



UNIVERSITY of  
DENVER

STURM COLLEGE OF LAW  
Clinical Programs

Environmental Law Clinic  
Student Law Office  
2255 East Evans Avenue  
Suite 335  
Denver, Colorado 80208  
303-871-6140

June 27, 2022

VIA ELECTRONIC MAIL

Chad M. DeVolin, Manager  
Environmental Agriculture Program  
Division of Environmental Health and Sustainability

Meg Parish, Permits Section Manager  
Nicole Rowan, Director  
Water Quality Control Division

Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive S.  
Denver, CO 80246  
303-692-2000

**Re: Notice of Administrative Appeal, Request for Adjudicatory Hearing, and Request for Reconsideration of Adjudicatory Action**

The Center for Biological Diversity and Food & Water Watch (“Affected Parties”) hereby submit this Notice of Administrative Appeal, Request for Adjudicatory Hearing, and Request for Reconsideration for the General Permit for Concentrated Animal Feeding Operations under the Colorado Discharge Permit System Modification 1 (Permit No. COA-934000), issued by the Environmental Agriculture Program, Division of Environmental Health and Sustainability, Colorado Department of Public Health and Environment (EAP), on June 7, 2022. By way of this letter, the Affected Parties intend to exhaust their administrative remedies related to the General Permit Modification 1.

**I. Identification of Person Requesting Hearing and Subject Matter of the Request**

The Center for Biological Diversity and Food & Water Watch and their members are affected and aggrieved by EAP’s issuance of the General Permit Modification 1. Members of the Affected Parties live, work, and recreate in areas of Colorado that will be affected by pollution from Concentrated Animal Feeding Operations (“CAFOs”) resulting from the General Permit. The Affected Parties are committed to protecting Colorado’s surface and ground waters against impairment from the discharge of pollutants such as nitrogen,

phosphorus, pathogens, heavy metals, salts, and pharmaceuticals from CAFOs in the state, as well as supporting the fundamental constitutional rights of Coloradans to a healthy environment, clean drinking water, and swimmable, fishable waterways.

The Affected Parties submit this appeal, request for adjudicatory hearing, and request for reconsideration to address EAP's failure to incorporate monitoring conditions into the permit that are capable of assuring compliance with the permit, as required by federal law. The Affected Parties submitted comments on the draft permit during the public comment period requesting that EAP adopt changes to the permit in order to adequately protect Colorado's waters from CAFO pollution discharges. *See* Ex. 1, Center for Biological Diversity and Food & Water Watch Comments on Draft Colorado General Permit for Concentrated Animal Feeding Operations Modification 1 (COA934000) (May 16, 2022) ("Comments"). EAP responded to the Comments in the Fact Sheet accompanying the General Permit with Modification 1. *See* Ex. 2, General Permit Modification 1, and Ex. 3, Fact Sheet – Rationale for Modification 1 ("Fact Sheet"). EAP's Final General Permit with Modification 1 and its response to Comments in the Fact Sheet do not sufficiently address the concerns identified by the Affected Parties in the Comments and reflect a misunderstanding of monitoring requirements in federal law. EAP's issuance of the General Permit without sufficient monitoring provisions was arbitrary, capricious, and contrary to law.

## II. Statutory and Regulatory Authority

**Administrative appeal.** C.R.S. § 25-8-503.5(3) provides that "[a] party may appeal a general permit issued under section 25-8-502 (1)(b)(I)(G) pursuant to the appeals process set forth in section 24-4-105, C.R.S." Under § 24-4-105(14)(a)(II), an appeal to the Division must be made by "filing exceptions within thirty days after service of the initial decision upon the parties." The final permit modification was served upon the parties on June 7, 2022, and therefore this appeal is timely.

**Request for adjudicatory hearing.** Section 21.4(A)(3)(a) of Regulation 21 (Water Quality Control Commission Procedural Rules) provides that the Water Quality Control Division "shall provide the opportunity for a formal public adjudicatory hearing" for "discharge permits issued pursuant to section 25-8-501 through 504, C.R.S. including major permit modifications as specified in section 21.7 (B)" of Regulation 21. Section 21.7(B) states that "any person adversely affected or aggrieved by a Division determination regarding issuance or a condition of a discharge permit is entitled to a hearing in accordance with section 24-4-105, C.R.S."

Under Regulation 61 (Colorado Discharge Permit System Regulations), Section 61.7, any person "affected or aggrieved by the Division's final determination" regarding a discharge permit may demand an adjudicatory hearing within thirty days of the final permit determination. Section 61.7(c) provides that only issues of law or fact identified during the public comment period or not reasonably ascertainable from the Draft Permit may be identified at the adjudicatory hearing, and Section 61.8(g) notes that "[w]hen a permit is modified, only the conditions subject to modification are reopened." *See also* Ex. 3, Fact Sheet at 6 ("When a permit is modified, only the conditions subject to modification are reopened.

Once the final modified permit is issued, the applicant or any other person affected or aggrieved by the Division’s final determination on the modified provisions may demand an adjudicatory hearing within thirty (30) calendar days of the date of issuance on the conditions subject to modification.”).

The Center for Biological Diversity and Food & Water Watch are affected and aggrieved by the issuance of the modified General Permit, and their Comments addressed all issues within the scope of this request. The issues raised in this request relate to the conditions subject to modification.<sup>1</sup> The Affected Parties are therefore entitled to an adjudicatory hearing.

**Request for reconsideration of adjudicatory action.** C.R.S. § 25-8-403 permits “any party directly affected” by a “final order or determination of the commission or division” to apply to the commission or division for “a hearing or rehearing with respect to, or reconsideration of, such order or determination” within the time permitted for seeking judicial review of such order or determination. C.R.S. § 25-8-404 provides that a proceeding for judicial review shall be filed within thirty days after an order or determination has become final. *See also* Regulation 21, Section 21.14 (“During the time permitted for seeking judicial review of any final order or determination of the Commission or Division rendered in any adjudicatory proceeding, any party directly affected by such order or determination may apply to the Commission or the Division, as appropriate, for a hearing...with respect to, or reconsideration of, such order or determination.”). As parties directly affected by the issuance of the General Permit, the Affected Parties are entitled to seek reconsideration of the permit modification action.

**Statutory and regulatory authorities cited in Part III, Basis for Error.** The Affected Parties cite to the following authorities to establish a basis for error: 33 U.S.C. §§ 1251, 1311, 1342, 1362; 40 C.F.R. §§ 122.23, 122.41, 122.44, 122.48, 123.25, 412.12, 412.31(a), 412.43; C.R.S. §§ 25-8-501, 25-8-504; Colorado Regulation 61 (Colorado Discharge Permit System Regulations); Colorado Regulation 81 (Animal Feeding Operations Control Regulation).

