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Via email to rosborough.evelyn@epa.gov and Via First Class Mail
U.S. Environmental Protection Agency Region 6
William Honker, Director, Water Quality Protection Division
Evelyn Rossborough, Water Quality Protection Division
6WQ-NP : 1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: Public Comments on EPA Region 6's Draft National Pollutant Discharge Elimination System General Permit for Discharges from Concentrated Animal Feeding Operations in New Mexico (NMG010000) - 79 Fed. Reg. 78431 (December 30, 2014).

Dear Mr. Honker, Ms. Rossborough, and U.S. EPA Region 6:

On behalf of the Socially Responsible Agriculture Project, the New Mexico Environmental Law Center, Animal Legal Defense Fund, Sierra Club – Rio Grande Chapter, Amigos Bravos, Lea County Concerned Citizens, Rio Valle Concerned Citizens, and Mesquite Community Action Committee (the "Commenters") this firm submits herewith comments on the U.S. Environmental Protection Agency's (EPA) draft National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Concentrated Animal Feeding Operations (CAFOs) in New Mexico (NMG010000), as published in 79 Fed. Reg. 78431 on December 30, 2014 (the "Draft Permit"). A CD with documents referenced herein is being forwarded to EPA Region 6 today via U.S. Mail.

Thank you for the opportunity to submit comments on this issue important to the mission and concerns of the Commenters. The Commenters are organizations concerned with the negative environmental, public health, sustainable agriculture, animal welfare, and social and environmental justice impacts of CAFOs. The Commenters include national and regional organizations created to address the problems of mega-dairies and CAFOs. The Commenters are concerned as they see water levels dropping while the mega dairies pump more and more water--and, at the same time, there is a slow increase in the levels of nitrates in everyone's drinking water. The Commenters represent and work with communities on the ground that experience the intense odors, swarms of flies, and air-borne animal waste, all of which result in an ever-diminishing quality of life and health. The Commenters are concerned that, like the impacts from the huge manure piles heaped up at every mega dairy, the dairies use their every-growing profits to wield equally large amounts of local power and influence to buy the right to pollute the air, land and water. If the situation continues unabated, life in the New Mexico communities near these mega dairies will become unlivable. The Commenters request that you account for the points raised in this letter by revising the Draft Permit accordingly.

I. New Mexico's Dairy CAFO Problem

New Mexico, for the most part, is an arid, high-desert eco-system with an ever-diminishing supply of water, is home to approximately 355,000 dairy cows. Most of these animals are in the middle and southern regions of the state as part of confined animal feeding operations for milk production. In the last twenty-five years, the number of cows in New Mexico has increased 22%, growing from approximately 80,000 cows in 1990 to 310,000 cows in 2003, and now reaching 355,000 cows.[1] It is estimated that there are between 172 and 216 industrial-sized "concentrated animal feeding operations",[2] with an average herd size in New Mexico of 2,088 cows.[3] New Mexico's average herd size is nearly *three times* in excess of the base animal unit number of 700 dairy cows to qualify as a "large" CAFO under EPA regulations.[4] New Mexico's CAFOs are thus *extremely* large CAFOs, and thus the principles of pollution prevention that apply to Large CAFOs should be all the more diligently applied by EPA Region 6 to New Mexico's CAFOs. Unfortunately, this is not the case.

According a recent conversation with EPA, only 22 dairies have coverage under the current EPA General Permit (the "2009 Permit"), and only 25 are expected to seek coverage under the new General Permit. The remaining New Mexico dairy CAFOs claim that they do not discharge, or for other reasons are exempt from NPDES permitting program (both from the General Permit and Individual Permit programs). This means that only 10% to 13% of New Mexico's dairy waste is regulated by the EPA General Permit program. The rest is given a "pass". This is not the purpose of the NPDES permitting program for CAFOs. EPA summaries of USDA data estimates that in 2007, New Mexico's dairy cattle produced 6,722,076 tons of manure, making New Mexico the 9th largest producer of dairy manure in the U.S.[5] The same year, New Mexico's beef cattle produced another 6,096,990 tons of manure,[6] and New Mexico's "other" cattle produced 4,349,920 tons of manure.[7] Additional manure produced by swine and fowl CAFOs compound New Mexico's manure problem, but these facilities are not covered under the Draft Permit and neither does EPA consider their impacts here. As a herd of 2,500 dairy cattle produce the waste of 411,000 people,[8] New Mexico's 355,000 cows produce approximately the same amount of waste as 58,362,000 people (nearly population of Italy, or of our nation's two most populous states -

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[1] Dale Doremus, "Environmental Regulations of New Mexico's Dairy Industry", Decision Makers Field Guide at 76-79 (2003).

[2] The Dairy Producers of New Mexico estimates there are 172 dairies. *See* http://www.nmdairy.org/faq.htm. In 2012, the New Mexico Ground Water Quality Bureau estimated that there were 216 as of 2010. *See* NMED GWQB Dairy Discharge Volumes (Dec. 10, 2010).

[3] Dairy Producers of New Mexico at http://www.nmdairy.org/faq.htm.

[4] *See* 40 C.F.R. § 122.23(b)(4)(i).

[5] EPA, "Literature Review of Contaminants in Livestock and Poultry Manure and Implications for Water Quality." EPA-820-R-13-002 at 111, Table A-2 (Jul. 2013) ("EPA Literature Review").

[6] Id.

[7] EPA Literature Review at 112, Table A-3.

[8] *See* EPA, EPA Region 10, "Relation Between Nitrate in Water Wells and Potential Sources in the Lower Yakima Valley, Washington", EPA-910-R013-004 at 31 (Mar. 2013).

California and Texas - combined), yet only a fraction of it is regulated by EPA, and as the Commenters point out in this letter, regulatory structure is littered with holes. When EPA's regulatory scheme is overlaid with situation of state dairy rules in New Mexico, the result is a disregard for the Clean Water Act, and a disservice to the waters and people of New Mexico.

