Clean Water Act Facility Response Plan Final Rule – What It Means For You!

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Don Gansert, Managing Consultant

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Introduction

Don Gansert

- Managing Consultant:
  - Trinity Kansas City Office
  - BS Electrical Engineering, Syracuse University
- Focus Areas:
  - FRP, RCRA, SWPPP/NPDES, TRI/Tier II
  - Auditing, Teaching
- Outside of Work: Hunting, Gardening, Coaching
- Contact Info:
  - Office Location: Lenexa, KS
  - Telephone: (913) 302-5537
  - dgansert@trinityconsultants.com

Jamaica – 40th Anniversary

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Agenda

1. Review of the Final Rule (40 CFR 118)
2. Applicability and Key Timelines
3. Planning Distance Modeling
4. Future Planning

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Final Rule

CWA FRP – Overview

- The rule requires subject facilities to prepare for a worst-case discharge of CWA hazardous substances (HS) into navigable waters
- This rule affects **onshore non-transportation related facilities** that could **cause substantial harm to the environment** by **discharging HS into navigable waters**
- Regulation **driven by a March 12, 2020 Consent Decree between EPA and several groups** (National Resources Defense Council, Clean Water Action, etc.)

Rule Timeline

March 12, 2020 – CD
March 27, 2022 – Proposed Rule
March 28, 2024 – Final Rule
June 1, 2027 – Compliance!

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Clean Water Act Hazardous Substances & RQs

40 CFR 116 & 117.3

- Original regulation – August 1979
  - Started with designated chemicals as “hazardous” under the Federal Water Pollution Control Act (40 CFR 116)
  - Also focused on reportable spills of these HS (40 CFR 117)
- Currently 296 hazardous substances
  - “Toxicological Selection Process”
  - “Discharge Potential Screening Criteria”

TABLE 117.3—REPORTABLE QUANTITIES OF HAZARDOUS SUBSTANCES DESIGNATED PURSUANT TO SECTION 311 OF THE CLEAN WATER ACT

Material	Category	RQ in pounds (kilograms)
Acetaldehyde	C	1,000 (454)
Acetic acid	D	5,000 (2,270)
Acetic anhydride	D	5,000 (2,270)
Acetone cyanohydrin	A	10 (4.54)
Acetyl bromide	D	5,000 (2,270)
Acetyl chloride	D	5,000 (2,270)
Acrolein	X	1 (0.454)
Carbon tetrachloride	A	10 (4.54)
Chlordane	X	1 (0.454)
Chlorine	A	10 (4.54)
Chlorobenzene	B	100 (45.4)
Chloroform	A	10 (4.54)
Chlorosulfonic acid	C	1,000 (454)

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Final CWA FRP

- **Triggering Threshold** – **1,000x** the Reportable Quantity (RQ) of CWA Hazardous Substance
  - 1,000x RQ based on aggregate "maximum quantity onsite" (similar to Tier II applicability)
- **Timeline for Completion** – **36-month timeline** for completing FRPs

Final Compliance Date for "Existing Facilities" (operating 11/30/26) – June 1, 2027

Final Compliance Date for "Newly Regulated Facilities" (trigger after 11/30/26) – Six months

Final Compliance Date for "New Construction Facilities" – prior to start of operations

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Notable Changes to the Final Rule

- Additional language to **describe some types of climate change impacts** that may need to be considered for “adverse weather conditions”
  - E.g., temperature fluctuations, rising seas, storm surges, inland and coastal flooding, drought, wildfires, and permafrost melt in northern areas
- Requirement to **consider aqueous products that form** when the hazardous substance enters water (for FWSE risk assessments)
- Requirement to **review and recertify their CWA FRP every five years** (similar to SPCC)
- Clarify factors that a **RA should consider when determining whether a site must prepare a CWA FRP at their discretion** (118.5(b))

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Notable Changes to the Final Rule (cont.)

- Requirement to **consider pH and alkalinity of the receiving water** to better characterize worst-case discharges (118.10(b)(ii)(E)).
- When identifying risk, **must assess the age of CWA HS containers** (similar to oil FRP).
- When assessing your ability to adversely impact a public water supplies (PWS), **must identify taste or odor thresholds in water** to “more fully inform the relevant PWS of the risks”.
- Requirement to **identify types of environmental monitoring to be collected**, including method collection techniques, parameter of interest measurement, a description of how the data will be used in a response, and personal protection and safety considerations

Notable Changes to the Final Rule (still going!)

- Requirement to **prepare a ERAP** (similar to oil FRPs)
- Specify that owners/operators **must coordinate with local emergency planning and response organizations outside of SERCs, and LEPCs in coordination activities**
  - Also added a provision that owners/operators must document that they have made a “good faith effort” to coordinate (similar addition for PWS coordination)

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Notable Changes to the Final Rule (let's end it..)

- Once covered facility determines it meets one of the substantial harm criteria, the owner or operator **must plan for all CWA hazardous substance onsite above the threshold quantity**.
  - "EPA recognizes that r**esponse and/or recovery actions may vary widely depending on the physicochemical properties of the substance**, so **one CWA hazardous substance at facilities with multiple CWA hazardous substances that meet or exceed the threshold quantity cannot adequately inform that facility's FRP**." (118.10)
  - **This one hurts…**
    - E.g., Refinery/petrochemical facility could easily trigger four or more chemicals (benzene, toluene, xylene, naphthalene, HF acid, H2SO4 acid, etc.)
    - E.g., Fertilizer plant could easily trigger multiple chemicals (ammonia, nitric acid, ammonium hydroxide, etc.)

