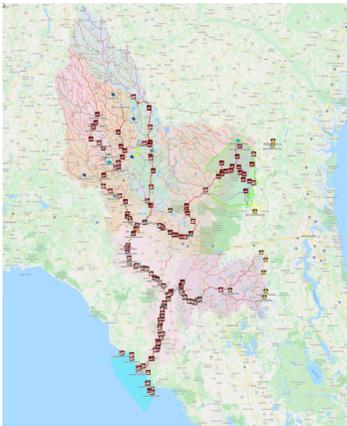
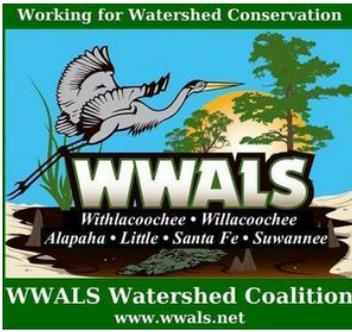


September 27, 2021



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WWALS is an IRS 501(c)(3) nonprofit charity est. June 2012

WWALS Watershed Coalition advocates for conservation and stewardship of the Withlacoochee, Willacoochee, Alapaha, Little, Santa Fe, and Suwannee River watersheds in south Georgia and north Florida through education, awareness, environmental monitoring, and citizen activities.

Suwannee RIVERKEEPER® is a program and a paid staff position of WWALS.



To: TwinPines.Comment@dnr.ga.gov

Cc: Mark Williams, Commissioner, GA-DNR

Re: **Mining moratorium: NWPR WOTUS and Army Corps on Okefenokee mine site**

Several recent events combine as evidence that the Georgia Environmental Protection Division (GA-EPD) would do well to impose a moratorium on all mining permits at least until the implications become clear of the recent court ruling to revoke last year's changes to the Waters of the U.S. (WOTUS) by the U.S. Environmental Protection Agency (EPA).

Recent further questions by GA-EPD to the miners about their permit applications from the mesh with concerns Waterkeeper Alliance and Suwannee Riverkeeper have with the inadequate decision last year by the U.S. Army Corps of Engineers (USACE) to abdicate oversight over the mine site within miles of the Okefenokee Swamp. Both those comments and the USACE decision are related to WOTUS. EPA and USACE have halted implementation of the 2020 Navigable Waters Protection Rule (NWPR) upon which the USACE decision was based.

GA-EPD repeated questions about streams and the mine site

In its September 10, 2021, Permit Coordination Letter,¹ GA-EPD asked about water draining into the Floridan Aquifer or into rivers, or water moving in the other direction.

Exhibit I Modeling the GW Flow System Comments James L. Kennedy Ph.D., P.G.

...
Page 8: *Explicitly explain what use of the drains versus rivers means in the model. In MODFLOW drains can receive water from the modeled aquifer but cannot recharge the modeled aquifer. A river can both receive water from the modeled aquifer and discharge water to the modeled aquifer.*

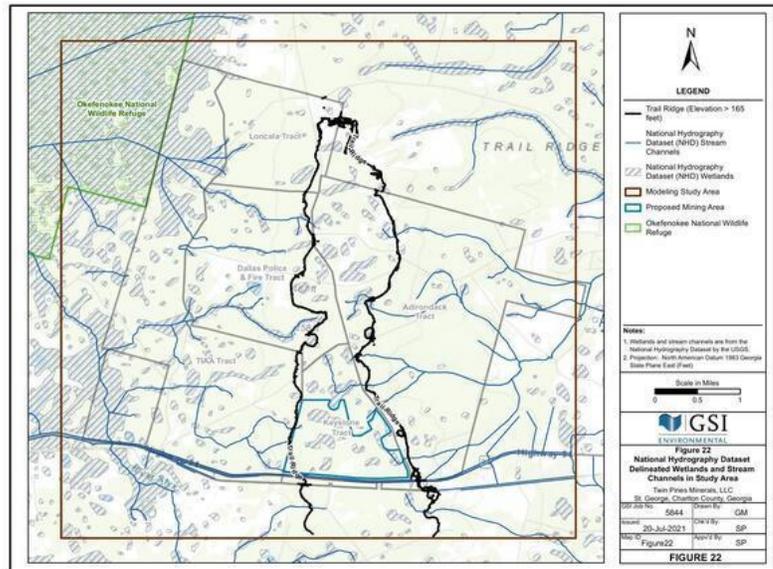


Figure 22. Wetlands and Stream Channels

¹ [EPD Permit Coordination Letter, September 10, 2021, https://epd.georgia.gov/document/document/epd-permit-coordination-comments-91021pdf/download](https://epd.georgia.gov/document/document/epd-permit-coordination-comments-91021pdf/download)

Explain that the drains were modeled based on the surface water courses shown on Figures 22 and 23. Explain that no rivers were modeled because there are no rivers within the model domain.

