

**TWIN PINES MINERALS, LLC
SAUNDERS DEMONSTRATION MINE
CHARLTON COUNTY, GEORGIA**

As requested by Georgia EPD, Twin Pines Minerals, LLC (TPM) has completed the Provisions Checklist for Protection of the Environment and Resources of the State, which was developed to assist compliance with the Georgia Environmental Policy Act ("GEPA"). While TPM does not object to completing the survey, we note that the GEPA statute does not apply to any activity by a non-governmental entity, including activities permitted or licensed by government agencies.

The following provides an explanation for the answers provided to each item in the checklist.

1. Wetlands - Will the action occur in a "wetlands" area?

The definition of wetlands is included in the Federal Regulation, 33 CFR 32.93. The DNR Rules for Environmental Planning, Chapter 391-3-16-03, incorporate the federal definition as well as both acceptable and unacceptable uses of wetlands. Under current federal law and state policy, alterations or degradations of wetlands should be avoided unless it can be demonstrated that there will be no long-term impacts or net loss of wetlands. A Federal Permit is required for most wetland activities.

No federal jurisdictional wetlands will be affected by this project. Non-jurisdictional wetlands will be temporarily affected. They will be reclaimed as detailed in the Reclamation Plan incorporated in the Surface Mining Land Use Plan.

2. Flood Plain/River Corridor - Will the action occur in a floodplain or a river corridor?

Floodplains are designated areas of land that become flooded with water during periods of rainfall that increase the primary stream flow. Many floodplain areas are shown on Federal Floodplain Maps which have been prepared in support of the National Flood Insurance Program. Additional maps and information on floodplains are available from the DNR's Environmental Protection Division (EPD). Most proposed government actions that occur directly in a floodplain area or which may alter the size or character of the floodplain area are considered significant. Under H.B. 643, passed by the 1991 Session of the General Assembly, lands adjacent to major rivers are protected from certain types of development. DNR is charged with developing rules for the River Corridor protection program.

The project is not located within the flood plain of the St. Marys River or any of its tributaries. It is also not in a river corridor, being over 5 miles from the St. Marys River.

3. Water Supply - Does the proposed action have the potential for decreasing either the quality or quantity of water available for water supply?

Water supply means a source of water that is used for drinking water in addition to other consumptive purposes. The DNR Rules, Chapter 391-3-16, contain criteria for water supply watersheds. These criteria establish a basis to allow development in a water supply watershed without contaminating the water source to a point where it cannot be treated to meet drinking water standards. EPD can provide information to state agencies as to whether their proposed projects lie within water supply watersheds.

The quality and quantity of drinking water sources will not be affected. The project is not within a public water supply watershed. Based on the well inventory prepared for the project, there also are no public water supply wells in the area.

4. Water Resources - Will the proposed action result in large demand for water from the available water resources? Will the proposed action result in a degradation of the quality of waters of the state?

The waters of the state include surface and groundwater that is not wholly confined to a single privately owned piece of property. Water resources management is one of the most important issues facing Georgia now and in the future. A growing population and the potential for water shortages focus on the importance of adequate amounts of good quality water. The DNR Rules for Surface Water Withdrawals, chapter 391-3-6, provide the regulatory framework for withdrawal, diversion or impoundment of surface waters of the State. DNR Rules for groundwater Use, Chapter 391-3-2, establish regulatory framework for withdrawal, diversion or impoundment of surface waters of the State. DNR Rules for Groundwater Use, Chapter 391-3-2, establish regulatory procedures for withdrawing, obtaining or utilization of groundwaters of the state.

No surface water withdrawal is proposed for the project. A maximum of 1.44 million gallons per day (MGD) of water will be withdrawn from the Upper Floridan Aquifer, subject to a permit to be issued by Georgia EPD. The average daily withdrawal will be much less. The withdrawal will not have a material effect on the availability of water for other users or uses, on water levels in the Okefenokee National Wildlife Refuge, or on associated hydrologic systems.

As discussed in parts 6 and 7 below, the project will operate pursuant to wastewater discharge and stormwater permits issued by Georgia EPD, which will ensure that waters of the state are not degraded.