### **III. Basis for Error**

#### **A. Legal Background**

The federal Clean Water Act (“CWA”) prohibits the discharge of pollutants from a point source to waters of the United States except when the discharge is authorized by a

---

<sup>1</sup> The Center for Biological Diversity submitted a Notice of Appeal, Request for Adjudicatory Hearing, and Request for Reconsideration on the original CAFO General Permit on Oct. 7, 2021. The Division of Environmental Health and Sustainability and Water Quality Control Division granted an adjudicatory hearing, which is currently scheduled to take place before the Office of Administrative Courts on Oct. 31, 2022 (identified as Case No. WQ 2022-0001). If and when this request for hearing is granted, the Affected Parties intend to move to consolidate this matter with Case No. WQ 2022-0001.

permit issued under the National Pollutant Discharge Elimination System (“NPDES”) program. 33 U.S.C. §§ 1311(a), 1342.

NPDES permits must contain both “effluent limitations,” which control the type and amount of pollutants that a point source can discharge into waters of the United States, and monitoring provisions capable of ensuring that permittees comply with those effluent limitations. 33 U.S.C. §§ 1311, 1342(a)(2), 1342(b)(1)(A). All NPDES permits, including CAFO general permits like the one at issue in this appeal, must contain “monitoring requirements . . . [t]o assure compliance with permit limitations.” 40 C.F.R. § 122.44(i). This monitoring must be “representative of the monitored activity.” 40 C.F.R. § 122.41(j); see also 40 C.F.R. § 122.48. “Issuance of an NPDES permit is [] arbitrary, capricious, and contrary to law if the permit fails to include [such] monitoring provisions.” *Food & Water Watch v. U.S. Env’t Prot. Agency*, 20 F.4th 506, 516 (9th Cir. 2021). In addition to its essential role in determining compliance with the permit, monitoring is used in NPDES permits to “establish a basis for enforcement actions, assess treatment efficiency, characterize effluents and characterize receiving water.” *Id.* at 515 (quoting U.S. Env’t Prot. Agency, NPDES Permit Writers’ Manual, 8.1.1 (Sept. 2010)).

The CWA specifically defines CAFOs as point sources, meaning that any CAFO must obtain a NPDES permit in order to lawfully discharge to waters of the United States. 33 U.S.C. § 1362(14); 40 C.F.R. § 122.23(d)(1), (f). The Act’s designation of CAFOs as point sources reflects the threat that pollution from CAFOs poses to the environment and human health. *See* S. Rep. No 92-414, 92–93 (1971), reprinted in 1972 U.S.C.C.A.N. 3668, 3761 (“Animal and poultry waste, until recent years, has not been considered a major pollutant . . . The picture has changed dramatically, however, as development of intensive livestock and poultry production on feedlots and in modern buildings has created massive concentrations of manure in small areas.”). Federal regulations further prohibit discharges from CAFO production areas, with limited exceptions related to extreme precipitation events. *See* 40 C.F.R. §§ 412.12, 412.31(a), 412.43; *id.* at § 122.23(b)(8) (“Production area means that part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. . . . The manure storage area includes but is not limited to lagoons, runoff ponds, . . . under house or pit storages, liquid impoundments, . . . and composting piles”).<sup>2</sup>

In 2020, the U.S. Supreme Court confirmed that the NPDES permitting program applies to a discharge of pollutants from a point source to waters of the United States through groundwater where that discharge is “the functional equivalent of a direct discharge from the point source into navigable waters.” *Cty. of Maui, Haw. v. Haw. Wildlife Fund*, 140 S. Ct. 1462, 1477 (2020); *see also id.* at 1476 (“We hold that the statute requires a permit when there is a direct discharge from a point source into navigable waters or when there is the

---

<sup>2</sup> The designation of CAFOs as point sources under the CWA is further reenforced by extensive scientific literature demonstrating that CAFOs are significant contributors to water pollution across the U.S. *See, e.g.*, Ex. 4, U.S. Env’t Prot. Agency, Literature Review of Contaminants in Livestock and Poultry Manure and Implications for Water Quality, EPA 820-R-13-002 (2013), <https://tinyurl.com/yc7bamkn>.

*functional equivalent of a direct discharge.* We think this phrase best captures, in broad terms, those circumstances in which Congress intended to require a federal permit.”) As the Court explained, since this broader approach does not “clearly explain how to deal with middle instances,” it provided a number of non-exclusive factors that could be considered in determining whether a discharge falls under this test, including:

(1) transit time, (2) distance traveled, (3) the nature of the material through which the pollutant travels, (4) the extent to which the pollutant is diluted or chemically changed as it travels, (5) the amount of pollutant entering the navigable waters relative to the amount of the pollutant that leaves the point source, (6) the manner by or area in which the pollutant enters the navigable waters, (7) the degree to which the pollution (at that point) has maintained its specific identity. Time and distance will be the most important factors in most cases, but not necessarily every case.

*Id.* at 1476-77.

The Court further noted that EPA has applied the permitting scheme to certain discharges to surface water through groundwater for over 30 years. *Id.* Colorado’s Attorney General has similarly taken the position that the CWA covers both direct and indirect discharges and that it is “simply wrong to conclude that discharges to navigable waters via groundwater can never be covered by the NPDES program.”<sup>3</sup>

Controlling discharges through groundwater is particularly important in this context because CAFOs store enormous amounts of pollution-laden waste in impoundments, which leak pollutants into groundwater. *Food & Water Watch*, 20 F.4th at 509 (“[Lagoon] standards specifically allow for permeability and, thus, the lagoons are designed to leak.” (quoting *Cnty. Ass’n for Restoration of the Env’t, Inc. v. Cow Palace, LLC*, 80 F. Supp. 3d 1180, 1223 (E.D. Wash. 2015))). The Supreme Court’s opinion in *Maui* makes clear that the CWA regulates these discharges if they are the functional equivalent of a direct discharge to surface water.

The federal government has delegated authority to Colorado to administer the NPDES program within the state.<sup>4</sup> States that administer NPDES programs must establish requirements “at least as stringent” as the corresponding federal requirements. 40 C.F.R. § 123.25(a). The Colorado Water Quality Control Division (“WQCD”) implements these obligations through the Colorado Water Quality Control Act. C.R.S. § 25-8-501(1) (“No person shall discharge any pollutant into any state water from a point source without first having obtained a permit from the division for such discharge”). State regulations establish

---

<sup>3</sup> See Ex. 5, Letter from Attorneys General of Maryland, California, Colorado, Connecticut, the District of Columbia, Maine, Massachusetts, Michigan, Oregon, Rhode Island, and Vermont to Scott Wilson, U.S. Env’t Prot. Agency (June 7, 2019).

