

March 20, 2023

Via Electronic Mail

Director Richard Dunn
Georgia Department of Natural Resources, Environmental Protection Division
2 Martin Luther King Jr. Drive SE
Suite 1456, East Tower
Atlanta, GA 30334
twinpines.comment@dnr.ga.gov

Re: Comments Opposing Twin Pines Minerals' Draft Mining Land Use Plan

Dear Director Dunn:

Together, our 41 organizations, representing more than five million members, write to ask you to protect the Okefenokee National Wildlife Refuge by denying Twin Pines Minerals' (TPM) application to strip mine for heavy mineral sands at the doorstep of the refuge:



The pristine waters of the Okefenokee are under threat from TPM's proposed heavy mineral sands mine
(© Gregory Miller)

Altamaha Riverkeeper
Amphibian Foundation
Black Warrior Riverkeeper
Center for a Sustainable Coast
Center for Biological Diversity
Chattahoochee Riverkeeper
Coosa River Basin Initiative
Defenders of Wildlife
Dogwood Alliance
Emory Ecological Society
Environment Georgia
Flint Riverkeeper
Founder of the St. Marys EarthKeepers
Friends of Georgia State Parks &
Historic Sites
Georgia-Alabama Land Trust
Georgia Audubon
Georgia Canoeing Association
The Georgia Conservancy
Georgia Conservation Voters
Georgia ForestWatch
Georgia Interfaith Power and Light

Georgia River Network
Georgia WAND
Georgia Women (And Those Who Stand
With Us)
Glynn Environmental Coalition
Nagano Garden Club
National Parks Conservation
Association
National Wildlife Refuge Association
Ogeechee Riverkeeper
One Hundred Miles
Satilla Riverkeeper
Savannah Riverkeeper
Science for Georgia, Inc.
Sierra Club Georgia Chapter
Sierra Club, Florida Chapter
Southern Conservation Trust
SouthWings, Inc.
Sowing Seeds Outside the Walls
The Wilderness Society
Wilderness Watch

At 438,000 acres, the Okefenokee Swamp is one of the most wild, pristine, and ecologically intact places in America, sheltering more than one thousand animal and plant species within its pine islands, cypress forests, and blackwater channels. In addition to providing refuge to wildlife, the Okefenokee offers an escape to hundreds of thousands of people who camp, fish, boat, bird, and hunt in its wilderness each year. As the U.S. Fish and Wildlife Service put it, “The Okefenokee is like no other place on earth.”¹

TPM’s proposed mine places this valuable resource at unacceptable risk, and EPD should not allow TPM to move forward. The Surface Mining Act and its regulations place the burden squarely on TPM to show (1) that the proposed mine is based on sound engineering and conservation principles, (2) that the proposed mine will not harm the environment or contiguous natural resources, and (3) that the proposed mine is consistent with land use in the area. If TPM cannot do so, EPD may not grant a permit.

¹ U.S. Fish and Wildlife Serv., *Okefenokee National Wildlife Refuge*, <https://bit.ly/425dMFE> (last visited March 20, 2023).

As shown below, TPM has not—and cannot—meet this burden. Among other concerns:

TPM proposes to use experimental techniques that are not based on sound engineering and conservation principles.

- TPM has failed to show that mining will not harm the Okefenokee or other surrounding natural resources. On the other hand, more than 85 scientists, including University of Georgia hydrologist Rhett Jackson, have concluded that the mine poses a significant risk to the swamp.
- The proposed mine is not consistent with land use in the area.
- The public overwhelmingly opposes the project. There have been more than 160,000 comments opposing the mine, and polling shows that more than 70% of Georgia voters, including 75% of South Georgia voters, oppose TPM's proposal.²
- The Department of the Interior and U.S. Fish and Wildlife Service oppose the project. Secretary of the Interior Deb Haaland, Regional Administrator Leo Miranda, and Refuge Manager Michael Lusk, in addition to U.S. Fish and Wildlife Service Directors from the Nixon, Ford, Carter, Bush, and Clinton administrations, have spoken out against the proposed mine.
- TPM and its leadership have a long track record of noncompliance and environmental harm and have already cut corners on the proposed mine. As one Madison County resident put it, "If you grant them a permit, Twin Pines will destroy the Okefenokee, just like its sister company destroyed my community."

To ensure the Okefenokee's survival for future generations, we ask you to deny this proposal for surface mining on the Okefenokee's Trail Ridge.³

BACKGROUND

1. The Okefenokee Swamp and National Wildlife Refuge

The Okefenokee Swamp is one of the largest and most well-preserved freshwater ecosystems in the world. Unlike most other globally significant wetlands, the Okefenokee is the source of rivers, rather than their recipient—allowing it to escape

² Mason-Dixon Polling & Strategy, *Okefenokee National Wildlife Refuge Mining Poll* (September 2022) (full results attached as Ex. 1).

³ The attachments to this letter are available at <https://southernenvironment.sharefile.com/d-s8a29616b273341b5b1937a263c5c2e68>.

many upstream disturbances that threaten other globally important wetlands, like the Everglades or the Great Dismal Swamp.

The Okefenokee sits in a saucer-shaped depression that was once part of the ocean floor. To its east, the swamp is bordered by Trail Ridge, an elevated terrace created as an ancient barrier island complex over one million years ago when the Atlantic Ocean was approximately forty miles further inland than it is today.

Today, the swamp is a vast peat bog, holding the largest remaining undisturbed peat deposit on the North American Coastal Plain, which stretches from Massachusetts to Mexico.⁴ With peat layers up to 15 feet deep in some areas, the swamp stores the equivalent of more than 95 million tons of carbon dioxide in its peat alone.⁵

For nearly a century, the United States has celebrated and protected the Okefenokee Swamp. In 1937, Congress designated the Okefenokee Swamp as a National Wildlife Refuge; it remains the largest refuge in the eastern United States. It is also a National Wilderness Area and a National Natural Landmark, a designation reserved for “the best examples of biological and geological features” in the country.⁶

On an international scale, the Okefenokee National Wildlife Refuge is designated as a “Wetland of International Importance” under the United Nations Ramsar Convention and is also a candidate for designation as a UNESCO World Heritage Site.

From a biodiversity perspective, the Okefenokee is a critical link in important wildlife corridors that connect park and conservation lands around the Southeast. For example, the proposed Florida Wildlife Corridor stretches from Everglades National Park to the Okefenokee National Wildlife Refuge to promote the safe migration of threatened and endangered species, including the Red-Cockaded Woodpecker, Whooping Crane, Wood Stork, Florida Panther, West Indian Manatee, Gulf Sturgeon, Okaloosa Darter, and Eastern Indigo Snake. Likewise, based on Georgia’s State Wildlife Action Plan, the Okefenokee is a central connecting feature within another network of priority wildlife corridors linking additional federal conservation units, including the Ocmulgee Mounds National Historic Park, Bond Swamp National Wildlife Refuge, Cumberland Island National Seashore, and Fort Frederica National Monument.⁷

⁴ U.S. Fish and Wildlife Serv., *Okefenokee Swamp’s Peatlands: A Hidden Resource* (2022) (attached as Ex. 02).

⁵ *Id.* (“Okefenokee’s peatland is significant as the largest remaining undisturbed peat deposit on the North American Coastal Plain (NACP) that stretches from Massachusetts to Mexico and within the northern hemisphere’s subtropical zone around the globe.”).

⁶ Nat’l Park Serv., *National Natural Landmarks Program*, <http://bit.ly/3YHWo74> (last visited Mar. 19, 2023).

⁷ Georgia Dep’t of Nat. Res., *State Wildlife Action Plan* (Sept. 2015), available at <https://bit.ly/40biuAe>.



Standing up to four feet tall with a wingspan of up to five feet, the federally threatened wood stork is one of the more than 230 bird species that take shelter in the Okefenokee (© Gregory Miller)

In addition to its environmental value, the Okefenokee National Wildlife Refuge is economically important to local residents. With more than 400,000 annual visits, the Refuge's visitation numbers are on par with those of iconic national parks like Redwood and Denali. These visits are critically important to Georgia and nearby communities, contributing \$24 million annually to local economies and supporting 955 jobs in the local area, according to the U.S. Fish and Wildlife Service.⁸

The cultural and historic resources associated with the Okefenokee Swamp are equally important, with Native American roots reaching back thousands of years. The Muscogee (Creek) Nation, for example, is currently working with the U.S. Fish and Wildlife Service to designate its ancestral homelands within the Okefenokee Swamp—once regarded as “the most blissful spot on earth” by the Nation⁹—as a Traditional Cultural Property on the National Register of Historic Places. Indeed, the word

⁸ Georgia House of Representatives, Nat. Res. and Env't Comm. Hearing (March 14, 2023) [hereinafter HB 71 Hearing] (statement of Michael Lusk); see also U.S. Fish & Wildlife Serv., Div. of Econ., *The Economic Contributions of Recreational Visitation at Okefenokee National Wildlife Refuge* 2–3 (May 2019) (attached as Ex. 03).

⁹ U.S. Fish & Wildlife Serv., *Muscogee Nation Visits “Most Blissful Spot on Earth”* (July 14, 2022), <http://bit.ly/3yvdsme>.

“Okefenokee” itself, a Muscogee word meaning “trembling earth,” is a testament to the region’s Native American history.

2. History of Mining on Trail Ridge

Like many sand deposits in the coastal plain, Trail Ridge contains heavy mineral sands. As a result, the ridge has at times been a target of the mining industry. In the 1990s, the chemical giant E.I. du Pont de Nemours & Company announced plans to mine a strip of Trail Ridge along the refuge boundary—a proposal that, like TPM’s, faced near-universal opposition. Then-Secretary of the Interior Bruce Babbitt called for DuPont to withdraw its proposal, noting, “Is it apparent on the face of it that this refuge and this mining project are not compatible.”¹⁰ His rationale was simple: “Titanium is a common mineral, but the Okefenokee is a very uncommon swamp.”¹¹

Georgia’s then-Commissioner of Natural Resources Lonice Barrett agreed, calling the Okefenokee “sacred ground” and noting that the mining threat was “the most significant environmental issue” he had encountered in his nearly thirty years in state government.¹² The Georgia Board of Natural Resources voiced concerns as well, adopting a resolution expressing “its strong recommendation that full and comprehensive environmental impact statements be completed to fully assess all applicable natural, environmental, historical, cultural and recreational impacts of the proposed action prior to any state or federal permits being considered.”¹³

Eventually, the ongoing public outcry and government opposition led DuPont to abandon the project and donate a portion of the property for permanent protection. Following the DuPont saga, mining companies largely avoided the portion of Trail Ridge that directly influences the Okefenokee Swamp, focusing instead on other heavy mineral sand deposits in the region—until now.

3. The TPM Proposal

In 2018, TPM announced plans to strip-mine thousands of acres of land next to the Okefenokee National Wildlife Refuge.¹⁴ As shown on the map below, the pending

¹⁰ John H. Cushman Jr., *Official Attacks Plan for Mining Project*, N.Y. Times (Apr. 4, 1997), <http://bit.ly/3J572yZ>.

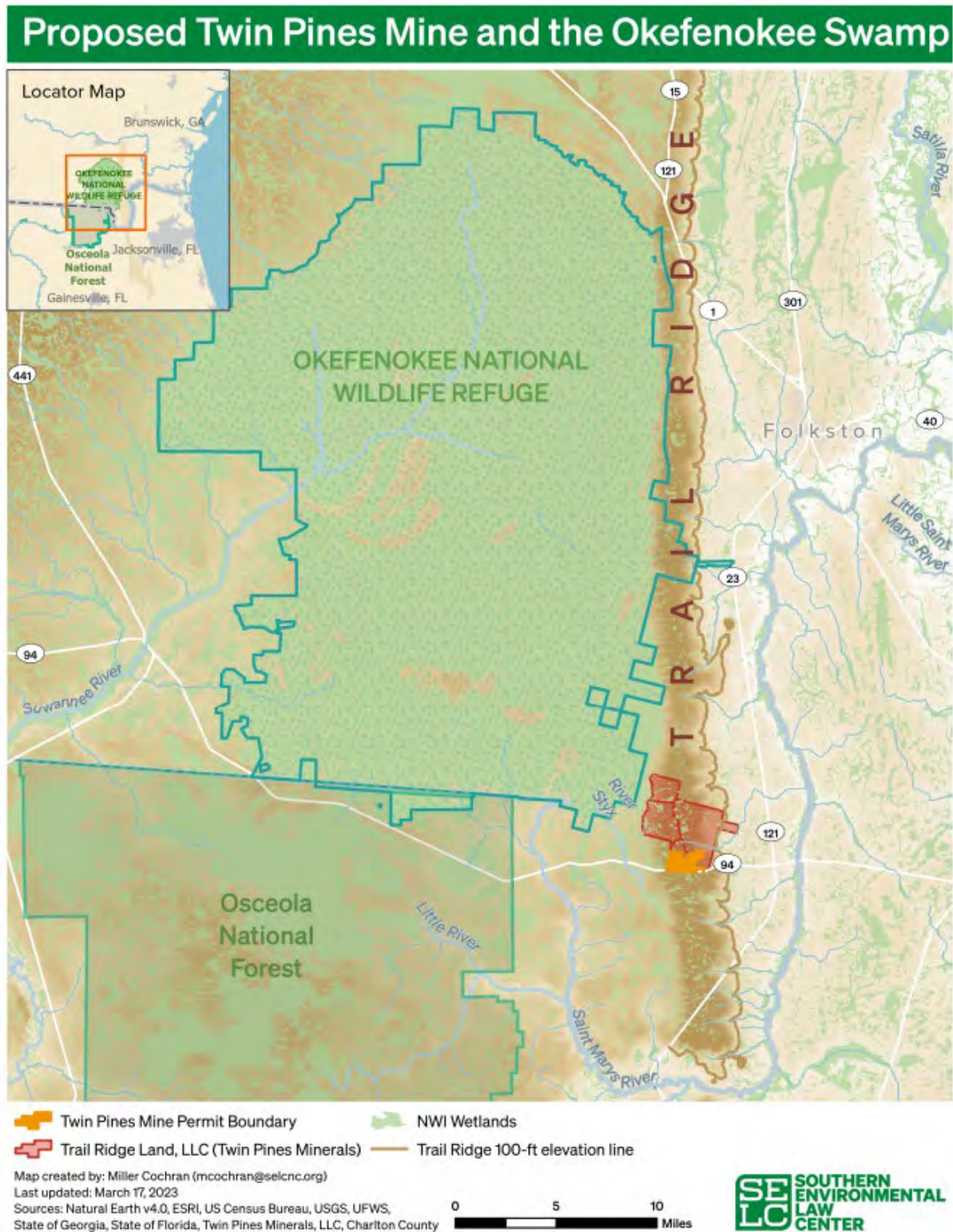
¹¹ Donald P. Baker, *DuPont Asked to Drop Mine Plan*, Wash. Post (Apr. 4, 1997), <http://bit.ly/40fKov1>.

