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The application has failed to demonstrate that the proposed project will not result in a take of certain species and in fact runs a reasonable risk of taking others. First, depending on the mine's hydrological impacts, it may result in a take in the form of harm of endangered Atlantic and shortnose sturgeons due to their vulnerability to point source pollution, fluctuations in temperature, changes in dissolved oxygen levels, and increased sediment loads. Second, the Project may result in a take of the threatened Gulf sturgeon in the Florida portion of the Suwannee River, where take of the species is banned.<sup>280</sup> Depending on the yet-to-be-determined extent of the hydrological impacts, take of Gulf sturgeon could occur in the form of harm, given their sensitivity to changes in water quality, dissolved oxygen levels, and temperature fluctuation. Moreover, if the hydrological impacts of the project reduce the spring flow that Gulf sturgeon rely upon in the summer months, take in the form of harassment could result because lost habitat may significantly disrupt normal behavioral patterns. The project could also take redcockaded woodpeckers by harassment if any members of this species use the area for activities such as breeding, feeding, or sheltering that is close enough to Twin Pines for these behavioral patterns to be disrupted by mining activities such as lighting, noise, smoke, and habitat destruction. The project may also result in a take of the threatened wood stork, a species to which take prohibitions extend. 281 Depending on its hydrological impacts, the project could result in a take of wood storks by harassment due to both loss of prey and to habitat loss that would interfere with their use of the Okefenokee for foraging, breeding, and nesting purposes. Moreover, the project may result in a take of wood storks due to harassment from lighting, noise, and human encroachment near the refuge boundary. Finally, the project may result in take of eastern indigo snake by both harm and harassment. This is because mining operations are likely to result in both direct mortality and the fragmentation of existing populations due to habitat alterations.

## VII. Before granting a Section 404 permit, the Corps should ensure that the proposed mine would not adversely impact Okefenokee Wilderness.

As part of the public interest test, the Corps must also consider whether the proposed mine would have any adverse impacts on Okefenokee Wilderness. The 12,000-acre Twin Pines tract directly abuts the wilderness. As explained elsewhere in these comments, since Twin Pines has made it clear that its mining project will progress in phases and there is no indication that Twin Pines will set aside a buffer between the proposed mine and the Wilderness area, it is fair to conclude that mined area will extend up to the wilderness area boundary. Unless Twin Pines engages in extraordinary measures, the proposed phased mining project will have adverse noise, light, and recreational impacts on the wilderness area.

Congress passed the Wilderness Act in 1964 to ensure that there were lands in the United States that offered solitude so that people would have the opportunity to experience natural sights and sounds. The Act aims to preserve and protect such lands in their natural

<sup>&</sup>lt;sup>280</sup> Endangered and Threatened Wildlife and Plants; Threatened Status for the Gulf Sturgeon; Final Rule, 56 Fed. Reg. 49387 (Sept. 30, 1991) (extending take prohibitions).

<sup>&</sup>lt;sup>281</sup> *See* Endangered and Threatened Wildlife and Plants; Reclassification of the U.S. Breeding Population of the Wood Stork From Endangered to Threatened; Final Rule 37080 (June 30, 2014) (extending take prohibitions).