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Applicability and Key Timelines

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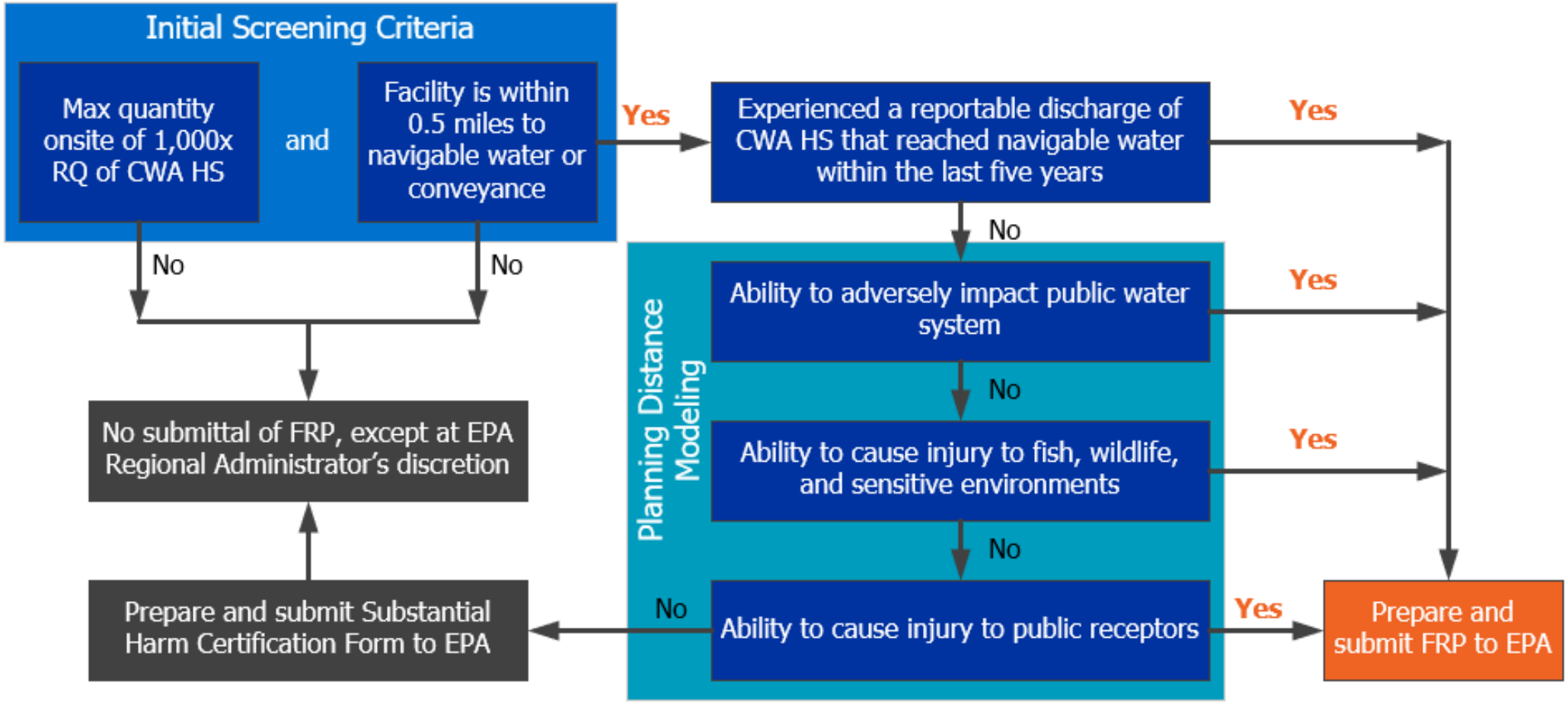

***Conveyance** – includes but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, landfill leachate collection system, vessel, or other floating craft*

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Applicability – Screening Criteria

- Initial Screening Criteria
  - (1) Does the facility have a total container capacity of 1,000x the RQ for a HS onsite
    - **Includes the aggregate maximum quantity for each CWA hazardous substance present at all locations within the entire facility at any one time**
    - "…across all containers, including but not limited to rail cars or other mobile storage not under active shipping papers, process vessels, canisters, drums, bulk storage tanks, dumpsters, totes, or bulk cargo containers positioned on land."
  - (2) Is the facility within one-half mile to navigable waters or conveyance to navigable waters

Note: must exclude consideration of manmade features such as dikes, equipment, depressions, or other structures, which may serve to restrain, hinder, contain, or otherwise prevent a discharge, like the oil FRP.

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Chlorine Gas Example (1 of 2)

- The RQ for Chlorine is 10 pounds
- The threshold calculation:
  - 1,000 times the RQ of 10 pounds equals 10,000 pounds
- The typical facility receives chlorine gas in one-ton cylinders
- The facility is less than ¼ mile from the Mississippi River

- **Criteria 1 of 2:** If your facility has six (6), one-ton cylinders of chlorine gas
  - 6 cylinders times 2,000 pounds equals 12,000 pounds

    12,000 pounds > 10,000 pounds
- **Therefore, your facility exceeds the 10,000-pound threshold for the maximum amount on site.**

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Chlorine Gas Example (2 of 2)

- The RQ for Chlorine is 10 pounds
- The threshold calculation:
  - 1,000 times the RQ of 10 pounds equals 10,000 pounds
- The typical facility receives chlorine gas in one-ton cylinders
- The facility is less than ¼ mile from the Mississippi River

- **Criteria 2**: Is the facility less than ½ mile from navigable waters or a conveyance to navigable waters?