¹² *Id.*

¹³ Georgia Bd. of Nat. Res., *Resolution Regarding DuPont Mining Project Adjacent to the Okefenokee Swamp* (April 23, 1997) (attached as Ex. 04).

¹⁴ At the time, TPM acknowledged that, because more than 45% of the proposed mine site was made up of jurisdictional wetlands, it would need to obtain a Clean Water Act permit before mining. The Southern Environmental Law Center’s comments to the U.S. Army Corps of Engineers, submitted on September 12, 2019, and May 28, 2020, are attached as Exs. 05 and 06, respectively, and incorporated herein.

surface mining permit application covers a 773-acre tract, which will make up the first phase of the proposed mine.



During the mining process, TPM plans to dig 50-foot-deep pits in Trail Ridge, excavating the sandy soil for “wet processing,” during which the lower density sand is separated from the heavier minerals using machines called “spiral concentrators.” Once the minerals are removed, TPM intends to return the then-homogenized lower density sands to the mining pits along with a three-foot layer of what TPM calls “soil amendments.” After replacing topsoil, the company would move on to the next square in the grid, eventually excavating thousands of acres bordering the refuge.

This process, though billed as “harmless” and “environmentally benign” by TPM, poses substantial risks to local and regional hydrology. First, although TPM intends to eventually return the lower density sands, or tailings, to the mining pits, the extraction and wet processing would mix all fifty feet of sediments together, mixing and combining the distinct geological layers that make up Trail Ridge. According to experts, this homogenization could increase the bulk hydraulic conductivity of the system, causing Trail Ridge to transmit water faster after mining and potentially lowering water levels in the long term.

Second, the mining process would remove an enormous amount of groundwater from the underlying aquifer. As this water is pumped out of the pit during active mining operations, groundwater will continue to be pulled into the mining pit from all directions, requiring continuous dewatering during active mining. On top of this, TPM proposes to withdraw additional groundwater from the underlying Floridan aquifer. These significant and continuous groundwater withdrawals are expected to reduce water levels in at least the southeast corner of the swamp and potentially affect flow to the upper St. Marys River. Given the peat-rich, fire-prone landscape of the swamp, even a small change in water levels could have significant adverse impacts on the swamp ecosystem, particularly during drought conditions.

Third, by disturbing and homogenizing the sediments on Trail Ridge, the mining process is likely to release toxic contaminants stored in those sediments, including radionuclides and heavy metals, into the swamp and nearby surface waters like the Suwannee and St. Marys Rivers.

TPM dismisses these concerns, noting that the proposed mine will serve as a “demonstration mining-to-reclamation project to prove conclusively that [its] plans are sound....”¹⁵ But characterizing TPM’s proposal as a “demonstration” project is misleading at best. TPM has made no secret of its intention to expand the project across the company’s 7,764 acres on Trail Ridge, and a 773-acre project site is hardly a demonstration so much as the first phase of mining. The investment of time and money required to develop and operate a six-year mining operation on this scale is significant

¹⁵ Twin Pines Minerals, LLC, *Twin Pines Moves Forward with Plans for Charlton County Mining-To-Reclamation Project*, <https://bit.ly/3JkWU5r> (last visited March 19, 2023).

and would be very difficult from an economic perspective to abandon at the end of six years of mining, even if an objective assessment of the data reveals adverse environmental impacts. An actual “demonstration” project would be much smaller in size, would last for a much shorter duration, and would be followed by a recovery period that would allow collection and meaningful evaluation of potential impacts from the so-called demonstration.

As described in the attached expert report,¹⁶ if the proposed mine were truly intended to serve as a demonstration of concept, there would be robust water elevation and water quality monitoring systems already in place and generating baseline data from locations within and surrounding the proposed “demonstration” site. There would also be clear and scientifically supported plans for a specified pause before further mining to allow hydrologic systems to recover and water chemistry to reach equilibrium. The recovery data collection period would have to be sufficiently long to assure that surface and wetland reclamation techniques are successful, and that impacts to surface water and groundwater quantity and quality have been allowed sufficient time to be detected and evaluated prior to permitting even larger-scale mine development. Further, there would be a planned period during which the data developed throughout the mining and post-mining recovery would be evaluated by TPM and EPD to identify possible impacts to water quantity and quality. The proposed project includes none of this.

4. Public Opposition to the Proposed Mine

Since TPM proposed mining in 2018, support to protect the Okefenokee has been overwhelming and unwavering, with more than 160,000 individual comments at the state and federal level as of March 1, 2023. More than one thousand people registered for the two public hearings EPD conducted in February, with individuals from across Georgia speaking out to share their stories and concerns.

For example, Ellis Wynn, the son of a Georgia Game Warden who has been to the Okefenokee “more times than [he] can count,” explained, “It would be like putting a mine next to Yellowstone. I can’t really put into words how much I oppose it.”¹⁷

Maelyn Belmondo, a resident of Blackshear, Georgia, less than a half hour drive from the Okefenokee, discussed her memories of visiting the swamp as a child and taking her own children and their classmates there on school field trips. “I have seen first-hand the look on their faces when they experience the swamp, some of them, for

¹⁶ Letter Report from Mark A. Hutson to William Sapp (March 18, 2023) [hereinafter “Hutson Report”] (attached as Ex. 7).

¹⁷ Ga. Env’t. Prot. Div., Public Hearing on Draft Surface Mining Land Use Plan (Feb. 21 and 23, 2023) [hereinafter “EPD Public Hearing”] (statement of Ellis Wynn).

the very first time... it is truly awesome,” she said.¹⁸ “I oppose the Twin Pines mining operation proposal because of the impacts it will likely have in the future for both me and my children and for this iconic natural resource.”¹⁹

Josh Howard, a fifth-generation Charlton County resident and president of Friends of the Okefenokee National Wildlife Refuge, explained, “The Okefenokee is the greatest asset and resource in Charlton County and no mining company can guarantee that their mines will not cause irreparable harm. If mining activities cause the problems that we believe they will, then it cannot be undone.”²⁰ He continued, “For many of us the Okefenokee is part of our identity. We may have different temperaments, talents, and convictions, but we are all Swampers and identify with it. We don’t want to risk it.”²¹

Sheila Carter, a former Okefenokee guide whose family has worked as guides for several generations, implored EPD, “Please don’t let them mine what God has put for us here to enjoy, and generations beyond us.”²²



Rev. Antwon Nixon, born and raised in Folkston, leads local advocates for the long-term protection of the swamp (© Rena Ann Peck)

¹⁸ *Id.*

¹⁹ *Id.* (statement of Maelyn Belmondo).

²⁰ HB 71 Hearing, *supra* n. 8 (statement of Josh Howard).

²¹ *Id.*

²² EPD Public Hearing, *supra* n. 17 (statement of Sheila Carter).

Local, state, and federal officials from both sides of the aisle, as well as scientists and faith leaders, have also spoken out in support of the Okefenokee. Below is a selection of letters of opposition and state and local resolutions in support of the swamp:

- *Letter from Secretary Haaland Opposing Mine* (attached as Ex. 08): A letter from Secretary of the Interior Deb Haaland urging the State of Georgia not to move ahead with approval for the proposed mine in order to ensure that the swamp and refuge are protected.
- *Letter from State and Federal Officials Opposing Mine* (attached as Ex. 09): A letter of opposition from former Secretary of the Interior Bruce Babbitt, who oversaw the Dupont mining proposal, former U.S. Fish and Wildlife Service directors from five administrations, Lonice Barrett, the Commissioner of the Georgia Department of Natural Resources under the Miller, Barnes, and Perdue administrations, and a number of other prominent former state and federal officials.
- *Letter from U.S. Senator Jon Ossoff Opposing Mine* (attached as Ex. 10): A letter from Senator Ossoff urging EPD to reject TPM's permit application because "the risk of severe damage to [the Okefenokee] ecosystem is unacceptable."
- *Letter from Science Community Opposing Mine* (attached as Ex. 11): An open letter opposing the mine from more than 85 scientists, many of whom have direct experience studying various aspects of the Okefenokee Swamp.
- *Letter from Georgia Faith Leaders Opposing Mine* (attached as Ex. 12): A letter from more than one hundred faith leaders from across the state calling on public officials to protect the uniquely holy Okefenokee Swamp.
- *Resolution of the City of Homeland Requesting Protection for Okefenokee Swamp and the Surrounding Natural Resources and Drinking Water Supplies* (attached as Ex. 13): A resolution by the City of Homeland, a city in Charlton County located approximately five miles from the eastern border of the Okefenokee Swamp and just a few miles from the proposed mining site.
- *Resolution of the Ware County Board of Commissioners Requesting Protection for Okefenokee Swamp* (attached as Ex. 14): A resolution from Ware County, which is home to a substantial portion of the Okefenokee Swamp and National Wildlife Refuge and derives significant economic benefits from refuge-related ecotourism.
- *Joint Resolution of the City of Waycross and Ware County Requesting Protection for the Okefenokee Swamp* (attached as Ex. 15): A resolution from the

City of Waycross, the county seat of Ware County. Waycross is home to the Okefenokee Swamp Park and one of the primary entrances to the National Wildlife Refuge. The city derives significant economic benefits from refuge-related ecotourism.

- *Resolution of the City of Brunswick Supporting the Protection of the Okefenokee Swamp as a Natural Resource of International Importance and as an Economic Driver for Southeastern Georgia* (attached as Ex. 16): A resolution from the City of Brunswick, a city of nearly 15,000 people located in Glynn County northeast of the Okefenokee Swamp.
- *Resolutions of the City of St. Marys Requesting Protection for Okefenokee Swamp and Supporting the Protection of the Okefenokee Swamp as a Natural Resource of International Importance and as an Economic Driver for Southeastern Georgia* (attached as Exs. 17 and 18): Resolutions from St. Marys, a city of nearly 20,000 people located on the St. Marys River east of the Swamp. The headwaters of the St. Marys River are located in the Okefenokee Swamp, and the water quality of the river is directly threatened by the proposed TPM mining project.
- *Resolution of the City of Kingsland Requesting Protection for Okefenokee Swamp* (attached as Ex. 19): A resolution from the City of Kingsland, a city of 17,000 people located in neighboring Camden County. It is located just north of the St. Marys River.
- *Resolution of the City of Valdosta in Opposition of Strip Mining in the Okefenokee Swamp* (attached as Ex. 20): A resolution from the City of Valdosta, a city of 56,000 people located approximately 45 miles from the western border of the Okefenokee Swamp. It is the most populous city in the Suwannee River basin.
- *Proclamation by Governor Brian P. Kemp Declaring Okefenokee Swamp Day* (attached as Ex. 21): A 2022 proclamation by Governor Kemp recognizing that “the Okefenokee Swamp hosts more than 650,000 visits by Americans and international tourists to Georgia on an annual basis, generating upwards of \$64.7 million annually for the economies of Ware, Clinch, and Charlton Counties and creating some 750-swamp tourism-related jobs.”
- *Letters from current and former legislators, both Republican and Democrat, from around the State including Representative Taylor (R-Thomasville); Representative Stephens (R-Savannah); Representative Dempsey (R-Rome); Representative Evans (D-Atlanta); Representative Hawkins (R-Gainesville);*

Senator Jackson (D-Stone Mountain); then-Senator Jordan (D); Senator Kirkpatrick (R-Marietta); Representative Knight (R-Griffin); then-Senator Ligon (R); Representative Lim (D-Norcross); then-Senator McNeill (R); Representative Oliver (D-Decatur); Senator Parent (D-Atlanta); Representative Powell (R-Hartwell); Representative Roberts (D-Atlanta); Representative Schofield (D-Atlanta); Representative Tankersley (R-Brooklet); Senator Williams (R-Milledgeville); and Representative Williams (D-Marietta) (collectively attached as Ex. 22).

- *Letters from Mayors of Woodbine, Georgia; Kingsland, Georgia; Fernandina Beach, Florida; St. Marys, Georgia; and the Camden County Joint Development Authority* (collectively attached as Ex. 23)

In addition, more than 370 news articles, opinion pieces, and letters to the editor have been published since mid-2019, including pieces in the New York Times, Washington Post, and other national and international publications.²³ Filmmakers have produced two award-winning documentaries about the threats to the Okefenokee, *Sacred Waters: Okefenokee in Peril* and *Okefenokee Destiny*.²⁴

Students across the state have engaged in outreach and advocacy efforts—including an educational video produced by a 4th grade class in Avondale Estates, an advocacy film by UGA students, several documentary-style interviews conducted by an Atlanta high school class, and an economic analyses of potential World Heritage status by a high school class in Newnan. The New School in Atlanta developed a public service curriculum around the current threat to the Okefenokee, organizing a two-day camping trip in the refuge with more than 100 students, teachers, and administrators; writing letters to the editor; holding a concert to raise funds to support advocacy efforts; and lobbying at the Georgia State Capitol in support of efforts to protect the Okefenokee.

