

Idaho Pollutant Discharge Elimination System

Effluent Limit Development Guidance

Draft Outline



**State of Idaho
Department of Environmental Quality**

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Effluent Limit Development Guidance Draft Outline

- ✓ 1. Introduction
 - ✓ a. Purpose and Need
 - ✓ b. Effluent Limit Development Process
 - ✓ c. Relationship to Existing Rules and Guidance
 - ✓ i. Clean Water Act (CWA) Background
 - ✓ ii. Idaho Water Quality Standards
 - ✓ d. Regulatory Citations
 - ✓ e. Data Analyses and Considerations
- ✓ 2. Determining Technology-Based Effluent Limits (TBELs)
 - ✓ a. TBELs for Publicly Owned Treatment Works (POTWs)
 - ✓ i. Secondary and Equivalent to Secondary Treatment
 - ✓ 1) Secondary Treatment Standards
 - ✓ 2) Equivalent to Secondary Treatment
 - ✓ 3) Criteria to Qualify for Equivalent to Secondary Treatment Standards
 - ✓ ii. Adjustments to Equivalent to Secondary Treatment
 - ✓ iii. Apply Secondary and Equivalent to Secondary Treatment Standards
 - ✓ 1) Determine Appropriate Standards to Apply
 - ✓ 2) Calculate Effluent Limits Based on Secondary Treatment
 - ✓ 3) Calculate Effluent Limits Based on Equivalent to Secondary Standards
 - ✓ 4) Apply Special Considerations and Adjustments
 - ✓ a) Substitution of Chemical Oxygen Demand (COD) or Total Organic Carbon (TOC) for 5-day Biochemical Oxygen Demand (BOD5)
 - ✓ b) Adjustments for Industrial Contributions
 - ✓ c) Adjustments to Percent Removal Requirements
 - ✓ 5) Document the Application Standards, Adjustments, and Considerations in the Fact Sheet
 - ✓ iv. Pretreatment Standards
 - ✓ 1) Prohibited Discharges
 - ✓ 2) Categorical Standards
 - ✓ 4) Pretreatment Standards for Existing Sources (PSES)
 - ✓ 5) Pretreatment Standards for New Sources (PSNS)
 - ✓ b. TBELs for Non-POTWs
 - ✓ i. Effluent Guidelines and the Statutory Foundation
 - ✓ 1) Best Practicable Control Technology Currently Available (BPT)
 - ✓ 2) Best Conventional Pollutant Control Technology (BCT)
 - ✓ 3) Best Available Technology Economically Achievable (BAT)
 - ✓ 4) New Source Performance Standards (NSPS)
 - ✓ ii. Apply Effluent Guidelines
 - ✓ 1) Learn About the Industrial Discharger