- Yes, the facility is ¼ mile from the Mississippi River. The Mississippi River is a navigable water
- **Therefore, since both screening criteria are met, then proceed to the four (4) substantial harm criteria**

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Applicability – Screening Criteria for Mixtures

- The rule proposes the following requirements regarding mixtures that contain CWA HS pursuant to 40 CFR 118.9:
  - If the quantity of all CWA HS constituent(s) of the mixture or solution is **known**:
    - The mixture meets the threshold quantity when the maximum capacity onsite, as defined in section 118.2, meets or exceeds the threshold quantity of any CWA HS in the mixture by extrapolating the amount of each constituent to the full capacity of the container
  - If the quantity of one or more of the CWA HS constituent(s) of the mixture or solution is **unknown**:
    - The mixture meets the threshold when the **maximum capacity onsite of the mixture or solution meets or exceeds the lowest threshold quantity** for the CWA HS established in section 118.3(a) by extrapolating the amount of the known constituent(s) to the full capacity of the container

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Example - Mixture Calculation (Known Constituents)

- A facility has 5,000 lbs of a mixture containing
  - 45-55% water
  - 5-10% chromic acid (RQ = 10 lbs)
  - 30-40% sulfuric acid (RQ = 1,000 lbs)
- Assume highest percentage of CWA hazardous substance
  - 10% x 5,000 lbs = 500 lbs chromic acid
  - 40% x 5,000 lbs = 2,000 lbs sulfuric acid

- Compare to 1,000x RQ
  - CA: 500 lbs < 10,000 lbs
  - SA: 2,000 lbs < 100,000 lbs

Below threshold quantity

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Example - Mixture Calculation (Unknown Constituents)

- A facility has 1,000 lbs of a non-hazardous waste containing:
  - water
  - chromic acid (RQ = 10 lbs)
  - arsenic pentoxide (RQ = 1 lb)
- Assume entire mixture is composed of the lowest RQ substance
  - 1,000 lbs arsenic pentoxide

- The facility also stores these reagents:
  - 75 lbs chromic acid
  - 50 lbs arsenic pentoxide

Incentive to conduct compositional testing on wastes (rather than just TCLP) – watchout for other programs impacted (TRI)!

Above threshold quantity

- Compare to 1,000x RQ
  - 1,000 lbs + 50 lbs > 1,000 lbs

Note: LQG & TSDFs get an exemption

Applicability – Substantial Harm Criteria

- If both screening criteria are met there are four (4) substantial harm criteria
  - (1) Ability to adversely impact public water systems
  - (2) Ability to cause injury to fish, wildlife, and sensitive environments
  - (3) Ability to cause injury to public receptors
  - (4) Having a reportable discharge of a hazardous substance within the last 5 years
- If any substantial harm criteria is met, a facility must prepare a CWA FRP
- EPA Regional Administrators also have the right to require a CWA FRP regardless of criteria

Need a planning distance – discussed later!

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Applicability Criteria 1:

Public Water Systems (PWS)

Applicability Criteria 1: Public Drinking Water Intakes

- WCD would cause violation of federal or state drinking water standards or regulations
  - Would discharge substance react with drinking water treatment chemicals?
- WCD would interfere with PWS's ability to comply with regulations
  - Would discharge alter water quality or interfere with treatment processes?

> An example of a chemical product that could form through a reaction is the CWA hazardous substance ammonium thiocyanate, which reacts with free chlorine to form cyanogen chloride and/or free cyanide, both of which are acutely toxic above a threshold and are regulated under SDWA.

89 FR

> or SDWR. For example, a release of a strong acid, such as sulfuric acid in sufficient quantity may reduce water alkalinity to a degree where the PWS can no longer maintain adequate corrosion control, putting it at risk of a violation under the Lead and

89 FR 21935

Applicability Criteria 1: Public Drinking Water Intakes (cont.)

- WCD would cause threat to public health
  - Would discharge exceed a Drinking Water Health Advisory limit?
- WCD would contaminate PWS infrastructure
  - Includes intake structures, treatment facilities, drinking water distribution systems, and premise plumbing systems to a degree that requires remediation to restore system components
  - "Likely to corrode, foul, adhere to, adsorb onto, permeate into, or otherwise damage components.."
- WCD would impact drinking water aesthetics
  - Could it make water unacceptable to consumers..

plumbing systems. For example, CWA hazardous substances that are oil-like can foul water treatment filtration media, making it ineffective.

89 FR 21936

aesthetic impacts. For example, chloride has a secondary MCL of 250 mg/L—above this concentration, the taste of the water may be unacceptable to customers. Several CWA hazardous substances, such as hydrochloric acid, would increase the chloride concentration in water.

