CLEAN WATER ACTION | CLEAN WATER FUND

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Submitted via www.regulations.gov

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United Stated Environmental Protection Agency
1200 Pennsylvania Ave, NW
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RE: Comments on Preliminary Effluent Guidelines Program Plan 15, Docket Number EPA-HQ-OW-2021-0547

Dear Dr. Flanders,

Clean Water Action/Clean Water Fund appreciates the opportunity to comment on the Environmental Protection Agency's (EPA) Preliminary Effluent Guidelines Program Plan 15.

We support EPA's decision to revise Effluent Limitations Guidelines and Standards (ELGs) for the Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) category and for chromium electroplating facilities in the Metal Finishing category in order to address discharges of per-and polyfluoroalkyl substances (PFAS). We also support EPA's announcement of a new rulemaking to revise the Meat and Poultry Products point source category to address nitrogen and phosphorus pollution, as well as the agency's intention to publish a proposed supplemental rule to strengthen limits for certain wastewater streams from coal-fired power plants.

While we commend EPA's efforts, we are seriously concerned that the agency is not moving quickly enough to address PFAS wastewater discharges from other point source categories that are known or suspected of using these toxic "forever chemicals." We also believe that EPA should publish a proposed supplemental ELG for coal-fired power plants sooner than the Fall 2022 deadline it announced in July 2021, and that the agency should continue to study and increase protections from the Oil and Gas Extraction and Centralized Waste Treatment (CWT) categories.

Below we outline recommendation on how the agency can better address PFAS in industrial wastewater discharges, suggested further actions EPA should take to control wastewater discharges from coal-fired power plants and from the oil and gas sector, as well as recommendations on how the agency should consider environmental justice in its ELGs planning and rulemaking.

Per-and Polyfluoroalkyl Industrial Sources and Discharges

PFAS are toxic and threaten human health and the environment

The body of literature documenting potential health effects from human exposure to PFAS is vast and growing rapidly. To date, epidemiological studies have found strong evidence between human exposure to certain PFAS such as PFOA and PFOS and heightened risk of thyroid disease, increased cholesterol levels, liver damage, certain cancers including kidney and testicular, and harmful in utero developmental effects, such as low birth weight, reduced response to vaccines, and delayed mammary gland development.[1] PFAS can persist in human bodies for years or even decades. In May 2021, the United States Agency for Toxic Substances and Disease Registry (ASTDR) released its long anticipated final Toxicological Profile for ten PFAS, including PFOA, PFOA, PFBA, PFNA, and PFHxS. In its final Toxicology Profile ASTDR estimates the half-life of PFHxS is up to 35 years in humans.[2] The estimated half-life of PFOS is up to 27 years and for PFOA it is up to 10 years.[3] While more research is needed to better ascertain the toxicological effects of lesser studied short-chain PFAS as well as mixtures of different types of PFAS compounds, "PFAS are universally toxic to some extent, and all pose the same problems of bioaccumulation and high resistance to degradation."[4]

Many PFAS are water soluble, mobile, and persistent in the environment.[5] These compounds can travel far through the water cycle and easily contaminate rivers, streams, and groundwater. Because of the strong carbon-fluorine in PFAS compounds they do not readily breakdown in the environment and can bio-accumulate in fish and other aquatic species. There is ample evidence to support strong regulations to keep these toxic, human-made chemicals out of our nation's water resources in order to protect human health and the environment.

PFAS must be controlled at the source

Because PFAS are highly mobile in the water cycle and also difficult to remove once they contaminate water resources, PFAS must be controlled at the source. Industrial facilities are known to discharge PFAS in or directly upstream of drinking water sources. Once PFAS enter a drinking water source, they are difficult and costly for a water utility to remove, since PFAS can pass through conventional drinking water treatment. Drinking water treatment plants, funded by the customers of the regulated Public Water Systems who run them, are not supposed to be the place where water pollution challenges are managed. The burden of contamination caused by industries benefiting from the manufacturing and use of PFAS chemicals should not be shifted onto downstream communities. Allowing PFAS chemicals to make it all the way to our drinking water sources is a remarkable injustice and glaring inefficiency. EPA must do everything it can