5. Groundwater Recharge - Will the action result in the disturbance or altering of a groundwater recharge area?

Groundwater recharge areas are those portions of the earth's surface where water infiltrates into the ground to replenish an aquifer. The Significant Recharge Areas of the state are those areas mapped by the DNR in Hydrologic Atlas 18 (1989 Edition). The DNR Rules for Environmental Planning Criteria, Chapter 391-3-16, contain specific criteria for protection of groundwater recharge areas.

No significant groundwater recharge area will be affected by this project. The proposed TPM Saunders Demonstration Mine site is not located within a Significant Recharge Area as mapped by the DNR in Hydrologic Atlas 18 (1989 Edition).

6. Stormwater - Will the project result in increasing the amount of storm water runoff for downstream property owners?

The primary concern related to storm water is the creation of impervious surfaces that contribute to an increase of the amount of storm water runoff to the point where there is damage or a threat to downstream property owners. Another very important issue is the potential contamination of stormwater through increased contact with contaminants.

The volume of stormwater runoff from the facility is not expected to be greater than pre-mining conditions. Stormwater discharges associated with the proposed TPM Saunders Demonstration Mine will

be covered under an Industrial National Pollutant Discharge Elimination System (NPDES) General Permit (GAR050000). TPM will be required to maintain compliance with the requirements of the permit, including preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP).

7. Wastewater - Will the project produce wastewater that is discharged to a surface stream?

Wastewater means contaminated water (sewage or other contaminants) that must be treated and disposed of either by direct discharge to a surface stream or indirect discharge to an existing municipal sewer system. Even if the wastewater from a state project is to be discharged to a municipal sewer system, the effect can be significant if that wastewater causes the municipality to expand its sewage treatment system.

Wastewater will be discharged to Boone Creek pursuant to an NPDES permit to be issued by Georgia EPD. Impacts to the receiving stream will be minor, as demonstrated in the antidegradation analysis. As described in the Water Use Management Plan submitted with the NPDES permit application, the only process wastewater discharge to surface water will occur when (1) it is necessary to pump water from the process water overflow pond to prevent it from overflowing due to excess stormwater and/or process operations which produce more water than is typical, and (2) when it is necessary to de-water the mining pit due to equipment malfunctions or other emergency repairs. All process water will be treated prior to discharge.

8. Air Quality - Will the action result in a release or discharge of contaminants into the ambient air?

Any action that results in the release or discharge of contaminants into the air such that existing ambient air quality may be diminished is a significant action. All discharges or releases may be subject to regulation under the Georgia Air Quality Control Act and/or the U.S. Clean Air Act.

The TPM Saunders Demonstration Mine will be covered under an EPD-issued air permit for particulate/opacity emissions relating to operation of the Mineral Separation Plant. TPM will be required to maintain compliance with requirements of the permit. The permit, once issued, will stipulate provisions to ensure potential impacts are protective of the environment.

9. Solid Wastes - Will the project result in the generation of solid wastes for disposal, or will the proposed actions occur near or in an active or closed landfill?

Solid waste is defined in the Georgia Comprehensive Solid Waste Management Act. It includes different categories of wastes which exist in a solid form (household garbage, demolition material, land clearing debris, commercial non-hazardous waste material, etc). Whereas the amount of solid waste generated that requires disposal is of concern, another primary issue relates to a land disturbing activity in the vicinity of an active or closed landfill.

The TPM Saunders Demonstration Mine will not generate process solid waste that will require off-site disposal. Office-related waste will be disposed off-site by a contracted waste disposal company. The proposed mining area is not within a former landfill; therefore, no land disturbing activity will occur in the vicinity of an active or closed landfill.

10. Soil Stability/Erodibility - Will the action displace soils that will be carried off site and pose a threat to surface waters or property?

Under the Georgia Soil, Erosion and Sedimentation Act, local governments which have authorized management programs under the Act establish control procedures and permit the project. If the action takes place in a county or municipality that does not have such authorization, EPD is the regulating agency. In either case, a technical guidance book is available from either the local government or EPD.

The proposed TPM Saunders Demonstration Mine has submitted a Surface Mining Land Use Plan that details erosion control measures and reclamation activities that will be implemented to reduce the potential for sediment-laden soils to leave the site. The TPM Saunders Demonstration Mine site and the Mineral Separation Plant site will be covered under Industrial NPDES General Stormwater permits (GAR050000). These permits require the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to provide measures for control of stormwater discharge. Construction activities that may not be covered by the Surface Mining Permit will be permitted under a Construction Stormwater Permit to be issued by the EPD. Detailed erosion control measures will be included in any such permit application.

