

March 13, 2020

Regulatory Division SAS-2018-00554

JOINT PUBLIC NOTICE Savannah District/State of Georgia

The Savannah District has received an application for a Department of the Army permit, pursuant to Section 404 of the Clean Water Act (33 U.S.C § 1344), as follows:

Application Number: SAS-2018-00554

<u>Applicant</u>: Steven R. Ingle, Twin Pines Minerals, LLC, 2100 Southbridge Parkway, Birmingham, Alabama 35209

<u>Agent :</u> Cindy House-Pearson, TTL, Incorporated, 2743-B Gunter Park Drive West, Montgomery, Alabama 36109

<u>Location of Proposed Work</u>: The 1,042 acre site is located North of Georgia Highway 94, West of Georgia Highway 23, and East of the Okefenokee National Wildlife Refuge, Saint George, Charlton County, Georgia (Latitude 30.524446, Longitude -82.11909).

Description of Work Subject to the Jurisdiction of the U.S. Army Corps of Engineers: The applicant proposes to construct a demonstration mining project on 1,042 acres that will mine heavy mineral sands on 898 acres over 6 years. The proposed demonstration project will be used to validate a previously completed groundwater model. Impacts to aquatic resources will occur in yearly phases as shown on the enclosed table. Compensatory mitigation was calculated according to the Savannah District 2018 Mitigation SOP, and the applicant is proposing to purchase credits for the permanent impacts to streams and wetland as shown in the enclosed table. The enclosures attached to this Public Notice include a selection of 13 pages of figures, tables, and information from the full application. The full application and appendices are available for public download as separate documents. Please refer to the Savannah District Public Notice page for links to download the full application and appendices. https://www.sas.usace.army.mil/Missions/Regulatory/Public-Notices/Year/2020/

BACKGROUND

The proposal to mine along Trail Ridge was originally presented at the Savannah District Interagency Review Team (IRT) meeting on August 7, 2018 as a pre-application

consultation. Written comments were received by this office from U.S. Fish and Wildlife Service (USFWS), Georgia Department of Natural Resources, and U.S. Environmental Protection Agency (EPA) in response to the pre-application meeting and documents provided by the applicant to these agencies.

This office issued an Aquatic Resource Delineation Concurrence letter on December 18, 2018 for the Loncala and Keystone tracts, and on January 24, 2020 for the Adirondack and TIAA tracts. The Loncala tract is 1,012-acres and contains 405.11 acres of wetland and 3,020 linear feet of tributary. The Keystone tract is 1,034-acres and contains 544 acres of wetland and 297 linear feet of tributary. The Adirondack tract is 551-acres and contains 149.6 acres of wetland and 11,840 linear feet of tributary. The TIAA tract is 1,143-acres and contains 662.2 acres of wetland.

The initial proposal for Phase I of the overall mine was submitted to Savannah District on July 5, 2019, and a joint public notice (JPN) was published on July 12, 2019. The JPN was extended on July 19, 2019 and closed on September 12, 2019. Over 22,000 comments from resource agencies, politicians, environmental groups, students, and members of the public were received. Copies of the comments were provided to the applicant and their consultant on October 7, 2019. The application was withdrawn on February 7, 2020. The current proposal was received on March 6, 2020. The proposed mining operation would be within the proposed project area for Phase I. However, as a result of discussions between the Corps and applicant, the scope of the proposed project has been reduced and the project purpose has been modified to utilize this project specifically as a demonstration project to validate groundwater models for the purpose of better understanding the effects of mining activities along Trail Ridge. The mine is still proposed to function as an economically viable stand-alone project that does not rely on future mining activities to be practicable to the applicant.

This Joint Public Notice announces a request for authorizations from both the Corps and the State of Georgia. The applicant's proposed work may also require local governmental approval.

STATE OF GEORGIA

<u>Water Quality Certification</u>: The Georgia Department of Natural Resources, Environmental Protection Division will review the proposed project for Water Quality Certification, in accordance with the provisions of Section 401 of the Clean Water Act. Prior to issuance of a Department of the Army Permit for a project located in, on, or adjacent to the waters of the State of Georgia, review for Water Quality Certification is required. A reasonable period of time, which shall not exceed one year, is established under the Clean Water Act for the State to act on a request for Water Quality Certification, after which, issuance of such a Department of the Army Permit may proceed.

<u>State-owned Property and Resources</u>: The applicant may also require assent from the State of Georgia, which may be in the form of a license, easement, lease, permit or other appropriate instrument.

