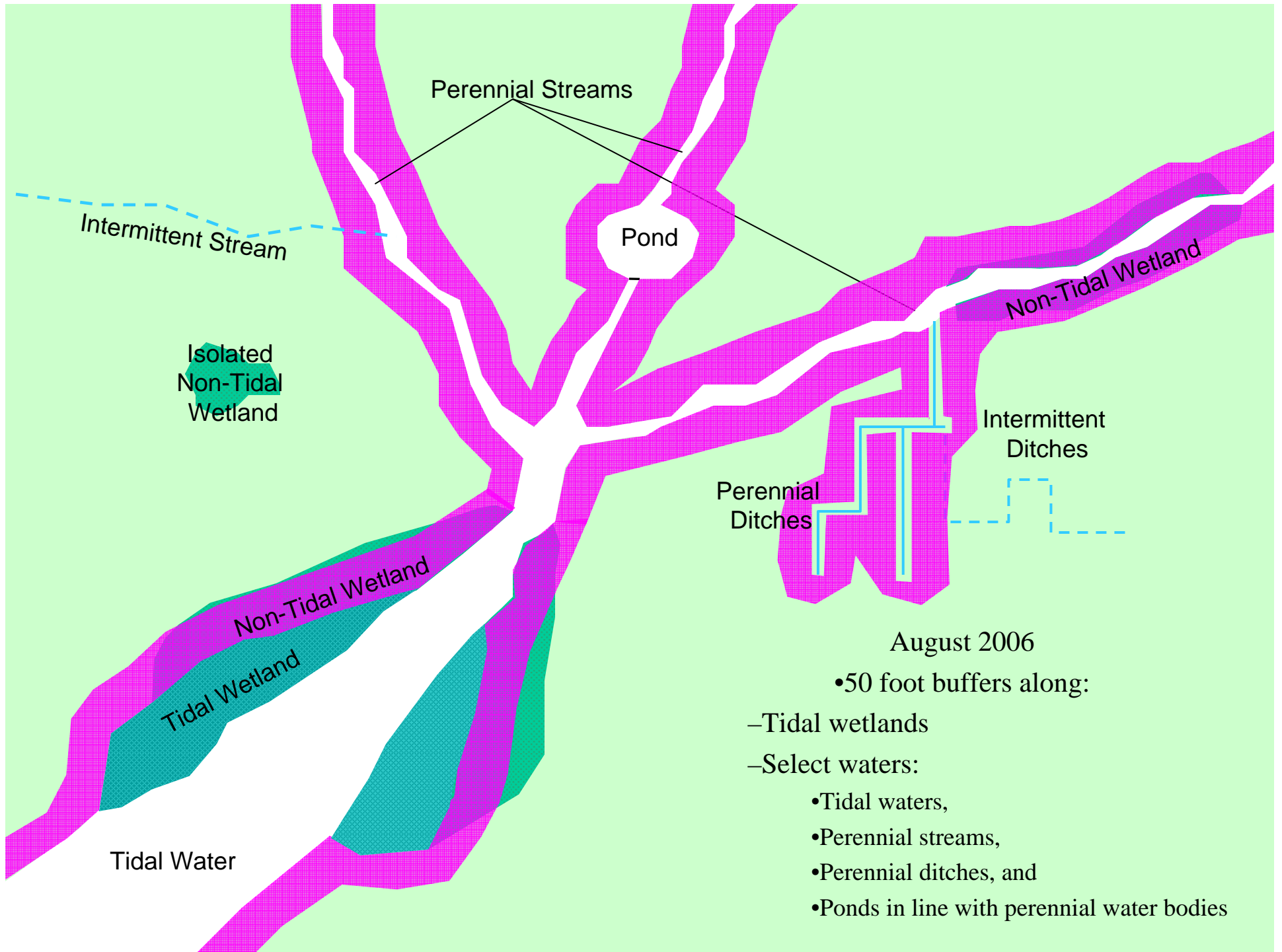
- **No lot lines (3/4-acre lot or less in a major subdivision) permitted within wetlands**
- **Buffers must be delineated on site plans**
- **Buffers will be identified with markers**
- **Specific language required in deed restrictions to protect the buffer**