<sup>4</sup> Notice of Approval of Program for Control of Discharges of Pollutants to Navigable Waters, 40 Fed. Reg. 16713 (Apr. 14, 1975).

effluent limitations for CAFOs, including a prohibition on discharges from CAFO production areas, with limited exceptions related to extreme precipitation.<sup>5</sup>

In 2006, the WQCD delegated authority to the Manager of EAP to approve and sign CAFO discharge permits on behalf of the state. Ex. 6, Order Regarding Request for Adjudicatory Hearing (“Hearing Order”) at 3. EAP also implements Water Quality Control Commission Regulation 81, a distinct regulatory scheme that aims to protect groundwater and surface water from the impacts of animal feeding operations.<sup>6</sup>

## **B. Procedural Background**

The initial CAFO General Permit in Colorado was issued in 2001, with subsequent renewals issued in 2005, 2012, and 2016. Ex. 6, Hearing Order at 3. The General Permit covers the vast majority of permitted CAFOs in Colorado: of 100 permitted CAFOs in FY 2021, 99 were certified under the General Permit and only one operated under an individual permit.<sup>7</sup>

On June 10, 2021, EAP published the draft of the General Permit renewal, COA-934000, for public notice. On July 12, 2021, the Center for Biological Diversity submitted comments requesting that EAP address a number of issues with the draft permit, including the lack of groundwater monitoring requirements. Ex. 8 (“the Center’s Comments”).

On September 7, 2021, EAP issued a final version of COA-934000 along with a Fact Sheet addressing the Center’s Comments. *See* Ex. 9, Colorado General Permit for Concentrated Animal Feeding Operations (COA-934000), and Ex. 10, Fact Sheet for COA-934000. EAP explicitly declined to incorporate groundwater monitoring requirements into the permit because (1) a state law, C.R.S. § 25-8-504(2)(a), “prevent[ed] the program from being any more stringent than what is required by the federal act or regulations,” and (2) groundwater protection requirements for CAFOs were covered by Regulation 81, and therefore EAP considered them outside the scope of the CAFO permit. Ex. 10, Fact Sheet for COA-934000 at 23.

On September 16, 2021, the U.S. Court of Appeals for the Ninth Circuit published an opinion in *Food & Water Watch v. U.S. Env’t Prot. Agency*, finding EPA’s issuance of a general permit for Idaho CAFOs to be arbitrary, capricious, and contrary to law because the permit lacked sufficient monitoring provisions to ensure compliance with the permit. 20 F.4th at 518.<sup>8</sup> The Ninth Circuit found that certain requirements, such as weekly and daily visual

---

<sup>5</sup> *See* 5 CCR 1002-61 (Colorado Discharge Permit System Regulations), Sections 61.17(6)(a)(i), 61.17(6)(a)(iii)(A), 61.17(6)(b)(i), 61.17(6)(b)(iv)(A).

<sup>6</sup> Ex. 7, Env’t Agric. Program Annual Report 2021 at 9 (Mar. 2022).

<sup>7</sup> *Id.* at 12.

<sup>8</sup> The Ninth Circuit opinion from Sept. 16, 2021, *Food & Water Watch v. U.S. Env’t Prot. Agency*, 13 F.4th 896 (9th Cir. 2021), was superseded by the court’s opinion from Dec. 16, 2021, which modified the final two paragraphs of the opinion to remand the permit to EPA

inspections of waste storage structures and other production area infrastructure, satisfied the monitoring requirement for above-ground discharges, but ultimately held that the permit issuance was unlawful because the permit did not include any monitoring requirements for underground discharges from waste storage areas. *Id.* at 516-17. The court confirmed that NPDES permits must include monitoring for underground discharges to ensure that CAFOs comply with the production area zero-discharge effluent limitation. *Id.* at 517.

On October 7, 2021, the Center submitted a Notice of Administrative Appeal, Request for Adjudicatory Hearing, and Request for Reconsideration of Adjudicatory Action to the Colorado Department of Public Health and Environment (“CDPHE”) and EAP. In its request, the Center reiterated its concern that the CAFO permit lacked groundwater monitoring requirements, a concern which the Ninth Circuit had validated in *Food & Water Watch*. Ex. 11, Notice of Administrative Appeal.

On October 14, 2021, the Division of Environmental Health and Sustainability and WQCD granted the Center’s request for an adjudicatory hearing on the question of whether EAP violated state and federal law by not including groundwater monitoring requirements in the CAFO permit to ensure compliance with the permit’s terms. Ex. 6, Hearing Order at 9. The hearing in this matter is scheduled for October 31, 2022. Ex. 12, Notice of Hearing.

On April 14, 2022, EAP published a modified draft CAFO permit for public notice. *See* Ex. 2, General Permit Modification 1 and Ex. 3, Fact Sheet for Modification 1. This modified draft permit changed the original permit in two main ways: (1) it prohibited discharges from production areas to surface water via groundwater with a direct hydrological connection and barred CAFOs that discharge to surface water through hydrologically connected groundwater from eligibility for coverage under the General Permit; and (2) it incorporated conditions from Section 81.7 of Regulation 81 related to impoundment liners, construction, operation, and inspections, as well as documentation of these activities.

Although EAP had previously asserted that it could not incorporate groundwater monitoring requirements into the CAFO permit because they would exceed federal requirements and were beyond the scope of the permit, the agency stated in the Fact Sheet accompanying the draft permit that incorporating provisions from Regulation 81 is consistent with federal requirements because it is “not more or less stringent than” an EPA-issued CAFO general permit in New Mexico, which addresses underground discharges from production areas. Instead of incorporating monitoring requirements for underground discharges into the permit, as the Center urged in its Comments on the original draft permit and the Ninth Circuit confirmed the CWA requires in *Food & Water Watch*, EAP asserted that the addition of conditions from Regulation 81 eliminates the possibility of a hydrological connection between CAFOs and surface water, thereby ensuring compliance with the permit’s prohibition on discharges from production areas. Ex. 3, Fact Sheet at 3.

---

for further proceedings rather than vacating the permit. These Comments cite to the newer opinion.

On May 16, 2022, the Affected Parties submitted comments on the draft CAFO permit. Ex. 1, Comments.<sup>9</sup> The Affected Parties raised two issues with the draft permit related to monitoring. First, the Affected Parties noted that the permit did not incorporate representative monitoring conditions sufficient to ensure compliance with the terms of the permit, as required by the CWA. *Id.* at 9-13. Second, the Affected Parties argued that EAP’s assumption that CAFOs eliminate any possible hydrological connection to surface water by complying with the provisions of Regulation 81 is arbitrary and factually unsupported, further highlighting the need for monitoring. *Id.* at 13-17. Ultimately, the Affected Parties requested that EAP modify the permit to include a determination of whether or not groundwater below a site is connected to surface water. If a site does have such a connection, the Affected Parties requested that EAP require groundwater monitoring to effectively determine whether the facility is discharging pollutants to waters of the United States in violation of the permit, as required by federal law. *Id.* at 17.

On June 7, 2022, EAP issued the final modified CAFO permit. Ex. 2, General Permit Modification 1. EAP declined to make changes to the permit to incorporate a determination of connection between ground and surface waters or groundwater monitoring conditions, as the Affected Parties requested. In the Fact Sheet accompanying the permit issuance, EAP recognizes that the CWA authorizes regulation of discharges to groundwater that are the “functional equivalent of a direct discharge” from a point source to surface water, but justifies its refusal to make changes to the permit by arguing that the permit terms already “provide assurance of compliance with the permit’s discharge limitations, thus fully satisfying applicable Clean Water Act requirements.” Ex. 3, Fact Sheet at 7 (quoting *Cty. of Maui*, 140 S. Ct. at 1477). EAP asserts that the modified permit’s “impoundment construction requirements” are comparable to the conditions of the EPA-issued CAFO permit for New Mexico permit conditions in terms of “assuring that there will be no ‘functional equivalent of a direct discharge’ of pollutants from such impoundments into a WOTUS.” *Id.* at 8.<sup>10</sup> EAP also asserts that the monitoring provisions in the permit—i.e. weekly visual inspections and corrective action requirements—meet the CWA requirement that monitoring terms generate data that is representative of the monitored activity and assure compliance with permit limitations. *Id.* (citing 40 C.F.R. §§ 122.48(b); 122.44(i)(1)).