89 FR 21936

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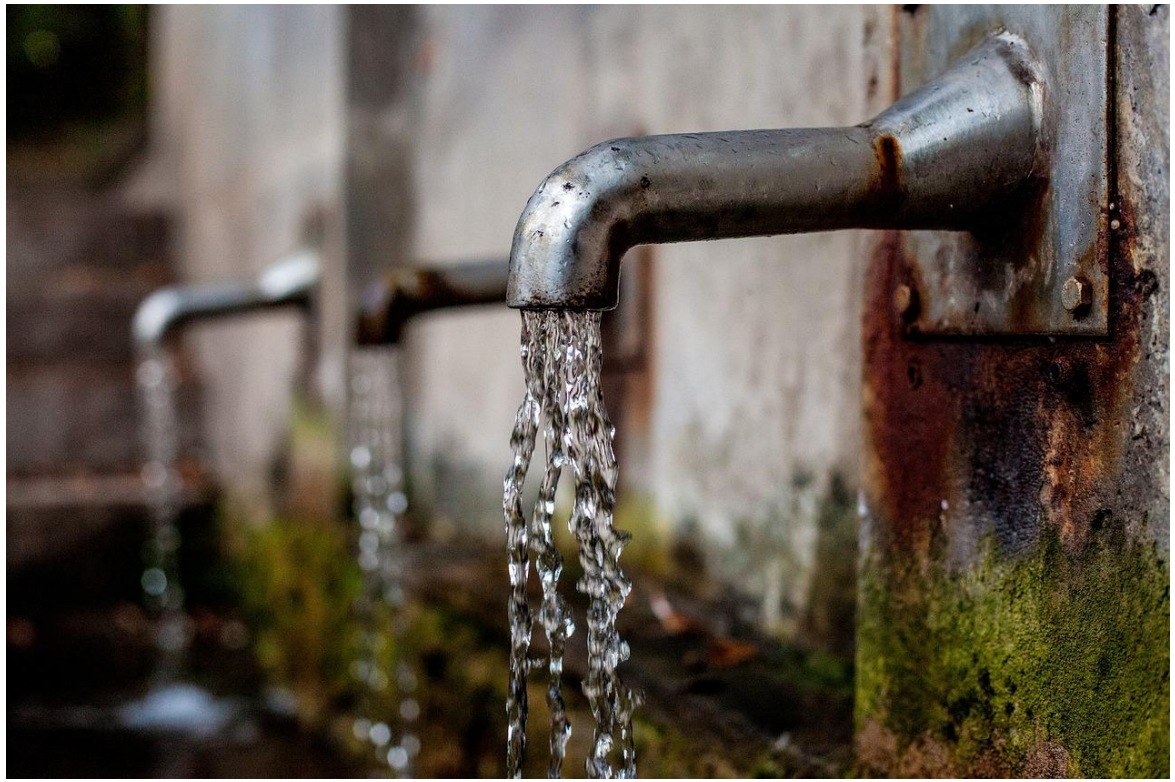
Public Water Systems

- Identify all public water intakes within this distance
  - Must have at least 15 service connections and serve at least 25 individuals
  - Includes collection, treatment, storage and distribution facilities
- **Facilities are expected to coordinate with PWS**



We'll review the planning distance calculation later in this presentation.

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Applicability Criteria 2:

Cause Injury

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Applicability Criteria 2: Cause Injury to FWSE

- Calculate the distance that WCD could travel from the facility before it is contained. This is referred to as the **planning distance**.
- Evaluate whether the discharge could cause “injury” to FSWE
  - *Injury* means a **measurable adverse change**, either long- or short-term, in the chemical or physical quality or the viability of a **natural resource or public receptor (including to human health)** resulting either **directly or indirectly from exposure to a discharge, or exposure to a product of reactions** (e.g., more hazardous degradation products, ignition, or reaction) resulting from a discharge
- Check available sources to determine what constitutes an area that is sensitive for fish and wildlife or the environment
  - Wetland data
  - Threatened/endangered species
  - ACPs

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Fish & Wildlife & Sensitive Areas (FWSE)

- Designations:
  - Legal designation
  - Evaluations rendered by area committees or members of the federal On Scene Coordinator (OSC)
  - As determined based on local scientific knowledge, responder experience, and community priorities
- See DOC/NOAA Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments (59 FR 14713, March 29, 1994)

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Examples of FWSE

- Wetlands
- National Parks
- State Parks
- Endangered Species Habitats
- Wilderness Areas
- Marine Sanctuaries
- Estuarine Reserves
- Conservation Areas
- Wildlife Areas
- Wildlife Refuges
- Wild & Scenic Rivers
- Recreation Areas
- National Forests
- Land Trust
- . . . and others

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What Does "Cause Injury" to FWSE Mean?

- Once **planning distance calculations** are completed, concentration-based results are compared to chart in Appendix B to determine if WCD could "cause injury"
- The threshold is 10 percent of the LC50 concentrations

Category	RQ (lbs.)	Endpoints for fish, wildlife and sensitive environments using 96-hour LC50		
		Aquatic toxicity (mg/liter)		10% (mg/L)
		Lower	Upper	
X	1	0	0.1	0.01
A	10	0.1	1	0.1
B	100	1	10	1
C	1,000	10	100	10
D	5,000	100	500	50

"Categories" for each CWA HS is listed under 40 CFR 117.3. Examples include:

- **Ammonia – B**
- **Benzene – A**
- **Chlorine – A**
- **Xylene – B**

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Applicability Criteria 3:

Public Receptors

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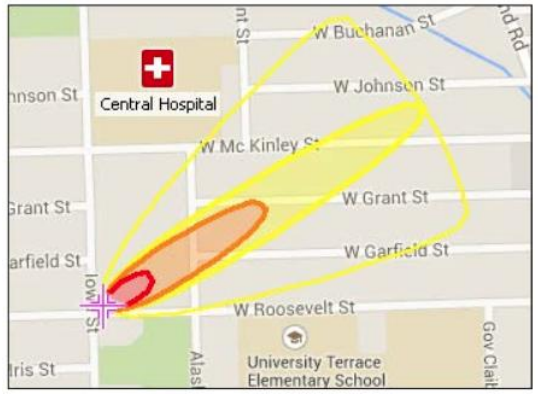
Public Receptors



- Ability to cause "injury" to public receptors
- Public receptors are parks, recreational areas, docks, public spaces, etc.
  - Areas inhabited or occupied by the public at any time without restriction by the facility
- The threshold is 10 percent of the LD50 concentrations

Category	RQ (lbs.)	Endpoints for public receptors LD50		
		Mammalian toxicity (oral) (mg/kg)		10% (mg/kg)
		Lower	Upper	
X	1	0	0.1	0.01
A	10	0.1	1	0.1
B	100	1	10	1
C	1,000	10	100	10
D	5,000	100	500	50

