



PRETREATMENT 101 - TYPICALVILLE

An Introduction to Pretreatment



Today's Presentation

- Goals of Pretreatment
- History of Pretreatment Program
- Pretreatment in North Carolina
- The Program
 - Major program elements
 - Files
 - Inspections / Guidance / Training
 - Summary and Contacts

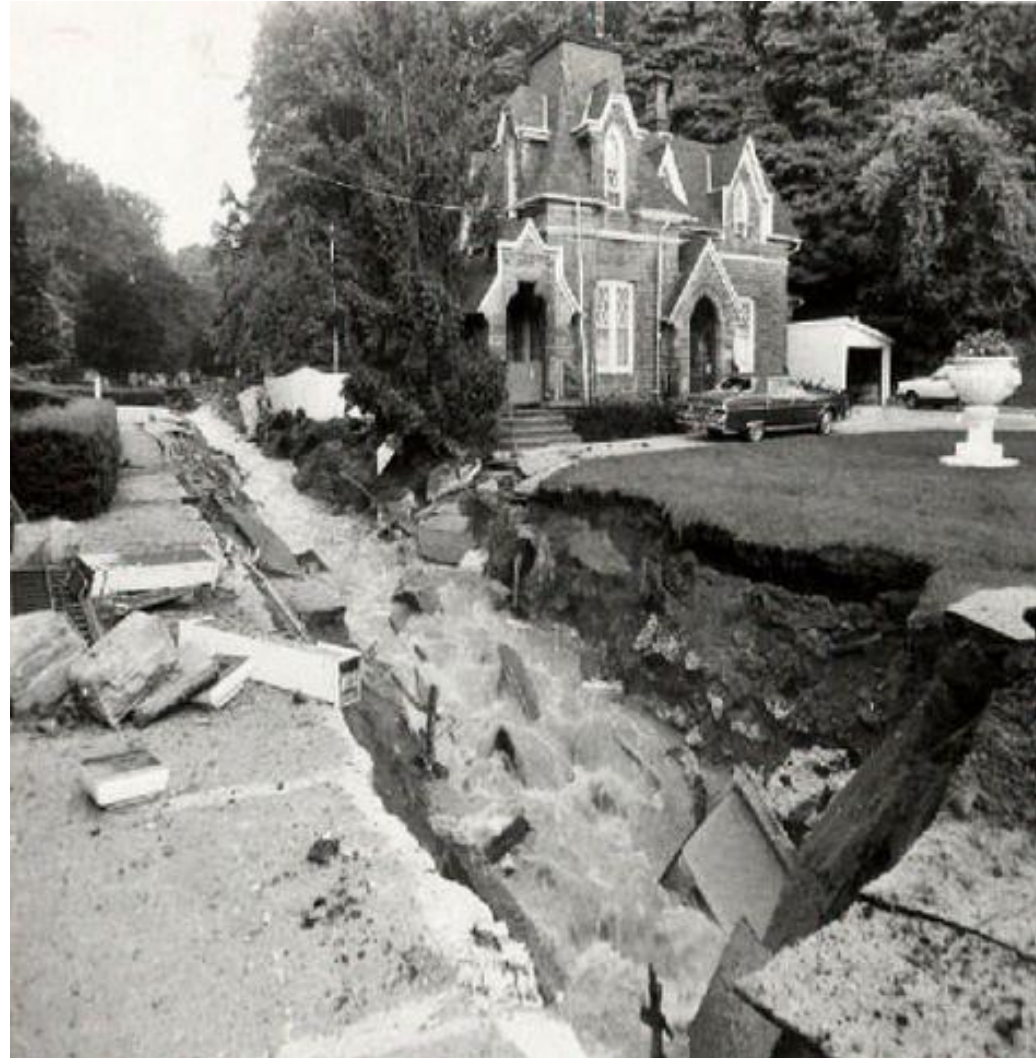


What's the Purpose of the Pretreatment Program?

- Prevent Pass Through
 - clean rivers, groundwater, and land
 - compliance with NPDES+sludge limits
- Prevent Interference
 - properly functioning + compliant wastewater treatment plants (WWTPs) and sewer collection systems
- Promote the beneficial use of biosolids
 - good sludge for land application or composting
- Protect Worker Health and Safety



Louisville Kentucky



Louisville Kentucky



Louisville Kentucky



Louisville Kentucky Sewer Explosion

2 ½ Years after promulgation
of 40 CFR 403 General
Pretreatment Regulations
for Existing and New
Sources of Pollution



Pretreatment Program History

- 1972 Clean Water Act
- 1978- Federal Pretreatment regulations established (40 CFR Part 403)
- 1982- EPA approval of the NC Program
- 1983/84 - majority of NC POTW Pretreatment Programs approved
- 1987-90 - major revision to NC and Federal pretreatment regulations
- 2005 – Streamlining of the Pretreatment Program
- 2011 – Revision to NC pretreatment regulations and model SUO
- 2019 additional revisions to the NC Pretreatment Rules



Develop and Implement the “Right” Pretreatment Program

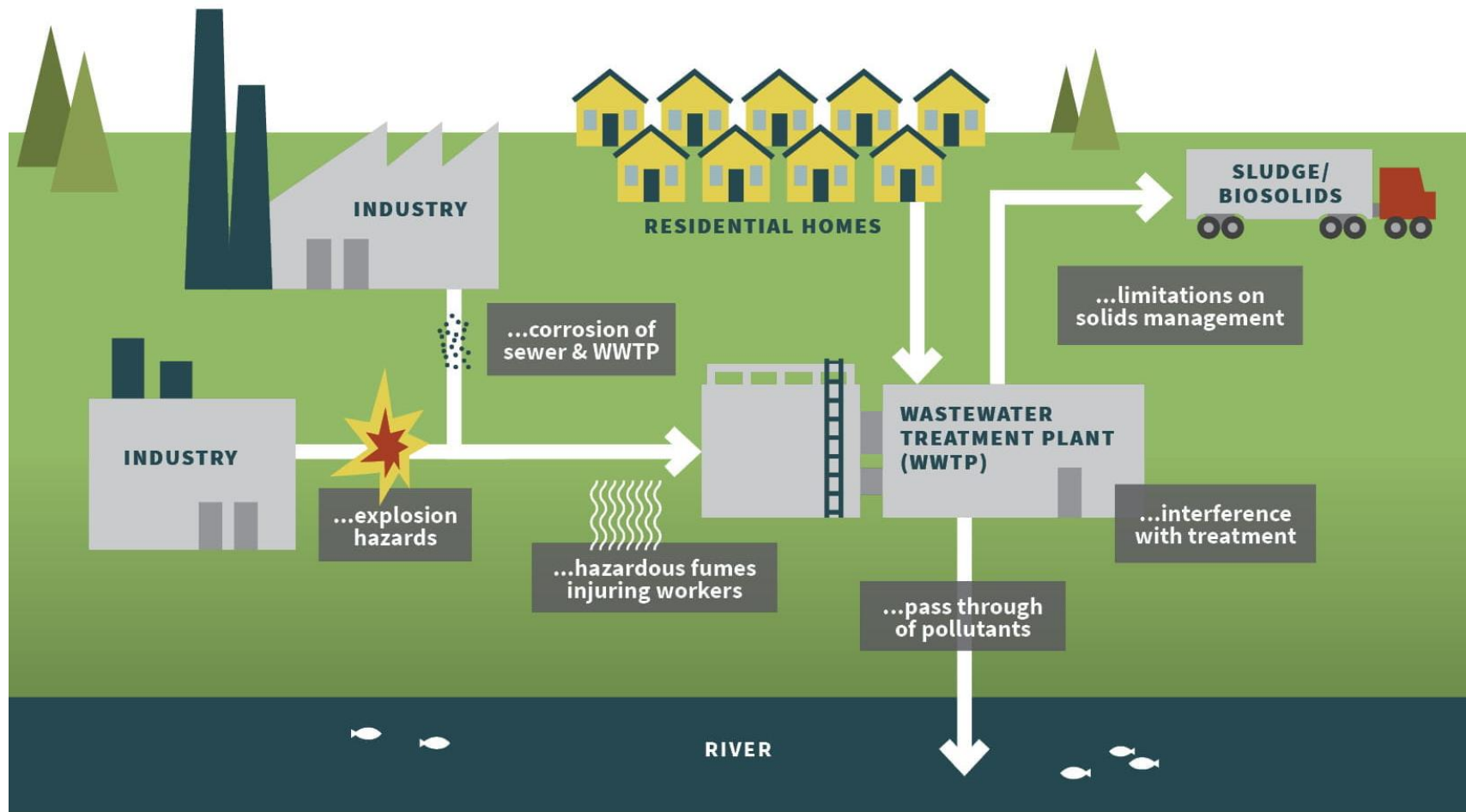
Creating a Pretreatment Program that:

- Protects the POTW
- Is Environmentally sound
- Is Technically feasible
- Is Judicially defensible

There is a delicate balance between these goals and protecting the POTW!



TYPICALVILLE



Pretreatment Laws and Regulations

- Federal Clean Water Act
- Federal General Pretreatment Regulations
 - 40 CFR 403
 - CFR = Code of Federal Regulations
- North Carolina Statutes
 - § 143-215.1. Control of sources of water pollution; permits required.
- North Carolina Administrative Code (NCAC)
 - 15A NCAC 02H .0900 – Local Pretreatment Programs



Got Pretreatment?

- Publicly Owned Treatment Works (POTWs) required to have a Pretreatment Program if process wastewater from Significant Industrial User (SIU) is accepted
 - POTW = city, town, county, Sanitary District, Sewer Authority
 - federally owned are exempt

Reference: NPDES Permit, PART IV SPECIAL CONDITIONS FOR MUNICIPAL FACILITIES



Got Pretreatment?

- What is a SIU?
- To understand this, first learn -
 - What is an IU?
 - What is a Pretreatment Program supposed to do?



What's an IU?

- User
 - “Person” that uses the sewer collection system, as in discharges into it
- Industrial User (IU).
 - broadly intended to cover any User of the collection system (and WWTP) that is not a house
 - maybe even some houses, too, for example someone doing large amounts of commercial cooking in their home



What is a Significant Industrial User (SIU)?

- An IU with the potential to cause
 - Pass Through (NPDES problems)
 - Interference (collection system problems and inhibition)
 - Bad biosolids
 - Poor Worker Health and Safety
- i.e., goals of Pretreatment Program



What is a SIU?

Significant Industrial User – 15A NCAC 2H .0903(b)(33)

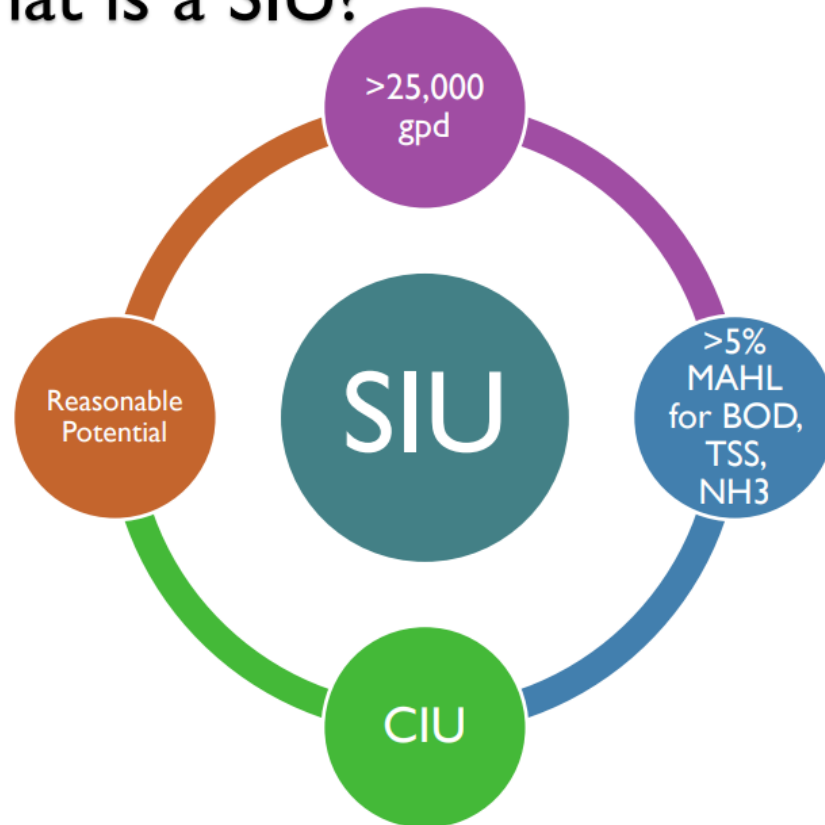
- >25,000 gal/day of process wastewater
- >5% Maximum Allowable Headworks Loading (MAHL) i.e., WWTP treatment capacity for BOD, TSS, NH3
- covered under Federal Categorical Pretreatment Regulations as a CIU
- any facility which the Control Authority or DWR believes has the potential to adversely impact the POTW



What is an SIU?