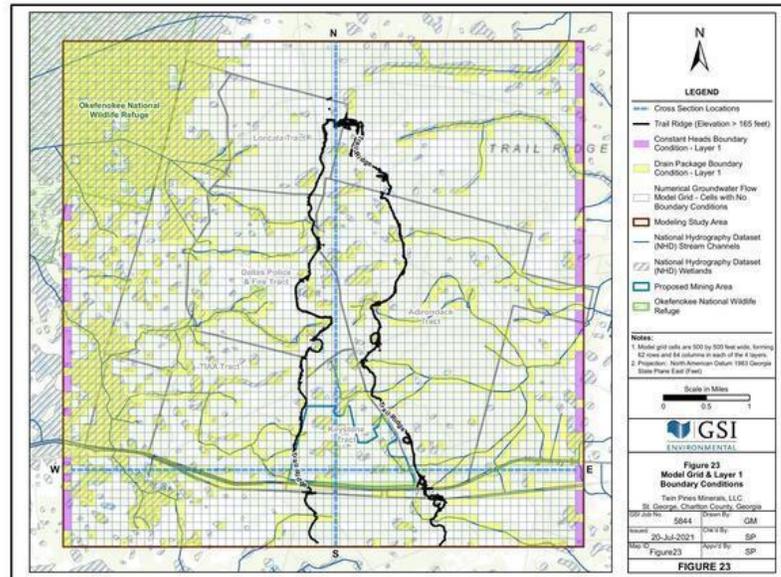


Figure 23. Model Grid...

GA-EPD has actually been asking about those streams since December 2019.²

...Streams S-1i, S-5, S-6, S-7, S-10 and S-1 are tabulated as having almost complete permanent impacts in Table 13, but these impacted streams are not plotted/labeled on Figure 4.1b. If indeed some amount of temporary stream impacts would occur as a result of this project, no mention is made of any reconfiguration/reestablishment/restoration of such streams.

In the miners' response of September 17, 2021,³ they seemed to dodge GA-EPD's questions. See their Exhibit I⁴ (emphasis added):

4.3 Model Boundary Conditions

...Wetlands are discharge areas for groundwater. Stream channels in the area may recharge groundwater during periods of rainfall events but are otherwise locations of groundwater discharge. The drain boundary in MODFLOW-NWT was used to represent wetlands and streams. The drain boundary allows water to flow out of the groundwater system when water levels are at or above a prescribed "drain" elevation – no flow occurs when groundwater levels are below the "drain" elevation. Thus, for MODFLOW models, drains can receive water from the modeled aquifer **but cannot simulate losses from surface water features to the aquifer**. A river boundary

² Stephen C. Wiedl, PWS, Manager — Wetlands Unit, Georgia Environmental Protection Division, December 5, 2019, "Additional GaEPD Comments for Twin Pines Mineral Mine, Charlton County, GA,"

<https://wwals.net/pictures/2019-12-01--epd2-usace-tpm/EPD-December-2019-Comments-per-Twin-Pines-Mineral-Mine.pdf>

³ GA-EPD website, "Twin Pines Minerals, LLC Response - September 17, 2021,"

<https://epd.georgia.gov/twin-pines-minerals-llc-response-september-17-2021>

⁴ Sorab Panday, Ph.D., Robert Wyckoff, Gao Martell, GSI Environmental Inc., 14 September 2021, "MODELING THE GROUNDWATER FLOW SYSTEM AT THE PROPOSED TWIN PINES MINE ON TRAIL RIDGE,"

<https://epd.georgia.gov/document/document/twin-pines-exhibit-i-modeling-groundwater-flow-9142021/download>

*condition in MODFLOW can receive water from the modeled aquifer as well as discharge water to the modeled aquifer. Drains were used to simulate the surface water features shown in Figures 22 and 23 and **no rivers were represented since there are no rivers within the model domain.** The streambed elevation or the elevation of the wetland were assigned as the “drain” elevations. The drain boundary includes a conductance term to represent sediments at the bottom of the streams, wetlands, or lining of the streambed. A high conductance value (10 7 ft 2 /d) was used for the drains to allow water to freely drain without resistance from near surface depositions or alterations*

Yes, GA-EPD already pointed out no rivers were within the model domain. Yet streams within the model domain are connected to rivers, and there is surface water interchange with the aquifers, plus both rivers and the aquifers interchange water with the Okefenokee Swamp. Thus the miners’ model still seems inadequate.

