



# **Potential for Forest Conservation and Restoration Created by the Clean Water Act**

**Presented at  
Maryland Forest Conservation Goal-Setting Session on  
Green Markets for Forest Conservation**

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Presented by  
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# The Challenge

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## **We Have the Broad Legal Mandates**

- **Meet Water Quality Standards**
- **Maintain Pollution Caps**
- **Protect Waters from Degradation**

## **We Lack some Operational Procedures**

## **We Lack some Programs**



# The Opportunities

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## The Operational Procedures are Currently Being Developed

- **Nutrient Offsets for New Point Sources**
- **Water Resource Elements of Comprehensive Land Use Plans**
- **Creating Administrative Institutions**
- **Offsetting New Nonpoint Sources**



# The Larger Context

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## **Clean Water Act Framework:**

- 1. Set Standards**
- 2. Monitor Waters**
- 3. List Impaired Waters**
- 4. Develop TMDLs**
- 5. Implement TMDLs**
- 6. Evaluation and Feedback**



# Water Quality Standards

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**“Protect and restore the**

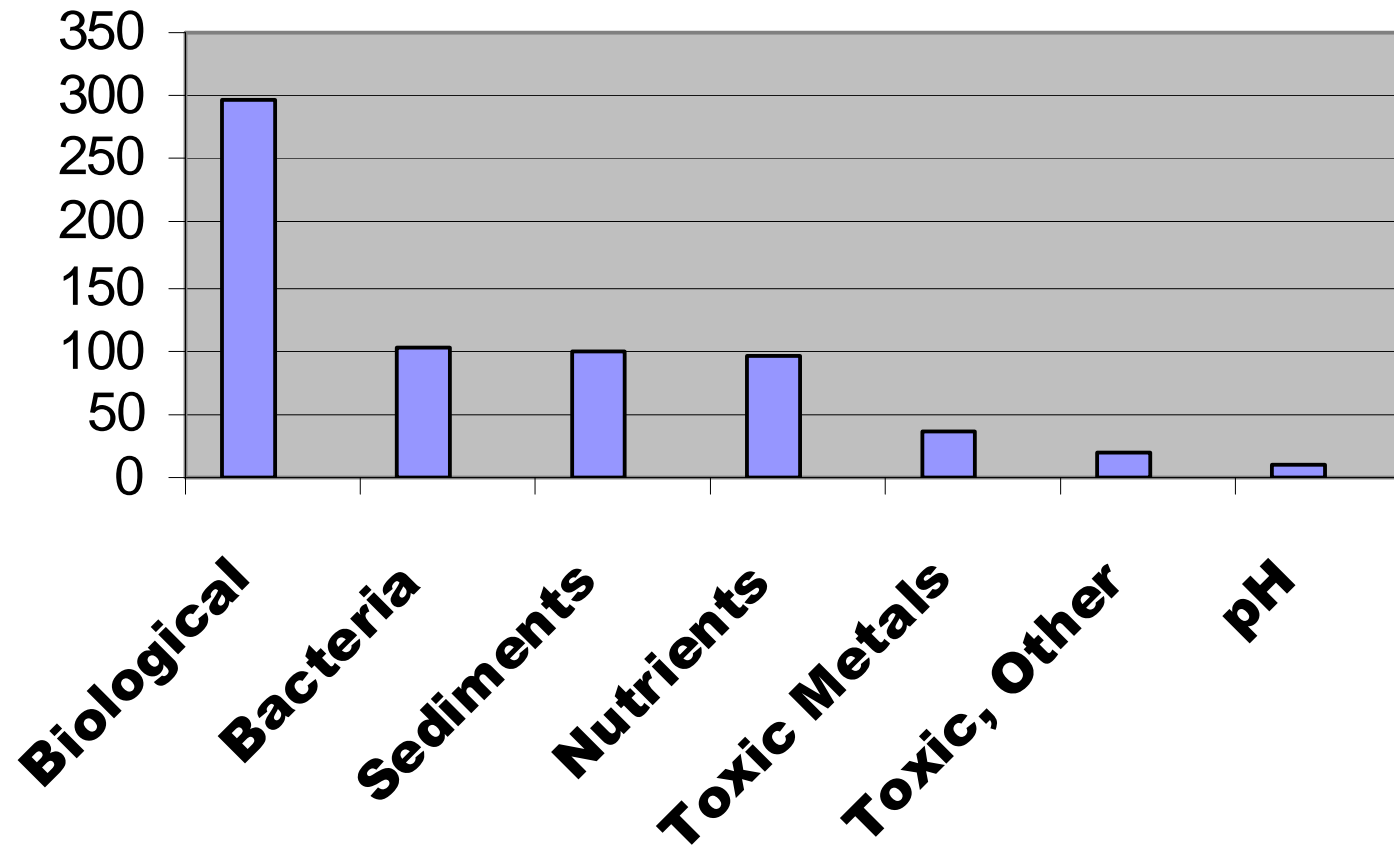
- Physical,**
- Chemical and**
- Biological integrity of the Nations waters”**

