

# Fifth Stakeholder Meeting for Nondegradation Rulemaking

Minnesota Pollution Control Agency

June 9, 2009, 1:00pm - 3:30pm, MPCA Offices, Rochester

June 10, 2009, 1:00pm - 3:30pm, MPCA Offices, Duluth

June 12, 2009, 8:30am - 11:30am, Dakota Lodge, West St. Paul

# Agenda

- Welcome, introductions
- Issue Paper 9 – How should cumulative impacts be addressed?
- Group discussions and written response to discussion points
- Issue Paper 10 – How should Outstanding Resource Value Waters be protected?
- Group discussions and written response to discussion points
- Summary/Next Steps



# Issue Paper 9 – How should cumulative impacts be addressed?

- Current rule and guidance
- EPA guidance
- Related litigation
- Options for how information regarding cumulative impacts may be used in antidegradation decisions
- Challenges

# Current rule and guidance

- Minn. R. 7050.0185, Subp. 4
  - “(T)he agency shall consider the ... cumulative impacts of all new or expanded discharges on the receiving water...” in the decision of whether additional control measures will be required
- MPCA's 1988 Guidance
  - No guidance on how cumulative impacts should be used in decision-making process





# EPA guidance

- Cumulative impacts should be considered where multiple *de minimis* loadings are allowed (Region 5, Office of Science and Technology)
- Cumulative impacts should be based on total assimilative capacity (Office of Science and Technology)
- Need to establish baseline conditions for each affected waterbody (Region 9, Office of Science and Technology)
- Evaluate through TMDL-like analysis (Region 8)



# Related litigation

- Ohio Valley Environmental Coalition, et. al. v. Marianne Lamont Horinko, 2003
  - 10% reduction in available assimilative capacity before Tier 2 review is required was deemed reasonable
  - 20% cumulative reduction from all discharges before Tier 2 review is required was considered arbitrary and capricious



# Related litigation

- Kentucky Waterways Alliance, et. al. v. Stephen L. Johnson, 2008
  - Remanded back to EPA six exemptions to Tier 2 review. Exemptions included:
    - <20% increase in pollutant loading considered *de minimis*
    - Discharges under stormwater general permits
    - Discharges from concentrated animal feeding operations (CAFOs)
  - Cumulative impacts must be taken into consideration where “insignificant” (*de minimis*) degradation is allowed

# How should information regarding cumulative impacts be used in antidegradation decisions?

- Options/considerations
  - Trigger for review
  - Determining level of review
  - To create a margin of safety
  - To create a set aside
  - Identify downward trending waters





# Trigger for review

- Ensures that multiple individual activities do not unnecessarily degrade water quality
- Usually based on use of assimilative capacity
- Examples of cumulative triggers:
  - Wisconsin:  $> 33\%$  of assimilative capacity (for indicator parameters, other than D.O.)
  - New Mexico:  $> 10\%$  of assimilative capacity (for municipal and industrial discharges)
  - Tennessee:  $> 10\%$  of assimilative capacity, available habitat or 7Q10 low flow



# Determining level for review

- Under a scaled approach, cumulative impacts may determine what level of review is appropriate
- Example:
  - Maryland: Analysis of social and economic justification is only required when more than 25% of the assimilative capacity is used. (Alternatives analysis is required for all Tier 2 reviews)



# To create a margin of safety

- Accounts for uncertainty - creates a safety buffer to protect a standard
- Examples:
  - New Hampshire – 10% total assimilative capacity above the standard
  - North Carolina – for toxics no additional lowering of water quality is allowed beyond one-half of the normal standard.