People across the state have displayed yard signs, written letters, and called their legislators in unprecedented numbers, and polls show that more than 70% of Georgia voters, including 74% of Republican voters and 75% of South Georgia voters, agree that mining next to the Okefenokee Swamp is a bad idea.

In short, the amount and strength of opposition exceeds that of any other proposed project in state history—and does so by a long stretch. What's more, it is clear that this opposition is only growing and that the organizations working to protect the swamp are in this fight for the long-term. The mission of the Okefenokee Protection

²³ For a list of articles, op-eds, and letters to the editor, see Okefenokee Protection Alliance, *News*, <https://protectokefenokee.org/news/> (last visited Mar. 19, 2023).

²⁴ To view the documentaries, see Okefenokee Protection Alliance, *Documentaries*, <https://protectokefenokee.org/documentary/> (last visited Mar. 19, 2023).

Alliance, for instance, is to protect the Okefenokee for this and future generations. A spotlight has been trained on the Swamp, and it will continue to illuminate this natural treasure for generations to come.

5. TPM's Track Record of Noncompliance and Misrepresentations

TPM dismisses this unprecedented level of opposition with promises of good corporate stewardship and environmental protection. But its promises are as unsupported by history as they are by science.

TPM and its leadership have a long track record of noncompliance and environmental harm. For example, TPM operated one other facility in Starke, Florida. In January 2018, the Florida Department of Environmental Protection (DEP) conducted a routine inspection and noted that TPM's silt fence was overwhelmed with sand and "process water and tailing fill [were] deposited in a wetland without permission."²⁵ In addition, DEP noted that TPM had been operating the facility without proper authorization for over a year and a half.²⁶ Based on these and other inspections, DEP issued a consent order in February 2019. The following month, TPM failed a compliance test for particulate matter on three emission units, emitting at more than 150% of the allowed level.²⁷ Later that year, in December 2019, TPM failed yet another compliance test for particulate matter.²⁸ One month later, in January 2020, TPM failed its retest.²⁹ In April 2020, TPM submitted to yet another consent order, including additional fines for once again emitting particulate matter at more than 150% of the permitted limit and also for its history of non-compliance.

Other companies owned or operated by TPM's leadership have fared no better. North Carolina Renewable Power and Georgia Renewable Power, for example, routinely violated their environmental permits. For example, in June 2016, under TPM President Steven Ingle's leadership, North Carolina Renewable Power violated its air permit by exceeding the allowable limits for particulate matter, sulfur dioxide, and nitrogen oxides.³⁰ The North Carolina Department of Environmental Quality (DEQ) also cited the company for improper operation and maintenance practices based on its

²⁵ *Florida Dep't of Env't Prot. v. Chemours*, OCG File No. 18-1240, Consent Order (Feb. 7, 2019); Letter from Florida Dep't of Env't Prot. to the Chemours Company TT, LLC (Feb. 7, 2018). All orders and notices from the Florida DEP are collectively attached as Ex. 24.

²⁶ *Florida Dep't of Env't Prot. v. Chemours*, OCG File No. 18-1240, Consent Order (Feb. 7, 2019).

²⁷ *Florida Dep't of Env't Prot. v. Twin Pines Minerals, LLC*, OCG File No 19-0196, Consent Order (Apr. 9, 2019).

²⁸ Letter from Florida Dep't of Env't Prot. to Twin Pines Minerals, LLC (Feb. 19, 2020).

²⁹ *Id.*

³⁰ Letter from N.C. Dep't. of Env't Quality to Steven Ingle, N.C. Renewable Power (June 29, 2016). All notices of violation from the North Carolina DEQ are collectively attached as Ex. 25.

exceedingly frequent monitoring downtimes.³¹ DEQ also noted that the company had violated its permits by failing to complete source testing on time.³² Three months later, in September 2016, DEQ sent the company another notice of deficiency for again failing to submit required compliance reports on a timely basis.³³ Two months after that, DEQ issued another notice of violation, this time for exceeding carbon monoxide emissions limitations.³⁴ A few months later, in March 2017, DEQ issued yet another notice of violation for air quality violations.³⁵ DEQ also cited the facility once again for exceedingly high monitoring downtimes.³⁶ That June, DEQ issued two additional notices of violations just two weeks apart. Each violation occurred under Mr. Ingle's leadership.³⁷

Georgia Renewable Power (GRP), another company with related ownership,³⁸ has a similar record of violations. GRP operated two facilities: one in Madison County, Georgia, and the other in Franklin County, Georgia. Both facilities have been the subject of a flood of complaints, most of them regarding the excessive noise and noxious fumes generated by burning creosote-infused railroad ties.³⁹ The facilities have been featured in local news pieces with titles like *Biomass Plant Double-Crosses Rural Residents*⁴⁰ and *Fumes from GRP Plants Continue to Plague People Living Nearby*.⁴¹ These complaints quickly made their way to the Georgia state legislature and precipitated the unanimous passage of Georgia HB 857, signed into law by Governor Kemp on August 4, 2020, which prohibits the burning of chemically treated wood products for commercial energy generation.

³¹ *Id.*

³² *Id.*

³³ Letter from N.C. Dep't. of Env't Quality to Steven Ingle, N.C. Renewable Power (Sept. 12, 2016).

³⁴ Letter from N.C. Dep't. of Env't Quality to Steven Ingle, N.C. Renewable Power (Nov. 16, 2016).

³⁵ Letter from N.C. Dep't. of Env't Quality to Steven Ingle, N.C. Renewable Power (Mar. 13, 2017).

³⁶ *Id.*

³⁷ Letter from N.C. Dep't. of Env't Quality to Steven Ingle, N.C. Renewable Power (June 15, 2017); N.C. Dep't. of Env't Quality to Steven Ingle, N.C. Renewable Power (June 30, 2017).

³⁸ According to corporate filings, Raymon Bean, an owner and manager of TPM, also owns all or part of Green Fuels Energy, LLC, and its subsidiary, Georgia Renewable Power. Twin Pines Minerals, LLC, Application for Certificate of Authority for Foreign Limited Liability Company (May 11, 2018), *available at* <https://ecorp.sos.ga.gov/BusinessSearch>. Steven Ingle, president of Twin Mines, also served as Vice President of Engineering for Green Fuels Energy and Georgia Renewable Power. Lee Shearer, *Alabama company plans wood-burning electricity plants*, Athens Banner-Herald (Sept. 12, 2015), <http://bit.ly/3YYYG1U>. Corporate certificates of formation for the companies are collectively attached as Ex. 26.

³⁹ There were thirty-eight formal complaints total, which can be searched at <https://cts.gaepd.org/Public>.

⁴⁰ Dink Nesmith, *Biomass Plant Double-Crosses Rural Residents*, Flagpole (Dec. 18, 2019), bit.ly/3T36ZIN.

⁴¹ MJ Kneiser, *Fumes from GRP Plants Continue to Plague People Living Nearby*, 92.1 WLHR (June 24, 2020), <http://bit.ly/3J8Yc3b>.

In its short history, GRP Madison has submitted to two consent orders from EPD, been hauled into federal court by its neighbors, and sent a flock of concerned and angry residents flying to the EPD complaint hotline.⁴² In 2020, GRP Madison signed two consent orders in the same month: on June 1, it was fined \$7,500 for excessive fugitive emissions;⁴³ and on June 18, it was fined \$16,800 for discharging wastewater without a permit.⁴⁴ Two months later, it received an enforcement order for continuing to burn creosote-infused wood after the passage of HB 857 prohibited such burning.⁴⁵ Nearby property owners sued the in February 2020 alleging that it had discharged wastewater onto their land.⁴⁶ That case was resolved in December of 2019, when GRP Madison submitted to a consent decree under which it agreed to pay a total of \$850,000 to the plaintiffs and an additional \$4,000 in civil penalties to the federal government.⁴⁷

As one Madison County resident put it at last month's EPD hearing on TPM's proposed mining land use plan:

They said they would be good neighbors, and they lied.... [T]he plant repeatedly and illegally discharged and disposed of wastewater, they dumped stormwater, they disposed their ash on our neighbors, and generated so much noise, odor, fugitive dust, and air pollution that they ruined the quality of life in our community.... It got so bad, that I had to sell my home.... If you grant them a permit, Twin Pines will destroy the Okefenokee, just like its sister company destroyed my community. Please, please do not let that happen.⁴⁸

GRP's second facility, located in Franklin County, Georgia, is known to the Northeast Georgia community for the loud sounds from its facility that keep people up at night,⁴⁹ the foul-smelling soot that its facility belches into the air,⁵⁰ and the time it

⁴² Thirty-two of the thirty-eight total complaints involving GRP facilities involved the Madison plant.

⁴³ GRP Madison Renewable Energy Facility, LLC, Order No. EPD-AQC-7032, at 4–5 (Ga. Env't Prot. Div. June 1, 2020) (consent order) (on file with EPD).

⁴⁴ GRP Madison Renewable Energy Facility, LLC, Order No. EPD-WP-8932, at 10–11 (Ga. Env't Prot. Div. June 18, 2020) (consent order) (on file with EPD).

⁴⁵ GRP Madison Renewable Energy Facility, LLC, Order No. EPD-AQC-7041 (Ga. Env't Prot. Div. Aug. 7, 2020) (enforcement order) (on file with EPD).

⁴⁶ Consent Decree and Judgment at 1, *Michael v. GRP Madison*, LLC, No. 3:19-cv-00019 (M.D. Ga. Dec. 5, 2019), ECF No. 26.

⁴⁷ *Id.* at 5–7.

⁴⁸ EPD Public Hearing, *supra* n. 17 (statement of Gina Ward).

⁴⁹ Complaint No. 91376, *available at* <https://cts.gaepd.org/Public> (“They are running the furnace 24/7 for most of the time and it sounds like a freight train running down Hwy 198.... It is also extremely hard to sleep at night since the sound is so loud that all you hear is this roar.”).

⁵⁰ Complaint No. 94331, *available at* <https://cts.gaepd.org/Public> (“[W]e are smelling creosote again very strongly! It's [S]aturday morning! They are breaking the law! It burns your nose here at my house!”); Complaint No. 95458, *available at* <https://cts.gaepd.org/Public> (complaining of vehicles being covered

allowed huge piles of decaying wood chips at its facility to catch on fire, and then allowed runoff from water used to control the fire to overflow retention ponds and discharge into the nearby Indian Creek.⁵¹ The runoff killed more than two thousand fish over four and a half miles, causing a stench and contaminating the water for local residents.⁵² This incident prompted local news headlines like *Citizens clamor for action on tainted creek water*⁵³ and “*Something’s got to be done,*” residents say.⁵⁴ As one frustrated citizen put it, “We have noise issues, we have soot on everything, and now the creek has been poisoned.”⁵⁵ Another lamented, “I feel that our community has been written off as collateral damage for this company to make money.”⁵⁶

A Franklin County Commissioner described the county’s experience with GRP Franklin as follows:

[S]ince the beginning of their operation earlier this year, we’ve had nothing but grief from them.... Over the last four months we have listened to person after person after person after person stand up here and tell us how miserable their lives and their quality of life have become since this plant begin to operate due to the noise produced and the chemical emissions produced and even water pollution. Not one time during all this has any representative from GRP come before this board to talk to us and to talk to the people who are complaining and address their concerns.... They promised no noise, then they promised the noise would get better once they reached full operational status, then they said they were going to monitor the sound, they’ve ordered a silencer, they hope to have it installed in four weeks, but still there is no end in sight to the problems created by this plant.... We’ve been patient and the residents in that area have been more than patient, and yet what has GRP done? It is a matter of public record that they have been delinquent in paying their taxes. The pollution continues unabated, and it’s time that we the county commission declare the noise and chemical emissions to be a nuisance of great public

and ruined by “wood dust from the plant” and wondering “what my wife and I and the neighbors are breathing”).

⁵¹ Ethan Jordan, *Citizens Clamor for Action from County on Tainted Creek Water* (Oct. 11, 2019), <http://bit.ly/3LaraCF>; Complaint No. 91376, available at <https://cts.gaepd.org/Public> (“At this time they have what I consider a mulch pile that is smoldering and they are watering it down, the supposed effect of this watering down is runoff into Indian creek where the fish are dying.”).

⁵² Jordan, *supra* n. 51.

⁵³ *Id.*

⁵⁴ Shane Scoggins, ‘*Something’s Got to Be Done,*’ Residents Say, Franklin County Citizen Leader (Oct. 9, 2019), <http://bit.ly/3mHOehU>.

⁵⁵ Jordan, *supra* n. 51.

⁵⁶ Email from Tensley M. Adams to Karen Hays (Nov. 12, 2019) (on file with EPD).

health significance and order them to abate the nuisances or be penalized until they do.⁵⁷

TPM's current proposal has started off no better. TPM has misrepresented critical facts to the public, attempted to skirt permitting requirements, and disparaged the public's attempts to engage in the permitting process. For example:

- TPM conducted land disturbing activities (including bulldozing and grading land within the proposed permit boundary for draglines, equipment, and facilities) without land disturbance permits from Charlton County—avoiding the comment period that would typically precede its issuance.⁵⁸ In addition, under the plain language of the Surface Mining Act, TPM should have obtained a Surface Mining Act permit *before* undertaking these land disturbing activities, since they constitute an activity that is “part of a process for the removal of minerals, ores, and other solid matter.”⁵⁹



TPM broke ground on staging areas before obtaining required permits (© Joseph Kelly)

⁵⁷ Shane Scoggins, *Franklin Co. BOC to Take GRP to Court*, Mainstreet News (Dec. 11, 2019), <https://bit.ly/3mKyavA>.