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[1] Suzanne E. Fenton, et al., *Per-and Polyfluoroalkyl Substance Toxicity and Human Health Review: Current State of Knowledge and Strategies for Informing Future Research,* ENVIROMENTAL TOXICOLOGY AND CHEMISTRY, Vol. 40, No. 3, 607-612 (2021) (attached)
[2] ASTDR Toxicological Profile at 5.
[3] Id.
[4] William S. Dean, et al. *A Framework for Regulation of New and Existing PFAS by EPA,* JOURNAL OF SCIENCE POLICY & GOVERNANCE, Vol. 16, Issue 1, at 5 (2020) (Attached).
[5] Carol F. Kwiatkowski, et al. *Scientific Basis for Managing PFAS as a Chemical Class, Environ. Sci. Technol. Lett.,* 2020, 7, 532-543. Available at: https://pubs.acs.org/doi/10.1021/acs.estlett.0c00255

to prevent these toxic chemicals from getting into drinking water sources in the first place using its Clean Water Act and other pollution prevention regulatory authorities. **Eliminating or drastically reducing industrial discharges of PFAS is one of the most important things EPA can do to protect drinking sources from these toxic substances.**

Just like drinking water systems should not have to bear the burden of removing PFAS from drinking water sources, publicly owned treatment works (POTWs) should not be burdened with untreated PFAS-laden wastewater from industrial polluters. Instead, industrial dischargers of PFAS should have to remove PFAS from their wastewater effluent before sending their effluent to a POTW. PFAS chemicals are "known to pass through" POTWs and 'the high water solubility of some PFAS allows them to pass through most POTW treatment processes."[6] The Clean Water Act requires EPA to develop and impose pretreatment standards for pollutants determined "not to be susceptible to treatment by [POTWs] or which would interfere with the operation of such treatment works."[7] PFAS not only meet the definition of pollutant under the Clean Water Act, which defines pollutant to include chemical and industrial waste,[8] but also the definition of toxic pollutant, which are those pollutants that cause "death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformities, in such organisms or their offspring."[9]

The state of Michigan has used its industrial pretreatment program (IPP) to drastically reduce concentrations of PFOS in municipal POTWs effluent by requiring upstream industrial users to eliminate their sources of PFOS or to treat their wastewater with a granulated activated carbon (GAC) system. Three wastewater treatment plants (WWTPs) had PFOS levels in their effluent reduced by 99 percent, four WWTPs had PFOS levels reduced by 95 to 97 percent, and another WWTP had its PFOS levels reduced by 88%.[10]

EPA should use all available Clean Water Act regulatory tools, such as effluent limitations guidelines and standards and industrial pretreatment programs, to curb the flow of PFAS into our nation's drinking water sources and municipal wastewater treatment plants.

PFAS should be regulated as a class

EPA researchers have identified over 9000 PFAS chemicals in existence.[11] Due to the sheer number of PFAS in commerce and in the environment, it is not practical for EPA to regulate these chemicals individually. Instead, EPA should take a holistic approach and regulate PFAS as a class. The State Attorneys General of California, Colorado, Connecticut, Delaware, District of Columbia. Illinois, Iowa, Maine, Maryland, Massachusetts, Minnesota, New Mexico, Oregon, North Carolina, Pennsylvania, Rhode Island, Virginia, Washington, and Wisconsin, recently

[6] EPA, Preliminary Effluent Guidelines Program Plan 14, 3-19-20 (October 2019)
[7] 33 U.S.C. § 1317(b) (1).
[8] 33 U.S.C. § 1362 (6).
[9] 33 U.S.C. § 1362 (13).
[10] MICHIGAN IPP PFAS INITIATIVE: IDENTIFIED SOURCES OF PFOS TO MUNICIPAL WASTEWATER TREATMENT PLANTS –DCN OCPSF00070, Docket EPA-HQ-OW-2020-0582 at 16 (August 2020).
[11] Environmental Protection Agency, *PFAS Master List of PFAS Substances (Version 2)*, available at: https://comptox.epa.gov/dashboard/chemical_lists/pfasmaster (last visited October 13, 2021)

urged EPA to address PFAS as a class because this "approach is the most effective way to regulate PFAS as it provides greater protection to the public, decreases the burden on regulatory agencies, and provides greater certainty to the operators of public water systems."[12]

