



# SIERRA CLUB

**HB 393 Opposition Testimony  
House Energy & Natural Resource Committee  
Adam Rissien, May 15, 2018**

Good afternoon, Chairman Landis, Vice Chair Hagan, Ranking Member O'Brien and members of the House Energy & Natural Resource Committee. The Sierra Club Ohio Chapter thanks the committee for this opportunity to testify again in opposition to House Bill 393. Sierra Club is the nation's largest grassroots-led environmental organization with over 180,000 members and supporters in the state of Ohio with a mission to explore, enjoy and protect the planet.

Our opposition to HB 393 remains from concerns over potential contamination to Ohio's rivers, streams and lakes, as well as threats to people's health, from the sale and surface application of oil and gas well waste fluids, commonly called "brine." The waste fluid is a result of the production, operation or plugging of both vertical and horizontal oil and gas wells. The exact chemical makeup of these brines is unknown due to a lack of transparency in the extraction process. However, as previous opponent testimony noted, oilfield brines may contain hundreds of chemicals including aluminum, ammonia, arsenic, beryllium, boron, bromide, butoxyethanol, cadmium, chromium, copper, ethylene glycol, lead, manganese, methanol, molybdenum, nickel, nitrate/nitrite, radium, selenium, silver, strontium, sulfate, uranium and zinc. Certainly, vertical oil and gas wells contain many, or all, of these dangerous chemicals, including radium 226 and radium 228 since they are Naturally Occurring Radioactive Materials (NORM). These materials can be further concentrated through processing methods, referred to as a Technologically Enhanced NORM (TENORM).

Nature's Own Source product, AquaSalina is in fact a TENORM product, with combined radium levels exceeding safe federal and state drinking water standards,<sup>1</sup> and Ohio's limits on radium discharge to the environment. These facts were disclosed in a July, 2017 memo written by inspectors from the Ohio Division of Oil and Gas Resource Management Radiation Safety Section after testing nine different samples of AquaSalina, including those from the manufacturer before and after being processed, as well as from containers bought at a Lowe's Home Center in Akron, OH and the Hartville Hardware Store in Hartville OH. The full memo is enclosed with our testimony, and we want to highlight some of the findings and statements made by the state inspectors.

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<sup>1</sup> See 40 CFR 141.66(b) and OAC 3745-51-15.

After evaluating the test results, inspectors determined the following:

- “All post-samples collected in this study were found to be increased in radioactive activity from the respective pre-samples.”
- “There was a 45% increase in combined radium Ra 226/Ra 228 concentration between the pre (1) and post (1) samples collected from the Nature’s Own Source/AquaSalina Cleveland production facility.”
- “There was a 92% increase in combined radium Ra 226/Ra 228 concentration between the pre (2) and post (2) samples collected from the Nature’s Own Source/AquaSalina Cleveland production facility.”
- “The combined radium Ra 226/Ra 228 concentration in the Nature’s Own Source/AquaSalina container purchased from Hartville Hardware was the highest identified in this study at 2,491 pCi/l.”
  - Safe drinking water limits are 5 pCi/l and Ohio’s effluent discharge limit is 60 pCi/l.

The memo’s main recommendations include :

- Advising Nature’s Own Source that they are producing TENORMs.
- Advise the company that the radioactivity of AquaSalina exceeds the safe drinking water standards for combined radium by a factor of 300, and human consumption of ANY AMOUNT is highly discouraged.
- Advise the company that the radioactivity of AquaSalina exceeds the State of Ohio discharge to the environment limits.

This committee has heard proponent testimony dismissing risks posed by the use of AquaSalina. However, the findings and recommendations revealed by the Ohio Division of Oil and Gas memo suggests otherwise, and we urge members to reject the notion that AquaSalina is in any way a safe product, and certainly not one that any Ohio resident can unwittingly buy at their local store.

We also would like to remind the committee that HB 393 is not specific to AquaSalina. Rather, the proposed legislation creates a category for AquaSalina and other processed or recycled brines from vertical wells, allowing them to be sold as a “commodity.” The bill has several fundamental flaws in its approval and oversight, which we outline below demonstrating why committee members should vote against HB 393.

