


A silver mountain bike is parked on a rocky trail overlooking a river valley. The bike is the central focus, with its frame, handlebars, seat, and wheels clearly visible. The background features a wide river flowing through a valley, surrounded by rugged, reddish-brown rock formations and sparse green vegetation. The sky is clear and blue.

EPA Update- *Regional-Style*

Al Garcia

Region 8 Pretreatment Workshop
April 30, 2019

A photograph of a bicycle covered in a thick layer of snow, leaning against a wooden fence. The background shows a snowy landscape with trees and a building. The text is overlaid on the image in a yellow, serif font.

EPA Update- *Regional-Style*

Al Garcia

Region 8 Pretreatment Workshop

April 30, 2019

EPA Update

- Dental Amalgam
- Emerging Pollutants of Concern
 - Nutrients
- E-Reporting
- Hazardous Waste Pharmaceutical Rule

Pretreatment Program

40 CFR 403.8(f)(1-6)

- Legal authority
- Procedures
- Funding/Resources
- Local Limits
- Enforcement Response Plan
- IU inventory

Dental Amalgam

- Published on June 14, 2017
 - ...with correction – June 26, 2017
 - ...and corrections, *sigh* - July 5, 2017.
- 40 CFR Part 441
- Effective Date – July 14, 2017

Dental Amalgam

- New Source Date – July 14, 2017
- Applicability
- Provisions:
 - Installation of an ISO 11143-compliant Amalgam Separator (or equivalent device)
- Compliance with 2 BMPs
 - Line cleaners
 - Waste amalgam must be treated

Existing vs. New Source

- Existing Source:
 - Compliance with Rule by July 14, 2020
 - Provide a one-time compliance report-
October 12, 2020
- New Source
 - Compliance with Rule upon startup
 - Provide a one-time compliance report within
90 days

Program Implementation

- Legal authority
- Procedures
- Funding/Resources
- Local Limits
- Enforcement Response Plan
 - *Compliance Evaluation*
- IU inventory

Pretreatment Implementation

IU inventory

- You need to identify the universe of dental dischargers in your service area.

EPA Region 8

- Coordinated with State ADA offices
- Provided the EPA Region 8 One-time Compliance report
- Receiving reports from dentists in non-approved program
- Phase II
 - IU inventory in 2019
 - Gather list of dentist offices

Emerging Pollutants of Concern



Progress on Establishing Nutrient Criteria – Region 8

- CO – Nutrient Table Values for the State (Regulation 31.17)
 - Control Reg 85 for TP (1.0 mg/L) and TIN (15 mg/L)
- MT – Eco-Regional Nutrient Criteria for wade-able streams; variances
- UT – TBEL for P
- ND, SD, WY – criteria in progress

Nutrient Control - POTWs

- Nutrient Removal Strategies
 - Treatment technology
 - POTW optimization
 - Source control
- Pretreatment as a tool for POTW permitting
- Nutrient Non-domestic sources

Biological Nutrient Removal (BNR)

Oxygen Poor Habitat (Anoxic)

- Denitrification: Nitrates as N (NO_3) converts to Nitrogen_(g) – N_2
- Phosphorus
 - Bacteria break down BOD to create volatile fatty acids (VFAs)
 - Phosphate Accumulating organisms (PAO) use VFAs as a fuel source, release soluble ortho-P

Biological Nutrient Removal (BNR)

Oxygen Rich Habitat

- Nitrification: Ammonia-N (NH_4) converts to Nitrates-N (NO_3)
- Phosphorus
 - PAOs assimilation of soluble P