EAP also takes issue with the assertion in the Comments that impoundments are designed to leak, highlighting the need for monitoring. EAP argues that “the seepage rate standard in this modified permit will not allow pollutants to reach groundwater, let alone allow pollutants to reach WOTUS through a groundwater conduit.” Ex. 3, Fact Sheet at 8. EAP differentiates its effective seepage rate standard from the U.S. Natural Resource

---

<sup>9</sup> The Colorado Livestock Association, which has intervened in the administrative challenge to the original CAFO General Permit, did not submit comments on the permit modification.

<sup>10</sup> The New Mexico permit became effective in September 2016, well before the Ninth Circuit issued its decision in *Food & Water Watch*. See NPDES General Permit for Discharges from CAFOs in New Mexico (NMG010000) at 1, available at <https://www.env.nm.gov/wp-content/uploads/sites/25/2017/07/NMG010000-CAFO-NM-20160901.pdf>. The New Mexico permit therefore does not establish compliance with what EPA now accepts as the monitoring mandate as interpreted by the Ninth Circuit.

Conservation Service (NRCS) standard of coefficient of permeability, i.e. hydraulic conductivity. *Id.* EAP then quotes from the Statement of Basis, Specific Statutory Authority, and Purpose for Regulation 81, which states that seepage under the maximum rate is not considered a discharge and that the maximum rate has been used in the design of “numerous domestic facilities.” *Id.* EAP therefore states that it “feels confident in the efficacy of its liner requirements to prevent discharges of pollutants that might reach groundwater, let alone migrate to a WOTUS through directly hydrologically connected groundwater.” *Id.*

### C. Argument

EAP’s issuance of the General Permit without sufficient monitoring requirements to ensure compliance with the permit terms was arbitrary, capricious, and contrary to law for two reasons. First, the permit does not incorporate representative monitoring conditions that are sufficient to ensure compliance with the terms of the permit, namely the prohibition on production area discharges to surface waters via groundwater, as required by the CWA. Second, EAP’s assumption that CAFOs eliminate any possible hydrological connection to surface water by complying with the provisions of Regulation 81 is arbitrary and factually unsupported.

#### i. **The permit does not incorporate monitoring conditions sufficient to ensure compliance with the permit terms, contrary to federal law.**

##### 1. *The CWA requires monitoring, and pollution management practices cannot supplant this requirement.*

As the Affected Parties stated in their Comments, monitoring is central to the CWA’s NPDES permitting program. It serves to ensure that point sources are complying with the effluent limitations that were designed to achieve the CWA’s goal of restoring and maintaining the integrity of the nation’s waters. 33 U.S.C. § 1251(a). For this reason, NPDES permits must include monitoring conditions that are “representative of the monitored activity,” 40 C.F.R. § 122.41(j), and that can ensure compliance with the permit’s effluent limitations, 40 C.F.R. § 122.44(i).

In addition to ensuring compliance with the terms of a permit, monitoring also serves other enforcement and water quality protection purposes: it is used to “establish a basis for enforcement actions, assess treatment efficiency, characterize effluents and characterize receiving water.” *Food & Water Watch*, 20 F.4th at 515 (quoting U.S. Env’t Prot. Agency, NPDES Permit Writers’ Manual, 8.1.1 (Sept. 2010)). Monitoring helps to ensure that technologies and practices to prevent pollution are actually working, and enables regulators and the public to take action if they are not.

EAP cannot evade the requirement to include monitoring conditions that ensure compliance with the permit’s effluent limitations by assuming that pollution *management* practices are perfectly effective at all times. CWA regulations mandate both pollution controls through “[p]roper operation and maintenance,” *as well as* monitoring to assure those controls actually worked at the end of the day. 40 C.F.R. § 122.41 (e) & (j) (listing both

as “conditions [that] apply to all NPDES permits”). The former cannot supplant the latter. EAP must require monitoring in the CAFO permit to establish compliance or detect unlawful discharges from CAFO production areas. *Food & Water Watch*, 20 F.4th at 517.<sup>11</sup>

The provisions from Regulation 81 that EAP has added to Part IV(A)(4) of the permit do not constitute representative monitoring for discharges to surface water that occur through groundwater. EAP has incorporated text from Section 81.7 of Regulation 81 regarding impoundment liners, setback requirements, visual inspections, waste removal, and depth markers, as well as documentation of compliance with Regulation 81. EAP’s sole focus on operational controls and above-ground inspections to prevent unlawful discharges, without additional provisions to monitor for actual discharges, is out of step with the requirements of the CWA for three reasons: (1) the provisions in the modified permit cannot detect (*i.e.*, monitor for) underground discharges from waste impoundments; (2) the Ninth Circuit has made clear that monitoring for underground discharges is required by the CWA; and (3) the existing inspection scheme under Regulation 81 is not effectively implemented to protect surface waters.

2. *The provisions EAP has inserted into the permit from Regulation 81 do not meet the monitoring requirements of the CWA because they cannot monitor for underground discharges.*

As noted above, the permit must include monitoring that is representative of the monitored activity and that can ensure compliance with the permit’s effluent limitations. 40 C.F.R. §§ 122.41(j); 122.44(i). Here, the relevant “monitored activity” is the discharge of pollutants from a CAFO’s production area, which includes the manure storage area and waste containment areas, and the relevant effluent limitation is zero; the General Permit, therefore, prohibits discharges from CAFO production areas, including discharges through groundwater that are the functional equivalent of a direct discharge to surface water and bars CAFOs that discharge to surface water through hydrologically connected groundwater from coverage under the General Permit. CAFO General Permit Modification 1, Parts I(D)(2)(g), II(A), II(A)(5). Zero is a numeric effluent limitation subject to compliance monitoring. Therefore, the permit must include monitoring conditions to ensure that facilities comply with the prohibition on discharges from CAFO production areas by detecting any discharges that do occur, including discharges through groundwater.

Consider how NPDES permits work for any other point source category: pollution controls are mandated that are intended to facilitate permit compliance and protect water quality, but monitoring, as well as the reporting of monitoring results through Discharge Monitoring Reports (“DMRs”), is still required to confirm that the point source actually complies with the law and its permit. Under EAP’s logic here, if applied to those other point

---

<sup>11</sup> While the focus of this request is on discharges from production areas, CAFO land application areas also pose a threat of discharges through groundwater. Threshold eligibility under Part I(D)(2)(g) and verifying EAP’s expectation that nutrient management plans are adequately protective of water quality at land application sites, Ex. 3, Fact Sheet at 8, also require monitoring to ensure compliance.

source categories, a permitted entity such as a mining operation that has installed pollution control devices and conducts inspections *to confirm merely that such devices are in place* would not thereafter need to monitor its discharges to make sure those devices are actually working or report its compliance through DMRs. Of course, this is not how such permits operate in those other point source categories—and neither should they for the CAFO point source category.