## Key Points:

- **HB 393 removes and restricts ODNR's authority.** Under HB 393's proposed language found at Revised Code 1509.22(C)(9)(a), the Ohio Department of Natural Resources Division chief of Oil and Gas must accept only certain documentation before issuing an order or permit to sell a brine commodity that demonstrates it is "not expected to result in damage or injury to public health, safety, or the environment." In other words, the chief cannot require any other form of documentation or proof that the "commodity" is safe, and in fact, HB 393 explicitly prohibits the chief from any future rulemaking or establishing other requirements necessary to protect the public or environment.
  - HB 393 states "[t]he chief shall not adopt rules or establish or impose additional requirements applicable to commodities governed by division (C)(9)(a) of this section."
    - Given the high radium levels already found in AquaSalina, this provision seems to acknowledge the need for more protective rules, and then precludes them altogether.
    - The restriction against additional requirements extends to other sections of the Revised Code, including 1509.222 and 1509.223 that ensures the chief has oversight of brine transportation and application. Specifically, section 1509.223 requires brine transporters to file statements detailing the location, date, time and amounts of brine disposed at each location. HB 393 removes this crucial oversight mechanism for brine commodities.
- **HB 393 lacks adequate direction or requirements pertaining to the documentation that the chief must accept to demonstrate a brine commodity is not expected to result in damage or injury to public health, safety, or the environment.**
  - HB 393 directs the chief to accept documentation approved by the Ohio Department of Transportation (ODOT), or from a third party certification entity approved by ODOT. However, there is no criteria, numeric or otherwise, required for that documentation to demonstrate the brine commodity is safe; no chemical disclosure, no lab results, or any other information. ODOT simply has to approve the documentation or certification.
    - The ODOT is not the proper agency to protect Ohio's natural resources or the health of people exposed to processed brine. Rather that duty should properly fall to the Ohio Department of Natural Resources, the Ohio Environmental Protection Agency, and the Ohio Department of Health.
  - HB 393 also directs the chief to accept as sufficient documentation showing a brine commodity is on the the most recent pacific northwest snowfighters qualified products list.
    - Looking at the testing requirements published by the Pacific Northwest Snowfighters Association (enclosed), only 11 chemicals are tested. Absent from the list are any radiological materials, such as radium found

in the AquaSalina samples, and certainly there is a likelihood brine contains more than 11 chemicals.

- The testing requirements by this association do not take into account contaminants from processed oil and gas waste, and are insufficient to demonstrate the safety of brine commodities.
  - Nature's Own Source claims AquaSalina is on the Pacific Northwest snowfighters qualified product list, and under HB 393 the chief must accept its inclusion as sufficient documentation to approve its use as a commodity even though the Oil and Gas Division has found unsafe levels of radium in several AquaSalina samples.
- **HB 393 restricts the chief's ability to collect brine commodity samples, and given the restrictions placed on the chief's authority, it is unclear what action the Division of Oil and Gas can take if test results show dangerous levels of contaminants.** Previously this committee amended HB 393 (under 1509.22(C)(9)(b)) to require the chief collect brine commodity samples for testing, but restricts the number of samples to just four annually. The Ohio Division of Oil and Gas Resource Management Radiation Safety Section memo relied on tests from nine separate AquaSalina samples, and recommends more testing be completed. HB 393 would preclude adequate sampling and testing, even in its amended version. ***Testing should not be restricted.***
    - HB 393 should direct sampling and testing rules be promulgated that require, at a minimum four samples, and then as many as necessary to ensure public health and safety, and prevent any groundwater contamination or degradation of waters of the state.
    - HB 393 should also direct that testing be conducted by an Ohio-EPA certified lab capable of measuring radiological materials.

Given that processed "brine" can already be used as deicer under current Revised Code, it seems the intent of HB 393 is to remove ODNR oversight and allow the unfettered sale of oil and gas well waste fluids. As it stands, HB 393 lacks adequate provisions to ensure public health and safety, or to protect the environment. It fails to include any measurable criteria necessary to show the "brine" is safe. It also lacks sufficient sampling and testing provisions, and it fails to account for the presence of Technologically Enhanced Naturally Occurring Radioactive Materials.<sup>2</sup> Finally, it unnecessarily restricts the chief's authority. **For these reasons, we urge the committee to vote against passing HB 393.**

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<sup>2</sup> See additional studies demonstrating dangers posed by oil and gas waste fluids: (<http://documents.latimes.com/study-hydraulic-fracking/>), (<http://pubs.usgs.gov/sir/2011/5135/>), (<https://stateimpact.npr.org/pennsylvania/2018/01/20/study-conventional-drilling-waste-responsible-for-radioactivity-spike-in-rivers/>).