EPA should promulgate PFAS effluent limitation guidelines and pretreatment standards for multiple industry sectors at once

We support EPA initiating a rulemaking process to revise ELGs for certain facilities known to be discharging PFAS in the Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) category and for chromium electroplating facilities in the Metal Finishing category. However, we believe the record before EPA supports revising ELGs and pretreatment standards for additional point source categories.

In its Preliminary Plan 15, EPA lists four additional industrial categories known to discharge PFAS: airports; landfills; pulp, paper, and paperboard; and textile miles.[13] EPA also identified the metal finishing category, beyond just chromium electroplating facilities as PFAS dischargers. PFAS formulators in the OCPSF category are also known to discharge PFAS, yet EPA has only announced it will be revising ELGs for PFAS manufacturers in the OCPSF category. According to EPA, "PFAS, including legacy long-chain PFAS and replacement PFAS, are present in wastewater discharges from PFAS manufacturers and PFAS formulators to surface waters and POTWs," and "PFAS manufacturers and formulators have few monitoring requirements, effluent limitations, or pretreatment standards for PFAS in their wastewater discharge permits and may continue to discharge PFAS to POTWs or surface waters unless effective controls are in place."[14]

Rather than revising effluent limitation guidelines and standards (ELGs) and pretreatment standards to control PFAS discharges for one industrial sector at a time, which could take decades, EPA should promulgate ELGs and pretreatment standards for multiple sectors at once. PFAS are used in a wide variety of industrial processes and consumer products, and are likely equally ubiquitous in industrial and municipal wastewater discharges. In addition to revising the ELGs for the OCPSF category and chromium electroplating facilities in the Metal Finishing category, EPA should revise ELGs and pretreatment standards for the following 40 CFR point source categories that are known or suspected to be discharging PFAS:

- Part 410: Textile mills
- Part 413: Electroplating
- Part 419: Petroleum Refining
- Part 469: Electrical and Electronic Components
- Part 425: Leather Tanning and Finishing
- Part 430: Pulp, Paper, Paperboard

[12] May 10, 2021 States Attorneys General letter to EPA, Docket ID. No. EPA-OW-2020-0530; Proposed Rule; Revisions to the Unregulated Contaminant Monitoring Rule (UCMR 5) for Public Water Systems (Attached).
[13] EPA Preliminary Plan 15.
[14] EPA, *Multi-Industry Per- and Polyfluoroalkyl Substances (PFAS) Study – 2021 Preliminary Report*, 5-10 (Sept. 2021).

- Part 433: Metal Finishing
- Part 437: Centralized Waste Treatment
- Part 445: Landfills
- Part 446: Paint Formulating
- Part 449: Airports
- Part 463: Plastics Molding and Forming
- Part 469: Electrical and Electronic Components

This list should not be considered exhaustive, and as more information becomes available on other 40 CFR point source categories that discharge PFAS, EPA should consider revising ELGs for those categories as well. It is likely that the treatment technologies EPA identifies as available, achievable, and affordable for PFAS manufacturers in the OCSPF category and for chromium electroplating facilities in the Metal Finishing category to control their PFAS discharges, would be applicable to other industrial point source categories. At a minimum, EPA should provide technical guidance on available treatment technologies that can remove or reduce PFAS for all industrial point source categories that discharge PFAS.

