

*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](#),<sup>5</sup> and bentonite can also deplete oxygen.<sup>6</sup>

### **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:<sup>7</sup>

*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.<sup>111</sup> 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.<sup>112</sup> 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.*

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

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

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<sup>5</sup> 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>

<sup>6</sup> 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>

<sup>7</sup> 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>