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August 19, 2025

Colonel Brandon Bowman, USA

District Commander U.S. Army Corps of Engineers

Jacksonville District

PO Box 4970

Jacksonville, FL 32232

Re: Regulation of Phosphate Mining in Florida

Dear Colonel Bowman,

The purpose of this letter is to ask the U.S. Army Corps of Engineers to take what actions are needed to strengthen the regulation of the phosphate industry in Florida. It supports the proposal by ManaSota-88 that new phosphate mining regulations, and an updated 2013 Areawide Environmental Impact Study, are needed. A copy of an op-ed, explaining the proposal, by ManaSota-88's chairman Glenn Compton is enclosed.

Florida Veterans for Common Sense is an all-volunteer nonprofit nonpartisan advocacy organization of Vietnam to Afghanistan/Iraq Era Veterans. Veterans have a duty to help forge the future of our country. To that end, we advocate to help shape local and national policies. An area of urgent concern is the pollution of our water supply by phosphate mining threatening national security. Another urgent concern is the threat of radiation from the phosphate industry which will endanger the health of our fellow citizens.

Please consider the following:

1. Phosphate mining threatens “paradise” while contributing to the wasteful and harmful global food system.

Though some people still consider Florida to be paradise, it's been known for decades that phosphate operations have been polluting Florida's surface and ground water to an extent that is unhealthy for all living things. Surface water pollution results from breaks in the containment of slurry ponds atop phosphogypsum stacks (gyp stacks) as well as from spills from Clay Settling Areas (CSAs). These breaks release heavy metal poisons (lead, mercury, cadmium, zinc, and nickel), nitrogen, and radiation (from uranium, thorium, and radon). Fish kills and algal blooms such as red tide are the visible results.

Ground water pollution is from sinkhole-like collapses below the slurry ponds that result in the release of those same chemicals and radioactive minerals into the Floridan Aquifer which supplies potable water to the people of southern Florida.

Phosphate operations are, of course, a necessary and driving part of the world's industrial agriculture system, but that polluting system is highly inefficient, using about 10 calories of oil to produce each calorie of food. In addition to the waste and pollution during production, synthetic fertilizers emit nitrous oxide (N₂O) during application. N₂O is a heat trapping gas 273 times more powerful than carbon dioxide (CO₂). Industrial agriculture is therefore a major cause of global warming. Global warming drives our changing climate with its increasingly severe and dangerous weather events; events that challenge not only the future of farming, but our very existence.

Synthetic fertilizers feed crops directly, which can give the appearance of effectiveness. But synthetic fertilizers, like those produced from phosphate mining, spoil the health of the soil with negative impacts on its organic matter and soil microbes.

Our industrial agriculture system must be phased out as soon as possible and replaced by more biophilic (i.e. life-loving) systems that include none of the synthetic fertilizers which destroy living soil, turning it into dirt and desert.

2. To date, regulation of the phosphate industry has failed.

History shows that even when properly “Permitted and Engineered,” phosphate sites have failed:

- 1971 Clay Settling area (CSA aka Slime Pond) spillage into the Peace River
- 1977 Mulberry gyp stack spillage
- 1989, 1991, 1992, 1993 Nichols Mine unauthorized mine water discharges affected Alafia River
- 1993 Riverview Chemical Complex non-permitted discharge of gyp stack seepage to Archie Creek
- 1994 Mulberry sinkhole drained gyp stack
- 1994 Clay Settling Area spill into Payne Creek/Peace River 2 billion gallons lost
- 1994 Hopewell Clay Settling Area spill
- 1997 Heavy rain caused failure of Mulberry gyp stack releasing 56 million gallons into the Alafia River
- 2001 Tropical Storm Gabrielle causes Piney Point's gyp stack to overflow into Bishops Harbor
- 2001 Piney Point leak caused Mulberry Phosphate bankruptcy. Florida Department of Environmental Protection (FDEP) took over
- 2002 FDEP begins permanent closure of Piney Point
- 2004 Hurricane Frances caused Riverview stack failure into Archie Creek/Tampa Bay
- 2011 Port Manatee dredge spoil added, liner ripped, and 170 million gallons released. HRK files for bankruptcy
- 2016 Mulberry sinkhole drained 215 million gallons from a gyp stack into aquifer
- 2021 Piney Point Leak discharged 200 million gallons

This long history of regulated failure shows we need new, stronger regulations.

3. Phosphate mining in Florida presents a security threat like the tragedy that befell Syria.

Water supply failures in Syria resulted in social instability, migration, economic collapse, war, and overthrow of the government. We shouldn't take the chance that the same thing could happen in Florida.

In Syria, long-term drought forced farmers and rural communities to maintain their crops by pumping from the aquifer. For several years, pumping the aquifer allowed the farmers to maintain their lifestyle until they pumped the aquifer dry. Once they did so, the farmers could not grow their crops. Unable to survive on their farms, the farmers sought a better life in the cities. The cities were unable to absorb them. Desperate people turned to desperate means and the social order collapsed, which may not recover for the foreseeable future.