15A NCAC 2H .0903(b)(33)

What is a SIU?



What is a Significant Industrial User (SIU)?

- large manufacturing facilities
- small industries such as a little metal finishing shop or a textile business
- companies that aren't typically considered "industries" such as hospitals, commercial laundries and landfills



What's a CIU?

- CIU=Categorical Industrial User
- A subset of SIUs (all CIUs are SIUs)
- a SIU that is covered by a specific Federal Categorical Regulation, for example:
 - metal finisher (40 CFR 433)
 - Pharmaceutical (40 CFR 439)



What's a non-SIU?

- IU that is not a SIU
- may or may not be issued a local IUP or other individual control mechanism
- Industrial, Commercial, or Institutional (ICI) entity



North Carolina Pretreatment Program

- 115 Active Pretreatment Programs
- Over 200 local POTW Pretreatment Coordinators and consultants
- DWR/DENR
 - Pretreatment Staff in NPDES Municipal Permitting Unit
 - 7 Regional Offices' DWR Staff
 - Other Division of Water Resources (DWR) and Dept of Environmental Quality (DEQ) staff interaction



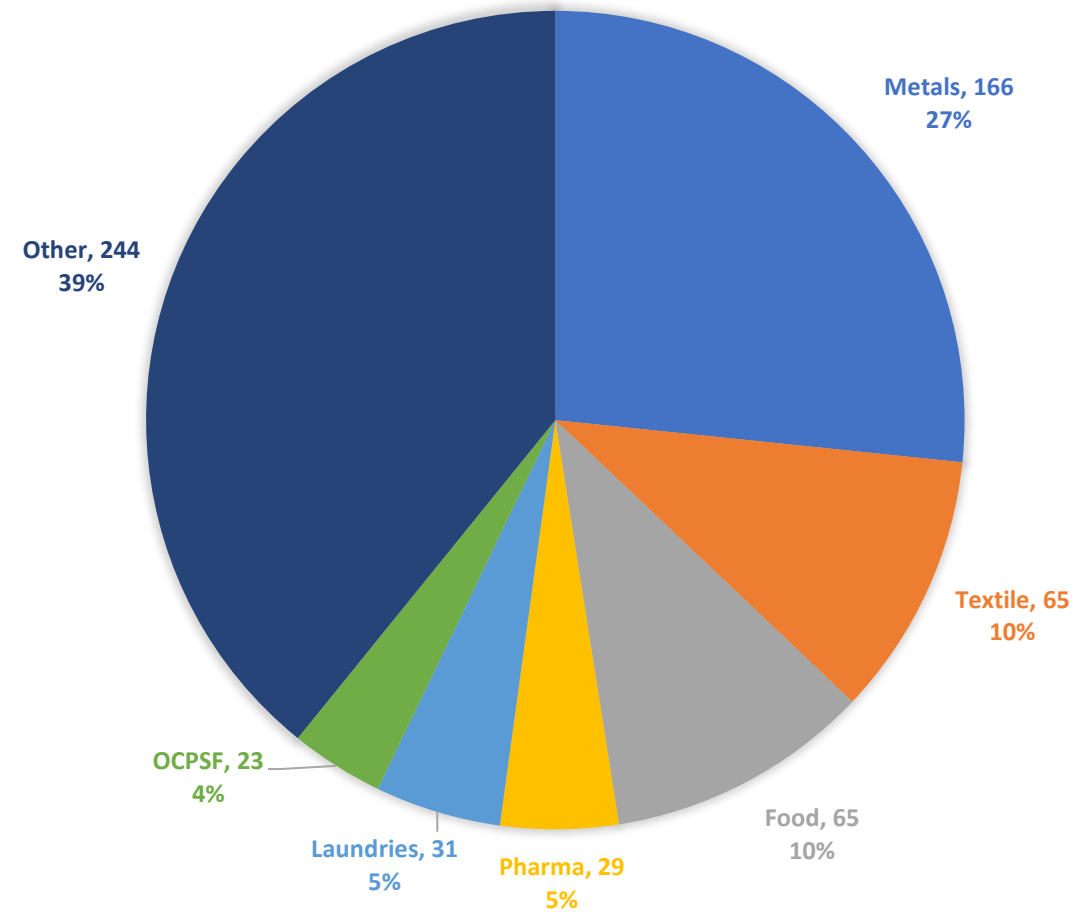
NC - Full Program versus Modified Program

- Modified Program - 34 Programs
 - POTW combined permitted flow of 2 MGD or less AND have 3 or less SIUs
 - DWR determines who qualifies
 - Short Term Monitoring Plan (quarterly for 1 year every 5 years)
 - submit slightly smaller Pretreatment Annual Report (PAR)
- Full Program - 81 Programs
 - Long Term Monitoring Plan (on-going)
 - Full Pretreatment Annual Report (PAR) Required



NC Pretreatment Program 2022

2021-2022 SIU COUNT = 623



In 1995, NC had 1220 SIUs which was 10% of all US SIUs.

600 were Textiles

Pretreatment

The Federal and State Pretreatment Program gives regulatory authority for EPA, states, and municipal governments to control the discharge of industrial wastewater into municipal Wastewater Treatment Plants (WWTPs) or Publicly Owned Treatment Works (POTWs). The objectives of the Pretreatment Program are to prevent pass-through, interference, or other adverse impacts to the POTW, its workers or the environment; to promote the beneficial reuse of biosolids; and to assure that all categorical pretreatment standards are met. There are over 600 Significant Industrial Users (SIUs) who discharge industrial wastewater to more than 110 POTWs throughout the State of North Carolina.

Dental Amalgam Rule - 40 CFR Part 441

EPA promulgated 40 CFR Part 441 Effluent Limitations Guidelines and Standards for the Dental Category, on June 14, 2017 with an effective date of July 14, 2017. The new rule regulates mercury discharged in wastewater from dental facilities to a Publicly Owned Treatment Works (POTW) or municipal wastewater treatment plants (WWTP).

Existing sources are those dental dischargers in operation prior to July 14, 2017 and must submit to the Control Authority a one-time compliance report by October 12, 2020. Any dental practice that begins operation on or after July 14, 2017 is a new source and must comply with the Rule. Please see the [Fact Sheet](#) for further detail on requirements for equipment, best management practices and reporting and recording keeping and exemptions to the Rule.

For dental offices in locations with an approved pretreatment program the control authority is the POTW. Check the [list of municipal pretreatment contacts in NC](#) to determine if there is an approved pretreatment program in your location.

Contact the listed pretreatment coordinator for instructions on how to submit compliance reports. Address, phone numbers and email addresses are provided.

For dental offices in locations without an approved pretreatment program the State is the control authority. Complete the One-Time [Compliance Report for Dental Dischargers](#) and mail to:

North Carolina Division of Water Resources
NPDES Municipal Permitting Unit
1617 Mail Service Center
Raleigh NC 27699-1617

Sewer Use Ordinance (SUO)

This Model SUO includes many revisions to address the 2011 revisions to NCAC 15A 02H .0900 - Local Pretreatment Programs.

- [Model Pretreatment SUO revised August 26, 2011](#)
- [NC SUO Checklist August 2011](#)
- [Summary of SUO Comments](#)
- [Example Attorney's Statement](#)

State Pretreatment Regulations

The Rules are final and effective as of July 1, 2019.

- [Pretreatment Rules: 15A NCAC 02H .0900](#)

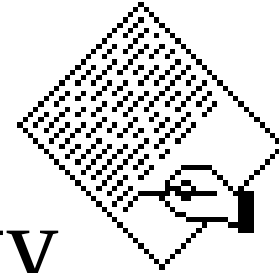
Federal Regulations

- General pretreatment regulations: [40 CFR 403](#) of (July 2012)
- Categorical Pretreatment Regulations: [40 CFRs 400-471](#) of

Municipal: NPDES, Pretreatment and Collection System
Pretreatment
Categorical User Information
Comprehensive Guide
Headworks Analysis
Industrial Waste Survey
Other Downloads
Mercury Guidance
Annual Report Guidance
Permit Writing Guidance
Training
Collection Systems



Division of Water Resources (DWR) Responsibility

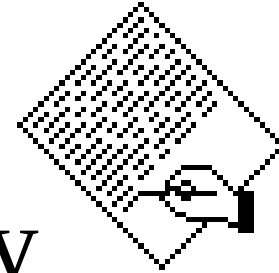


- **DWR is Approval Authority**

- Delegate DWR's responsibilities for Industrial Users under General Statutes to POTW.
- Approve POTW's Pretreatment Program, including review of each element and Industrial User Pretreatment Permit (IUP).
- Compliance judgment and enforcement for failure to implement Pretreatment Program
- Training and Support!



POTW Responsibility

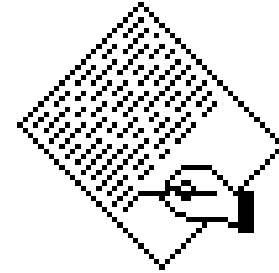


- **POTW is Control Authority**

- POTW is permittee of Approval Authority (DWR)
- Develop and Implement DWR approved Pretreatment Program
- Control Industrial Users through Industrial User Pretreatment Permits (IUP) and Sewer Use Ordinance (SUO)
- Perform compliance judgment and take enforcement against IUs for failure to comply with IUP and SUO



