

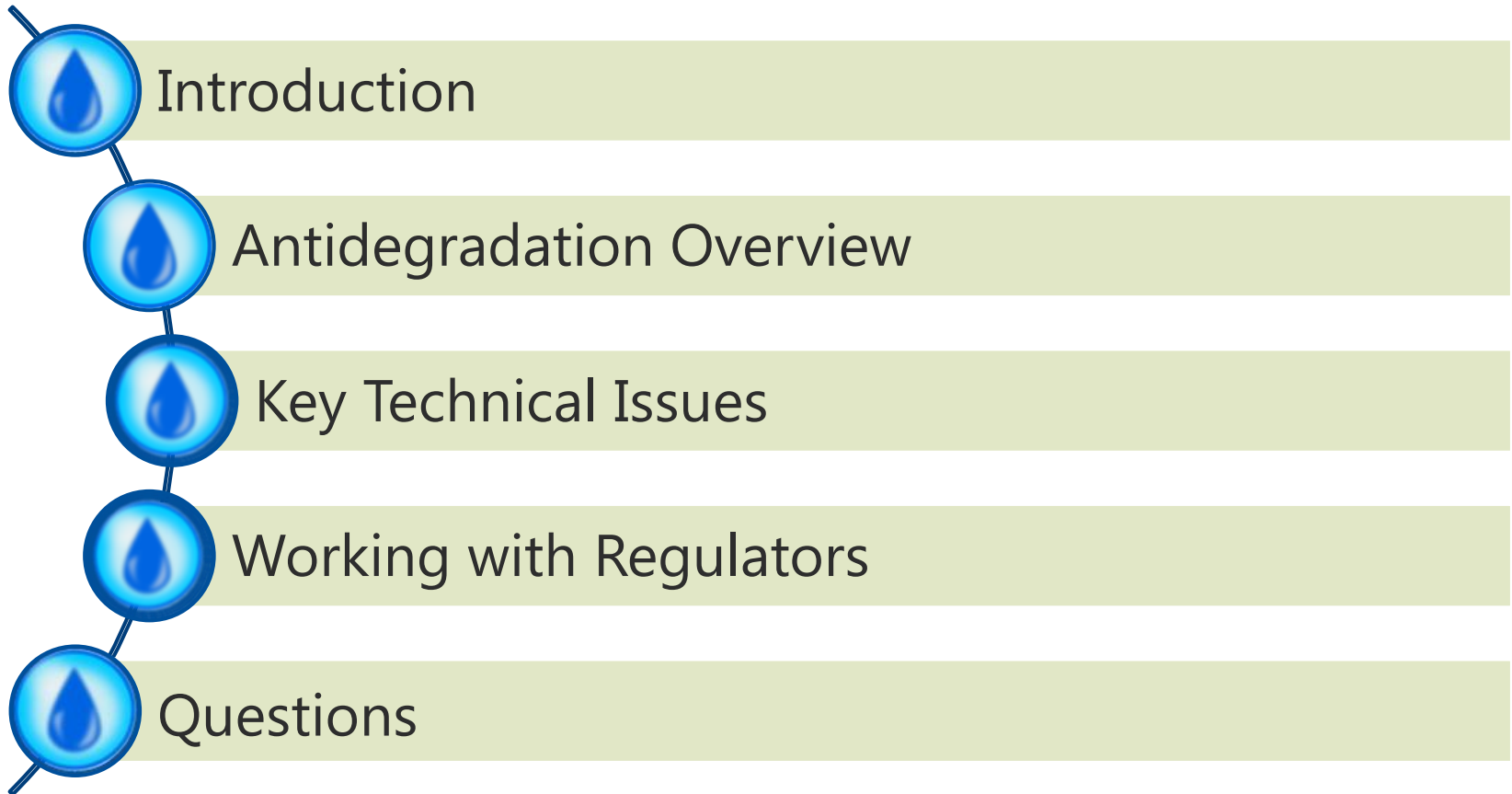
Antidegradation: A Practical Guide

Midwest Environmental Compliance Conference
November 1, 2016

