November 30, 2012

Office of Environmental Assessment (OEA)
Attn: Carol Harrison
U.S. EPA, Region 10
1200 Sixth Avenue, Suite 900
Mail code: OEA-095
Seattle, WA 98101

Re: Comment on Lower Yakima Valley Nitrate Study (September 2012). Submitted by Friends of Family Farmers.

Dear Ms. Harrison:

On behalf of Friends of Family Farmers, an Oregon not-for-profit organization working for sustainable agriculture, the Animal Law Clinic at Lewis & Clark Law School submits these comments regarding the *Relation Between Nitrate in Water Wells and Potential Sources in the Lower Yakima Valley, Washington* (Lower Yakima Valley Nitrate Study or Study). It is Friends of Family Farmers' position that given the scope and degree of the problem of contamination of residential water wells in the Yakima Valley, Environmental Protection Agency (EPA) should immediately act to hold dairies in the Yakima Valley accountable under its authority of the Clean Water Act (CWA); should along with Washington State Department of Agriculture (WSDA) and other appropriate agencies, regulate higher standards and enforce requirements for manure handling, storage, application and disposal under its rulemaking authority; should work to ensure clean and safe drinking water to the 24,000 Yakima Valley residents who depend on private residential drinking wells.

The Study is a step in the right direction as it recognizes the longstanding problem of polluted water. EPA's own scientific data and research concludes that livestock operations (mostly dairies) are the largest potential source of nitrogen in the Lower Yakima Valley. EPA data found the second largest potential source is from fertilizer application (manure or synthetic or both) to irrigated crop fields. However, given the historic and current volumes of waste produced by the dairies, the Study fails to acknowledge the severity of the situation. The contamination problem needs to be addressed effectively with remediation efforts starting as soon as possible.

The evidence continues to accumulate, while at least 24,000 residents in the Lower Yakima Valley do not have clean and safe drinking water. Not only has there been a history of excess Maximum Containment Load (MCL) levels of nitrate in downgradient drinking wells from dairies and irrigated crop fields, WSDA inspectors have also noted elevated levels of nitrogen detected in the dairies studied and as well as over-application of nutrients to fields associated with the dairies. Moreover, WSDA inspection reports for some dairies also indicate that roof runoff is generally not directed away from areas contaminated with manure, so roof runoff could flush nitrogen into the soil column

during rain or snowmelt events.

I. EPA may enforce groundwater pollution regulation under CWA.

EPA should consistently monitor and enforce NPDES permits to ensure Concentrated Animal Feeding Operations (CAFOs) are meeting their Nutrient Management Plans. Under the Clean Water Act (CWA) EPA has the authority to regulate all point sources to protect surface water quality.[1] Subject to CWA, discharges of any pollutant to navigable waters in the United States are unlawful.

Discharges to groundwater that reach navigable waters are also likely within the CWA scheme.[2] In *Washington Wilderness Coalition v. Hecla Mining Co*., 870 F. Supp. 983, 990 (E.D. Wash. 1994), environmental groups claimed that a mining company violated CWA by discharging pollutants into surface waters without an NPDES permit. The federal appeals court held that "since the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation by NPDES permit." *Id*.

Similarly, *Friends of Santa Fe County v. Lac Minerals*, 892 F. Supp. 1333 (D.N.M. 1995) found that:

> [the] expansive construction of the Clean Water Act's jurisdictional reach, foreclose[s] any argument that the CWA does not protect groundwater with some connection to surface waters. And although a minority of courts have held otherwise[3], … most courts to have considered the issue have held that hydrologically connected groundwaters are regulated waters of the United States.

Id. at 1358. (citing *Washington Wilderness Coalition* and others[4]).

In the Study, EPA estimates that the Haak Dairy lagoons leak 482,000 to 5,873,000 gallons of liquid waste per year into the underlying soils and that the other

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[1] 33 U.S.C. § 1311 et seq.

[2] See *Friends of the Coast Fork v. County of Lane, Oregon*, No. 95-6105-TC, 1997 U.S. Dist. LEXIS 22705 (D. Or. Jan. 31, 1997) (release to groundwater of leachate from a landfill required a permit if the groundwater was hydrologically connected to nearby surface waters); *U.S. Steel Corp. v. Train*, 556 F.2d 822 (8th Cir. 1977) (CWA regulated discharge into deep wells).

