

BEFORE THE UNITED STATES ARMY CORPS OF ENGINEERS

**PETITION TO HALT THE APPROVAL OF
CARBON DIOXIDE PIPELINES UNDER NATIONWIDE PERMIT 58
AS CONTRARY TO THE PUBLIC INTEREST**

November 6, 2023

Submitted by

**354 ENVIRONMENTAL JUSTICE, CLIMATE, CONSERVATION,
PUBLIC HEALTH, INDIGENOUS, FAITH-BASED, AND
COMMUNITY ORGANIZATIONS**

I. Executive Summary

In its January 13, 2021, rulemaking, *Reissuance and Modification of Nationwide Permits* (“Final Rule”), the U.S. Army Corps of Engineers (“Corps”) removed carbon dioxide (“CO₂”) pipelines from the scope of Nationwide Permit (“NWP”) 12 and created a new NWP 58 for pipelines that transport water, sewage, and “other substances.”¹ Under the Final Rule, CO₂ pipelines would henceforth be authorized under NWP 58.²

NWPs are general permits that authorize certain activities under Section 404 of the Clean Water Act (“CWA”) and Section 10 of the Rivers and Harbors Act of 1899 (“RHA”).³ NWPs eliminate the need for any further review for categories of activities that “are similar in nature, cause only minimal adverse environmental effects when performed separately, and have only minimal cumulative adverse effect on the environment.”⁴

This petition seeks a rulemaking removing CO₂ pipelines from the scope of NWP 58. First, CO₂ pipelines are in no way “substantially similar in nature” to other utility line activities authorized under NWP 58. To the contrary, CO₂ pipelines often stretch thousands of miles and cross thousands of water bodies, posing significant and unique environmental, health and safety risks to adjacent communities, wildlife, waterways, and the environment. The one-size-fits-all approach of nationwide permits hinders the public’s ability to obtain information and provide meaningful analysis and input on the unique dynamics pipeline crossings will have on individual waterways. Because of the enormous potential for direct and indirect impacts to people and the environment, these projects should not be reviewed under a general, nationwide permit.

Second, in issuing NWP 58, the Corps did not conduct any meaningful analysis of the potential impacts of large-scale carbon pipeline development, including the required public interest review required by Corps regulation as well as review under the National Environmental Policy Act and Endangered Species Act. In fact, neither the Final Rule, the notice of proposed rulemaking or the Corps decision document mention CO₂ pipelines *at all* except for only a brief statement clarifying their inclusion in the new NWP 58.⁵ The Corps decision to include CO₂ pipelines in NWP 58 without this necessary analysis is arbitrary and capricious and must be rectified.

Third, the expansion and development of CO₂ pipelines following the adoption of supercharged subsidies for carbon capture and storage (“CCS”)⁶ in the Inflation Reduction Act (“IRA”)⁷ poses significant implications for climate change. The expanded and enhanced 45Q tax credit for

¹ U.S. Army Corps of Eng’rs, *Reissuance and Modification of Nationwide Permits*, 86 Fed. Reg. 2,744 (Jan. 13, 2021).

² *Id.* at 2,771; U.S. Army Corps of Eng’rs, *Decision Document: Nationwide Permit 58* at 9 (2021), <https://usace.contentdm.oclc.org/digital/api/collection/p16021coll7/id/16849/download> [hereinafter “NWP 58 Decision Document”].

³ Federal Water Pollution Control Act (“Clean Water Act”), 33 U.S.C. § 1251 *et seq.*; Rivers and Harbors Act of 1899, 33 U.S.C. § 401 *et seq.*

⁴ 86 Fed. Reg. at 2,745; 33 U.S.C. § 1344(e)(1).

⁵ 86 Fed. Reg. at 2,771, 2,819. *See also generally* U.S. Army Corps of Eng’rs, *Notice of Proposed Rulemaking*, 86 Fed. Reg. 57,298 (Sept. 15, 2020) [hereinafter “Proposed Rule”]; NWP 58 Decision Document, *supra* note 2.

⁶ “CCS” is used throughout this petition to refer to various carbon capture technologies, including carbon capture and storage, carbon capture and sequestration, and carbon capture, use and storage/sequestration (aka “CCUS”).

⁷ Inflation Reduction Act, Pub. L. No. 117–169 (2022).

carbon capture has triggered a boom in CO₂ pipeline buildout, as an accompanying component of CCS technologies. But CCS is a dangerous delay tactic championed by the fossil fuel industry and other polluters to continue business as usual while taking resources away from the needed transition to clean, cheaper renewable energy. In its public interest review for NWP 58, the Corps utterly and completely failed to consider how authorizing CO₂ pipeline projects for CCS will impact the climate.⁸

While CCS technology is touted as a tool that will improve air quality and combat the climate crisis, it actually has the potential to increase emissions and prolong the use of fossil fuels.⁹ CCS depends on the production of greenhouse gases from the attached fossil fuel facility and is frequently used to extract even more fossil fuels through a process called enhanced oil recovery (“EOR”).¹⁰ The Intergovernmental Panel on Climate Change (“IPCC”) modeled pathway with the best chance of keeping warming below 1.5°C makes no use of fossil fuels with CCS or bioenergy with CCS, and employs limited to zero use of engineered carbon removal technologies.¹¹ Instead, the success of achieving that pathway requires a rapid phaseout of fossil fuels along with only limited CO₂ removal by natural carbon sequestration methods, such as reforestation and enhanced soil remediation.¹² Because CCS is unnecessary, ineffective, and dangerous, CCS is not a climate solution that will prevent the worsening harms of the climate crisis, and that new CCS infrastructure (like CO₂ pipelines) is contrary to the public interest.

Due to the IRA’s expansion of the 45Q production tax credit for carbon capture, NWP 58 will be frequently sought and obtained for harmful fossil fuel and CCS infrastructure projects that will be funded by taxpayer dollars and entirely avoid environmental review. For example, Summit Carbon Solutions has submitted preconstruction notices to the Corps seeking permitting approval under NWP 58 for its proposed \$4.5 billion, 2,100-mile-long Midwest Carbon Express CO₂ pipeline project to transport captured CO₂ from ethanol facilities in Iowa, Nebraska, Minnesota, and South Dakota to an underground storage site in North Dakota.¹³ Summit is estimated to garner nearly \$12.2 billion in energy tax credits (including the 45Q production tax credit).¹⁴

⁸ See generally NWP 58 Decision Document, *supra* note 2.

⁹ See Emily Grubert and Frances Sawyer, *US Power Sector Carbon Capture and Storage Under the Inflation Reduction Act Could Be Costly with Limited or Negative Abatement Potential*, 3 *Env’tl Research: Infrastructure and Sustainability* 1 (Mar. 10, 2023), <https://iopscience.iop.org/article/10.1088/2634-4505/acbed9>.

¹⁰ Ctr. for Int’l Env’tl. L., *Confronting the Myth of Carbon-Free Fossil Fuels: Why Carbon Capture Is Not a Climate Solution*, 8 (2021), <https://www.ciel.org/wp-content/uploads/2021/07/Confronting-the-Myth-of-Carbon-Free-Fossil-Fuels.pdf> [hereinafter “CIEL Report”]. See also Dep’t of Energy, 9.2 *Commercial Carbon Dioxide Uses: Carbon Dioxide Enhanced Oil Recovery*, Nat’l Energy Technology Laboratory, <https://netl.doe.gov/research/coal/energy-systems/gasification/gasifiedia/eor> (last accessed Sept. 1, 2023).

¹¹ Intergovernmental Panel on Climate Change, *Summary for Policymakers*, in *Global Warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*, 14 (Masson-Delmotte et al. eds., 2018), Section C.1.1., Figure SPM 3b (Pathway 1), <https://www.ipcc.ch/sr15/> [hereinafter “IPCC, Global Warming of 1.5°C”]. See also IPCC, *Global Warming of 1.5°C*, *supra*, at Ch. 2.3.3 and Table 2.SM.12.

¹² CIEL Report, *supra* note 10, at 2-3.

¹³ Pipeline Fighters Hub, Summit Midwest Carbon Express CO₂, <https://pipelinefighters.org/pipelinefighths/summit-carbon-solutions-midwest-carbon-express/>.

¹⁴ Paul Blackburn, *The Inflation Reduction Act May Save the Fossil Fuel Industry*, The Hill (Aug. 14, 2022), <https://thehill.com/opinion/energy-environment/3598964-the-inflation-reduction-act-may-save-the-fossil-fuel-industries/>.

Similarly, Navigator CO₂ Ventures' proposed Heartland Greenway CCS project would have required a Corps permit under NWP 58 for pipelines to transport carbon waste approximately 1,300 miles across five states to a proposed sequestration location in southern Illinois.¹⁵ Navigator CO₂ Ventures also submitted preconstruction notices to the Corps under NWP 58,¹⁶ though the project has since been cancelled. However, these projects require significant scrutiny to protect the public interest and the environment from harm, and should not be considered under a nationwide permit.

Consistent with existing law, science, and President Biden's directive to respond to the climate emergency and advance environmental justice,¹⁷ this petition requests that the Corps issue an immediate moratorium on the approval of permits for CO₂ pipelines and revise NWP 58 to exclude CO₂ pipelines, which should be considered individually due to their great potential to adversely affect people and the environment.

Even if CO₂ pipelines are considered for individual permits, however, the Corps may not issue any permits under the CWA or RHA that are "contrary to the public interest."¹⁸ CO₂ pipelines for CCS projects should fail any meaningful public interest test due to their significant climate change and community environmental health and safety impacts, discussed further below. For these reasons, petitioners also ask the Corps to promulgate a science-based rule establishing a rebuttable presumption that the issuance of permits for CO₂ pipelines for CCS projects, is contrary to the public interest, and revoke any permits already issued that fail to meet this public interest standard.

II. Notice of Petition

Pursuant to the right to petition the government guaranteed by the Administrative Procedure Act, including Title 6 of the United States Code Sections 553(e) and 555(b), and the First Amendment of the Constitution of the United States, the undersigned organizations hereby petition the U.S. Army Corps of Engineers to:

- (1) Revoke the Nationwide Permit 58 for CO₂ pipelines;
- (2) Require the use of individual permits for CO₂ pipelines, pursuant to Title 33, Code of Federal Regulations, Section 1344(e)(1) (Certification) and Title 33 Code of Federal Regulations, Section 330.1(b) (Nationwide Permits);
- (3) Institute a moratorium on such permits while promulgating a science-based rule that fully considers the climate, wildlife, and environmental justice harms of CO₂ pipelines and associated CCS projects, and the best available scientific information, including from the Intergovernmental Panel on Climate Change, the U.S. Global Change Research Program,

¹⁵ Pipeline Fighters Hub, Navigator Heartland Greenway CO₂, <https://pipelinefighters.org/pipelinefights/navigator-co2-ventures-heartland-greenway/>.

¹⁶ Navigator Heartland Greenway Pipeline System: Application Submitted Under SDCL Chapter 49-41B, 5, <https://puc.sd.gov/commission/dockets/HydrocarbonPipeline/2022/HP22-002/Application.pdf>.

¹⁷ President Joe Biden, *Tackling the Climate Crisis at Home and Abroad*, Exec. Order No. 14,008, (Jan. 27, 2021), <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/> (declaring "the policy of my Administration to organize and deploy the full capacity of its agencies to combat the climate crisis to implement a Government-wide approach that reduces climate pollution in every sector of the economy").