Appendix B to Part 118

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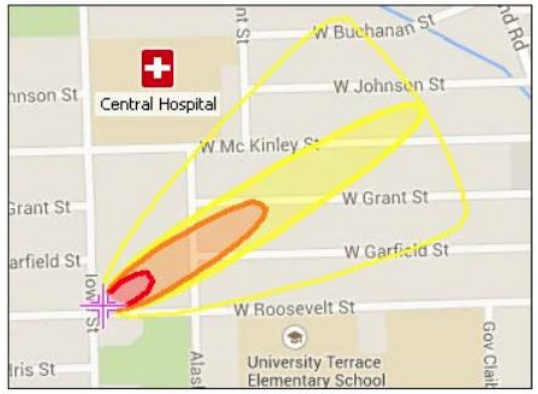
Public Receptors



- "Public receptor" definition (118.2):
  - Public receptors mean parks, recreational areas, docks, or other public spaces inhabited, occupied, or used by the public at any time **where members of the public could be injured as a result of a worst-case discharge into or on the navigable waters or a conveyance to navigable waters**.
- **Laymen's terms: "areas through which the public has access to navigable waters"**
- Tricky!
  - Designated use of "recreational"– likely triggers
  - Airborne release of a HS that does not reach a navigable waterway via planning distance modeling? – likely doesn't trigger, **except…**

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Are you a genius? Because this just got complicated!

- **EPA suggested some HS are present in solid or gas forms such that they could not be discharged to navigable waters**:
  - However, EPA stresses that adverse weather conditions, including extreme events due to **climate change**, must be considered.
  - As such, **if a solid stored as a powder or in pellets could release in a high-intensity rainfall event or flood scenario and navigable waters or a conveyance to navigable waters, the covered facility must make a substantial harm determination**.
  - Similarly, **should a worst-case discharge consist of a CWA hazardous substance released as a gas that could mix with rainwater and then reach navigable waters or a conveyance to navigable waters, the covered facility owner or operator would need to examine that outcome in their worst-case discharge scenario(s).**

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Example of a Gas (Chlorine)

- From the previous slide
  - Similarly, should a worst-case discharge consist of a CWA hazardous substance released as a gas that could mix with rainwater and then reach navigable waters or a conveyance to navigable waters, the covered facility owner or operator would need to examine that outcome in their worst-case discharge scenario(s).
  - **Chlorine gas is a greenish yellow gas at room temperature and atmospheric pressure. It is two and a half times heavier that air.**
    - **Thus, it will not rise and will tend to accumulate in low-lying areas.**

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Example of a Gas (Chlorine)

- "Simple Question" we need to answer – how much of the chlorine gas from a worst-case discharge will get to the river during adverse weather?
  - Once it gets to the river – does it have the ability to "cause injury" downstream?
- **Multiple mathematical models needed for different pathways!**
  - **Initial air release** – need a dispersion model to estimate plume dimensions (e.g., RMP-Comp, AERMOD, SLAB, etc.)
  - **Chlorine absorption into stormwater** – need a vapor-liquid equilibrium equation (or dare I say, non-equilibrium…) (e.g., Henry's law, Raoult's law, etc.)
  - **Stormwater runoff into the river** – likely use the Rational Method to estimate (runoff coefficients x surface area x rainfall intensity)

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Example of a Gas (Chlorine)

- **But wait – there's more!!**
- **Multiple mathematical models needed for different pathways!**
  - **Chlorine reactions in the river** – need an equilibrium reaction equation to estimate free chlorine vs. hypochlorous acid vs. hypochlorite ions (will be temperature and pH dependent!)

Chlorine in Water: $Cl_2 + H_2O \leftrightarrow HOCl + H^+ + Cl^-$

Hypochlorous Acid Equilibrium: $HOCl \leftrightarrow OCl^- + H^+$

$$K_a = \frac{[OCl^-][H^+]}{[HOCl]}$$

  - **Chlorine traveling down the river** – consider two things:
    - Reaction kinetics of the chlorine as it travels downstream…
    - Dilution effects of the river itself
- **Put simply – this is very complicated as the rule currently stands..**

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Applicability Criteria 4: Reportable Discharge

Applicability Criteria 4: Reportable Discharge

- Having a reportable discharge of a CWA hazardous substance
  - This includes discharges at, or exceeding, RQ that reach navigable waters or adjoining shorelines
  - Any reportable discharge in the past five (5) years fulfills this substantial harm criteria
    - Facility discharge records
    - NRC or state reporting

Harm Criteria – What's Next?

- Both screening criteria are met (1,000x RQ and ½ mile distance)
- Four (4) substantial harm criteria are evaluated
  - (1) Ability to adversely impact PWS
  - (2) Ability to cause injury to FWSE
  - (3) Ability to cause injury to public receptors
  - (4) Having a reportable discharge of a CWA hazardous substance within the last 5 years
- If one (or more) substantial harm criteria is met – **facility must prepare a CWA FRP**
- If substantial harm criteria are NOT met – **facility must still complete and submit Substantial Harm Certification Form to EPA *including supporting calculations and modeling***

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Trinity Study of Impacted Industries and Common Triggering Chemicals

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Analysis of Impacted Industries

- Analysis of **publicly available TRI & CDR data**
  - TRI requires “max onsite” range reporting
    - Conservatively used lower end of reporting range for applicability
  - CDR requires “max production volume”
    - Estimated max onsite by using a monthly distribution
- Identified CWA HS by CAS Numbers
- Ability to identify most common triggering chemicals, most impacted facilities based on NAICS code, and even state-specific analysis (Nebraska example)