[3] see, e.g., Village of Oconomowoc Lake v. Dayton Hudson Corp., 24 F.3d 962, 965 (7th Cir.), cert. denied, 130 L. Ed. 2d 282, 115 S. Ct. 322 (1994); Kelley v. United States, 618 F. Supp. 1103, 1106-07 (W.D. Mich. 1985),

[4] *Sierra Club v. Colorado Ref. Co.,* 838 F. Supp. 1428, 1434 (D. Colo. 1993) (The Clean Water Act's preclusion of the discharge of any pollutant into "navigable waters" includes such discharge which reaches "navigable waters" through groundwater.); *McClellan Ecological Seepage Situation v. Weinberger*, 707 F. Supp. 1182, 1195-96 (E.D. Cal. 1988), vacated on other grounds, 47 F.3d 325 (9th Cir. 1995), petition for cert. filed, 63 U.S.L.W. 3819 (U.S. May 1, 1995) (No. 94-1807); *New York v. United States*, 620 F. Supp. 374, 381 (E.D.N.Y. 1985). See also 2 William H. Rodgers, Jr., Environmental Law: Air & Water § 4.8 at 114-15 (1986) ("There is little doubt that discharges into groundwaters that eventually move into surface waters are prohibited under Section 301 of the Act.").

dairies studied leak between 3,330,000 and 39,600,000 gallons. Under the cases cited above, EPA has full authority under CWA to regulate groundwater contamination from Haak Dairy (and other CAFOs) just as it does for pollution to surface waters.

II. EPA may designate the Lower Yakima Valley as a sole source aquifer under SDWA.

Further, under section 1424(e) of the Safe Drinking Water Act (SDWA), EPA may designate an area as a "sole source aquifer" if it determines that "the area has one aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health."[5] In areas that overlie a designated sole-source aquifer, no federal funding may be committed for projects that the EPA determines may contaminate such an aquifer.

The Study found nitrate contamination in the basaltic or alluvial aquifers in the Lower Yakima Valley. Samples from wells downgradient of the dairies studied contain excess levels of nitrate than the EPA MCL level of 10 mg/L. Further, the Study found that excess nitrogen from irrigated crops with highly permeable soils may pose a threat to the aquifer. This contamination puts the health of the 75,000 residents of the Lower Yakima Valley who depend on the aquifers for their drinking water at significant risk. Nitrate concentrations greater than the MCL may cause health problems such as methemoglobinemia (blue-baby syndrome) in infants and susceptible individuals, which can lead to death in extreme cases. Some studies have shown a positive association between long-term exposure to nitrates in drinking water and risk of cancer and certain negative reproductive outcomes.

Section 1424(e) of SDWA provides:

> Any State, municipal or local government or political subdivision … or any planning entity (including any interstate regional planning entity) that identifies a critical aquifer protection area over which it has authority or jurisdiction may apply to EPA for a designation of sole source aquifer under this section. Any applicant shall consult with other government or planning entities with authority or jurisdiction in such area prior to application. Applicants, other than the Governor, shall submit the application for a demonstration program jointly with the Governor.

42 U.S.C. § 300h-6 (c). EPA may make this designation under its own initiative, or Washington, through its appropriate agency, may apply for EPA designation.

In evaluating the application, EPA should consider:

> (1) The vulnerability of the aquifer to contamination due to hydrogeologic characteristics;
> (2) The number of persons or the proportion of population using the ground water

[5] 42 U.S.C. § 300h-3 (a)(1)

> as a drinking water source;
> (3) The economic, social and environmental benefits that would result to the area from maintenance of ground water of high quality; and
> (4) The economic, social and environmental costs that would result from degradation of the quality of the ground water.

42 U.S.C. § 300h-6 (d).

III. EPA has CWA authority to require CAFOs to disclose basic facility information.

Currently, there is a tremendous lack of transparency in the regulation of clean water with respect to CAFOs and irrigated crop producers. It is the standard in other industries for point sources[6] to provide standard site-specific information to EPA. The CAFO industry should not be an exception. Repeatedly throughout the Report, EPA notes that it requested information from dairies and irrigated crop producers, yet was repeatedly denied access to this information. This information is not only important with respect to EPA's ability to effectively enforce regulations that apply to the facilities, it is also directly related to water quality safety and human health. Estimates may be helpful to outline the scope of the problem, but details, such as the actual construction of the dairy lagoons (if they are lined, and if so, with what material), are necessary to determine the extent to which a particular operation or practice may be contributing to water degradation such as the increase in nitrogen concentrations. With this type of information, the agencies could start more effectively regulating relevant facilities with respect to the actual numbers of animals, quantities of nitrogen, or narrower ranges of estimates for certain parameters such as lagoon leakage.

