

# Pretreatment 101

From the Beginning

Adam Butterfield

Jeff Macfarlane

# PRETREATMENT 101

Opening / Introduction

Federal Water Pollution Control Act / Clean Water Act / Water Quality Act

40 CFR 403 / Pretreatment Program Requirements

General and Specific Prohibitions

Categorical Limits / Local Limits overview

Reporting: SIU to CA and CA to AA

Legal Authority

IU Permits

Enforcement Response Plan

Q&A

# PRETREATMENT 101

Opening / Introduction	Both
Federal Water Pollution Control Act / Clean Water Act / Water Quality Act	Jeff
403 / Pretreatment Program Requirements	Adam
General and Specific Prohibitions	Jeff
Categorical Limits / Local Limits overview	Jeff
Reporting: SIU to CA and CA to AA	Adam
Legal Authority	Adam
IU Permits	Both
Enforcement Response Plan / Guide	Both
Q&A	Both

# 2 Things You Don't Want to See Being Made



Laws

Sausages



## IDEA

President, legislators, lobbyists, special interest groups, citizens.

## DRAFTING

Formal copy of bill prepared.

## INTRODUCTION

Bill is introduced, given a number, assigned to committee.

## FLOOR DEBATE AND VOTE

Bill is debated and voted on.

## CALENDARED

Placed on file for consideration on floor.

## COMMITTEE REVIEW

Testimony from author, proponents, opponents.  
Actions: Pass, Amend and Pass, No Action, Kill by Holding, Refer to another committee.

## PROCESS REPEATED IN OTHER HOUSE

If no amendments, it is sent to the President. If amended in 2<sup>nd</sup> house, bill is sent back to house of origin for review of amendments.

## CONFERENCE COMMITTEE

If committee members can't resolve differences, the bill dies. May write compromise version, if adopted, it goes to President.

## COMMITTEE REVIEW

House of origin decides whether to accept second-house amendments; if accepted, it goes to President, if not, it is sent to a two-house committee.

## PRESIDENT

Has 10 days to: Sign, allow to become law without signing, or veto.

## IDEA

President, legislators, lobbyists, special interest groups, citizens.

## DRAFTING

Formal copy of bill prepared.

## INTRODUCTION

Bill is introduced, given a number, assigned to committee.

## FLOOR DEBATE AND VOTE

Bill is debated and voted on.

## CALENDARED

Placed on file for consideration on floor.

## COMMITTEE REVIEW

Testimony, proposals, actions, no action, to a committee.



## PROCESS REPEATED IN OTHER HOUSE

If no amendments, it is sent to the President. If amended in 2<sup>nd</sup> house, bill is sent back to house of origin for review of amendments.

## CONFERENCE COMMITTEE

If committee members can't resolve differences, the bill dies. May write compromise version, if adopted, it goes to President.

## COMMITTEE REVIEW

House of origin decides whether to accept second-house amendments; if accepted, it goes to President, if not, it is sent to a two-house committee.

## PRESIDENT

Has 10 days to: Sign, allow to become law without signing, or veto.

# Bill, Law, or Regulation?

- Bills are not laws
- Acts can be either bills or laws
- Laws are not regulations

# 1869 – 1948 Bills



Mostly bills approving funding for rivers and harbors projects so that boats and barges could use them for transporting goods and people.



# 1899 Bill (called the Refuse Act)

Prohibited dumping of garbage into rivers and harbors to prevent them from being filled in because it would be an obstruction to navigation.

# 1890 Bill (Section 6 was called the Refuse Act)

Section 6 of the Act prohibited “...the casting, throwing, emptying, or unlading of specific substances, ballast, stone, slate, gravel, rubbish, sawdust and of ***“refuse, or other wastes of any kind”*** into ports, roads, or navigable waters unless a permit was first secured from the Secretary of War.