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TRI Data Analysis

Number of facilities above the CWA FRP threshold by chemical & State												
State	Number of Facilities	No. of Chemicals Above Threshold	Benzene	Xylene (mixed isomers)	Chlorine	Naphthalene	Ammonia	Toluene	Ethylbenzene	Formaldehyde	Cyclohexane	Styrene
TX	189	448	111	78	21	36	21	29	20	12	13	6
LA	98	213	46	26	20	22	11	13	7	8	3	4
CA	52	142	37	34	9	14	8	19	6		7	1
OH	45	72	17	12	8	5	4	5	1	4	1	4
IL	33	70	16	13	5	7	5	7	3		2	4
AL	33	47	8	6	8	1	3			1		2
KY	29	49	10	8	6	2	7	2		1		1
IN	28	53	12	11	5	4	5	5	2	1	2	
FL	27	49	11	11	8	4	5	3			1	
TN	24	36	7	10	6	2	2	1	1			2

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Number of facilities above the CWA FRP threshold by chemical & NAICS		
NAICS	No. of Chemicals	NAICS Description
424710	540	Petroleum Bulk Stations and Terminals
324110	421	Petroleum Refineries
325199	201	All Other Basic Organic Chemical Manufacturing
325180	106	Other Basic Inorganic Chemical Manufacturing
325211	87	Plastics Material and Resin Manufacturing
424690	77	Other Chemical and Allied Products Merchant Wholesalers
325110	75	Petrochemical Manufacturing
211130	45	Natural Gas Extraction
562211	39	Hazardous Waste Treatment and Disposal
325311	38	Nitrogenous Fertilizer Manufacturing
325998	32	All Other Miscellaneous Chemical Product and Preparation Manufacturing
221112	27	Fossil Fuel Electric Power Generation
928110	25	National Security
325194	23	Cyclic Crude, Intermediate, and Gum and Wood Chemical Manufacturing
325320	19	Pesticide and Other Agricultural Chemical Manufacturing
325120	18	Industrial Gas Manufacturing
336110	14	Automobile Manufacturing
325611	14	Soap and Other Detergent Manufacturing
325314	13	Fertilizer (Mixing Only) Manufacturing
325312	12	Phosphatic Fertilizer Manufacturing
325612	12	Polish and Other Sanitation Good Manufacturing
325193	10	Ethyl Alcohol Manufacturing
321114	10	Wood Preservation
322110	9	Pulp Mills
324199	9	All Other Petroleum and Coal Products Manufacturing
325510	8	Paint and Coating Manufacturing
325212	8	Synthetic Rubber Manufacturing
325130	5	Synthetic Dye and Pigment Manufacturing
424720	5	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)

EPA's final rule listed over 50 three-digit NAICS groups potentially affected by the rule (i.e., everybody)

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Tier II Data Analysis in Nebraska

- Number of Nebraska facilities = 116
  - TRI data analysis only revealed nine facilities (Tier II data not hampered by FTE and NAICS code applicability criteria)
- Number of Nebraska facilities with multiple triggers = 13

Most Common Chemicals	Toxicity Category	No. of Facilities
Ammonia	B	93
Chlorpyrifos	X	9
Chlorine	A	6
Phosphorus	X	5
Benzene	A	3
Pentachlorophenol	A	3
Chromic acid	A	2
Calcium carbide	A	2
Tetraethyl lead	A	2
Calcium hypochlorite	A	2
Hydrofluoric acid	B	1
Phosphoric acid	D	1
Sodium bichromate	A	1
Polychlorinated biphenyls	X	1
Sulfuric acid	C	1
Sodium hypochlorite	B	1
Cupric sulfate	A	1

Planning Distance Modeling

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Planning Distance Calculation (1 of 2)

- **Planning distance calculation**
  - Use the maximum capacity of a single largest container OR
  - Multiple interconnected containers

    Remember: for the initial criteria, the maximum volume of the CWA HS on-site is used to determine if your facility triggers the next steps which is different the volume used to calculate the planning distance calculation.

  - Must consider overland transport including:
    - Nearest opportunity for discharge into or on the navigable waters
    - Ground conditions (topography, draining, etc.)
    - Properties of the CWA HS

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Planning Distance Calculation (2 of 2)

▸ Planning distance calculation

- In-water transport including:
  - Point of entry to navigable waters
  - Flow rate and duration of the discharge
  - Direction of the discharge at the point of entry
  - Surface versus underwater entry
  - Conditions of the receiving water

- Adverse weather conditions:
  - Based on adverse winds, currents, and/or river stages, over a range of seasons, and weather conditions.

- Properties of the CWA HS:
  - Solubility in water, density, vapor pressure, human toxicity, aquatic toxicity, etc.

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Planning Distance – Key Definitions (118.2)

- ***Planning distance*** means the **distance to an endpoint** such that a **worst case discharge** of CWA hazardous substances into or on the navigable waters or a conveyance to navigable waters from a non-transportation-related onshore facility could adversely impact a public water system or cause injury to fish, wildlife, and sensitive environments or public receptors, as described in § 118.10.
- ***Distance to the endpoint*** means the greatest distance a CWA hazardous substance in a **worst case discharge** into or on the navigable waters or a conveyance to navigable waters can travel while still having the ability to cause **injury** to public receptors or fish, wildlife, and sensitive environments, as determined under § 118.3(c)(1) and (c)(3) using endpoint concentrations enumerated in Appendix B or adversely impact a public water system as in § 118.3(c)(2).

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Planning Distance – Key Definitions (cont.)

- ***Endpoint*** means the concentration at which a **worst case discharge** of a CWA hazardous substance has the ability to cause **injury** to public receptors or fish, wildlife, and sensitive environments as in Appendix B or adversely impact a public water system as in § 118.3(c)(2).
- ***Worst case discharge*** means the largest foreseeable discharge in **adverse weather conditions** including a discharge resulting from fire or explosion.
- ***Injury*** means a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource or public receptor (including to human health) resulting either directly or indirectly from exposure to a discharge, or exposure to a product of reactions (e.g., more hazardous degradation products, ignition, or reaction) resulting from a discharge.