¹⁸ 33 C.F.R. § 320.4(a).

and other literature cited herein, establishing a rebuttable presumption that permits for CCS infrastructure such as CO₂ pipelines are contrary to the public interest and therefore shall not be issued pursuant to Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and Title 33, Code of Federal Regulations, Section 320.4; and

- (4) Suspend and revoke any permits already issued under NWP 58 for CCS infrastructure, such as CO₂ pipelines, that were unlawfully issued as contrary to the public interest, pursuant to Title 33, United States Code, Section 1344 and Title 33, Code of Federal Regulations, Section 325.7(c) & (d).

Due to the grave urgency of the climate crisis, Petitioners request an acknowledgement of receipt and initial response to this petition within 30 days. Should the Corps unlawfully withhold or unreasonably delay its response to this petition, Petitioners may resort to the judiciary to compel agency action.¹⁹

III. Legal Framework

Congress enacted the Clean Water Act (“CWA”) to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”²⁰ The CWA specifies that it is “the national goal that the discharge of pollutants into the navigable waters be eliminated.”²¹ To accomplish these goals, Section 404 of the CWA generally prohibits the discharge of any pollutant—including dredged or fill material—into waters of the United States unless authorized by a permit.²²

Section 404 of the CWA gives the Corps primary responsibility for permitting activities that involve the discharge of dredged or fill materials into U.S. waters.²³ The Corps oversees the Section 404 permitting process and must also comply with guidelines promulgated by the U.S. Environmental Protection Agency (“EPA”), which are incorporated into the Corps’ own regulations.²⁴ The objective of these “404(b)(1) guidelines” is to prevent “unacceptable adverse impact[s]” to the nation’s aquatic ecosystems from the discharge of dredged or fill material.²⁵

Consistent with the goal of eliminating water pollution, the CWA prohibits the issuance of any permit for projects that do not meet specific environmental criteria and, critically, are contrary to the public interest.²⁶ In many cases, projects that trigger the need to apply for a dredge and fill permit under Section 404 of the CWA also require a permit under Section 10 of the River and Harbors Act.

Section 10 of the River and Harbors Act of 1899 (“RHA”) declares it unlawful to build “any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any port, roadstead, haven, harbor, canal, navigable river, or other water of the United States, outside established harbor lines, or where no harbor lines have been established,” or “to excavate or fill,

¹⁹ 5 U.S.C. § 706(1).

²⁰ 33 U.S.C. § 1251(a).

²¹ *Id.* § 1251(a)(1).

²² *Id.* §§ 1311(a), 1344(a)–(e).

²³ *Id.* § 1344.

²⁴ *Id.* § 1344(b)(1); 33 C.F.R. §§ 320.4(b)(4), 325.2(a)(6).

²⁵ 40 C.F.R. § 230.1(c).

²⁶ 33 C.F.R. § 320.4.

or in any manner to alter or modify the course, location, condition, or capacity of” any navigable water without a permit from the Corps.²⁷

A. *Nationwide Permits*

Under the CWA, Congress established a default prohibition on the discharge of pollutants into U.S. waters.²⁸ This broad prohibition is designed to achieve the overall purpose of the Act, which is to restore the “chemical, physical, and biological integrity of the Nation’s waters” and *eliminate* water pollution.²⁹ The Act provides for limited exceptions to the general prohibition.

One such exception is available for categories of “similar” activities that “will cause only minimal adverse environmental effects when performed separately and will have only minimal cumulative adverse effect on the environment,” for which the Corps may issue a Nationwide Permit (“NWP”).³⁰ To determine whether an NWP is appropriate, the Corps must comply with several environmentally protective prohibitions. For example, the Corps may not issue a permit for the discharge of dredge or fill material that will cause or contribute to violations of state water quality standards, jeopardize species listed under the Endangered Species Act (“ESA”), or violate marine sanctuary requirements.³¹ Further, the Corps may not approve permits that “will cause or contribute to significant degradation of the waters of the United States.”³² The Corps must also demonstrate that steps have been taken to “minimize potential adverse impacts” of any discharge on the aquatic ecosystem.³³

NWPs are a type of general permit that offer a streamlined alternative to the individual permitting process and can be used to satisfy the permit requirements of the CWA and the RHA.³⁴ NWPs are issued for up to five years, at which point they are either reissued or expire.³⁵ The Corps also has the power to revoke an NWP.³⁶

NWPs are “designed to regulate with little, if any, delay or paperwork certain activities having minimal impacts.”³⁷ When the Corps issues an NWP, it conducts a national scale assessment for the permit pursuant to the National Environmental Policy Act (“NEPA”).³⁸ Once an NWP is issued, specific projects that meet the terms and conditions of that NWP may proceed without obtaining an individual permit or undergoing individual NEPA review. Projects permitted under an NWP are not subject to project-specific public participation and do not undergo the more rigorous, site specific environmental and public interest review to which individual permits are

²⁷ 33 U.S.C. § 403. *See also* 33 C.F.R. § 320.2(b); *United States v. Hernandez*, 979 F. Supp. 70, 76 (D.P.R. 1997) (finding the RHA is “an instrument for the enforcement of environmental policy” prohibiting activities that impair ports, channels, and other navigable waters).

²⁸ 33 U.S.C. § 1311(a) (“the discharge of any pollutant by any person shall be unlawful”).

²⁹ *Id.* §§ 1251(a), 1251(a)(1).

³⁰ 33 U.S.C. § 1344(e)(1); 33 C.F.R. § 322.2(f).

³¹ 40 C.F.R. § 230.10(b).

³² *Id.* § 230.10(c).

³³ *Id.* § 230.10(d).

³⁴ *See* 33 C.F.R. § 330.1(b).

³⁵ 33 U.S.C. § 1344(e)(2); 33 C.F.R. § 330.6(b).

³⁶ 33 C.F.R. § 330.1(b).

³⁷ *Id.* § 330.1(b).

³⁸ *See generally*, NWP 58 Decision Document, *supra* note 2.

subject.³⁹ “In most cases” projects that meet the specific terms and conditions of an NWP may be constructed without even notifying the Corps.⁴⁰ In some cases, applicants must submit a preconstruction notification to the relevant Corps district engineer and hold off on construction until the district engineer verifies that the project meets the NWP’s terms and conditions.⁴¹ If the district engineer determines that the project does not comply with the NWP’s terms and conditions, they must deny verification; the applicant may then seek authorization under the individual permitting process.⁴² If the district engineer simply fails to respond to the preconstruction notification within 45 days, then generally “[t]he permittee may presume that his project qualifies for the NWP.”⁴³

B. Nationwide Permit 58

In its January 13, 2021, rulemaking *Reissuance and Modification of Nationwide Permits*, 86 Fed. Reg. 2,744 (“Final Rule”), the Corps reorganized its various nationwide permits. In the Final Rule, it limited the scope of its existing NWP 12 to oil and gas pipelines, established NWP 57 to permit electric power lines, and, most relevant here, reallocated all other pipelines—including CO₂ pipelines⁴⁴—under NWP 58.⁴⁵ In its Proposed Rule, the Corps stated that it intended to provide separate NWPs for categories of pipelines “because of the differences between oil and natural gas pipelines, electric and telecommunication lines, and utility lines that carry water and other substances.”⁴⁶ The Final Rule justified the creation of separate NWPs for different types of projects because doing so would, *inter alia*, “ensure that the categories of activities authorized by these NWP are substantially similar in nature and that they will result in no more than minimal individual and cumulative adverse environmental effects,” “help reduce regulatory uncertainty,” “provide diversity and stability to the NWP program and allow Corps districts to continue to authorize categories of utility line activities by an NWP in the event that one of the three NWPs is invalidated or stayed by a federal court,” and “benefit the people who rely on electric utility lines and telecommunication lines and utility lines for water and other substances to deliver energy, information, entertainment, potable water, and other goods and services.”⁴⁷

Thus, the Corps’ creation of NWP 58 was based on a need to group pipeline projects that are “substantially similar in nature,” and decrease regulatory uncertainty for regulated entities.⁴⁸ However, the Final Rule neither evaluated whether CO₂ pipeline projects are “substantially similar” to the water, sewer, and other pipeline projects included in NWP 58 nor evaluated the wildlife and environmental impacts of authorizing nationwide permitting for CO₂ pipelines and

³⁹ See 33 C.F.R. § 323.3(a).

⁴⁰ *Id.* § 330.1(e)(1); see also *id.* § 330.1(c).

⁴¹ *Id.* § 330.6(a)(1); see also *id.* § 330.1(e)(1).

⁴² *Id.* § 330.6(a)(2).

⁴³ *Id.* § 330.1(e)(1).

⁴⁴ See NWP 58 Decision Document, *supra* note 2, at 9 (noting NWP 58 would cover, *inter alia*, “[u]tility lines constructed to convey . . . carbon dioxide”).

⁴⁵ 86 Fed. Reg. at 2,744.

⁴⁶ 86 Fed. Reg. at 57,322.

⁴⁷ 86 Fed. Reg. at 2,778.

⁴⁸ *Id.*

associated infrastructure in accordance with NEPA and the ESA.⁴⁹ Instead, the Final Rule merely recognized that CO₂ pipelines would be included within the catch-all NWP 58, without further discussion or evaluation.⁵⁰

C. Individual Permits

The CWA also authorizes the Corps to issue individual, site-specific permits for the discharge of dredged or fill material into waters of the United States on a case-by-case basis,⁵¹ but it must overcome the Act's presumption against discharges into waterways and the destruction of wetlands.⁵² Similarly, the RHA authorizes the Corps to issue individual site-specific permits for activities affecting navigable waters,⁵³ but Congress's ultimate intention in creating that regime was to protect those waters.⁵⁴ As emphasized in *Buttrey v. United States*, which upheld the Corps' denial of a Clean Water Act Section 404 permit for a development project, "the Corps shall begin its analysis of a proposed project with the presumption that the 'unnecessary alteration or destruction of [wetlands] should be discouraged as contrary to the public interest.'"⁵⁵ This presumption is "very strong."⁵⁶

To overcome this presumption discouraging the issuance of individual permits, the Corps must evaluate whether certain environmentally protective criteria are met. These criteria include: provisions designed to protect wetlands; fish and wildlife; water quality; historic, cultural, scenic, and recreational values; coastal zones; marine sanctuaries; floodplain management; water supply and conservation; and economics—all of which are severely adversely impacted by climate change, as discussed in more detail *infra*.⁵⁷

Along with the obligation to demonstrate it has met these criteria, the Corps may not issue an individual permit under CWA Section 404 unless there is no practicable alternative to the proposed discharge that would have "less adverse impact" on the aquatic ecosystem.⁵⁸ Where the discharge is not water dependent and is proposed for a special aquatic site, such as a wetland,

⁴⁹ *N. Plains Res. Council v. U.S. Army Corps of Eng'rs*, 454 F. Supp. 3d 985, 992 (D. Mont. 2020) ("Project-level [ESA] review does not relieve the Corps of its duty to consult on the issuance of nationwide permits at the programmatic level.")

⁵⁰ 86 Fed. Reg. at 2,771, 2,819.

⁵¹ 33 U.S.C. § 1344(a).

⁵² 33 C.F.R. § 320.4(b).

⁵³ 33 U.S.C. § 403

⁵⁴ See *Zabel v. Tabb*, 430 F.2d 199, 211 (5th Cir. 1970) *cert. denied*, 401 U.S. 910 (1971) ("The intent of the three branches has been unequivocally expressed: The Secretary must weigh the effect a dredge and fill project will have on conservation before he issues a permit lifting the Congressional ban.").