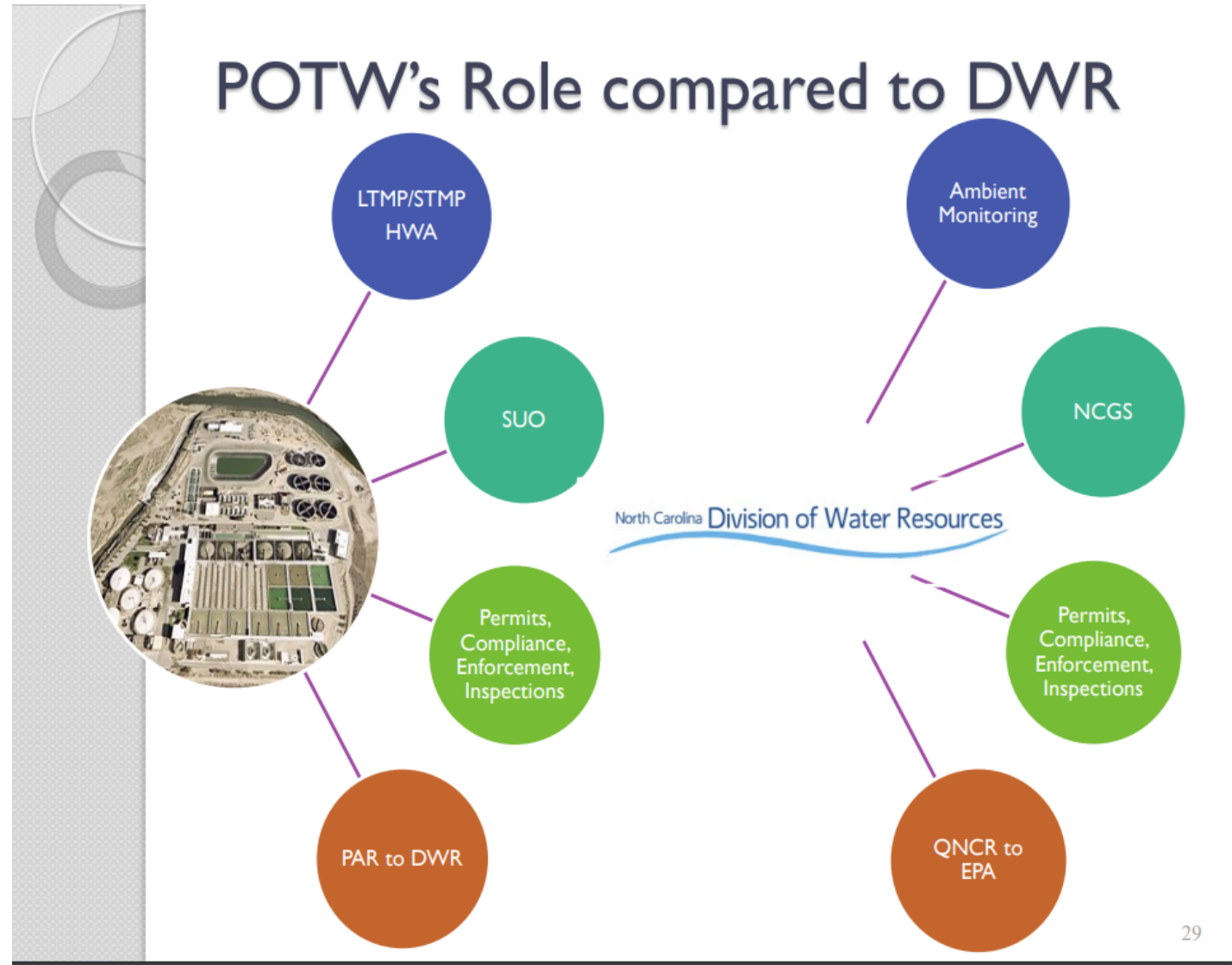
SIU Responsibility



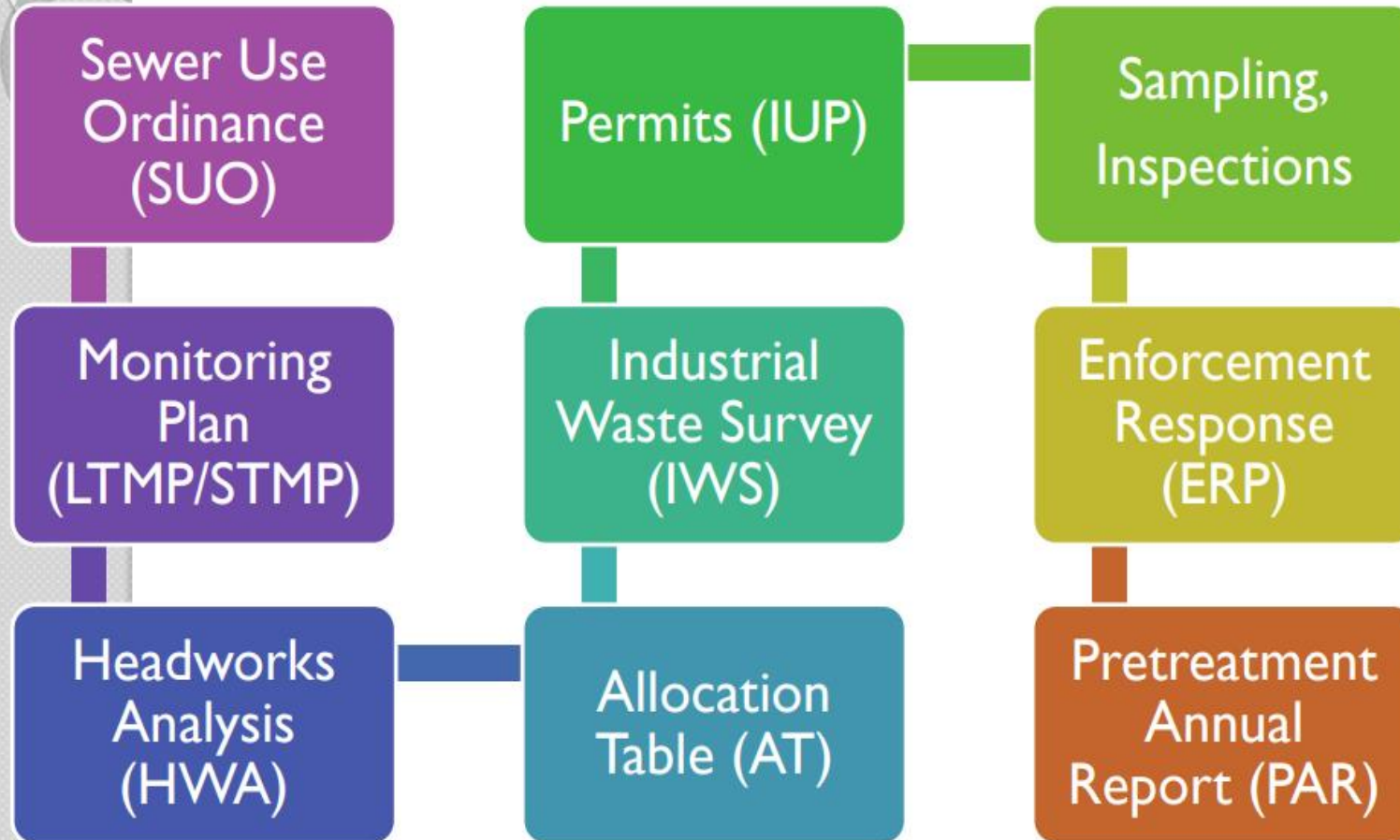
- SIU is Permittee of POTW
 - “Controlled” by POTW
 - Comply with SUO and IUP
 - Keep POTW informed of SIU operations, including notification of changes before they make the change.



POTW's Role compared to NC DWR



Major Program Elements



Sewer Use Ordinance (SUO)

- Adopted by the POTW's governing board
- Prohibited discharges
- Gives the POTW the authority to Control Users:
 - Deny or Halt discharge
 - Establish Local Limits
 - Issue permits
 - Enforce permits
 - Issue penalties



What is a SIU Permit (IUP)?

IUP= Industrial User Pretreatment Permit

- SIU= Significant Industrial User
- Like DWR permits, IUPs are issued under NC General Statute (NCGS) 143-215.1
 - DWR Director's authority under NCGS is delegated to POTW.
 - Purpose is to protect POTW and environment.
 - Same format as NPDES permits: Include limits, monitoring, reporting, general and specific conditions.



Pretreatment Permits versus Pretreatment Equipment

- SIU definition not tied to whether Industrial User (IU) has treatment units
 - Not all SIUs have pretreatment equipment, but all SIUs have pretreatment permits (IUPs)
 - Not all IUs (Industrial Users) are SIUs
 - Not all IUs with pretreatment *equipment* are SIUs
 - non-SIUs can be issued non-SIU (or local) IUPs



SUO and IUP

- POTW is Control Authority
 - POTW controls what IU discharges and under what conditions
- SUO and IUP are Control Mechanisms
 - SUO is general control of all IUs
 - IUP is individual control mechanism for one specific SIU or non-SIU
- If SUO and IUP don't do what you need them to do, change them!
 - Too harsh, too weak, can cause extra work



Permit Writing Guidance

Details about the next Pretreatment Permit Writing Workshop are on the [Training](#) page.

[Basic IUP Guidance, Including What to Submit](#) (August 2005)

IUP Training Materials

- [IUP Writing Steps: Workshop Outline](#)
- [Industrial User Wastewater Survey and Discharge Permit Application: Slugem Hosiery](#)
- [Guidance Document for Completing the Industrial User Wastewater Survey and Discharge Permit Application](#)
- [Slugem Hosiery SIU Inspection Form](#)
- [Slugem Hosiery Data Summary Spreadsheet](#)
- [Categorical Industry Overview Presentation](#)
- [Blank Industrial User Wastewater Survey and Discharge Permit Application](#) (April 2012)

Permit Writing Files

- [Generic Industrial User Permit \(includes Permit Synopsis\) - update changes in red](#), (July 27, 2018)
- [Example IUP & Synopsis: Will Plateit \(40 CFR 433\)](#) (March 2009) ☐
- [Combined Wastestream Formula: Example IUP & Synopsis: Will Plateit \(40 CFR 433\)](#) ☐.
- [Example IUP modification: Will Plateit \(40 CFR 433\)](#)
- [Ammonia and Total Nitrogen IUP Limit Guidance](#) (July 2005)
- [SIU Inspection Form](#)

Pretreatment Guide

[Mercury Guidance](#)

[Annual Report Guidance](#)

[Permit Writing Guidance](#)

[Other Industrial Information](#)

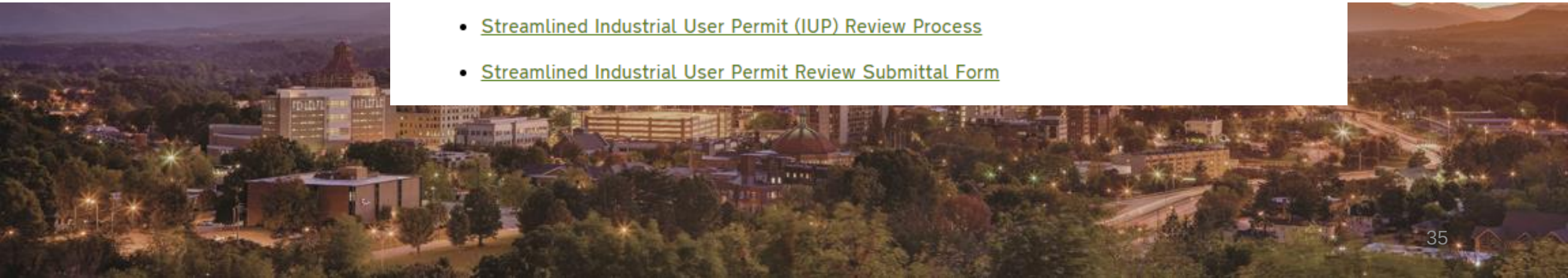


Streamlined Review of IUPs

In order to use available resources more effectively and recognizing the maturity and experience prevalent in the pretreatment program, the Division is proposing a process to streamline the review of Industrial User Permits (IUPs).

After attending the class and meeting other criteria, a permit writer may be approved to participate in the streamlined permit review process. Permits submitted under this process will not be subject to a full Division review. Benefits to the POTW include less paperwork to submit and immediate approval of your permits. Please review the following documents for more detail. Programs employing at least one approved permit writer and meeting all of the other specified requirements will be considered "Approved". If staffing changes occur, the Program may be required to go through the approval process again.