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Overview



Antidegradation Overview

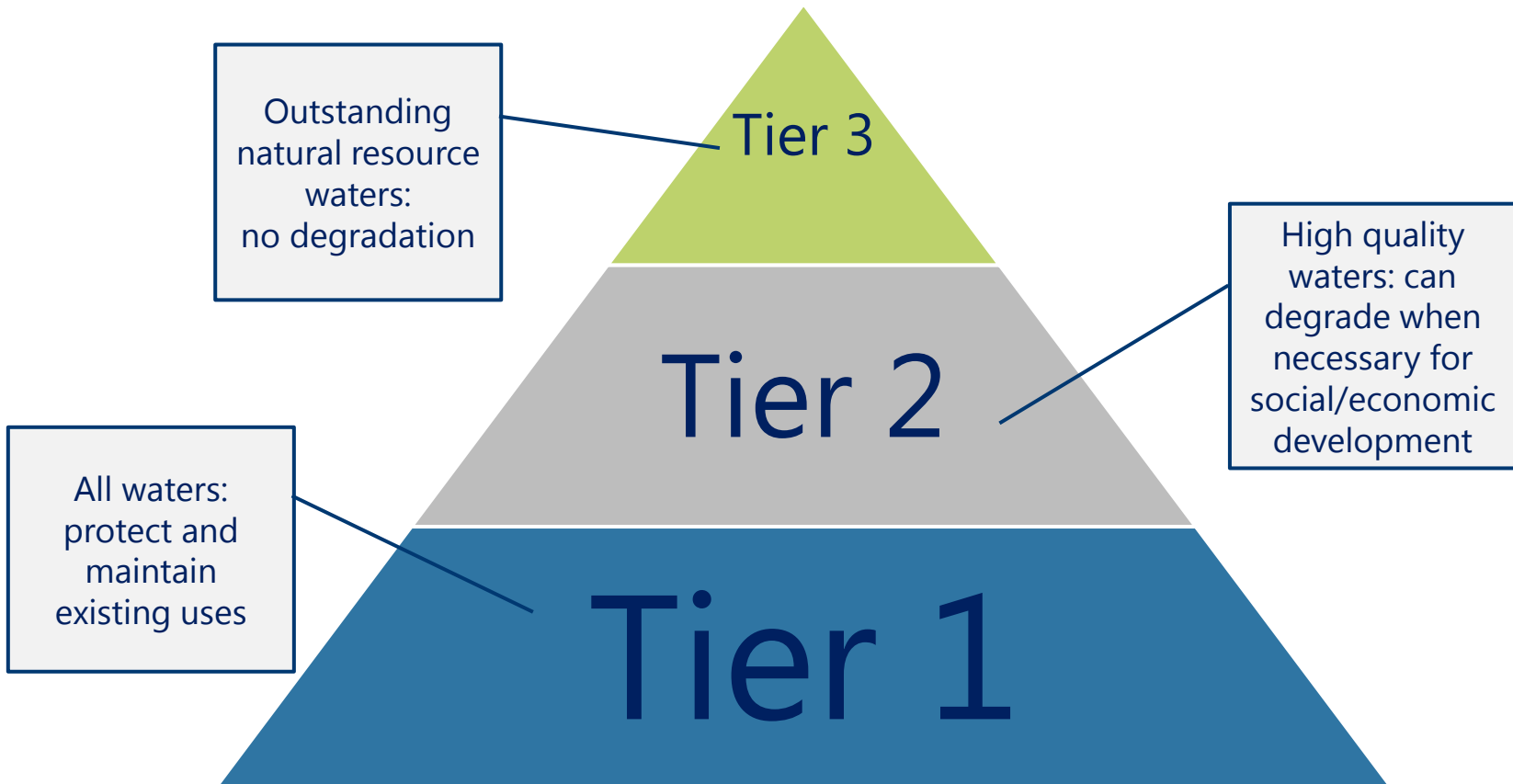


Antidegradation Overview