⁵⁵ 690 F.2d 1170, 1180 (5th Cir. 1982) *cert. denied*, 461 U.S. 927 (1983); see also 33 C.F.R. § 320.4(b)(1).

⁵⁶ 690 F.2d at 1180 (emphasis in original). In *Buttrey*, the court upheld the Corps' denial of an individual permit as contrary to the public interest, rejecting the applicant's assertion that the permit should be issued because "the 40 acres at stake in this lawsuit are a 'mere flyspeck' in relation to the entire [] watershed." *Id.* at 1180. See also *Hough v. Marsh*, 557 F. Supp. 74 (D. Mass. 1982) (observing that CWA regulations applying to dredge and fill permits "[a]t the outset [] announce a general presumption against discharge").

⁵⁷ 33 C.F.R. § 320.4. See also 40 C.F.R. §§ 230.10(b)-(d) (dredge and fill permits should not be issued if doing so would threaten human health and welfare, aquatic life, ecosystem diversity, or other environmental criteria, or violate state water quality standards, Endangered Species Act, or the Marine Protection, Research, and Sanctuaries Act).

⁵⁸ 40 C.F.R. § 230.10(a).

Corps regulations state that “practicable alternatives . . . are presumed to be available, unless clearly demonstrated otherwise.”⁵⁹

D. Public Interest Test

The Department of the Army, which encompasses the Corps, may not issue any permit—including individual and nationwide permits under CWA section 404 and RHA Section 10 permits—without completing an in-depth “public interest review” evaluating “the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest.”⁶⁰ The Corps’ decision as to whether a permit is in the public interest “should reflect the national concern for both protection and utilization of important resources.”⁶¹ Ultimately, the Corps may not grant a permit if it is found to be “contrary to the public interest.”⁶²

The Corps’ public interest review must consider the whole project and the construction and operational impacts of all components, including pipelines, storage facilities, export terminals, and any attached CCS projects themselves which are certainly, at a minimum, relevant cumulative impacts that the Corps must consider.⁶³

In *Columbia Riverkeeper v. U.S. Army Corps of Engineers*, the court reviewed the Corps’ issuance of CWA Section 404 and RHA Section 10 permits to the Kalama Manufacturing and Marine Export Facility.⁶⁴ The court rejected the Corps’ contention that it need only evaluate whether one portion of the Kalama project that necessitated a Corp permit (the export terminal) was in the public interest and that it need not consider the impacts of the associated methanol refinery, which the Corps argued was not within their jurisdiction.⁶⁵ The court disagreed, noting that “[u]nder 33 C.F.R. § 320.4(a)(1), the Corps is directed to consider evaluation of ‘cumulative impacts,’” and so consideration of the impacts of the Methanol Refinery attached thereto was required.⁶⁶ Thus, the Corps must consider the impact of a project in its entirety, not just the pipeline itself, and it cannot justify a failure to evaluate with the duties of another government agency.

Another requirement of the Corps’ public interest review is that “[t]he benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable

⁵⁹ *Id.* § 230.10(a)(3).

⁶⁰ 33 C.F.R. § 320.4(a).

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Columbia Riverkeeper v. U.S. Army Corps of Eng’rs*, No. 19-6071, 2020 U.S. Dist. LEXIS 219535, at *22-23 (W.D. Wash. Nov. 23, 2020), *motion for reconsideration denied*, 2020 U.S. Dist. LEXIS 231611 (W.D. Wash. Dec. 9, 2020), *appeal dismissed*, 2021 U.S. App. LEXIS 22400 (9th Cir., Jun. 16, 2021).

⁶⁴ *Id.* at *2.

⁶⁵ *Id.* at *9.

⁶⁶ *Id.* at *22. *See also Fox Bay Partners v. U.S. Army Corps of Eng’rs*, 831 F. Supp. 605, 610 (N.D. Ill. 1993) (upholding the Corps’ denial of CWA Section 404 and RHA Section 10 permits to a developer despite some noted beneficial effects because of the project’s adverse and cumulative effects on the environmental and “substantial public opposition to the proposal”).

detriments.”⁶⁷ The CWA does not define “benefits” or “detriments.” But the court found in *Wyoming Outdoor Council v. U.S. Army Corps of Engineers* that the Corps must consider as the project’s detriments all foreseeable impacts—including cumulative impacts.⁶⁸ Additionally, the law prohibits giving “unjustifiably greater weight” to the purported benefits of a project.⁶⁹ As the court reiterated in *Columbia Riverkeeper* when striking down the Corps’ public interest review, the Corps cannot rely “on benefits of the Project in worldwide reduction of greenhouse gases without conducting an assessment of the detriments worldwide.”⁷⁰

In conducting this balancing and deciding whether the permitted project is in the public interest, the Corps must consider:

[a]ll factors which may be relevant to the proposal . . . including the cumulative effects thereof . . . [including] conservation, economic, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.⁷¹

Courts have held that the fact that ecological concerns “dominate” the public interest review “may and should” drive the Corps decision on permits.⁷² Further, the Corps must consider the following “general criteria” in conducting the public interest review:

- (1) the “relative extent of the public and private need for the proposed structure or work;”
- (2) “[w]here there are unresolved conflicts as to resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work;” and
- (3) the “extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited.”⁷³

⁶⁷ 33 C.F.R. § 320.4(a)(1).

⁶⁸ 351 F. Supp. 2d 1232, 1256 (D. Wyo. 2005) (holding that the Corps’ public interest review impermissibly ignored cumulative impacts).

⁶⁹ *Hough v. Marsh*, 557 F. Supp. 74, 86 (D. Mass. 1982) (striking down public interest review that looked one-sidedly at economic benefits but ignored adverse impacts).

⁷⁰ 2020 U.S. Dist. LEXIS 2196535 at *20-23; *see also Hough*, 557 F. Supp. 74 at 86 (striking down public interest review in part because the Corps considered the project’s positive economic benefits but “sidestepped any consideration of adverse economic effects” and did not consider cumulative effects from existing and future projects).

⁷¹ 33 C.F.R. § 320.4(a)(1). The regulation’s list of factors is considered illustrative, not exhaustive. *Water Works & Sewer Bd. v. U.S. Dep’t of Army*, 983 F. Supp. 1052, 1075 n17 (N.D. Ala. 1997) (“This is not an exhaustive list, but solely an indicator of the factors that the Corps may find relevant to consider.”); *Hough*, 557 F. Supp. at 81 (“This [public interest] provision recites a non-exhaustive list of some sixteen factors . . .”). *See also Buttrey*, 690 F.2d at 1180 (“This review considers virtually all aspects of a project.”).

⁷² *United States v. Members of the Estate of Boothby*, 16 F.3d 19, 23 (1st Cir. 1994).

⁷³ 33 C.F.R. §§ 320.4(a)(2)(i)-(iii).

This public interest test is broad in scope by design and born out of Congress' intent that the Corps use its power to deny permits when necessary to address ecological concerns. Through the CWA Section 404 and RHA Section 10 programs the Corps has a clearly demonstrated duty to protect the environment.

In 1968, the Corps promulgated regulations requiring that engineers deciding whether to issue a permit under the RHA consider "the effects of permitted activities on the public interest including effects upon water quality, recreation, fish and wildlife, pollution, our natural resources, as well as the effects on navigation."⁷⁴ Subsequently, the House Committee on Government Operations emphasized that the Corps "should instruct its district engineers . . . to increase their emphasis on how the work will affect *all aspects of the public interest*, including not only navigation but also conservation of natural resources, fish and wildlife, air and water quality, esthetics, scenic view, historic sites, ecology, and other public interest aspects of the waterway."⁷⁵ The Fifth Circuit characterized the purpose of the public interest test as being to:

deny that which might have been granted routinely five, ten, or fifteen years ago before man's explosive increase made all, including Congress, aware of civilization's potential destruction from breathing its own polluted air and drinking its own infected water and the immeasurable loss from a silent-spring-like disturbance of nature's economy.⁷⁶

After this decision, the Corps "issued regulations interpreting its statutory authority as empowering it to take into account a full range of economic, social, and environmental factors."⁷⁷ These regulations broadened the Corps' consideration to include many factors beyond the agency's previous short-sighted focus on navigation, and extended the public interest test to permits issued under the CWA as well as the RHA.⁷⁸

In sum, Congress, agency regulations, and courts have made clear that the Corps must consider the full scope of environmental factors and impacts of a project when deciding whether issuing a permit is in the public interest. Undeniably, when considering permits for CCS infrastructure projects, such as CO₂ pipelines, the Corps must likewise consider all aspects of their contribution to climate change and resulting harm.

IV. The Approval of CWA Section 404 and RHA Section 10 Permits for CO₂ Pipelines Is Contrary to the Public Interest.

The approval of CCS infrastructure such as CO₂ pipelines will cause climate and environmental justice harms and lock in fossil fuel dependence for decades to come. The scientific evidence is overwhelmingly clear that every factor of the Corps' public interest test, including those factors

⁷⁴ 33 C.F.R. § 209.330(a) (1967).

⁷⁵ U.S. House Committee on Government Operations, *Our Waters and Wetlands: How the Corps of Engineers Can Help Prevent Their Destruction and Pollution*, H. R. Rep. No. 91-917 (1970), at 5 (emphasis added).

⁷⁶ *Zabel v Tabb*, 430 F.2d 199, 201 (5th Cir. 1970).

⁷⁷ *United States v. Alaska*, 503 U.S. 569, 581-82 (1992); *see also generally* *Regulatory Programs of the Corps of Engineers*, 42 Fed. Reg. 37,122 (July 19, 1977) (providing notice of the regulations issued).

⁷⁸ *Permits for Discharges of Dredged or Fill Material into Waters of the United States*, 42 Fed. Reg. 37,122 (Jul. 19, 1977); 33 C.F.R. § 320.4(a)(1) (expressly applying public interest test to all Department of the Army permits).

specifically enumerated in the non-exhaustive list provided by 33 C.F.R. § 320.4, will be implicated by the approval of these CO₂ pipelines. CCS is a dangerous delay tactic championed by polluting industries to continue dependence on their dirty products, such as biomass and fossil fuels. CCS projects are generally uneconomical without public subsidies, rely on faulty, unproven technology, and lack sufficient federal oversight and environmental review. The approval of CCS infrastructure projects not only adds to the severe and ongoing harms of climate change but could also make it impossible to limit warming to 1.5°C, and thus impossible to avoid truly apocalyptic damages.

A. Carbon Capture Is Fossil Fuels in Sheep's Clothing: A False Solution to the Climate Crisis

The IPCC modeled pathway to the best chance of limiting warming to 1.5°C makes no use of fossil fuels with CCS or bioenergy with CCS and limited to no use of engineered CO₂ removal technologies.⁷⁹ Although CCS technology is touted as a tool that will improve air quality and combat the climate crisis, it has the potential to increase emissions and preserve the longevity of the fossil fuel industry.

CCS refers to the process of collecting or capturing CO₂ generated by industrial processes such as power production and then transporting the captured emissions to sites where it is either used for industrial processes or injected underground.⁸⁰ In the United States, more than 95% of all deployed CCS capacity has been used for enhanced oil recovery (“EOR”), the process of taking captured CO₂ and injecting it back into depleted oil wells to further extract more fossil fuels.⁸¹ Using captured CO₂ to extract additional combustible fuels that will release the CO₂ back into the atmosphere obviously defeats any purported climate mitigation purpose.⁸² Practically, the use of CCS for EOR processes does nothing to address climate concerns but instead ensures greater fossil fuel extraction, extending the lifetime of the dirty fossil fuel industry and worsening the climate emergency.