As currently proposed, EPA's Plan 15 excludes the vast majority of industrial points source categories that are known to discharge PFAS into our nation's waters. EPA states it lacks information on PFAS discharges from most industrial categories known to discharge PFAS. This is not surprising as few states require PFAS monitoring in water pollution permits, but it is not a reason for not gathering the information needed to revise ELGs for particular industrial categories. EPA has the authority to require that PFAS discharges be disclosed during the National Pollutant Discharge Elimination System (NPDES) permitting process. In order to gather additional information on PFAS discharges in industrial wastewater, EPA should notify state permit writers that facilities must disclose any discharges of PFAS when applying for or renewing a NPDES permit.

EPA should expand its Multi-Industry Per-and Polyfluoroalkyl Substances (PFAS) Study

EPA has preliminarily identified seventeen different industrial sectors that are known or suspected of using PFAS and "that may lead to PFAS discharges to receiving waters", though it notes that its "list is not exhaustive."[15] EPA's current Multi-Industry study for PFAS only includes five industrial point source categories. EPA should expand its study to include all seventeen industrial sectors identified in its October 2019 Review of PFAS in Wastewater Discharge.[16]

Though not included on EPA's list of industries identified as using PFAS, there is evidence that PFAS has been used in oil and gas production in at least six states. A recent report revealed that in 2011 EPA approved use of three chemicals for use in oil and gas production, even though agency staff "worried in writing that these chemicals could degrade into PFOA-like

[15] U.S. Environmental Protection Agency, *Review of Per-and Polyfluoroalkyl Substances (PFAS) in Industrial Wastewater Discharge*, October 2019, at 2-1.
[16] Id.

substances."[17] Several sources have documented that PFAS and PFOS may be used in enhanced oil recovery operations.[18] According to a Stockholm Convention report, "PFOS derivatives may be used as surfactants in the oil and mining industry to enhance oil or gas recovery in wells."[19] Several materials disseminated by EPA include reference to use in the oil and gas industry.[20] However, lack of transparency and reporting requirements for enhanced recovery and other operations prevent the public and/or regulators from obtaining data about the presence and quantity of these contaminants in produced water discharges and other uses outside the oil and gas industry. Based on this evidence, we urge EPA to also include the Oil and Gas Extraction category, as well as CWTs that accept oil and gas waste in its PFAS Multi-Industry Study.

EPA should also include municipal wastewater treatment plants (WWTPs) in its PFAS Multi-Industry study. Some states like Michigan and Colorado are already moving forward with requiring PFAS monitoring at wastewater treatment plants, as some WWTPs have been found to discharge high levels of PFAS to surface waters.

EPA should remind states of their existing authority to monitor and control PFAS

EPA's NPDES Permit Writers' Manual gives permit writers the clear authority to require monitoring for pollutants of concern even when the permit writer is not able to decide whether a discharge has the reasonable potential to cause an excursion of a water quality standard:

"After evaluating all available information characterizing the nature of the discharge without effluent monitoring data for the pollutant of concern, if the permit writer is not able to decide whether the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a water quality criterion, he or she may determine that effluent monitoring should be required to gather additional data. The permit writer might also include a clause in the permit that would allow the permitting authority to reopen the permit and impose an effluent limitation if the required monitoring establishes that there is a reasonable potential that the discharge will cause or contribute to an excursion above a water quality criterion."[21]

This recommendation is consistent with the EPA NPDES Permit Writers Manual directive for "Pollutants Otherwise Expected to be Present in the Discharge," which applies to both federal and state permit writers. Section 6.2.1.5 of the NPDES Permit Writers Manual describes "pollutants for which neither the discharger nor the permitting authority have monitoring data

[17] Physicians for Social Responsibility, *Fracking with "Forever Chemicals*," July 2021, at 6. Available at: https://www.psr.org/wp-content/uploads/2021/07/fracking-with-forever-chemicals.pdf

[18] Karydas, A. (1990). *U.S. Patent No. 4,921,619*. Washington, DC: U.S. Patent and Trademark Office. Available at: https://patentimages.storage.googleapis.com/0c/a2/eb/4091ebf58f32c6/US4921619.pdf