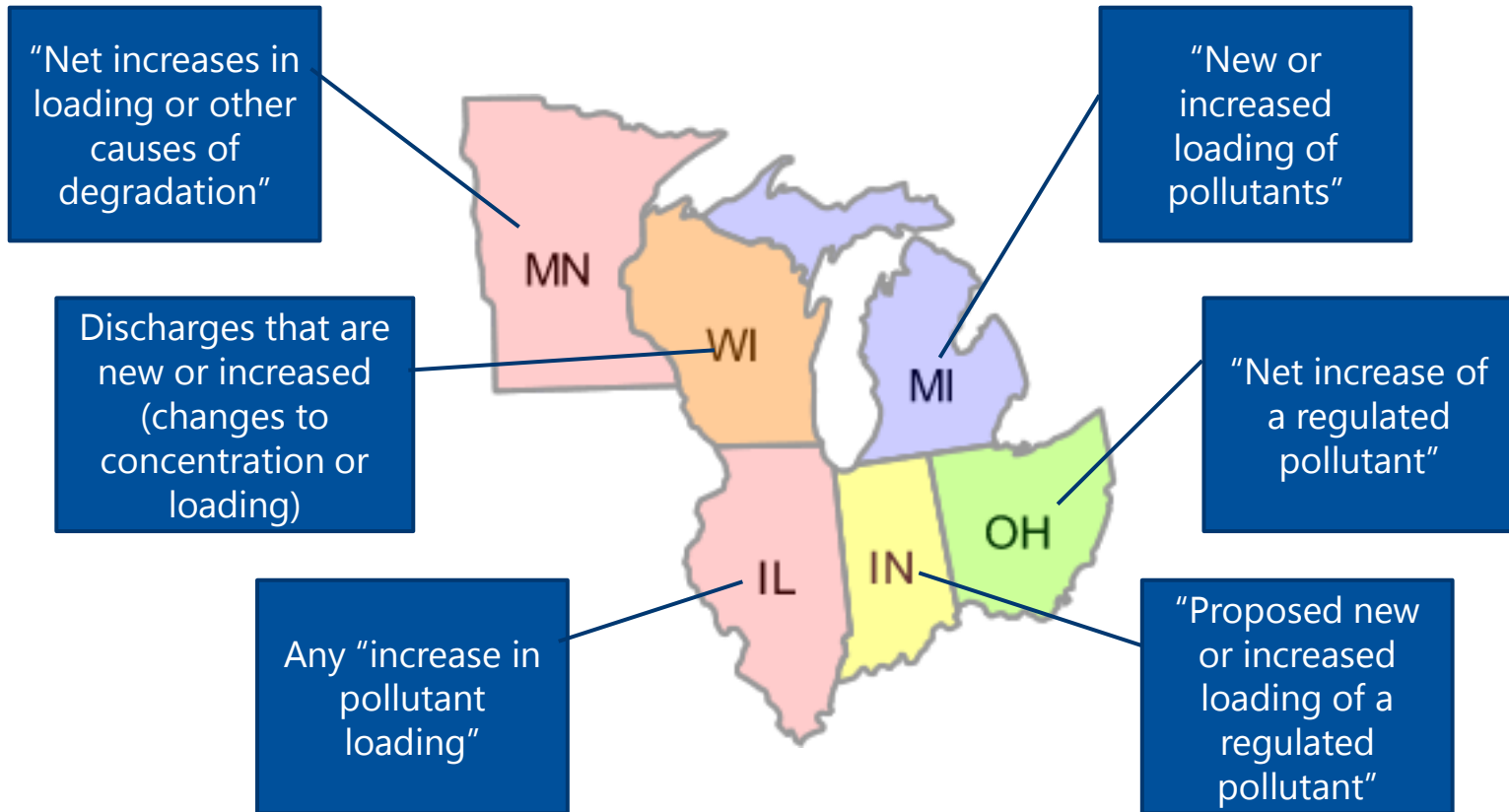
“...restore and **maintain** the chemical, physical, and biological integrity of the Nation’s waters”