The Commenters recognize that the EPA is well-aware of facts tying CAFOs to water pollution throughout the United States. Notably, CAFOs are named as point sources under 33 U.S.C. § 1362(14) of the Clean Water Act. Secondly, EPA itself has documented, researched, studied, and written numerous reports on CAFO pollution.[9] The instances linking CAFOs to water pollution are overwhelming, for example: the 1995 bursting of an 8-acre hog manure lagoon in North Carolina that spilled 25 million gallons of manure into the New River, the 1999 Hurricane Floyd event in North Carolina where at least 5 lagoons burst and 47 were flooded, the 2002 and 2010 "Dead Zones" in the Gulf of Mexico caused by algal blooms from animal waste, the 2011 spillage in Illinois of 200,000 gallons of manure into a creek. But there is also less "spectacular" instances of water pollution known primarily to thousands of communities across the United States that live nearby or downstream from the estimated 20,000 CAFOs in the country.

A 2001 report from the USDA's Economic Research Service found that 60% - 70% of the manure nitrogen and phosphorus may not be able to be assimilated by the farmland on which it was generated.[10] Nitrogen and phosphorus can leach into groundwater, causing eutrophication, harmful algal blooms, ammonia toxicity to aquatic life, nitrate poisoning in drinking water,[11] increased salinity in surface water and ground water.[12] Potassium, salts, trace elements, antimicrobials, hormones, and numerous other pollutants can also leach into groundwater.[13] EPA has identified support for the finding that aoonotic pathogens have the potential for transport to ground water and surface water and may be subsequently ingested through recreation or drinking water, with potential implications for human health.[14] Enteric viruses have been observed to be transported via ground water, and a nationwide survey of drinking water wells revealed enteroviruses in 15% of samples; bacteria, cryptosporidium oocysts and E. Coli have been documented in groundwater downgradient from an unlined cattle manure lagoon.[15] The Second Circuit observed that "the EPA has marshaled evidence suggesting that such a prophylactic measure [referring to the duty to apply for a NPES permit] may be necessary to effectively regulate water pollution Large CAFOs, given

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[9] *See, e.g.,* EPA, "Case Studies on the Impact of Concentrated Animal Feeding Operations (CAFOs) on Ground Water Quality," EPA 600/R-12-052 (Sept. 2012); EPA Region 10, "Relation Between Nitrate in Water Wells and Potential Sources in the Lower Yakima Valley, Washington", EPA-910-R013-004 (Mar. 2013); EPA Literature Review.

[10] EPA Literature Review at 1.

[11] The U.S. Agency for Toxic Substances & Disease Registry correlates numerous illnesses with nitrate poisoning, including methemoglobinemia, thyroids problems, reproductive system problems, developmental problems, and cancers. *See* "ATSDR Case Studies in Environmental Medicine Nitrate/Nitrite Toxicity." (Dec. 5, 2013).

[12] EPA Literature Review at 2, Table 1-1.

[13] Id.

[14] EPA Literature Review at 13 and 20-22.

[15] EPA Literature Review at 19-20.

that Large CAFOs are important contributors to water pollution and that they have, historically at least, improperly tried to circumvent the permitting process."[16]

Most of New Mexico's cows are in the southeastern and south-central regions of the state, in the counties of Chaves and Roosevelt, Curry, Eddy, Lea, Dona Ana, Luna, Scorro, Valencia, and Bernalillo. EPA estimated (as of 2007) that in New Mexico 80,695 (1,000 kg of N) of nitrogen was produced from animal manure and 20,669 (1,000 kg of P) of phosphorus were produced.[17] Conditions especially conducive to contamination of groundwater may exist in these areas, such as coarse sandy soils, soils with macropores, and a shallow water table.[18] According to EPA, "[g]round water is most vulnerable to contamination when manure is applied before a heavy rainstorm in an area with coarse, sandy soil and a shallow water table."[19] NMED's own data shows that 57.1% of the state's dairies are polluting groundwater. (See NMED Ground Water Quality Dairy Facilities 6-5-09, attached hereto as Exhibit 1).

The Commenters also wish to highlight for EPA the dairies in the Doña Ana area ("Dairy Row"). The pollution plume from Dairy Row stretches from south of La Cruces to Anthony, New Mexico at the New Mexico – Texas - Mexico border. This situation is one with which the current EPA Region 6 Administrator, Mr. Ron Curry, is familiar. Efforts to get a first stage abatement plan began while Mr. Curry was Secretary of the Environment in New Mexico. Years later, the dairies' efforts to evade additional abatement continued, and despite liners in all of the 13 (now 11 by ownership) dairies, the water pollution problems *still continue*. The Dairy Row Dairies have continued to spend significant sums of money on lawyers and experts, resisting remediation at every step of the way. For example, now in Stage 2 remediation, monitoring wells have been installed further and further away from at least one of the most southern dairies of Dairy Row. These wells are now located inside neighborhoods – not at the source of contamination at the CAFO. Monitoring wells positioned in neighborhoods is very telling of where the contaminated plume extends to, but these locations fail to identify and protect pollution *before* it reaches communities.

EPA should be on high alert and have a high level of concern about the New Mexico dairy problem. The Commenters submit these comments because they and the citizens of New Mexico are in dire need of EPA's help. It is obvious that New Mexico has failed in its implementation, permitting, and enforcement of the Dairy Rule, and federal oversight is badly needed. EPA can help by revising the Draft Permit as described in these Comments.