# Senate Bill 418, 80th Congress, April 28, 1948

"...pollution of our water resources by domestic and industrial wastes has become an increasingly serious problem due to the rapid growth of our cities and industries.... Polluted waters menace the public health (through contamination of water and food supplies), destroy fish and game life, and rob us of other benefits of our natural resources."

# Water Quality Act of 1965

“It shall not be lawful to throw, discharge, or deposit, or cause, suffer, or procure to be thrown, discharged, or deposited either from or out of any ship, barge, or other floating craft of any kind, or from the shore, wharf, manufacturing establishment, or mill of any kind, any refuse matter of any kind or description whatever...”

# Water Quality Act of 1965

***“...other than that flowing from streets and sewers and passing therefrom in a liquid state, into any navigable water of the United States...”***

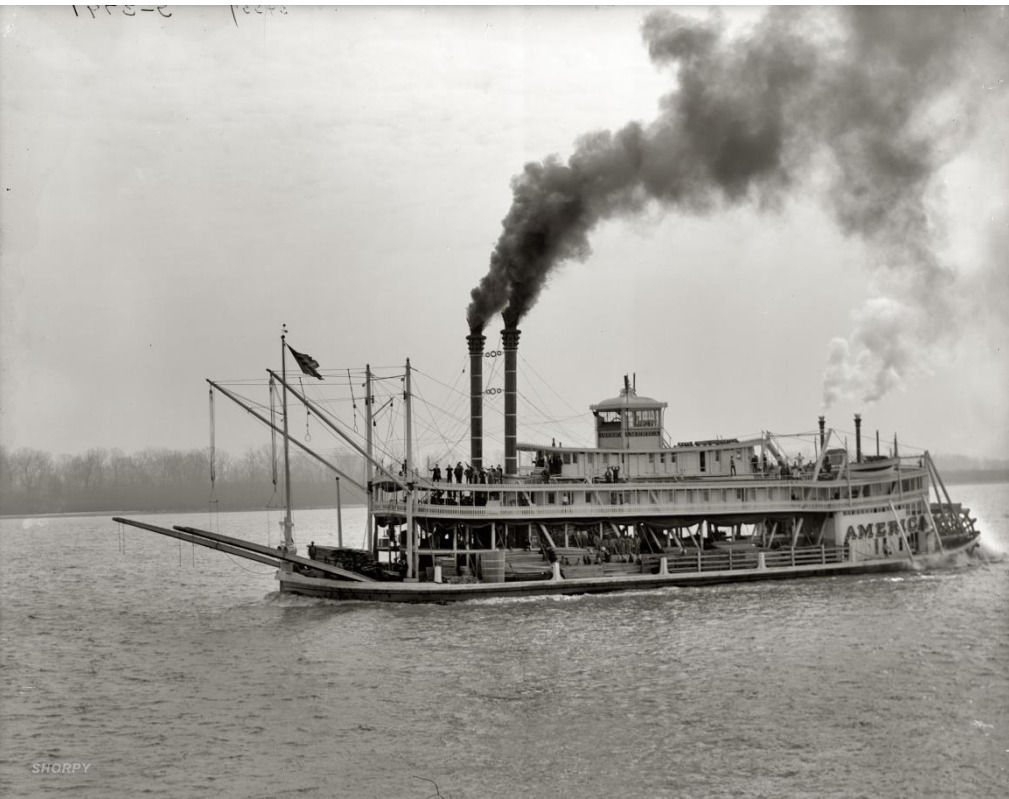
# Water Quality Act of 1965

“...or into any tributary of any navigable water from which the same shall float or be washed into such navigable water and it shall not be lawful to deposit, or cause, suffer, or procure to be deposited material of any kind in any place on the bank of any navigable water, or on the bank of any tributary of any navigable water, where the same shall be liable to be washed into such navigable water, either by ordinary or high tides, or by storms or floods, or otherwise...”

# Water Quality Act of 1965

***“...whereby navigation shall or may be impeded or obstructed...”***

1903-6









Between 1949 and 1971 numerous bills were introduced but ultimately were defeated due to concerns of “federal government over-reach” and a perceived surrender of state sovereignty.

