

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.

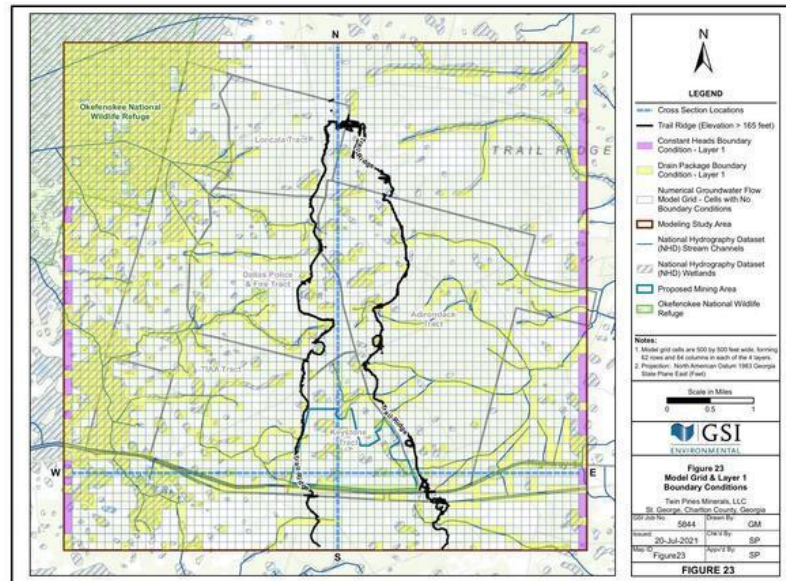


Figure 23. Model Grid...

GA-EPD has actually been asking about those streams since December 2019.<sup>2</sup>

...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,<sup>3</sup> they seemed to dodge GA-EPD's questions. See their Exhibit I<sup>4</sup> (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

<sup>2</sup> 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>

<sup>3</sup> GA-EPD website, "Twin Pines Minerals, LLC Response - September 17, 2021,"

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

<sup>4</sup> 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>