Buffer data

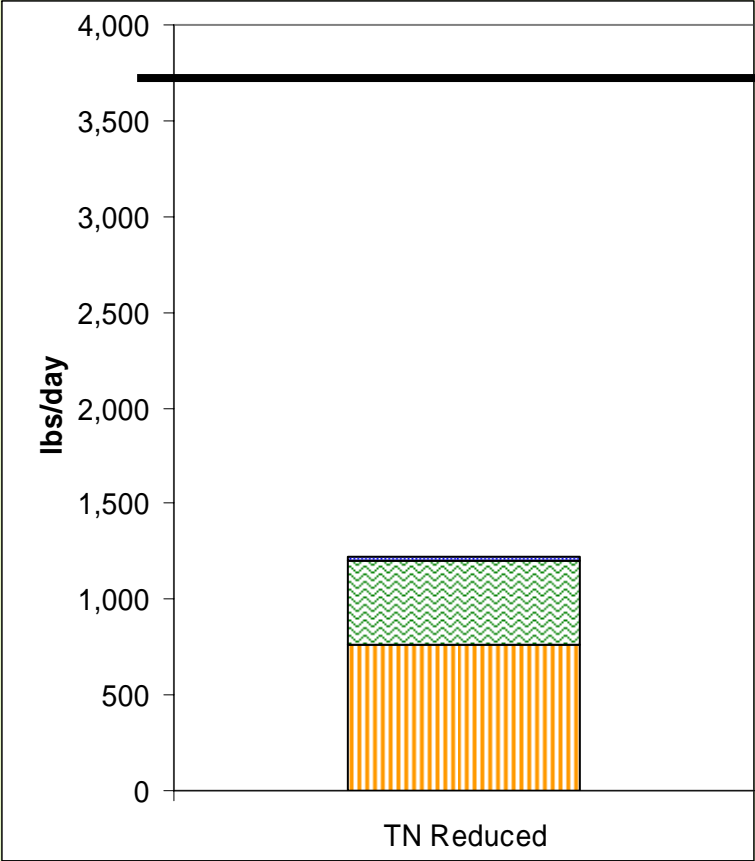
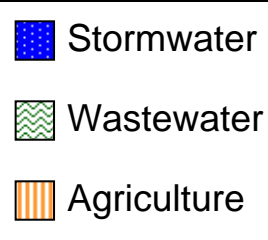


From 2003 Environmental Law Institute report

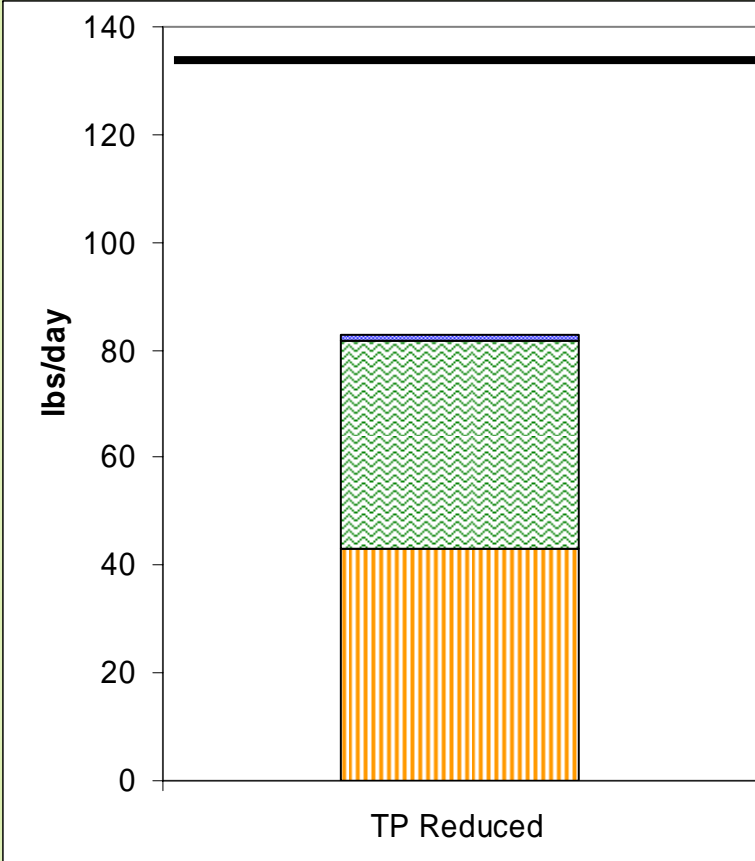
The Institute's review found ranges from 13-302 ft to remove nutrients and pollutants.