CCS projects around the world have failed drastically—and repeatedly—to meet their GHG emission reduction promises.⁸³ For example, in July 2021, Chevron admitted that its self-described “world’s biggest CCS project” failed to meet its five-year capture target and was seeking a deal to make up for millions of tons of CO₂ emitted.⁸⁴ In another example, the Petra

⁷⁹ CIEL Report, *supra* note 10.

⁸⁰ *Id.* at 2.

⁸¹ *Id.* at 8; Department of Energy, 9.2 *Commercial Carbon Dioxide Uses: Carbon Dioxide Enhanced Oil Recovery*, National Energy Technology Laboratory, <https://netl.doe.gov/research/coal/energy-systems/gasification/gasification-eor>.

⁸² “The primary goal of EOR is maximizing oil production, not storing carbon.” Food and Water Watch, *The Case Against Carbon Capture: False Claims and New Pollution*, 8 (March 2020), https://foodandwaterwatch.org/wp-content/uploads/2021/04/ib_2003_carboncapture-web.pdf.

⁸³ Institute for Energy Economics and Financial Analysis (IEEFA), *The Carbon Capture Crux: Lessons Learned* (Sept. 2022), <https://ieefa.org/resources/carbon-capture-crux-lessons-learned>.

⁸⁴ Bruce Robertson & Milad Mousavian, *If Chevron, Exxon and Shell Can't Get Gorgon's Carbon Capture and Storage to Work, Who Can?* IEEFA (April 26, 2022), <https://ieefa.org/articles/if-chevron-exxon-and-shell-cant-get-gorgons-carbon-capture-and-storage-work-who-can>.

Nova⁸⁵ CCS facility which was promised to capture 90 percent of the power plant’s total CO₂ emissions only captured 7 percent.⁸⁶

There is also a substantial energy penalty for the use of CCS that reduces any potential climate benefits—especially when that extra energy is sourced from fossil fuels.⁸⁷ An energy penalty is defined as the extra energy required to run a capture process or the amount of energy spent when compared to the energy generated.⁸⁸ The energy penalty of CCS increases the fuel requirement for electricity generation by 11-40%.⁸⁹ Thus, the installation of CCS and its concomitant energy penalty drives even more pollution at the site of combustion. In addition to CCS’s failure to address air pollution as promised, it increases water consumption and potential water pollution.⁹⁰

Furthermore, for CCS carbon sequestration to be considered permanent it must not leak into the atmosphere—but there is no safe, permanent, and verifiable way to store CO₂. Even minor leakage could reduce the benefit of CCS by up to 35%.⁹¹ There are also limited storage sites in both number and geography.⁹² Thus, it is inevitable that old or abandoned oil and gas wells that are often improperly sealed, if at all, are utilized instead, which can worsen the possible resulting harms.⁹³ Wells have weaknesses and gaps, and fracking causes long-term subterranean instability and seismic activity which can dislodge even the most carefully stored CO₂.⁹⁴ Even worse, there is no required long-term oversight of storage sites, and CO₂ leaks are extremely difficult to detect.

After billions of dollars of investment and decades of development, deployment of CCS has consistently proven to be ineffective and unnecessary.⁹⁵ Despite CCS’s failures to address emissions and its clear capacity to worsen climate harms, NWP 58 seeks to facilitate this faulty

⁸⁵ Petra Nova was shut down in 2020 due to plunging oil prices but will soon restore operations. Kevin Crowley, *The World’s Largest Carbon Capture Plant Gets a Second Chance in Texas*, Bloomberg (Feb. 8, 2023), <https://www.bloomberg.com/news/articles/2023-02-08/the-world-s-largest-carbon-capture-plant-gets-a-second-chance-in-texas#xj4y7vzkg>.

⁸⁶ CIEL Report, *supra* note 10, at 2.

⁸⁷ CIEL Report, *supra* note 10, at 4; Mark Z. Jacobson, *The Health and Climate Impacts of Carbon Capture and Direct Air Capture*, 12 Energy & Environmental Science (2019), <https://pubs.rsc.org/en/content/articlelanding/2019/ee/c9ee02709b#!divAbstract>.

⁸⁸ *Id.*

⁸⁹ See Kurt House, et. al., *The Energy Penalty of Post-Combustion CO₂ Capture & Storage and its Implications for Retrofitting the U.S. Installed Base*, Energy & Env’tl. Sci. (Jan. 22, 2009), <https://dash.harvard.edu/bitstream/handle/1/12374812/1239214136-mja188.pdf>.

⁹⁰ Clark Butler, Institute for Energy Economics and Financial Analysis (IEEFA), *Carbon Capture and Storage Is About Reputation, Not Economics*, 5 (2020), https://ieefa.org/wp-content/uploads/2020/07/CCS-Is-About-Reputation-Not-Economics_July-2020.pdf [hereinafter “IEEFA Report”].

⁹¹ *Id.*

⁹² See United States Geological Survey (“USGS”), Frequently Asked Questions, <https://www.usgs.gov/faqs/which-area-best-geologic-carbon-sequestration> (last visited Sept. 1, 2023).

⁹³ See Nicholas Groom, *Special Report: Millions of Abandoned Oil Wells Are Leaking Methane, a Climate Menace* Reuters (June 2020), <https://www.reuters.com/article/us-usa-drilling-abandoned-specialreport/special-report-millions-of-abandoned-oil-wells-are-leaking-methane-a-climate-menace-idUSKBN23N1NL>.

⁹⁴ IEEFA Report, *supra* note 89, at 5-6.

⁹⁵ U.S. Government Accountability Office, *Carbon Capture and Storage: Actions Needed to Improve DOE Management of Demonstration Projects* (Dec. 20, 2021), <https://www.gao.gov/products/gao-22-105111> [“hereinafter GAO Report”].

technology at rapid rates and with minimal public involvement. The promotion and use of CCS technology, which has already been proven ineffective to address the climate crisis, is a clear case of greenwashing *not* in the public interest.

B. Carbon Capture Is Only Economically Viable with Huge Public Subsidies

CCS is not economically viable without government subsidies and EOR, or the production of combustible fuels, making the technology inextricable from the fossil economy.⁹⁶ CCS investments generally lack financial justification because they do not provide adequate return on investment.⁹⁷ For example, when the Department of Energy (“DOE”) selected eight coal CCS projects for funding under its Clean Coal Power Initiative, it invested nearly \$684 million into six of the eight coal CCS projects selected — but only one became operational.⁹⁸ Three projects were withdrawn as not economically viable.⁹⁹ As a “climate solution,” CCS is more expensive, less efficient, and less competitive than renewable energy projects, and it is being promoted by these polluting industries to help them stay in business.¹⁰⁰

According to the IPCC’s “Climate Change 2022: Mitigation of Climate Change” report, CCS has much less potential for GHG emissions mitigation than solar and wind energy, and is far more costly.¹⁰¹ Furthermore, economists and energy analysts alike have found that CCS projects are “prohibitively expensive compared to other GHG emissions mitigation options, such as renewable energy and energy storage technologies.”¹⁰² Renewable energy is already the cheapest source of electricity for not only most of the United States but also the world.¹⁰³ CCS could “more than double the construction costs and increase the cost of energy produced (known as levelized cost of energy) by up to 61 percent” for a newly built gas fired plant.¹⁰⁴ With coal- and gas-fired power stations already more costly than renewable alternatives, adding CCS makes them even less competitive without significant subsidies.

The federal production tax credit for CCS projects (under Section 45Q of the US Internal Revenue Code) is the primary federal policy supporting CCS.¹⁰⁵ The biggest beneficiaries of this subsidy are oil companies that claim the credit for injecting CO₂ into depleted underground oil wells to extract even more oil, through EOR. Chevron’s aforementioned “world’s biggest CCS project” that drastically failed to meet its emission reduction targets received tens of millions in

⁹⁶ CIEL Report, *supra* note 10, at 8.

⁹⁷ IEEFA Report, *supra* note 89, at 1.

⁹⁸ GAO Report, *supra* note 30, at 1.

⁹⁹ *Id.* at 8.

¹⁰⁰ “European oil companies—in particular, Equinor, Shell, and Total—are investing in CCS, notwithstanding the lack of return, because it is an important part of their decarbonization narrative and supports their aims to be seen as ‘responsible’ energy.” IEEFA Report, *supra* note 89, at 1.

¹⁰¹ See IPCC, *Climate Change 2022 Mitigation of Climate Change*, <https://www.ipcc.ch/report/sixth-assessment-report-working-group-3/>.

¹⁰² IEEFA Report, *supra* note 89, at 1.

¹⁰³ CIEL Report, *supra* note 10, at 3.

¹⁰⁴ *Id.* at 4.

¹⁰⁵ *Id.* at 9.

subsidies.¹⁰⁶ Thus, the tax credit functions as a fossil fuel subsidy in which CO₂ is the commodity.

The extension and enhancement of this tax credit in the Inflation Reduction Act has triggered an unprecedented flurry of new proposed CCS projects. For example, the forthcoming Summit project, a vast network of CO₂ pipelines across five Midwestern states, is likely to garner nearly \$12.2 billion in energy tax credits including the 45Q production tax credit.¹⁰⁷ Additionally, the 45Q production tax credit does not require NEPA reviews for projects it supports. Taxpayers are footing the bill for the 45Q taxpayer credit that will fund these projects, and they will be approved without NEPA and ESA review. As of July 2023, DOE has received over \$138.9 billion in loan guarantee applications for fossil fuel projects, a large portion of which are for CCS projects.¹⁰⁸

Furthermore, even before the IRA extended and expanded these credits, a 2020 investigation by the Treasury Inspector General for Tax Administration revealed massive fraud involving approximately \$1 billion in tax credits claimed over a decade for capturing and storing CO₂ under the 45Q tax credit.¹⁰⁹ However, this problem only came to light after a request from a senior member of the Senate Finance Committee, rather than through any internal IRS oversight processes, verification or checks.¹¹⁰ The current 45Q program lacks an enforcement mechanism to prevent fraud like this from reoccurring. Although the Senate Finance Committee member requested that the agency take enforcement actions against the fossil fuel companies that fraudulently claimed the credit and take additional steps to prevent future fraud by the industry,¹¹¹ the IRS has not done so. Perpetrators of past fraud have faced no additional oversight or repercussions for their bad actions beyond repaying the unlawfully obtained tax credits. In fact, despite the committee member's request, the names of those bad actor corporations have never been released to the public.

¹⁰⁶ Will Peischel, *Chevron Made \$4.5 Billion in 2018. So Why Did the IRS Give Them a Refund?* (Jan. 3, 2020), <https://www.motherjones.com/politics/2020/01/chevron-made-4-5-billion-in-2018-so-why-did-the-irs-give-them-a-refund/>.

¹⁰⁷ Paul Blackburn, *The Inflation Reduction Act May Save the Fossil Fuel Industry*, *The Hill* (Aug. 14, 2022), <https://thehill.com/opinion/energy-environment/3598964-the-inflation-reduction-act-may-save-the-fossil-fuel-industries/>.

¹⁰⁸ Department of Energy, *Monthly Application Activity Report*, <https://www.energy.gov/lpo/monthly-application-activity-report>.

¹⁰⁹ Press Release, *Menendez Releases Inspector General Investigation Finding Fossil Fuel Companies Improperly Claimed Nearly \$1B in Clean Air Tax Credits* (Apr. 30, 2020), <https://www.menendez.senate.gov/newsroom/press/menendez-releases-inspector-general-investigation-finding-fossil-fuel-companies-improperly-claimed-nearly-1b-in-clean-air-tax-credits>.