The requirements in the permit modification do not constitute sufficient monitoring because they cannot detect discharges to surface water through groundwater, nor are they representative. Putting aside that lagoon liners are “designed to leak” even when constructed according to existing standards, as explained below and confirmed by *Food & Water Watch*, 20 F.4th at 509, requirements intended to ensure liner integrity and to construct impoundments according to setback requirements may be helpful as a pollution control practice, but they do not confirm, nor can they substantiate, whether unlawful discharges are actually occurring. The documentation requirements from Regulation 81 serve to ensure compliance with Regulation 81 itself, but cannot ensure compliance with the zero-discharge requirement mandated by CWA regulations. Likewise, while visual inspections of the exposed part of a liner are helpful to identify issues like erosion or weed growth, they cannot detect discharges that occur underground, therefore making them invisible to the inspector.

The advancing age, management, and use patterns of most of the CAFO waste management infrastructure in Colorado further confirm why more than just above-surface visual inspections are necessary to ensure compliance with the discharge prohibitions of the General Permit. The majority of CAFOs in Colorado use either earthen (clay) or plastic liners for impoundments.<sup>12</sup> Depending on the facility’s Standard Operating Procedure, an operator might only be required to clean and inspect these liners every 10, 20, *or* 30 years.<sup>13</sup> During the long periods between cleanings, liner integrity issues may arise underground that are not visible to operators or inspectors. For example, EPA notes that “[a]s structures age, the integrity of the walls and bottoms of the lagoon may be penetrated by burrowing animals, or the lagoon walls and bottoms may develop cracks from wetting and drying cycles.”<sup>14</sup> Lagoon seals can also rupture because of “gas release from microbial activity in soil beneath the seal.”<sup>15</sup> Visual inspections are inadequate to detect issues such as these that can result in

---

<sup>12</sup> Ex. 7, Env’t Agric. Program Annual Report 2021 at 15.

<sup>13</sup> Standard Operating Procedures included in Response to Colorado Open Records Act request, January 2020, on file with University of Denver Environmental Law Clinic. What the SOPs mean by “clean” is ambiguous, but it is the Affected Parties’ understanding that these cleanings involve a complete or near-complete removal of manure or wastewater such that more of the impoundment liner is visible, and that the operator must visually inspect the impoundment after each cleaning, but is not required to re-certify at that time that clay- or plastic-lined impoundments are capable of maintaining the maximum seepage rate.

<sup>14</sup> Ex. 13, U.S. Env’t Prot. Agency, Risk Assessment Evaluation for Concentrated Animal Feeding Operations, at 26 (2004).

<sup>15</sup> *Id.*

pollutant discharges far in excess of the continuous seepage rate EAP already allows from lagoons.

These provisions are also not representative of the monitored activity. For example, setback requirements are a best management practice regarding impoundment siting. They have nothing to do with confirming whether a particular impoundment is or is not discharging pollutants. Similarly, liner standards and waste removal schedules are operational parameters, and do not indicate compliance with production area discharge limitations. Representative monitoring must demonstrate whether or not a CAFO in fact is in compliance with the zero-discharge standard, which in turn means that monitoring must be required at sufficient frequency and at such times when unlawful discharges are most likely to occur.

3. *The permit is inconsistent with the Ninth Circuit's interpretation of monitoring requirements under the CWA in Food & Water Watch.*

In *Food & Water Watch*, the Ninth Circuit explicitly found that above-ground inspection requirements were insufficient to ensure that CAFO production areas comply with the zero-discharge requirement. There, EPA argued that similar provisions to those in the permit at issue here—*i.e.*, regular visual inspections of impoundments and depth markers, samples after a discharge, requirements to monitor discharge if a liner failed so significantly that it resulted in a discharge, and liner integrity requirements—were sufficient to ensure that permittees met the permit's effluent limitations. Resp'ts' Answering Br. 34-37, *Food & Water Watch v. U.S. Env't Prot. Agency*, No. 20-71554 (9th Cir. Nov. 23, 2020). The Ninth Circuit rejected EPA's argument and instead agreed with the Petitioners that the permit did not "require monitoring that would ensure detection of unpermitted discharges." 20 F.4th at 516. The court found that the permit must include monitoring conditions for underground discharges from production areas because "[w]ithout a requirement that CAFOs monitor waste containment structures for underground discharges, there is no way to ensure that production areas comply with the Permit's zero-discharge requirement." *Id.* at 517.

EAP's justification for the permit modification is premised on an erroneous reading of the Ninth Circuit's opinion in *Food & Water Watch*. Despite the court's clear pronouncement that NPDES permits must contain monitoring for underground discharges from production areas, EAP states that visual inspections "are an equivalent monitoring requirement for underground discharges" when compared to the inspection requirements that the Ninth Circuit found appropriate only for *above-ground* discharges from failing water lines, diversion ditches, and the like. Ex. 3, Fact Sheet at 4-5; *Food & Water Watch*, 20 F.4th at 516. Even after considering the Affected Parties' Comments, EAP argues that "the monitoring provisions in the permit modification – that is, weekly visual inspection and corrective action requirements – are of the 'type, intervals, and frequency sufficient to yield data which are representative of the monitored activity,' 40 C.F.R. § 122.48(b), and serve 'to assure compliance with permit limitations' (i.e. no discharge of pollutants into a WOTUS). 40 C.F.R. § 122.44(i)(1)." Ex. 3, Fact Sheet at 8. This is simply contrary to the Ninth Circuit's interpretation of the CWA. As the court's opinion makes clear, the only way to determine

whether CAFO waste impoundments comply with the zero-discharge requirement is to require representative monitoring that assures compliance.<sup>16</sup>

*4. The current implementation of inspection requirements further highlights the need for monitoring to protect surface waters.*

Even if the provisions of the permit modification were sufficient to meet the requirements of federal law, which they are not, EAP's justification for refusing to make changes to the modified permit only contemplates a scenario in which liners work exactly as they were intended and operators implement the Regulation 81 scheme exactly as written. But as the Affected Parties show above, liners can develop integrity issues over time, and available information on the Regulation 81 scheme also indicates that current practices are not sufficiently protective against pollution from production areas, highlighting the need for groundwater monitoring. For example, EAP's response to a recent Colorado Open Records Act request provides examples of facilities' noncompliance with the terms of Regulation 81. One facility noted erosion along the embankment interior of an impoundment in dozens of inspection reports dating from January 2016 through October 2016, January 2021, and December 2021.<sup>17</sup> Another facility noted vegetation on pond embankments on weekly inspection reports from May 2, 2016 through June 27, 2016 and vegetation on diversion structure embankments from April 4, 2016 through June 27, 2016.<sup>18</sup> The records did not note any corrective action taken by either facility.