The 1948 Act had some good parts, such as some funding help and technical expertise but had no real enforcement “teeth” to limit pollution.



The Cuyahoga River fire,  
Cleveland, Ohio

The picture of the Cuyahoga River on fire that ended up in Time Magazine a month later - a truly arresting image showing flames leaping up from the water, completely engulfing a ship - was actually from a much more serious fire in November 1952. No picture of the 1969 river fire is known to exist.



## Cleveland Mayor Carl Stokes



# Cleveland Mayor Carl Stokes and the Cleveland City Council

## Top 12 legislative accomplishments of 1968

Administration-sponsored bills have been passed by City Council in unprecedented volume. Among the major legislation enacted:

1. An increase in the city income tax to 1 percent.
2. Authorization of \$49 million in bonds, plus \$6.5 million in bond anticipation notes, to finance a broad range of capital improvements—street lighting, motor vehicles and equipment, airport parking, water and sewers, recreation facilities.
3. Establishment of the Department of Human Resources and Economic Development to coordinate job training and placement programs and to retain and expand business and industry.
4. Higher salary bands (\$30,000 top) for the Community Development Director and Health Director; higher pay throughout the city, in order to attract outstanding persons in all areas of government.
5. Creation of a city-county port authority.
6. An estimated \$1 million of utilities and other improvements in the Gladstone Area to make sites attractive for industrial development.
7. Approval of an application to the Federal government for a Community Development Improvement Program grant.
8. *Submission to the voters of a \$100 million Clean Water Bond Issue which passed.*
9. Authorization of transfer of the Zoo to the Cleveland Metropolitan Park Board.
10. Approval of a five-year, multi-million-dollar Urban Beautification program and application for Federal grant.
11. Increase in Municipal Light [electrical power] rates and authorization of improvements of light [electrical power] plant aimed at abating air pollution.
12. Approval of Cleveland's first and the nation's largest Open Spaces program, to acquire and add to park and recreation lands. Approval led to \$1,815,000 in Federal matching funds for the overall \$3,359,000 program.



# Cleveland Mayor Carl Stokes and the Cleveland City Council

## Top 12 legislative accomplishments of 1968

Administration-sponsored bills have been passed by City Council in unprecedented volume. Among the major legislation enacted:

1. An increase in the city income tax to 1 percent.
2. Authorization of \$49 million in bonds, plus \$6.5 million in bond anticipation notes, to finance a broad range of capital improvements—street lighting, motor vehicles and equipment, airport parking, water and sewers, recreation facilities
3. Establishment of training and placement programs to coordinate job training and placement
4. Higher salary bands and pay throughout the city
5. Creation of a city-county port authority
6. An estimated \$1 million for industrial development.
7. Approval of an application to the Federal government for a Community Development Improvement Program grant.
8. *Submission to the voters of a \$100 million Clean Water Bond Issue which passed.*
9. Authorization of transfer of the Zoo to the Cleveland Metropolitan Park Board.
10. Approval of a five-year, multi-million-dollar Urban Beautification program and application for Federal grant.
11. Increase in Municipal Light [electrical power] rates and authorization of improvements of light [electrical power] plant aimed at abating air pollution.
12. Approval of Cleveland's first and the nation's largest Open Spaces program, to acquire and add to park and recreation lands. Approval led to \$1,815,000 in Federal matching funds for the overall \$3,359,000 program.



## Cuyahoga River, Before & After (thank you Clean Water Act)



# Protect the Clean Water Act

Contact Your Congresspeople NOW - <http://goo.gl/KTupf>



A black and white photograph of the Republic Steel plant in Pittsburgh, Pennsylvania. The plant is a large industrial complex with numerous tall smokestacks and buildings, situated on a hillside overlooking the city. In the foreground, there are several train tracks with freight cars. The city skyline, including the PPG Place tower, is visible in the background across the river. The text "Republic Steel" is overlaid on the image in a white box.

