

Balancing State Resources for TMDL Development: Pace, Rigor & Expectations



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Three Stages of 303(d)

- Listing – Identify Problems every 2 years
- Development – Analyze Problem w/i 8-13 years
- Implementation – Correct Problem w/i years or decades

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Resource Balance Reflects Strategy & Priorities

- There are two strategies for TMDL development
 - **Pace** – Development Stage Emphasis
 - **Rigor** – Implementation Stage Emphasis
- From roughly 1995-2005, Court Decrees dictated that Pace be the strategy for EPA and, by extension, the States

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Pace & Rigor are Polar Opposites

Kansas TMDL Program	2000-2006 (Court Decree)	2007-2008 (Post-Decree)
Pace (# of waters w/ TMDL annually)	350 / yr	120 / yr
Rigor (Average Length of TMDL)	11 pages	31 pages

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The Key to Effective Implementation is Strong Linkage

- TMDLs unveil cause & effect linkages
 - Sources – Loadings - Ambient Quality - Designated Uses
 - Pace-Driven: Simple analysis (Load Duration Curves, STEPL, Model defaults)
 - Rigor-Driven: Deeper analysis (SWAT, calibration & verification data, UAA)

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Considerations in Assigning Priority for Implementation

- Severity of Pollutant – by Regulation
- Uses to be Made of Water – by Regulation
 - Type of Use (Rec vs ALU vs WS)
 - Extent of Use (Beach; T&E; Backup Supply)
- Resource Availability – \$, Time, Personnel
- Program Applicability – NPDES, MS4, Farm Bill
- Local Mechanism – Active Watershed Groups
- Hydrologic Conditions during Impairment

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EPA's Expectations

(via 2006 – 2011 Strategic Plan)

- SP – 10: By 2012, Attain WQS for all pollutants and impairments in 2250 water bodies
- SP – 12: By 2012, Improve water quality in 250 impaired (HUC 12) watersheds
- Thus, the Expectation is Implementation

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How do TMDLs fit in?

- EPA's 6 Paths to Attainment
 - **Restoration via Implementation***
 - **New Data indicate Attainment***
 - Original Basis for Listing Incorrect
 - **New Assessment Methodology***
 - Water No Longer Considered Threatened
 - **New Water Quality Standards***
 - * TMDL Analysis Will Support This Path

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TMDL Implementation Dictates Development Needs

- Providing for Point Sources – WLA
- Defining Nutrients/Sediment Endpoints
- WQ Trading Opportunities
- Local / Regional Importance of Water Body
- Cause and Effect Linkages
 - Scale
 - Complexity
 - Uncertainty

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