Overview of TMDL and Antidegradation Issues

WV Acid Mine Drainage Symposium

April 15, 2003
Where are we?/How are we doing?

TMDLs

• Total Maximum Daily Load program
  – Full assumption of program from EPA
  – First round of tmdls by state underway
  – Completion of EPA tmdls from Consent Decree
  – Funding
Where are we/How are we doing?

Antidegradation

• Antideg review being conducted for all new and expanded permit applications
• Guidance document developed
• Tier 2.5 streams still under review
TMDL Program

• Incorporating the statewide Watershed Management Framework Process
• Multi-agency initiative started in 1997 to focus state/federal agency resources on environmental priorities at watershed scale
Watershed Management Framework

- 32 watersheds (8-digit HUC)
- 5 Hydrologic Groups (A – E)
- Watershed Assessment, NPDES Permit reissuance synchronized
- WV Nonpoint Source Program integration
- WVDEP TMDL development synchronized
West Virginia’s 32 Major Watersheds

1. Elk River
2. Little Kanawha
3. Cheat
4. Gauley River
5. S. Br. Potomac River
6. Tygart Valley
7. Tug Fork
8. West Fork
9. Cacapon River
10. Middle Ohio North
11. Monongahela
12. Upper Ohio South
13. Dunkard
14. Upper Ohio North
15. Middle Ohio South
16. Northern Ohio
17. James River
18. Big Sandy
19. Twelvepole
20. Monongahela
21. Dunkard
22. Greenbrier River
23. Lower Ohio
24. Lower Kanawha
25. Lower New
26. Upper Kanawha
27. Upper New
28. Coal River
29. Upper Guyandotte
30. Lower Guyandotte
31. Upper Ohio
32. Lower Ohio
33. Shenandoah
34. James River
35. Potomac Direct Drains
36. Tug Fork
37. Greenbrier River
TMDL/WMF Synchronization

• Pre-TMDL monitoring occurs concurrently with WMF assessment year
• TMDL completion just ahead of WMF implementation year
• WVDEP program started January 2001
• Two batches underway
  – HGA (2004 TMDLs)
  – HGB (2005 TMDLs)
2004 WVDEP TMDLs

• Hydrologic Group A

• Impaired waters in Upper Kanawha and Upper Ohio North watersheds

• Pre-TMDL monitoring completed

• TMDL development contract awarded 11/02
2004 WVDEP TMDLs

• Pollutant source assessment activities underway

• Requested instream monitoring data in electronic format from active mining operations

• TMDLs to be finalized 12/31/04
2005 WVDEP TMDLs

• Hydrologic Group B

• Impaired waters in Coal River, North Branch Potomac, and Lower Kanawha watersheds

• TMDLs to be finalized 12/31/05

• Pre-TMDL monitoring began 7/1/02 and will continue thru 6/30/03
2006 WVDEP TMDLs

• Impaired waters in Hydrologic Group C

• TMDLs to be finalized 12/31/06

• Just started stream selection process; PN 2/1/03

• AMD in Gauley watershed

• Pre-TMDL sampling 7/1/03 – 6/30/04
EPA TMDLs

- Upper and Lower Guyandotte
- Consent Decree modification
- TMDLs to be finalized March 2004
- Mainstem Al, Fe, and FC impairments
- Mine drainage impaired tributaries from the 1998 303(d) list
2002 WV 303(d) List

• Provisional Draft to TMDL Stakeholders and EPA (6/19/02)
• Response to comments (7/30/02)
• Draft to Public Notice (8/1/02)
• Responsiveness Summary and Final Draft to EPA and commenters (10/9/02)
• List available on DEP website
• Awaiting EPA approval
2002 WV 303(d) List - Format

- Watershed Based
- Narrative Information, 303(d) Table, Status Tables
- Status Tables -
  - Delisted
  - TMDLs Developed
  - TMDLs Developed (Improvement Realized)
- Responsiveness Summary
2002 WV 303(d) List

- Approximately 655 streams listed
- Approximately 4300 stream miles
- Biological Impairment is most common listing (approx 480 listings)
- Approximately 160 remaining mine drainage impaired waters
Antidegradation

- A process to protect and maintain existing uses and to maintain high quality waters at their existing high quality
- Clean Water Act requires antidegradation component in state water quality standards
- Provisions have been included in WV Standards since early 1980’s
Antidegradation Implementation Rule

- Product of a two-year development process, adopted by the 2001 Legislature
- Being implemented by the Department of Environmental Protection
- Includes detailed implementation requirements not previously contained in standards
- 60 CSR 5; 46 CSR 1
Antidegradation Implementation

Water Quality Standard

Tier 1
Green Ck

Tier 2
Blue Ck

Tier 2.5
Yellow Ck

Tier 3
Red Ck

10%
Tier 2 Protection

- High Quality Waters
- High quality waters are to be maintained at their existing high quality unless limited degradation is necessary to accommodate important economic or social development and there are no less-degrading alternatives available
- Represents vast majority of state streams; default assumption
- Pollutant-by-pollutant application with existing quality established by a baseline water quality assessment
Tier 2.5 Protection

- Waters of Special Concern
- De facto water quality criteria for parameter of concern established at baseline water quality plus 10% of available assimilative capacity
- Water quality cannot exceed the de facto water quality criteria
- Includes provisions for short term changes to water quality
- Streams to which this protection applies will be identified in regulations
Tier 2.5 Protection

- Presumptive list of 444 streams included in 60 CSR 5
- Detailed objection process
- Presumptive list represents about 2,000 miles of streams (6% of WV stream miles)
- Nomination process


**Tier 2.5 Protection**

- Presumptive Tier 2.5 list was compiled by the Department of Environmental Protection, in cooperation with the Division of Natural Resources
- Naturally reproducing trout streams
- DEP-determined reference streams
- Streams with high biological scores located on public lands
Tier 3 Protection

- Outstanding National Resource Waters
- Waters shall be maintained, protected and improved.
- No permanent lowering of existing water quality allowed
- Includes provisions for short term changes to water quality
DEP Guidance Development

• Many aspects of the rule require guidance
• “Sounding Board” input in development process
• Baseline water quality, assessing impacts of proposed discharges, evaluating pollution control alternatives, evaluating social/economic importance
Antidegradation
Guidance Document

- Overview (Chapter 1)
- Tiered Protection Levels (Chapter 2)
- Review Process (Chapter 3)
- Review of Specific Activities (Chapter 4)
- Baseline Water Quality (Chapter 5)
Antidegradation
Guidance Document

– Assessing Degradation (Chapter 6)
– Alternative Evaluation (Chapter 7)
– Social and Economic Importance (Chapter 8)
– Public Participation and IGC (Chapter 9)
– Short Term /Limited Effect (Appendix A)
Antidegradation
Guidance Document

• Available on WVDEP website and in hard copy format
Tier 2.5 Objection Process

• Rule provides opportunity for landowner objection
• DEP advertised presumptive list and held series of meetings Spring 2002
• Over 4000 written objections
Tier 2.5 Objection Process

• DEP must respond to all objections
• Objections have been entered into database
• Plan is to generate form letters (3-4 flavors); certified mail
• Resource problems; money & staff
Tier 2.5 Objection Process

- DEP response will describe listed segment and provide justification for listing
- Objectors get another 30 days to supplement objection
- DEP considers objections and makes decisions
- Another PN and comment period
- Emergency Rule, maybe; final rule by 2004 Legislature
Questions??