Republic Steel

# The Federal Water Pollution Control Act (the Clean Water Act)

- Began as Rivers and Harbors Act of 1869
- 53 Acts between 1869 and 1970, water pollution being only a secondary consideration.
- 1948 Water Pollution Control Act.
- Completely rewritten and passed as FWPCA on October 18, 1972.
- Clean Water Act of 1977
- Water Quality Act of 1987, expanded to include storm water

# Water Quality Act of 1987

## Parts that Pretreatment Coordinators Need to Know

- Title 40 of the Code of Federal Regulations (40 CFR)
  - Parts 100-140
  - Parts 401-471
    - 56 categories
    - 27 with pretreatment standards (as of 2011)
  - Parts 501-503

# Prohibit

- 40 CFR 401: General provisions with a “...national goal of ***eliminating the discharge of all pollutants...***”

*Regulate: Control; manage; supervise*

# Regulations

- Clean Water Act prohibits polluting waters of the United States.
  - What is “prohibit”?
  - What is “polluting”?
  - What are “waters of the United States”?



# Benzopyrene

- Very potent carcinogen (a pollutant)
- Product of combustion of organic substances
- A 7-oz charcoal-broiled steak contains about 24,000,000,000,000,000 (24 quadrillion) molecules of benzopyrene.

# What is Pollution?



Hardly  
recognizable  
as water



Pure  
 $H_2O$

# Waters of the United States:

All waters with a "significant nexus" to "navigable waters" are covered under the CWA; however, the phrase "significant nexus" remains open to judicial interpretation and considerable controversy. The 1972 statute frequently uses the term "navigable waters," but also defines the term as "waters of the United States, including the territorial seas."

# Waters of the United States:

Some regulations interpreting the 1972 law have included water features such as intermittent streams, playa lakes, prairie potholes, sloughs and wetlands as "waters of the United States."

# Waters of the United States:

In the 2006 case *Rapanos v. United States*, a plurality of the Supreme Court held that the term "waters of the United States":

***...includes only those relatively permanent, standing or continuously flowing bodies of water "forming geographic features" that are described in ordinary parlance as "streams... oceans, rivers, and lakes."***

# Not Waters of the United States:

## **Intermittent stream**

In the United States, an *intermittent* or seasonal stream is one that only flows for part of the year.



# Not Waters of the United States:

A **dry lake** or **playa lake** is an ephemeral lakebed that either partially or completely dries up most years.



# Not Waters of the United States:



**Prairie Potholes** are depressions gouged out by glaciers. They fill with water in the spring, creating wetlands which range in duration from temporary to semi-permanent.



# Not Waters of the United States:



A **slough** or **marsh** is a wetland that is dominated by herbaceous rather than woody plant species. Marshes can often be found at the edges of lakes and streams, where they form a transition between the aquatic and terrestrial ecosystems.

# Not Waters of the United States:



A **slough** or **marsh** is a wetland that is dominated by herbaceous rather than woody plant species. Marshes can often be found at the edges of lakes and streams, where they form a transition between the aquatic and terrestrial ecosystems.

# CWA Regulations

Title 40 of the Code of Federal Regulations (40 CFR)

- Parts 100-140
- Parts 401-471
  - 56 categories
  - 27 with pretreatment standards (as of 2011)
- Parts 501-503

# What is in the Clean Water Act?

- 40 CFR 105: An awards program for reducing water pollution.
- 40 CFR 109 – 112: Oil pollution
- 40 CFR 116 & 117: Hazardous waste
- 40 CFR 122 – 127: The NPDES program
- 40 CFR 129: Toxic Pollutant Effluent Standards
- 40 CFR 133: Secondary Treatment Standards (for POTWs)
- 40 CFR 136: Testing methods

# What is in the Clean Water Act?

- 40 CFR 401: General provisions with a “...national goal of ***eliminating the discharge of all pollutants***, as determined in accordance with regulations issued by the Administrator...”