¹¹⁰ Department of Treasury Letter to Senator Menendez (Apr. 15, 2020), <https://www.menendez.senate.gov/imo/media/doc/TIGTA%20IRC%2045Q%20Response%20Letter%20FINAL%2004-15-2020.pdf>.

¹¹¹ Press Release, *Following IG Investigation Findings That Fossil Fuel Companies Improperly Claimed Nearly \$1B in Clean Air Tax Credits, Menendez Urges IRS Commissioner to Audit & Examine All Claimants Of The Credit* (June 30, 2020), <https://www.menendez.senate.gov/newsroom/press/following-ig-investigation-findings-that-fossil-fuel-companies-improperly-claimed-nearly-1b-in-clean-air-tax-credits-menendez-urges-irs-commissioner-to-audit-and-examine-all-claimants-of-the-credit>

Despite a disturbing record of mismanagement, 45Q is poised to hand out billions in tax breaks over the next decade¹¹² and the IRS has not made any substantive changes to the 45Q tax credit program. The current system remains ripe for fraud and corporate gift which will only be exacerbated by the enormous expansion and extension of the 45Q tax credit recently authorized by the Inflation Reduction Act.¹¹³ In its investigative report, the Treasury Inspector General for Tax Administration acknowledged that while the IRS had conducted audits and denied 45Q credits for a portion of the nearly \$1 billion in fraudulent claims, hundreds of millions of improperly claimed taxpayer dollars remain unchallenged by the IRS.¹¹⁴

C. Carbon Capture Pipeline Infrastructure Is Underregulated and Will Result in Severe Harm That Is Contrary to the Public Interest

CCS technology demands a massive infrastructure buildout that by 2050 is estimated to be two to four times larger than that of the current global oil industry.¹¹⁵ However, the heavy environmental footprint and safety and health hazards associated with CCS infrastructure have been largely overlooked.

While the construction and operation of CO₂ pipelines pose similar risks to communities and the environment as fossil fuel pipelines,¹¹⁶ CO₂ pipelines additionally present unique and significant public safety concerns. CO₂ gas is “odorless, colorless, doesn’t burn, is heavier than air, and is an asphyxiant and intoxicant,” which makes pipeline releases harder to observe and avoid.¹¹⁷ The lack of odor and invisibility of CO₂ is most harmful to people because it is nearly impossible to determine whether you are in a hazard area before you are harmed. Additionally, current regulations do not include a requirement for odorants to be added for leak detection safety (like with methane gas). Nor do they include standards addressing the various contaminants that are often present within transported CO₂; however, it is common for transported CO₂ to contain toxic

¹¹² Taxpayers for Common Sense, *Costly Expansion of 45Q in the Inflation Reduction Act of 2022* (Aug. 2, 2022), <https://www.taxpayer.net/energy-natural-resources/45q-expansion-in-the-inflation-reduction-act/>.

¹¹³ Food & Water Watch, *Carbon Capture and Sequestration: Fossil Fuels’ Billion-Dollar Bailout*, 3 (Aug. 2022), https://www.foodandwaterwatch.org/wp-content/uploads/2022/08/FSW_2208_CCS_Subsidies.pdf.

¹¹⁴ Taxpayers for Common Sense, *supra* note 110.

¹¹⁵ Niall Mac Dowell et al., *The Role of CO₂ Capture and Utilization in Mitigating Climate Change*, 7 *Nature Climate Change* 243, 244 (2017), <https://www.nature.com/articles/nclimate3231>. Current estimates suggest that 30,000 to 96,000 miles of pipelines could be required to meet net zero goals by 2050 (as compared to the approximately 5,000 miles of CO₂ pipelines operating today in the United States). See U.S. Department of Energy, *Pathways to Commercial Liftoff: Carbon Management*, 11 (April 2023), https://liftoff.energy.gov/wp-content/uploads/2023/04/20230424-Liftoff-Carbon-Management-vPUB_update.pdf.

¹¹⁶ See Center for Biological Diversity, *Petition to Halt The Approval of Fossil Fuel Infrastructure Permits as Contrary to the Public Interest*, 17-24 (Oct. 6, 2021), https://www.biologicaldiversity.org/programs/climate_law_institute/energy_and_global_warming/pdfs/Petition-to-Halt-Army-Corps-Re-Fossil-Fuel-Infrastructure-Permits.pdf?_gl=1*1luma7u*_gcl_au*MTc0MjM4OTgwNi4xNjg1NDY0NjQy.

¹¹⁷ Pipeline Safety Trust, *Accufacts’ Perspectives on the State of Federal Carbon Dioxide Transmission Pipeline Safety regulations as it Relates to Carbon Capture, Utilization, and Sequestration within the U.S.*, 8 <https://pstrust.org/wp-content/uploads/2022/03/3-23-22-Final-Accufacts-CO2-Pipeline-Report2.pdf> [hereinafter “PST Report”].

and corrosive contaminants.¹¹⁸ New projects seeking to convert former methane gas pipelines for use with CO₂ thus present huge unknown risks, which are also currently unregulated.¹¹⁹

Further, CO₂ has unique potential to fracture pipelines, and releases can result in very violent ruptures with the “unzipping” of a pipeline over long distances¹²⁰ but, there are no federal regulations¹²¹ to address fracture threats.¹²² During a CO₂ pipeline rupture release, dry ice particles within the fluid can contribute to fogging in the air and ground around the release.¹²³ CO₂’s physical properties allow it to travel large distances at lethal concentrations displacing oxygen and settling in low spots increasing the affected area and impact on public health.¹²⁴ Oxygen displacement can starve gasoline or diesel powered equipment utilized by first responders, rendering it useless, and cause disorientation, confusion, unconsciousness and death for humans and animals.¹²⁵

For example, in 2021, the residents of Satartia, Mississippi experienced a CO₂ pipeline rupture that sickened dozens of people.¹²⁶ In that instance, Denbury Inc. was operating a network of CO₂ pipelines in the Gulf coast for EOR. The pipelines were pumping CO₂ compressed into a liquid at high pressure, which is required for effective transport but makes pipelines more susceptible to dangerous ductile fractures.¹²⁷ It took 15 min for first responders to realize that the “foul smell and green fog across the highway” reported by a 911 caller was a CO₂ pipeline rupture.¹²⁸ Even worse, neither the sheriff deputies, volunteer firefighters, nor staff at two area hospitals had emergency training for CO₂ leaks. The rupture resulted in more than 300 residents being evacuated and 46 hospitalized, with victims found gasping for breath, nauseated, foaming at the mouth, and rendered unconscious.¹²⁹ Months later, residents continued to suffer from mental foginess, lung dysfunction, chronic fatigue, and stomach disorders.¹³⁰

The safety concerns and environmental harms associated with CO₂ pipelines fall disproportionately on marginalized communities. Both the Gulf Coast of Texas and Cancer Alley in Louisiana have been named as potential epicenters for CCS development because they are

¹¹⁸ *Id.* at 10; see also Jared Strong, *Environmental Groups Seek Biden Moratorium on Carbon Dioxide Pipelines*, *Iowa Capital Dispatch*, <https://iowacapitaldispatch.com/2023/05/25/environmental-groups-seek-biden-moratorium-on-carbon-dioxide-pipelines/>.

¹¹⁹ PST Report, *supra* note 117, at 7.

¹²⁰ *Id.* at 6.

¹²¹ *Id.*

¹²² The current Pipeline and Hazardous Materials Safety Administration (“PHMSA”) regulations very narrowly define the type of CO₂ covered: they only regulate CO₂ pipelines if transported as a supercritical fluid of >90% purity. 49 C.F.R. § 195. If CO₂ is being transported as a gas, or a liquid, or at <90% purity, it is entirely unregulated. PST Report at 3-4.

¹²³ *Id.* at 6.

¹²⁴ *Id.* at 9.

¹²⁵ *Id.*

¹²⁶ Dan Zegart, *Gassing Satartia: Carbon Dioxide Pipeline Linked to Mass Poisoning* (Aug. 26, 2021), *Huffington Post*, https://www.huffpost.com/entry/gassing-satartia-mississippi-co2-pipeline_n_60ddea9fe4b0ddef8b0ddc8f.

¹²⁷ *Id.*; See also CIEL Report, *supra* note 10, at 10.

¹²⁸ Zegart, *supra* note 126.

¹²⁹ CIEL Report, *supra* note 10, at 11; Zegart, *supra* note 126.

¹³⁰ Zegart, *supra* note 126.

already heavily industrialized from oil, gas, and petrochemical activities, along with their concentration of the most viable injection and storage sites.¹³¹ CCS projects in other areas of the U.S. also focus on areas where energy and industrial infrastructure is already most concentrated, which are typically areas in or adjacent to poor neighborhoods and communities of color.¹³² For these reasons, the White House Environmental Justice Advisory Council cites CCS as an example of the types of projects that will *not* benefit a community.¹³³ CCS thus furthers many of the same harms that the fossil fuel industry has already inflicted upon environmental justice communities.

Despite plans to construct multistate CO₂ pipelines for CCS projects that, as discussed above, rely heavily on public subsidies, there is no federal agency designated responsible for the oversight of the development of CCS infrastructure. Lack of federal oversight means permitting is left largely up to a patchwork of state laws prone to a narrow view of the impacts inside their state and lacking any real ability to determine if a proposed project is in the public interest. The lack of a federal agency with the authority to evaluate these projects can lead to overbuilding capacity, exposing ratepayers and the public to financial risk from stranded assets, and precluding an analysis of the cumulative impacts that these projects can have on our environment, public health, and our climate. This patchwork system also hinders public participation and transparency because it lacks a centralized forum of public engagement and a standardized appeals process.

V. The Corps Should Revoke Nationwide Permit 58 for Carbon Dioxide Pipelines as Contrary to the Public Interest and Should Not Approve Any Carbon Capture Storage Infrastructure Through a Nationwide Permit.

Despite the clear evidence that approving CO₂ pipelines is contrary to the public interest, the Corps has opened the door to indefensibly permitting a new generation of fossil fuels through nationwide permitting of CCS infrastructure. The Corps created NWP 58 in 2021 to group pipeline projects that are “substantially similar in nature,” and decrease regulatory uncertainty for regulated entities.¹³⁴ But CO₂ pipelines are in no way like the water and sewage pipelines and other localized infrastructure that are authorized under the same NWP. Further, the Corps failed to conduct programmatic public interest, NEPA and ESA analyses for CO₂ pipelines authorized under NWP 58. In fact, the decision-making document supporting the issuance of NWP 58 makes no mention of CO₂ pipelines excepting only the brief statement clarifying their inclusion to NWP 58.¹³⁵

NWP 58 authorizes “activities required” for the construction of utility lines for water and other substances, excluding natural gas, products derived from oil or natural gas, and electricity so long as the activity does not result in loss of more than ½ acre of waters of the U.S. at each point

¹³¹ CIEL Report, *supra* note 10, at 11.

¹³² *Id.*

¹³³ White House Env'tl. Justice Advisory Council, *Justice 40 Climate and Economic Justice Screening Tool & Executive Order 12898 Revisions Interim Final Recommendations*, 58 (May 13, 2021), https://www.epa.gov/sites/default/files/2021-05/documents/whejac_interim_final_recommendations_0.pdf.

¹³⁴ *Reissuance and Modification of Nationwide Permits*, 86 Fed. Reg. 2,744, 2,778 (Jan. 13, 2021).