—33 U.S.C. § 1251(a) (CWA § 101(a))

Three “Tiers” of Protection



Antidegradation Triggers



Activities That May Require Antidegradation Demonstrations

- NPDES permits or permit modifications
- 401 certifications
- NPDES general permits
- Water quality standards review
- TMDLs

Exemptions from Antidegradation Requirements

- Short-term lowering of water quality
- CERCLA or RCRA response actions
- Applications for coverage under a general NPDES permit
- De minimis discharges of pollutants

Antidegradation: Tier 1

Existing Uses:

“those uses **actually attained** in the water body on or after November 28, 1975, whether or not they are **included in the water quality standards.**”

Existing uses

Designated uses

—40 C.F.R. § 131.3(e)

Antidegradation: Tier 2

“[W]aters of the State whose **existing quality is better than any of the established standards** of this Part must be maintained in their present high quality, unless the lowering of water quality is **necessary to accommodate important economic or social development.**”

—Ill. Ad. Code § 302.105(c)(2)

Antidegradation: Tier 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.**”

—40 C.F.R. § 131.12(3)

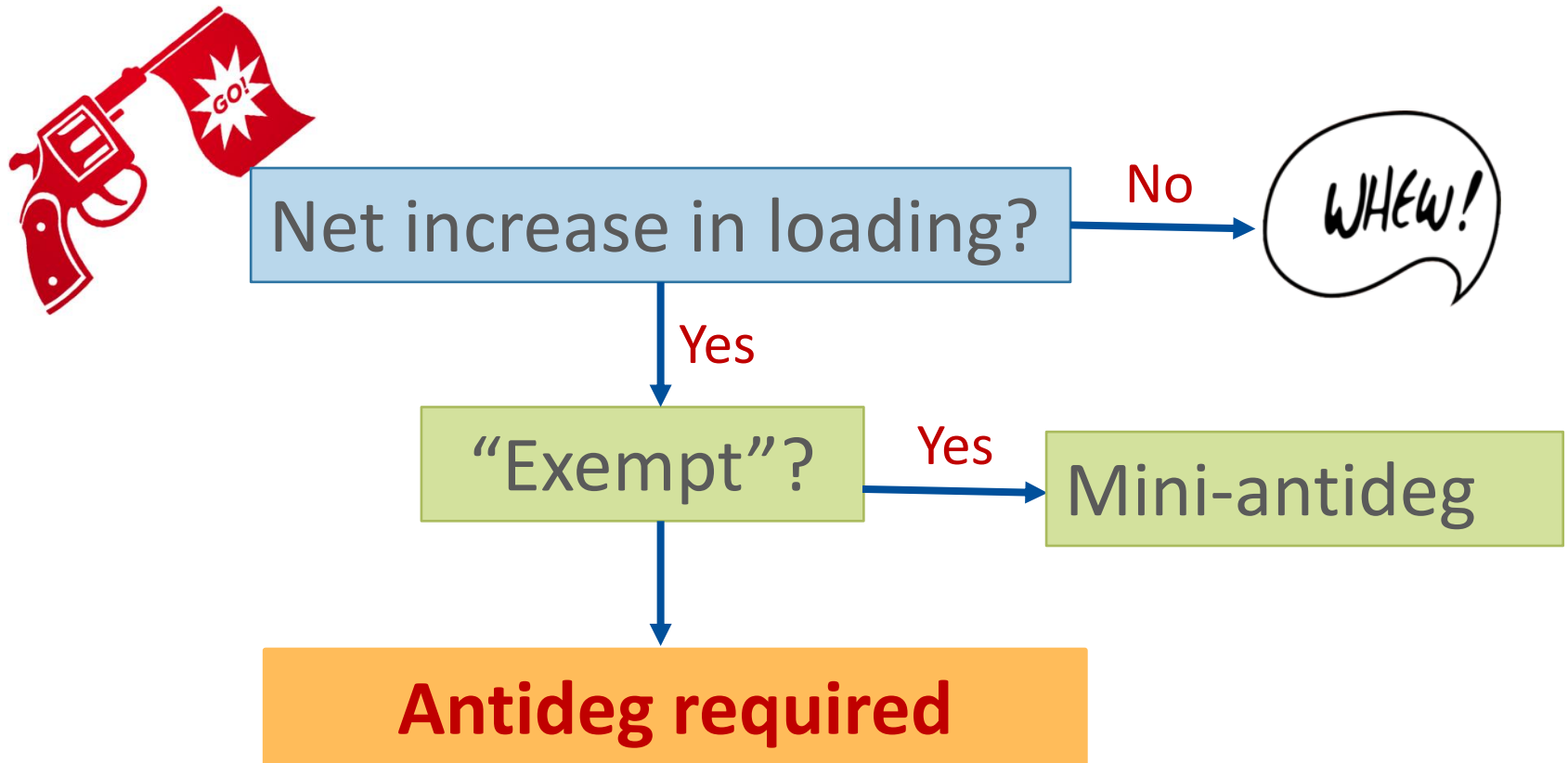
Antidegradation for Bioaccumulative Chemicals in the Great Lakes Basin



