

Impacts of the Ever Expanding 303(d) List of Impaired Waterbodies

2018 REGFORM Water Seminar

September 12, 2018



What Is the Impaired Waters List

- Section 305(b) of the Clean Water Act Requires States to Complete Biennial Assessment of Waters of the US
 - Categorize Waters (5 categories)
- Section 303(d) of the Clean Water Act
 - Identify Waters not Attaining their Designated Uses
 - Identify the Total Maximum Daily Load

How Are Waters Assessed?

- Listing Methodology Document (LMD)
 - Based Upon Application/Implementation of USEPA Integrated Report Guidance
 - Identifies Categories of Waters
 - Identifies Usable Data
 - Numeric
 - Biologic

How Are Waters Assessed? cont'd

- Identifies How Usable Data will be Assessed
 - Data Quality (e.g. QAPP)
 - Data Qualifiers
 - Data Age
 - 2020 LMD Limitations on data >7 years old (New!)
 - Weight of Evidence

305(b) Report

- Report on the Overall Status of Surface Waters
- Waters are Assigned to 1 of 5 General Categories
 - Category 1 – All Designated Uses are Full Attainment
 - Category 2 – Some (perhaps most) but not all are Full Attainment
 - Sub-Category 2A – Available Data Suggests Attainment (No Impairment Suspected)
 - Sub-Category 2B – Some Available Data Suggests Impairment

305(b) Report

- Category 3 – Insufficient Data to Assess Attainment of Uses
 - Sub-Category 3A – Available Data Suggests Attainment
 - Sub-Category 3B – Available Data Suggest Non-Attainment
- Category 4 – Available Data Indicates an Impairment (Non-Attainment of at least 1 Designated Use)
 - Sub-Category 4A – Non-attainment and TMDL already in-place
 - Sub-Category 4B – Non-attainment with Water Pollution Controls Already in-place (e.g. WQBELs, voluntary watershed control plan)
 - Sub-Category 4C – Non-attainment and no discrete pollutant or property of the water causes or contributes to the impairment

305(b) Report/303(d) List

- Category 5* – Non-Attainment of at least 1 Designated Use
 - Waterbody Segment Identified
 - Designated Beneficial Use(s) Impaired Identified
 - Pollutant(s) Causing or Contributing to the Impairment Identified
 - Source of Pollutant(s) Identified

- Schedule for Total Maximum Daily Loads (TMDLs)

* Category 5 includes 5-alt. Impaired waters w/out a TMDL, but low priority due to an alternative restoration approach being pursued.

History or Trends of Missouri's 303(d) List - Streams

Year	Classified Miles	MILES ASSESSED	Impairment Miles*	Fully Support Miles	Pollutant Pairs Removed	Pollutant Pairs Identified
2016	115,772	24,761	5,549	5,307	27	448
2014	24,491	10,473	5,659	4,814	31	381
2012	24,491	9,984	5,441	4,328	88	353
2010	22,270	13,734	3,771	9,962	36	342

***Pollutant:** bacteria, heavy metals, low dissolved oxygen, mercury in fish tissue

Pollutant Source: NPS, mining, atmospheric deposition, WWTP

History or Trends of Missouri's 303(d) List – Stream Impairment Causes

Year	% Impairment Bacteria	% Impairment Low Dissolved Oxygen
2016	15	5.6
2014	10	3
2012	12	-
2010	8	5

Pollutant Source: NPS, WWTP

History or Trends of Missouri's 303(d) List - Lakes

Year	Classified Acres	ACRES ASSESSED	Impairment Acres*	Fully Support Acres
2016	363,653	296,962	72,715	189,093
2014	303,014	257,729	70,372	188,142
2012	302,777	212,414	67,611	126,461
2010	291,707	258,744	32,853	140,259

***Pollutant:** bacteria, nutrients, mercury in fish tissue

Pollutant Source: NPS, atmospheric deposition, WWTP

History or Trends of Missouri's 303(d) List – Lake Impairment Causes

Year	% Chlorophyll - a	% Mercury in Fish Tissue	% Total Nitrogen	% Total Phosphorus
2016	29.15	9.5	28	0.88
2014	14.8	8	8	0.28

Pollutant Source: NPS, WWTP

303(d) List Implications – Total Maximum Daily Loads (High Priority)

Year	Bacteria	Metals	Low Dissolved Oxygen	Nutrients/Biological
2018	14	-	-	-
2019	20	-	-	-
2020	3	7	-	-
2021	13	1	-	-
2022	8	1	-	-
2023	6	6	4	1
2024-2028 & > 10 years			57	10 (1 in 2024)

Implication/Impact of Impaired Waters

- Resources
 - Monitoring – data quality, data quantity
 - TMDLS (side note: 4 TMDLs approved thus far in 2018)
- Non-Point Source Management Plans
- Permitting

Implications of Impaired Waters - 40 CFR 122.4(i)

No permit may be issued:

- To a **new source or a new discharger**, if the discharge from its construction or operation will **cause or contribute** to the violation of water quality standards unless:
 - (1) There are sufficient remaining pollutant load allocations to allow for the discharge; and
 - (2) The existing dischargers into that segment are subject to compliance schedules designed to bring the segment into compliance with applicable water quality standards.

Impaired Waters

Definition of New or Expanded Discharge

- EPA defines “new discharge” as:
 - Any building, structure, facility, or installation from which there is or may be a “discharge of pollutants after August 13, 1979 and has never received a finally effective NPDES permit for discharges at the “site.”
 - A new facility, or a new combined treatment plant serving two or more existing facilities

Impaired Waters

Definition of New or Expanded Discharge

- Expanded discharge not specifically defined, but has come to mean:
 - An increase in mass discharge (kg/day)
 - This could mean:
 - An increase in flow with the same concentration
 - An increase in concentration limit with no change in flow

Impaired Waters

Definition of New or Expanded Discharge

- EPA defines a “new source” as:
 - any building, structure, facility, or installation from which there is or may be a “discharge of pollutants,” the construction of which commenced after promulgation of standards of performance under section 306 of CWA which are applicable to such source, or after proposal of standards of performance ...
 - Example: new process at your source which is covered by a different categorical standard. Mesabi Nugget facility at a former taconite ore mine.

Impaired Waters - Permitting Approach

- Impaired Receiving Water with TMDL
 - Must stay within your WLA
 - Can trade within watershed only if TMDL specifies methods for trading
 - Investigate whether a reserve capacity exists and if you can access reserved load allocations
 - If TMDL is silent on trading:
 - Cannot trade with other WLA sources – need to redo wasteload allocation & TMDL
 - Cannot trade with other LA sources – need to redo wasteload allocation & TMDL
 - Re-doing a TMDL will take years

Impaired Waters - Alternative Actions

- Remove Designated Beneficial Uses
 - Use Attainability Analysis/Use & Value Determination
- Changing Waterbody/Watershed Conditions
 - Additional Monitoring

Questions, Comments, Thanks

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