EAP's Annual Report for FY 2021 also highlights issues with CAFOs' compliance with various liner maintenance and inspections requirements. Out of the 42 permitted and registered CAFOs that EAP inspected in FY 2021, four "had issues that needed to be addressed to preserve liner integrity," eight "had depth markers that were damaged, missing, incorrectly markers [sic] or in the wrong location," six "had impoundments that did not have adequate storage," four "were missing items like liner certifications and impoundment drawings, or had not included a new impoundment in their SOP," and six "had incomplete records of their production area inspections."<sup>19</sup> Overall, EAP found some type of violation at 53% of permitted CAFOs in FY 2021; it has found violations at over half of permitted CAFOs every year since at least 2016.<sup>20</sup> This undermines and renders arbitrary EAP's blind reliance on practices to ensure compliance with the permit. As in every industry, best management practices fail and operators make mistakes—EAP cannot assume otherwise here.

---

<sup>16</sup> EAP argues that the permit's liner seepage rate requirement is more stringent than the NRCS standard. Ex. 3, Fact Sheet at 8. Yet EAP has provided no real-world monitoring data that would support any different consideration of liners' performance in preventing pollutants from reaching groundwater under the permit's seepage rate standard.

<sup>17</sup> Weekly inspection records included in Response to Colorado Open Records Act request, Feb. 11, 2022, on file with University of Denver Environmental Law Clinic.

<sup>18</sup> *Id.*

<sup>19</sup> Ex. 7, Env't Agric. Program Annual Report 2021 at 15-16.

<sup>20</sup> *Id.* at 14; *see also* Ex. 14, Env't Agric. Program Annual Report 2020 at 13 (Apr. 2021).

Because the modified permit does not include sufficient monitoring conditions to ensure that permittees comply with the prohibition on discharges from production areas, the permit does not meet the requirements of federal law.

**ii. EAP's assumption that the terms of Regulation 81 eliminate discharges to surface water through groundwater is factually flawed, and EAP must implement groundwater monitoring at sites where a discharge may occur.**

Aside from being insufficient to meet the legal mandates of the CWA, the additional provisions in the permit cannot, as EAP asserts, "ensure that an underground discharge . . . does not occur." Ex. 3, Fact Sheet at 3. Indeed, not only does the modified permit not eliminate the possibility of discharges of pollutants to groundwater that eventually enter surface water, it exacerbates that possibility by using this permit modification to further embed waste impoundment and design standards from Regulation 81 *that are designed to leak waste*. That EAP thereafter attempts to cover that fact by arbitrarily and without support in the record labeling such leakage, also known as seepage, as "insignificant" does not support its conclusion that the modification will ensure that underground discharges do not occur. Quite the opposite, hitching permit compliance to an unsupported assumption of insignificance emphasizes the need for actual monitoring provisions in the General Permit, as well as verifiable analyses of the connection between groundwater and surface water at CAFO sites.

*1. CAFO impoundments leak pollutants into groundwater.*

There is no doubt that CAFO impoundments leak waste into groundwater in Colorado and elsewhere. The modified permit expressly incorporates the maximum seepage rates provided by Section 81.7, meaning that at least some leakage of waste from impoundments into groundwater is permitted even when a CAFO's liners are operating optimally. A report published by EPA acknowledges that "all CAFO lagoons do in fact leak" and that although leakage rates are supposed to be low enough at properly constructed lagoons to "preclude adverse environmental impacts," more information is needed to determine whether these design leakage rates are actually effective in diverse hydrogeological settings.<sup>21</sup> The U.S. Natural Resources Conservation Service likewise notes that "clay liners obviously allow some seepage" and that "[s]eepage from these structures has the potential to pollute surface water and underground aquifers."<sup>22</sup>

Indeed, NRCS estimates that clay-lined impoundments designed to a  $1 \times 10^{-6}$  centimeter per second permeability value leak at a rate of 9,240 gallons per acre per day before manure sealing takes effect, at which point the rate reduces to 924 gallons per acre

---

<sup>21</sup> Ex. 15, Stephen R. Hutchins et al., Case Studies on the Impact of Concentrated Animal Feeding Operations (CAFOs) on Ground Water Quality 94, U.S. Env't Prot. Agency (2012).

<sup>22</sup> Ex. 16, U.S. Nat. Res. Conservation Serv., Part 651, Appendix 10D: Design and Construction Guidelines for Impoundments Lined with Clay or Amendment-Treated Soil 10D-1, 10D-2 (2008).

per day.<sup>23</sup> Therefore, “even assuming [] lagoons [are] constructed pursuant to NRCS standards, these standards specifically allow for permeability and, thus, the lagoons are designed to leak.” *Cnty. Ass’n for Restoration of the Env’t v. Cow Palace*, 80 F.Supp.3d 1180, 1223 (E.D. Wash. 2015); *see also Wash. State Dairy Fed’n v. Dep’t of Ecology*, 18 Wn. App. 2d 259, 279 (Wash. Ct. App. 2021) (recognizing that “studies have consistently shown that manure lagoons leak and that seepage from lagoons primarily goes to groundwater” (internal quotation omitted)).

EAP emphasizes that the NRCS permeability value differs from Colorado’s maximum seepage rate of  $1 \times 10^{-6}$  cm/sec because the Colorado standard, unlike the NRCS standard, takes into account “actual operating conditions such as maximum liquid depth and liner thickness.” Ex. 3, Fact Sheet at 8. But even if Colorado’s seepage rate does result in a lower amount of seepage than that contemplated by NRCS, the fact remains that clay-lined impoundments leak a significant amount of waste: NRCS notes that it is “seldom technically or economically feasible” to meet a discharge value of less than 500 gallons per acre per day using compacted clay liners and that achieving seepage rates lower than 500 gallons per acre per day would require synthetic liners, concrete liners, or above-ground storage tanks.<sup>24</sup>

EAP’s explanation as to how Colorado’s seepage rate standard “prevents” discharges is unsupported and contrary to facts in the record. For the assertion that seepage below the permit’s standard of  $1 \times 10^{-6}$  cm/sec is so low that it is not considered to be a discharge, EAP cites to the Water Quality Control Commission’s Statement of Basis, Specific Authority and Purpose for Regulation 81. Ex. 3, Fact Sheet at 8 (citing Section 81.22 of Regulation 81). Section 81.22, in turn, quotes Section 61.14(9)(a) of Regulation 61, which states that “[t]he owner of any impoundment who can demonstrate...that the seepage from the impoundment does not exceed  $1 \times 10^{-6}$  cm/sec (“Allowable Seepage”) will be considered not to have a discharge to waters of the state, by virtue of the insignificant nature of the seepage.”<sup>25</sup>

As the factual sources cited here and in the Comments show, seepage from CAFO impoundments, even when they are constructed in compliance with best practices, is far from “insignificant.” But even if it were true that Colorado’s standard guarantees a low seepage rate, EAP, as the state authority charged with implementing the NPDES scheme for CAFOs, cannot determine that the seepage does not constitute a discharge under the CWA. As the Affected Parties noted in their Comments, the CWA simply does not contemplate a *de minimis* exception for discharges: *any* amount of discharge is unlawful if it is not authorized by a NPDES permit, regardless of the extent of the pollution. Ex. 1, Comments at 14 n.29; 33 U.S.C. §§ 1311(a), 1342. And, as the Supreme Court in *Maui* confirms, and EAP in its Fact Sheet agrees, if groundwater flows in such a way that it ultimately causes “the functional equivalent of a direct discharge” to surface water, that discharge is unlawful under the CWA and this permit. *Cty. of Maui*, 140 S. Ct. at 1477; Ex. 3, Fact Sheet at 8.