- [Streamlined Industrial User Permit \(IUP\) Review Process](#)
- [Streamlined Industrial User Permit Review Submittal Form](#)



IUPs

- IUP Basic Guidance
- DWR Pretreatment Permitting Website
- Example IUP – Will Plateit

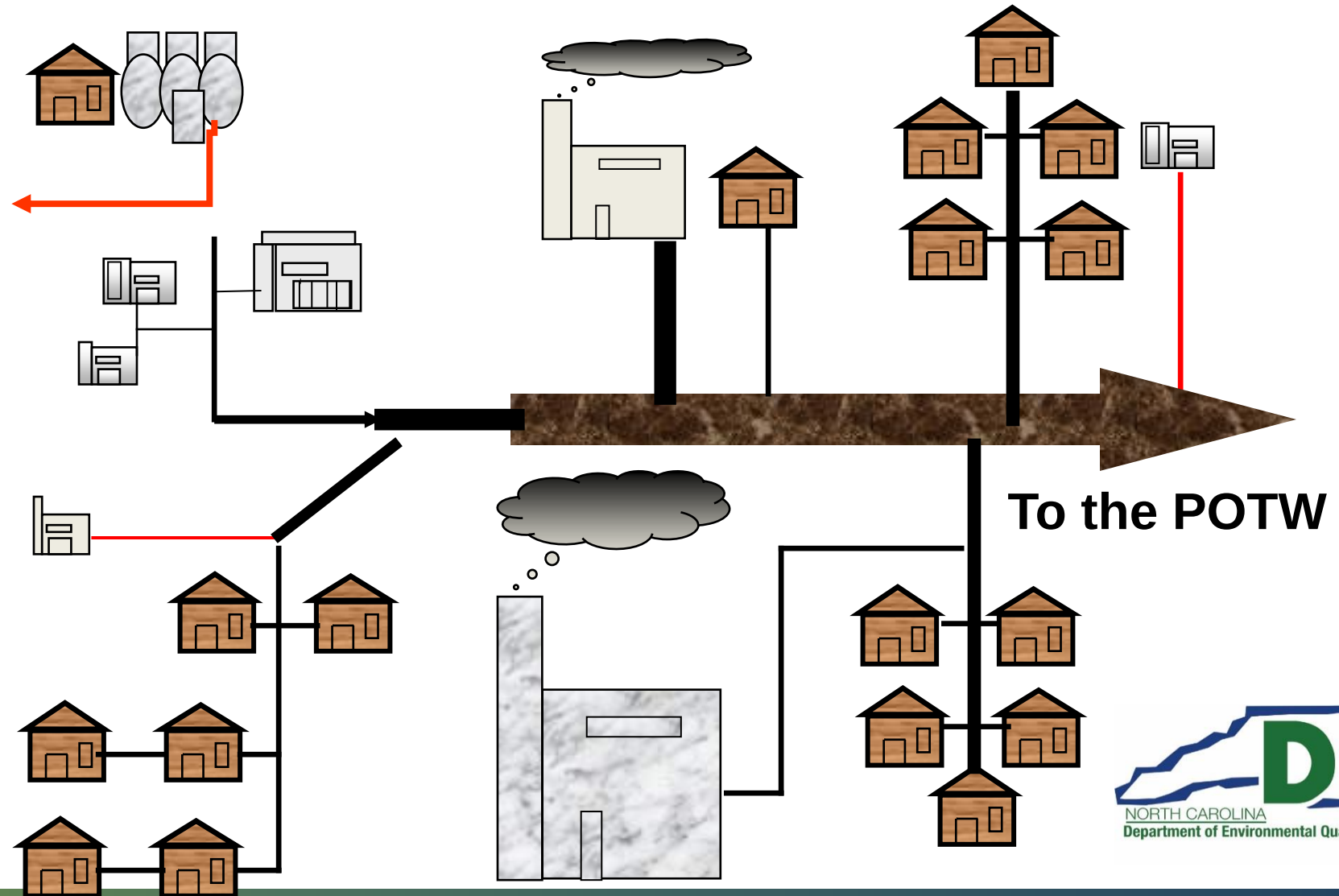


Industrial Waste Survey (IWS)

- Survey all ICIs connected to POTW
 - Satellite communities – who tells who?
- Determine who needs “controlling” or regulating (who is a SIU)
- Do you know when a new ICI entity is planning to move to town?
 - Or only find out after already here?!
- Do you know when an IU or SIU makes a change to their process?
 - Or only find out after already made it?!



Investigating your Collection System



Long Term or Short Term Monitoring Plan

- POTW Site-Specific Sampling Plan
- collects data for use in
 - Headworks Analysis (HWA)
 - WWTP removal rates
 - WWTP inhibition criteria
 - WWTP influent + uncontrolled load
 - Local Limits
 - NPDES/Non-discharge permit
 - Other applications
- Full Programs – Long; Modified – Short;
Only difference is the frequency.

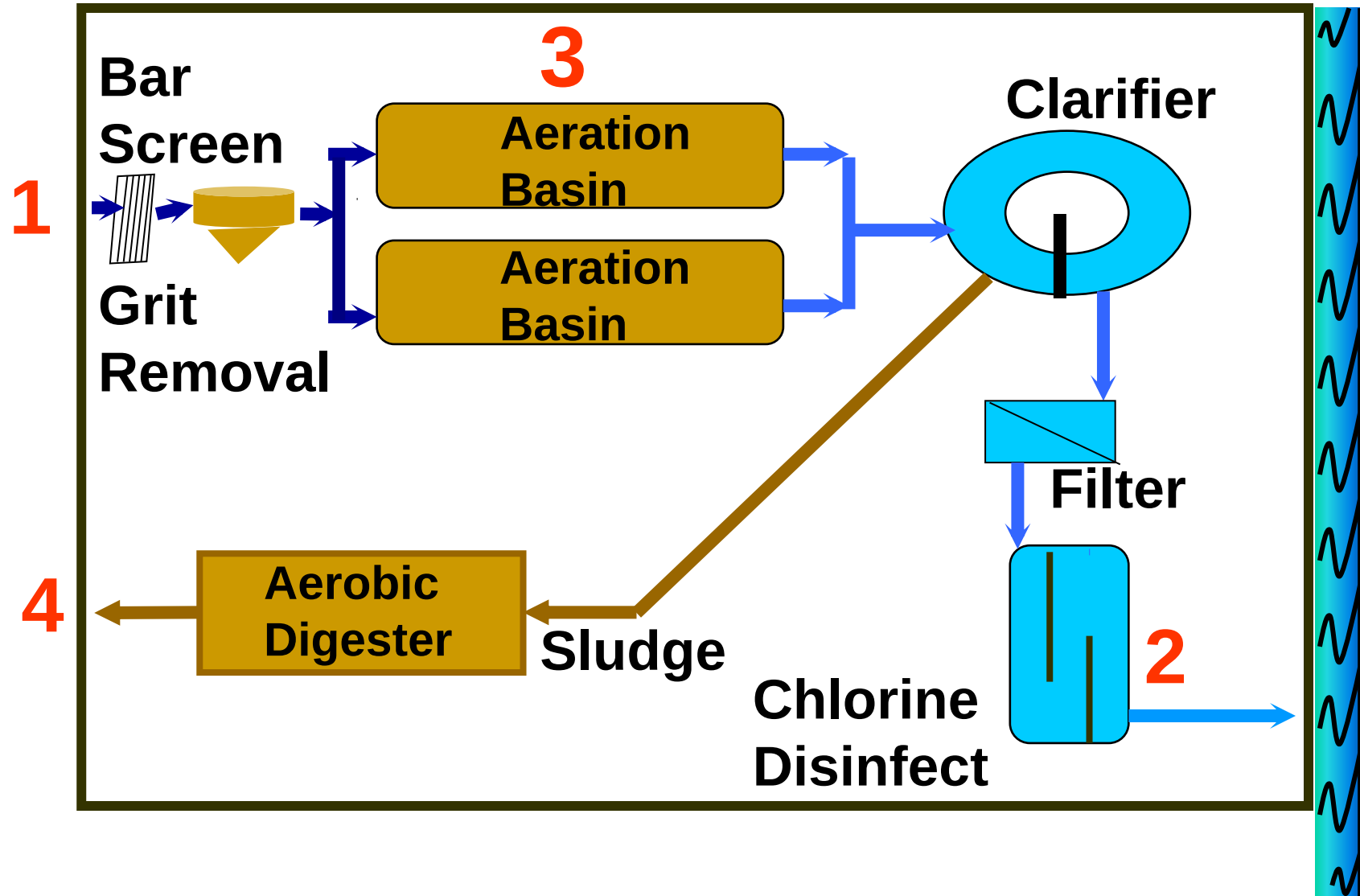


LTMP/STMP Pollutants of Concern (POCs)?

- NPDES Permit Limited Pollutants of Concern
 - Sludge Regs (40 CFR 503)- As, Cd, Cu, Pb, Hg, Mo, Ni, Se, and Zn
 - EPA Required- Cd, Cr, Cu, Pb, Ni, Zn
 - SIU IUP Limits- Ag, CN, Chlorides, Fluoride, organics, etc.
-
- Not all POTWs have the same POCs
 - A POTW's POCs can change over time



Typical LTMP/STMP Monitoring Locations at a WWTP



Typical LTMP Monitoring Frequencies

- Full Programs have a LTMP—
Long Term Monitoring Plan
 - Influent and Effluent - Quarterly
 - Aeration Basin- Semi-annually
 - Sludge to Disposal- per sludge permit
- Some POTWs do more
- Some POTWs allowed to do less in DWR approved LTMP



Typical STMP Monitoring Frequencies

- Modified Programs have a STMP-
Short Term Monitoring Plan
 - Influent and Effluent- One year of quarterly sampling once every 5 years
 - Aeration Basin- once every 5 years
 - Sludge to Disposal- per sludge permit
- Some POTWs do more



LTMP/STMP Practical Quantitation Levels (PQLs)

- PQLs must be approved by DWR in LTMP/STMP
- *Comp Guide, Chapter 4, Appendices 4-A, 4-C, and 4-D, page 3*
 - Some POTWs use lower
 - Some POTWs allowed to use higher in DWR approved LTMP/STMP
- Each time you receive a lab report, make sure PQLs are met!



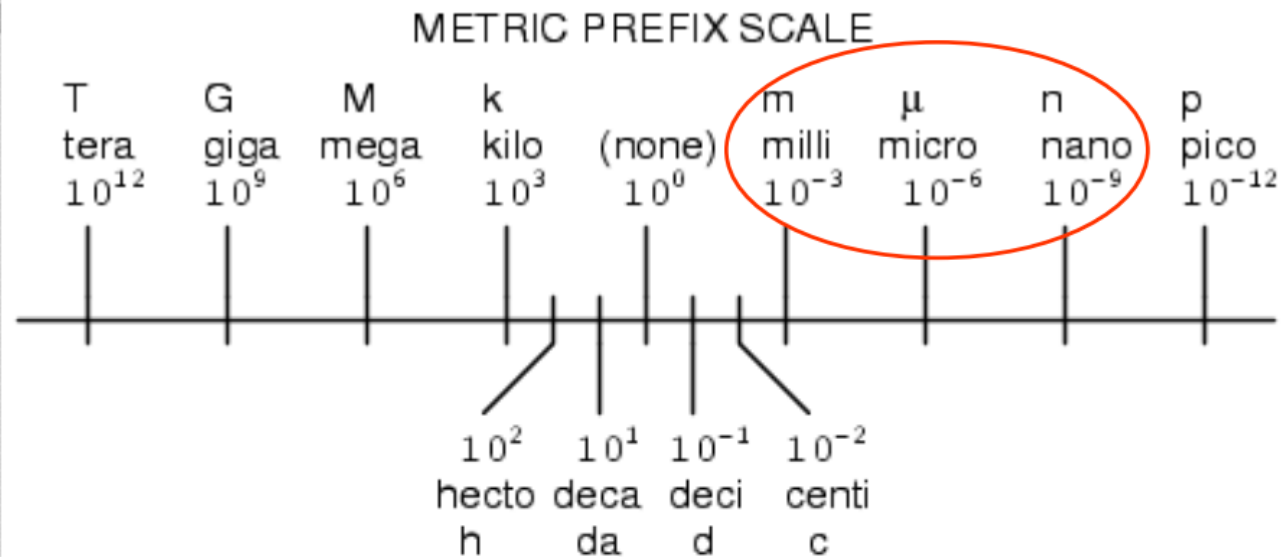
LTMP/STMP Guidance

- Find yours.
- Understand and follow it.
- *Comprehensive Guide, Chapter 4*
- Data Summaries - forms on website
 - separate column for “less than” sign
 - average, max, and min
- If LTMP/STMP doesn't do what you need it to do, change it!
 - Too much, too little data, useless data
- Effluent LTMP/STMP data on DMRs
 - All pollutants