P Removal -convert soluble P to TSS: PAOs are wasted to digesters

Existing Activated Sludge Plant

Inlet (P/TKN/ NH_4^+)
With or without
primary
clarification



Return Activated Sludge

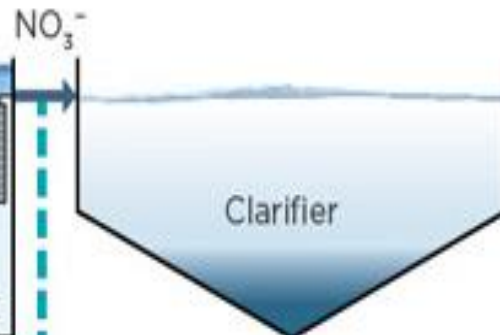
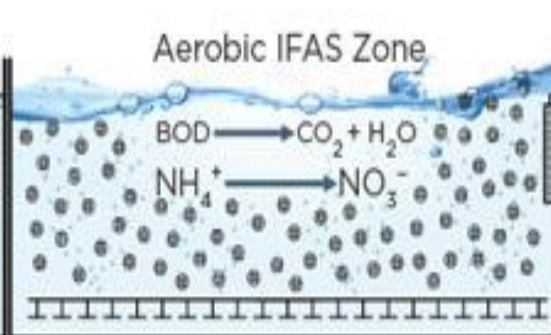
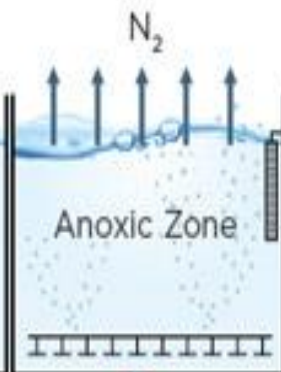
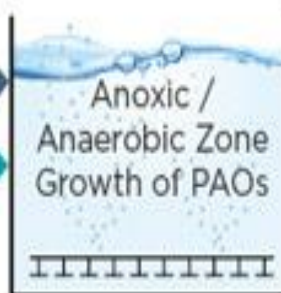
Waste Sludge

Converted to IFAS for BNR

De-Nitrification

Nitrification

Inlet (P/TKN/ NH_4^+)
With or without
primary
clarification



NO_3^-

Internal Recycle

Return Activated Sludge

Waste Sludge

Biological Nutrient Removal (BNR) Treatments

- IFAS - Integrated Fixed Film Activated Sludge
- SBR - Sequential Batch Reactor
- Oxidation Ditch
- MBR – Membrane Biological Reactor
- MBBR - Moving Bed Biofilm Reactor
- Step Feed Process

POTW Optimization

- Creating optimal habitat for bacteria involved in N and P removal
 - Denitrifying bacteria will outcompete PAOs for VFAs
 - Dial in anaerobic, anoxic, and aerobic habitats
- Utilizing skills, expertise, and institutional knowledge of WWTP operators

Non-Domestic Sources

- Characterize Service Area: Non-Domestic Sources or Industrial Users (IU)
- Characterize IUs in service area
 - Determine impact to POTW
- Determine and Control SIUs

Establishment of Nutrient WQ Criteria/NPDES permit limits

- Establishes Pollutants of Concern
- Develop local limits based on NPDES Standards, including variances
- Determine loadings from IUs in service area and provide control

Region 8 Non-Approved Program Initiative

- Outreach to Region 8 non-approved programs
 - Wastewater Operator Training
 - Non-Approved Programs Traveling Road Show
- Region 8 Non-Approved Programs Ordinance example
- NPDES Permit Language

Nutrient Point Sources

- Fish hatcheries
- Oil and gas lagoons
- Metal Finishing – phosphate coating
- Ortho-phosphate corrosion control-
drinking water distribution lines
- Breweries/distilleries, car washes,
industrial laundries - detergents
- Food Processing Facilities

Food Processing Facilities

- Slaughterhouse
- Cheese Processing
- Bacon Processing
- Egg Processing
- Meat Packing
- Poultry Packing
- Food Products

EPA National Initiative

- Food Processing Facilities
 - Ties to nutrients
- Pressures on smaller POTWs to address nutrient loadings when NPDES permit limits are established

Local Program Implementation

- Legal authority
- Procedures
- Funding/Resources
- Local Limits
- Enforcement Response Plan
- IU inventory

