

# Antidegradation Background



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# Water Quality Standards

- Defines water quality goals of a water body
- This is accomplished by:
  - Designating the use or uses of the water (aquatic, recreational, etc.)
  - Setting criteria necessary to protect the uses
  - Preventing degradation of water quality

# What is Antidegradation?

- Antidegradation refers to federal regulations designed to maintain and protect existing water quality and high quality waters from unnecessary pollution

# Applicability

- Antidegradation applies to any permitting action regarding a regulated discharge of a new or increased amount of a pollutant of concern

# Origins

- Basic policy was est. in 1968 by U.S. Dept. of the Interior
- Promulgated in CFR in 1983
  - 40 CFR 131.12
- No explicit requirement for antidegradation in CWA
  - Consistent with spirit and intent of the act
  - “...restore and maintain the chemical, physical and biological integrity of the Nation’s waters”

# Degradation Defined

- A decline in the chemical, physical, or biological conditions of a surface water as measured on a pollutant-by-pollutant basis
- Increase in any pollutant concentration or mass loading
- Focus on “Pollutants of Concern”

# Tiers of Anti-deg

- Tier 1 – Maintain uses
    - Can increase pollutant concentration up to the WQS
  - Tier 2 – Maintain existing quality
    - Higher quality waters
      - Concentration of pollutants are substantially below the water quality limit needed to protect the use
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- Tier 2 ½ – Outstanding Iowa Waters
    - Unique Waters
    - Degradation allowed only under very limited conditions
  - Tier 3 – Outstanding National Resource Waters
    - Unique Waters
    - Degradation allowed only under very limited conditions

# Tiers of Anti-deg

- Tier 2
  - Try to protect existing higher quality condition
  - Degradation allowed only if it is “**necessary** to accommodate **important** economic or social development”
    - No reasonable alternative to degradation
    - Noteworthy social or economical benefits
    - Existing uses are protected

Tier 2 Example:

Stream: **Otter Creek**

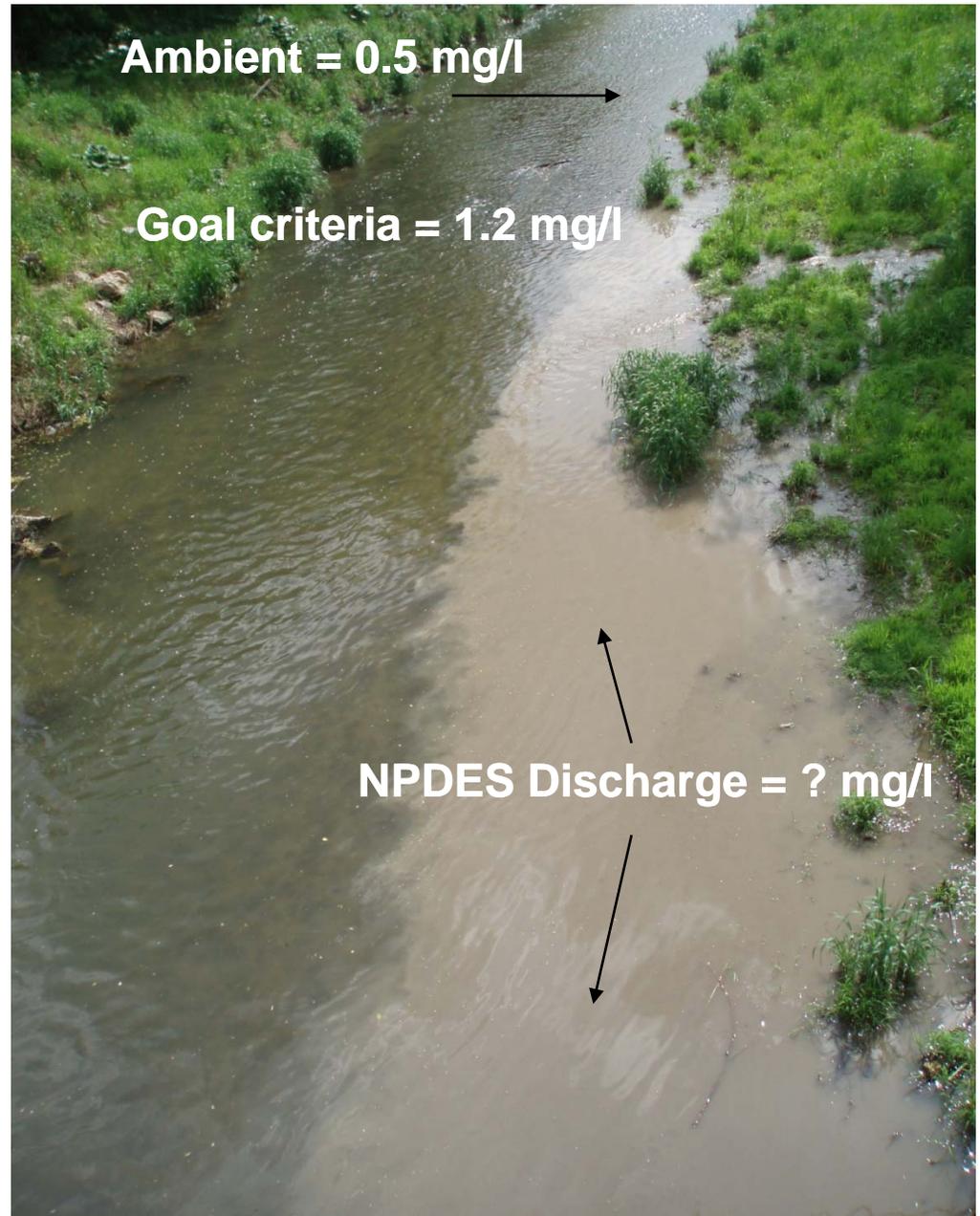
Class: **B(WW-2)**

Parameter: **Zinc**

Aquatic Life Criteria: **1.2 mg/l**

Ambient condition: **0.5 mg/l**

**Water quality is better than  
necessary to protect use**



# Tiers of Anti-deg

- Tier 2 ½ - Outstanding Iowa Waters
  - Some waters may not have national significance, but are outstanding within Iowa
  - Water body by water body approach
  - This tier affords more protection than Tier 2
  - Allows some flexibility not afforded in Tier 3
  - Old HQ waters will transfer to OIW