⁵⁸ Letter from Veronica Craw, EPD Nonpoint Source Program Manager, to Hon. James Everett, Chair of Charlton County Board of Commissioners and Hampton Raulerson, Charlton Cnty. Adm'r (June 21, 2021) (attached as Ex. 27); *see also* Georgia Dep't of Community Affairs, *Development of Regional Impact #3410 Forms* (collectively attached as Ex. 28).

⁵⁹ O.C.G.A. § 12-4-72(15) (defining “surface mining”); *accord* GAR050000, 2017 Industrial General Permit § 8.J.3.2 (noting that the Surface Mining Permit covers “activities performed for purposes of mine site preparation ... [and] construction of staging areas to prepare for erecting structures”).

- TPM ignored professional licensing requirements when drilling boreholes to investigate the subsurface geology of the proposed mine site, allowing the work to be performed under the supervision of a hydrologist not yet licensed in Georgia.⁶⁰ TPM also failed to post the required bond before drilling.⁶¹
- TPM requested a permit from the Corps and EPD for land it didn't own or control, despite representing under penalty of perjury that it did. The landowner, TIAA Timberlands, made repeated requests to TPM to remove the parcel from the application, all of which went ignored. TIAA eventually contacted the Corps directly: "To date, this request has been ignored by Twin Pines; consequently, we are formally notifying you on behalf of TIAA Timberlands of such material inaccuracies and asking your assistance with respect to the removal of any and all references to TIAA Timberlands or TIAA Timberlands Property from the Mining Application."⁶²
- To the public, TPM touted its hydrology model as "well-received" by peers at the University of Georgia.⁶³ In reality, UGA hydrologists have been some of the most outspoken critics of TPM's application and hydrology model.
- TPM told the public that the proposed mine is necessary to extract titanium for use in important devices like "surgical tools, prosthetics, automobiles, aircraft, spaceships and military equipment...."⁶⁴ According to mineral commodity experts at the U.S. Geological Survey, however, it is "unlikely" that any of the titanium extracted at the proposed mine would become titanium metal.⁶⁵ Instead, it would almost certainly be used for titanium dioxide pigment, which is primarily used to color white paint and plastics.⁶⁶

TPM's President Steven Ingle dismisses these concerns by saying, "There's no way we would do anything to harm the swamp which would expose us to regulatory actions and place our investment at risk."⁶⁷ History shows otherwise: TPM and its

⁶⁰ Mary Landers, *Despite Ongoing Investigation and Scientific Disputes, a Plan for Strip Mine near Okefenokee Advances*, *The Current* (Jan. 20, 2023), <http://bit.ly/42l05mg>.

⁶¹ *Id.*

⁶² Letter from Jeff Nuss, Greenwood Res., Inc. (on behalf of TIAA Timberlands I, LLC) to Holly Ross, U.S. Army Corps of Eng'rs (Sept. 15, 2020), <http://bit.ly/3ZB7EDN>.

⁶³ Nedra Rhone, *Mining company withdraws permit application for project near Okefenokee*, *Atlanta Journal-Constitution* (Feb. 8, 2020), <http://bit.ly/3FiHRIb>.

⁶⁴ *Id.*

⁶⁵ Email from U.S. Geological Survey to Anna Figueroa, S. Env't Law Ctr. (Mar. 27, 2020) (on file with authors).

⁶⁶ U.S. Geological Survey, Nat'l Minerals Information Ctr., *Titanium Statistics and Information*, <http://bit.ly/401Ylwp> (last visited Mar. 17, 2023).

⁶⁷ Russ Bynam, *Bill to halt mining near Okefenokee gets hearing but no vote*, *Associated Press* (Mar. 14, 2023), <http://bit.ly/408fDb4>.

leadership appear to view environmental noncompliance fines as a cost of doing business, not a deterrent against violations—a practice that seems likely to continue given the Surface Mining Act’s inexplicably low cap on noncompliance fines.

Ultimately, whether TPM and its leadership’s track record is attributable to an intentional disregard for environmental regulations or simply incompetence, neither EPD nor the public should trust TPM or its leadership (or its so-called “novel” mining techniques) with a world-class resource like the Okefenokee Swamp. There is too much to lose.

TECHNICAL AND LEGAL COMMENTS

EPD has both the authority and the obligation to deny TPM’s surface mining permit application. The Surface Mining Act and its regulations place the burden squarely on TPM to show, among other requirements, (1) that the proposed mine is based on sound engineering and conservation principles; (2) that the proposed mine will not harm the environment or contiguous natural resources; and (3) that the proposed mine is consistent with land use in the area and the public interest.⁶⁸ If TPM cannot do so, EPD may not grant a permit. As shown below, TPM has not—and cannot—meet this burden.

1. The mining land use plan is not based on “sound engineering and conservation principles.” Ga. Comp. R. & Regs. § 391-3-3-.05.

The proposed mine is not based on “sound engineering and conservation principles, for accomplishing the operator’s reclamation objective and for protection of adjacent watersheds from effects of erosion and siltation.”⁶⁹ As described below, (1) the proposed mine is likely to increase the frequency and severity of drought in the Okefenokee; (2) the reclamation objective is inappropriately narrow for this site; (3) the mine would attempt multiple novel techniques and cause harm in this sensitive area; (4) the mine fails to sufficiently monitor or mitigate impacts to water levels; and (5) the mine fails to sufficiently monitor or mitigate impacts to water quality.

⁶⁸ Ga. Comp. R. & Regs. § 391-3-3-.05(5) (“It is the operator’s responsibility to provide a properly prepared, acceptable and sufficient Mining Land Use Plan that will provide for the protection of the environment in the development and operation of the stie and reclamation of mined lands.”). EPD has the power and duty to “examine and pass upon” permit applications and surface mining land use plans, O.C.G.A. § 12-4-73(a)(2)–(3), and EPD may only issue permits “on evidence satisfactory to the director of compliance” with the Surface Mining Act and regulations. *Id.* § 12-4-75(1).

⁶⁹ Ga. Comp. R. & Regs. § 391-3-3-.05(2).

a. TPM's groundwater withdrawals are likely to increase the frequency and severity of drought in the Okefenokee Swamp.

In separate comments submitted to EPD, Dr. Rhett Jackson concluded that TPM's groundwater withdrawals will have "large effects on swamp drought conditions."⁷⁰ As the U.S. Fish and Wildlife Service warned, "[l]owered water tables within the Okefenokee basin could elevate fire frequency and intensity and alter fire behavior due to increased exposure of traditionally wetted areas."⁷¹ Even "[s]light changes in soils, hydrology, and fire behavior would result in changed vegetative patterning that govern habitat conditions" in the Refuge.⁷² These risks alone are enough to deny TPM a surface mining permit, as TPM cannot "alleviate and/or mitigate [such] adverse effects."⁷³

Dr. Jackson's analysis is based on TPM's estimate that it will pump 1.128 million gallons per day (MGD) from the mine pit and 0.43 MGD from the Floridan Aquifer, thereby reducing groundwater inputs to the Okefenokee and causing a significant increase in the frequency and severity of drought in the swamp. EPD used the wrong river gage to reach its contrary conclusion of "minimal" impacts to water levels in the swamp.⁷⁴ The gage EPD used is inappropriate as it reflects a much larger downstream basin and masks the impact of the mine in the relevant area. EPD should rescind its assessment and use flow data from the appropriate location, as recommended by Dr. Jackson and ten other research hydrologists from southeastern universities.⁷⁵

b. TPM's reclamation objective is not protective of the Okefenokee Swamp.

TPM's stated reclamation objective is inadequate and would allow TPM to close the mine and walk away even if it caused damage to the Okefenokee Swamp. The objective is much more limited than TPM's broad statements elsewhere about impacts to the Okefenokee and other surrounding lands.⁷⁶ The proposed reclamation objective is

⁷⁰ C. Rhett Jackson, Ph.D., *Comments on TPM LLC Draft Mining Land Use Plan 3* (Feb. 26, 2023) [hereinafter "Jackson Comments"] (attached as Ex. 29).

⁷¹ Letter from Donald W. Imm, U.S. Fish & Wildlife Serv., to Col. Daniel Hibner, U.S. Army Corps of Eng'rs 4 (May 28, 2020) (attached as Ex. 30).

⁷² *Id.*

⁷³ Ga. Comp. R. & Regs. § 391-3-3-.09.

⁷⁴ Memorandum from W. Zeng, Georgia Env't Prot. Div., Water Supply Program, to Jamie Lancaster and William Cook, Georgia Env't Prot. Div., Land Protection Branch (Dec. 7, 2022) (on file with EPD).

⁷⁵ Letter from C. Rhett Jackson *et al.* to Georgia Env't Prot. Div. (Feb. 20, 2023) (attached as Ex. 31).

⁷⁶ *E.g.* Twin Pines Minerals, LLC, Proposed Saunders Demonstration Mine: Updated Documents, Sheet 15 at 2 (Nov. 28, 2022) [hereinafter "Proposed MLUP"] ("The proposed project will demonstrate in practice what extensive studies have already proved: that these critical minerals can be recovered without any impact to the Okefenokee National Wildlife Refuge, the boundary of which is three miles away at its closest corner, and with negligible environmental impacts beyond the mine site.").

merely “to restore the land surface and groundwater approximately to pre-mining levels, and to revegetate the site with plant communities associated with pine flatwoods or depressional wetlands.”⁷⁷ For this mine, the reclamation objective should have, at a minimum, explicitly included considerations of impacts to the Okefenokee Swamp and other surrounding lands in the Okefenokee’s watershed.⁷⁸

Sheet 9’s “Performance Criteria for Reclamation” are also entirely inadequate as they fail to include actual restoration of groundwater levels or maintenance of water quality. Similarly, TPM’s goals for wetland mitigation are inconsistently stated throughout the application materials.⁷⁹ The hundreds of acres of wetlands slated for excavation serve important functions and sound conservation principles should require avoiding their destruction or, at a minimum, minimizing and mitigating any impacts caused by the loss of important wetland functions such as habitat, pollution filtration, and flood prevention.⁸⁰ As has been pointed out to TPM for several years, and again in Section 5 below, recreation or restoration of the hundreds of acres of wetlands in the mining area is a significant task that cannot be accomplished without a detailed plan.⁸¹

c. Untested operations decrease the likelihood of success.

TPM’s “demonstration” rests on a series of wholly untested operations now proposed to be run all at once next to the Okefenokee Swamp. Moreover, the haphazard evolution of the mine plans and TPM’s history of noncompliance with environmental safeguards fails to inspire confidence in the plan’s workability. No other similar mine in the region uses a dragline excavator. No other mine proposes to spread a layer of bentonite across hundreds of acres. No other mine uses hundreds of evaporators or has successfully operated in south Georgia without any discharge of wastewater. Sound engineering and conservation principles weigh strongly against such an experiment on 773 acres in this environmentally sensitive location.

Trail Ridge’s geological layers control groundwater flow through the area, but they will be excavated and homogenized 50 feet deep by TPM’s proposed mining. Because the low permeability layers that extend across significant areas will be lost, TPM proposes an unproven method to mimic the lost functions: adding a three-foot

⁷⁷ *Id.*, Sheet 9.

⁷⁸ Similarly, TPM’s description of the lands and communities potentially affected by mining ignores the Okefenokee Swamp, *id.*, Sheet 15 at 3–4, despite assurances elsewhere about protecting it. TPM’s refusal to acknowledge even the potential for harm to the Swamp’s values is indicative of TPM’s dismissive approach to any evidence that contradicts their preferred conclusions.

⁷⁹ Sheet 10 refers to the “restoration of non-jurisdictional wetlands,” Sheet 15 says “some wetlands may be restored and/or created,” and Appendix M says “there is no current plan to recreate them.”

⁸⁰ See 33 C.F.R. § 325.1(d)(7).

⁸¹ Richard Rheinhardt, *Review of USACE Clean Water Act Permit Application by Twin Pines Minerals* (Sept. 2019) (attached as Ex. 32).

layer of bentonite-mixed sand across the entire site. Among the issues associated with the bentonite plan—beyond the fact that there are no other mining operations using bentonite at this scale and in such a manner—is the practical matter of how it would be reliably and consistently applied by sidecasting it into the open pit. Inconsistent application could undermine the purpose of the bentonite layer. Further there does not appear to be any consideration that TPM’s plans to mine overlapping cuts across the site will result in the repeated excavation of the bentonite layer, its homogenization in the separation plants and eventual replacement in the pit. TPM refers to these as “sand-only” tailings on Sheet 9.