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Planning Distance – Key Definitions (cont.)

- ***Adverse weather*** means weather conditions that make it difficult for response equipment and personnel to clean up or respond to discharged CWA hazardous substances, **accounting for impacts due to climate change**, such as the increased frequency and intensity of extreme weather events, temperature fluctuations, rising seas, storm surges, inland and coastal flooding, drought, wildfires, and permafrost melt in northern areas and that must be considered when identifying response systems and equipment in a response plan for the applicable operating environment.
- ***Climate change*** means… no, that's not defined ☺

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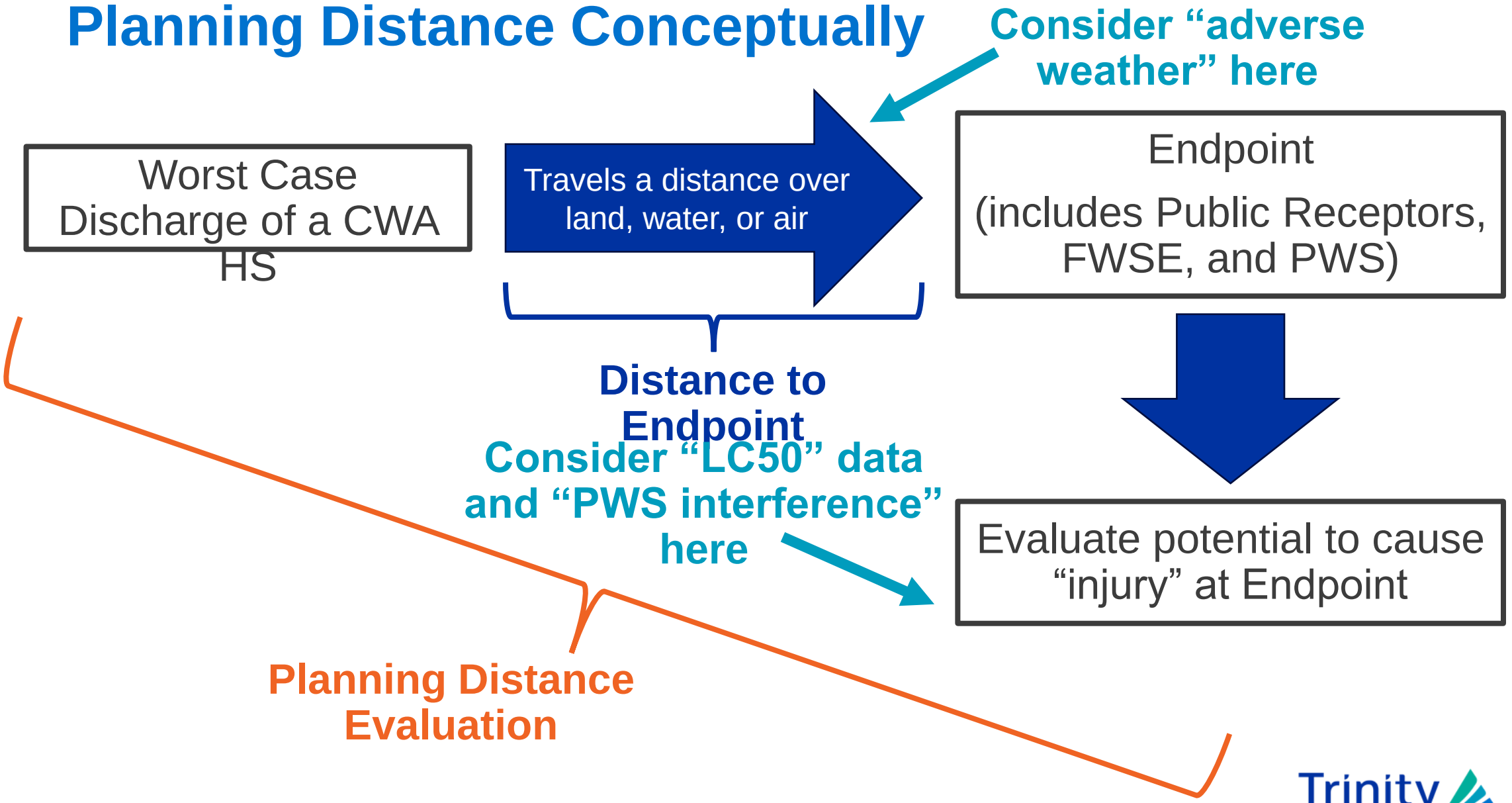
Planning Distance Conceptually