**Standards Composed of Three Elements:**

- Designated Uses**
- Criteria**
- Antidegradation Policy**

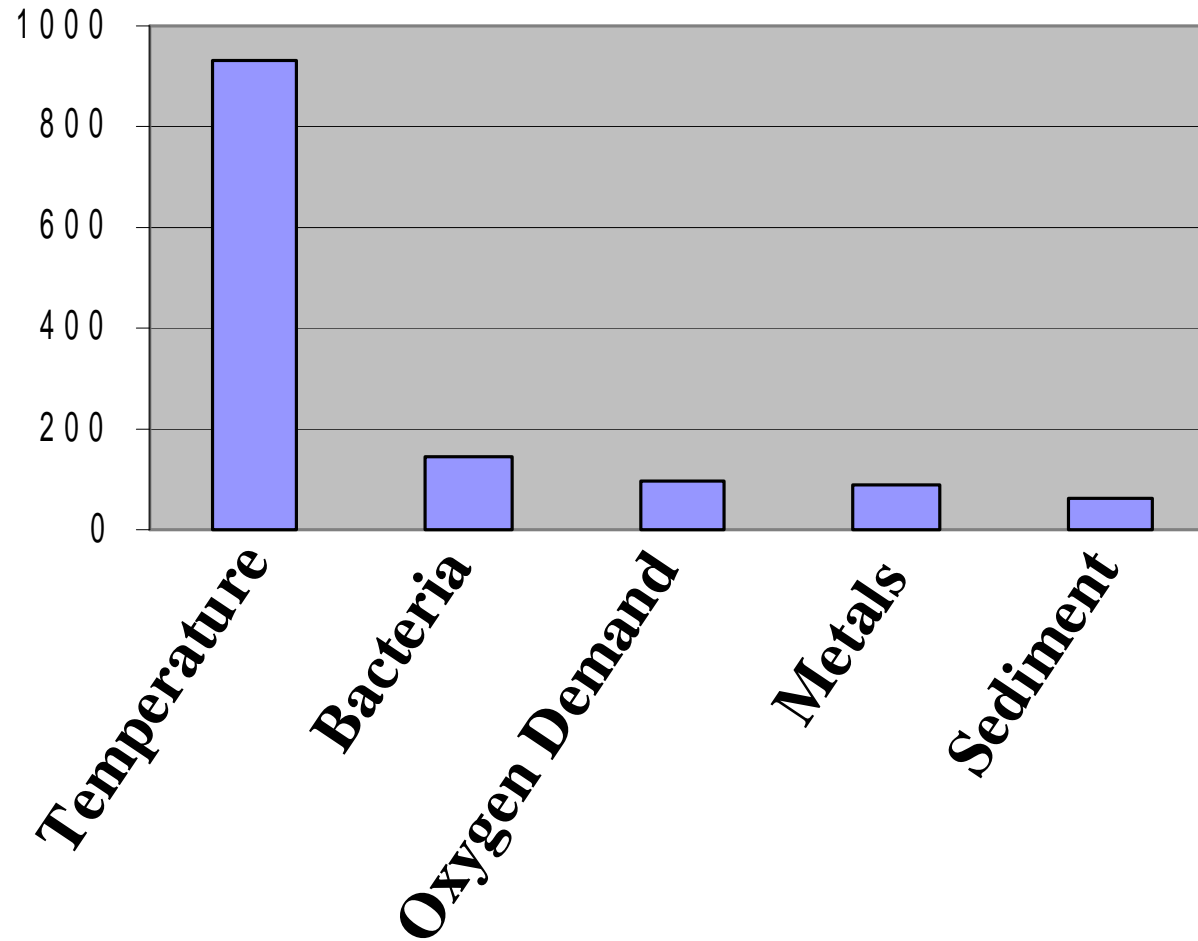


# Maryland's 303(d) List





# Oregon's 303(d) List





# MD Temperature Criteria

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## For Use III Nontidal Cold Waters

(a) The maximum temperature outside the mixing zone may not exceed 68F (20C) or the ambient temperature of the surface waters, whichever is greater.

(d) It is the policy of the State that riparian forest buffer adjacent to Use III waters shall be retained whenever possible to maintain the temperatures essential to meeting this criterion.