<u>Georgia Coastal Management Program</u>: Prior to the Savannah District Corps of Engineers making a final permit decision on this application, the project must be certified by the Georgia Department of Natural Resources, Coastal Resources Division, to be consistent with applicable provisions of the State of Georgia Coastal Management Program (15 CFR Part 930). Anyone wishing to comment on Coastal Management Program certification of this project should submit comments in writing within 30 days of the date of this notice to the Federal Consistency Coordinator, Ecological Services Section, Coastal Resources Division, Georgia Department of Natural Resources, One Conservation Way, Brunswick, Georgia 31523-8600 (Telephone 912-264-7218).

U.S. ARMY CORPS OF ENGINEERS

The Savannah District must consider the purpose and the impacts of the applicant's proposed work, prior to a decision on issuance of a Department of the Army permit.

<u>Cultural Resources Assessment</u>: In compliance with Section 106 of the National Historic Preservation Act of 1966 and amendments thereto, an analysis for archaeological and historic resources was conducted. Terra Xplorations conducted a Phase I cultural resources survey for the Keystone, Adirondack, and TIAA tracts and summarized their findings in three separate reports. These reports will be coordinated with the State Historic Preservation Officer.

The Corps has NOT made an effects determination regarding potential effects to historic properties, however we are requesting information from any interested parties on the potential for this project to effect properties listed in or eligible for listing in the National Register of Historic Places.

<u>Endangered Species</u>: Threatened and Endangered species surveys were conducted for the project area, and consultation with the USFWS will be required. The application states that the gopher tortoise and gopher frog will be impacted by the project due to the construction of facilities and mining activities.

Pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 et seq.), we request information from the USFWS, the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service; or, any other interested party, on whether any species listed or proposed for listing may be present in the area and the potential effects this project may have on those species.

<u>Public Interest Review</u>: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable

detriments. All factors, which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and in general, the needs and welfare of the people.

<u>Consideration of Public Comments</u>: The Corps is soliciting comments from the public; federal, state, and local agencies and officials; Native American Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

<u>Application of Section 404(b)(1) Guidelines</u>: The proposed activity involves the discharge of dredged or fill material into the waters of the United States. The Savannah District's evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the EPA Administrator, under the authority of Section 404(b) of the Clean Water Act.

<u>Public Hearing</u>: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application for a Department of the Army permit. Requests for public hearings shall state, with particularity, the reasons for requesting a public hearing. The decision whether to hold a public hearing is at the discretion of the District Engineer, or his designated appointee, based on the need for additional substantial information necessary in evaluating the proposed project.

<u>Public Meetings</u>: Public Meetings will be held at locations in the State of Georgia. The locations, dates, and times of Public Meetings will be provided by separate public notice and will also be posted on our website. Notice of public meetings will be provided no later than 30 days before the date of the 1st meeting, to allow sufficient advance notice. General locations under consideration include metro Atlanta, metro Savannah, and a location near the project area. No registration will be required to attend. The purpose of these meetings is to allow the public opportunity to review and provide comments on the proposed project.

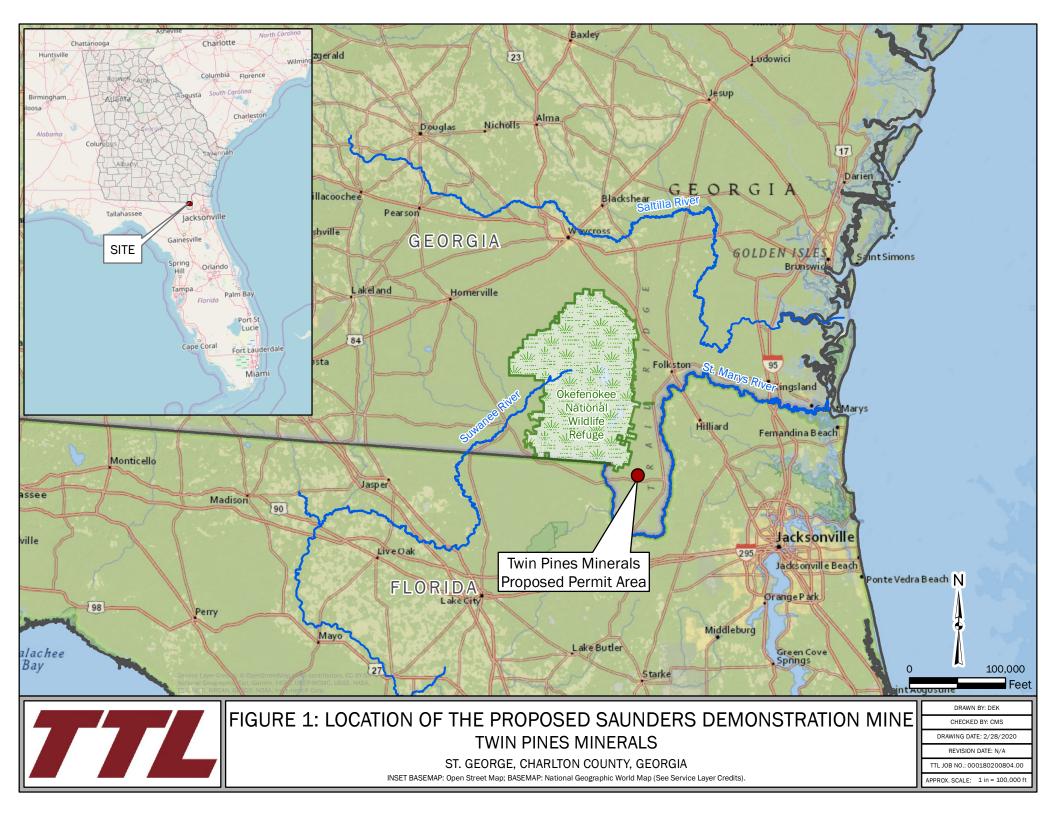
<u>Comment Period</u>: Anyone wishing to comment on this application for a Department of the Army permit should submit comments by email to:

CESAS-SpecialProjects@usace.army.mil or alternatively in writing to the Commander, U.S. Army Corps of Engineers, Savannah District, Attention: Ms. Holly Ross, 1104 North Westover Boulevard, Suite 9, Albany, Georgia, 31707, no later than 30 days from the date of this notice. Please refer to the applicant's name and the application number in your comments.

If you have any further questions concerning this matter, please contact Ms. Holly Ross, Project Manager, Albany Field Office at 678-422-2727 or via email at **CESAS-SpecialProjects@usace.army.mil**.

Enclosures:

- 1. Project Location, Saunders
- 2. Heavy Minerals formations map
- 3. Hydrologic Unit Code map
- 4. Overall Saunders Tract
- 5. Proposed project area showing progression of mining
- 6. Summary table of Alternatives Analysis
- 7. Summary table of on-site avoidance and minimization
- 8. Types and amounts of aquatic resource impacts (3 pages)
- 9. Mitigation Plan (2 pages)



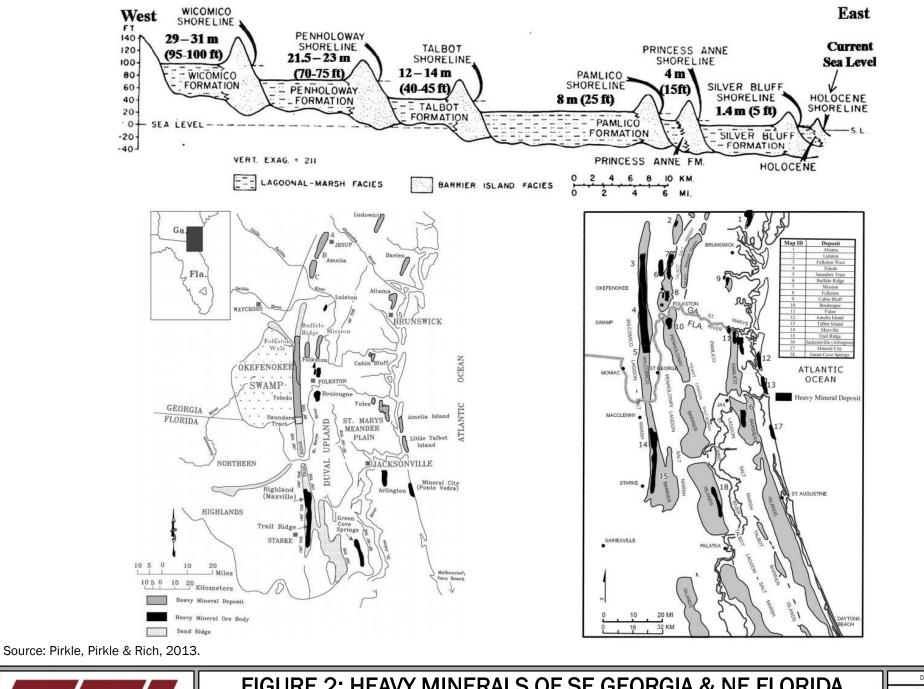
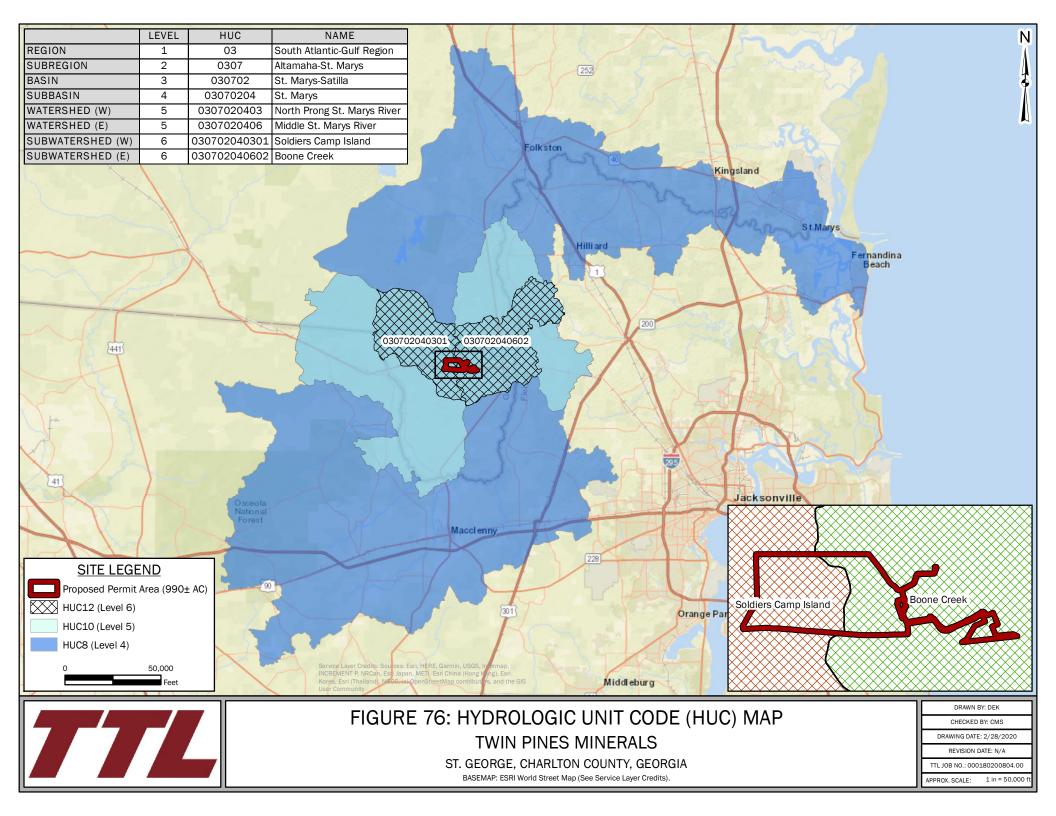
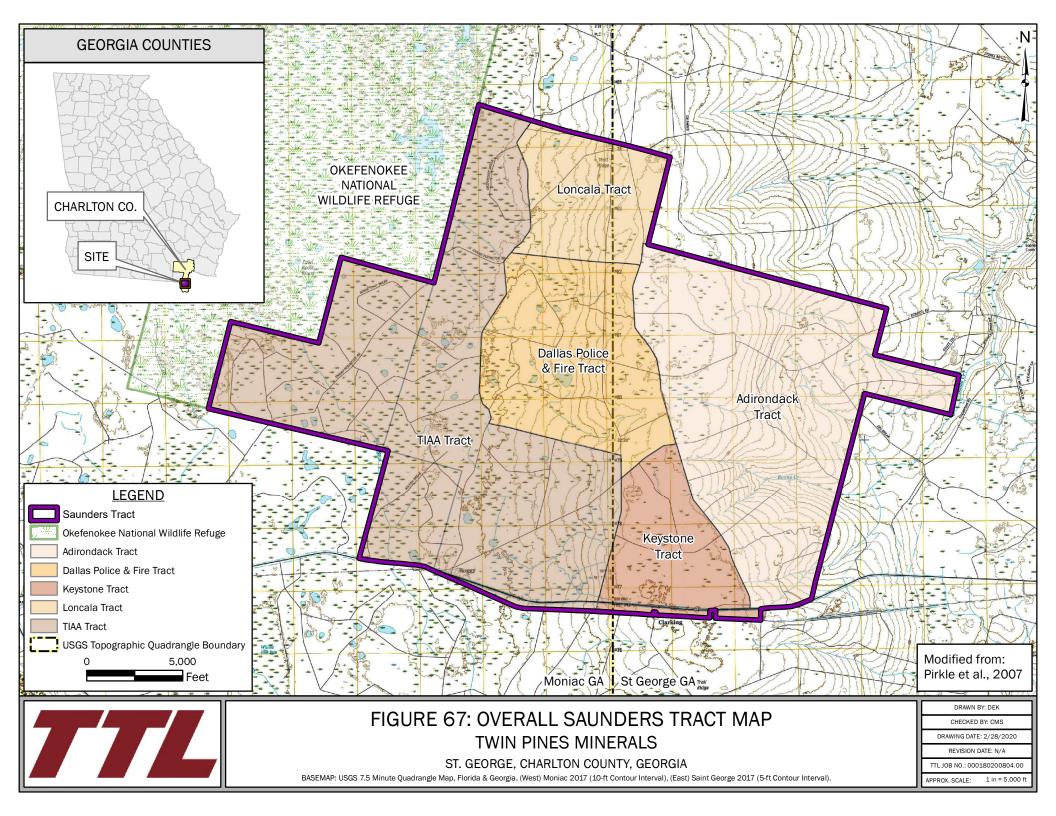
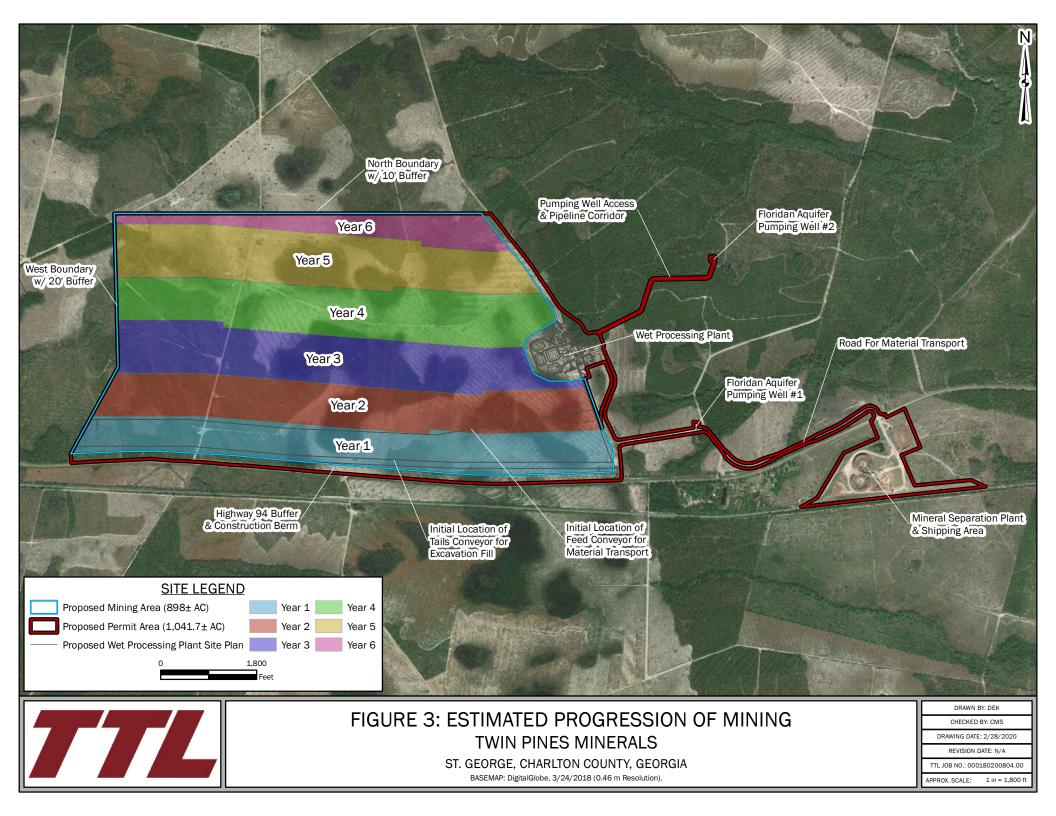