¹³⁵ *See* NWP 58 Decision Document, *supra* note 2.

that the project crosses jurisdictional waters.¹³⁶ Although the use of NWP 58 is limited to such pipelines with up to ½ acre of loss of U.S. waters for each “single and complete project,”¹³⁷ the Corps defines that term as “that portion of the total linear project that includes *all crossings of a single water of the United States (i.e., a single waterbody) at a specific location.*”¹³⁸ In other words, NWP 58 allows pipeline projects to invoke NWP 58 separately at each location where the project crosses a river, stream, or wetland. By contrast, non-linear projects need only invoke NWP 58 once for the overall project, unless the separate components of the project would have “independent utility” (i.e., if the components could function as stand-alone projects).¹³⁹

NWP 58 thus allows the Corps to treat each water crossing along the route of a proposed pipeline project—crossings that could number in the hundreds or thousands—as a “single and complete project” that each qualifies separately under NWP 58. There is no limit to the number of times that a single pipeline project can invoke NWP 58, nor is there a maximum number of acres of water that a pipeline project can impact while still being authorized in a piecemeal fashion under NWP 58. For example, the proposed Summit project, for which preconstruction notices have already been filed with the Corps under NWP 58, expects to involve crossing three large rivers and numerous unnamed streams.¹⁴⁰ However, under the NWP process, the public will not be provided an opportunity to comment on the proposed pipelines and their cumulative impacts on people and the environment.

The Corps’ Public Interest Determination for NWP 58 makes a mockery of Congress’ intent to ensure broad consideration of public interest factors in all permitting decisions and to deny permits that are contrary to the public interest. The cursory analysis provided by the Corps—which cannot fairly be described as the “review,” “evaluation,” “careful weighing” or “balancing” required by the regulations, 33 C.F.R. § 320.4(a)(1)—is a textbook example of an agency punting its legal requirements and reaching a predetermined outcome with as little effort as possible.

The Corps arbitrarily and capriciously held up the benefits of one class of pipelines without evaluating and balancing the detriments of CO₂ pipelines.¹⁴¹ In fact, the public interest review of NWP 58 makes no mention of the harms nor supposed benefits of “other substance” pipelines it lumps into the catch-all permit, like CO₂ pipelines, despite the extensive existing scientific resources available for such analysis, including those referenced in this petition. This contradicts the plain text of the Corps’ regulations, which require it to consider the “probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest.”¹⁴² This is inconsistent with the requirements of the public interest test: to “take into

¹³⁶ *Id.* at 1.

¹³⁷ *Id.* at 3.

¹³⁸ 86 Fed. Reg. at 2,877 (emphasis added).

¹³⁹ *Id.* at 2,876.

¹⁴⁰ Jeff Beach, *Summit Carbon Solutions Files for Pipeline Permit on Part of Minnesota Route* (Sept. 21, 2022), <https://www.agweek.com/news/summit-carbon-solutions-touts-pipeline-easement-milestone-in-iowa-1>.

¹⁴¹ *Columbia Riverkeeper*, 2020 U.S. Dist. LEXIS 2196535 at *20-23.

¹⁴² 33 C.F.R. § 320.4(a).

account a full range of economic, social, and environmental factors” in deciding whether to issue permits under the Clean Water Act.¹⁴³

Additionally, the Corps admitted that the activities authorized by NWP 58 “may alter the habitat characteristics of streams, wetlands, and other waters of the United States, which may decrease the quantity and quality of fish and wildlife habitat”¹⁴⁴ and that, it can cause changes in the flood-holding capacity of the 100-year floodplain which would impact human health, safety, and welfare.¹⁴⁵ While admitting to various harms to the public interest that will be incurred by the adoption of NWP 58, including decreased “quality of water supplies by adding pollutants to surface waters and groundwater,” the Corps simultaneously disclaims responsibility in stating that “many causes of water pollution [] are outside the Corps’ control and responsibility.”¹⁴⁶

In other portions of the agency’s public interest review for NWP 58, however, the Corps invokes and analyzes effects over which it could likewise contend it has no jurisdiction or control as *benefits* that purportedly justify the project.¹⁴⁷ For example, under “food and fiber production,” the Corps speculates that “[f]ood production may be increased by activities authorized by this NWP,” a benefit it uses to justify the issuance of the NWP.¹⁴⁸

The National Climate Assessment, prepared pursuant to Congressional mandate specifically for federal agencies to use in their decision-making, includes an entire chapter on food production.¹⁴⁹ It explains the many ways the climate crisis is threatening U.S. food security by decreasing crop yields and nutritional content, increasing stress to livestock, contaminating food supplies, and decreasing access to food.¹⁵⁰ Relying on purported benefits of NWP 58 to food production because water pipelines may be used for irrigation, while simultaneously ignoring the harms presented by CO₂ pipelines entirely, and the entire body of science on the climate harms to that same economic sector from fossil fuels, is arbitrary and capricious decision-making, and unlawful.¹⁵¹

For all these reasons, the Corps should not authorize any CO₂ pipelines through its nationwide permitting program. The Corps should issue a moratorium on the use of NWP 58 for CO₂ pipelines and revise the permit to exclude such projects.

VI. The Corps Should Also Deny Individual Clean Water Act Section 404 and RHA Section 10 Permits for Carbon Pipeline Infrastructure Projects

¹⁴³ *United States v. Alaska*, 503 U.S. 569, 582 (1992).

¹⁴⁴ NWP 58 Decision Document, *supra* note 2, at 61.

¹⁴⁵ *Id.* at 62.

¹⁴⁶ *Id.* at 64.

¹⁴⁷ The Corps cannot hold up the benefits of a project without evaluating and balancing its detriments. *Columbia Riverkeeper*, 2020 U.S. Dist. LEXIS 2196535 at *20-23.

¹⁴⁸ NWP 58 Decision Document, *supra* note 2, at 66.

¹⁴⁹ U.S. Global Change Research Program, Impacts, Risks, and Adaptation in the United States, Fourth National Climate Assessment, Vol. II 60, 391-437 (2018), <https://nca2018.globalchange.gov/>.

¹⁵⁰ *Id.*

¹⁵¹ 5 U.S.C. § 706(A); *see also Columbia Riverkeeper*, 2020 U.S. Dist. LEXIS 219535, at *22-23.

Given the serious environmental, health and safety concerns outlined above, the Corps should also revoke any unlawfully issued individual Section 404 dredge and fill permits for CO₂ pipelines and related infrastructure, and stop authorizing new permits for these projects, as they are individually and cumulatively contrary to the public interest. A “careful weighing” of the “benefits which reasonably may be expected to accrue” against these projects’ “reasonably foreseeable detriments”¹⁵² leads to one conclusion: the catastrophic impacts of these projects on our environmental, cultural, social, and economic systems overwhelmingly outweigh any purported benefits they might confer.

The following case studies are illustrative, though by no means exhaustive, examples of the kinds of CCS infrastructure projects for which permits should be denied or revoked.

1. Summit Carbon Solutions’ Midwest Carbon Express

Summit Carbon Solutions’ proposed Midwest Carbon Express CO₂ pipeline project would be the largest carbon capture project if constructed.¹⁵³ Already anticipated to cost upwards of \$4.5 billion, the project would transport CO₂ by pipeline 2,100 miles from ethanol facilities in the Midwest to North Dakota for attempted underground storage. This pipeline will require thousands of stream crossings, but under NWP 58, each crossing will be treated as an individual invocation of the permit, meaning that the cumulative impacts of the pipeline will be obscured. As illustrated below (Figures 1 and 2), the proposed path of the pipeline may affect habitat of numerous protected species, impacts to all of which must be considered for the entire length of the project in an individual permit review. Freedom of Information Act requests revealed that Summit Carbon Solutions has submitted preconstruction notices to the Corps seeking permitting approval under NWP 58, though the company has made no public announcement of its submissions.

¹⁵² 33 C.F.R. § 320.4(a)(1).

¹⁵³ Leah Douglas, *Summit Says Carbon Pipeline Project Has Secured 20% of Iowa Route*, Reuters (April 19, 2022), <https://www.reuters.com/business/sustainable-business/summit-says-carbon-pipeline-project-has-secured-20-iowa-route-2022-04-19/>.

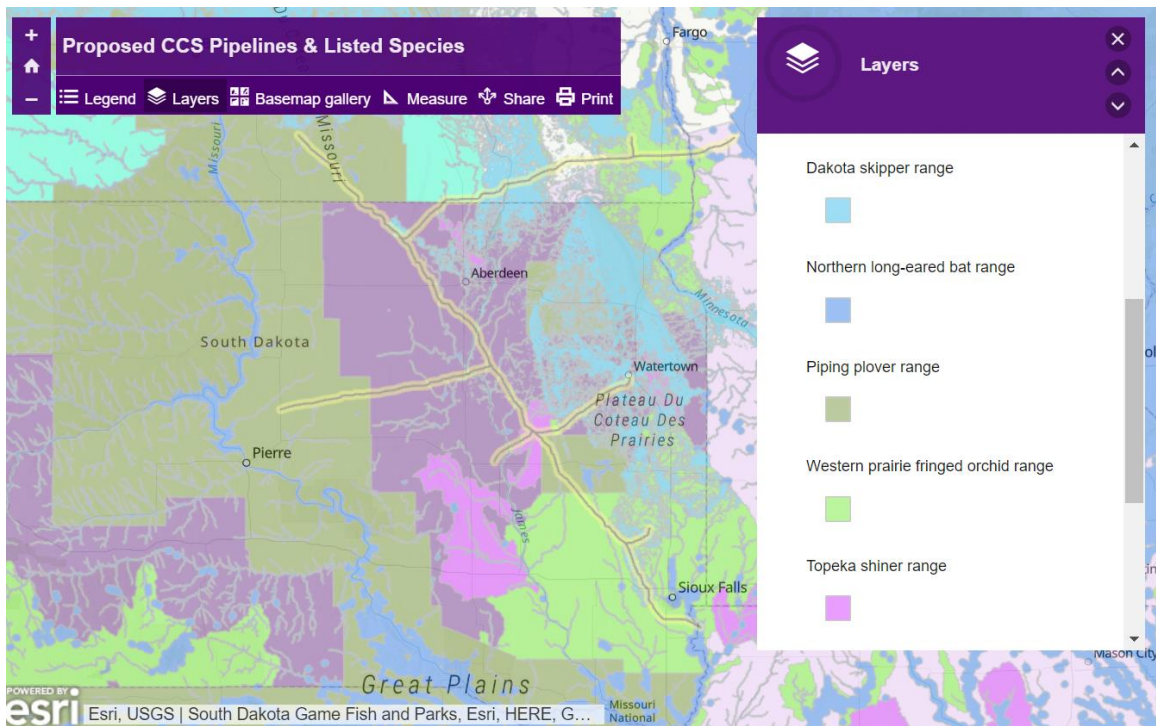


Figure 1 - Proposed pipeline route for Summit Carbon Solutions' Midwest Carbon Express (Proposal A) overlaid with habitat ranges for various federally protected species.¹⁵⁴