II. <u>EPA Must Take a Leadership Role</u>

EPA is well-aware of the strategies the dairy industry has undertaken to fight the state dairy rule NMAC 20.6.6 (the "Dairy Rule") via two petitions to the New Mexico Water Quality Control Commission (Consolidated Matters 12-09(R) and 13-08(R)), industry's tactics with the Martinez Administration to withdraw established water pollution safeguards,

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[16] *Waterkeeper Alliance, Inc. v. U.S. EPA*, 399 F.3d 486, n. 22 (2nd Cir. 2005) (citations to EPA proposed and final rules omitted).
[17] EPA, "Estimated Animal Agriculture Nitrogen and Phosphorus from Manure – Specific Indicators." (Jul. 2, 2014).
[18] EPA Literature Review at 24.
[19] EPA Literature Review at 26.

and the New Mexico Environmental Department's (NMED) inadequate substitute proposals for "Advisory Committees" to amend New Mexico Water Quality Act regulations.[20] EPA is also aware that the Dairy Rule was based on science, but since 2011 has been embroiled in political and legal battles.[21]

The Commenters wish to point out that this General Permit is an *opportunity* for EPA. Through this General Permit, EPA is uniquely positioned to raise the bar for water pollution protection in New Mexico, to put a stop to industry and governmental efforts to subvert dairy rules that were properly obtained by the citizens of New Mexico after a multi-year battle - and agreed to in 2011 by the dairy industry[22] - and to shine a light on the real environmental protection needs of New Mexico's waters. The timing of EPA's General Permit being issued now, while the Dairy Rule's implementation and enforcement is stayed,[23] and before the anticipated April 2015 public hearing, is a moment that EPA ill-afford to squander. Without EPA involvement, NMED is not incentivized to uphold or enforce the Dairy Rule.

In this General Permit, EPA must take the much-needed top-down approach to the issues industry and politics are attempting to dismantle. While EPA Region 6 may view the Dairy Rule and as purely a state issue because of the Dairy Rule's focus on groundwater, as discussed in these Comments, this approach is not supported by the Clean Water Act or federal caselaw, and failure to address the issue of groundwater pollution from New Mexico's dairies may be arbitrary and capricious under the Administrative Procedure Act, and maybe in violation of the National Environmental Policy Act. For EPA not to take a strong stand on this issue will allow New Mexico to reverse nearly 20 years in groundwater protection law. The Dairy Rule fight has already stalled state permitting of New Mexico's CAFOs by nearly five years; will EPA simply sit back and let the legal wrangling continue,

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[20] *See, e.g.,* a limited selection of articles on this issue, including S. Hansen, "Sierra Club asks court to reconsider hearing site ruling." Quay County Sun. (Dec. 2, 2014); J. Sorrentino, "Moo Rules: Dairy industry and environmental groups clash on groundwater protections." (Jun. 24, 2014); Press Release, "NM Environment Department violates Advisory Committee process for dairy rule meetings." New Mexico Environmental Law Center (May 14, 2014); D. Jamail, "New Mexico Governor Martinez Accused of Wholesale Disregard of the Law." Truthout (May 6, 2014); Press Release, "Citizens' coalition protests weakening of NM Dairy Rule." New Mexico Environmental Law Center (Mar. 18, 2014); C. Calloway, "Hearing set for dairymen to voice groundwater rule concerns." Clovis News Journal. (Sept. 14, 2013).
[21] *See, e.g.,* Written Testimony of William C. Olson, *In the Matter of Proposed Amendments to 20.6.6 NMAC (Dairy Rule)*, No. WQCC 12-09(R) and 13-08(R) ("Olson Testimony").
[22] In 2010, the NMED Hearing Officer noted that "there are substantial areas of agreement between the parties." *In the Matter of Proposed Amendment to 20.6.2 NMAC (Dairy Rule)*, "Hearing Officer Report", Water Quality Control Commission (No. WQCC 09-13(R)) at 1 (Oct. 7, 2010). The WQCC Board unanimously adopted the agreed upon rule. *In the Matter of Proposed Amendment to 20.6.2 NMAC (Dairy Rule)*, "Proposed Statement of Reasons and Order" Water Quality Control Commission (No. WQCC 09-13(R)) at 1 (Jan. 14, 2011).
[23] The Dairy Industry Group for a Clean Environment ("DIGCE") has noted that since the Dairy Rule went into effect, approximately 128 dairies applied for state permits, only 18 were issued as final permits, and at least 7 of those dairies requested variances. *See* DIGCE Second Petition to Amend, *In the Matter of Proposed Amendments to 20.6.6 NMAC (Dairy Rule)*, No. WQCC 13-08 at 2-3 (Aug. 5, 2013).

even though it has the authority to regulate the issues covered by the Dairy Rule, and the substance of the Dairy Rule was *agreed to by all stakeholders*? EPA must take a stronger stand in the Draft Permit to help dismantle the gridlock that industry and politics have caused, and to set the proper federal floor to protect New Mexico's waters, and public health. The Commenters have additional specific asks in these comments, but specifically as to the Dairy Rule, the Commenters ask that EPA Region 6 incorporate the following points into the Draft Permit:

Phased implementation of the following (phased at times that prioritize environmental and public health):

1. Double-lined leak detection plastic liners for waste water lagoons and all other sources of pollution;
2. Lined corals, pens, feeding areas, manure storage areas, compost, and silage storage areas;
3. One mile set-backs of dairy operations from all sources of water, including domestic drinking water wells;
4. Mandatory control of flies, dust and air-borne manure in solid and liquid form;
5. Mandatory use of flow meters, air-check valves between clean water sources and mix-waste liquids during land application of liquid waste; and
6. Mandatory nutrient management plans for use of waste on crops with plans prepared only by certified nutrient management planners[24]

III. Hydrologic Connection Should Be Presumed and Protected

Both EPA's 2009 Permit and the Draft Permit rightfully recognize the hydrologic connection that exists between surface water and groundwater. The Draft Permit states "There shall be no discharge of manure, litter, or process wastewater from retention or control structures to surface waters of the United States through groundwater with a direct hydrologic connection to such waters."[25] Furthermore the Draft Permit requires that in the context of lagoons, the permittee "shall document that no hydrologic connection exists between the contained wastewater and surface waters of the United States."[26] EPA Region 6 is correct to take this pollution control approach seriously, particularly New Mexico, and the Commenters greatly appreciate EPA's acknowledgement of the interconnectedness of our nation's waters and the need to protect all waters from CAFO pollution.

A. Groundwater and the Clean Water Act

To be consistent with the Clean Water Act EPA's Draft Permit must go further. The Clean Water Act's goal is to protect the quality of surface waters, and thus the NPDES permit system regulates any pollutants that enter such waters either directly or through

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[24] *See, e.g.,* Olson Testimony.

