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Re: [Docket ID No. EPA-HQ-OW-2021-0328](#)

September 3, 2021

Dear Ms. Christensen and Ms. Jensen,

Thank you for the opportunity to comment on *Docket ID No. EPA-HQ-OW-2021-0328 Request for Recommendations: Waters of the United States*. The [Johns Hopkins Center for a Livable Future](#) (CLF) is an interdisciplinary research center based at the Johns Hopkins Bloomberg School of Public Health. CLF applies science and systems thinking to help build healthy, just, equitable, resilient, and sustainable food systems.

The Clean Water Act (CWA) was enacted in 1972 to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.”ⁱ Since the 1970s, the EPA and the United States Army Corps of Engineers (USACE) have defined the “waters of the United States” (WOTUS), which establishes the scope of jurisdiction of the CWA. Unfortunately, the 2020 Navigable Waters Protection Rule (NWPR) narrowed the definition of jurisdictional waters and thereby weakened the CWA. We applaud the Biden Administration’s initiation of new rulemakings to revise the WOTUS definition. As Executive Order 13990 directed, the revised WOTUS rule should protect public health and the environment, prioritize environmental justice, and hold polluters accountable.ⁱⁱ

Our comment focuses on two specific issues for which your respective agencies have requested feedback on: *environmental justice interests* and *exclusions from the definition* in the prior rules. We first discuss the ramifications of the WOTUS definition for communities overburdened with environmental pollution from agriculture. Next, we review the implications of several agriculture-related exclusions that were expressly left out of the NWPR.

Environmental Justice Interests

Agriculture is a major contributor to the degradation of local community environments and water sources in the US. Large-scale industrial food animal production, animal feeding operations (AFO) and concentrated animal feeding operation (CAFO) facilities are particularly illustrative in this regard –and are associated with serious environmental and health impacts on proximal ecosystems and communities.ⁱⁱⁱ Research has shown that many of these communities bear the undue burdens of poor environmental quality, poor health and poor economic conditions and that this is experienced disproportionately more by communities of color, low-socioeconomic status and vulnerable populations.^{iv} These conditions are emblematic of the environmental justice issues faced by many rural communities.^v

The agricultural application of chemical fertilizers and manure are two key sources of environmental and water pollution that compromise our environment and harm public health^{vi}, disproportionately affecting vulnerable populations. Overapplication of manure and waste from these facilities can contaminate surface and groundwater with nitrates, drug residues, and other hazards^{vii,viii ,ix, x} and studies have demonstrated that humans can be exposed to waterborne contaminants from livestock and poultry operations through the recreational use of contaminated surface water and the ingestion of contaminated drinking water.^{xi,xii,xiii}

The EPA’s National Water Quality Monitoring Report to Congress in 2017 reported that nitrogen and phosphorous, primarily from agricultural processes, are the most widespread chemical stressors in rivers and streams (46% of which are in poor biological condition) and lakes, ponds and reservoirs (21% of which are in poor biological condition), conditions that can lead to eutrophication and dead zones in water bodies.^{xiv} The United States Geological Survey (USGS) has attributed 41% of the nitrogen in the Gulf of Mexico to farm fertilizers.^{xv} In the National Assessment of Water Quality project, the USGS found that at least one inorganic constituent exceeded a health benchmark in 3 to 50 percent of samples collected from the nation’s principal groundwater aquifers, and that nitrate was the only man-made source that exceeded known human-health benchmarks.

Exposure to elevated levels of nitrates in drinking water is associated with adverse health effects, including cancer.^{xvi,xvii ,xviii, xix} birth defects and other reproductive problems^{xx,xxi ,xxii, xxiii} thyroid problems,^{xxiv,xxv} and methemoglobinemia.^{xxvi, xxvii} Nutrient runoff (including nitrogen and phosphorus) has also been implicated in the growth of harmful algal blooms,^{xxviii,xxix} which may pose health risks for people who swim or fish in recreational waters, or who consume contaminated fish and shellfish. Exposure to algal toxins has been linked to neurological impairments, liver damage, gastrointestinal illness, severe dermatitis, and other adverse health effects.^{xxx} Harmful algal blooms are expected to occur more frequently due to climate change and nutrient pollution.^{xxxi}