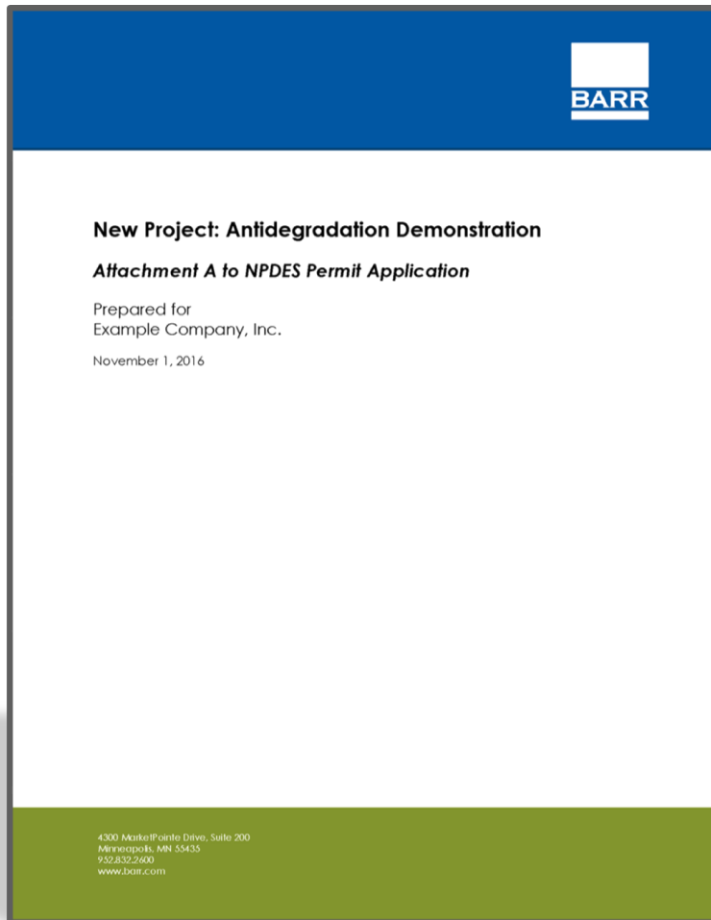
Key Technical Issues



Do Antidegradation Procedures Apply?