FIGURE 2: HEAVY MINERALS OF SE GEORGIA & NE FLORIDA TWIN PINES MINERALS ST. GEORGE, CHARLTON COUNTY, GEORGIA DRAWN BY: DEK CHECKED BY: CMS DRAWING DATE: 2/21/2020 REVISION DATE: N/A TTL JOB NO.: 000180200804.00 APPROX. SCALE:







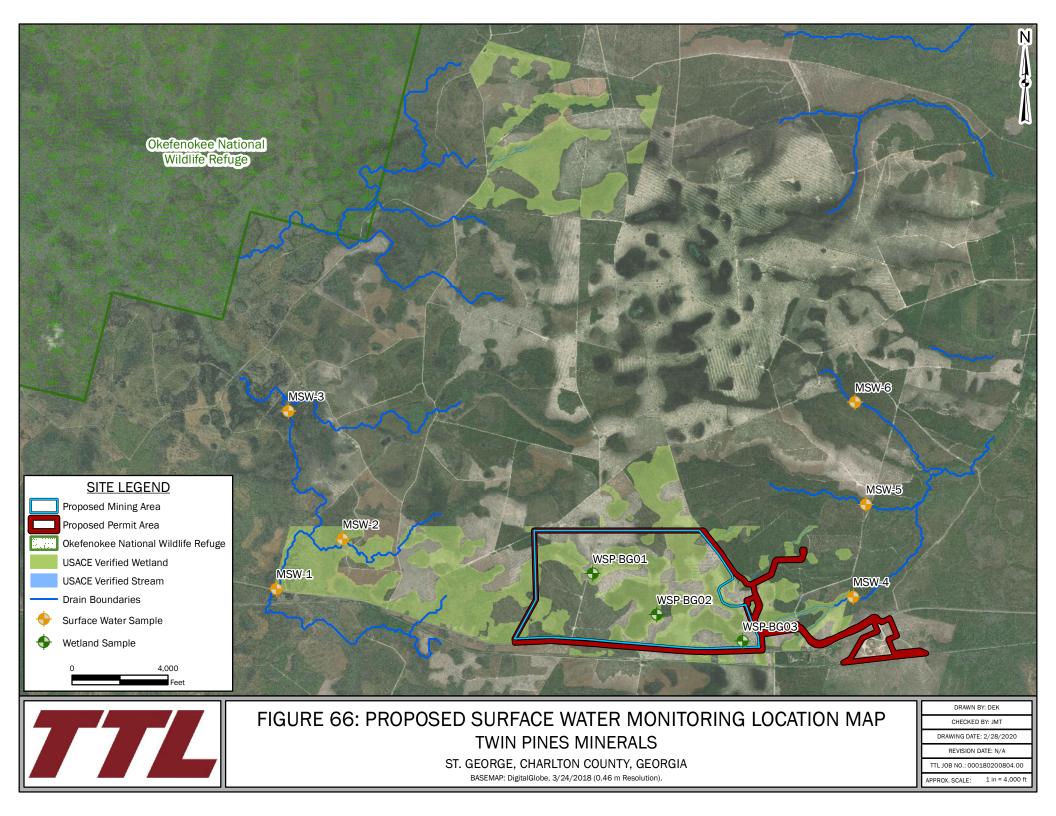


Table 17: Summary of Alternatives Analysis								
		Off-Site Alternative On-Site Alternatives: Saunders Tract						
Factor		Alternative 1 (CS 1)	Alternative 2 (CS 2)	Alternative 3 (Loncala Tract)	Alternative 4 (Keystone Tract: Layout 1)	Alternative 5 (Keystone Tract: Layout 2)	Alternative 6 (No Action Alternative)	
Distance from Okefenokee Swamp		>3.0 miles	>3.0 miles	0.5 miles	2.7 miles	2.7 miles	NA	
Aquatic Resources	Wetland	Not evaluated	Not evaluated	405.11 ac	1,194.437 ac	1,202.399 ac	NA	
On-Site	Stream	Not evaluated	Not evaluated	3,020 lf	11,587 lf	11,587 lf	NA	
	Open Water	Not evaluated	Not evaluated	0.34 ac	0 ac	0 ac	NA	
Cultural Resources		Not evaluated	Not evaluated	Yes – one potentially eligible site; one unknown effect	Yes – one potentially eligible site off-site property	Yes – one potentially eligible site off-site property	No effect	
Effect on T&E Species		Not evaluated	Not evaluated	No effect with mitigation measures	No effect with mitigation measures	No effect with mitigation measures	No effect	
Economic Feasibility (Mining cuts avg 1.5% HMS)		No	No	Yes	Yes	Yes	No	
Available for Lease/Purchase		Yes	Yes	Yes	Yes	Yes	NA	
Practi	cable	No	No	Yes	Yes	Yes	No	

Table 18: Avoidance and Minimization Summary Table											
Factor		Alterna	ative 3 (Lon	cala Tract)	Alternative 4 (Keystone Tract: Alternative 5 (Keystone Tract: Layout 1) Layout 2)						
	Distance from Okefenokee Swamp		0.5 miles	6				2.7 miles	2.7 miles		
Distance	from Rail		3.5 miles	5	On-site	e but would r constructe		On-s	ite, currently	ently in place	
			Im	pacted		Imp	pacted		Im	pacted	
Aquatic Resources		On-site	Mining	Infrastructure	On-site	Mining	Infrastructure	On-site	Mining	Infrastructure	
	Wetland (ac)	405.387	287.537	4.672	1,194.44	522.134	65.131	1,202.40	453.111	25.124	
	Stream (lf/ac)	3,020 / 0.337	0	1,160 / 0.106	11,587 / 1.010	0	8,781/0.692	11,587 / 1.010	0	412 / 0.020	
	Open Water (ac)	0.34 ac	0	0	0	0	0	0	0	0	
Cultural F	Resources	, prop	osed mining	site adjacent to	One poten	tially NRHP e . Property wil	eligible off-site I be avoided	One potentially NRHP eligible off-site property		0	
Threatened & Endangered Species Summary (within proposed impact footprint)			tortoise, 3 go veyed for liste	opher frogs, not ed plants	t 6 gopher tortoise, 2 gopher frogs, 0 federally listed plants, 3 state listed threatened parrot pitcher plants 1 gopher tortoise, 0 federally listed plant threatened parrot			isted plants,	1 state listed		
LEC	OPA		NO			NO			YES		