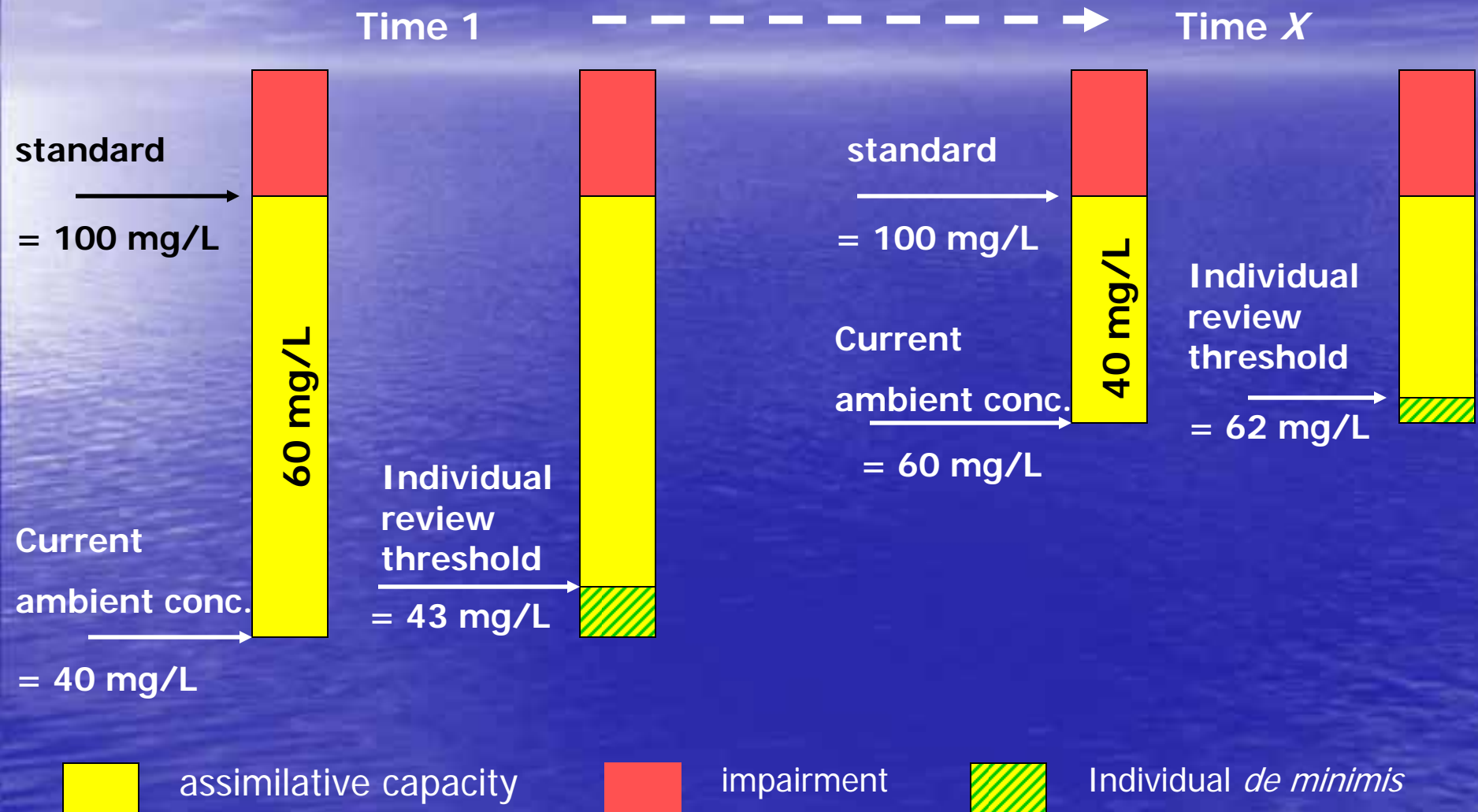


# To create a set aside

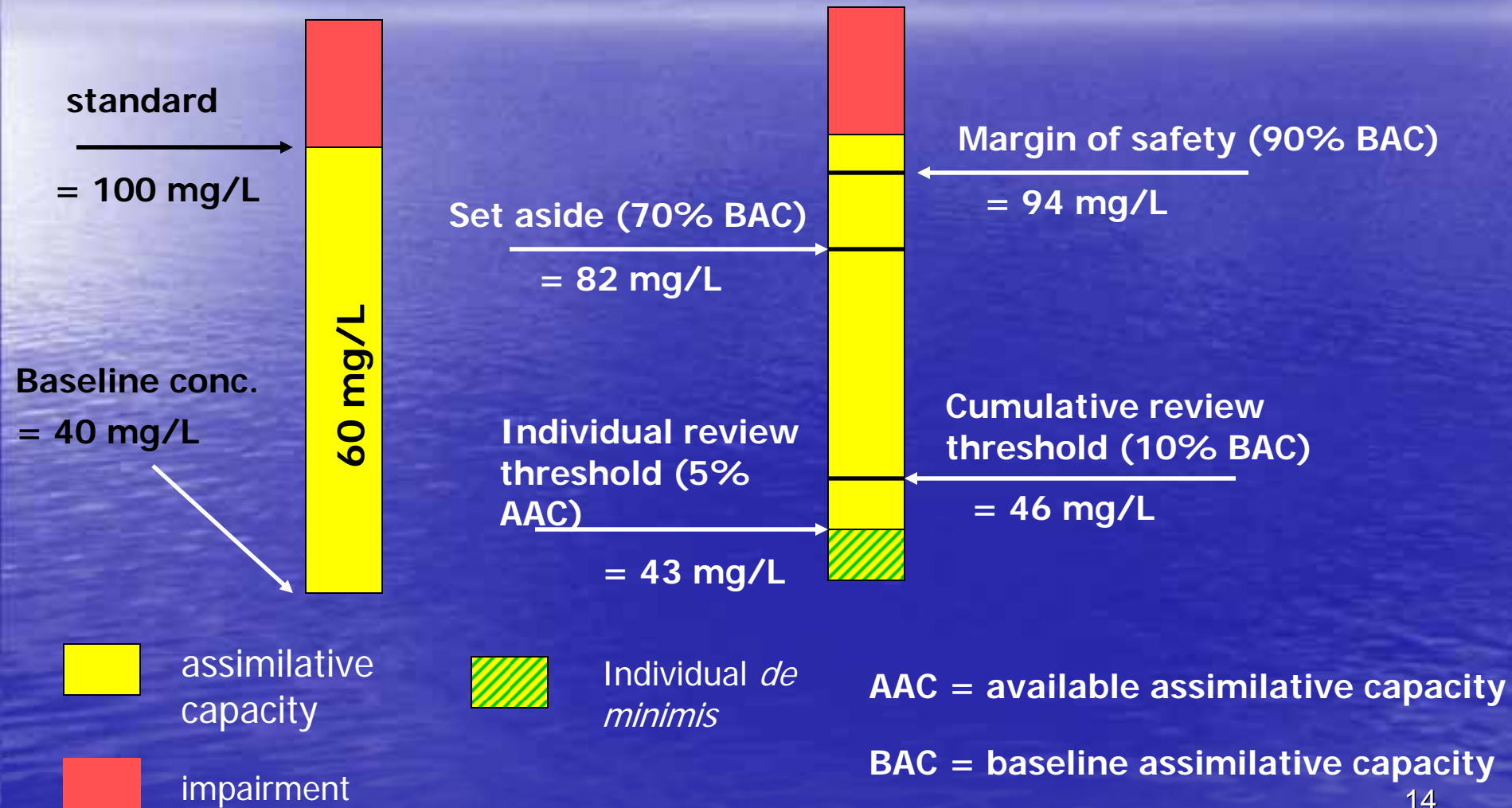
- Used to prohibit or restrict activities once a predetermined amount of the assimilative capacity of a high-quality water has been consumed
- Example: Ohio
  - Outstanding State Waters - 70% of remaining available assimilative capacity
  - Superior High Quality Waters - 35% of remaining available assimilative capacity
  - General High Quality Waters - not less than the standard unless authorized by a variance



# Example of individual review threshold set at 5% of available assimilative capacity for individual actions



# Examples of individual and cumulative review thresholds, set asides and "margins of safety"





# Identify downward trending waters

- Used to identify waters that, although they may be high-quality, are potentially being degraded at a relatively rapid rate
- Identification occurs through watershed monitoring/assessment



# Challenges

- Establishing baselines
- Describing impacts and thresholds
- Parameters of concern and interaction among parameters
- Allotment of available water quality
- Unaccounted loadings/impacts
  - Regulated sources (e.g. de minimis loadings/impacts, general permits)
  - Unregulated sources
- Gathering, organization and storage of information
- Spatial and temporal scale



# Discussion Points

1. Should there be an understanding of cumulative impacts before an individual permit or certification is issued?
2. How should information regarding cumulative impacts be used? (May be more than one.)
  - As a trigger for review?
  - Determining level of review?
  - To create a margin of safety?
  - To create a reserve or set-aside?
  - To identify downward trending waters?