Both in December 2019 and in August 2021, GA-EPD asked the miners many questions about their proposed use of bentonite clay.

A question GA-EPD did not ask, but should, is what if the clay gets into waterways with fish? Bentonite in small particles [can get into the gills of fish and suffocate them](#),⁵ and bentonite can also deplete oxygen.⁶

USACE did not consider streams in its October 2020 abdication of mine oversight

This repeated GA-EPD concern about streams and the mine site seems related to a point [Waterkeeper Alliance](#) made in its September 3, 2021, comments, co-signed by Suwannee Riverkeeper, to EPA about the 2020 Navigable Waters Protection Rule:⁷

Recently, the Corps determined that nearly 400 acres of previously jurisdictional wetlands near the Refuge are now unprotected by the Clean Water Act, allowing the mining company to begin mining without any involvement by the agency.¹¹¹ For reasons that are unclear, the Corps did not discuss the streams at the site, which appear to be, but not are not being treated as, jurisdictional waters under the CWA.¹¹² This decision has important implications for the initial part of the mine as well as the longer-term expansion of the mine to more than 8,000 acres near the Refuge.

¹¹¹ Corps Approved Jurisdictional Determination, [ORM Number: SAS-2018-00554](#) (Oct. 14, 2020) ([Attachment 11](#)).

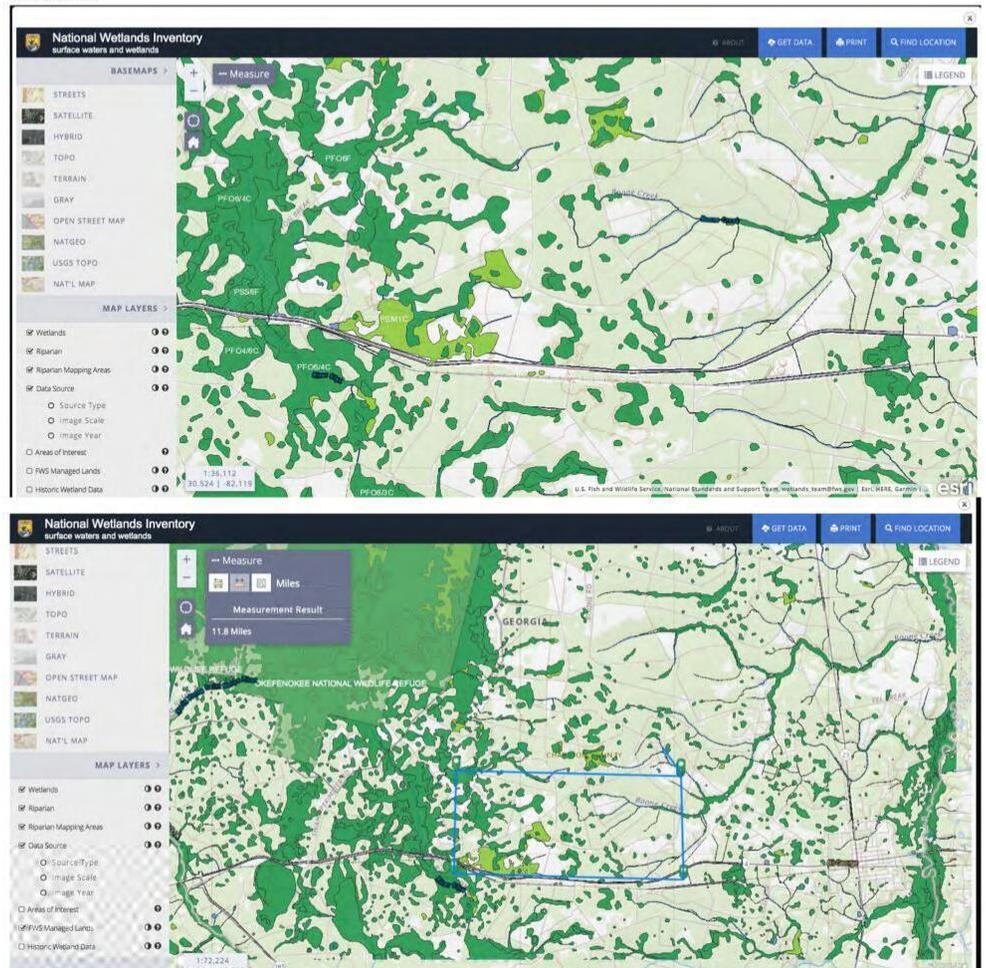
¹¹² National Wetlands Inventory Map of the Twin Pines Mine Site Area, available at: <https://www.fws.gov/wetlands/data/Mapper.html> ([Attachment 12](#)).