6.0 TYPES OF IMPACTS

The current design for the proposed project would impact waters of the U.S. by dragline mining and subsequent placement of approximately 33,182,677 cubic yards of fill material in wetlands, and streams, as well as the construction of the associated facilities and roads which would involve the placement of fill material in wetlands and streams. The impacts to wetlands from the mining activities are considered permanent for the purposes of mitigation due to the unknown, long-term timeline associated with restoring previously mined areas. However, the mined area will be reclaimed with the excavated material and, once minerals are extracted, restored. Restoring wetlands will minimize the temporal loss of wetland function and provide data to demonstrate the time necessary to complete wetland restoration activities after HMS mining. Mitigation for impacts will be provided through the purchase of wetland and stream credits from an approved commercial mitigation bank, because of this and the proposed reclamation activities of the mine that will be constructed will result in permanent impacts to waters of the U.S. Stream SB will be permanently impacted by the placement of a culvert and associated outfall protection in an existing low-water road crossing, detailed drawings for the culverted locations and cross-sections are included in Appendix E.

The waters proposed to be impacted include wetlands and intermittent streams. The streams are generally part of the tributary system of the St. Mary's River. On-site aquatic features and proposed impacts are shown on Figure 75. The review area contains approximately 1,202.399 acres of wetlands and approximately 11,587 linear feet of stream channel. Aquatic resources quantities, proposed impacts, and mining summary are provided in the tables below. All activities will be performed in a manner to minimize turbidity in the stream.

Proposed Mining Summary by Property								
Property	Mining Method	Total Area to be mined (ac)	Mining Depth	Total Wetland to be Mined (ac)	Total Upland to be Mined (ac)			
TIAA	Dragline	233.315	25	83.511	149.804			
Keystone	Dragline	644.566	50	369.60	294.966			
TOTAL		897.881		453.111	444.77			

The following table provides a summary of the proposed mining volumes by property area.

Proposed Mining Volume Summary								
Broporty	Total Volume to	be Mined	Total Wetland to Be Mined					
Property	Cubic feet	Cubic yards	Cubic feet	Cubic yards				
TIAA	254,080,050 ±	9,410,372 ±	90,943,484	3,368,277				
Keystone	1,447,424,750 ±	53,608,324 ±	804,988,801	29,814,400				
TOTAL	1,701,504,800 ±	63,410,372 ±	895,932,285	33,182,677				

There will be no oils or other pollutants released from the proposed activities which will reach the stream.

All work performed during construction will be done in a manner to prevent interference with any legitimate water uses.

	Proposed Mining Wetland Impact Summary by Year										
YE	AR 1	YE	AR 2	YE	YEAR 3 YEAR 4		AR 4	YEAR 5		YEAR 6	
ID	AREA (Acres)	ID	AREA (Acre)	ID	AREA (Acres)	ID	AREA (Acres)	ID	AREA (Acres)	ID	AREA (Acres)
WA1	4.947	WH1	0.084	WN1	3.619	WU1	15.485	WAB1	27.497	WAH	0.376
WB1	9.588	WI1	20.476	WO1	1.285	WV	11.088	WAC	21.851	WAI	3.992
WC	19.152	WJ	1.419	WP1	0.530	WW	6.936	WAD	8.927	WAJ	19.691
WD	25.132	WK	0.081	WQ	0.507	WX	12.960	WAE	1.116		
WE	3.945	WL	21.134	WR	46.530	WY	10.171	WAF	24.490		
WF	15.090	WM	47.133	WS	29.754	WZ	13.915	WAG	1.002		
WG	0.756			WT	1.135	WAA	21.317				
Total Year 1	Year 78.61 Year 90.327 Year 83.36 Year 91.872 Year 84.883 Year 24.059										
Total I	Total Mining Impacts = 453.111 acres										
¹ Wetl	¹ Wetland area is located on the TIAA property tract.										