[19] Jensen, Allan. (2010). Draft guidance document on alternatives to perfluorooctane sulfonate and its derivatives. 10.13140/RG.2.1.4628.6489. Available at: at: https://www.researchgate.net/publication/299238731_Draft_guidance_document_on_alternatives_to_perfluorooctane_sulfonate_and_its_derivatives/citation/download

[20] U.S. Envtl. Prot. Agency. *Basic Information on PFAS.* https://www.epa.gov/pfas/basic-information-pfas

[21] See EPA NPDES Permit Writers' Manual at 6-30-6-31, available at: https://www.epa.gov/sites/default/files/2015-09/documents/pwm_2010.pdf

but, because of the raw materials stored or used, products or by-products of the facility operation, or available data and information on similar facilities, the permit writer has a strong basis for expecting that the pollutant could be present in the discharge."

States such as Michigan and Colorado are already using their existing Clean Water Act authorities to address PFAS discharges. For instance, since June 2019, the Colorado Department of Public Health and the Environment (CDPHE) has required Suncor Energy, a petroleum refinery in Commerce City, Colorado to monitor PFAS in its wastewater effluent. PFAS monitoring conducted between June 2019 and August 2021 revealed that Suncor discharged PFOS and PFOA from its Outfall 020A in excess of 70 parts per trillion (ppt) combined PFOA/PFOS in 20 out of 34 months reported.[22] The minimum level of combined PFOA/PFOS detected over these 16 months was 36 ppt in August 2019 and the maximum level detected was 1011 ppt in March 2021.

In 2020 CDPHE sent a discharge permit survey to its permittees to better understand which permittees are using and/or storing certain products containing PFAS, such as Class B firefighting foam. 193 facilities reported to CDPHE to have a known presence of PFAS, including six that reported PFAS in their wastewater discharges.[23] In March 2021, CDPHE also issued a revised permit for a landfill that included effluent limits for five PFAS and required weekly monitoring for over two dozen PFAS.[24]

EPA should compel other states to follow the lead of states like Michigan and Colorado, which are moving forward to control PFAS in wastewater discharges, even without new regulations from EPA. The agency could do this by issuing a guidance document to remind states of their existing Clean Water Act authorities to require PFAS monitoring and/or effluent limits in permits.

We urge EPA to revise ELGs and pretreatment standards for the OCPSF point source category and chrome-plating facilities, as well as for other industrial categories that are known to discharge PFAS into our nation's waters, as outlined in our comments above.

Steam Electric Power Generating Point Source Category

On July 26, 2021 EPA announced its intention to initiate a supplemental rulemaking process to strengthen the 2020 Steam Electric Reconsideration Rule. We urge EPA to act swiftly to close loopholes and to address weakness in the 2020 rule. Steam electric power plants—mostly coal—are responsible for the majority of arsenic, lead, mercury, selenium, and other toxic metals discharged into our nation's rivers, lakes, and streams every year, and have made it unsafe to eat fish from many contaminated rivers and lakes. Power plants also discharge high levels of nutrients and bromide that can create treatment challenges for drinking water systems.

[22] Duty to Provide letter from CDPHE to Suncor and Suncor PFAS monitoring data (both attached).
[23] Results of CDPHE Discharger Survey, December 2020 (attached).
[24] CDPHE Permit CO0048815 and factsheet (attached).

Specifically, EPA must close the bottom ash loophole created by the 2020 rule and reaffirm that zero discharge for bottom ash transport water is required. The majority of coal-fired power plants are already using dry handling or closed looped systems for their bottom ash transport water. EPA must also establish a zero discharge standard for flue gas desulfurization (FGD) wastewater. Only membrane filtration or similar zero-discharge technology can eliminate bromide pollution, which is a threat to drinking water and human health.

We believe EPA should propose a supplemental rule earlier than the Fall 2022 deadline it announced earlier this year. The record before EPA in the 2020 rulemaking clearly showed that technologies to eliminate both bottom ash transport water and FGD wastewater are available, achievable, and affordable. Requiring plants to use these technologies would eliminate more than a billion pounds of pollutants from entering water bodies every year, and provide hundreds of millions of dollars per year in public health and environmental benefits.