- ✓ 2) Identify the Applicable Effluent Guideline Categories
- ✓ 3) Identify the Applicable Effluent Guideline Subcategories
- ✓ 4) Determine whether Existing or New Source Standards Apply
- ✓ 5) Calculate TBELs from the Effluent Guidelines
 - ✓ a) Calculating Mass-Based TBELs from Production-Normalized Effluent Guidelines
 - ✓ b) Calculating Mass-Based TBELs from Flow-Normalized Effluent Guidelines
 - ✓ c) Calculating Mass-Based TBELs from Concentration-based Effluent Guidelines
 - ✓ d) Supplementing Mass-Based TBELs with Concentration Limits
 - ✓ e) Incorporating Narrative Requirements from Effluent Guidelines
- ✓ 6) Account for Overlapping or Multiple Effluent Guidelines Requirements
 - ✓ a) Superseding Effluent Guidelines
 - ✓ b) Multiple Effluent Guidelines Requirements
- ✓ 7) Apply Additional Regulatory Considerations in Calculating TBELs
 - ✓ a) Tiered Discharge Limits
 - ✓ b) Internal Outfalls
 - ✓ c) Effluent Guidelines Variances, Waivers, and Intake Credits
- ✓ 8) Apply Additional Requirements in Effluent Guidelines
- ✓ 9) Document the Application of Effluent Guidelines in the Fact Sheet
- ✓ iii. Case-by-Case TBELs for Industrial Dischargers
 - ✓ 1) Legal Authority to Establish Case-by-Case TBELs
 - ✓ 2) Identify Need for Case-by-Case TBELs
 - ✓ 3) Factors Considered When Developing Case-by-Case TBELs
 - ✓ 4) Resources for Developing Case-by-Case TBELs
 - ✓ 5) Statistical Considerations When Establishing Case-by-Case TBELs
 - ✓ 6) Document Case-by-Case TBELs in the Fact Sheet
- ✓ 3. Determining Water Quality-Based Effluent Limits (WQBELs)
 - ✓ a. Characterize the Effluent
 - ✓ i. Identify Pollutants of Concern in the Effluent
 - ✓ 1) Pollutants with Applicable TBELs
 - ✓ 2) Pollutants with a Total Maximum Daily Load (TMDL) Wasteload Allocation (WLA)
 - ✓ 3) Pollutants Identified as Needing WQBELs in the Previous Permit
 - ✓ 4) Pollutants Identified as Present in the Effluent through Monitoring
 - ✓ 5) Pollutants Otherwise Expected to be Present in the Discharge
 - ✓ ii. Identify Effluent Critical Conditions
 - ✓ 1) Effluent Flow
 - ✓ 2) Effluent Pollutant Concentration
 - ✓ b. Characterize Receiving Water Critical Conditions

- ✓ i. Receiving Water Upstream Flow
- ✓ ii Receiving Water Background Pollutant Concentration
- ✓ iii. Other Receiving Water Characteristics
- ✓ c. Determine Applicable Water Quality Standards
- ✓ i. Beneficial Uses
- ✓ ii. Water Quality Criteria
 - ✓ 1) Numeric Criteria—Aquatic Life
 - ✓ a) Calculating Metals and Ammonia Criteria
 - ✓ b) Special Considerations for Temperature Numeric Criteria
 - ✓ 2) Numeric Criteria—Human Health
 - ✓ 3) Narrative Criteria
 - ✓ 4) Site-Specific Water Quality Criteria Implementation
 - ✓ 5) Water Quality Standard Variances and Intake Credits
- ✓ iii. Antidegradation
- ✓ d. Determine the Need for WQBELs
 - ✓ i. Define Reasonable Potential
 - ✓ ii. Assess Critical Conditions
 - ✓ iii. Establish an Appropriate Mixing Zone
 - ✓ iv. Conduct a Reasonable Potential Analysis (RPA)
 - ✓ 1) What to do if Data is not Available
 - ✓ 2) Document RPA in the Fact Sheet
- ✓ e. Calculate **Parameter Pollutant**-specific WQBELs
 - ✓ i. Calculate **Parameter Pollutant**-specific WQBELs from Aquatic Life Criteria
 - ✓ 1) Determine Acute and Chronic WLAs
 - ✓ 2) Calculate Long-term Average (LTA) Concentrations for each WLA
 - ✓ 3) Select the Lowest LTA as the Performance Basis for the Permitted Discharger
 - ✓ 4) Calculate Average Monthly and Maximum Daily Limits
 - ✓ 5) Document Calculation of WQBELs in the Fact Sheet
 - ✓ ii. Calculate Chemical-specific WQBELs based on Human Health Criteria for Toxic Pollutants
- ✓ f. Calculate RPA and WQBELs for Whole Effluent Toxicity (WET)
 - ✓ i. **Types of WET Tests** Expressing WET Limits or Test Results
 - ✓ **ii. WET WLA and RPA**
 - ✓ iii. Determine WET Triggers and Limits
 - ✓ iv. Document **RPA and WQBEL WET** Calculations **for WET** in the Fact Sheet
- ✓ g. Special Considerations
 - ✓ i. Water Quality Trading
 - ✓ ii. Emerging Contaminants

- iii. Watershed Permitting
- 4. Final Effluent Limits and Antibacksliding
 - a. Determine Final Effluent Limits
 - b. Apply Antibacksliding Requirements
 - c. Document Final Effluent Limit Rationale in the Fact Sheet