Progress to Date

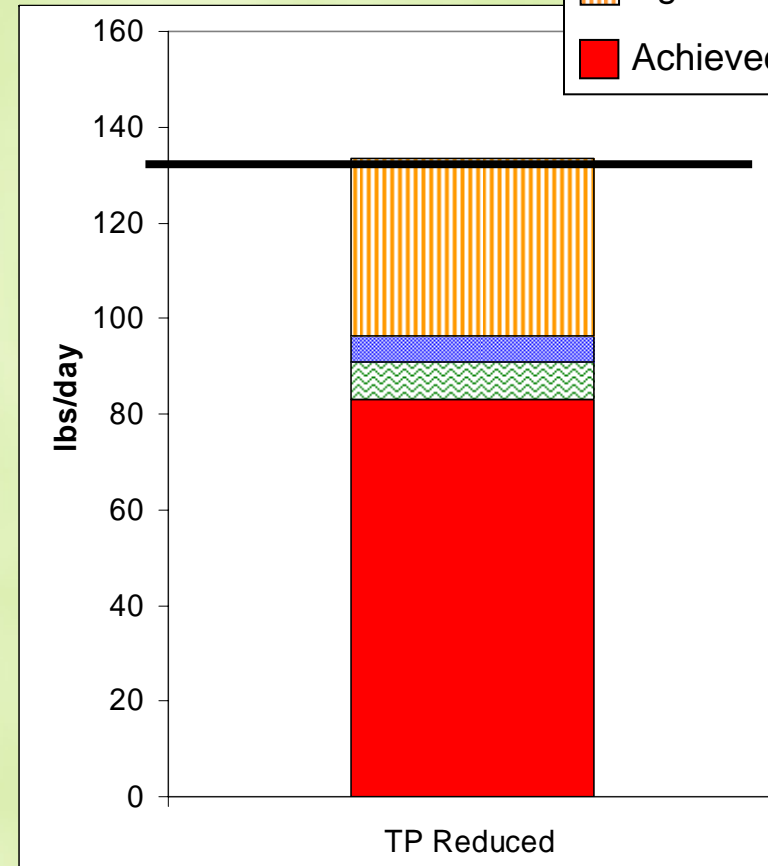
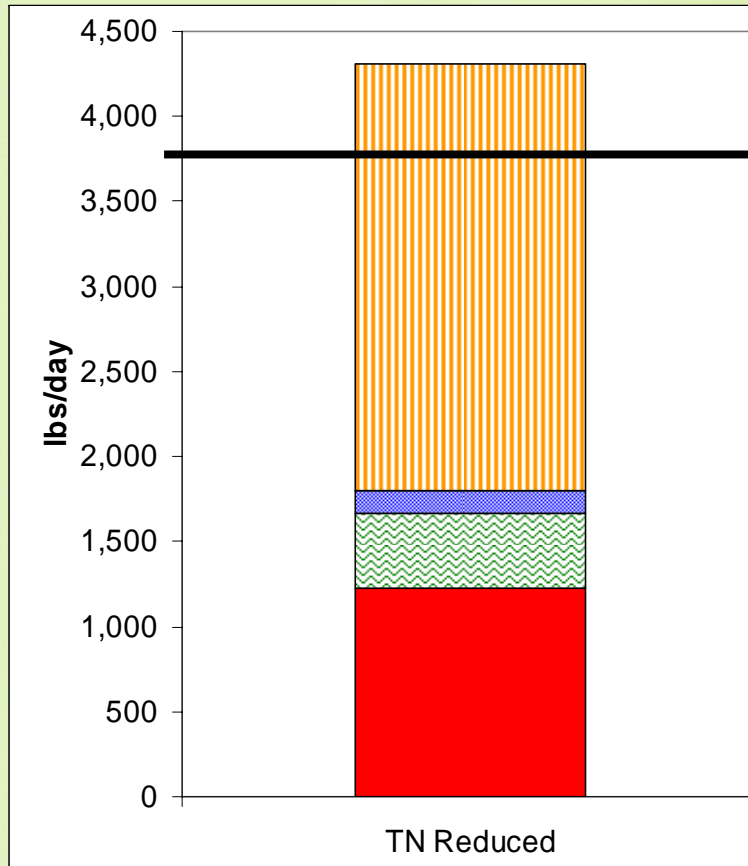
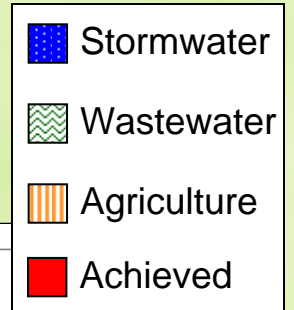


32 % of Goal Achieved



62 % of Goal Achieved

Meeting the PCS goal



Effective Date

- **Wastewater – 180 days from promulgation of the PCS regulation**
- **Stormwater & Buffer**
 - **In the county, upon promulgation**
 - **In the towns, 1 year from the promulgation date**
 - **TRIGGER: Submission of a major subdivision plan, a site plan, or a request for a traffic impact study to DELDOT for the purpose of securing a letter of no objection or entrance approval**



Path Forward

- August 3rd: Met with Tributary Action Team
- August 8th: Met with Nutrient Management Commission
- August 23rd: Workshop in Georgetown
- **September 6th: Sussex County Association of Towns**
- **September 19th: Workshop in Dewey Beach**
- **Revisions if needed**



Comments, Questions