March 9, 2016

Miles V. McEvoy
Deputy Administrator, National Organic Program
U.S. Department of Agriculture
1400 Independence Ave, SW
Room 2646; Stop 0268
Washington, DC 20250

Dear Mr. McEvoy,

Thank you for responding to our concerns about the potential use of treated oil and gas wastewater in organic agriculture. We appreciate the attention you are giving to this issue as our organizations work to sustain consumers' trust in our nation's organic food system.

You stated in your letter that the National Organic Program is not aware of hydraulic fracturing wastewater being used on organic farms. However, we are unsure, based on the language you are using, if you are also disavowing any knowledge of the use of "treated" wastewater being used in organic production. Although treated, effluent from these operations have been found to be contaminated with toxicants.

Whether or not you have knowledge of direct or indirect usage, we do not believe that anything should prevent the USDA from taking proactive measures to protect public health. Wastewater from oil and gas operations – so-called "produced water" – is a growing source of irrigation water. It has been reported in the media that this wastewater, a by-product of hydrocarbon exploration and production, is already being utilized on Californian farms and possibly in organic production.[1]

Overall, our argument is that (1) wastewater from oil and gas operations has been used for agricultural irrigation for decades; (2) this practice has escalated in recent years and is expected to continue expanding; (3) current rules are insufficient to protect public health; (4) current regulatory procedures are insufficient to determine which food products are utilizing this type of irrigation; and (5) these circumstances are converging in a manner that will be to the detriment of the National Organic Program and to consumer confidence in the organic label.

As an example, Chevron has been supplying California's Cawelo Water District with treated, produced wastewater from its oil fields since the mid-1990s.[2] "The district obtains approximately 36,000 acre-feet (or 11.7 billion gallons) per year from local oil producers."[3] This source has constituted about half of Cawelo's water use in recent years.

Several major farming operations and brands are among the water district's customers, including one (Sunview) that sells organic raisins and grapes along with other produce.[4] These customers receive oil wastewater blended with water from other sources, so it is difficult to determine which agricultural commodities the wastewater irrigates and whether some products are represented as certified organic.

This practice has become particularly compelling to the parched water districts of California's San Joaquin Valley, where oil and gas drilling occurs near – and sometimes on – active farmland. With continued drought forecasts across the West, additional farmers are likely to turn to wastewater from oil and gas production. One company is currently developing plans to treat up to 4 million gallons of wastewater per day to sell to agricultural customers.[5] A spokesperson for the Western States Petroleum Association was even quoted saying that the oil industry could become a net producer of water in California.[6]

The biggest problem is that oil and gas drilling operations use and produce toxic chemicals. Several studies have shown that oil and gas wastewater can contain harmful contaminants even after being "treated" or "recycled" – and we simply don't have enough information about the long-term effects this exposure may have on consumers, farmworkers, and the environment.

Currently-published science is insufficient to determine the health impacts to consumers – either acute or chronic from cumulative exposure – caused by chemical mixtures present in produced water after absorption by crops. Furthermore, unsuspecting swimmers, fishermen, and wildlife could be poisoned by the petroleum-laced wastewater sitting in irrigation channels. Any of these impacts could violate requirements in the Organic Foods Production Act and, thus, regulatory oversight should err on the side of caution at this point in time.

A public interest watchdog group, Water Defense, tested the Cawelo Water District's *treated* irrigation wastewater that it purchases from Chevron. Water Defense's chief scientist discovered high levels of acetone, hydrocarbons, and methylene chloride (a carcinogen).[7] A test of Cawelo's water performed by a third party for Chevron also found acetone and hydrocarbons, as well as benzene (a carcinogen), toluene, xylene, and various heavy metals (methylene chloride was not analyzed, though Chevron has denied using the chemical).[8]

Unfortunately, current testing regimes are wholly inadequate, focusing primarily on issues that could affect crop growth, such as salinity and boron, instead of a more comprehensive approach that would target the wide range of synthetic chemicals potentially harmful to humans and animals. Given the deficiencies in end-to-end tracking and the lack of scientific information around health impacts, organic consumers and grocers are left wondering about the chemical-laced water used to grow, and potential toxic residues in, their food. Indeed, one organic grocery outlet – PCC Natural Markets – has had to field concerns from shoppers, causing it to send public comments to your agency requesting a moratorium on, and review of, the use of treated wastewater to irrigate crops.[9] PCC, based in Seattle, is the largest member-owned grocery cooperative in the United States.

The use of this contaminated wastewater has become such a concern that a bill – AB14 – has been introduced in the California state legislature that would mandate labeling for packaged food and raw agricultural commodities.[10] This could create a situation where food that bears an organic label also states that it was grown using "recycled or treated hydraulic fracturing or oilfield wastewater." A forward-thinking ban by the National Organic Program would sidestep such legislative conflicts and preserve consumer confidence in the USDA's organic seal.

This is no longer a hypothetical threat to our food system; it is a pressing trend that must be addressed in its early stages. You stated that "organic regulations require that production practices implemented at farms and processing facilities must maintain or improve the natural resources of the operation, including soil and water quality." This is a commendable policy, one that has been made effective and actionable by specific language prohibiting conventional pesticides, sewage sludge-based fertilizers, and petroleum-based fertilizers. The addition of petroleum-laced wastewater to this list, a prudent action, would be in alignment with the intent of the National Organic Program's organic standards and consistent with the existing organic regulations.

Considering the emerging body of scientific evidence against using treated wastewater to irrigate crops, a proactive action by the National Organic Program is necessary to prevent this hazardous practice. Such a move would demonstrate your agency's commitment to healthful produce and organic brand integrity and would certainly be appreciated by organic community stakeholders. Thank you for considering the inclusion of this policy change in the National Organic Standards.

Sincerely,

Alexander Rony
Sr. Digital Innovation Campaigner
Sierra Club

Mark A. Kastel
Co-Director & Senior Farm Policy Analyst
The Cornucopia Institute

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2. Heberger, M. and Donnelly, K. (December 2015). "Oil, Food, and Water: Challenges and Opportunities for California Agriculture." Pacific Institute.
3. (September 2015). "Produced Water For Agricultural Use: Frequently Asked Questions." Cawelo Water District.
4. Harkinson, J. (24 July 2015). "These Popular Fruit and Veggie Brands May be Grown with Oil Wastewater." Mother Jones.
5. Cox, J. (9 January 2016). "Company hopes to treat oil wastewater for reuse in agriculture." The Bakersfield Californian.
6. Sommer, L. (7 April 2014). "California Farmers Look to Oil Industry for Water." KQED.
7. Cart, J. (2 May 2015). "Central Valley's growing concern: Crops raised with oil field water." Los Angeles Times.
8. (15 June 2015). "Technical Report: Reclaimed Water Impoundments Sampling." Amec Foster Wheeling Environment & Infrastructure, Inc.
9. Bialic, T. (5 October 2015). "Comments to the National Organic Standards Board." PCC Natural Markets.
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