[25] EPA Region 6, Draft National Pollutant Discharge Elimination System General Permit for Discharges from Concentrated Animal Feeding Operations in New Mexico (NMG010000) at 9 (Dec. 30, 2014). ("Draft Permit").

[26] Draft Permit at 22. As discussed infra, lagoons are not the only sources of pollution from CAFOs; the other sources (corrals and pens, application fields, compost piles, silage storage areas, e.g.) should be similarly regulated.

groundwater.[27] The basic scientific hydrologic principle that surface waters and groundwaters are connected is inevitable, thus all surface and groundwaters have a "significant nexus" as the *Rapanos* legal test puts forth, or the "direct" hydrological connection as the Draft Permit proposes as the qualifying factor. Both of these tests however are artificial constructs that overlook the basic scientific facts of hydrology and geology. As such, they have no basis in the Clean Water Act itself.[28] EPA itself has recognized that the use of the term "surface" water in its CAFO regulations is an effort to distinguish surface water from groundwater, but in no way does it change the fact that the Agency's authority encompasses "waters of the United States, including the territorial seas."[29] Thus, as a starting point, EPA's Draft Permit should presume that a groundwater – surface water connection exists, and exists for all sources of pollution at a CAFO (not just lagoons).

The EPA's Scientific Advisory Board has indicated that for many rivers, including the Rio Grande in central New Mexico, groundwater may be the major source of flow for rivers, sinks, and springs.[30] New Mexico state cases have also found that groundwaters "contribute substantially" to the flow of the Rio Grande.[31] Additionally, approximately 88% of New Mexico's streams are ephemeral or intermittent.[32] During intermittent periods, the surrounding ecosystem can depend on groundwater to survive.[33] Lastly, different factors can determine when and where groundwater contamination will occur. Shallow water tables, precipitation, soil type, and preferential flow pathways, clay and organic matter content of soils, and oxidation-reduction potential are some of the factors that affect vulnerability.[34] NMED has stated that "Maintenance of surface water quality is necessary to protect the State's ground water quality."[35] Similarly, EPA Region 6 should recognize the groundwater – surface water connection, and provide greater surface water protections by halting the entry of pollution into ground waters in the first place. The primary ways for EPA to address this

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[27] *Hawai'i Wildlife Fund v. Co. of Maui*, 2014 WL 2451565 at 13 (D. Hawaii 2014) (citing *Williams Pipe Line Co. v. Bayer Corp.* 964 F.Supp. 1200, 1319-20 (S.D. Iowa 1997) and *Washington Wilderness Coal v. Hecla Min. Co.*, 870 F.Supp. 983, 990 (E.D. Wash. 1994)).

[28] *See Rapanos*, 547 U.S. 715, 126 S.Ct. 2244-45 (2006) (Kennedy concurrence explaining that *Rapanos* plurality postulated requirement of a surface-water-connection draws no support from the structure of the Clean Water Act or Supreme Court precedent in *Solid Waste Agency of Northern Cook Co. v. Army Corps of Engineers*, 531 U.S. 159, 121 S.Ct. 675 (2001)); *see also Hawai'i*, 2014 WL 2451565 at 8.

[29] *Waterkeeper Alliance v. U.S. EPA*, 399 F.3d 486, n, 16 (2nd Cir. 2005).

[30] *See, e.g.,* Rodewald, Comments to the chartered SAB on the Adequacy of the Scientific and Technical Basis of the Proposed Rule Titled "Definition of 'Waters of the United States' Under the Clean Water Act at 6-7 (September 2, 2014) ("SAB Report").

[31] *See, e.g., City of Albuquerque v. S.E. Reynolds*, 71 N.M. 428, 435-36, 379 P.2d 73 (N.M. 1962) (rehearing den. 1963).

[32] *See* U.S. EPA, "The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest" at 5 (Figure 3) (EPA/600/R-08/134) (Nov. 2008).

[33] Id. at 10.

[34] *See* New Mexico Water Quality Control Commission, 305(b) Report for Submission to the United States Congress, "Water Quality and Water Pollution Control in New Mexico," Ground Water Quality Management in New Mexico, Ch. 5 p. 85 NMED/SWQ-02/1 (2002) and Ch. 1 at 14 ("NMED 305(b) Report").

[35] NMED 305(b) Report, Ch. 1 at 14.

issue are to require for *all* CAFOs, and as addressed below, (1) synthetic liners for all lagoons, (2) liners to 1x10(-7) cm/sec for other sources of pollution (e.g. compost piles, corrals and pens, silage storage areas), (3) increased soil sampling for application fields, (4) increased sampling for field application materials, (5) source-specific sited monitoring wells sampled on a quarterly basis. EPA Region 6 must get a handle on *where* the surface water pollution is coming from, *how much*, and *all* the pathways by which pollution enters surface waters. EPA is equipped with this authority under the Clean Water Act and the Draft Permit is its tool.

B. Only a "hydrologic connection" is necessary, not a "direct" connection

The "direct" hydrologic connection test proposed by EPA in its Draft Permit overstates the legal requirement for Clean Water Act liability and thus this provision favors industry over environmental and public health. Courts have found that even *indirect* hydrological connections to groundwater are subject to CWA NPDES permitting.[36] In *Rapanos*, Justice Kennedy opined that only a "*reasonable inference* of ecological interconnection" was required to find wetlands part of the CWA.[37] The Ninth Circuit found that underground seepage from a pond to a river, where the seepage had "a *significant effect* on the chemical, physical, and biological integrity" or the river" violated the Clean Water Act.[38] In relying on *Rapanos*, the *Hawai'i* court found that even if the groundwater itself was not protected by the Clean Water Act, Clean Water Act liability still arose where the groundwater is a conduit through which pollutants reach waters navigable-in-fact.[39] This distinction is important for EPA Region 6 to recognize in its Draft Permit. The "direct" requirement EPA Region 6 imposes is contrary to the holdings of *Rapanos* and *Hawai'i*. Regardless of whether the conduit of pollutants is surface water or groundwater, under the Clean Water Act, addition of a pollutant violates the Act.[40] It is the science of the migration of pollution that brings the CWA violation into being.[41] In New Mexico, there is ample evidence of CAFOs contributing to groundwater and surface water pollution, primarily through the records prepared by the New Mexico Ground Water Quality Board and attached hereto as Exhibit 1. There is also evidence of groundwater contamination plumes from dairies extending beyond a mile in length.[42] Thus, for EPA Region 6 to require a "direct" hydrologic connection as a trigger for lining lagoons at New Mexico's CAFOs misreads the Clean Water Act and impermissibly limits the NPDES Permit Program. The Commenters ask EPA to remove the "direct" requirement for hydrologic connection from the Draft Permit and to leave in the well-established and well-acknowledged "hydrologic connection", and that (as discussed below) this apply to all sources of pollution at a CAFO and not just lagoons. As a result, to qualify for any exemptions (currently limited to lagoon liners in the December 31, 2014 Draft Permit) *each* CAFO must document that *no* hydrologic connection exists.