TPM itself warns that using bentonite could adversely impact the groundwater system, including “artificially rais[ing] the water table above the land surface leading to ponding or increased surface water runoff, reducing downward flow to deeper parts of the surficial aquifer, [and] reducing groundwater discharge to the west [towards to the Okefenokee] and to the east of Trail Ridge.”⁸² With these recognized significant risks, TPM should have conducted more detailed mapping of the humate-cemented sands under this mine footprint in advance of this comment period and modeled those actual site conditions, rather than proposing to “map” the soil types during active mining and asking to discontinue the soil amendment plan on the fly.⁸³

The latest “novel” technique proposed by TPM is the use of 167 to 193 individual evaporators⁸⁴ floating in an interconnected series of ponds in an unprecedented attempt to remove the massive amounts of water the proposed mine would have to handle. The Water Management Plan fails to describe the maintenance and repairs necessary to keep the system functioning and provides no detail regarding whether the capacity of the system can be maintained while evaporating water with high total dissolved solids and organic content. We echo the comments of Dr. Rhett Jackson who continues to raise significant practical and environmental concerns associated with this aspect of the experimental proposal. Of note, there is TPM’s failure to evaluate the feasibility of the system based on local climate data and TPM’s failure to acknowledge the likely deposition of tons of salt to the surrounding area via the aerosolized wastewater.⁸⁵

The vague statement in the Water Management Plan that there is only a “target” operating depth for the evaporator ponds is inappropriate. Given the experience of similar mines in the region with attempted “no-discharge” systems, a much more

⁸² Proposed MLUP, Sheet 9.

⁸³ Similarly, the plans should explicitly note that soil data from existing and installed piezometers will also be considered in determining the extent of the humate-cemented, consolidated black sands. *E.g.*, Proposed MLUP, App. D at Figs. 3, B, and C.

⁸⁴ TPM identifies one type of evaporator unit but does not commit to using it, stating TPM will install those units “or equivalent.” It is not stated whether supporting materials for any different units will be submitted for EPD review or approval.

⁸⁵ Jackson Comments, *supra* n. 70, at 11–14.

specific requirement would be needed, including a pond water level at which TPM would cease mining and pumping additional water into the ponds. This is particularly important where TPM has identified no plan for overflow discharges from the pond system, despite their likely discharge to an impaired waterbody.⁸⁶ To state the obvious question, what happens if it rains too much? What happens if evaporators do not work as hoped? With the more severe weather events that we can expect, and have already experienced, as climate change worsens, these questions must be answered before EPD even considers authorizing TPM's proposed mine.

The experience of the Southern Ionics Minerals mines on Penholloway Terrace is real-world evidence that warrants precaution here on Trail Ridge. That operation had many similarities: a heavy mineral sands mine in Charlton County on an ancient barrier island complex with a high water table operating without a wastewater discharge permit based on plans to re-use process water and store excess water in management ponds. However, the "inability of this approach to accommodate excess water during excessively wet weather and with certain mine configurations" led to discharges of wastewater and an application for a wastewater discharge permit.⁸⁷ EPD should compare the assumptions in each of these "no-discharge" systems with the circumstances leading to Southern Ionics Minerals' discharge permit to ensure that history does not repeat.

It appears that Twin Pines Minerals--much like Southern Ionics Minerals when they first applied for their mining permit--has no real appreciation of the amount of water that they are going to have to process. The critical difference between the Southern Ionics mine and the proposed mine is that EPD was able to save Southern Ionics by granting the mine an NPDES discharge permit when the mine became overwhelmed with storm water. That is not an option with TPM's proposed mine

⁸⁶ The driving force for the proposal to use machines to evaporate millions of gallons of process wastewater also gives cause for concern. That is, TPM's apparent intent to avoid public review processes. On March 9, 2021, EPD confirmed that to discharge the contaminated wastewater TPM proposed, EPD would have to revise the total maximum daily load for the St. Marys River (or the amount of loading of pollutants based on the sources of pollution and water quality conditions), a process requiring public notice and comment as well as U.S. EPA approval. Email from Elizabeth Booth, Ga. Env't Prot. Div., to Lynn Sisk, Jacobs Eng'r Group, Inc. (March 9, 2021) (attached as Ex. 33). TPM pushed back on this position and paid former EPD Director Harold Reheis to call EPD staff about it. See Email from Elizabeth Booth, Ga. Env't Prot. Div., to W. Fenwick *et al.*, Ga. Env't Prot. Div. (June 30, 2021) (attached as Ex. 34). When TPM was informed again that their discharges would trigger public and EPA review, TPM withdrew its permit application and began claiming it could operate without any discharge of wastewater. Email from Audra Dickson, Ga. Env't Prot. Div., to Jamie Lancaster *et al.*, Ga. Env't Prot. Div. (July 26, 2021) (attached as Ex. 35).

⁸⁷ Southern Ionics Minerals, *NPDES Permit Application for a New Industrial Discharge at an Existing Mining Operation*, EPA Form 1 at 2 (Jan. 16, 2018).

because the St. Marys River is impaired for the very pollutants that the TPM mine would discharge. EPD will not be able to rescue TPM in the same way it did Southern Ionics.

And what then? With no ability to discharge process water, TPM would soon be underwater both literally and figuratively. With no income from mining, the mining company would not be in a position de-water the ponds or restore the mined area. The Okefenokee Swamp, the most treasured natural area in Georgia, would be left with a gaping hole and enormous sterile ponds for neighbors. This tragedy, of course, would merely be the icing on the cake compared to the damage that the Okefenokee Swamp itself could suffer at the hands of TPM if the proposed mine were to lower the water levels of the Swamp. And, of course, EPD would be credited with causing this tragic outcome.

Before EPD even considers authorizing the proposed mine, it must answer the following question: if the TPM water management plan does not work, for example, the mine cannot evaporate sufficient water, what will EPD do to prevent the inevitable environmental trainwreck? In other words, when TPM is packing its bags for Alabama, what is EPD going to do to restore the hydrologic integrity of Trail Ridge?

d. The proposed groundwater level monitoring is insufficient.

TPM's groundwater level monitoring plan appears designed to hide rather than discover problems associated with the proposed mine. In fact, the Performance Criteria for the Reclamation Plan do not mention restoration of groundwater levels as a requirement for final reclamation, as they should. Any such monitoring plan should require prompt submittal of all relevant data to EPD for EPD to make the determinations as to whether mining is having an impact on water levels. The plan should also identify effective remedial actions if problems do develop. Instead, the Draft Plan leaves critical analysis to be conducted solely by TPM, with no deadlines, and without clear standards.

The Draft Plan says the water level data will be "downloaded monthly" although that "may be adjusted" to evaluate the data. It does not specify how frequently or when the data will be evaluated, nor does it specify under what conditions the frequency of data collection will be "adjusted." TPM never commits to submitting the data to EPD unless TPM itself determines that the water levels are not approximately normal, i.e. within "2.7 feet above or below normal."⁸⁸ Even if the water levels are not within that range, under its plan TPM can still claim all is well if TPM determines that water levels in other areas are "fluctuat[ing] uniformly."

⁸⁸ Proposed MLUP, Sheet 11 § 2.4.

In Appendix R, TPM says its rain gauges “mimic each other” and “fluctuate in a similar relationship to one another.” TPM provides no explanation of what deviation from this mimicry would trigger a change in operations. This is too vague and too discretionary for such a critical aspect of the proposed mine. For instance, could TPM claim that because water levels in a rain gauge at the north end of its 8,000-acre mine site dropped 6 inches, a drop in water levels of 6 feet at the mine site is fluctuating uniformly? No mining company should enjoy such discretionary standards, especially when the stakes are so high.

TPM goes on to state that even if it identifies that water levels are not returning to approximately normal levels and that the other areas are not mimicking each other, “no further action will be required” if the condition “can be attributed to [any] factors unrelated to the mining activity.” Again, TPM cannot be the entity making this determination without any oversight.⁸⁹

Further, in the event TPM determines that none of these excuses for not contacting EPD are available to it, it still has thirty days after making that determination to notify the EPD Director that a problem with the groundwater levels in the mine has surfaced. And TPM then only commits to “conduct further investigations” on an indeterminate timeline and eventually propose a contingency plan with “feasible engineered solutions.” EPD should require that mining stop immediately if there is a potential problem or impact to water levels from the mining operation. Under this framework, TPM will be able to complete the entire mine without having to raise a flag about errant groundwater levels. It makes no sense to allow mining to proceed in this sensitive area until mitigation measures are identified and shown to be effective.

e. The proposed water quality monitoring is insufficient.

Disturbing the natural sediments that comprise Trail Ridge will release contaminants presently bound up in the soils to groundwater and will impact water quality in groundwater and surface streams, both in the Okefenokee Swamp and in areas east of Trail Ridge. Repeatedly since 2019, commenters have raised the issue of water quality impacts to groundwater and surface water. Yet TPM has not attempted to identify or evaluate the fate and transport of contaminants released by the proposed mine. Detailed technical concerns with the proposed water quality monitoring plan are in the attached report(s) of Mark Hutson, P.G., and some of those concerns are reiterated here.

⁸⁹ Rather, the framework proposed by TPM is inappropriately backwards here. The presumption should be that mining is the cause, and the burden should shift to proving that it is not.

As described by Mr. Hutson, “the currently proposed monitoring system appears designed to minimize the possibility of detecting environmental impacts rather than providing high quality data upon which to base future decisions.”⁹⁰ For example:

- None of the piezometers proposed for monitoring have been installed and therefore no baseline samples from the relevant site have been collected. Using data from other widely spaced locations along and across Trail Ridge will mask increases in contaminant concentrations resulting from monitoring.
- Sheet 11 says data will be used to assess water quality but does not identify how that assessment will be done.
- TPM has not evaluated how long it will take for peak contaminant concentrations to migrate to monitoring well locations. Similarly, TPM has not identified the basis for the length of its proposed post-mining monitoring period.
- The list of analytical parameters is insufficient and appears to be based on parameters detected in undisturbed baseline monitoring. Monitoring only those parameters detected prior to mining is not the purpose of collecting samples and the list should ensure that any contaminants released by mining activities are detected.
- Sheet 11 says that water level and chemistry data will be analyzed for trends and compared to applicable standards but fails to describe exactly how that data will be evaluated and against what specific standards it will be compared. The plan should have identified the specific statistical testing to be used as well as identified concentrations for each parameter above which mining operations will be suspended.
- The plan should have required suspension of mining activities until a contingency plan has been implemented and shown to be effective in alleviating identified water quality issues.
- There are no monitoring wells proposed downgradient of the water management ponds, which could detect any leakage or discharge.
- There are no surface water monitoring locations near the boundary of the mine area. Placing surface water monitoring points along the study boundary will render the system less effective at detecting changes.

⁹⁰ Hutson Report, *supra* n. 16, at 4.

- There are no surface water monitoring locations on the streams that flow from the mine site to the Okefenokee Swamp, preventing detection of surface-water contamination to the swamp.

Again, TPM has been aware of many of these concerns for years and has refused to provide adequate responses to these concerns. It is critical that adequate water quality testing is performed because the western side of the proposed mine site drains to the Okefenokee Swamp and the eastern side drains to the St. Marys River, a 303(d) listed impaired waterway. If the mine were to cause more groundwater to flow towards the St. Marys, the water quality of that already impaired water could worsen still further.

2. The mining land use plan does not ensure “the protection of contiguous natural and other resources.” Ga. Comp. R. & Regs. § 391-3-3-.05(2) and 391-3-3-.09.

As Director Dunn stated last week, TPM’s proposed land use plan must “identify impacts to adjacent natural resources like the Okefenokee Swamp.”⁹¹ As shown above, TPM has not done so. Absent such assurances, the stakes are too high to grant a permit.



The Okefenokee Swamp is one of the largest and most well-preserved freshwater ecosystems in the world (© Gregory Miller)

⁹¹ HB 71 Hearing, *supra* n. 8 (statement of Richard Dunn); *see also* Ga. Comp. R. & Regs. § 391-3-3-.09.

Although it has garnered the most attention, the Okefenokee Swamp is not the only important natural resource at stake. The swamp forms the headwaters of two of the South's healthiest river systems: the St. Marys and the Suwannee. The St. Marys is a blackwater river that has been designated as one of "America's most endangered rivers" by American Rivers because of TPM's mining application. It surfaces as a tiny stream known as River Styx and flows from the western edge of Trail Ridge and into the southeastern Okefenokee Swamp. From there it travels 125 river-miles before delivering its tea-colored water into the Atlantic Ocean near St. Marys, Georgia, and Fernandina Beach, Florida.

The Suwannee, the fabled blackwater river memorialized in song by Stephen Foster, flows more than 240 miles from South Georgia through North Florida and into the Gulf of Mexico. In recognition of its exceptional water quality and the significance of its natural communities, the State of Florida has designated it an Outstanding Florida Water.



The proposed mine also threatens downstream rivers like the Suwannee, one of the South's healthiest river systems (© Georgia River Network)

As the headwaters to these two major rivers, the Okefenokee's health and vitality are essential to supplying downstream ecosystems with clean water. In addition, as described above, by disturbing and homogenizing the sediments on Trail Ridge, the mining process is likely to release the toxic contaminants stored in those sediments, including radionuclides and heavy metals, into nearby surface waters like the St. Marys River—a concern that TPM has repeatedly failed to address.

In addition, the wetlands within the proposed mine site—whether labeled by TPM as jurisdictional or non-jurisdictional—are important in their own right. Although less celebrated than the Okefenokee, the Suwannee, or the St. Marys, more than three hundred acres of wetlands sit atop the proposed mine site. Although TPM dismisses these impacts as “minor,” it would likely take decades for habitat to return and perhaps longer for biogeochemical cycling to return to pre-mining conditions—if at all—as explained further in Section 5 below.