Preparing an Antidegradation Demonstration



New Project: Antidegradation Demonstration

November 1, 2016

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Alternatives Assessment

Alternatives	Effectiveness	Cost	Feasibility
Technology 1	High	\$\$\$\$\$	High
Technology 2	Medium	\$\$	High
POTW	High	\$\$	Low
Offsets	High	\$\$\$	Not Feasible

Characteristics of the Discharge



Parameters of Concern (POCs)

- Pollutants reasonably expected in discharge
- Anticipated to cause degradation
- Have numeric or narrative standards
- Bioaccumulative substances? – then GLI rules apply

New Project vs. Modification

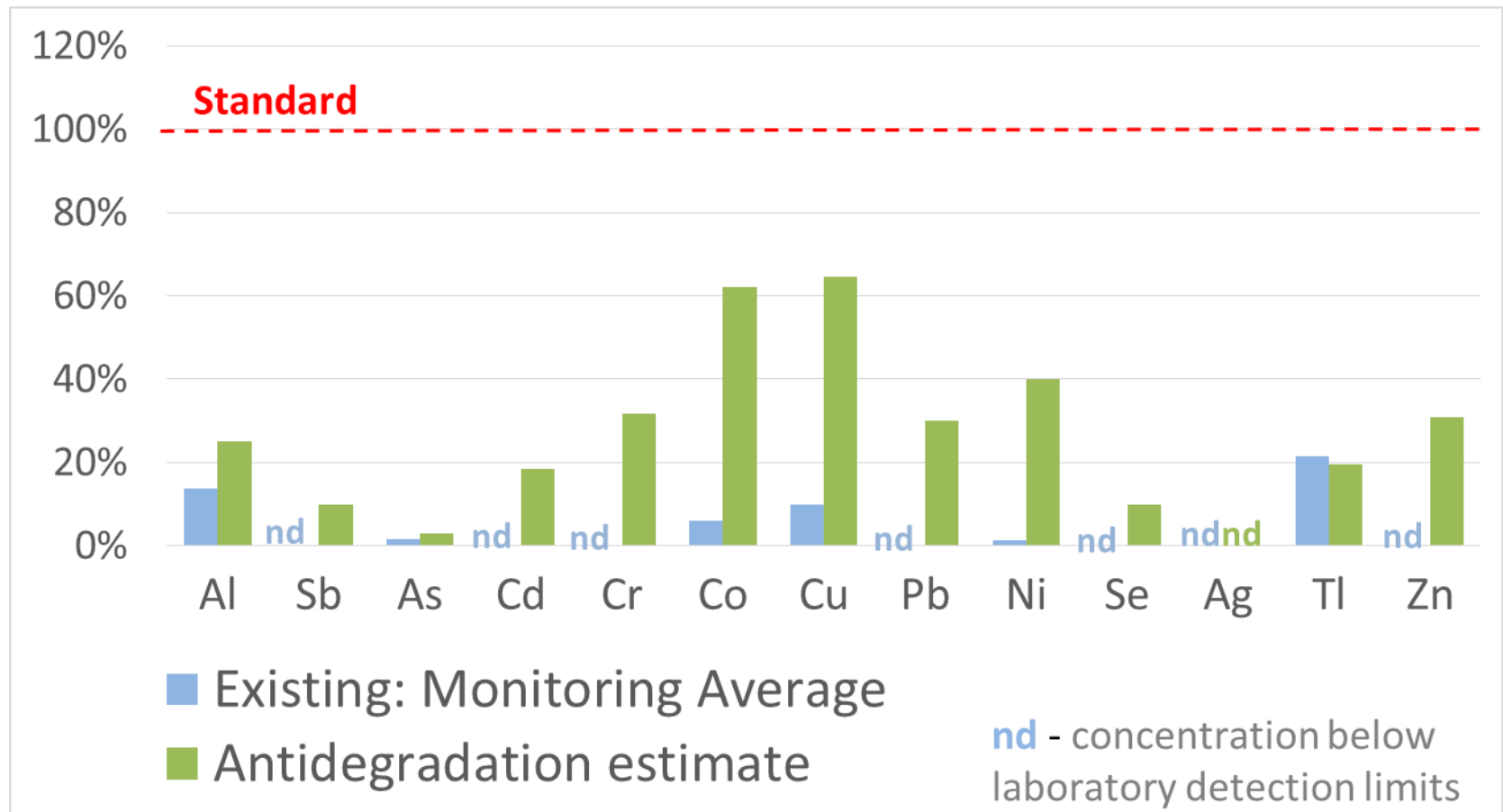
Receiving and Downstream Waters



Estimate Water Quality Effects of Discharge



Compare Existing and Expected Water Quality



Degradation

degradation or degrade: *a measurable change* to existing water quality made or induced by human activity resulting in diminished chemical, physical, biological, or radiological conditions of surface waters

measurable change: the practical ability to detect a variation in water quality, taking into account limitations in analytical technique and sampling variability

Social and Economic Benefits



The screenshot shows the EPA website interface. At the top left is the EPA logo and the text "US Environmental Protection Agency". Below this are navigation tabs: "Learn the Issues", "Science & Technology", "Laws & Regulations", and "About EPA". A search bar on the right contains the text "Search EPA.gov" and a magnifying glass icon. Below the navigation is a "Related Topics" section with the link "Water Quality Standards: Regulations and Resources" and "Contact Us" and "Share" buttons. The main heading is "Economic Guidance for Water Quality Standards". Underneath is a section titled "Workbook and Worksheets" containing two bullet points: "Interim Economic Guidance for Water Quality Standards: Workbook (PDF)" (89 pp, 646 K, March 1995, EPA-823-B-95-002) and "Worksheets for Interim Economic Guidance for Water Quality Standards (PDF)" (36 pp, 246 K, March 1995). To the right is a "Related Information" box with three links: "Federal Water Quality Standards Regulations", "Reference Library of Water Quality Standards Policy and Guidance Documents", and "Water Quality Standards in Your Area". Below this box is a note: "You will need Adobe Reader to view some of the files on this page. See EPA's About PDF page to learn more." Below the main heading is a section titled "Spreadsheet tools to evaluate economic impacts" with a paragraph explaining their purpose.

