



DERP FORUM

Achieving Greater Success Through Strong Partnerships

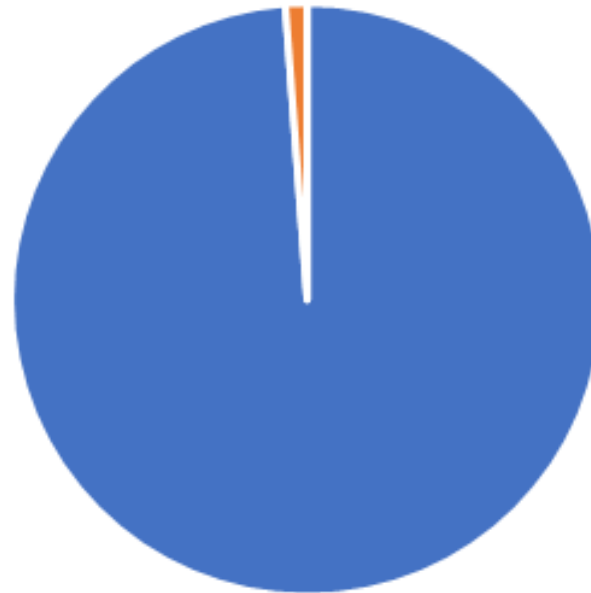
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New York's Path to a 1,4-Dioxane Guidance Value

And the Overall Challenges of CEC Regulation

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The "Big Picture" Challenge of Chemical Regulation



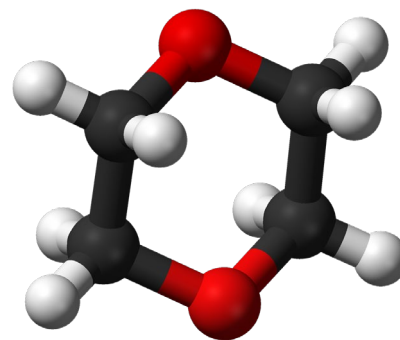
■ Chemicals in Commerce

■ NYSDCE WQS & GVs

Unique Regulatory Challenge of CEC's

- Contaminants of Emerging Concern (CEC's)
 - Limited knowledge on fate, transport, and toxicity
 - Limited monitoring data available, costs & complexity of collecting new data
 - High degree of media and public pressure to react
- Regulatory Process is Not Dynamic
 - Large amount of toxicity data required
 - Consequences for “getting it wrong” on both sides
 - New regulations take 6-24 months to adopt
 - Lag in Federal criteria recommendations

1,4-Dioxane Basics



- EPA classifies 1,4-Dioxane (1,4-D) as a probable human carcinogen based on the results of animal studies
- Direct contact causes irritation to eyes and respiratory tract
- Uses
 - Stabilizer for 1,1,1-TCA
 - Solvent in cleaning and personal care products
- In commercial use since 1950's, use increased significantly through the 1980's

UCMR3

- UCMR - Unregulated Contaminant Monitoring Rule
- Rotating list of chemicals, monitored in finished drinking water
- UCMR3 - 2012-2016 - Included 1,4-Dioxane
- UCMR3 found 1,4-D in 40 NYS public water supplies
 - 31/40 were groundwater in Long Island
 - Suspected source – industrial use of chlorinated solvents



Should we regulate it?

How should we regulate it?

How long will it take?

Drinking Water Protection Roles in NYS

NYS DOH

- Sets Maximum Contaminant Levels (MCLs)
- Oversees quality of finished (treated) drinking water

NYS DEC

- Sets Water Quality Standards (WQS) and/or Guidance Values (GV)
- Acts to prevent contamination to drinking water sources
- Oversees clean-ups of contamination

How? - NYS DEC Water Quality Standards (WQS)?

- Authority under CWA and State Law
- Numeric WQS
 - Option to directly adopt a NYS Department of Health (DOH) drinking water MCL
- Narrative WQS
 - Most narrative WQS are 'None in any amount that impairs best uses'
- Used to set SPDES effluent limits, assess water quality, and establish recovery goals
- WQS process – proposal to adoption – can take 12-24 months, difficult to amend/change

How? - NYS DEC Water Guidance Values (GV)

- All GVs are numeric
 - Numeric translation of narrative “toxics” WQS
- Derived based on specific procedures in regulations - same as the WQS (including DOH MCL option)
- Used to set SPDES effluent limits, assess water quality, and establish recovery goals – same as WQS
- GV process – proposal to finalization – can take as little as 6 months, easier to amend/change

Deriving a WQS or GV – Collaborative Effort

- DEC does not have in-house toxicologist to derive a human health standards – derived by NYS Department of Health (DOH)
 - DOH gathers the toxicity research
 - DOH validates the research
 - DOH selects the proper values and factors from the research
 - DOH performs the required calculations to produce a WQS/GV per 6 NYCRR Part 702
 - DOH drafts a “Fact Sheet” for the WQS/GV to explain the derivation
- Aquatic Life WQS/GVs are derived by DEC Division of Fish & Wildlife in a similar fashion

Internal Process of Setting the 1,4-D GV

- DEC began our process in 2017 - requesting fact sheets from DOH and DFW
- Fact sheet development 2017-2019
- WQS vs. GV Decision – GV because...
 - No MCL (came in 2020)
 - No Federal guidance (non-regulatory HAL)
 - Toxicology still evolving
 - “Quicker”

GV Proposal-to-Finalization Process

- DEC proposes GV for public comment
 - Comment period typically 45-60 days
- DEC gathers comments and drafts responses
 - Certain responses drafted by DOH or DFW
 - GVs modified if needed, significant mods restart the process
- DEC “finalizes” the GV

What GV's did NYS propose & finalize?

Chemical	DOH - Finished Drinking Water	DEC GV - Ambient Water		
		Human Health	Aquatic Life	
			Chronic	Acute
1,4-Dioxane	1 µg/L	0.35 µg/L	18,000 µg/L (fresh) 7,000 µg/L (saline)	160,000 µg/L (fresh) 63,000 µg/L (saline)
		Applicable to all Class A's, GA	Applicable to all Surface Water Class except D & SD	Applicable to all Surface Water Class

Timeline – How quick did we respond?

- 2013 - UCMR3 first data release
- 2017 - NYS Drinking Water Quality Council formed
 - 1st task MCL recommendations for PFOA, PFOS and 1,4-D
- 2019 - NYS law limiting 1,4-D in consumer products, phased implementation 2022-23
- 2020 - NYS DOH adopts 1,4-Dioxane MCL of 1.0 ppb
- October 2021 – DEC proposes Guidance Values for PFOA, PFOS, and 1,4-D
- March 2023 – DEC adopts GVs

Questions & Thank you!

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