In addition, it is likely that the proposed mine’s hydrological impacts, when coupled with the conversion of Trail Ridge habitat and the increase in noise and light, will impact several species that are found within the larger Okefenokee ecosystem as well as downstream in the St. Marys and Suwannee Rivers. As described in the attached Appendix, the Okefenokee Swamp and its surrounding ecosystems are home to approximately 620 species of plants, 233 species of birds, 39 species of fish, 37 amphibians, 64 reptiles, and 50 mammals, many of which are threatened or endangered, including the red-cockaded woodpecker, the wood stork, and the eastern indigo snake. The proposed mining land use plan does not adequately consider the harm to or mitigation of this habitat and species.⁹²

3. The proposed mine is not consistent with “land use in the area of the mine.” Ga. Comp. R. & Regs. § 391-3-3-.05.

The proposed mine is inconsistent with land use in the area. As Secretary Babbitt said in the 1990s, “It is apparent on the face of it that this refuge and this mining project are not compatible.”⁹³

What was plainly apparent then is even more so now. The State need not take our word for it: the proposed mine’s largest neighbor has said so time and time again: the U.S. Fish and Wildlife Service, owner and caretaker of the Okefenokee National Wildlife Refuge, has repeatedly, and loudly, voiced its opposition. The U.S. Fish and Wildlife Service has submitted at least three sets of written comments to the U.S. Army Corps of Engineers expressing concerns about the proposed mine’s impact on the wildlife habitat, wilderness character, and values for which the refuge was established.⁹⁴ Just last week, the Refuge Manager for the Okefenokee National Wildlife Refuge testified to state legislators that “surface mining along Trail Ridge and other areas adjacent to the refuge would damage the integrity of the Okefenokee Swamp and the important cultural values

⁹² Appendix A, attached hereto, provides a brief summary of endangered, threatened, and other vulnerable species that may be harmed by the proposed mining operations.

⁹³ Cushman, *supra* n. 9.

⁹⁴ Letter from Donald W. Imm, U.S. Fish & Wildlife Serv., to Col. Daniel Hibner, U.S. Army Corps of Eng’rs (Feb. 20, 2019) (attached as Ex. 36); Letter from Catherine Phillips and David Viker, U.S. Fish & Wildlife Serv., to Col. Daniel Hibner, U.S. Army Corps of Eng’rs (Oct. 8, 2019) (attached as Ex. 37); Letter from Donald W. Imm to Col. Daniel Hibner (May 28, 2020), *supra* n. 70.

of this area.”⁹⁵ The U.S. Fish and Wildlife Service Regional Director, who oversees refuges in 10 states and two territories across the Southeast, has said the same.⁹⁶ So has the Assistant Secretary of Fish and Wildlife and Parks for the Department of the Interior.⁹⁷ Most recently, Secretary of Interior Deb Haaland added her voice to the chorus of opponents. “The proposed mining activity in this area poses an unacceptable risk to the long-term hydrology and future of the swamp ecosystem and these cultural values,” she wrote.⁹⁸ “I strongly recommend that the State of Georgia not move ahead with approval for this proposed mine in order to ensure that the swamp and refuge are appropriately protected.”⁹⁹



The proposed mine is not an appropriate neighbor for one of the world's most valuable natural resources (© Gregory Miller)

⁹⁵ HB 71 Hearing, *supra* n. 7 (statement of Michael Lusk).

⁹⁶ Letter from Leopoldo Miranda-Castro, Regional Dir., U.S. Fish & Wildlife Serv., to Brigadier Gen. Jason E. Kelly, Commander, S. Atl. Div., U.S. Army Corps of Eng'rs (Dec. 21, 2021) (attached as Ex. 38).

⁹⁷ Letter from Shannon A. Estenoz, Assistant Sec'y for Fish & Wildlife & Parks, U.S. Dep't of the Interior, to Michael L. Conner, Assistant Sec'y of the Army (Civil Works) (Mar. 7, 2023) (attached as Ex. 39).

⁹⁸ Letter from Deborah Haaland, Sec'y of the U.S. Dep't of the Interior, to Brian Kemp, Governor, State of Ga. (Nov. 22, 2022) (attached as Ex. 8).

⁹⁹ *Id.*

Former Department of the Interior officials are no less opposed. In addition to Secretary Babbitt, U.S. Fish and Wildlife Service Directors from the Nixon, Ford, Carter, Bush, and Clinton administrations have voiced their opposition to the project.¹⁰⁰ Indeed, we are aware of no other project anywhere in the country that has engendered this level of opposition from the U.S. Department of the Interior.

Local citizens and municipalities are likewise concerned about how the project will affect land use in the area. As described above, a September 2022 poll showed that 75% of South Georgia voters oppose the proposal to mine next to the Okefenokee Swamp.¹⁰¹ The cities of Homeland, Waycross, Valdosta, and St. Marys have voiced their concerns, as has Ware County. More than 160,000 written comments have been submitted showing the myriad ways in which the proposed project is inconsistent with land use in the area, and hundreds of concerned citizens joined EPD's public hearings to express their opposition.

In response to these overwhelming concerns that mining is not consistent with land use in the area, TPM provides only a November 2020 letter of support from the Charlton County Administrator. For a number of reasons, that letter fails to satisfy TPM's burden.

First, the November 2020 letter is not dated within 30 days of the receipt of TPM's application, as required by the EPD's guidance for Surface Mining Act land use plans.¹⁰² Instead, TPM's application is dated November 28, 2022—more than two years after the County issued the November 2020 letter.

Second, the November 2020 letter does not address the proposed mine's incompatibility with the County's Comprehensive Plan. Instead, the letter simply states that "Charlton County currently has no zoning regulations that would prohibit the proposed mining operations." While true, this is because Charlton County has no zoning regulations *at all*—not because the mine is consistent with the County's zoning regulations. The County does have a Comprehensive Plan, however, developed jointly with Folkston and Homeland after public notice and engagement with local citizens. As laid out below, the Comprehensive Plan directs the county to "encourage and request that any proposed development be compatible with the underlying Character Areas." The proposed mine is conspicuously incompatible with the character areas within which it would be located—a fact entirely ignored in the November 2020 letter and in TPM's application.

¹⁰⁰ Letter from Bruce Babbitt, Former Sec'y of the U.S. Dep't of the Interior, *et al.* (attached as Ex. 9).

¹⁰¹ Okefenokee National Wildlife Refuge Mining Poll, *supra* n. 2.

¹⁰² Georgia Env't Prot. Div., *Guidance for Mining Land Use Plan 1* (Sept. 9, 2020), available at <http://bit.ly/3ZWbuHE>.

Third, the November 2020 letter does not—and cannot—speak to the proposed mine’s consistency with the neighboring Okefenokee National Wildlife Refuge. The U.S. Fish and Wildlife Service, not the County, is best equipped to make that determination and has repeatedly concluded that mining is not consistent with the purpose of the Refuge.

Fourth, the August 2019 resolution attached to the November 2020 letter was passed under the assumption that the U.S. Army Corps of Engineers would conduct a thorough NEPA review and not permit an operation that would threaten the Okefenokee National Wildlife Refuge, and, in any event, does not purport to address whether the proposed mine is consistent with land use in the area. Instead, it expresses support for the proposed mine based on the alleged economic benefits—a separate question than that before EPD under the Surface Mining Act standards.

Fifth, the August 2019 resolution states that the Commission’s support for the mine is “subject to [the mine’s] approval by any other authority having jurisdiction.” As Charlton County Commissioner Jesse Crews put it, “we [the County Commission] passed a resolution that told Twin Pines, ‘seek your permits from EPD, if you can get them, fine, if you can’t get them, we’ll see ya.’ See, that’s it, that was it. All we did.”¹⁰³ TPM, however, attempts to use this resolution, which supports the mine only if EPD determines it is safe and appropriate, to argue to EPD that the mine is safe and appropriate. EPD should not fall for this circular reasoning.

Sixth, the November 2020 letter and the August 2019 resolution do not reflect the views of many local citizens. For example, Josh Howard, President of the Friends of the Okefenokee National Wildlife Refuge and a fifth-generation resident of Charlton County testified to the House Natural Resources and Environment Committee that “there are many folks in Charlton County, residents that are opposed to mining on Trail Ridge” and that the August 2019 resolution “does not represent the views of many of the residents of our county.” He continued, “Only a few that stand to benefit personally and financially from the mine strongly support it. Those voices do not speak for the rest of us.”¹⁰⁴

In addition to the hydrological and other concerns addressed above, the paragraphs below highlight additional specific concerns about how the mine is inconsistent with nearby land uses and the public interest.

¹⁰³ HB 71 Hearing, *supra* n. 8 (statement of Jesse Crews).

¹⁰⁴ *Id.*

a. The proposed project is inconsistent with state and local land use plans.

i. The proposed mine is inconsistent with the Joint Comprehensive Plan for Charlton County and the cities of Folkston and Homeland.

The Comprehensive Plan for Charlton County and the cities of Folkston and Homeland recognizes the importance of the Okefenokee Swamp to the region's economy and quality of life. The Plan, developed jointly after public notice and comment from local citizens, emphasizes the community's desire to preserve its "sense of place" by "protecting scenic and natural features that are important to defining the community's character."¹⁰⁵ The plan also highlights the local community's desire to protect its world-renowned resource for economic reasons. For example, the Plan states a goal for Charlton County "to become a regional center for eco-tourism"¹⁰⁶ by "target[ing] tourism opportunities presented by the Okefenokee Wildlife Refuge...."¹⁰⁷



In addition to its ecological importance, the Okefenokee National Wildlife Refuge is economically important to communities like Folkston, the "Gateway to the Okefenokee" (© Gregory Miller)

¹⁰⁵ *Joint Comprehensive Plan Update for Charlton County and the Cities of Folkston and Homeland* 24 (Oct. 15, 2020), available at <https://bit.ly/3YT4Gtb>.

¹⁰⁶ *Id.* at 12.

¹⁰⁷ *Id.* at 26.

The Plan sets out a handful of “Community Goals” to guide land use policy decisions. Two of those goals address the importance of the Okefenokee and the need to protect it:

- Goal 1: Improve the greater Charlton County economy by diversifying and establishing an economic and cultural climate that will allow the County to become a regional center for eco-tourism and other coastal area-oriented businesses.
- Goal 3: Protect, appropriately use, or conserve the natural resources of the County, notably the Okefenokee National Wildlife Refuge and Rivers, to maximize their functions and values in a sustainable manner for perpetuity.

The plan also identifies “a lack of coordination and cooperation between State and Federal agencies to market the Okefenokee National Wildlife Refuge” as a challenge.¹⁰⁸ It is disappointing that, despite this clearly identified need for State and Federal assistance to support a local eco-tourism industry based around the Okefenokee National Wildlife Refuge, the State is now considering issuing a permit that would put the local eco-tourism economy at risk.

In addition to setting broad “Community Goals,” the Comprehensive Plan identifies specific “Character Areas” to guide future land use decisions. These character areas are particularly important where, as here, the local government has not yet adopted a zoning ordinance.

The proposed mine site straddles the “Mixed Use Transitional” and “Mixed-Use Preferred Development” character areas. The “Mixed Use Transitional” character area is designed to protect rural, agricultural, and forestry land uses and encourages the use of conservation easements to protect environmentally sensitive areas.¹⁰⁹ The Plan recommends that all proposed uses within this zone should be “compatible with the natural and cultural uses surrounding them.”¹¹⁰

The “Mixed Use Preferred Development” character area allows for mixed use development but advises the use of land development standards that would “steer development and economic growth where Charlton County would like to see it and to limit any potential negative environmental impacts.”¹¹¹ The stated goal in this area is to “provide for compatible development, market the County as a bedroom community to

¹⁰⁸ *Id.* at 16.

¹⁰⁹ *Id.* at 56–57.

¹¹⁰ *Id.*

¹¹¹ *Id.* at 57–58.

Jacksonville, and preserve a rural quality of life in the midst of the County's close proximity to a major metropolitan area."¹¹²

It goes without saying that a heavy industrial strip mine is incompatible with rural, agricultural and forestry land uses and certainly inconsistent with a bedroom community with a rural quality of life.¹¹³

ii. The proposed mine is inconsistent with the State Wildlife Action Plan.

The proposed mine is also inconsistent with the State Wildlife Action Plan (SWAP), a comprehensive wildlife conservation strategy developed by the Georgia Department of Natural Resources to conserve Georgia's animals, plants, and natural habitats. The current SWAP identifies the Okefenokee Swamp as a high priority conservation area, both in its own right and based on its landscape connectivity to the St. Marys, Suwannee, and Satilla Rivers.

EPD should give extreme deference to state prioritizations like this one, especially those coming from the Georgia Department of Natural Resources. To spend taxpayer money on identifying high priority conservation areas only to have those same priorities ignored and undermined by EPD in issuing permits would be inexcusable.

b. The proposed mine is incompatible with ecotourism associated with the Okefenokee National Wildlife Refuge.

In addition to its ecological and cultural importance, the Okefenokee National Wildlife Refuge is an important economic engine for Charlton, Clinch, and Ware Counties in Georgia, as well as Baker County, Florida. Of the hundreds of national wildlife refuges throughout the nation, the Okefenokee ranks fourth in terms of economic output.¹¹⁴ According to a May 2019 Report by the U.S. Fish and Wildlife Service, the Refuge had more than 720,000 recreation visits in 2016, with approximately 65 percent of those visits by non-residents.¹¹⁵

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.* at 12.

¹¹⁵ U.S. Fish & Wildlife Serv., The Economic Contributions of Recreational Visitation at Okefenokee National Wildlife Refuge, *supra* n. 8 at 2–3.