# What is in the Clean Water Act?

- 40 CFR 405 through 471: Effluent guidelines and standards for point sources.
- 40 CFR 501 through 503: Biosolids and sewage sludge

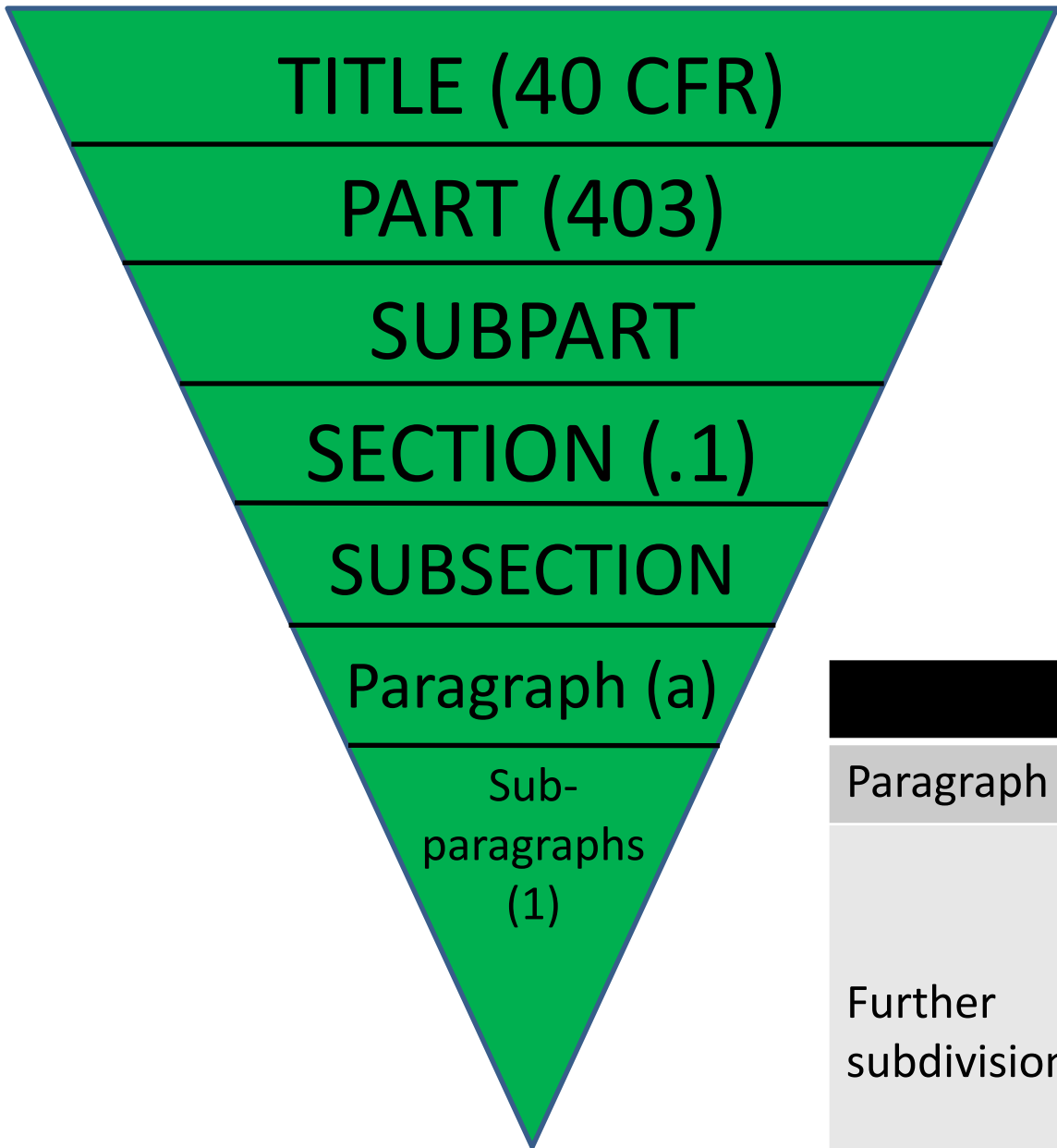
# What is in the Clean Water Act?