Oil and Gas Extraction Wastewater Management

We strongly encourage EPA to take steps to further study and increase protections from oil and gas extraction wastewater (aka produced water) in the final ELG 15 Plan. EPA has documented impacts and areas in need of further study from produced water in both its study of Centralized Waste Treatment facilities,[25] and the study of Hydraulic Fracturing and Drinking Water,[26] yet has largely not followed up on these findings with regulatory activity. A growing body of independent research[27] and state regulatory proceedings[28] indicate water quality problems can arise from produced water discharge that should compel EPA and states to adopt additional, more stringent protections. As additional states seek or obtain permitting authority (see Texas, New Mexico etc.), a likely increase in produced water discharge will likely occur. Yet most states do not have the capacity or resources for robust scientific research needed to set standards and ensure water quality. EPA must fill that role and set national standards to ensure the Clean Water Act does its job in protecting Waters of the United States.

In response to the solicitation for input on ongoing studies (section 6) and rulemakings (section 7), we offer the following suggestions which relate to produced water discharges.

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[25] U.S. Envtl. Prot. Agency, *Detailed Study of the Centralized Waste Treatment Point Source Category for Facilities Managing Oil and Gas Extraction Wastes*, EPA-821-R-18-004 (May 2018), *available at:* https://www.epa.gov/sites/production/files/2018-05/documents/cwt-study_may-2018.pdf.

[26] U.S. Envtl. Prot. Agency, *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States*, EPA-600-R-16-236Fa (Dec. 2016), *available at:* www.epa.gov/hfstudy.

[27] Warner, Nathaniel & A Christie, Cidney & B Jackson, Robert & Vengosh, Avner. *Impacts of Shale Gas Wastewater Disposal on Water Quality in Western Pennsylvania,* Environmental Science & Technology. (Oct 2013).

[28] Cal. Reg'l Water Quality Control B.d Central Valley Region, Cease and Desist Order R5-2019-0045 for Valley Water Management Company McKittrick 1 & 1-3 Facility Kern County, adopted June 6, 2019, *available at*: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/kern/r5-2019-0045.pdf.

Section 6. Ongoing Studies

6.3 Oil and Gas Extraction Wastewater Management

We support EPA's decision, as noted in this section, not to make changes to Sec. 437 to allow for more flexibility for increased discharge of produced water to Centralized Waste Treatment (CWT) facilities. However, work remains with regards to produced water and CWTs and generally, which should be addressed in the ELG program.

We view the 2018 Study of Oil and Gas Wastewater Management as an incomplete first step in studying the regulation of produced water discharges. EPA should follow up on the stakeholder engagement study with a more robust technical study of produced water discharge which should include:

- An overall review of the chemicals that may be present in produced water and the knowledge and information gaps around analytical methods and toxicity levels – as noted below and in the CWT study, many of these chemicals are unknown and/or lack vital information. Required disclosure of chemical additives is wholly lacking. Not a single state in the country requires comprehensive reporting of the identities of all chemicals used in oil gas wells for such purposes as drilling, routine maintenance and enhanced recovery. Only one state (California) requires public reporting of the identities of all chemicals used in well stimulation treatments regardless of trade secret claims.[29]
- A comprehensive inventory and accounting of all produced water discharges and an analysis of their downstream impacts and efficacy of regulatory protections. This information is necessary to begin to evaluate the effectiveness of existing permits and regulations in protecting water quality.
- A review of Sec 435, particularly the subsections which authorize produced water discharge in certain instances, and whether these provisions are adequately protective of water quality.
- A review of conventional oil and gas wastewater discharges to publicly owned treatment works (POTWs). In 2019 in its supplemental technical support document for unconventional oil and pretreatment standards, EPA concluded that wastewater generated from shale, tight, and conventional oil and gas formations can generate concentrations of pollutants that POTWs do not effectively treat, and that some of these pollutants and will pass through untreated and be discharged..[30] In the 2016 preliminary ELG 13 plan, EPA initially included an information solicitation of conventional POTW discharges, yet that language was not included in the final plan.[31] EPA should relaunch this effort.