Units conversion

Unit Conversions



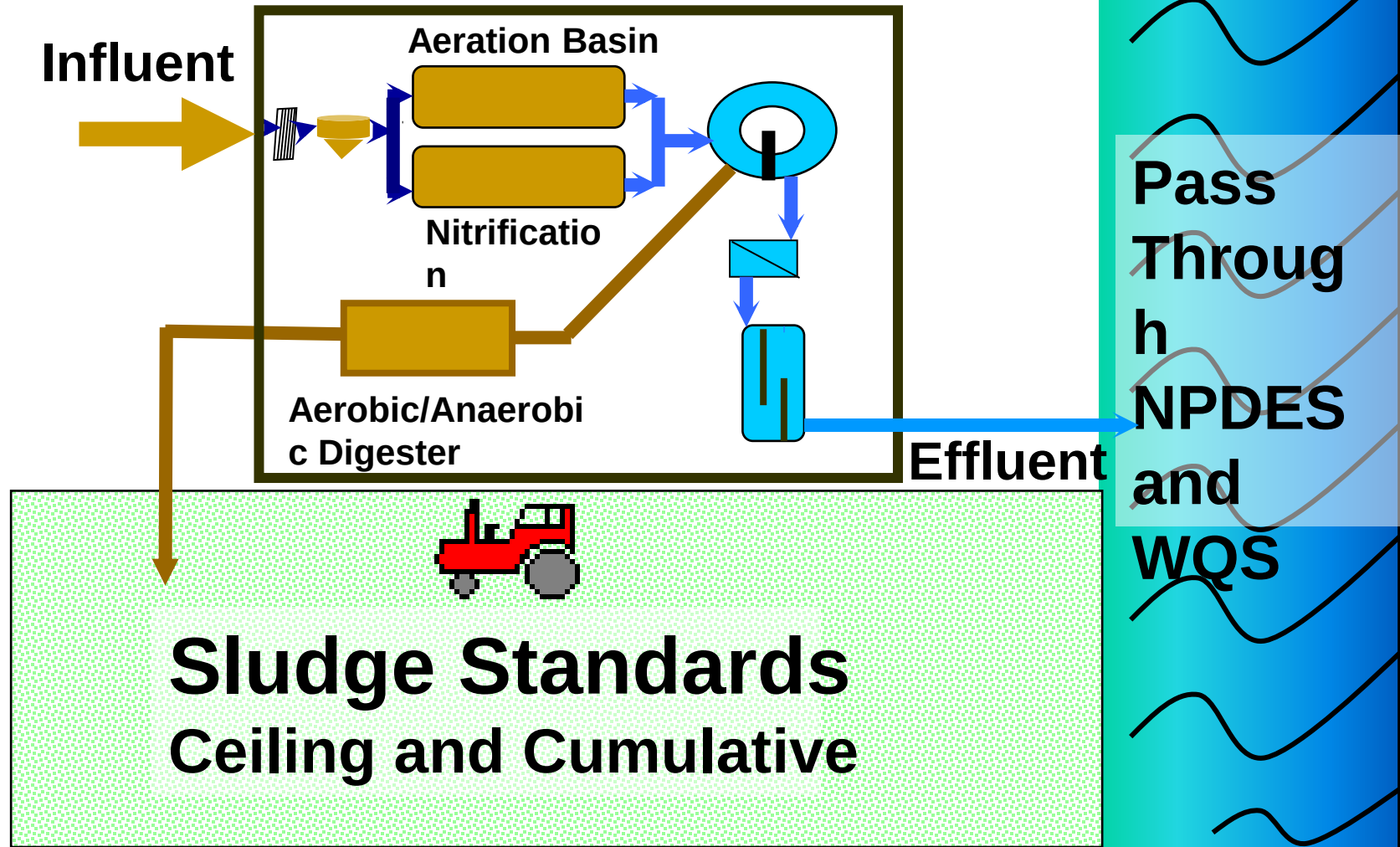
Headworks Analysis (HWA)

- Technical Analysis of a WWTP
 - Passthrough, inhibition, sludge
- Maximum Allowable Headworks Loading (MAHL)
- Maximum Allowable Industrial Loading (MAIL)
- HWA Workshops scheduled per POTW due dates/locations. Municipal Unit specifically invites POTWs with upcoming HWAs due, but all are welcome!