Electronic Reporting



Electronic Reporting Rule

- Federal Register – October 22, 2015
- **Effective Date – December 21, 2015**
- Reduces burden of existing paper-based reporting from regulated facilities and reduces third-party data entry errors by instead requiring electronic data submissions

Electronic Reporting Rule

- Phase 1 – DMR Submissions & Biosolids Reports (21 Dec 2016)
- Phase 2 – General Permit and Program Reports (21 Dec 2020)

Region 8 Annual Report Database

EPA Region 8 Industrial Pretreatment Program

Annual Report of POTW Implementation

Last Updated: 06-26-2016

Built for Microsoft Excel 2013 or newer

Enter Permit Number

C00026638

Enter Year to use as Baseline

2015

Generate File

What is CROMMER?

- Cross Media Electronic Reporting Rule
- 40 CFR 403.8(g) – “A POTW that chooses to receive electronic documents must satisfy the requirements of 40 CFR part 3.”

What is CROMMER?

- System Standards to ensure Integrity and Enforceability of electronic received data
 - Criteria for establishing a copy of record;
 - Integrity of the electronic document;
 - Validity of the electronic signature;
 - Determination of the identity of the individual uniquely entitled to use a signature device; and
 - Opportunity to review and repudiate the copy of record.
- PDFs do not meet these data integrity elements

CROMMER Guidance

- Guidance issued May 2018

https://www.epa.gov/sites/production/files/2018-05/documents/cromerr_potw_1.pdf

CROMMER Guidance

May 2018

- Roles and Responsibilities of Pretreatment Programs:
 - Verify Legal Validity of Electronic Signatures
 - Prepare CROMMER system documentation
 - Review and Update Pretreatment Program Requirements

Program Implementation

- Legal authority
- Procedures
- Funding/Resources
- Local Limits
- Enforcement Response Plan
- IU inventory

Procedures

- 40 CFR 403.8(f)(2)(iv) : “Receive[s] and analyze[s] self-monitoring reports and other notices submitted by Industrial Users in accordance with the self-monitoring requirements in § 403.12”
- 40 CFR 403.8(f)(5) and 403.9(b) - Identify POTW organizational duties
- 40 CFR 403.8(f)(3) and 403.9(b): Ensure that the POTW has sufficient resources (funding) and qualified personnel

Hazardous Waste Pharmaceutical Rule



Domestic Sewage Exclusion

- RCRA, §1004(27)
- Solid or dissolved material in domestic sewage is not defined as a solid waste under RCRA
 - Solids wastes cannot be considered as Hazardous wastes for purposes of RCRA
- Covers non-domestic wastes

Domestic Sewage Study

- Report to Congress on the Discharge of Hazardous Wastes to POTWs
- Pretreatment Regulations Updates
- July 24, 1990
- Addressed control of Hazardous Wastes discharged to POTWs

Pretreatment Regulations Updates

- Included new prohibitive discharge standards
 - Explosivity
 - Toxic vapors, fumes
 - Petroleum oil, Non-biodegradable cutting oil or products of mineral origin
 - Trucked/Hauled Wastes

Pretreatment Regulations Updates

- Slug Discharge Control plans
- Clarified notification of Hazardous waste in 403.12(p)
- Supplemented permit conditions

Hazardous Waste Pharmaceutical Rule

- February 22, 2019
- Sewer ban prohibition on hazardous waste pharmaceuticals from health care facilities and reverse distributors
- Effective Date – August 21, 2019

Program Implementation

- Legal authority
- Procedures
- Funding/Resources
- Local Limits
- Enforcement Response Plan
- IU inventory

EPA Contact Info

A photograph of two snowboarders lying on their backs on a snowy slope. The snowboarder on the left is wearing a grey jacket, black pants, and a white helmet. The snowboarder on the right is wearing a grey jacket, orange pants, and a black helmet. Both are wearing goggles and gloves. Their snowboards are visible in the foreground, one black and one green.

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