IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

Wasteload Allocations (WLAs)

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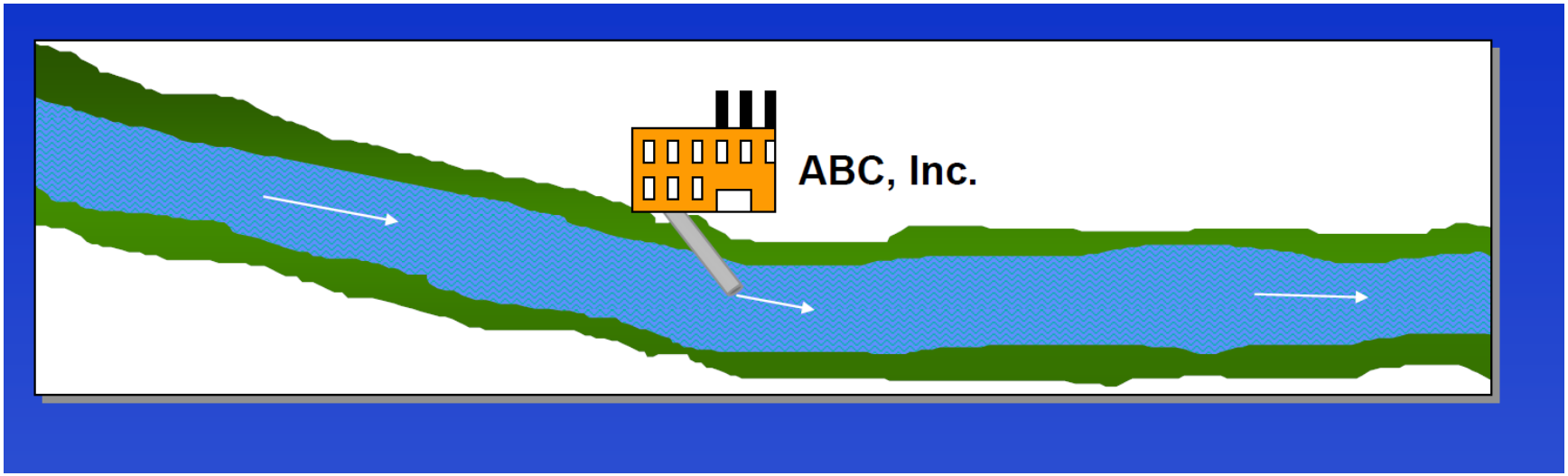
Outline

- ❑ What is WLA and the Purpose
- ❑ The Process of Developing WLAs
- ❑ Current Rule Making
- ❑ Questions & Comments

Facility-Specific WLAs



WLA = the maximum allowable pollutant concentration in the effluent from a point source discharger which, after accounting for available dilution, will meet water quality standards in-stream

TMDL-Based WLAs

- Watershed based (Far-field WLAs)

The Purpose of the WLAs

- Protect different beneficial uses
  - Aquatic Life
  - Human Health
  - Drinking Water
- WQ based limits for NPDES permits
- Provide targets for wastewater treatment design

The Process of Developing WLAs

- WLAs are developed under critical flow conditions
  - 30Q10, 7Q10 or 1Q10
- Pollutants of Concern
  - Major municipal discharges (AWW > 1 MGD):
    - Ammonia, *E coli* and priority pollutants such as heavy metals and organic compounds
  - Industrial discharges:
    - BOD, temperature, chlorine, ammonia, metals

The Process of Developing WLAs
Factors to consider

- ❑ Stream Designations
  - ➢ Warmwater vs. Cold Water; Primary vs. Secondary contact
- ❑ Stream Flows (USGS)
- ❑ Mixing Zone and Diffuser
- ❑ Effluent and ambient temperature and pH (for ammonia)
- ❑ Other nearby dischargers
- ❑ Losing stream status
  - ➢ Year round disinfection
- ❑ Impaired waters & completed TMDLs

The Process of Developing WLAs
Site-specific Data

- ❑ Site specific mixing zone study or diffuser
- ❑ Site specific stream and effluent hardness
  - ➢ Chloride, sulfate, metals
- ❑ Stepwise limits
- ❑ Flow variable limits
- ❑ Site Specific Water Quality Criteria

Current Rule Making

- *E. coli* sample maximum clarification
  - ✓ To clarify *E. coli* of 235 organisms/100 ml only used for beach closure and notification
- Copper Biotic Ligand Model
  - ✓ An alternative copper criterion
  - ✓ DOC, pH, Temperature, Calcium, Sodium, Magnesium, Potassium, Chloride, Sulfate and Alkalinity
- Update the Wasteload Allocation Procedure
  - ✓ Complete overhaul

Major Changes- WLA Procedure Document

Design Stream Low Flow Determination

- What is the change?
  - Updating low flow values based on 2013 USGS low flow study
  - Add monthly low flow option (current practice)

- Impact:
  - 71% - Higher stream flow
  - 29% - Lower stream flow

Major Changes- WLA Procedure Document
Bacteria

- What is the change?
  - Continuous discharges: geometric mean limit
  - Intermittent dischargers (CDLs) – maximum daily limit

Major Changes- WLA Procedure Document
Bacteria

E. coli Monthly Geomean Limits for Continuous Discharges (org/100mL)

Recreational Uses	Monthly Geomean Limit
Class A1 or A3	126
Class A2	630

Major Changes- WLA Procedure Document
Bacteria

E. coli Monthly Maximum Daily Limits for Intermittent Discharges (org/100mL)

Recreational Uses	Maximum Daily Limit
Class A1 or A3	1,073
Class A2	5,367

Major Changes- WLA Procedure Document
Thermal Discharge

- What is the change?
  - The Mississippi River Temperature Workgroup
  - Developed a procedure:
    - Both protective and reasonable to achieve

Iowa's Temperature Water Quality Standard

- For all warm water streams
  - Maximum 32° C
  - Temperature rise <3° C
  - Rate of change ≤1° C/hour
- Additionally for Mississippi River
  - Shall not exceed Table value more than 1% of hours in 12-months
  - No more than 2° C above Table value at any time

Zone	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
II	4	4	12	18	24	29	29	29	28	23	14	9
III	7	7	14	20	26	29	30	30	29	24	18	11

Major Changes- WLA Procedure Document

Mixing Zone Procedures

- What is the change?
  - Add special limitation of MZ for bioaccumulatives
    - Mercury, Chlordane, PCB and Dieldrin

Major Changes- WLA Procedure Document

Flow Variable Limits

- What is the change?
  - This section is retained and strengthened
  - 3 key requirements to be eligible:
    1. Ability to meet effluent limits at critical low flow conditions;
    2. Ability to obtain stream flow measurements that accurately represent the stream flow at the outfall location;
    3. Pass an antidegradation review if the facility does not currently have flow variable limits.

Major Changes- WLA Procedure Document

Site-Specific Data Collection

- What is the change?
  - Water Chemistry Data
    - 2-Year once/week to 2-Year/month – annual statistics
- Impact on facilities:
  - Significant reduction for number of sampling requirements

Major Changes- WLA Procedure Document

Rule Making Status

- ❑ Held several stakeholders meetings
- ❑ Preparing documents for Governor's Office Preclearance
  - ➢ Fiscal impact statement
  - ➢ Job impact statement

Questions & Comments?

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