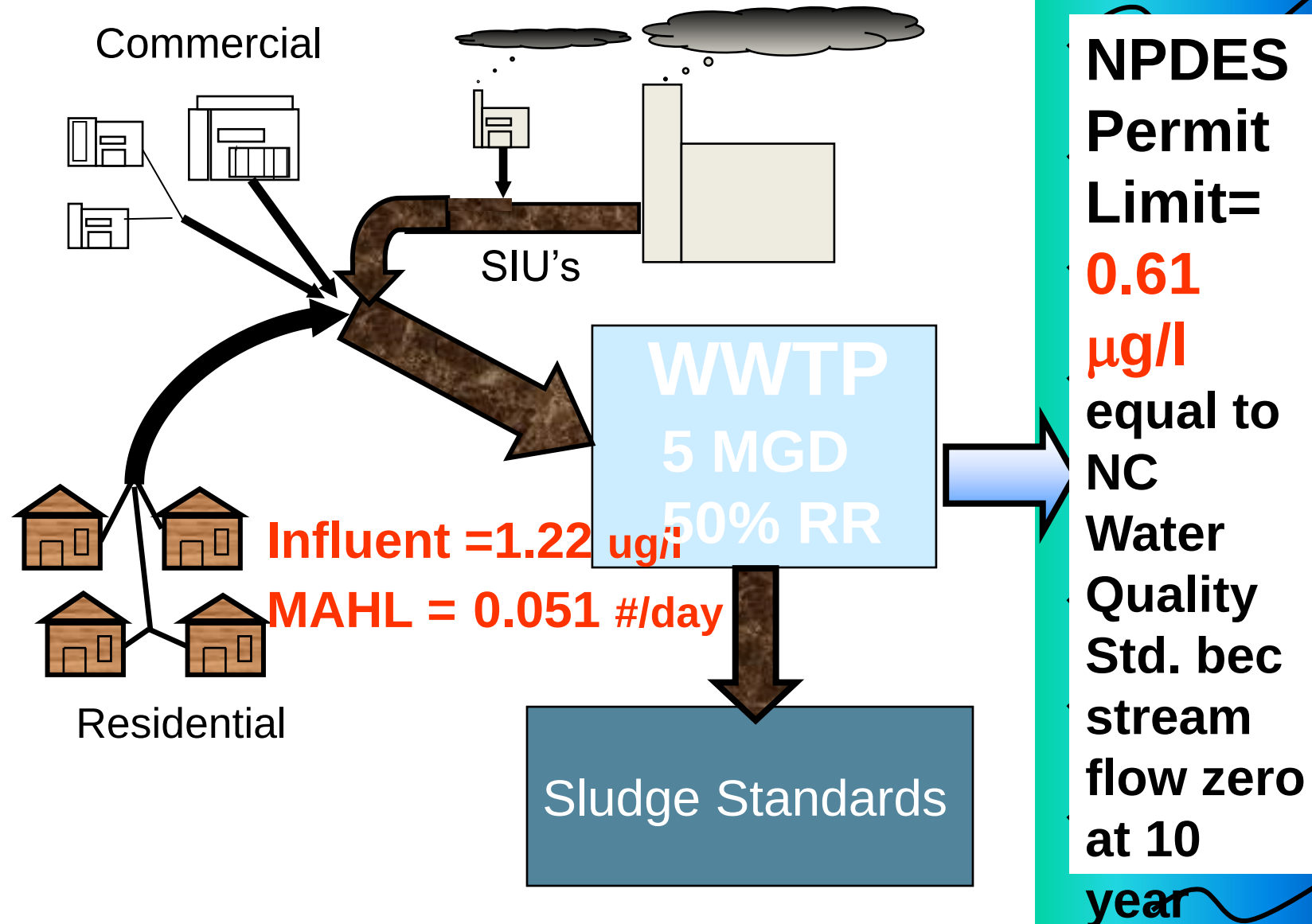


Three Limiting Criteria

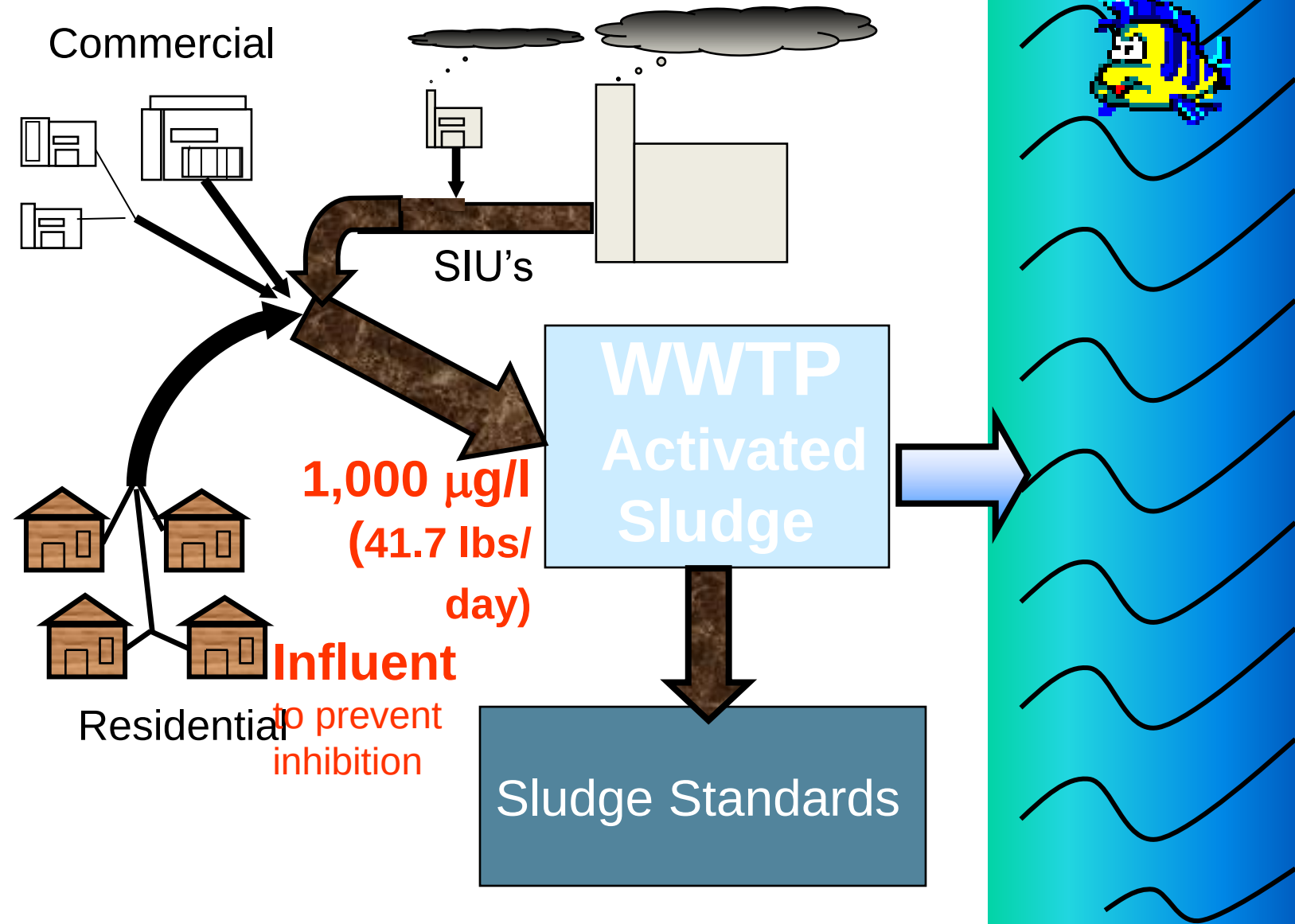
Biological Inhibition



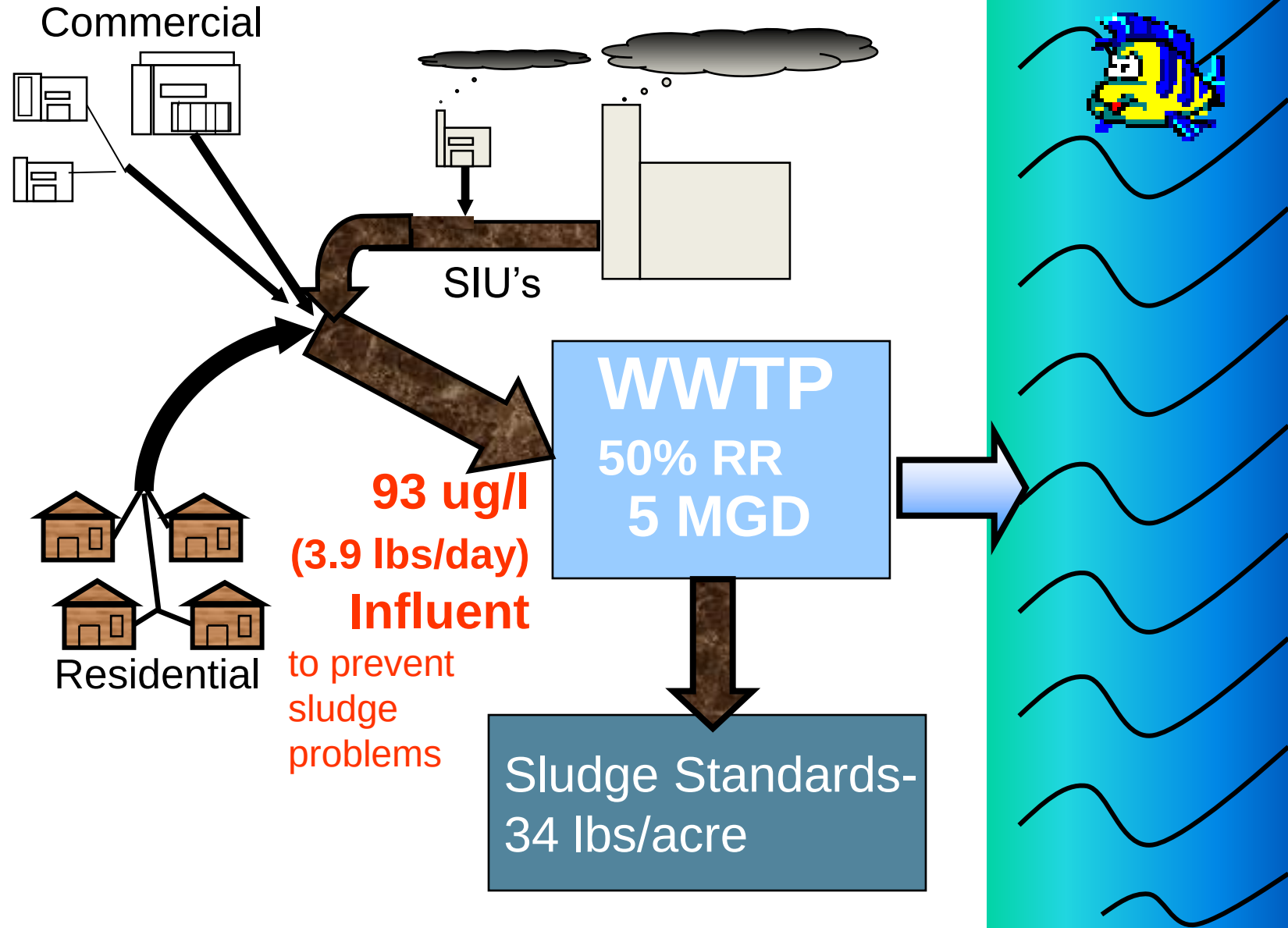
Pass Through cadmium load- based on NPDES



Inhibition cadmium load



Sludge cadmium load- based on 40 CFR 503



Evaluation of the most limiting criteria at the POTW

- 1) Pass Through Criteria – 1.22 ug/l
- 2) Biological Inhibition Criteria - 1,000 ug/l
- 3) Sludge Criteria - 93 ug/l

Use the most limiting factor as the Maximum Allowable Headworks Load (MAHL)

MAHL = 1.22 ug/l or 0.051 lbs/day
based on passthrough



Headworks Analysis (HWA)



We have just performed an HWA, the technical basis of the Pretreatment Program!



Headworks Analysis

The Headworks Analysis (HWA) calculates the flow and pollutant treatment capacity of a wastewater treatment plant (WWTP). It incorporates the WWTP design criteria as well as environmental criteria to protect the receiving stream (NC Water Quality Standards or NPDES limits), the WWTP biomass (inhibition criteria), and the sludge disposal site (40 CFR 503 land application or incineration standards).

The Allocation Table compares the flow and pollutant loads permitted to the WWTP's significant industrial users (SIUs) to the allowable WWTP influent loads from the HWA to ensure the WWTP will not be overloaded.

HWA Training Materials

- [HWA Workshop Slides](#) of. These slides (Tab 2 of the workshop materials) include detailed discussions on calculations, definitions, references, decision making and explanations.
 - Individual Workshop Materials: [Tabs 1, 3A, 3B, 3C, 3D, Calculator](#)

Spreadsheets for the HWA

- [Headworks Analysis Spreadsheet with linked Allocation Table and Headworks Addendum for Sludge Loading \(HASL\) Worksheet](#) (February 2008)
- [Calculator](#) (April 2017)
- [Separate Allocation Table \(not linked to the HWA Spreadsheet\)](#)
- [Generic Data Summary Spreadsheet](#)
- [Removal Rate Spreadsheet](#)
- [Uncontrollable Mass Balance Spreadsheet](#)

Guidance Documents for HWA

- [HWA Design Memos](#) (February 2007, December 2007 and December 2008)
- [What items to submit with your POTW's HWA](#) (February 2009)
- [February 2009 HWA Numbers](#)
- [Removal Rate Determination Guidance](#) (2004)
- [Headworks Addendum for Sludge Loading \(HASL\)](#) (2004 modifications)
- [Sludge conversion formulas](#)
- [Typical Problems with HWA](#)

Organics HWA and Related Guidance Documents

- [Organics Headworks Analysis Spreadsheet](#)
- [Organics Headworks Analysis Guidance](#)

Pharmaceutical HWA and Related Guidance Documents

- [Pharmaceutical Organics Headworks Analysis Spreadsheet](#)
- [Pharmaceutical OHWA Guidance](#)

Pretreatment

[Categorical User Information](#)

[Comprehensive Guide](#)

[Headworks Analysis](#)

[Industrial Waste Survey](#)

[Other Downloads](#)

[Mercury Guidance](#)

[Annual Report Guidance](#)

[Permit Writing Guidance](#)

[Training](#)

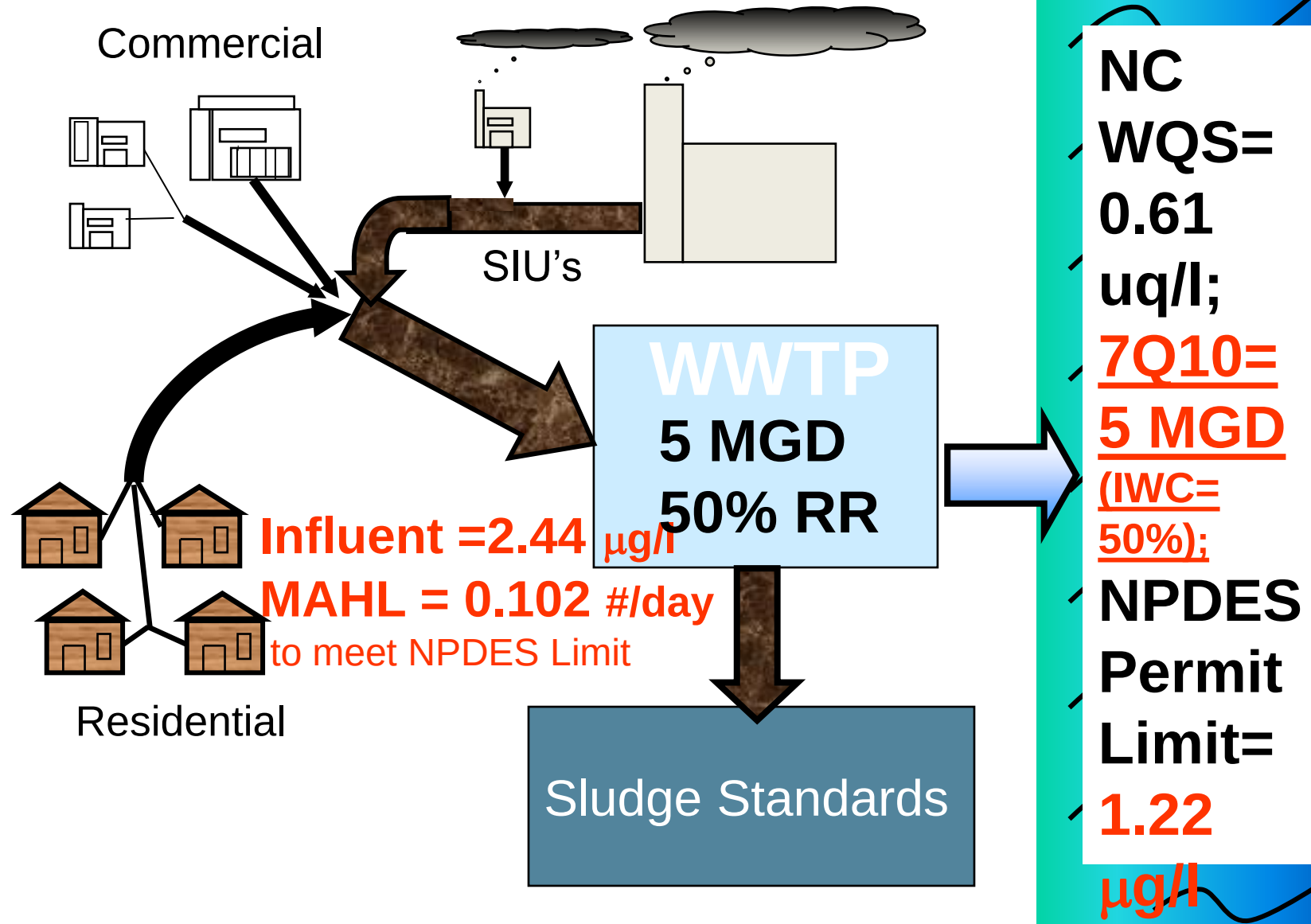


HWA and MAHL

- How can I get a larger MAHL?
 - bigger river
 - better removal rate
 - site-specific inhibition criteria
 - more land for sludge disposal