COMAR 26.08.02.03-3





# TMDL Definition

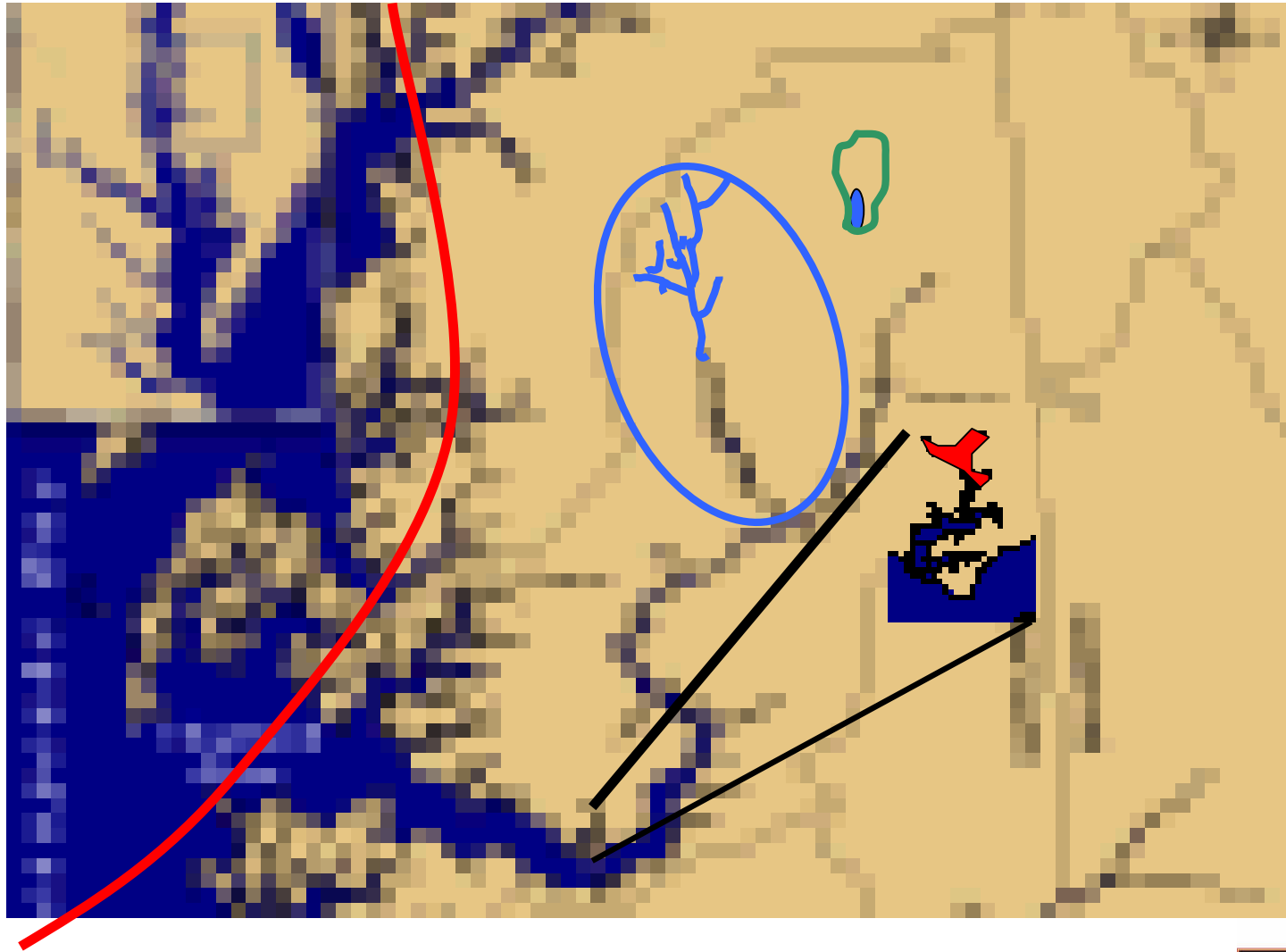
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## Total Maximum Daily Load:

- **The maximum amount of an impairing substance or a stressor that a waterbody can assimilate and still meet water quality standards.**
- **Allocates load among ALL pollution contributors, including natural sources.**
- **TMDL = PS + NPS + Margin of Safety**



# Various Geographic Scales





# Two Major Classes of Impairments

## Near-field:

- Physical Stream Degradation
- “Biological” Impairment





# Two Major Classes of Impairments

## Far-field:

- **Downstream Effects of Nutrients & Sediments**





# Key Objectives

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## **Environmental Objectives:**

- 1. Restore Impaired Water Quality**
- 2. Maintain Restored Water Quality**
- 3. Protect Water Quality**



# Other Pieces of the Puzzle

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- **Water Quality Standards**
  - **Includes Antidegradation Policy**
- **303(d) List of Impaired Waters**
  - **Prohibitions on Permitted Pollutant Increases  
UNLESS a TMDL identifies an allocation.**
- **TMDLs (Loading Caps, Stressor Limits)**
- **Drinking Water Issues**
- **EPA Memo on Stormwater as a Point Source**



# Emerging Issues

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- **Prohibitions on Permits Before TMDL is Developed**
- **Stormwater Allocations for NPDES Permits**
- **Biological impairments**
- **Trash TMDLs**
- **Thermal TMDLs**
- **Nutrient Off-sets for New Sources**
- **Local Land Use Planning (HB1141)**
- **Antidegradation Policy**



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**QUESTIONS?**

**COMMENTS?**

*Necessity is the Mother of Invention*