- 40 CFR 403: General Pretreatment regulations for existing and new sources of pollution.

**YOUR PRETREATMENT PROGRAM  
WAS DEVELOPED FROM THIS PART**

# How to Read and Cite the CFRs





	Symbol
Paragraph	(a), (b), (c), etc.
Further subdivisions	(1), (2), (3), etc.
	(i), (ii), (iii), etc
	(A), (B), (C), etc.
	(1), (2), (3), etc.
	(i), (ii), (iii), etc

# Response to the 2004 Annual Report From the EPA Office of the Inspector General:

## Evaluation Report

### Effectiveness of Effluent Guidelines Program for Reducing Pollutant Discharges Uncertain

Report No. 2004-P-00025

August 24, 2004



# Is It Working?

5-6628620

EPA  
350  
2004-  
P-  
00025

# Wikipedia search on CWA:

“To date, the effluent guidelines and categorical pretreatment standards regulations have been published for 56 categories and apply to between 35,000 and 45,000 facilities that discharge directly to the nation's waters. ***These regulations are responsible for preventing the discharge of almost 700 billion pounds of pollutants each year...***”

# Response to the 2004 Annual Report From the EPA Office of the Inspector General:

pollutant discharge data, we could not determine the extent of environmental benefits brought about by EPA's investment in the effluent guidelines program.

Further, EPA does not measure the effectiveness of either the effluent guidelines program or individual effluent guidelines. Consequently, EPA does not have sufficient evidence to show that this program has actually produced reductions. Although our work showed significant reductions in a few facilities, EPA has not systematically collected data to evaluate this program as a whole. Therefore, EPA cannot support a statement made in its recent Annual Report that industrial discharges of pollutants have been reduced by billions of pounds as a result of effluent guidelines. The effluent guidelines program has a marked insufficiency of information to make managerial decisions because EPA has not developed a systematic way of collecting such information.

## Recommendations

We recommend that the Acting Assistant Administrator, Office of Water, systematically collect and monitor data for a select number of facilities to measure the effectiveness of specific effluent guidelines. We also recommend that the Assistant Administrator develop performance measures based on the systematic collection of data and take the necessary steps to ensure that appropriate data is collected.

## Agency Comment and OIG Evaluation

In a July 7, 2004, response to our draft report (see Appendix D), the Office of Water generally agreed with our findings and recommendations. The Office of Water agreed to perform retrospective analyses to determine the effectiveness of several effluent guidelines. The Office of Water also agreed that actual pollutant discharge data should be used to develop performance measures and stated that the work evaluating the effectiveness of several effluent guidelines will help address this recommendation. Finally, the Office of Water agreed that adding a data field to the Permit Compliance System would be a useful way to link reporting facilities with the appropriate effluent guidelines.

We agree with the Office of Water's proposed actions. However, we would like to obtain additional information about the retrospective studies EPA plans on undertaking and how these individual studies will be used to develop an assessment of the overall program. For example, we would like to know which effluent guidelines will be selected for analysis, the methodology to be used, and timeframes for completing the studies.

We also made technical changes to the draft in response to the Agency's comments.

“...EPA does not have sufficient evidence to show that this program has actually produced reductions.”

“Therefore, EPA cannot support a statement made in its recent Annual Report that industrial discharges of pollutants have been reduced by billions of pounds as a result of effluent guidelines.”

Obviously it IS working



Obviously it IS working



# Obviously it IS working



Obviously it IS working





# Obviously it IS working



# Obviously it IS working



Obviously it IS working



Obviously it IS working



Obviously it IS working



Obviously it IS working



Obviously it IS working



Obviously it IS working





Obviously it IS working



Obviously it IS working



Obviously it IS working



Obviously it IS working



Obviously it IS working



Obviously it IS working

Obviously it IS working