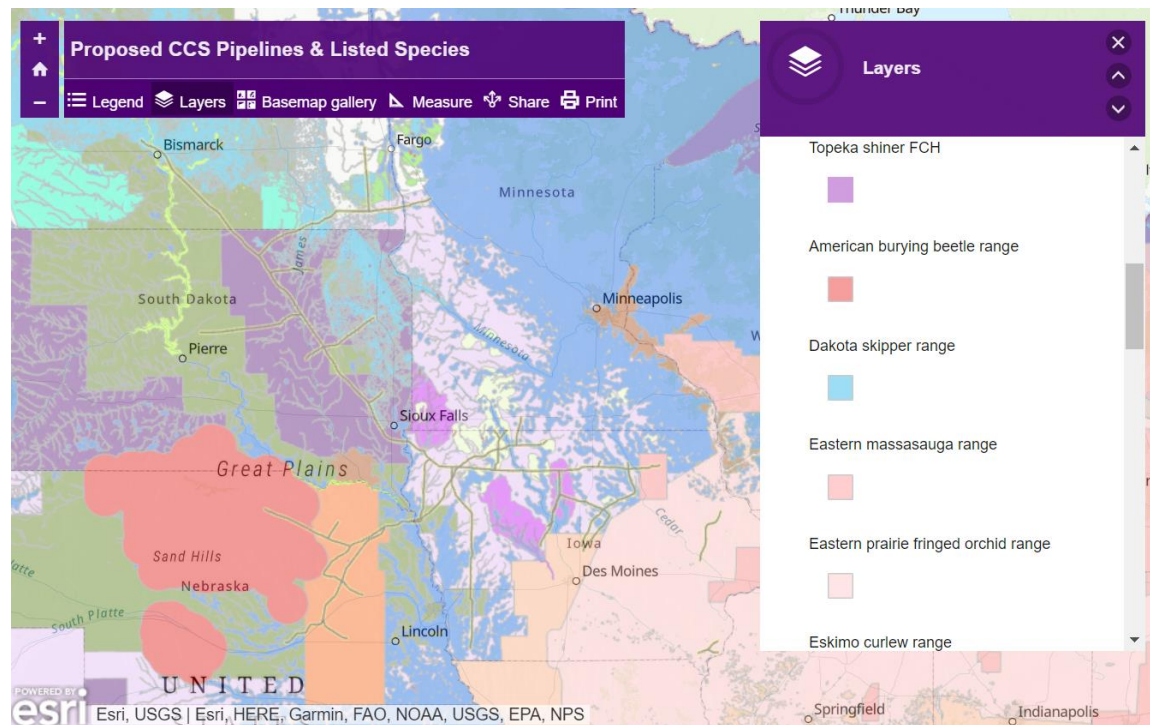


Figure 2 - Proposed pipeline route for Summit Carbon Solutions' Midwest Carbon Express (Proposal B)

¹⁵⁴ Ctr. for Biological Diversity, *Map of Proposed CCS Pipelines and Listed Species*, <https://center.maps.arcgis.com/apps/View/index.html?appid=aa149f4c186d47a18b75eadc8a228be1> (interactive map).

overlaid with habitat ranges for various federally protected species.¹⁵⁵

2. Navigator CO₂ Ventures' Heartland Greenway

Navigator CO₂ Ventures' proposed Heartland Greenway CCS project will transport carbon waste by pipeline over approximately 1,300 miles across five states to a proposed sequestration location in southern Illinois.¹⁵⁶ Navigator CO₂ Ventures has already submitted its preconstruction notices to the Corps under NWP 58 for the hundreds, if not thousands, of stream crossings the project will require.¹⁵⁷ Under the Corps process for nationwide permitting, if the agency fails to respond to a project proponent's preconstruction notice within 45 days, the application for the nationwide permit is presumed approved. 33 C.F.R. § 330.1(e)(1). Due to the lack of public process and transparency, it is unclear whether this application has been approved. Similarly to the aforementioned Summit pipeline proposal, the current Navigator pipeline proposal will cross through and affect habitat for dozens of federally protected species (Figure 3, below). The Corps has not evaluated these impacts at all in its nationwide permit covering CO₂ pipelines.

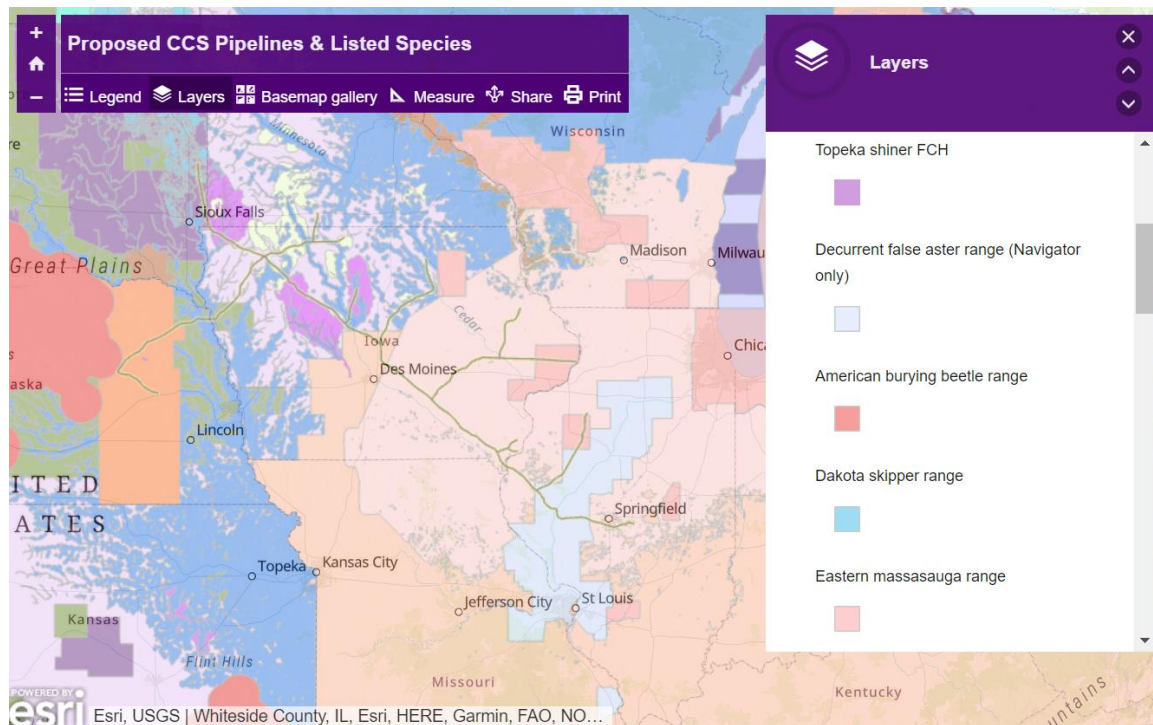


Figure 3 - Proposed pipeline route for Navigator CO₂ Ventures' Heartland Greenway

¹⁵⁵ *Id.*

¹⁵⁶ Pipeline Fighters Hub, *Navigator Heartland Greenway CO₂*, <https://pipelinefighters.org/pipelinefighters/navigator-co2-ventures-heartland-greenway/>. In October of 2023, Navigator CO₂ Ventures withdrew its plans to move forward with the Heartland Greenway CCS project. Jack Dura, *Navigator cancels proposed Midwestern CO₂ pipeline, citing 'unpredictable' regulatory processes*, Assoc. Press (Oct. 20, 2023), <https://apnews.com/article/carbon-dioxide-pipeline-co2-navigator-canceled-73dee04da685b512d6aefa01302cdae3>.

¹⁵⁷ Navigator Heartland Greenway Pipeline System: Application Submitted Under SDCL Chapter 49-41B, 5, <https://puc.sd.gov/commission/dockets/HydrocarbonPipeline/2022/HP22-002/Application.pdf>.

VII. Conclusion

For all the reasons discussed above, the undersigned organizations petition the Corps to:

- (1) Revoke the Nationwide Permit 58 for CO₂ pipelines;
- (2) Require the use of individual Clean Water Act Section 404 and Rivers and Harbors Act Section 10 permits for CO₂ pipelines, pursuant to 33 C.F.R. § 1344(e)(1) (Certification) and 33 C.F.R. § 330.1(b) (Nationwide Permits);
- (3) Institute a moratorium on such permits and promulgate a science-based rule that fully considers the climate, wildlife, and environmental justice harms of CO₂ pipelines and associated CCS projects, and the best available scientific information, including from the Intergovernmental Panel on Climate Change, the U.S. Global Change Research Program, and other literature cited herein, establishing a rebuttable presumption that permits for CCS infrastructure such as CO₂ pipelines are contrary to the public interest and therefore shall not be issued pursuant to Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and 33 C.F.R. 320.4; and
- (4) Suspend and revoke any permits already issued under NWP 58 for CCS infrastructure, such as CO₂ pipelines, that were unlawfully issued as contrary to the public interest, pursuant to 33 U.S.C. § 1344 and 33 C.F.R. § 325.7(c) & (d).

Because of the urgent nature of this issue and the growing number of CO₂ projects seeking to utilize NWP 58, we ask the Corps to respond to this petition within 30 days. If the Corps fails to respond within a reasonable timeframe, the undersigned organizations may seek judicial review.

Any responses and all correspondence related to this petition should be directed to the authors at the email addresses provided below.

Respectfully submitted this 6th day of November 2023.

Authors:

Lauren Parker, Staff Attorney
Margaret Coulter, Senior Attorney
Jason Rylander, Legal Director
Climate Law Institute
Center for Biological Diversity
1411 K Street NW, Suite 1300
Washington, DC 20005
lparker@biologicaldiversity.org
mcoulter@biologicaldiversity.org
jrylander@biologicaldiversity.org

¹⁵⁸ Ctr. for Biological Diversity, *Map of Proposed CCS Pipelines and Listed Species*, <https://center.maps.arcgis.com/apps/View/index.html?appid=aa149f4c186d47a18b75eadc8a228be1>, *supra* note 154.

Petitioners:

1. Center for Biological Diversity
2. 1000 Grandmothers for Future Generations
3. 100Grannies for a Livable Future
4. 198 methods
5. 350 Bay Area
6. 350 Bay Area Action
7. 350 Chicago
8. 350 Colorado
9. 350 Conejo / San Fernando Valley
10. 350 Eugene
11. 350 Humboldt
12. 350 Silicon Valley
13. 350 Wichita
14. 350.org
15. 350Brooklyn
16. 350Hawaii
17. 350Juneau--Climate Action for Alaska
18. 7 Directions of Service
19. A Community Voice
20. Adventist Peace Fellowship
21. AFGE Local 704
22. Africa Institute for Energy Governance
23. All Our Energy
24. Alliance for Affordable Energy
25. American Rivers
26. Animals Are Sentient Beings, Inc.
27. Animas Valley Institute
28. Anthropocene Alliance
29. Atchafalaya Basinkeeper
30. Benicians for a Safe and Healthy Community
31. Bergen County Green Party
32. Berkshire Environmental Action Team
33. Better Path Coalition
34. Between the Waters
35. Beyond Burning
36. Beyond Extreme Energy
37. Blue Ridge Environmental Defense League
38. Bold Alliance
39. Bold Iowa
40. Breathe Project
41. Bronx Jews for Climate Action
42. Bucks County Concerned Citizens Against the Pipelines
43. Bucks Environmental Action
44. California Communities Against Toxics
45. California Interfaith Power and Light