---

<sup>23</sup> *Id.* at 10D-2.

<sup>24</sup> *Id.* at 10D-15.

<sup>25</sup> As noted above in section III(C)(i)(3), EAP has provided no actual monitoring data to substantiate its conclusion that the seepage from CAFO impoundments in Colorado that comply with current regulations is “insignificant.”

2. EAP's conclusion that the seepage rate standard in the permit results in "insignificant" amounts of discharge is unsupported.

EAP cites to language in the Statement of Basis for Regulation 81 that "numerous domestic facilities" have used the  $1 \times 10^{-6}$  cm/sec seepage rate standard and that it "generally is considered to require an impervious liner to meet it." Fact Sheet at 8 (quoting Section 81.22). Regulation 81, in turn, quotes this language directly from "the statement of basis and purpose language (in Regulation #61) for the July 10, 1989 ground water permitting regulation hearing."<sup>26</sup> Neither Regulation 81 nor Regulation 61 cite any authority for this finding.

In other words, EAP justifies its "confiden[ce] in the efficacy of its liner requirements to prevent discharges" with language from a regulatory process that occurred over three decades ago and for which no factual support is available. Ex. 3, Fact Sheet at 8. That the  $1 \times 10^{-6}$  cm/sec seepage rate was used to construct numerous facilities prior to July 1989 and was considered to require "impervious" liners does not make it a sound basis for refusing to monitor facilities today. Indeed, numerous studies conducted since 1989, including six technical studies that the Affected Parties cited in and attached to their Comments, show that seepage from CAFO impoundments presents a threat to water quality.<sup>27</sup> And the scientific community has made significant advances in its understanding of seepage from CAFO impoundments since the late 1980s—thanks in part to monitoring data.<sup>28</sup> EAP's refusal to

---

<sup>26</sup> See Section 61.28, Regulation 61 (Statement of Basis, Specific Statutory Authority, and Purpose (1990 Land Application/Impoundment Revisions)).

<sup>27</sup> See Ex. 15, Hutchins et al., Case Studies on the Impact of CAFOs on Ground Water Quality; Ex. 17, Tom DeSutter et al., *Movement of Lagoon-Liquor Constituents below Four Animal-Waste Lagoons*, 34 J. Environ. Qual. 1234 (2005); Ex. 18, J.M. Ham, *Seepage Losses from Animal Waste Lagoons: A Summary of a Four-Year Investigation in Kansas*, 45 Transactions of the Am. Soc'y Agric. Eng'rs 983 (2002); Ex. 19, S. Baram et al., *Infiltration Mechanism Controls Nitrification and Denitrification Processes under Dairy Waste Lagoon*, 41 J. Env't Quality 1623 (2012); Ex. 20, J.M. Ham & T.M. DeSutter, *Toward Site-Specific Design Standards for Animal-Waste Lagoons: Protecting Ground Water Quality*, 29 J. Environ. Qual. 1721 (2000); Ex. 21, R.L. Huffman & P.W. Westerman, *Estimated Seepage Losses from Established Swine Waste Lagoons in the Lower Coastal Plain of North Carolina*, 38 Transactions of the Am. Soc'y Agric. Eng'rs 449 (1995).

<sup>28</sup> See Ex. 16, NRCS Appendix 10D at 10D-1 ("Animal waste storage ponds designed prior to about 1990 assumed that seepage from the pond would be minimized by the accumulation of manure solids and a biological seal at the foundation surface....Monitoring wells installed at some sites with very sandy soils showed that seepage containing constituents from the pond was still occurring even after enough time had passed that manure sealing should have occurred. This evidence caused U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) engineers to reconsider guidance on suitable soils for siting an animal waste storage pond."). The NRCS goes on to describe the development of a guidance document on impoundment design in the late 1980s that was subsequently "revised considerably" into what is now Appendix 10D. *Id.* at 10D-1-10D-2. See also *Sw. Elec. Power Co. v. U.S. Env't Prot. Agency*, 920 F.3d 999, 1005-06 (5th Cir. 2019)

consider the factual sources that the Affected Parties put before it during the permitting process, without putting forth any factual support for its own findings, is arbitrary.

3. *Seepage from CAFO impoundments harms the quality of groundwater and surface water and is difficult to predict or evaluate based on construction criteria alone.*

Seepage from lagoons includes pollutants that can affect groundwater, and subsequently surface water, quality. For example, one technical study found pollutants from lagoon waste in the soil below lagoons, including nitrogen and ammonium.<sup>29</sup> Another study found that the rate of ammonium nitrogen movement into the soil under lagoons ranged from 200 to 6,000 kilograms per hectare per year and chloride losses ranged from 500 to 8,000 kilograms per hectare per year; over a period of 25 years, nitrogen accumulations beneath a swine waste lagoon could exceed 230,000 kilograms.<sup>30</sup> EPA also notes that “[l]eaky lagoons and below grade storage facilities are potential sources of nitrogen compounds that may enter groundwater.”<sup>31</sup> And the National Association of Local Boards of Health concluded that “[g]roundwater can be contaminated by CAFOs through . . . leaks or breaks in storage or containment units.”<sup>32</sup>

Even when impoundments are constructed in compliance with national best practices, the amount of seepage into groundwater and the fate of those pollutants can be difficult to predict or determine based only on design standards, demonstrating why monitoring is essential. As noted above, many CAFOs in Colorado use compacted clay liners.<sup>33</sup> Seepage from earthen storage structures is “difficult to predict” because of the “complex group of variables that affect flow through the compacted liner.”<sup>34</sup> Furthermore, clay sediments “are highly sensitive to water content and tend to form desiccation cracks under unsaturated conditions,” which “serve as preferential flow paths for water and contaminants.”<sup>35</sup> “[T]he risk of groundwater contamination” from storage lagoons “is not only dependent on the seepage rate, but is governed by the chemical concentrations in the waste, depth to the water table, and under-basin soil properties.”<sup>36</sup> EAP requires CAFOs to use Darcy’s Law to calculate the seepage rate for impoundments,<sup>37</sup> but while Darcy’s Law

---

(describing the CWA’s emphasis on the best available pollution control technologies and increasingly stringent effluent limitations as technology advances).

<sup>29</sup> Ex. 17, DeSutter et al., *Movement of Lagoon-Liquor Constituents*, at 1234, 1241.