The "direct" connection EPA Region 6 proposes also ignores EPA SAB Panel analysis

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[36] *See, e.g., Hawai'i*, 2014 WL 2451565 at 11- 12.
[37] *Rapanos*, 126 S.Ct. at 2208 (emphasis added).
[38] *North California River Watch v. City of Healdsburg*, 496 F.3d 993 at 1000 (9th Cir. 2007) (emphasis added).
[39] *Hawai'i*, 2014 WL 2451565 at 12.
[40] *See Hawai'i*, 2014 WL 2451565 at 13, 16; 33 U.S.C. § 1362(12)(A).
[41] *See, e.g., Hawai'i* at 14.
[42] *See, e.g.,* Olson Testimony at 7.

of groundwater. For example, Dr. Kenneth E. Kolm of the SAB Panel for Review of the EPA Water Body Connectivity Report explains that the connectivity is "four-dimensional" in nature (connecting waters laterally, vertically, longitudinally, and through time), and is "a foundational aspect of freshwater ecology."[43] EPA recently recognized that point in observing that "groundwater flow can connect unidirectional wetlands with other water bodies, potentially over great distances."[44] Appropriate designation of neighboring-adjacent water bodies requires the regulatory agencies (or, discharge permit applicants and holders) to account for the relevant hydrogeologic conditions and the transmittal of water, chemicals and material through surface flow, groundwater flow, and interflow. Removing the "direct" hydrologic connection requirement that currently exists in the Draft Permit encompasses these factors.

Additionally, requiring that an unspecified and subjective standard such as the "direct" connection trigger for environmental protection creates a barrier to that favors industry at the expense of environmental and public health. For example, nowhere does EPA Region 6 explain how its proposed application of "direct" hydrological connections will incorporate New Mexico's hydrology and geology. As such, EPA Region 6's use of the "direct" hydrologic connection may be arbitrary and capricious.

C. Factual Support for Importance of Ground Water Protection at CAFOs

In approximately 2009, NMED identified ground water contamination at approximately 30% of permitted dairies.[45] Since then, NMED data confirms that nearly 60% of the state's dairies are polluting groundwater.[46] Groundwater contamination from dairies in New Mexico is so widespread and problematic that NMED is currently requiring lengthy abatement plans. There were approximately 32 abatement plans underway in 2009,[47] and now approximately 50 dairies are in abatement.[48] This is an issue EPA should have addressed in its 2009 General Permit. Back in 2009, NMED documented that 72% of dairy facilities have had nitrate-nitrogen groundwater contamination during the dairy's history.[49] In 2009, 57.1% of dairies had nitrate nitrogen contamination in excess of NMWQCC standards.[50] NMED's data confirms that 71.9% of this contamination is caused by impoundments.[51] Now, with the Dairy Rule in limbo, EPA must use the Draft Permit to control this out-of-control pollution.

From a public use perspective, approximately 90% of New Mexico's population relies on ground water for domestic water supplies.[52] Seventy eight percent of the

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[43] SAB Report at 54 (Kolm Aug. 13, 2014 comments).
[44] EPA Connectivity at 5-23.
[45] Doremus at 76-79.
[46] *See* Exhibit 1.
[47] Table of impacts from New Mexico Dairies provided by Alex Puglisi of the New Mexico Environment Department, Groundwater Bureau. (February, 2009).
[48] *See, e.g.,* Olson Testimony at 7.
[49] Id.
[50] Exhibit 1; Olson Testimony at 7.
[51] Olson Testimony at 7.
[52] NMED 305(b) Report, Ch. 2 at 21.

population is served by public systems derived from groundwater sources.[53] Agriculture accounts for about 80% of the withdrawal of water withdrawn from the State's supplies, and 89% of the water withdrawn by public, private, and agricultural withdrawals is from groundwater.[54] According to NMED, "[ma]ny New Mexico aquifers are highly vulnerable to contamination from surface discharges."[55]

Due to the number of potential methods of transport of manure and associated constituents such as nitrogen, pathogens, organisms, and other pollutants – from runoff, discharges, infiltration, seepage, leakage, deposition, over-application, spills, flooding, tile drainage, the risks of groundwater and subsequently surface water contamination are high.

IV. *All* of a CAFO is a Clean Water Act "Point Source", Not Just Lagoons

The Clean Water Act defines the CAFO as a point source, not just the lagoons. 33 U.S.C. § 1362(14). A CAFO's acres of application fields, animal pens, corrals, compost piles, silage piles, and stockpiled manure are *also* sources of water pollution. Waste retention facilities such as lagoons are certainly *one* source of water pollution but they are not the *only* source, and the Draft Permit fails to recognize this. The Draft Permit requirement that permittees demonstrate no hydrologic connection between retention facilities and groundwater must be expanded to address *all* areas that are sources of water pollution at a CAFO. Ignoring other sources of contamination – especially those as exposed to surface water and groundwater contact as application fields – is a failure to apply the mandates of the Clean Water Act, and leaves gaping holes in EPA's permitting scheme. The Clean Water Act is to be read broadly in favor of controlling pollution *at the source*. The Supreme Court has recognized that the protection of aquatic ecosystems requires "broad federal authority to control pollution, for '[w]ater moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source'."[56]