Proposed Infrastructure Wetland Impact Summary							
Property	Wetland ID	Permanent Impacted Area (ac)					
Adirondack	Area 10 (WA)	0.225					
Adirondack	Area 8 (WE)	2.184					
Adirondack	Area 17 (WA)	0.645					
Adirondack	Area 18 (WA)	0.093					
Keystone	Area 4 (WAH)	0.037					
Keystone	Area 5 (WAI)	0.060					
Keystone	Area 6 (WAJ)	0.618					
Keystone	Area 7 (WAA)	4.176					
Keystone	Area 9 (WS)	5.027					
Keystone	Area 11 (WB)	1.367					
Keystone	Area 12 (WF)	0.041					
Keystone	Area 13 (WC)	0.920					
Keystone	Area 14 (WE)	2.378					
Keystone	Area 15 (WD)	3.450					
Keystone	Area 16 (WK)	2.438					
TIAA	Area 1 (WA)	0.330					
TIAA	Area 2 (WN)	0.359					
TIAA	Area 3 (WU)	0.776					
	TOTAL	25.124					

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Proposed Stream Impact Summary									
	Total Permanent Impacts								
Property	Stream ID	Classification	Length Area (LF) (AC)		Length (LF)	Area (AC)			
Keystone	SA	Intermittent	297	0.020	297	0.020			
Adirondack	SB	Intermittent	3,257	0.265	115	0.008			
		TOTAL	3,554	0.285	412	0.028			

7.0 MITIGATION PLAN

Mitigation for permanent impacts will be provided through the purchase of wetland and stream credits from an approved commercial mitigation bank. The Savannah District, US Army Corps of Engineers Regulatory Guidelines to Evaluate Proposed Mitigation Bank Credit Purchases in the State of Georgia was utilized when identifying the appropriate mitigation bank. This analysis is provided below. Using the 2018 Department of the Army Savannah District Corps of Engineers Standard Operating Procedure (SOP), the Qualitative Resource Assessments for Adverse Impact were utilized. SOP worksheets are included in Appendix F. The Qualitative Worksheets for Wetland and Stream Adverse Impacts were utilized to determine the total quantity of wetland and stream credits to be purchased as summarized below. The wetland and stream credits required for the impacts will be purchased prior to the initiation of the associated activities.

Prior to the start of construction, the applicant would purchase the required number of credits for the permanent infrastructure impacts as well as the impacts for the first year of mining (Year 1). The initial purchase would be for 553.36 depressional wetland grandfathered credits and 2,225 stream credits. Upon completion of the first year of mining, the applicant would purchase the required credits for Year 2 prior to commencing further mining. The mitigation for the impacts would continue in a phased manner each year, prior to the start of mining.

Mitigation Credits Required by Year								
	Depression	al Wetland	Stream					
Impact Type	Acres of Impact	Grandfathered Credits Required	Acres of Impact Grandfathered ts Required 0.028 2,2 433.44 0.000 0					
Infrastructure	25.12	119.92	0.028	2,225				
Mining Year 1	78.61	433.44	0.000	0				
Mining Year 2	90.33	541.92	0.000	0				
Mining Year 3	83.36	396.32	0.000	0				
Mining Year 4	91.87	489.28	0.000	0				
Mining Year 5	84.88	405.44	0.000	0				
Mining Year 6	24.06	143.60	0.000	0				
TOTAL	478.23	2,529.92	0.028	2,225				

The project is located in the St. Mary's Primary Service Area (PSA) and in the 03070204 8-digit Hydrologic Unit Code (Figure 76). There are three banks located in the PSA with non-tidal wetland credits. The Musket Bay Mitigation Bank currently has sufficient credits available for purchase for the initial start of construction that includes the permanent infrastructure and mining year 1 impacts. The other banks do not have sufficient credits on their own. Therefore, wetland credits will be purchased from Musket Bay Mitigation Bank or from a combination of banks that have credits available. There is also one bank, the Satilla River Mitigation Bank, that is within the tertiary service area. There are no banks with stream credits that service the 03070204 8-digit Hydrologic Unit Code. The Patriots Pride Mitigation Bank is within the secondary service area. Additional information and analyses are provided in the Table 19.

In general, reclamation will consist of returning the site to approximate preconstruction contours and elevations, replacement of the stockpiled topsoil and revegetation. The general processes are described below:

- Prior to mining the top 6 inches of topsoil will be removed and stockpiled nearby.
- The mined material will be returned to the mined area and restored to approximate preconstruction contours and elevations.
- The stockpiled topsoil will be replaced.
- The area will be revegetated with the appropriate native vegetation.

The Reclamation Plan detailing the activities that will take place will be submitted at a later date.