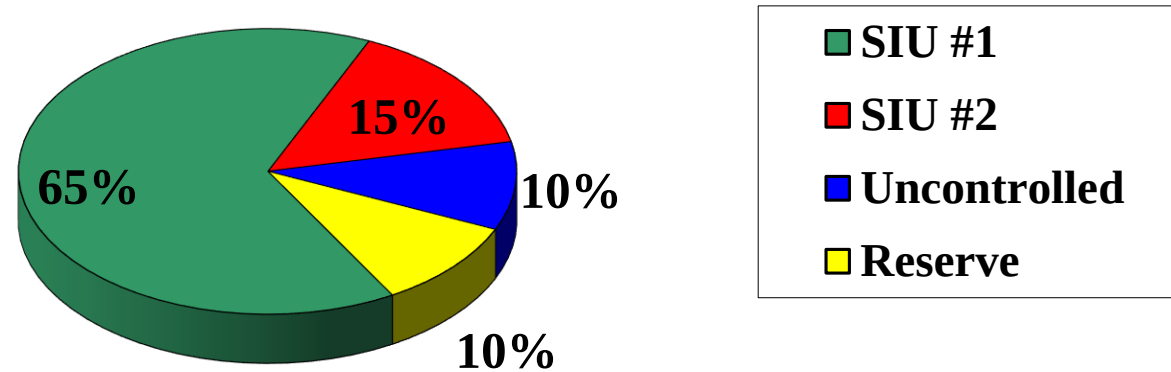


Pass Through cadmium load-based on NPDES

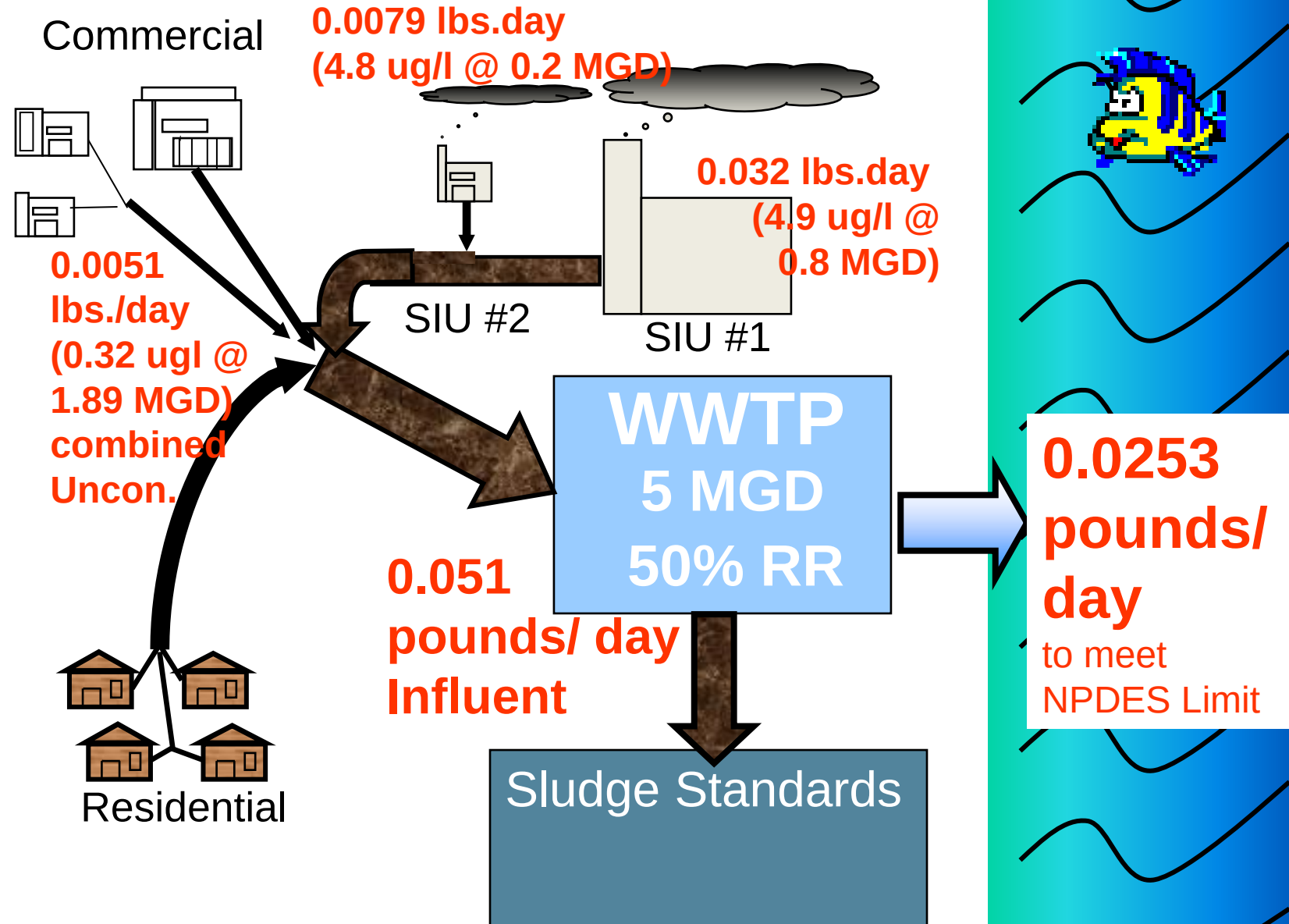


Allocating the pollutant load

Cadmium Allocation



Allocating Cadmium



Allocation Table (AT)

IUP Count	INDUSTRY NAMES	Industry Permit/Pipe number	FLOW		Cadmium	
			Permit Limits		Permit Limits	
					Conc.	Load
			MGD	gal/day	mg/l	lbs/day
1	Gold Brick Metal Finishing	001 / 1	0.01	10,000	0.07	0.00584
2	Flying Monkey's Food Creations	002 / 1	0.2	200,000		
3						
	Column Totals =>		0.21	210,000		0.00584
	Basis for MAHL =>		NPDES			Pass Thru
	MAHL from HWA (lbs/day) =>		5.0000			0.1668
	Uncontrollable Loading from HWA (lbs/day) =>		1.8690			0.0297
	Maximum Allowable Industrial Loading (lbs/day) =>		3.1310			0.1371
	Total Permitted to Industry (lbs/day) =>		0.2100			0.00584
	Total MAIL still available (lbs/day) =>		2.9210			0.1313
	Total MAIL still available (%) =>		93.29 %			95.74 %
	Total MAHL still available (%) =>		58.42 %			78.69 %
	5 % MAHL (lbs/day) =>		0.2500			0.0083

AT is SITE SPECIFIC for WWTP

Allocation Table

- SIU IUP limits
- Compute pounds/day
- Sum of SIU permitted load
- Compare against the MAHL and MAIL

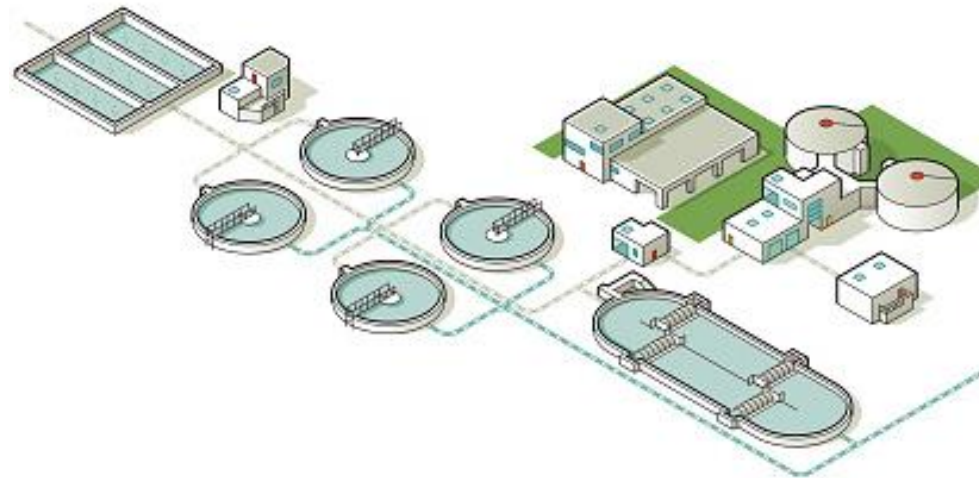
No over allocation is the goal!

- Find yours.



Compliance Judgment

- Is the SIU in compliance with the IUP or not?
- Compliance judgment responsibilities and required time frames are in the Enforcement Response Plan (ERP).



Limits Compliance Judgment

- IUP Limits – yes or no
- Technical Review Criteria (TRC)
- Significant NonCompliance (SNC)



Sampling of SIUs



- Must be performed per IUP
 - 15A NCAC 15H .0908(e) and 40 CFR 403.8(f)(2)(v)
 - 40 CFR 136
- DWR Chain of Custody forms found in *Comprehensive Guide, Appendix 7-A and B*
- Data Summaries
 - good detection levels
 - separate column for “less than” sign
 - average, max, min, and lbs/day



Industrial User Inspection and Sampling Manual For POTWs

Download
EPA-831B17001



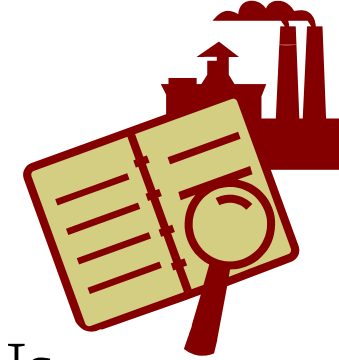
Reporting by SIU



- Must be performed per IUP
- Must submit reports on time
- IUP Part II, 2-sampling reports and 24 hour notification of violations
- Most other IUP conditions, including
 - Part II, 4 - additional monitoring
 - Part II, 7 - pretreatment unit operations
 - Part II, 23 - re-application
 - Part II, 25 - changes in operation
 - Part II, 30 - potential problems
- SIU communicate early and often



Inspections



- REQUIRED ANNUALLY AT ALL SIUs
- POTW staff goes on-site to SIU to confirm the SIU is in compliance:
 - Production changes
 - Pretreatment Unit operation
 - sampling and data summary sheets
 - Are they the same as what SIU sent you? Especially important if SIU not required to submit lab sheets and chain of custody
 - Slug/Spill Control Plan needed, followed
 - Housekeeping
 - Schematic/Diagram in application/permit adequate



Enforcement Response Plan (ERP)

- Enforcement that is timely, effective, fair, and equitable
 - Response time for POTW's issuance of Notices of Violation, etc.
 - Required fines/penalties
 - Required follow-up actions
 - Enforcement actions must escalate



Sampling, Inspection, and Enforcement

- Find your IUPs and ERP.
- Understand and follow them.
 - *Comprehensive Guide, Chapter 6 - IUP*
 - *Comprehensive Guide, Chapter 7 - Compliance Judgment, Sampling, and Inspection*
 - *Comprehensive Guide, Chapter 8 - Enforcement*
- If IUPs and ERP don't do what you need them to do, change them!
 - Too harsh, too weak, can cause extra work



Pretreatment Annual Report (PAR)



- Annual Progress Report
- DWR review of these documents:
 - Pretreatment “vital signs”
 - accuracy
 - compliance judgment
- Complete PAR required for Full Programs
 - Modified Programs must submit SIU in SNC info, PPS form
- Due March 1st. - 2 copies to PERCS Unit
- Classes in Jan/Feb of each year



Annual Report Guidance

Pretreatment Annual Report (PAR) Training Materials

- [PAR Workshop Guidance Manual](#) (January 2018)
- [PAR Workshop Compliance Judgment Examples](#) (January 2013)

PAR Guidance

- [PAR Workshop Questions, Discussion and Addendum](#) (January 2012)
- [Town of Typicalville Example 2013 PAR](#)
- [Compliance Judgment Scenario: Split Samples](#)
- [Example of Consent Order and Compliance Schedule](#)
- [Enforcement-So your SIU has a Limit Violation- What do you do?](#)
- [Enforcement- So your SIU has a Reporting violation-What do you do?](#)
- [PAR Requirements Memo, including what is required for Modified Pretreatment Programs](#) (February 10, 2012)
- [Pretreatment Delegation Guidance](#)

PAR Forms

- [Compliance Judgment Spreadsheet Form](#) (February 2009)
- [Compliance Judgment Worksheet for SNC With Limits Form](#) (March 2013)
- [Industrial Data Summary Form \(IDSF\) - SIUs with daily limits only](#)
- [IDSF for SIUs with both daily and monthly avg. limits](#) (December 2012)
- [Pretreatment Performance Summary Form \(PPS\)](#) (January 2018)
- [PPS Form Explanations](#) (January 2018)
- [Significant Non-Compliance Report \(SNCR\) Form](#) (2001)

Pretreatment Guide

[Mercury Guidance](#)

[Annual Report Guidance](#)

[Permit Writing Guidance](#)

[Other Industrial Information](#)



Files - Organized



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NORTH CAROLINA
Department of Environmental Quality



Files - Organized



- Can you easily find everything?
 - Chronological order
 - For each major program element (HWA, LTMP, IWS, etc.), have file with:
 - the element itself
 - your submittal letter to DWR
 - approval letter back from DWR
 - for SIU related info – by SIU
 - Need SIGNED paper copies. For SUO and maybe ERP, need documentation of adoption.
- Mark “received” date on everything!



Files - Complete

- keep at least 3 years (recommend 5)
- for major elements that are in effect for long periods, such as HWAs, IUPs, SUO, keep latest version and one before that (~6-10 years)
 - eliminate / clarify redundant copies
 - keep previous versions separate or marked “void”
 - toss draft versions or keep separate marked



Old School – PT Files





New School – PT SharePoint Files

The screenshot shows a SharePoint interface for a private group named "WQPS - Pretreatment, Emergency Response and Collection Systems". The top navigation bar includes links for "DEQ Internet", "DEQ Intranet", "Self Service", and "Contact DEQ". A search bar is located in the top right corner. The left sidebar contains a navigation menu with options: Home, Conversations, Documents, Shared with us, Notebook, Pages, Pretreatment (selected), Emergency Response, Sewer Programs, Enforcement, Site contents, Recycle bin, and Edit. The main content area displays a list of folders under the heading "Pretreatment". The folders are numbered 01 through 11, including "Admin", "Program Elements", "PT_Towns", "Inactive-not dev PT programs", "PT_Approval_Templates", "Special Projects", "Website", "Whole Effluent Toxicity", "Staff files", "WQ_Crit_Stds,pollutant evals", and "Misc".