This request from the Commenters is all the more important when viewed in conjunction with the Dairy Rule. Even though corrals, compost, and silage areas are sources of water pollution at a CAFO, the Dairy Rule does not regulate them. Thus their pollution can only be captured by more stringent regulation by EPA. Pollution from stormwater runoff from land application areas and production areas is inadequately addressed in the Dairy Rule, and similarly should be more stringently regulated by EPA. Lastly, in New Mexico, the majority of waste is expelled in corrals where it is not scraped out, but is "compacted by the cows to form an impermeable layer on top of the existing soil."[57] Not only should EPA address these sources of pollution in its General Permit regardless of the Dairy Rule, but these major gaps in regulation weigh all the more in favor of EPA taking action on these issues in the Draft Permit. By proposing the Draft Permit in its current format, EPA caves to dairy industry's "asks" in the pending Dairy Rule matter when it should be taking a stronger and leading role in pollution prevention and control. Additionally, prevention of groundwater contamination is clearly more cost effective and

[53] NMED 305(b) Report, Ch. 1 at 14.
[54] Id.
[55] Id.
[56] *Riverside Bayview Homes*, 474 U.S. at 133 (citing to S. Rep. No. 92-414, p. 77 (1972), U.S. Code Cong. & Admin. News 1972, pp. 3668, 3742).
[57] Dairy Producers of New Mexico at http://www.nmdairy.org/faq.htm.

technically achievable than is remediation.[58] By amending the Draft Permit, EPA can correct this gaping hole in pollution regulation, prevent contamination of New Mexico's waters, and provide long-term cost-reductions for industry.

V. National Environmental Policy Act

The Draft Permit contains no provisions for the requirements of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq.*, 40 C.F.R. § 1500 *et seq.*, and 40 C.F.R. Part 6. Other EPA Regions, such as EPA Region 10's General Permit for Idaho (NPDES Permit No. IDG010000) require EPA to conduct an environmental review pursuant to Council of Environmental Quality (CEQ) and EPA regulations. The Commenters request that EPA Region 6 revise the Draft Permit to require compliance with NEPA for *all* CAFOs seeking coverage under the new General Permit. This specifically includes existing CAFOs, "new" CAFOs, expanding CAFOs, and CAFOs seeking modifications of their permits. The Commenters further specify that they ask for *full* NEPA review including conducting a "hard look" at environmental impacts and alternatives, not merely "environmental information documents" or similar, less robust reviews.

VI. Specific Changes to EPA's Draft General Permit

The Commenters appreciate EPA's inclusion of certain provisions in the Draft Permit. Namely, (1) the requirement that 2009 General Permittees must submit a NOI and NMP within 90 days of the new General Permit, (2) "adequate storage" requirements, (3) annual employee training on topics including land application, facility operation and maintenance, housekeeping and material management practices, record-keeping, and spill response and clean-up, (4) adding rain gauges to monitoring requirements, (5) land application equipment inspection protocols, (6) Endangered Species Act consultation, (7) National Historic Preservation requirements, and (8) the requirement to use *certified* nutrient management plan planners. These are important and forward-thinking inclusions in the Draft Permit that recognize the need for a multi-faceted approach to pollution control, and how to protect the people, environmental, and culture of New Mexico from industrial animal agriculture impacts.

However, in 2009 EPA failed to account for public comments from groups like Amigos Bravos in revising its 2009 General Permit, and again in this Draft Permit, EPA failed to consider these requests. For example, in 2009 Amigos Bravos requested that EPA should *require* Large CAFOs to obtain permit coverage, that EPA should eliminate the greater than 25-year, 24-hour storm event discharge exemption, establish further protections for impaired waters, and that nutrient management plans must ensure compliance with the Clean Water Act.[59]

Additionally, the Commenters support EPA's approach that *all* CAFOs should be required to seek coverage under the General Permit, but the numerous exceptions under the Draft Permit render the permitting scheme ineffective at carrying out the Clean Water Act NPDES program. Second, EPA has not issued any individual permits. If EPA were to vet

[58] *See* NMED 305(b) Report Ch. 5 at 85 and Ch. 1 at 14.
[59] *See* Amigos Bravos and Friends of the Wild Rivers, Public Comments on NMG010000 – CAFO General Permit (Feb. 19 2009).

facilities more closely and with more site-specific information, it is likely that more individual permits would be issued.

With respect to the specific provisions of the Draft Permit, the Commenters note the following for EPA's consideration and request revision of the Draft Permit accordingly:

- Record keeping requirements. The Draft Permit proposes to limit general inspection, monitoring and recordkeeping requirements by only having some of the requirements applicable to Large CAFOs under IV.C. The Commenters ask EPA to revise the Draft Permit so that *all* requirements are applicable to *all* CAFOs. There is no reason why (1) soil, manure, and wastewater analysis, (2) operation and maintenance record keeping requirements, (3) land application documentation, and (4) manure transfer documentation should not be maintained by *all* of New Mexico's CAFOs. Without this documentation, EPA is in no position to monitor the pollution from CAFOs. As the Draft Permit applies to *all* CAFOs, EPA should not exempt any CAFOs from the reporting requirements.

- Set stronger minimal liner requirements. The Commenters appreciate EPA's requirement that a permittee document whether or not a hydrologic connection exists between "contained wastewaters" and surface waters under III.D.1. As discussed above, however, EPA should presume that there *is* a hydrologic connection, and that liners should be required for *all* sources of pollution. Additionally, the fact that a lack of a hydrologic connection can be shown by documenting that there is "no significant leakage" under III.D.1.a. is contrary to the Clean Water Act's strict liability scheme. Second, only if a permittee cannot document the hydrologic connection does EPA require a liner. By removing the "direct" hydrological connection requirement, more CAFOs will be required to use liners. While the Commenters appreciate the threshold liner conductivity of 1x10 (-7) and a thickness of 1.5 feet or greater, EPA fails to go the extra step of requiring that the liner be synthetic and not simply soil as the Draft Permit currently requires in III.D.1.b. EPA references synthetically lined lagoons in its Facility Closure Requirements (III.B.1.) but not in basic environmental and public health protection measures for facility operation. This conflict with New Mexico Dairy Rule. EPA should revise the liner requirements to match the plastic liner requirements in the Dairy Rule for new impoundments and for impoundments found to cause violation of water quality standards for nitrates, chlorides and/or total dissolved solids.