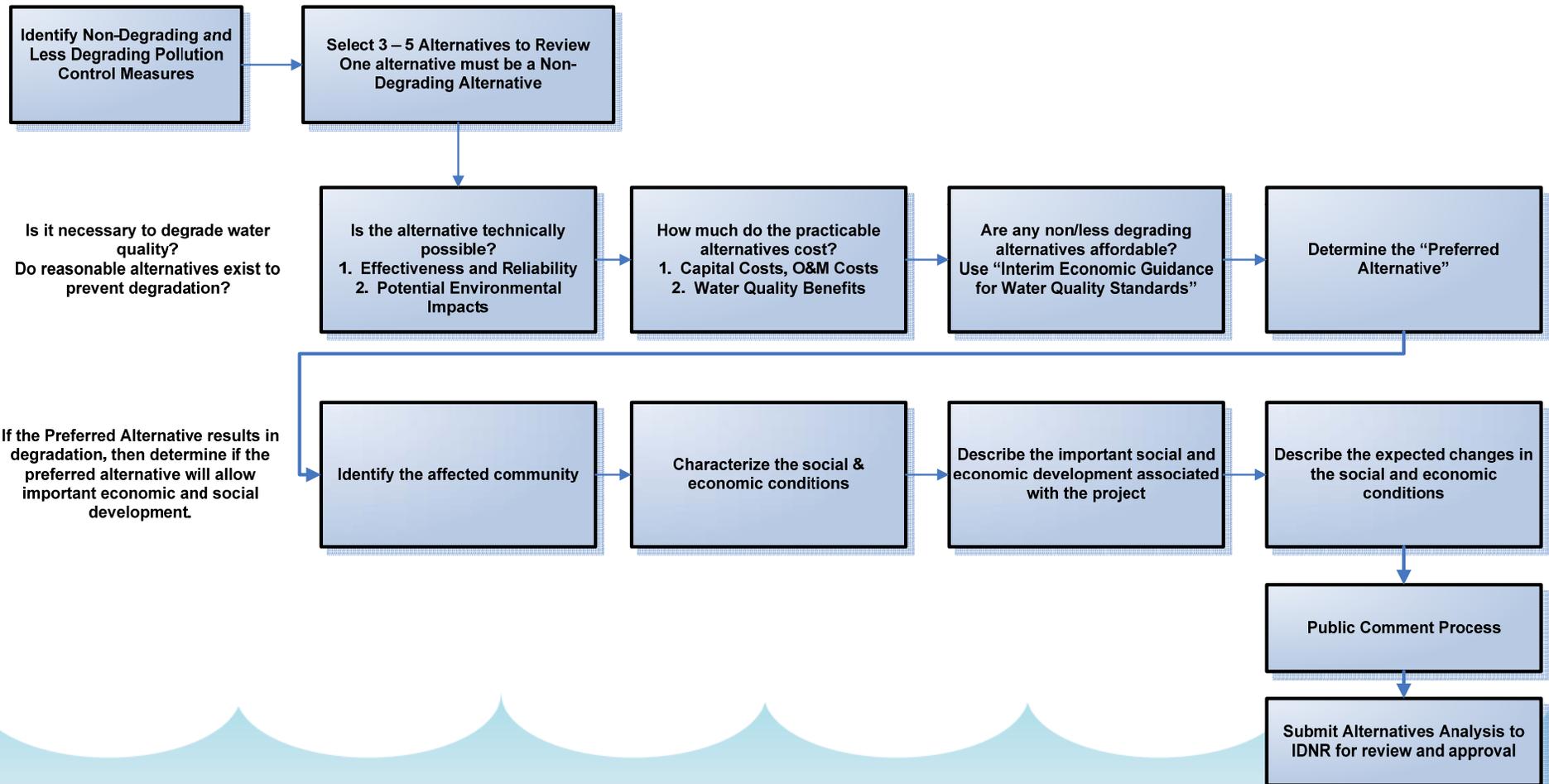
# Tiers of Anti-deg

- Tier 3 – Outstanding National Resource Waters
  - Quality must be maintained, degradation prohibited unless temporary and limited
  - Examples:
    - Waters of exceptional recreational or ecological importance
    - National Parks, State Parks, Wildlife Refuges
    - None are proposed in these rules
    - Nomination procedures

# Alternatives Analysis

- Non-Degrading and Less Degrading Pollution Control Measures
  - Land application
  - Subsurface irrigation
  - Waste transport
  - Groundwater recharge
  - Improvements in the collection system
  - Recycling or reuse
  - Discharge to a regional wastewater collection and treatment system
  - Seasonal or controlled discharges to avoid critical water quality periods

# Alternatives Analysis



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# Antidegradation Scenarios



# NPDES Permit Amendments & Renewals

- Where antideg applies:
  - Less stringent effective permit limits
  - New pollutants of concern
  - Change in outfall location



# NPDES Permit Amendments & Renewals

- Where antideg does not apply:
  - Compliance schedule data adjustments
  - Permittee name change
  - Change in monitoring requirements
  - Increased loads that are within design capacity
  - Change in chemical additives if no new POCs
  - Newly discovered discharge who doesn't have a permit
  - Where a future permit limit is not effective



# Antideg & Construction Permits

- Where antideg applies:
  - Any increase in design capacity
    - ADW or AWW Flows
    - 30 day TSS
    - 30 day BOD
    - 30 day TKN
  - Any change in design that will result in less stringent NPDES permit limits



# Antideg & Construction Permits

- Where antideg does not apply:
  - Any decrease in design capacity and equally or more stringent NPDES permit limits for POCs
  - Unsewered communities
  - CSO projects as long as there are not design impacts to the wastewater treatment plant



Lunch