Syria is a prime example of what can happen when a region runs out of water, and phosphate mining in the Florida watersheds, that provides millions of gallons of drinking water per day puts that water supply at risk.

Open pit mining of phosphate has undesirable effects on natural water flows. To reach the phosphate ore, the overburden of grass, trees, and dirt must be removed. This process changes normal water recharge and surface flow. Digging disrupts not only the ability of surface water to recharge the aquifer, but it can also directly disrupt the aquifer's flow.

There are unavoidable, damaging consequences of phosphate mining. Processing the ore results in massive amounts of dangerous solid and liquid waste. The waste contains heavy metals and radioactive material, and it must be put somewhere. The phosphate companies store it in what are called gyp stacks and CSAs. The latter are long-term settling areas for colloidal clay suspension. The history of gyp stacks shows these waste dumps are real threats to the water supply.

There have been at least three major CSA failures and six gyp stack failures or discharges in Florida. For example, in 1997 a (slurry pond, gyp stack failure) poured millions of gallons of toxic material into the Alafia River. The Piney Point gyp stack failed in 2021, pouring millions of gallons of hazardous waste into Tampa Bay. Piney Point did not completely collapse but was drained into Bishop's Harbor before that could happen.

Had either of these spills occurred in the Peace or Myakka River, the river's use as a water supply would have ended, perhaps for years.

When a spill does occur, who is going to clean it up? It's unlikely the company that caused it will pay the full cost of cleanup. In several cases companies have filed for bankruptcy because a massive spill was too expensive for one company to clean up. The company causing the problem then turns to local, state, or national government for help. Phosphate mining, therefore, is an excellent example of corporate socialism. Corporations take the profits while leaving the costs to governments and citizens.

If the Peace and Myakka Rivers are polluted by phosphate waste, it will take years to clean up the mess and make the water suitable for drinking again. What will happen? How will the 26 million gallons of water taken from the Peace River each day by Charlotte, Desoto, Sarasota counties and the City of North Port be replaced? Who will pay the cost? Will people desperate for water take desperate measures as they did in Syria?

4. Economics tells us to abandon Phosphate mining.

Economics is called the "dismal science," because it tells us we cannot have everything. We cannot have our cake and eat it too.

Southwest Florida's invaluable natural scarce resources include drinking water, estuarine waters, and natural habitat – all are required to support life. Mined habitat is never restored to its natural state. Reclamation is not the same as restoration. Biodiversity, necessary to stable life as we know it, can only be assured by NOT mining.

Phosphate companies say their operations provide thousands of jobs and make the fertilizer needed to feed the world. Corporate profits motivate this side of the story. Actually, mining operations threaten the welfare of millions of people and produce a product whose demand should be diminishing. Phosphate mining supports an inefficient global agricultural process that requires more energy than it produces, and it destroys the soil.

Economics is moving the world towards more efficient agricultural and farming practices that enhance food production while at the same time increase water retention, improve estuary water quality, and provide resistance to erosion. All living things benefit from healthy soil. Economics mandates that a new system of agriculture replace the current industrial model. We should no longer be using the unsustainable practice of phosphate strip mining to produce a synthetic fertilizer that ruins soil microbiology.

There is no free lunch: we cannot mine phosphates and assure safe drinking water and a prosperous economy. We should not allocate our precious land to phosphate mining.

5. Phosphate mining's radiation hazards are not acceptable.

Andy Mele, the Peace and Myakka Waterkeeper, testified at the DeSoto County Phosphate Mining Workshop. Arcadia, Florida on January 31, 2023. His presentation was titled "Searching for gamma radiation in the Bone Valley."¹ Using a professional grade Geiger counter, he found ample evidence of the radiation hazards of phosphate mining. Here are two examples:

Jane lives in a gated community, built on mine tailing fingers adjacent to a mine pit, which is part of the Cristina Mine in Lakeland, Florida. Jane's yard gives off almost 200 times the gamma radiation allowed by the EPA which can make you sick (5.5% increase in the likelihood of fatal cancer). After 3 years of accumulated exposure in her new home. Jane was diagnosed with breast cancer as were two of her neighbors. Also, if we assume that 2- and 3-year-olds play 20 hours a year at a playground in a Combee Road subdivision of Lakeland they would experience in excess of radiation levels of 700 mRem per year. This level of exposure is startling because the EPA safety threshold for an adult is 1000 mRem per year above the background level and children are supposed to be limited to 100 mRem per year.

¹ Andy's testimony can be seen on the video of the workshop at [Phosphate Mining Workshop: Reclamation & Radiation - Andy Mele](#)

Andy's presentation shows the Florida Departments of Health and Environmental Protection are not reporting all the facts to the public regarding the radiation hazards of phosphate mining. It should not be possible for developments to house people, or for children to play where the Geiger counter's needle is pegged at the maximum. New regulations should provide that radiation sequestration be as effective after mining as it is before.