EPA's 2018 Detailed Study of CWTs found several concerning aspects related to the efficacy of Sec 437. For example:

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[29] Calif. Public Resources Code § 3160.

[30] U.S. Envtl. Prot. Agency, *Supplemental Technical Support Document for the Effluent Limitations Guidelines and Standards for Unconventional Oil and Gas Operations.* (EPA-821-R-19-004) June 2019 p. 8-2.

[31] U.S. Envtl. Prot. Agency, *Preliminary 2016 Effluent Limitation Guidelines Program Plan.* (EPA-821-R-16-001), June 2016.

- "The current ELGs at 40 CFR Part 437 do not contain limitations for many of the pollutants commonly found in oil and gas extraction wastes. Many of these pollutants are not included on the current list of priority pollutants." (p 1-3)
- "EPA approved analytical methods do not exist for many constituents found in oil and gas extraction wastes. In addition, some constituents (such as total dissolved solids) found in oil and gas extraction wastes can interfere with EPA approved analytical methods and significantly affect the ability to detect and quantify the level of some analytes." (p. 1-3)

However, EPA has not taken steps to address these issues. EPA should follow up on these and other noted issues with regards to CWTs and produced water, both by initiating follow up study and/or rulemaking.

Rulemakings

In our view, the recommended studies would demonstrate the need for regulatory changes needed to protect water bodies from produced water discharges. Specifically, changes to the following regulations are warranted and would be supported with the studies listed above.

EPA should take steps to revise effluent guidelines for oil and gas extraction in Sec 435. In order to mitigate pathways of chemical exposure that could harm the environment and public health, these regulations must be updated to, at a minimum:

- Eliminate subcategory E (agricultural and wildlife water use subcategory) by expanding the zero discharge standard to all areas west of the 98th meridian until appropriate analytical methods and standards are developed that can ensure discharges are safe for humans and the environment.
- Update effluent guidelines for subcategory F (stripper well subcategory) as wastewater from low producing wells is not technically or chemically different from higher producing wells.
- Update effluent guidelines for subcategory H (coalbed methane subcategory).
- Establish zero discharge pretreatment standards for discharges to POTWs for conventional oil and gas wastewater consistent with the pretreatment standards for unconventional oil and gas wastewater.

As noted above, EPA found significant deficiencies with the regulation of CWTs that accept produced water. EPA should review Sec. 437 and begin a rulemaking to address those issues.

Environmental Justice

We support EPA incorporating equity and environmental justice into its ELGs planning and rulemaking process, which is required under Executive Order (E.O.) 12898, as well as under President Biden's 2021 E.O. 14008.

E.O. 12898 requires that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands."[32] President Biden's recent E.O. 14008 directs all federal agencies to "develop a strategy to address current and historical environmental injustice" and to "strengthen enforcement of environmental violations with disproportionate impact on underserved communities."[33]

In its Preliminary Plan 15, EPA states it is "evaluating the use of EJSCREEN, the agency's mapping and screening tool that combines demographic and environmental indicator information, to assess the proximity and potential impact of industrial discharges on underserved and underrepresented populations."[34] As part of the record for Preliminary Plan 15, EPA included an Environmental Justice Screening Analysis for Meat and Poultry Processing Facilities.[35] The agency analyzed the demographics of populations living within one mile of a wastewater discharge point of a Meat and Poultry Processing facility and found that the majority (81.6%) are minority, low-income, low education level, and/or linguistically isolated.[36] Most of these identified populations were also burdened with high levels of air pollution.[37]

This preliminary analysis shows that low-income and people of color populations are disproportionately impacted by wastewater discharges from Meat and Poultry Processing Plants. While this type of desktop analysis is a good first step toward evaluating how industrial wastewater dischargers are impacting environmental justice communities and we encourage EPA to conduct a similar analysis for all industrial point source categories, we are concerned that it does not adequately capture all environmental justice and equity considerations.