Activity	Residents	Non-Residents	Total
Non-Consumptive:			
Pedestrian	35,554	82,958	118,512
Auto Tour	91,019	136,529	227,548
Boat Trail/Launch	4,367	13,102	17,469
Bicycle	782	261	1,043
Photography	3,627	10,881	14,508
Interpretation	37,534	87,578	125,112
Other Recreation	24,066	24,066	48,132
Visitor Center	49,922	116,485	166,407
Hunting:			
Big Game	155	-	155
Small Game	-	-	-
Migratory Birds	-	-	-
Fishing:	4,623	-	4623
Total Visitation	251,649	471,860	723,509

2016 Recreation Visits to the Okefenokee National Wildlife Refuge¹¹⁶

Spending from those visits supported economic activity in the four-county region surrounding the Refuge, including Charlton County. According to the U.S. Fish and Wildlife Service, recreational spending in the local communities was associated with approximately 753 jobs, \$17.2 million in annual employment income, \$5.4 million in annual tax revenue, and \$64.7 million in annual economic output.¹¹⁷

Activity	Residents	Non-Residents	Total
Non-Consumptive	\$4,702,100	\$59,786,000	\$64,488,100
Hunting	\$4,600	\$0	\$4,600
Fishing	\$210,600	\$0	\$210,600
Total Expenditures	\$4,917,200	\$59,786,000	\$64,703,200

Visitor Recreation Expenditures Associated with the Okefenokee National Wildlife Refuge (2016)¹¹⁸

Economic Contribution	Residents	Non-Residents	Total
Economic Output	\$4,917,200	\$59,786,000	\$64,703,200
Jobs	57	697	753
Jobs Income	\$1,307,000	\$15,853,900	\$17,160,900
State and Local Tax Revenue	\$383,100	\$5,065,700	\$5,448,800

Local Economic Contributions Associated with Recreation Visit to the Okefenokee NWR (2016)¹¹⁹

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.*

More recent studies suggest even higher outputs. According to the 2022 Banking on Nature Report, the Refuge supports more than 950 jobs in the local region.¹²⁰

These numbers are anticipated to significantly increase as ecotourism in the region grows. For example, the Okefenokee National Wildlife Refuge holds promise to become the first U.S. National Wildlife Refuge to receive UNESCO World Heritage Site Status—a non-regulatory designation reserved only for international sites of outstanding universal value and exceptional natural beauty. Only a handful of sites in the United States, like the Grand Canyon, Great Smoky Mountains, Yellowstone, Everglades, and Yosemite, have been awarded UNESCO status. Should the refuge be designated—the Okefenokee is currently on the shortlist of tentative sites—the swamp would earn its rightful place beside these iconic natural wonders, further catalyzing the sustainable tourism and recreation economy in the area.

In addition to these direct economic benefits, the Okefenokee Swamp provides a number of ecological goods and services to the local community, including:

- (1) maintenance and conservation of environmental resources, services, and ecological processes; (2) protection of natural resources such as fish, wildlife, and plants; (3) protection of cultural and historical sites and objects; (4) provision of educational and research opportunities; and (5) outdoor and wildlife-related recreation.¹²¹

An assessment by the University of Georgia, prepared for the U.S. Fish and Wildlife Service, estimates the gross economic value from wetlands in the Refuge to be approximately \$125,000,000 per year:

Ecosystem Service	Gross Economic Value Per Year
Storm Protection	\$27,000,000
Water Quality	\$45,000,000
Commercial Fishing Habitat	\$0
Carbon Storage	\$53,000,000
4 service aggregate	\$125,000,000

*Gross Economic Values from Okefenokee Refuge Wetlands per Year*¹²²

According to the authors, the estimated values are conservative, in part because the study “only consider[s] benefits to local populations whereas National Wildlife Refuges provide[] benefits to the nation as a whole.” In addition, “because of lack of

¹²⁰ HB 71 Hearing, *supra* n. 8 (statement of Michael Lusk).

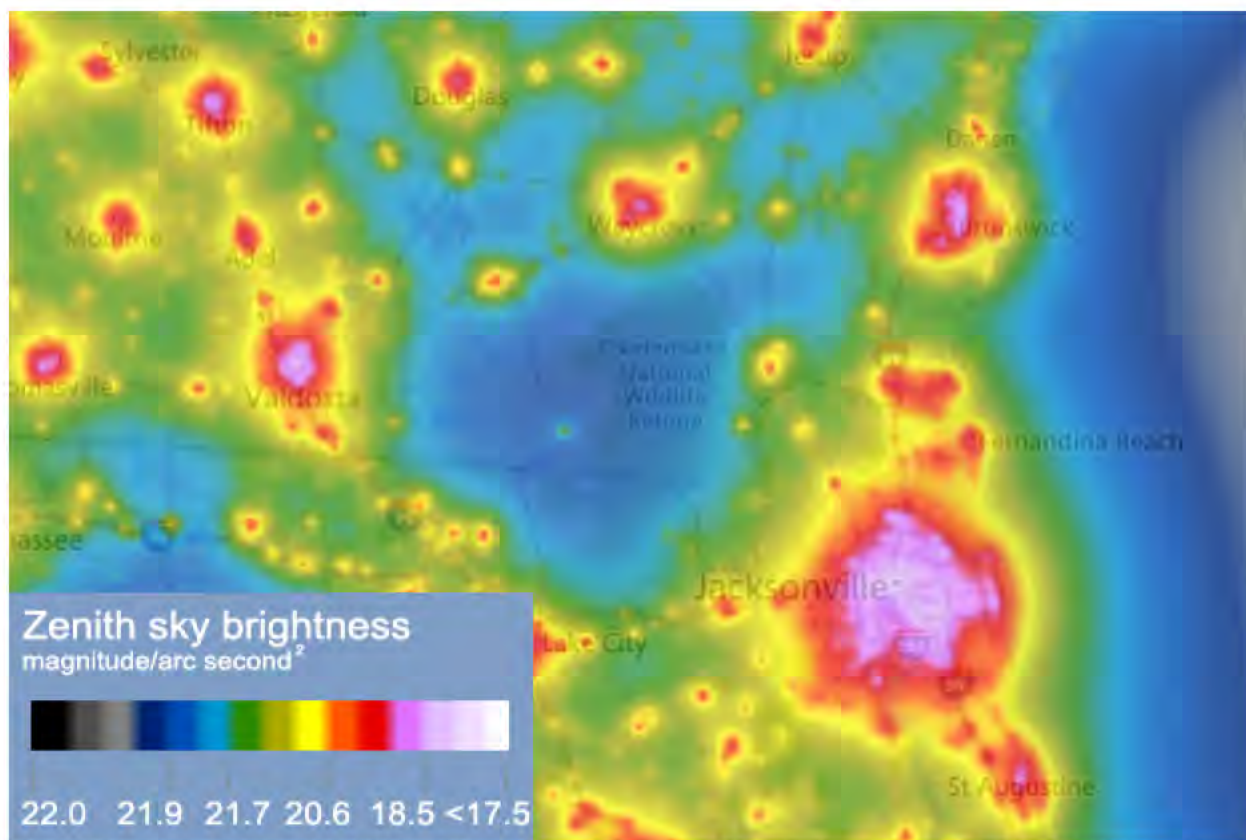
¹²¹ U.S. Fish & Wildlife Serv., The Economic Contributions of Recreational Visitation at Okefenokee National Wildlife Refuge, *supra* n. 8 at 1.

¹²² Douglas Patton *et al.*, *National Wildlife Refuge Wetland Ecosystem Service Valuation Model, Phase 1 Report* at iii (April 2012) (attached as Ex. 40).

data, [the] results also leave out other ecosystem services such as biodiversity protection, aesthetic values, and cultural values (plus potentially many more).”¹²³

c. Light pollution from the proposed mine will impair the visitor experience in the Okefenokee National Wildlife Refuge.

The Okefenokee Swamp enjoys natural nighttime darkness to a degree almost unparalleled in the eastern United States. Stephen C. Foster State Park, located on the western side of the Okefenokee Swamp, is a Gold-tier International Dark Sky Park, the first and only place in the state of Georgia to receive accreditation as part of the International Dark Sky Places Program.¹²⁴



The Okefenokee National Wildlife Refuge is home to some of the darkest skies east of the Mississippi River (@lightpollutionmap.info)

In addition to attracting visitors, the Okefenokee’s dark skies are important to the survival of its ecosystems. As one scientist noted, “[t]hough it may not be as immediately toxic as a chemical spill, light pollution is now among the most chronic

¹²³ *Id.* at 47.

¹²⁴ International Dark Sky Association, *Stephen C. Foster State Park (U.S.)*, <http://bit.ly/3FwUAHf> (last visited Mar. 19, 2023).

environmental perturbations on Earth.”¹²⁵ He went on to explain that “[r]esearchers have already identified harmful impacts on a shocking array of non-urban species, including bats, insects, plants, fish, turtles, marine invertebrates including corals, and even primates.”¹²⁶

It will be all but impossible to prevent light from the proposed mine from brightening the skies over the Okefenokee. In addition to the lights on the crane-like dragline and other the excavation equipment, the processing plants described above will also be lighted. Such light pollution can travel dozens of miles from its source.



The Okefenokee Swamp is home to some of the darkest skies in the Eastern United States (© Jay Blanton)

Despite these very real impacts, TPM has not addressed light pollution concerns at all in its application or land use plan, or even described the proposed lighting systems for the mine, making it impossible to meaningfully assess how the proposed mine will affect the visitor experience or ecosystems in the neighboring Okefenokee Swamp.

¹²⁵ Nadia Drake, *Our Nights are Getting Brighter, and Earth is Paying the Price*, Nat'l Geographic (Apr. 3, 2019), <http://bit.ly/3mEXfZ0>.

¹²⁶ *Id.*

d. Sound from truck traffic and mining operations may impair the visitor experience in the Okefenokee National Wildlife Refuge.

The machinery at the proposed mine is also likely to generate a substantial amount of noise throughout the day and night. Most of the excavation work would be done by a dragline, which TPM describes as a “large crane-like earthmoving machine” that is equipped with a “large capacity bucket” so that it can move “large quantities of material” efficiently. The noise from the dragline would be coupled with the sound from other pieces of smaller excavation equipment such as bulldozers, backhoes, and dump trucks. Once the titanium ore is excavated by these machines, TPM would feed it into a pre-concentration plant, followed by a wet concentration plant and mineral separation plant, both of which are likely to generate substantial noise. Transporting materials onto and off of the site is also likely to increase truck or train traffic. Indeed, in a document not submitted to EPD, TPM suggested it anticipates up to thirty trucks each day.¹²⁷ Despite repeated questions, TPM has yet to address sound concerns or disclose its intended operating hours. Without this information, neither EPD nor the public can adequately consider how noise from the proposed mine will impact the surrounding communities or the Refuge.

A recent study demonstrated anthropogenic noise impacts various species of amphibians, arthropods, birds, fish mammals, mollusks and reptiles.¹²⁸ Animals rely on sounds within their environment for essential information, such as mating and warning signals and echolocation; when these sounds are overpowered by anthropogenic noise, it poses serious threat to wildlife.¹²⁹ The Okefenokee is world renowned for its diverse migratory bird population; however, noise generated from the proposed mine infrastructure could disrupt migration patterns, cause birds to avoid the area and decrease the bird population density within the wildlife refuge.¹³⁰

Already, visitors to the Floyd Island campsites that are located within the wilderness area complain to the Service about hearing an existing train that is 10.5 miles away.¹³¹ The sounds from the proposed mine would only compound such noise intrusions into the wilderness area and detract further from the wilderness experience. TPM must address these concerns about noise pollution, and EPD must account for it in its analyses.

¹²⁷ Georgia Dep’t of Community Affairs, *Development of Regional Impact #3410 Forms*, *supra* n. 127.

¹²⁸ Hansjoerg P. Kunc and Rouven Schmidt, *The effects of anthropogenic noise on animals: a meta-analysis 1*, *Biology Letters* (Apr. 10, 2020), available at <https://bit.ly/3YGpjIN>.

¹²⁹ *Id.*

¹³⁰ Ana Benitez-Lopez *et al.*, *The impacts of roads and other infrastructure on mammal and bird populations*, *Biological Conservation* (Apr. 10, 2020), <https://bit.ly/3LgYZ56>.

¹³¹ E-mail from U.S. Fish & Wildlife Serv. staff member to author (Sept. 6, 2019).

e. The proposed mine threatens cultural resources in the area.

The proposed mine is also inconsistent with the abundant cultural and historical resources in the area. The Okefenokee has a rich cultural history, with evidence of Native American occupation dating back to 2500 BCE. Multiple Tribes have expressed concerns about the impact of the proposed mine on their ancestral homelands.

For example, Principal Chief of the Muscogee (Creek) Nation David W. Hill declared Trail Ridge from Hoboken, Georgia to the St. Marys River a “Sacred Site,” including all wetlands that form the watershed for the Okefenokee Swamp and St. Marys River.¹³²

Marian McCormick, Principal Chief of the Lower Muscogee Creek Tribe, expressed concerns about the impact of the proposed mine on ancestral grave sites. “Lowering the water levels will expose cultural items and graves of our ancestors. With the long history of the Muscogee and the natives that came before us, there is no way that there will be no burials in this area that will be exposed,” she explained.¹³³ “We are connected to the Okefenokee Swamp by the bones of our ancestors. There is no honor in mining this area. We ask that the EPD deny this application.”¹³⁴

At a minimum, EPD should provide meaningful consultation with state and federally recognized Native American Tribes who may have ancestral homelands on or near the proposed project site.

4. The mining land use plan does not provide sufficient detail concerning the reclamation plan. Ga. Comp. R. & Regs. § 391-3-3-.05(2).

As addressed above, the reclamation plan on Sheets 9 and 10 is wholly insufficient for this mining operation. The Performance Criteria for Reclamation amounts to filling in the mine pit and possibly decommissioning the ponds. Under these insufficient criteria, TPM could meet its “objectives” and be released from reclamation responsibilities even if significant adverse effects occur. Sheet 10 depicts “post-mining reclamation” for only 582 acres of the 773 acre mine. The lands and wetlands cleared for the ponds and facilities are affected lands requiring a detailed reclamation plan.