SharePoint

Search this library

DEQ Internet DEQ Intranet Self Service Contact DEQ

WQPS - Pretreatment, Emergency Response and Collection Systems Private group

Home Conversations Documents Shared with us Notebook Pages **Pretreatment** Emergency Response Sewer Programs Enforcement Site contents Recycle bin Edit

+ New Upload Edit in grid view Sync Add shortcut to OneDrive

Pretreatment

Name
01. Admin
02. Program Elements
03. PT_Towns
04. Inactive-not dev PT programs
05. PT_Approval_Templates
06. Special Projects
07. Website
08. Whole Effluent Toxicity
09. Staff files
10. WQ_Crit_Stds,pollutant evals
11. Misc



SIU Files

- file for each SIU, folders inside for different items for that SIU
 - IUP, with transmittal letter, synopsis, application, and DWR approval letter
 - inspections
 - NOVs and SIU responses
 - Correspondence, possibly separated by POTW and SIU
 - Data, possibly separated by POTW collected and SIU collected

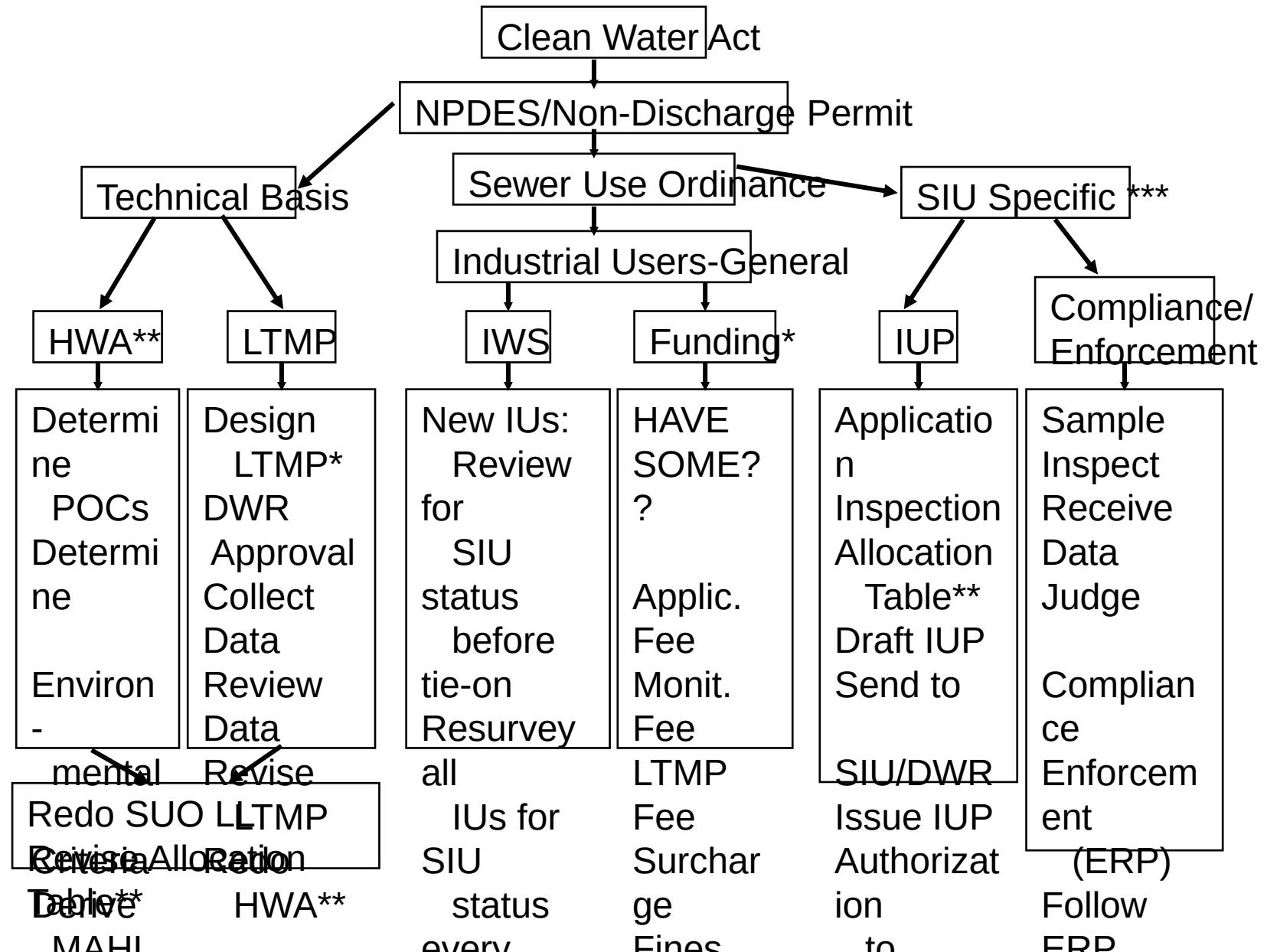


Funding

- Fair and Equitable
- Defendable
- Based on actual costs
- Examples:
 - Permit Charge
 - Sampling Cost Recovery Charges
 - Administration Charge
 - LTMP Charge
- Do you have enough money to operate the POTW's PT Program?



Pretreatment Implementation Flow Chart



DWR Inspections and Audits

- DWR staff goes on-site a minimum of 3 times in 5 years to POTW to perform detailed review of POTW's Pretreatment Program:

- program elements
- files
- sampling and data summary sheets
- compliance judgment/enforcement
- SIU correspondence
- inspections of SIUs
- Forms are on “Other Downloads” web-page



DWR Guidance and Training



- DWR Guidance - *Comprehensive Guidance for North Carolina Pretreatment Programs or “Comp Guide”*



- Training
 - One-day workshops on PAR, HWA and IUPs
 - Phone calls, emails, meetings, letters
- Pretreatment Program Training Web site –

<https://deq.nc.gov/about/divisions/water-resources/water-resources-public-information/training/pretreatment-program-training>



Pretreatment Program Training

2020 workshops have been scheduled - locations and dates below. Please click [here](#) to register. IUP Workshops will be scheduled based on demand.

EPA Pretreatment Training

Please visit [EPA's Pretreatment Training page](#) to review upcoming events and available training. Check EPA's website regularly for announcements of future topics.

Pretreatment 101 for Pretreatment Beginners

As presented at the 2019 NC-PC Annual Conference.

- [Pretreatment 101 Presentation](#) (October 2019)
- [Units Conversion Guidance](#) (2012)
- [Basic IUP Guidance and Compliance Judgment](#) (2012)

Pretreatment Annual Report (PAR) Workshops

Dates	PAR Workshop Locations
January 24, 2020	Neuse River Resource Recovery Facility (Admin Bldg.) Address: 8500 Battle Bridge Road, Raleigh, NC 27610
January 29, 2020	Salisbury-Rowan Utilities Administration Bldg. Address: 1 Water Street, Salisbury, NC 28144

Showing 1 to 2 of 2 entries

- [2020 PAR Invitation](#)
- [PAR Workshop Presentation, Compliance Judgment Examples](#)

Headworks Analysis (HWA) Workshops

Dates	HWA Workshop Locations
January 30, 2020	Salisbury-Rowan Utilities Administration Bldg. Address: 1 Water Street, Salisbury, NC 28144
April 30, 2020 (Cancelled)	Neuse River Resource Recovery Facility (Admin Bldg.) Address: 8500 Battle Bridge Road, Raleigh, NC 27610

Training

Pretreatment Program Training

[Surface Water Identification Training and Certification \(SWITC\) Course](#)



Permit Writing Guidance

Details about the next Pretreatment Permit Writing Workshop are on the [Training](#) page.

[Basic IUP Guidance, Including What to Submit \(August 2005\)](#)

IUP Training Materials

- [IUP Writing Steps: Workshop Outline](#)
- [Industrial User Wastewater Survey and Discharge Permit Application: Slugem Hosiery](#)
- [Guidance Document for Completing the Industrial User Wastewater Survey and Discharge Permit Application](#)
- [Slugem Hosiery SIU Inspection Form](#)
- [Slugem Hosiery Data Summary Spreadsheet](#)
- [Categorical Industry Overview Presentation](#)
- [Blank Industrial User Wastewater Survey and Discharge Permit Application \(April 2012\)](#)

Permit Writing Files

- [Generic Industrial User Permit \(includes Permit Synopsis\) - update changes in red \(July 27, 2018\)](#)
- [Example IUP & Synopsis: Will Plateit \(40 CFR 433\) \(March 2009\)](#) 
- [Combined Wastestream Formula: Example IUP & Synopsis: Will Plateit \(40 CFR 433\)](#) 
- [Example IUP modification: Will Plateit \(40 CFR 433\)](#)
- [Ammonia and Total Nitrogen IUP Limit Guidance \(July 2005\)](#)
- [SIU Inspection Form](#)

Pretreatment Guide

[Mercury Guidance](#)[Annual Report Guidance](#)[Permit Writing Guidance](#)[Other Industrial Information](#)

POTW Support and Training

- POTWs -
 - Annual Pretreatment Workshop - presented by Pretreatment Workshop Planning Committee
 - Pretreatment Consortium - www.ncpretreatment.org
 - Voluntary Certification Program
 - One on one support



Summary

- You are now ready (hopefully)!
- Find and read your Pretreatment Program Elements in your files
 - element itself
 - submittal letter to DWR
 - approval letter from DWR
 - especially IUPs, AT, LTMP/STMP, ERP
- Read *Comprehensive Guide*
 - especially Chapters 7 and 8
- Call us with any questions



Develop and Implement the “Right” Pretreatment Program

Creating a Pretreatment Program which

- Protects the POTW
- Is Environmentally sound
- Is Technically feasible
- Is Judicially defensible

There is a delicate balance between these goals and protecting the POTW!

- If Program doesn't do what you need it to do, work to fix it!
 - Too harsh or too weak, can cause aggravating circumstances.



NPDES Municipal Permitting Unit Pretreatment Staff

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NPDES Municipal Permitting Unit Office - Archdale Bldg, 9th floor



Acronyms

- AT- Allocation Table
- BOD- Biological Oxygen Demand
- CIU- Categorical Industrial User
- COD – Chemical Oxygen Demand
- DENR- Department of Environmental Quality
- DMR- Discharge Monitoring Report
- DWR- Division of Water Resources
- EPA-Environmental Protection Agency
- ERP- Enforcement Response Plan
- HWA- Headworks Analysis
- IU- Industrial User
- IUP- Industrial User Pretreatment Permit
- IWS- Industrial Waste Survey
- LL- Local Limit
- LTMP- Long term monitoring plan
- MAHL- Maximum Allowable Headworks Loading
- MAIL- Maximum Allowable Industrial Loading
- MGD- Million gallons per day
- NCAC- North Carolina Administrative Code
- NCGS- North Carolina General Statute
- NPDES- National Pollutant Discharge Elimination System
- NSCIU – Non-Significant Categorical Industrial User
- OCPSF- Organic chemicals, plastics and synthetic fibers
- PAR-Pretreatment Annual Report
- PERCS- Pretreatment, Emergency Response and Collection Systems
- POC- Pollutant of Concern
- POTW- Publicly Owned Treatment Works
- QNCR- Quarterly noncompliance report
- RPA- Reasonable potential analysis
- SIU- Significant Industrial User
- SNC- Significant noncompliance
- STMP- Short term monitoring plan
- SUO- Sewer Use Ordinance
- TMDL- Total Maximum Daily Load
- TOC – Total Organic Carbon
- WQS- Water Quality Standard
- WWTP- Wastewater Treatment Plant