In conclusion, the phosphate industry has a history of gyp stack and CSA structural failures. These failures cause pollution hazards that threaten our water supply, and therefore our national security. Further, the mining of phosphates creates radiation hazards that endanger the health of our fellow citizens. These structural failures and radiation perils have occurred even when phosphate mining has followed the rules, which tells us the rules are not sufficient. ManaSota-88's call for new and stronger regulations is well founded and imperative.

Unfortunately, the EPA currently has diminished authority and resources, while the state of Florida has a long history of favoring the phosphate industry over the safety of Floridians. These realities offer little hope of creating and implementing effective regulations. And for what? A product that itself harms the soil, our waterways, and contributes to global warming.

We urge the Army Corps of Engineers to intervene and take the action needed to protect our waters, our health, our economy, and our national security. The status quo, where the government favors corporate interests over the safety of the nation and its people, is not only unjust, but also harmful and immoral.

Sincerely,

A handwritten signature in black ink that reads "Gene Jones". The signature is written in a cursive, flowing style with a large initial "G".

Gene Jones

President, Florida Veterans for Common Sense.

Copy to:

Glen Compton, Chairman, ManaSota-88

Brooks Armstrong, President, People for Protecting the Peace River (3PR)

Andy Mele, Peace & Myakka Waterkeeper

Dr. Richard Whitman, President, Heal our Harbor

Guest Opinion

Bradenton Times

New Phosphate Mining Regulations Needed



Saturday, July 5, 2025

<https://thebradentontimes.com/stories/new-phosphate-mining-regulations-needed,150232>

by Glenn Compton

To protect and preserve the public’s health and the environment, Florida needs to strengthen existing phosphate mining regulations. The Florida Department of Environmental Protection (FDEP) needs to adopt the following:

- Phosphate production must be viewed as a “cradle to grave” operation of pollution. The mining of the ore, the production of the ore at fertilizer plants, and the disposal of hazardous waste from radioactive phosphogypsum need to be linked together in one permit.
- Require that steps be taken by the phosphate industry to reduce radiation to pre-mining background levels; therefore, not leading to significant land use restrictions and adverse health impacts.

- Assure the public that further residential development of phosphate lands is not permitted.
- Stop issuing permits for the construction or expansion of toxic slime ponds (clay settling areas) and phosphogypsum stacks.
- The remaining wetlands in Florida should not be mined. Acceptable wetland restoration techniques suitable for large-scale use are not feasible.
- The phosphate industry should be required to establish a network of groundwater monitoring wells which the industry pays for. This is necessary because present groundwater data is geographically spotty in nature, and many of the established wells are not suitable for the kinds of monitoring programs needed to determine or verify mining-related groundwater pollution problems.
- Conduct a comprehensive health risk analysis on all Florida phosphate reclaimed mine sites. The public currently uses fourteen reclaimed phosphate lands as recreational areas throughout the state. Testing is needed to determine the extent and source of pollution at these reclaimed mine sites.
- Conduct inorganic and radiochemical surface water and fish tissue sampling in an ongoing monitoring process at all former phosphate sites currently accessible to the public for fishing. The contaminated sites may adversely impact several endangered or threatened species, as well as anyone consuming fish caught at the former phosphate mines.
- Conduct an ecological risk assessment at former phosphate mine sites. Radium-226 and radium-228 have been identified at levels above the permitted EPA cancer risk screening concentrations. Land mined for phosphate exhibits higher radioactivity at the surface than it did before mining. Phosphate mining exposes radioactive materials and can increase surface and groundwater radiation levels. Elevated levels of radiation pose a considerable threat to human health and the environment.
- Conduct measurements to determine employee exposure to toxic and hazardous substances, and the potential for long-term health effects of living or working on-site at former phosphate mine sites.
- The elimination of toxic slime ponds should be required before any additional mining permits are issued. Studies funded by the phosphate industry should investigate changes in processing and reclamation procedures to eliminate these ponds.
- The radiological impact that phosphate mining has on the public and the environment, as a result of changes in the radioactive content of water resources, must be assessed. The redistribution of uranium-238, radium-226, and radon-222 that occurs due to mining needs to be analyzed. Radium-226 can be ingested

through contaminated drinking water, and radon-222 can be inhaled, often associated with dust from mining operations.

- Cancer mortality rates in the Central Florida Phosphate region and the Bone Valley region need to be identified.

Additionally, a Phosphate Environmental Impact Statement Update is Needed.

Please Write to:

Col. Brandon Bowman, District Commander, Army Corps of Engineers
Jacksonville District
PO Box 4970 Jacksonville, FL 32232
brandon.l.bowman@usace.army.mil

The 2013 Phosphate Environmental Impact Statement is deficient in addressing the public health and environmental impacts of phosphate mining, fertilizer production, and phosphogypsum waste disposal. An updated regional phosphate environmental impact statement is urgently needed before consideration is given to any additional phosphate mining permits.

Glenn Compton is the Chairman of [ManaSota 88](#), a non-profit organization that has spent over 30 years fighting to protect the environment of Manatee and Sarasota counties.