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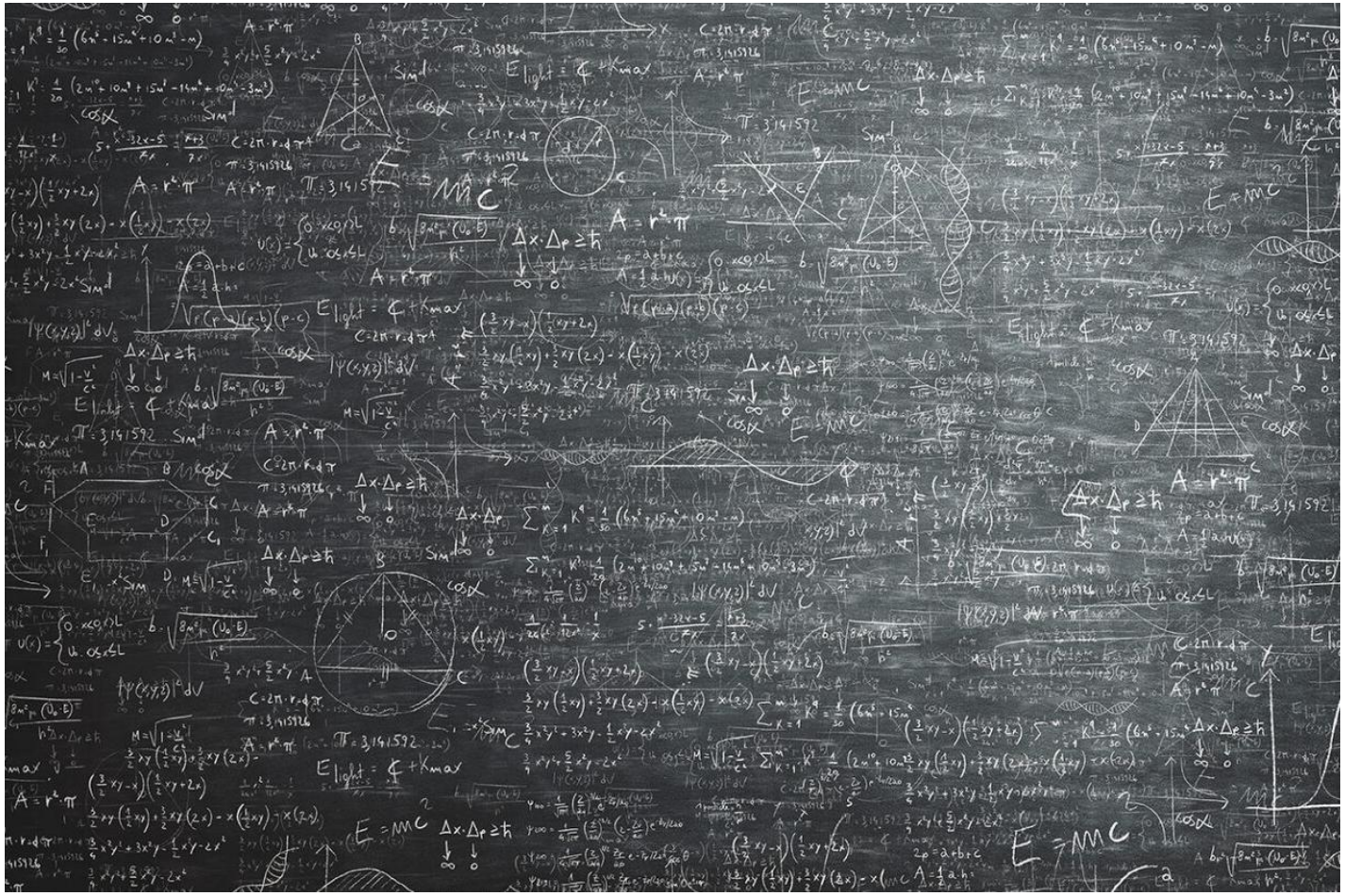
Warning – Math is in your future!

Remember:

- ***For the initial criteria, the maximum volume of the CWA HS on-site is used to determine if your facility triggers the next steps.***
- ***The single largest container or multiple interconnect containers are used to calculate the planning distance calculation.***
- ***There is a difference.***



Future Planning

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If I was you…

▸ Today (2024)

- Read the regulation and especially the preamble (i.e., get an understanding of the “intent” of this regulation)
- **Complete the initial screening criteria that focuses on the half-mile distance to a navigable water (or conveyance to a navigable water) and threshold quantity (1,000x RQ) criteria**

- Discuss with staff, if the on-site volume of the CWA HS is above the threshold quantity, can you reduce the volume under the 1,000 times the RQ criteria?

- If so, do so!!!!!

- Document that the maximum volume on-site is below the initial screening criteria.

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If I was you…

Today (2024)

- If the initial criteria is above the CWA HS threshold
  - Understand which facilities will require an analysis of “ability to cause injury” to FSWE and PWS
- Begin budgeting for 2025, 2026, and 2027
- Talk to your management team about future implications of rule
  - New training drills, exercises, etc.
  - Increased profile with EPA

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If I was you…

- **Tomorrow (2025)**
  - **Stay vigilant regarding EPA publications on compliance tools and guidance documents!**
    - **Tricky situation – start early and risk having to re-do, vs. starting late and running out of time (or running into disappointing EPA guidance that leaves more questions than answers)**
  - Begin analysis of “ability to cause injury” to FSWE and PWS for applicable facilities
    - Begin coordination with PWS!
  - Begin discussions with LEPCs/etc. to discuss emergency planning/response strategies and capabilities
  - Begin discussions with SROs to obtain contracts for any “missing pieces” in your emergency planning efforts
    - E.g., obtaining environmental monitoring equipment

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If I was you…

- **Mark your calendar the compliance dates**
  - FRPs due: **June 1, 2027**
    - For facilities in operation November 30, 2026
  - Substantial Harm Certification Forms due:
    - ***June 1, 2027***
  - Recertify plan(s) and Substantial Harm Certification:
    - ***Every 5 years***
  - Amendments (material changes)
    - ***Within 60 days***
- **Ask for a raise if you have not done so already ☺**
- **This rule is evolving – stay up to date on court filings, EPA guidance documents, etc.!**
  - Outside the umbrella of the CRA, but future litigation feels likely

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Upcoming Courses

CWA Permitting & Compliance
November 6, 2024 – Kansas City
December 11 – Charlotte

Introduction to Environmental Regulations (3-Day)
December 2, 2024 - Moab

Questions? Contact Us

Don Gansert – Managing Consultant
dgansert@trinityconsultants.c
Ph: (913) 302-5537