- Monitoring wells. While the Commenters appreciate that the Draft Permit requires monitoring wells for facilities with "direct hydrological connections" to waters of the United States under II.D.1.c., or leak detection systems, or "other appropriate measures", stronger and more direct guidance is needed for this provision to be effective. EPA can learn from the industry's efforts to undo meaningful monitoring in the Dairy Rule matter. First, the best line of defense is to use leak detection systems *and* monitoring, not "or". Second, EPA should more specifically require in the Draft Permit that a minimum number of monitoring wells installed, and that they be positioned so specifically target the *source* of the pollution (e.g. lagoon, field, corral area), its flow, and at appropriate

depths to detect this pollution *before* it reaches drinking water supplies or surface waters. EPA should also require this information be gathered quarterly, and made publicly available. Lastly, the Commenters are concerned that the unspecified and nebulous "other appropriate measures" category will be the go-to option for EPA and for industry, thus robbing the public of the meaningful data and preventative functions of monitoring wells. This option should be deleted.

- More frequent manure and soil sampling, and addition of sampling of all field application materials. The Draft Permit II.A.4.f. proposes to sample manure annually, and soil once every five years. The results of the analyses are then to be used to determine application rates for manure, litter, and process wastewater. The frequency of this testing is wholly inadequate to function as any meaningful indicator of the nutrients being applied throughout the year, of a field's nutrient status, and of crop needs at the time of application. To serve this purpose, manure and soil testing should be performed before each application. The five-year soil test requirement is wholly inadequate to function as a true and accurate representation of the current state of soils, of a crop's fertilizer needs. Additionally, the Draft Permit ignores the sampling of other materials applied to fields, such as wastewater or irrigation water. These materials also have elements than must be accounted for in determining a crop's needs, and thus should be sampled before each application. Lastly, the soil testing is only for phosphorus. The Draft Permit should also require testing at least for nitrogen.

- Expanding CAFOs must be subject to public comment and seven day new owner provision. While traditionally the dairy industry has been family-owned businesses, the size of these businesses is growing, as are the ownership interests. Additionally, out-of-state interests, corporate interests, and even foreign investment interests are entering the dairy industry. All of these interests can influence how a dairy will be managed, thereby affecting the environment, public health, and lifestyle of the nearby residents and communities. Certainly too with the new historic preservation requirements, additional public interests exist in how CAFOs will affect their surrounding areas. Commenters seek an increase in change of ownership public notification from 7 days to 30 days. EPA has the information on ownership changes 30 days beforehand; thus it should be made immediately available to the public. This is an important provision given the changing face of the dairy industry.

- EPA should eliminate the 25-year, 24-hour storm event discharge exemption. Technology exists to manage and control waste at CAFO facilities, so CAFOs should not be offered a "pass" when devastating weather conditions occur. The solution to eliminating the exemption is to require implementation of existing waste management technology. The development and implementation of technology is one the purposes of the Clean Water Act.[60] The reason for technology-forcing statutes is an assumption that "existing market forces fail to produce an appropriate level of pollution control, either because of explicit

[60] *See, e.g,* 33 U.S.C. §§ 1316(a)(1); 1317(a)(2) (CWA's best available demonstrated control technology and best available technology economically achievable).

collusion among manufacturers or because of the inability of spillover victims to communicate and enforce their needs within the market."[61] The exemption is contrary to the strict liability standard of the Clean Water Act, and it is contrary to New Mexico water quality standards and designated uses.[62] With climate change, increasing storms, monsoons, flash flooding, this is a reality and must be addressed through technology, not ignored. Depth markers and overflow diversion strategies are simply ways to monitor and cope with the problem during emergency situations; the Commenters urge EPA to push industry to eliminate the exemption in favor of more preventative and secure control technology so the emergency situation does not arise. Additionally, in Part II (A)(2)(b)(iv) the allowance for construction in the 100-year floodplain does not address the severity of flooding in arroyos. This language does not reflect the violent and destructive type of flooding that occurs in New Mexico during monsoon season.

- Mortality Management. Under II (A)(2)(a)(vi) – the requirements for mortality disposal do not address stormwater runoff and runoff controls, such as proper compost design, liners, covered rendering pickup containers, and other technology used to prevent contaminated stormwater runoff.

- "Structural breakage" concept. Under II.(A)(2)(a)(viii) it is not clear if erosion of berms is considered 'structural breakage' or if the EPA means a complete breach of the berm. Why provide an assumption of 'properly constructed' if there is currently no 'structural breakage'? Additionally, proper impoundment liner construction cannot be determined by evaluating the condition of the berms; there are many factors that go into determining whether an impoundment was or was not properly constructed.

- Diversion of "Clean Stormwater". Under II.(A)(2)(a)(ix) – dairies constructed in New Mexico use shade structures that have roofs, but not all roofs are guttered to facilitate diversion of "clean stormwater". Some dairies have gutters that drain onto the corral area thus allowing stormwater to come in contact with solid manure. This paragraph does not address that common element of New Mexico dairies.

- Skip in numbers. Part II (A)(2)(a)(x) – the numbering system goes from (ix) to (xi) without an (x). If (x) exists please produced this section immediately for public notice and comment. If (x) existed in prior drafts of the permit and was deleted, please produce this section to the public.

- Expansion. Part II (A)(2)(a)(xi) – the wording of this paragraph seems to allow a facility to expand without notifying the EPA and providing calculations, engineering designs, and an amended nutrient management plan that proves the

[61] William H. Rodgers, Environmental Law. Vol. I § 3.25(A) at 394 (1986 and Supp. Summer 2014).
[62] *See* New Mexico Standards for Interstate and Intrastate Surface Waters, 20.6.4.13 (D-H), 20.6.4.900(d) and (e).

waste handling system can accommodate the increased amount of manure, milking parlor wastewater, and contaminated stormwater.