11. Protected Mountains - Will the project involve the alteration of lands with high elevations and steep slopes?

Under House Bill 643, which was passed by the 1991 Session of the General Assembly, land which lies above 2,200 feet in elevation and has slopes of twenty-five (25%) or more, are identified as Protected Mountains. In accordance with the Act, DNR is charged with promulgating Rules for implementation of a "Mountain Protection" program.

Protected mountains will not be affected by the project. The TPM Saunders Demonstration Mine site is not located on or near protected mountains, as defined by Rule 391-3-16-.05(2)(i).

12. Protected Species - Will the proposed action harm or reduce the population of protected species?

Endangered species is used in both the generic sense for protected species and in a more narrow definition sense under the U.S. Endangered Species Act. Protected species includes those plant and animal species protected by the State in accordance with Georgia Wildflower Preservation Act of 1973 and the Georgia Endangered Wildlife Act of 1973. DNR Rules, Chapter 391-4-10, provide more detailed criteria for the state's protected species.

Protected species will not be affected by the project. The TPM Saunders Demonstration Mine site was evaluated for the presence of protected species and/or their associated critical habitat(s) during 2018 - 2020. Referenced species surveys and habitat assessment reports are provided as an exhibit within the Surface Mining Land Use Plan.

13. Critical Habitats - Is the proposed action expected to involve any critical habitats?

Critical Habitats, including U.S. Forest lands, U.S. Wildlife Refuges, Wilderness Areas, and Wild or Scenic Rivers, will not be affected by the project.

The proposed demonstration mine will not affect any “critical habitats,” as that term is defined under the federal Endangered Species Act, U.S. Forest lands, U.S. Wildlife Refuges, Wilderness Areas, or Wild and Scenic Rivers. At its closest point, the project site is 2.9 miles away from the boundary of the Okefenokee National Wildlife Refuge..

14. Historical - Will the proposed action involve disturbance of any historic property?

Applicant will need to consider any structure on or adjacent to the mine with the National Register of Historic Places.

Historical properties will not be disturbed by the project. No properties listed on the National Register of Historic Places are located on or adjacent to the proposed mining operation. A copy of the Cultural Resources assessment was included as an exhibit to the Surface Mining Land Use Plan.

15. Archaeological - Will the proposed action involve disturbance of any archeological property?

Archeological properties are the physical remains of the past that can be studied by archaeologist and other scholars to answer questions about prehistory and history. In addition, the regulations of the President's Advisory Council on Historic Preservation (36 CFR 800) which implements Section 106 of the National Historic Preservation Act contains definition and criteria of adverse effect for the protection of historic properties.

Archaeological properties will not be disturbed. A copy of the Cultural Resources assessment was included as an exhibit to the Surface Mining Land Use Plan.

16. Parks/Recreation— Will the proposed action involve disturbance or otherwise have a significant impact on the State's cultural resources?

In addition to the archeological or historic value, cultural resources may also include park lands, preserves, and other public lands or areas of recognized scenic and/or recreational value.

Park lands and public lands will not be disturbed or significantly affected. The TPM Saunders Demonstration Mine is 2.9 miles southeast from the Okefenokee National Wildlife Refuge property boundary and over five miles from the St. Marys River. Impacts to the Okefenokee National Wildlife Refuge and surrounding recreational waterways will be negligible.

17. Energy Supplies— Will the proposed action have significant impact on the reduction in the available energy supplies?

This primarily refers to the source of energy (electrical, gas/oil, solar, etc) that will be consumed by the project in relation to the total available in the area.

The TPM Saunders Demonstration Mine will use electricity to power the dragline and the mineral processing equipment. Sufficient power is available in the area to support the mining operations without impacting other power users in the area.

18. Beaches— Will the proposed action involve the disturbance of any ocean beach area?

The Georgia General Assembly has found that ocean beaches provide an unparalleled recreation resource which is vitally lined to the economy of Georgia's Coastal Zone and to that of the entire state.

They are also part of the sand-sharing system which provides habitats and acts as a protective buffer for other areas. This natural resource system is costly, if not impossible to reconstruct or rehabilitate once adversely affected by man-related activities. Therefore, any action in these areas should be considered highly significant

Beaches will not be affected by the project. The TPM Saunders Demonstration Mine site is located approximately 40 miles from the Atlantic Coast and associated beaches.