We recommend that EPA strengthen its environmental justice screening analysis by:

- Increasing the geographic proximity from wastewater discharge point. A one-mile radius does not adequately capture all potentially impacted populations, especially for pollutants such as PFAS or bromide that can travel long distances in water.

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[32] Presidential Documents, Exec. Order No. 12,898, § 1-101, 59 Fed. Reg. 7629, 7629 (Feb. 16, 1994).
[33] Tackling the Climate Crisis at Home and Abroad, Exec. Order No. 14,008, §§ 222(b)(i), 220(d), 86 Fed. Reg. 7619, 7630, 7631 (Feb. 1, 2021).
[34] Plan 15 at 5-19.
[35] U.S. EPA, *Environmental Justice Screening Analysis of Meat and Poultry Processing Facilities Memorandum,* September 8, 2021.
[36] Id at 7.
[37] Id.

- Considering the cumulative impact of multiple industrial wastewater discharges on the populations, as well as cumulative impact from other environmental factors (air pollutants, proximity to hazardous waste storage facilities, traffic, etc.)
- Measuring the number of impaired water bodies in environmental justice communities and evaluating the percentage of those impaired water bodies that have TMDLs.
- Evaluating compliance history for industrial wastewater dischargers to see if there are trends in frequency of inspections, violations and/or delayed enforcement actions. A recent study found that there was a delay in Clean Water Actions enforcement actions in communities with a higher percentage of poor and Hispanic residents.[38]
- Evaluating water bodies downstream of receiving waters that could be impacted by industrial discharges. Specifically, EPA should identify if downstream environmental justice communities rely on drinking water sources that are impacted by upstream industrial discharges and/or if those communities fish and/or recreate in impacted water bodies.

In addition to conducting an environmental justice screening analysis as part of the ELGS program planning process, EPA should also consider environmental justice when proposing new or revised ELGS by:

- Prioritizing revising or promulgating new ELGs for industrial point source categories whose wastewater discharges have disproportionate and adverse impacts on communities of color and low income communities.
- Evaluating all regulatory options to access whether there are differing impacts on communities of color and low income communities.
- Identifying any disproportionate and adverse impacts of different wastewater pollutants on low income communities and communities of color.
- Taking meaningful action to address any disproportionate and adverse impacts of the proposed regulatory options.

It is also essential that EPA go beyond merely analyzing environmental justice impacts. EPA should also conduct meaningful community engagement at every step of the ELGs planning process, from initial studies to promulgating final rules. In its Multi-Industry PFAS study EPA describes meeting with industry stakeholders, state agencies, and wastewater utilities, but there is no mention of meeting with environmental organizations or impacted communities. This is an unfortunate oversight and we urge EPA to consult directly with the communities that are most impacted by industrial discharges when gathering information on whether to revise or propose new ELGs for different industrial categories.

Additional recommendations for meaningful public engagement include:

- Holding stakeholder meetings on new, revised, or supplemental ELGs in the communities that are impacted by industrial wastewater discharges. In communities where English is not the primary language spoken at home, EPA should offer translations of presentations and written materials. Stakeholder meetings should be held during at least two different times, and include at least one evening session.

[38] Konisky et al, *Environmental injustice in Clean Water Act enforcement: racial and income disparities in inspection time*, Environ. Res. Lett. 16 (2021) 084020. (attached).

- Being transparent about setting clear timelines and meeting deadlines for when EPA intends to revise outdated ELGs or promulgate new ELGs.

We agree with EPA that "National ELGs and pretreatment standards can help ensure people in all areas in the vicinity of industrial direct and indirect discharges receive the same degree of protection from environmental and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn, and work."[39] To ensure concerns of environmental justice communities are addressed, they must have "equal access to the decision making process" at every step of ELGs planning, from initial studies, to drafting proposals, to promulgating final rules. In order to adequately address disparate and adverse impacts in ELGs planning and rulemaking, we urge EPA to adopt our recommendations.

Thank you for considering our comments. If you have any questions about our recommendations, please do not hesitate to contact us.

Sincerely,

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[39] EPA Preliminary Plan at 6-2.