The reclamation procedures indicate that groundwater levels are “expected to return naturally” and that natural plant communities are “expected to develop” from the topsoil but the performance criteria do not make those into enforceable requirements

¹³² Letter from Principal Chief David W. Hill, Muscogee (Creek) Nation, to Col. Joseph R. Geary, U.S. Army Corps of Eng’rs (Oct. 27, 2022) (Attached as Ex. 41).

¹³³ EPD Public Hearing, *supra* n. 17 (statement of Marian McCormick).

¹³⁴ *Id.*

for reclamation. TPM claims that its “demonstration” will prove it can operate in a benign manner but does not offer any reclamation requirements that could ensure it.¹³⁵

TPM also fails to adequately address wetlands reclamation issues. In its *Provisions Check List for Protection of the Environment and Resources of the State*, TPM falsely claims that impacts to wetlands will be “minor,” despite its plan to excavate more than 332 acres of wetlands, like the one shown below, to an average depth of 50 feet. As described in Section 1(b), it is unclear how or if TPM plans mitigate these losses, since the plans at best refer to only “restoration” which TPM does not define and which is a misnomer for the same reason impacts to wetlands are not “minor”—wetlands would have to be created from scratch from a 50-foot-deep hole in the ground. Indeed, creation of wetlands is generally not a preferred method of mitigation because of high failure rates and high costs.¹³⁶ Likewise, wetland restoration performance is limited and fails to recover original levels of wetland ecosystem function, even after many decades.



*This photograph, taken in August 2018, depicts part of the more than 332 acres of wetlands just south of the proposed Pre-Concentration and Wet Concentration Plants that would be excavated in year 2.*¹³⁷

¹³⁵ Tellingly, Sheet 10 does not depict reclamation of the approximately twenty acres of wetlands destroyed by the pond system and facilities, which TPM plainly intends to continue using as its mine moves closer and closer to the Okefenokee Swamp.

¹³⁶ David Moreno-Mateos *et al.*, *Structural and functional loss in restored wetland ecosystems*, PLoS Biology 10(1) (2012), available at <http://bit.ly/3yFsplJ>.

¹³⁷ See TTL, Inc., *Keystone Tract*, *supra* n. 138, App'x B at 5.

TPM determined that the wetlands on the site have a significant nexus to nearby relatively permanent waters.¹³⁸ Whether labeled by TPM as jurisdictional or non-jurisdictional,¹³⁹ these wetlands continue to serve important functions, including buffering surrounding areas from flooding and acting as natural pollution filters that improve water quality and protect wildlife.

As described in SELC's September 2019 and May 2020 comments to the U.S. Army Corps of Engineers, created wetlands have a low probability of success even under the best of circumstances, much less under inhospitable reclamation conditions like those on the project site. Indeed, based on TPM's previous submissions to the Corps and the current proposal, it appears TPM lacks a thorough understanding of the complexities involved in such a task.¹⁴⁰

TPM's plan does not describe any restoration of wetlands but rather the planting of trees in "reclaimed habitat" areas. TPM proposes to deem reclamation "successful where tree vegetation maintains a survivability rate of 50 percent," at some unidentified point in time.¹⁴¹ The only indication of timeline here is a statement that reclamation areas "will be monitored for two years following planting pending release of the mine from the reclamation activities."¹⁴² Trees alone are an insufficient marker of wetland restoration, and a detailed plan would include intermediate benchmarks and a clear timeline for evaluation.

TPM does not anticipate planting of any other vegetation based on an expectation that the seedbank in the topsoil will reestablish plant communities. The topsoil will be removed to an indeterminate depth approximately two weeks before mining and stockpiled near the excavation. Among other concerns, it does not appear that TPM intends to treat the topsoil that it removes from the site in a sufficiently careful manner, making any future wetland creation nearly impossible. First, the soil used to create a wetland must be wetland soil, meaning that TPM must separate the wetland soil that it removes from the upland soil that it removes. Second, the wetland soil redeposited on the tailings must be at a sufficient depth to support wetland functions. Third, stockpiling the topsoil for any extended time will make it more difficult for plant seeds to survive. It does not appear that TPM has considered any of these concerns.

¹³⁸ See TTL, Inc., *Waters of the United States Delineation Report: Approximately 551.1-Acre Adirondack Tract, St. George, Charlton County, Georgia* (July 3, 2019); TTL, Inc., *Waters of the United States Delineation Report: Approximately 1,034-Acre Keystone Tract, St. George, Charlton County, Georgia* (Sept. 28, 2018) (collectively attached as Ex. 42).

¹³⁹ See Letter from Sheryle G. Reeves and James R. Smith, TTL, Inc., to Jamie Lancaster, Ga. Env't Prot. Div. 9 (June 25, 2021) (on file with EPD) (indicating that non-jurisdictional wetlands must be considered and addressed).

¹⁴⁰ See Reinhardt Report, *supra* n. 81.

¹⁴¹ Proposed MLUP, Sheet 9.

¹⁴² *Id.*

In addition, water levels are critical for the existence of wetlands, and a 2.7-foot drop or increase in water levels from mining could entirely prevent their occurrence. Again, there are over 332 acres of wetlands in the footprint of this first phase of TPM's mine, and a drop in water levels could also negatively impact wetlands outside the mine footprint. There is a very real risk that the homogenized sands may be too permeable to ever support wetlands and streams. And even if the bentonite layer functions as intended, TPM still considers post-mining groundwater levels "restored" if they are 2.7 feet lower than they were before mining, regardless of the impacts to future wetland establishment.

Moreover, even if the pits that were previously wetlands are returned to preconstruction contours, the physical, biological, and chemical functions of those wetlands would not return for a very long time. It would likely take decades for habitat to return and perhaps longer for biogeochemical cycling to return to pre-mining conditions, especially if topsoil is not sorted by hydrogeomorphic (HGM) type when stockpiled.

If TPM intends to claim its impacts to wetlands will be "minimal," TPM should address the above concerns and also describe the following as part of any reclamation plan:

- How TPM intends to stockpile topsoil in a manner that will not adversely affect organic matter content, soil microbes, soil fungi (esp. root mycorrhiza), and seed banks of native plant species;
- Which ecosystems (or HGM subclasses) TPM would use to establish intermediate and final targets for their proposed created habitats and ecosystems;
- What mix of native species and herbaceous shrubs would TPM plant and what is the basis for planting those species; and
- What TPM's plan is for preventing invasive species (e.g., cogongrass) from overtaking reclaimed land.

We anticipate that many of these questions require additional studies and monitoring, which TPM should conduct before EPD moves forward.

5. The proposed application is not consistent with federal law.

According to EPD, the agency "does not complete its evaluation of state permit applications until the related federal approvals have been issued." "This conserves EPD

resources and avoids unnecessary duplication of effort by EPD and federal permitting authorities.”¹⁴³

On page 2 of its application, TPM represents that no federal permits are required. In support, TPM points to October 2020 and March 2021 negative jurisdictional determinations from the U.S. Army Corps of Engineers. As EPD is aware, however, the Navigable Waters Protection Rule (NWPR), which formed the basis for those negative jurisdictional determinations, was vacated and is no longer in effect.¹⁴⁴ As a result, negative jurisdictional determinations issued under the rule—like those on which TPM purports to rely—no longer accurately depict which waters are currently jurisdictional under the Clean Water Act. As a result, the negative jurisdictional determinations cited by TPM do not, and cannot, authorize the destruction of currently jurisdictional wetlands like those on the proposed mine site—an act that is plainly illegal under the statute itself.¹⁴⁵

The Corps agrees. Indeed, it addressed this exact scenario in a January 2022 guidance document related to the vacatur of the NWPR:

Q: Can a non-jurisdictional determination made under the NWPR be used to support the discharge of dredged or fill material into aquatic resources that are considered to be waters of the U.S. under the pre-2015 regime?

A: Not without a permit. ¹⁴⁶

The Corps reiterated this position in a recently published rule, stating, “NWPR AJDs, unlike AJDs issued under other rules that were changed pursuant to notice-and-comment rulemaking rather than vacatur, may not reliably state the presence, absence, or limits of ‘waters of the United States’ on a parcel.”¹⁴⁷

Despite its representation to the contrary in its application, TPM is well-aware of this requirement. As their counsel recently wrote to the Department of Justice:

¹⁴³ Georgia Env’t Prot. Div., *Twin Pines Permitting Update* (June 4, 2022).

¹⁴⁴ *Pascua Yaqui Tribe v. U.S. Env’t Prot. Agency*, No. CV-20-00266-TUC-RM, 2021 WL 3855977, at *5 (D. Ariz. Aug. 30, 2021) (vacating NWPR); *Navajo Nation v. Regan*, No. 20-CV-602-MV/GJF, 2021 WL 4430466, at *3 (D.N.M. Sept. 27, 2021) (same).

¹⁴⁵ A validly issued negative determination, under most circumstances, also creates a safe harbor against enforcement *by federal agencies* for five years from the date of issuance. However, as recognized by the Supreme Court in *U.S. Army Corps of Engineers v. Hawkes Co.*, 578 U.S. 590, 598 (2016), landowners may still be liable under a Clean Water Act citizen suit.

¹⁴⁶ U.S. Army Corps of Eng’rs, *Implementation of Navigable Waters Protection Rule Vacatur Talking Points, Key Messages, and Questions and Answers* 4–5 (Jan. 4, 2022) (attached as Ex. 43).

¹⁴⁷ *Revised Definition of “Waters of the United States,”* 88 Fed. Reg. 3,004, 3,136 (Jan. 18, 2023).

TPM also acknowledges that [the Army Corps of Engineers] maintain[s] their invitation for TPM to request a new or revised AJD under the pre-2015 regulatory regime, an invitation TPM respectfully declines.¹⁴⁸

Moreover, even under TPM's own interpretation, the NWPR jurisdictional determinations are valid only until January 2026, and therefore would expire in the second to third year of the project.¹⁴⁹ And TPM's own analysis shows that a Clean Water Act permit will be required to complete the project under the current regulatory scheme.

6. The mining land use plan should consider cumulative impacts.

TPM eventually plans to mine approximately 8,000 acres—a fact that it has acknowledged publicly on repeated occasions. Its application, however, considers the impacts from mining only the first 773-acre tract.

TPM's application is a classic example of “piecemealing,” or dividing a project into two or more phases and evaluating each piece in a separate environmental document, rather than evaluating the entire project in a single review. The dangers of piecemealing are obvious: although mining a small parcel may cause only small harms, the cumulative effect of mining numerous piecemeal parcels may cause significant, long-term damage.

As the U.S. Fish and Wildlife Service stated in 2020:

The demonstration mine may *establish a precedent to allow for cumulative impacts of other mining on Trail Ridge* adjacent to the [Okefenokee National Wildlife Refuge]. As the current demonstration mine is limited to 50 feet deep, it may not be representative of future mining impacts. Additionally, future mining to the north of the demonstration area will be closer and closer to the refuge and swamp. There seem to be differences in hydrology, confining layers, and depth of the underlying aquifer along the length of Trail Ridge [(citations omitted)]. *This demonstration mine may not show all the cumulative impacts of mining along Trail Ridge* due to these variations. Impacts may become evident in the [Okefenokee National Wildlife Refuge], which as stated earlier is recognized nationally and internationally of value to the public interest.¹⁵⁰

¹⁴⁸ Email from Lewis Jones to Andrew Doyle, U.S. Dep't of Justice (Aug. 19, 2022) (attached as Ex. 44)

¹⁴⁹ If the mine is permitted, TPM estimates it will take 6-12 months to set-up facilities and prepare the site before mining begins, meaning that any mining likely would not begin until 2024 at the earliest. See Proposed MLUP, Sheet 9.

¹⁵⁰ Letter from Donald W. Imm to Col. Daniel Hibner (May 28, 2020), *supra* n. 71 (emphasis added).

Although details about future phases may not yet be known, the basic contours are clear. Indeed, TPM has already purchased the land. There is no real dispute that the project, when complete, will have a significantly larger scope and impact than the first phase. In addition, if EPD grants this permit, additional mining beyond TPM's 8,000 acres is likely to follow. Common sense, law, and principles of good stewardship dictate that EPD should consider the cumulative impacts of the entire project, as well as other reasonably foreseeable mining projects on Trail Ridge—especially given that one of our nation's most valuable natural resources is at stake.

CONCLUSION

For all of these reasons, we ask you to deny TPM's application to strip mine heavy mineral sands at the doorstep of the Okefenokee National Wildlife Refuge. The stakes are too high, and the risks are too great. In the words of Secretary Babbitt: "The idea of compromising the integrity of this wildlife refuge for the color of toothpaste is inconceivable."



The state should not risk the integrity of one of the world's greatest natural resources on a strip mine (© Gregory Miller)

As shown above, EPD has both the authority and justification to deny TPM's permit application. All it needs is the courage to use it.

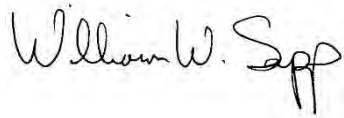
Director Richard Dunn

March 20, 2023

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Thank you for the opportunity to comment. If you have any questions or if we can provide any additional information, please feel free to contact us at 404-521-9900 or bsapp@selcga.org.

Sincerely,

A handwritten signature in black ink that reads "William W. Sapp". The signature is written in a cursive style with a large, stylized "S" at the end.

William W. Sapp
Senior Attorney
Southern Environmental Law Center

A handwritten signature in black ink that reads "Megan Hinkle Huynh". The signature is written in a cursive style with a large, stylized "H" at the end.

Megan Hinkle Huynh
Senior Attorney
Southern Environmental Law Center

A handwritten signature in black ink that reads "Bob Sherrier". The signature is written in a cursive style with a large, stylized "B" at the beginning.

Bob Sherrier
Staff Attorney
Southern Environmental Law Center