⁵ Southwestern Materials, retrieved September 22, 2021, “Is Sodium Bentonite Clay Safe for Fish, Wildlife, and Livestock,” <https://www.texasbentonite.com/is-sodium-bentonite-clay-safe-for-fish.html>

⁶ Torbjörn Carlsson and Arto Muurine, Cambridge University Press, February 1, 2011, [Identification of Oxygen-Depleting Components in MX-80 Bentonite](#), <https://www.cambridge.org/core/journals/mrs-online-proceedings-library-archive/article/abs/identification-of-oxygen-depleting-components-in-mx-80-bentonite/47949BFDA2777961FDF548DCE20EE9B3>

⁷ Waterkeeper Alliance, to U.S. EPA, September 3, 2021, “Re: Notice of Public Meetings Regarding “Waters of the United States”; Establishment of a Public Docket; Request for Recommendations – Docket ID No. EPA–HQ–OW–2021–0328” <https://wwals.net/pictures/2021-09-03--wka-comments-epa-wotus/Waterkeeper-et-al.-Comments-on-Docket-Id.-No.-EPA-HQ-OW-2021-0328.pdf>

National Wetlands Inventory Maps of Area In and Around the What is Believed to Be the Twin Pines Mining Site – Showing Multiple Streams and Wetlands, including Wetlands Intersecting Streams.



Source: <https://www.fws.gov/wetlands/data/mapper.html>

[Multiple Streams and Wetlands, including Wetlands Intersecting Streams PDF](#)

District Court revoked 2020 NWPR and EPA and USACE halted implementation

The effects of the recent District Court revocation of the NWPR will take time to play out.⁸

On August 30, 2021, the U.S. District Court for the District of Arizona in Pasqua Yaqui Tribe v. EPA, Case No. 4:20-cv-00266, vacated the Environmental Protection Agency’s (“EPA”) and U.S. Army Corps of Engineers’ (“Corps”) 2020 Navigable Waters Protection Rule (“NWPR”) redefining jurisdictional “Waters of the United States” (“WOTUS”) under the Clean Water Act (“CWA”). The district court found “fundamental, substantive flaws that cannot be cured without revising or replacing the NWPR’s definition” and accordingly remanded and vacated the rule. It appears that the court ruling applies nationwide, but it is possible that the ruling will only apply in Arizona.

⁸ Sophia E. Amberson, Rachael L. Lipinski, Duncan M. Greene, and Jenna R. Mandell-Rice, National Law Review, September 2, 2021, “UPDATED: Rough Waters Ahead, Once Again: A District Court Vacates the 2020 Navigable Waters Protection Rule as the EPA and Corps WOTUS Definition Rulemaking Continues; Updated: On September 3, 2021, the EPA announced that the EPA and Corps have halted the implementation of Navigable Waters Protection Rule and will be applying the pre-2015 WOTUS definition.”

<https://www.natlawreview.com/article/rough-waters-ahead-once-again-district-court-vacates-2020-navigable-waters>

Apparently EPA and USACE think the ruling applies nationally, because on September 3, 2021, EPA and USACE halted implementation of the NWPR.⁹

Since the USACE decision to abdicate oversight of the mine site was based on the NWPR, USACE should now reconsider that decision. If USACE takes back up its oversight of the mine site near the Okefenokee Swamp, GA-EPD and USACE will then be duplicating each others' work. Thus not only for legal and environmental reasons, but also for simple economic frugality with tax dollars, GA-EPD should halt review of this (or any other) mining application until the final fate of WOTUS is known, which could take months or years.

Recommendation

For all of the above reasons, we recommend that the Georgia Environmental Protection Division implement a moratorium on mining permit applications, at least until the effects of the recent court vacation of NWPR are known, including after USACE reconsiders its October 2020 abdication of oversight over the proposed mine site near the Okefenokee Swamp.

For the rivers and the aquifers,

John S. Quarterman
Suwannee RIVERKEEPER®
/s
WWALS Watershed Coalition, Inc.

⁹ *Ibid.*