# Discussion Points

3. What are the best ways to describe cumulative impacts and why? Some considerations include:
  - assimilative capacity,
  - dilution,
  - changes in ambient conditions,
  - changes in concentration and/or mass
  - parameters of concern
  - surrogate measures
  - others?
4. At what spatial scale should cumulative impacts be considered?

# Discussion Points

5. To adequately gauge cumulative impacts, should additional information be required of regulated entities with discrete discharges to provide additional assessment information on the receiving water as part of their permit requirements?
6. Should the MPCA develop and implement a tracking system to monitor cumulative impacts?

# Issue Paper 10 – How should ORVWs be protected?

- Federal regulation and EPA guidance
- Current Rule
- Possible revisions/clarifications
  - Temporary changes to water quality
  - Relationship between high quality waters and Restricted ORVWs
  - Protection from upstream activities
  - ORVW designation process
  - NPDES-permitted stormwater activities





# Federal regulation and guidance

- 40 CFR 131.12 (a)(3) - Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.
- EPA Guidance:
  - “maintained and protected” means “no new or increased discharges”
  - no new or increased discharges to tributaries that would result in lower water quality outstanding resource
  - exception for “temporary and short-term changes in the water quality”



# Current Rule: Minn. R. 7050.0180, Nondegradation for Outstanding Resource Value Waters

- Special characteristics may include high water quality, or exceptional recreational, cultural, aesthetic or scientific value
- Three categories
  - Prohibited
  - Restricted
  - Unlisted



# Prohibited ORVWs

- Most pristine or sensitive ORVWs
- Analogous to the federal ONRWs
- New or expanded discharges are prohibited
- Examples:
  - wilderness areas (e.g. Boundary Waters Canoe Area Wilderness, Voyageur's National Park),
  - portions of Lake Superior,
  - DNR designated scientific and natural areas, and
  - federal and state wild river segments



# Restricted ORVWs

- New or expanded discharges are not allowed where there is a prudent and feasible alternative
- Prudent and feasible test = Analysis of non-degrading alternatives
- Examples:
  - portions of Lake Superior and the Mississippi River,
  - certain lake trout lakes and calcareous fens, and
  - federal or state designated scenic or recreational river segments





# Unlisted ORVWs

- Waters not specifically listed in either Minn. R. 7050.0180, subparts 3-6b or Minn. R. 7050.0470
- Allows for flexibility to include waters that are at a later time determined to possess the characteristics of an ORVW
- Example: DNR designation of a scientific or natural area chronologically falls between MPCA rulemakings in which ORVWs are formally listed
- New or expanded discharges to Unlisted ORVWs are prohibited or stringently controlled to preserve the existing high quality or the special characteristics that make the water an ORVW

# Key definitions/concepts in current rule

- New discharge = not in existence on the date on which the ORVW was designated
- Expanded discharge = discharge changes in volume, quality, location, or any other manner after the date on which the ORVW was designated, such that an increased loading of one or more pollutants results
- Upstream discharges: New or expanded discharges to waters that flow into ORVWs be controlled so as to assure no deterioration in the quality of the downstream ORVW

# Possible revisions/clarifications

- Temporary changes to water quality
- Differences in how high quality waters and Restricted ORVWs are protected
- Protection from upstream activities
- ORVW designation process
- NPDES-permitted stormwater activities





# Allowance for temporary changes to water quality

- Current rule has no such provision
- Criteria may include:
  - length of time during which water quality will be lowered,
  - percent change in ambient conditions,
  - parameters affected,
  - likelihood for long term water quality benefits to the segment (e.g., as may result from dredging of contaminated sediments),
  - degree to which achieving the applicable Water Quality Standards (WQS) during the proposed activity may be at risk, and
  - potential for any residual long-term influences on existing uses