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Economic Guidance for Water Quality Standards

Workbook and Worksheets

- [Interim Economic Guidance for Water Quality Standards: Workbook \(PDF\)](#) (89 pp, 646 K, March 1995, EPA-823-B-95-002) This guidance is for use by states and EPA regional offices in considering economics at various points in the process of setting or revising water quality standards.
 - [Worksheets for Interim Economic Guidance for Water Quality Standards \(PDF\)](#) (36 pp, 246 K, March 1995)

Spreadsheet tools to evaluate economic impacts

The purpose of these spreadsheets is to help states, tribes, and stakeholders implement the recommendations in EPA's *Interim Economic Guidance for Water Quality Standards, Workbook (1995)*. The spreadsheets supplement the guidance by guiding the user through the necessary calculation steps to successfully implement the guidance recommendations.

Related Information

- [Federal Water Quality Standards Regulations](#)
- [Reference Library of Water Quality Standards Policy and Guidance Documents](#)
- [Water Quality Standards in Your Area](#)

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<https://www.epa.gov/wqs-tech/economic-guidance-water-quality-standards>

Working with Regulators



Working with Regulators

Begin discussions with regulators early in the process.

- Set up regular meetings
- Make sure all relevant agencies are involved

Discuss key assumptions and issues prior to submitting the application.

- Parameters of concern
- Modeling techniques and probabilistic methods (P50/P90)
- Data sources
- Key regulatory issues

Working with Regulators

Draft the application in a clear and persuasive manner.

- Follow agency decision-making criteria
- Consider including a regulatory analysis
- Draft with public review and comment in mind

Questions?



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