Assuming all Yakima Valley dairies followed the Natural Resources Conservation Service (NRCS) recommendation to avoid the use of lagoons at locations where aquifers serve as a domestic water supply, or constructing a liner following NRCS standards, the amount of seepage from the lagoons would still amount in the millions of gallons per year. This amount assumes all "lagoons are lined in accordance with NRCS standards, a likely best case scenario,"[7] yet, none of the agencies involved – EPA, WSDA, Washington Department of Ecology, NRCS, nor Yakima County – could affirm the status of lagoons in the dairies tested. Alarmingly, many states already require lagoons to meet specific permeability requirements, yet Washington does not. WSDA should bring Washington on par and promulgate regulations setting these requirements. If WSDA refuses to act, Yakima County should step in and require lagoon construction to a specific level of permeability.

EPA has CWA authority to require all CAFOs to report discharges and other relevant data as part of the National Pollutant Discharge Elimination System (NPDES)

[6] Section 502 of the Clean Water Act defines the term "point source" as "any … concentrated animal feeding operation … from which pollutants are or may be discharged. 33 U.S.C. § 1362(14).
[7] Lower Yakima Valley Nitrate Study, 33.

permit program.[8] EPA has the authority to, and should, require CAFOs to submit information relevant to aiding enforcement, developing permit limitations and effluent standards, and assuring CWA compliance, such as:

1. Number and type(s) of animals;
2. Type and capacity of manure storage;
3. Quantity of manure, process wastewater, and litter generated annually by the CAFO;
4. Whether the CAFO land-applies waste;
5. Available acreage for land application;
6. If the CAFO land-applies, whether it implements a nutrient management plan for land application;
7. If the CAFO land-applies, whether it employs nutrient management practices;
8. If the CAFO does not land apply, alternative distributions/transfers of manure, litter and/or wastewater;
9. Whether the CAFO transfers manure off site, and if so, quantity transferred, and methods of storage and transportation; and
10. Information on use of pharmaceuticals in their operations.

IV. EPA should set lagoon permeability requirements and application rates for irrigated crops.

The EPA should promulgate national primary drinking water regulations for contaminants that may pose health risks and that are likely to be present in public water supplies, such as setting permeability requirements for lagoons and agronomic rates under SDWA Section 1431.

On January 25, 2010, EPA issued a finding in support of the use of SDWA Section 1431, 42 USCS §§ 300f et seq.to address contamination in the Yakima valley. EPA found that groundwater in the Yakima Valley Basin is an underground source of drinking water which is contaminated, and that this contamination may present an imminent and substantial endangerment to human health. The sampling conducted by EPA in February and April, 2010, was done under the authority of SDWA Section 1431. Based on EPA's own evaluation of the sampling data, it may, and should, initiate further actions under Section 1431 in the future.

Additionally, EPA and WSDA should work with scientists to determine the carrying capacity for agronomic application of animal waste in the Yakima Valley. The appropriate regulatory agency should then promulgate regulations as to the agronomic

[8] EPA has the authority to regulate all point sources to protect water quality under the Clean Water Act (CWA or the Act).[8] Section 502 of the Act defines the term "point source" as "any … concentrated animal feeding operation … from which pollutants are or may be discharged. 33 U.S.C. § 1311; 33 U.S.C. § 1342.

Section 308 of the CWA expressly authorizes EPA to require the owner or operator of any point source to establish and maintain records and reports and "provide such other information as [EPA] may reasonably require" to carry out the objectives of the Act. 33 U.S.C. § 1318(a)(2)(A)(i), (ii), (v).

rates for each crop. The rules should set the amount, timing, frequency, and type of fertilizer, as well as the timing and amount of irrigation relative to the application of fertilizer and plant water demand to reduce fertilizer runoff into the groundwater and surface waters. The agency should then monitor producers and enforce regulations when application rates exceed agronomic rates. Application of liquid waste to fields exceeding agronomic rates causes nitrates and other contaminants in the waste to leach into the surface waters and groundwater, affecting drinking wells. Sufficient regulatory authority exists to address this pollution concern and action should be undertaken immediately to resolve the current contamination as well as to prevent further contaminations.

On behalf of Friends of Family Farmers
Respectfully Submitted,

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