46. California Nurses for Environmental Health and Justice
47. Campaign for Renewable Energy
48. CASA
49. Cascadia Climate Action Now
50. CASE Citizens Alliance for a Sustainable Englewood
51. Cedar Lane Environmental Justice Ministry
52. Center for International Environmental Law
53. Central California Environmental Justice Network
54. Chapman University
55. Chicago Benedictines for Peace
56. Chispa Texas/LCV
57. Chop Wood, Carry Water Daily Actions Newsletter
58. Christians For The Mountains
59. Church of the Covenant, Boston
60. Church Women United in New York State
61. Citizens Action Coalition of IN
62. Citizens Caring for the Future
63. Ciudadanos del Karso Inc.
64. Clean Air Coalition of Greater Ravena-Coeymans
65. Clean Energy Action
66. CleanEarth4Kids.org
67. CleanEarth4Kids.org
68. Climate Crisis Policy
69. Climate Crisis Solutions
70. Climate Equity Policy Center
71. Climate First: Replacing Oil & Gas (CFROG)
72. Climate Hawks Vote
73. Climate Land Leaders
74. Climate Reality Massachusetts Southcoast
75. Climate Reality Project NYC Chapter
76. Cnicago Benedictines for Peace
77. CODEPINK
78. Color Brighton Green
79. Communist Party USA, Elizabeth Gurley Flynn Club
80. Community Action for Healing Poverty Organization
81. Community for sustainable energy
82. Conceivable Future
83. Concerened Health Professionals of Pennsylvania
84. Concerned Citizen
85. Concerned Citizens Against Wabash Valley Resources
86. Concerned Citizens against WVR
87. Concerned Health Professionals of New York
88. Concerned Health Professionals of Pennsylvania
89. Cooperative Energy Futures
90. Current Climate For Brazoria County. It's a new organization
91. Dakota Resource Council

92. DC Statehood Green Party
93. Defend Our Health
94. Delaware Riverkeeper Network
95. Democratic Socialists of America - Knoxville, TN
96. Don't Gas the Meadowlands Coalition
97. Don't Waste Arizona
98. Durham Unitarian Universalist Fellowship
99. Earth Action, Inc.
100. Earth Care NM
101. Earth Ethics, Inc.
102. Earth Path Sanctuary
103. Earthkeeper Health Resources
104. Earthworks
105. East Bay Community Solar Project
106. Eco-Eating
107. Eco-Justice Collaborative
108. Ecologistics, Inc.
109. Education, Economics, Environmental, Climate and Health Organization
110. Elders Climate Action
111. Elmirans & Friends Against Fracking
112. Energy Justice Law and Policy Center
113. Extinction Rebellion Boston
114. Extinction Rebellion mid-Hudson
115. Extinction Rebellion Peace
116. Extinction Rebellion San Francisco Bay Area
117. Extinction Rebellion Seattle
118. Fairbanks Climate Action Coalition
119. Faith and Climate Action Montana
120. Faith in Place
121. Family Farm Defenders
122. FCCPR Climate Crisis Task Force
123. First Unitarian Church, Salt Lake City
124. First Unitarian Universalist Church of Houston
125. First Unitarian Universalist Society of Marietta, Ohio
126. Food & Water Watch
127. Forest Keeper
128. Fossil Free Tompkins
129. Fox Valley Citizens for Peace & Justice
130. FracTracker Alliance
131. Fridays for Future Orange County
132. Friends For Environmental Justice
133. Friends of the Bitterroot
134. George Mason University Center for Climate Change Communication
135. Georgia Advancing Communities Together, Inc.
136. Georgia Interfaith Power and Light
137. Giniw Collective

138. Good Neighbor Steering Committee of Benicia
139. Grassroots Environmental Education
140. Great Egg Harbor Watershed Association
141. Great Plains Action Society
142. Green Compass LLC
143. Green Education and Legal Fund
144. Green New Deal Virginia
145. Green Party of Onondaga County
146. Green Retirement, Inc.
147. Green Sanctuary Committee, FUUSM, Marietta, Ohio
148. Green State Solutions
149. Green Wichita Coalition
150. Grey Nuns of the Sacred Heart
151. Gulf Coast Creation Care
152. Heartwood
153. Hesperian Health Guides
154. Howling For Wolves
155. HSV Progressive podcast
156. Humand Dimensions TV llc
157. I-70/Vasquez Blvd Superfund CAG
158. IDEAS For Us
159. Idle No More SF Bay
160. Indian Point Safe Energy Coalition
161. Indigenous Earth Protector/Twin Cities
162. Indivisible Tacoma
163. Indivisible97415
164. Institute for Policy Studies
165. Interfaith Oceans
166. Interfaith Power & Light
167. Intheshadowofthewolf
168. Jewish Climate Action Network (JCAN)
169. Kentucky Environmental Foundationn
170. Kewaunee CARES
171. League of Women Voters
172. Liveable Arlington
173. Locust Point Community Garden
174. Long Beach Alliance for Clean Energy
175. Long Beach Gray Panthers
176. Long Island Progressive Coalition
177. Los Padres ForestWatch
178. Lutherans Restoring Creation
179. Maryland Ornithological Society
180. Media Alliance
181. Michigan Environmental Justice Coalition
182. Mid-Missouri Peaceworks
183. Mid-Ohio Valley Climate Action

184. Milwaukee Riverkeeper
185. Mission Blue
186. Montana Environmental Information Center
187. Mothers Out Front
188. Mothers Out Front Tompkins
189. Movement Rights
190. MoveON.org Hoboken RESIST
191. Native Community Action Council
192. Native Daily Network
193. Native Movement
194. Natural Capitalism Solutions
195. NC Climate Justice Collective
196. Nebraska Interfaith Power & Light
197. Network for a Sustainable Tomorrow
198. New Energy Economy
199. New Mexico Climate Justice
200. New Mexico & El Paso Region Interfaith Power and Light
201. New York Interfaith Power & Light
202. New York Progressive Action Network
203. Nia Impact Capital
204. Nicaragua Center for Community Action
205. NJ Sierra Club, Central Group
206. NJ State Industrial Union Council
207. NM No False Solutions Coordinator
208. No Coal in Oakland
209. No Fracked Gas in Mass
210. North American Climate, Conservation and Environment(NACCE)
211. North Quabbin Energy
212. Northeast Oregon Ecosystems
213. Northern Arizona Climate Change Alliance
214. Northern Plains Resource Council
215. Nuclear Energy Information Service (NEIS)
216. Nuclear Information and Resource Service
217. NYPAN Enviro Committee
218. NYPAN Greene
219. Occidental Arts and Ecology Center
220. Ocean Conservation Research
221. Oil and Gas Action Network
222. Oil Change International
223. Our Revolution Ohio
224. Our Revolution, Michigan
225. Palms To Pines Democratic Network
226. Panhandle Watershed Alliance
227. Partnership for Policy Integrity
228. Pass the Federal Green New Deal Coalition
229. Peace Action Wisconsin

- 230. Peace and Freedom Party; on the California ballot
- 231. Peace, Justice, Sustainability NOW!
- 232. Peacemakers of Schoharie County
- 233. People for a Healthy Environment
- 234. People Over Petro Coalition
- 235. People's Action
- 236. Physicians for Social Responsibility
- 237. Physicians for Social Responsibility Pennsylvania
- 238. Physicians for Social Responsibility. AZ Chapter
- 239. Physicians for Social Responsibility Iowa Chapter
- 240. PJIC Office, Sisters of Charity of New York
- 241. Plastic Pollution Coalition
- 242. Port Arthur Community Action Network(PACAN)
- 243. Positive Money US
- 244. Prairie Rivers Network
- 245. Presente.org
- 246. Preserve Giles County
- 247. Preserve Wild Santee
- 248. Private individual
- 249. Property Rights and Pipeline Center
- 250. Protect All Children's Environment
- 251. Protect Our Water, Heritage, Rights
- 252. PSR Arizona
- 253. PSR Colorado
- 254. Public Justice Center
- 255. Resist the Pipeline
- 256. RESTORE: The North Woods
- 257. Rise to Thrive
- 258. Rise Up WV
- 259. Rise4EJ
- 260. Rivers & Mountains GreenFaith
- 261. Rogue Climate
- 262. San Antonio Bay Estuarine Waterkeeper
- 263. San Francisco Bay Physicians for Social Responsibility
- 264. San Joaquin Valley Democratic Club
- 265. SanDiego350
- 266. Santa Fe Forest Coalition
- 267. Santa Cruz Climate Action Network
- 268. Save Our Illinois Land
- 269. SAVE THE FROGS!
- 270. SBCAN
- 271. Science and Environmental Health Network
- 272. Scientist Rebellion
- 273. SEE (Social Eco Education)
- 274. Seneca Lake Guardian
- 275. SF Climate Emergency Coalition

- 276. Sisters of St. Dominic of Blauvelt, New York
- 277. Sisters of St. Francis, Clinton, Iowa
- 278. Slingshot
- 279. Snake River Alliance
- 280. Social Action Council, First UU Church of Austin
- 281. Society of Alternative Resources
- 282. Solidarity Committee, Capital District NY
- 283. South Asian Fund For Education Scholarship and Training Inc
- 284. South Seattle Climate Action Network
- 285. South Valley Unitarian Universalist Society
- 286. Southern Oregon Climate Action Now
- 287. St. Andrews Pres, Austin, TX
- 288. St. Columban Mission for Justice, Peace and Ecology
- 289. Stand.earth
- 290. Standing Trees
- 291. Stone Crab Alliance
- 292. Stone Quarry House
- 293. Stop the Algonquin Pipeline Expansion (SAPE)
- 294. Sustainable Arizona
- 295. Sustainable Mill Valley
- 296. Sustainable Silicon Valley
- 297. SustainUS
- 298. Terra Advocati
- 299. Texas Campaign for the Environment
- 300. The Last Plastic Straw
- 301. The Natural History Museum
- 302. The Oakland Institute
- 303. The Quantum Institute
- 304. The Revolving Door Project
- 305. The River Project
- 306. The Vessel Project of Louisiana
- 307. The Wei LLC
- 308. Third Act Ohio
- 309. Third Act Upstate New York
- 310. Thomas berry forum for ecological dialogue at Iona university
- 311. Thrive at Life: Working Solutions
- 312. Thrive North Carolina
- 313. Tidelines Institute
- 314. Town of Universal, Indiana
- 315. Tucson Climate Action Network
- 316. Turtle Haven Sanctuary
- 317. Turtle Island Restoration Network
- 318. UC Berkeley Public Health
- 319. Unitarian Universalist Advocacy Network of Illinois
- 320. Unitarian Universalist Church of Willmar
- 321. Unitarian Universalist Congregation of Duluth MN

- 322. Unitarian Universalist Congregation of Petoskey (MI)
- 323. Unitarian-Universalist Congregation
- 324. Unitarian Universalist Fellowship of Hidalgo County Texas
- 325. Unite North Metro Denver
- 326. United American Indians of New England
- 327. United Women in Faith
- 328. UNM Leaders for Environmental Action and Foresight
- 329. Upper Gila Watershed Alliance
- 330. Upper West Side Recycling
- 331. Valley Unitarian Universalist Congregation
- 332. Valley Unitarian Universalist Congregation, Chandler AZ
- 333. Valley Watch, Inc.
- 334. Veterans for Climate Justice
- 335. VFP
- 336. Wall of Women
- 337. Wasatch Clean Air Coalition
- 338. Washington Physicians for Social Responsibility
- 339. Waterspirit
- 340. WE ACT for Environmental Justice
- 341. We stand in support of the petition
- 342. WESPAC Foundation, Inc.
- 343. West Dryden Residents Against Pipeline
- 344. West End Revitalization Association - WERA
- 345. Western Organization of Resource Councils (WORC)
- 346. Wild Watershed
- 347. WildEarth Guardians
- 348. Women Against War
- 349. Women's Earth and Climate Action Network
- 350. Womxn From The Mountain
- 351. Xun Biosphere Project
- 352. Xun Biosphere Research
- 353. Youth United for Climate Crisis Action
- 354. Zero Hour