

Nutrient Pollution

Criteria Development and Implementation *(Don't Shoot the Messenger!)*

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Presentation Overview

- 💧 Why Nutrients Are Bad!!!

- 💧 EPA Programs ...then and now

- 💧 State Programs and Implementation

- 💧 Who is Suing Who and Why?

Water Quality Impairments Due to Nutrient Pollution



- 💧 Excessive nutrients are a leading cause of water body impairment and can cause the growth of excessive algae and aquatic vegetation in receiving waters, leading to declines in dissolved oxygen levels.
- 💧 Excessive ammonia nitrogen is toxic to fish and other aquatic species.
- 💧 Aesthetic/recreational impairments – algae blooms, excessive vegetation etc.
- 💧 Loss of submerged aquatic vegetation in estuaries (loss of habitat).
- 💧 Can lead to formation of disinfection by-products in drinking water.

EPA Guidance for the Development of Numeric Nutrient Criteria

1998 Clean Water Action Plan

"Tonight, I ask you to join me in launching a new Clean Water Initiative, a far-reaching effort to clean our rivers, our lakes, our coastal waters for our children."

President Bill Clinton, State of the Union, January 27, 1998



National Nutrient Criteria Strategy

Regional Technical Assistance Groups

Technical Guidance Documents

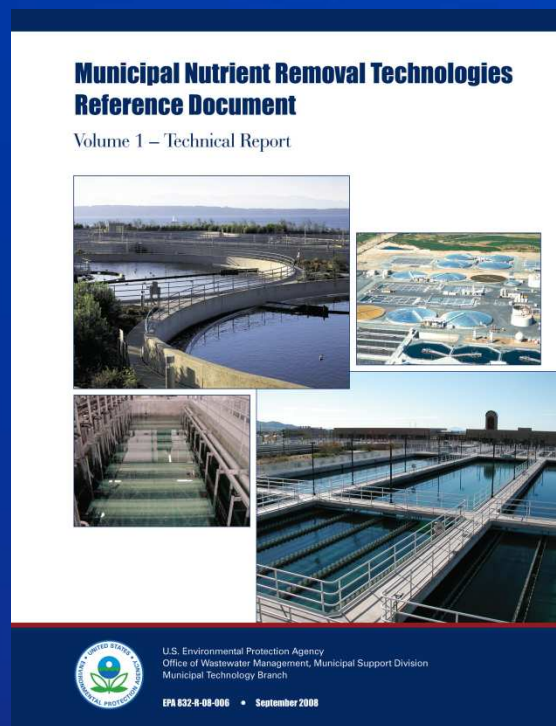
Nutrient Removal Technologies

Municipal Nutrient Removal Reference Document

💧 Technologies

💧 Case Studies

💧 Cost



Nutrient Criteria in States

💧 Qualitative, Narrative, Descriptive...

💧 Translation to Numeric Criteria

- 💧 Lakes/Ponds, Rivers/Streams, Estuaries, Wetlands
- 💧 One Size Does Not Fit All

💧 Implementation Implications

- 💧 What is the right threshold?
- 💧 TMDL Development
- 💧 Compliance and Enforcement
- 💧 Impacts to Stakeholders



The Lake Champlain Basin



Lake Champlain TMDL

💧 Point and Nonpoint Contributions

💧 Implementation





- 💧 Lake Champlain Basin Program

- 💧 Stormwater Litigation

- 💧 Comprehensive Nutrient Management Plan

Challenges and Successes

Challenge

-  Point v. Nonpoint
-  Limited Watershed-Based Funding
-  Long-Term Implementation
-  Regulatory/Legal Questions: Authority

Success

-  Coordination and Partnerships
-  WQ Improvements
-  Information Collection and Sharing

Petitions and Lawsuits

Secondary Treatment Standards for Nutrient Removal

1. Publish information on effluent treatment technology
2. Issue nitrogen and phosphorus removal requirements

Mississippi River and Gulf of Mexico

1. Adopt numeric water quality standards
2. Establish TMDLs



Florida Wildlife Federation v. US EPA

1. Violation of non-discretionary duty under CWA Section 303(d)
2. Injunction against EPA to promptly set numeric nutrient standards



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