- Rainfall Runoff. Part II (A)(2)(b)(vii) – this section does not include silage storage piles or mortality compost piles – both of which are common at New Mexico dairies.

- Sources of Waste. Part II (A)(4)(f) – this paragraph does not acknowledge the types of waste streams at a typical New Mexico dairy, such as solid manure from the corrals, composted mortality, greenwater impoundments that contain milking parlor washwater combined with manure, and contaminated stormwater impoundments.

- Equipment. Part II (A)(4)(g) –Require leak detection inspections at the onset of using the equipment for land application and each day it is used until the equipment is idled, not when it its not being used.

- Setbacks. Part II (A)(4)(h) – the setback of 100 feet to waters of the US usually implies that there will be some sort of vegetation that would filter any contaminated stormwater runoff prior to entering waters of the US. In New Mexico vegetation is scarce, and thus cannot be relied upon to remove pollutants. This paragraph does not acknowledge that the 100 feet may not guarantee that the land application is not occurring in alluvial soils hydrologically connected to the waters of the US.

- NMP Notice. Part III (A)(2)(c) – Public notice on the EPA website is not sufficient notice for people living near CAFOs that may have no internet connection, access to computers, or aware of the need to check the EPA website continuously. The EPA should notice to the adjacent landowners by certified mail and post the notice in both English and Spanish in the local newspapers for at least two weeks.

- EPA NMP Response and CAFO Revisions. Part III (A)(2)(e) – What will the Director do if the public comments indicate that the facility has not been in compliance with the General Permit? What are the procedures for evaluating the NOI for continued coverage when the facility has caused ground water contamination or caused excessive flies and odors without taking action to minimize the problems?

- Eggs. Part III (A)(3)(b) – why is the term "eggs" included in this paragraph if poultry facilities are not eligible to be covered by this General Permit (See Part I (D) Limitations on Coverage)? The list of items to which clean water must be diverted should include mortality compost piles.

- NMP Changes. Part III (A)(6)(a) – the public has the right to review the calculations used to generate the amended NMP and thus should be submitted to the Director.

- "Substantial" Changes to NMP. Part III (A)(6)(c) and (d) – it appears that the public is not offered a public comment period for changes that the Director considers 'not substantial' without identifying what changes would be considered 'not substantial'. Paragraph (b) provides some context of what would be considered substantial and thus triggers paragraph (d), but no examples of what would trigger paragraph (c).

- Chemicals. Part III (A)(7)(c) – what type of chemicals would be allowed to enter the waste handling system?

- Land Application Calculations. Part III (A)(7)(d) – this paragraph needs to be clear that the results of the sampling would be used to determine the land application rates and thus the sampling should be done with enough advance so that the lab results would be available prior to land application.

- Monitoring. For those facilities that have a hydrologic connection to waters of the US, the General Permit should require groundwater monitoring to determine if leakage from the production area, the impoundments and the land application areas is causing an increase in nitrates and other pollutants that could then adversely impact waters of the US.

- Facility Closure Requirements. Part III (B)(1)(c) – it is not practical to try to maintain fresh water in an impoundment in New Mexico just to protect a liner in case the operator wants to use the impoundment in the future. If the impoundment does not have a plastic liner, the additional seepage from the impoundment due to maintaining a liquid level high enough to "protect" a clay liner would just create a hydraulic head on the liner and seepage. The seepage would serve to push the pollutant plume under the impoundment farther into the subsurface and ultimately the groundwater. All impoundments that are not plastic lined must be removed as a part of closure. This section is only appropriate if the impoundment has a plastic liner.

- Manifesting Waste. Part III (C)(1)(b) – should require the phone number as well. Part III (C)(1)(c) – if the recipient receives significant amounts of the manure and/or wastewater, the EPA should require proof of certification to custom haul and properly apply the manure. The recipient should be required to have a nutrient management plan as well. The problem is that a CAFO could literally give or sell all of its manure to a third party(ies) and none of the land application is regulated under this General Permit. How would the EPA guarantee that the final disposition of the manure/wastewater would not cause impairment to waters of the US?

- Additional Special Requirements – Liner Construction. Part III (D)(1)(b) – the New Mexico Dairy Rule requires all new impoundments to have a plastic liner and any existing impoundments that have caused pollution to groundwater (nitrates, chlorides, and/or total dissolved solids) must install a plastic liner. This General Permit conflicts with the state-specific needs to protect groundwater in a state that has very little access to public and private water supplies.

- Definitions. Part VII – the definition of 'manure' includes compost – does the EPA mean composted manure only or does this definition include composted mortality? Also, the definition of process wastewater includes 'eggs', yet poultry facilities are not eligible for coverage under this General Permit. Perhaps it should be made clear that egg-laying facilities are not eligible for coverage.

VII. Conclusions

Consistent with the comments above, Commenters thus seek the following changes to EPA's Draft Permit:

- Establish a presumption that a hydrologic connection exists.
- Remove the requirement that a hydrologic connection be "direct".
- Increase and expand record-keeping requirements for all CAFOs.
- Increase minimal liner requirements for all sources of pollution, not just lagoons.
- Increase manure and soil monitoring quantities, include monitoring of other field application materials, and make clear the information is publicly available.
- Increase number of water monitoring wells and source-specific targets.
- Eliminate the 25-year, 24-hour storm event discharge exemption in favor of management control technology.
- Extend public notice and comment period for new owner changes to CAFOs.
- Incorporate phased implementation of the Dairy Rule provisions referenced above.

The Commenters thank EPA for focusing efforts on the seriousness of the New Mexico CAFO problem. They appreciate EPA's consideration of the points raised in these Comments particularly in light of the scientific facts favoring action, and political roadblocks the New Mexico Government and the Dairy Industry have thrown up to block change. The Commenters strongly encourage EPA Region 6 to give New Mexico citizens the help and protections they are entitled to under the Clean Water Act, the Administrative Procedures Act, and the National Environmental Policy Act by revising the Draft Permit as suggested herein.

Sincerely,

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