# Allowance for temporary changes to water quality – example activities

- Construction, installation, maintenance, replacement and/or repair of roads, bridges, boat ramps or docks, sea walls, and outfall or intake structures
- Activities that protect the public interest, such as emergency response activities and remediation activities used to improve water quality



# Differences in how high quality waters and Restricted ORVWs are protected

## – Options/considerations

- Create and clearly define two levels of non-degrading alternative analyses
- Allow for two water quality-based levels of protection
- Protect the characteristics that make the water body an ORVW, but still require Tier 2 review for other characteristics/parameters



# Protection from upstream activities

- Current language – control discharges to assure no deterioration in the quality of the downstream ORVW
- Does not work well for Restricted ORVWs where permitted lowering of water quality may be allowed
- Options:
  - Provide exceptions where lowered water quality is allowed to Restricted ORVWs, and/or
  - Require that activities that have the potential to impact downstream ORVWs must not degrade the exceptional high quality, or the other characteristics, that make the downstream water an ORVW



# ORVW designation process

- Current process:
  - ORVW designated waters generally have some prior state or federal designation or recognition as to their exceptional recreational, cultural, aesthetic, or scientific value
  - Opportunity for public hearings
- Alternative/additional process
  - Allow for public nomination





# NPDES-permitted stormwater activities

- Options for regulating stormwater activities impacting ORVWs:
  - Require individual review
  - Require more stringent permit conditions than for other waters
  - Adaptive management process – would involve BMP effectiveness monitoring and or receiving water monitoring
  - Combination of the above or other?
- Upstream impacts and general permits



# NPDES-permitted stormwater activities - continued

- Should we revise or clarify the definition of “expanded discharge”?
- “Expanded discharge” is one that changes in volume, quality, location, or other manner after the effective date the ORVW was designated, such that an increased loading of one or more pollutants result.

# Discussion Points

1. Minnesota Rule 7050.0180 currently does not have provisions for temporary lowering of water quality in ORVWs. Should such provisions be included in the revised rule? If so, what criteria should be used to determine the allowance for temporary lowering of water quality in ORVWs? Missouri's definition of temporary degradation (page 3) may be a good starting point.

# Discussion Points

2. How should the protection of Restricted ORVWs be different than from other waters where lowering of water quality is permitted? Some options for considerations are shown below:
  - Create and clearly define two levels of non-degrading alternative analyses.
  - Allow for two water quality-based levels of protection.
  - Protect the characteristics that make the water body an ORVW.



# Discussion Points

3. Should a public petition or nomination process be used in the designation of ORVWs? If so, what criteria should be used?

# Discussion Points

4. How should stormwater activities be regulated to ensure that lowering of water quality does not occur (for Prohibited waters) or is stringently controlled (for Restricted waters)? Some options to consider:
- Require individual review of permit application including an analysis of the impact to the receiving water.
  - Require more stringent permit conditions than for other waters. This assumes that, without knowing the impact to an individual receiving water, the ORVW will be protected.
  - Through an adaptive management process, require monitoring of receiving waters to ensure the ORVW is being protected.
  - Through an adaptive management process, require monitoring of control measures to ensure their effectiveness.
  - Other, or combination of above.

# Discussion Points

5. A number of questions related to NPDES-permitted stormwater activities arise from the definition of “expanded” discharge:
- Is it possible to have increases in volume without increases in pollutant loading?
  - Can increases in volume, by itself, be considered degradation? This would depend, in part, on runoff volume in relation to the size of the receiving water.
  - Is it reasonable for the agency to require that applicants maintain stormwater runoff conditions (volume and pollutant loading) at baseline conditions? In other words is it reasonable to require no net increase in stormwater impacts as development and redevelopment occurs?

# Next Steps

- Develop proposed responses to key issues
- Internal MPCA review
- External posting of selected responses
- MPCA Board information meeting
- Internal development of rule language and SONAR
- Public proposal of Rules