19. Dunes— Will the proposed activity alter coastal sand dunes?

Coastal sand dunes, beaches, sandbars, and shoals, comprise a vital natural resource system, known as the "sand-sharing system", which acts as a buffer to protect real and personal property and natural resources from the damaging effects of floods, winds, tides, and erosion. The coastal sand dunes are the most inland portion of the sand-sharing system and because they are a fragile product of shoreline evaluation, they are easily disturbed by action harming their vegetation or inhibiting their natural development. they are protected under the Georgia Shoreline Assistance Act of 1979.

Dunes will not be affected by the project. The TPM Saunders Demonstration Mine site is located approximately 40 miles from the Atlantic Coast and associated dunes.

20. Shoreline— Will the project involve activities in the Georgia Coastal shoreline area or in areas covered under the river corridor protection requirements of Georgia House Bill 643?

In accordance with DNR Rules, Chapter 391-2-2, protective measures and procedures are provided for the implementation of the Georgia Shoreline Assistance Act. Construction, erection, or engaging in any shoreline engineering activity or land alteration which alters the natural topography or vegetation of any area is highly regulated under the Act. In addition, the 1991 General Assembly passed House Bill 643 which also provides for the protection of coastal river corridors. DNR is authorized to promulgate Rules for the implementation of House Bill 643 and they are currently being developed.

Shoreline will not be affected by the project. The TPM Saunders Demonstration Mine site is located approximately 40 miles from the Atlantic Coast.

21. Coastal Marshland- Will the proposed action alter the Georgia coastal marshlands environment?

Georgia's coast contains the saltwater marshes. These marshes have been identified as one of the most extensive and productive marshland systems in the United States. Georgia's marshes, sands and near-shore ocean water produce more food and energy than any other estuaries zone on the eastern seaboard. They are also an essential life support system for Georgia's multi-million dollar seafood industry. Any activities that affect this area are closely regulated under the Georgia Coastal Marshlands Protection Act

Coastal marshland will not be affected by the project. The TPM Saunders Demonstration Mine site is located approximately 40 miles from the Atlantic Coast and associated coastal marshland.

22. Forest Land- Will the proposed action involve changes in forested areas?

Please include the harvesting of five acres or more of trees over two inches in diameter at breast height. The secondary effects of tree removal as well as other land disturbing activities that may

impact a forested area are of concern. Depending on the type of harvesting methods, tract locations and other variable criteria, there may exist a potential for erosion and sedimentation, habitat alteration, and other changes of concern. Manuals on Best Management Practices (common sense forestry associated practices which minimize the impact on the environment) are available from the Georgia Forestry Commission. These practices were developed by statewide task force, appointed by the Governor, with input from all aspects of forestry in Georgia.

Portions of the project site have been used for silviculture. Timber will be removed prior to mining; however, the reclamation plan submitted as part of the Surface Mining Land Use Plan calls for trees to be replanted after mining ceases.

23. Barrier Island - Will the proposed action involve activity on or near a barrier island?

Along the Georgia Coast, an extensive system of salt marshes, tidal estuaries, and sounds separate a chain of eight major and several smaller barrier islands from the mainland. Two-thirds of Georgia Barrier Islands are parks, refuges, or preserves. Sand beaches and dunes protect the islands from erosion and flooding. The islands shelter the marshes from the force of storms. Any proposed action that involves the barrier islands should be considered highly significant.

Barrier islands will not be affected by the project. The TPM Saunders Demonstration Mine site is not located on or near barrier islands.

24. Aquatic Life/Trout Streams - Will the proposed action involve an action that significantly impacts freshwater aquatic life?

Georgia has an abundance of freshwater lakes, streams, and bodies of water that support aquatic life. The freshwater fisheries are important for the total food chain. Primary and secondary trout streams should be protected.

No primary or secondary trout streams will be affected by the project (reference Georgia Department of Natural Resources Wildlife Resource Division – Trout Streams of Georgia Interactive Map). Impact to aquatic resources will be limited to the non-jurisdictional wetlands within the proposed mine footprint. Discharges of stormwater and wastewater will be covered under applicable NPDES permits to be issued by Georgia EPD. Discharges will be in compliance with permit limitations as may be set by the EPD, which are designed to be protective of the aquatic resources.