<sup>30</sup> Ex. 18, Ham, *Seepage Losses from Animal Waste Lagoons*, at 991.

<sup>31</sup> Ex. 13, U.S. Env’t Prot. Agency, Risk Assessment Evaluation for CAFOs, at 26.

<sup>32</sup> Ex. 22, Carrie Hribar, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities 3*, National Association of Local Boards of Health (2010), [https://www.cdc.gov/nceh/ehs/docs/understanding\\_cafos\\_nalboh.pdf](https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf).

<sup>33</sup> Ex. 7, Env’t Agric. Program Annual Report 2021 at 15.

<sup>34</sup> Ex. 18, Ham, *Seepage Losses from Animal Waste Lagoons*, at 983.

<sup>35</sup> Ex. 19, Baram et al., *Infiltration Mechanism Controls Nitrification and Denitrification Processes*, at 1624.

<sup>36</sup> Ex. 18, Ham, *Seepage Losses from Animal Waste Lagoons*, at 984.

<sup>37</sup> Regulation 81, Section 81.7(2)(b); *see also* Ex. 3, Fact Sheet at 8.

and data on soil materials “provide a useful first approximation of liner permeability,” “a host of factors affect seepage in the field that are not emulated under laboratory conditions or properly modeled with Darcy’s Law.”<sup>38</sup> These factors include “construction methods, weathering of side embankments, roots and burrowing pests, organic sludge deposits, and many other processes,”<sup>39</sup> some of which are invisible to above-ground inspections. Recognizing the limitations of seepage rate design, NRCS urges regulators to take into account not only seepage rates, but also “regional ground water flow, depth to the aquifer likely to be affected, and other factors” when evaluating the potential impact of storage ponds on groundwater.<sup>40</sup>

EAP appears to additionally rely on manure sealing to mitigate seepage from underground impoundments, but this practice does not guarantee low seepage rates. The NRCS calculates that manure sealing reduces initial seepage by one-tenth.<sup>41</sup> However, the effectiveness of manure sealing depends on the solids content of the manure<sup>42</sup> and soil characteristics at the CAFO site; and in areas with coarser soils, sealing may never attain the low seepage rates that it does in areas with fine-textured soils.<sup>43</sup> Furthermore, while sealing may improve seepage along the bottom of an impoundment, “processes such as freezing-thawing, erosion, macropore formation, and wetting-drying may compromise the liner along the shoreline and cause greater seepage into side embankments.”<sup>44</sup>

The amount of pollutants entering Colorado’s groundwater from CAFO impoundments is therefore impossible to determine based only on liner certifications and seepage rate calculations. But it is clear that CAFO impoundments leak pollutants into groundwater. If those pollutants reach surface water in a manner that is “the functional equivalent of a direct discharge,” the seepage would constitute an unlawful discharge under the CAFO permit and federal law. *Cty. of Maui*, 140 S. Ct. at 1477. And EAP’s assumption that permittees can “demonstrate the absence of a direct hydrological connection”<sup>45</sup> based on their compliance with Regulation 81 is untenable. Whether a hydrological connection exists between groundwater and surface water at a given site is a geologic fact, and CAFOs cannot “eliminate” or “demonstrate the absence of” a geologic fact by implementing best practices.

4. *EAP must implement an analysis of the connection between groundwater and surface water beneath CAFO production areas into the permit in addition to monitoring.*

As the Affected Parties stated in their Comments, in order to adequately determine whether facilities are discharging to surface water through groundwater that is connected to

---

<sup>38</sup> Ex. 20, Ham & DeSutter, *Toward Site-Specific Design Standards*, at 1725.

<sup>39</sup> *Id.*

<sup>40</sup> Ex. 16, NRCS Appendix 10D at 10D-2.

<sup>41</sup> *Id.*

<sup>42</sup> *Id.* at 10D-1.

<sup>43</sup> Ex. 21, Huffman & Westerman, *Estimated Seepage Losses*, at 449.

<sup>44</sup> Ex. 18, Ham, *Seepage Losses from Animal Waste Lagoons*, at 983.

<sup>45</sup> Ex. 3, Fact Sheet at 4.

surface water, EAP must first incorporate a mechanism to determine the connection between groundwater under CAFO production areas and surface water as a matter of hydrogeology and without reference to practices employed above ground at the site. Permitted facilities should be required to submit information about this connection to EAP, and the information should be available to the public. CAFOs sited above groundwater that is connected to surface water such that a functional equivalent of a direct discharge may occur must then be required to monitor their discharges to this interconnected system to ensure that they are in compliance with the zero-discharge limitation of Part II(A) of the permit and therefore that they meet the eligibility requirement of Part I(D)(2)(g). Ex. 1, Comments, at 17.

EAP's issuance of the General Permit without sufficient monitoring requirements to ensure compliance with the permit terms was arbitrary, capricious, and contrary to law. The Affected Parties respectfully request a hearing on the issue of whether EAP must incorporate groundwater monitoring at sites where a functional equivalent of a direct discharge to surface waters may occur into the General Permit.

#### **IV. Estimate of Time Required for Hearing**

The issue that the Affected Parties raise in this request is a narrow question of law. The Affected Parties estimate that one day will be required to conduct an adjudicatory hearing on this issue.

Dated June 27, 2022.

Sincerely,

/s/ Amy Volz

Amy Volz

Wyatt Sassman

Kevin Lynch

Environmental Law Clinic

University of Denver

Sturm College of Law

2255 E. Evans Ave.

Denver, Colorado 80208

308-871-6753

avolz@law.du.edu

Counsel for the Center for Biological Diversity and Food & Water Watch

## CERTIFICATE OF MAILING

I hereby certify that on June 27, 2022, I delivered a copy of the foregoing Notice of Appeal, Request for Adjudicatory Hearing, and Request for Reconsideration of Adjudicatory Action by electronic mail to [cdphe\\_legalservices@state.co.us](mailto:cdphe_legalservices@state.co.us) and [cdphe.cafo@state.co.us](mailto:cdphe.cafo@state.co.us), as well as to the following individuals:

**Chad M. DeVolin**

Manager, Environmental Agriculture Program  
Division of Environmental Health and Sustainability  
Colorado Department of Public Health and Environment  
[chad.devolin@state.co.us](mailto:chad.devolin@state.co.us)

**Meg Parish**

Permits Section Manager  
Water Quality Control Division  
Colorado Department of Public Health and Environment  
[meg.parish@state.co.us](mailto:meg.parish@state.co.us)

**Nicole Rowan**

Director  
Water Quality Control Division  
Colorado Department of Public Health and Environment  
[nicole.rowan@state.co.us](mailto:nicole.rowan@state.co.us)

/s/ Amy Volz

Amy Volz

Wyatt Sassman

Kevin Lynch

Environmental Law Clinic

University of Denver

Sturm College of Law

2255 E. Evans Ave.

Denver, Colorado 80208

308-871-6753

[avolz@law.du.edu](mailto:avolz@law.du.edu)

Counsel for the Center for Biological Diversity and Food & Water Watch