The WOTUS definition has far reaching implications for environmental justice, even when only considering pollution from agriculture. As we discuss in the next section, the NWPR’s exclusion of categories associated with nutrient runoff from agriculture (particularly large-scale industrial food animal production) and manure application means that communities near these facilities will continue to suffer health consequences. There is plenty of evidence demonstrating harm to communities, occurring especially in communities with low levels of political power, low socioeconomic status and communities of color that have been traditionally exploited.^{xxxii,xxxiii} The scale and scope of the impacts are difficult to quantify, in part due to the lack of surveillance mechanisms to monitor community health indicators and identify where manure and production wastes are being spread and non-permitted large-scale industrial food animal production facilities exist.

Exclusions from the definition

The NWPR explicitly excludes a number of categories from the definition of navigable waters, including these four agriculture-related areas we wanted to highlight:

- Groundwater drained through subsurface drainage systems, such as drains in agricultural lands.
- Many farm and roadside ditches.
- Artificially irrigated areas, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease.
- Artificial lakes and ponds, including water storage reservoirs and farm, irrigation, stock watering, and log cleaning ponds, constructed or excavated in upland or in non-jurisdictional waters.^{xxxiv}

While groundwater influence and contributions to surface waters as currently provisioned in WOTUS are an exhaustively debated legal topic, the influence of surface application of agriculture and large-scale industrial food animal production liquid and solid manure and production wastes can have dramatic impacts on both surface and groundwater chemical, physical and biological properties, especially in areas with specific geological factors.^{xxxv}

Given the USGS estimate that almost half of the nation’s population depend on groundwater for their source of potable drinking water, it is important to protect both surface and groundwater from point and non-point sources, overapplication of agricultural fertilizers, manure and production waste. In review of the exclusions, outlined above, many of the categories surround agricultural community environments and may have a direct hydrological connection to groundwater, a jurisdictional surface water and watershed, and as such there is sufficient precedent that they are regulable. Additionally, millions of point sources of pollution remain outside the NPDES program because their discharges do not directly reach, or cannot be traced to, a surface water. These areas may be highly vulnerable to weather events, and frequency and intensity of storms due to extreme weather, and climate change

are highly likely to increase overland flow from point and non-point sources impacting surface waters.^{xxxvi} The impacts and volatility of climate change are evident and are expected to increase and intensify. To prevent the continued contamination of surface waters, the 2020 NWPR exclusions must be reversed, and programs must be reinstated that support federal and state implementation to protect the WOTUS.

Existing regulations do not adequately protect our waters and must be expanded to prevent degradation by agricultural operations and protect public health.^{xxxvii,xxxviii} **It would be a significant first step to clarify the WOTUS definition to reinclude the categories discussed above.** In future rulemakings, we recommend that your respective agencies should seek comment about enhanced permitting and enforcement under the CWA and approaches to address non-point source pollution from agriculture, specifically large-scale industrial animal production.

Including the four categories above (drains in agricultural lands, farm ditches, artificially irrigated areas, artificial lakes and ponds) in the WOTUS definition is consistent with a watershed approach that is necessary to promote clean water and is consistent with the intent of the CWA. We urge your agencies to reinstate these excluded categories in the WOTUS definition.

Please contact us if you have any further questions or we can provide any additional information. Thank you again for the opportunity to provide comment. We appreciate your work to ensure the integrity of our nation's water supply and protect human health and the environment.

Sincerely,

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ⁱ 33 U.S.C. § 1251(a). Link: <https://www.govinfo.gov/content/pkg/USCODE-2018-title33/pdf/USCODE-2018-title33-chap26.pdf>

ⁱⁱ Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis. Executive Order 13990. Link: <https://www.federalregister.gov/documents/2021/01/25/2021-01765/protecting-public-health-and-the-environment-and-restoring-science-to-tackle-the-climate-crisis>

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