

AI: 90267

MSR323105



MISSISSIPPI DEPARTMENT OF  
ENVIRONMENTAL QUALITY

Rec'd via email:  
01/29/2026

**MINING NOTICE OF INTENT (MNOI)  
FOR COVERAGE UNDER  
MINING STORM WATER, DEWATERING AND NO DISCHARGE  
GENERAL PERMIT MSR32 3105 —  
(Number to be assigned by State)**

**File at least 30 days prior to the commencement of mining; 15 days if a Storm Water Pollution Prevention Plan (SWPPP) is already on file and mine dewatering is not proposed. Lateral expansion of an existing mine that has general permit coverage requires the submittal of the Major Modification Form, not a new MNOI. However, modification of the existing SWPPP to include the expansion is required. Discharge of storm water or impounded water associated with mining or the operation of a wastewater recirculation system with no discharge without written notification of coverage from MDEQ is a violation of State Law.**

**If the company seeking coverage is a corporation, a limited liability company, a partnership, or a business trust, attach proof of its registration with the Mississippi Secretary of State and/or its Certificate of Good Standing. This registration or Certificate of Good Standing must be dated within twelve (12) months of the date of the submittal of this coverage form. Coverage will be issued in the company name as it is registered with the Mississippi Secretary of State.**

**Please indicate the activities to be covered by this MNOI (check all that apply).**

- |  |  |
|--|--|
| <input type="checkbox"/> Storm Water Discharges Associated with Mining     | <input type="checkbox"/> Mine Dewatering |
| <input type="checkbox"/> Wastewater Recirculation System with No Discharge |  |

**The appropriate section of the MNOI must be completed if the applicant proposes to discharge storm water, discharge impounded mine water (dewatering) and/or operate a wastewater recirculation system with no discharge.**

**A site-specific Storm Water Pollution Prevention Plan (SWPPP) developed in accordance with ACT5 of the General Permit and a United States Geological Survey (USGS) quadrangle map or photocopy, indicating the site location and outfalls must be included with the MNOI submittal. The name of the quadrangle map must be shown on all copies. Quadrangle maps can be obtained from the MDEQ, Office of Geology at 601-961-5523. Additional submittals may include the following (check all that apply).**

- |   |   |
|---|---|
| <input type="checkbox"/> Section 404 Documentation                            | <input type="checkbox"/> Notice of Exempt Operations Form |
| <input type="checkbox"/> Dam/Reservoir Safety Permit or Written Authorization |   |

**ALL INFORMATION MUST BE COMPLETED (indicate "N/A" where not applicable)**

OC

MSR32 3105 \_ \_ \_

(NUMBER TO BE ASSIGNED BY STATE)

APPLICANT IS THE: ☐ OWNER ☐ OPERATOR

**OWNER CONTACT INFORMATION**

OWNER CONTACT PERSON: \_\_\_\_\_

OWNER COMPANY LEGAL NAME: \_\_\_\_\_

OWNER STREET OR P. O. BOX: \_\_\_\_\_

OWNER CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

OWNER PHONE #: (\_\_\_\_) \_\_\_\_\_ OWNER EMAIL: \_\_\_\_\_

**OPERATOR CONTACT INFORMATION**

OPERATOR CONTACT PERSON: \_\_\_\_\_

OPERATOR COMPANY LEGAL NAME: \_\_\_\_\_

OPERATOR STREET OR P. O. BOX: \_\_\_\_\_

OPERATOR CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

OPERATOR PHONE #: (\_\_\_\_) \_\_\_\_\_ OPERATOR EMAIL: \_\_\_\_\_

**MINE INFORMATION**

MINE NAME: \_\_\_\_\_

MINE SITE ADDRESS (If the physical address is not available, please indicate nearest named road.)

Street: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ County: \_\_\_\_\_ Zip: \_\_\_\_\_

\_\_\_\_\_/4 OF \_\_\_\_\_/4 OF SECTION \_\_\_\_\_, TOWNSHIP \_\_\_\_\_, RANGE \_\_\_\_\_

MINE SITE TRIBAL LAND ID (N/A If not applicable): \_\_\_\_\_

ATTACH A USGS QUAD MAP, EXTENDING ½ MILE BEYOND FACILITY, OUTLINING THE MINE BOUNDARIES  
(Maps can be obtained from the Mississippi Office of Geology. For information call 601-961-5523).

LATITUDE: \_\_\_\_ degrees \_\_\_\_ minutes \_\_\_\_ seconds LONGITUDE: \_\_\_\_ degrees \_\_\_\_ minutes \_\_\_\_ seconds

LAT & LONG DATA SOURCE (GPS (*Please GPS Entrance Gate*) or Map Interpolation): \_\_\_\_\_

TOTAL ACREAGE: \_\_\_\_\_ MATERIAL TO BE MINED: \_\_\_\_\_

WILL HYDRAULIC DREDGING BE USED? ☐ YES ☐ NO

WASHING OF SAND/GRAVEL? ☐ YES ☐ NO

ESTIMATED START DATE: \_\_\_\_\_

YYYY-MM-DD

ESTIMATED END DATE: \_\_\_\_\_

YYYY-MM-DD

SIC CODE \_\_\_\_\_

NAICS CODE \_\_\_\_\_

### RECEIVING STREAM INFORMATION

NEAREST NAMED RECEIVING STREAM: \_\_\_\_\_

IS RECEIVING STREAM ON MISSISSIPPI'S 303(D) LIST OF IMPAIRED WATER BODIES? (The 303(d) list of impaired waters and TMDL stream segments may be found on MDEQ's website: [http://www.deq.state.ms.us/MDEQ.nsf/page/TWB\\_Total\\_Maximum\\_Daily\\_Load\\_Section](http://www.deq.state.ms.us/MDEQ.nsf/page/TWB_Total_Maximum_Daily_Load_Section)) ☐ YES ☐ NO

HAS A TMDL BEEN ESTABLISHED FOR THE RECEIVING STREAM SEGMENT? ☐ YES ☐ NO

### COMPLETE IF STORM WATER DISCHARGE IS PROPOSED

ATTACH A STORM WATER POLLUTION PREVENTION PLAN (SEE PERMIT FOR REQUIREMENTS)

IDENTIFY THE ASSOCIATION OR GENERIC SWPPP ON FILE AT MDEQ: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### COMPLETE IF WASTEWATER RECIRCULATION SYSTEM WITH NO DISCHARGE IS PROPOSED

DISTANCE BETWEEN RECIRCULATION POND(S) AND PROPERTY LINE: \_\_\_\_\_ (FT)  
(MUST BE AT LEAST 150 FEET)

NUMBER OF RECIRCULATION POND(S): \_\_\_\_\_

STORAGE CAPACITY OF EACH RECIRCULATION POND(S): \_\_\_\_\_ (FT<sup>3</sup>)

### COMPLETE IF MINE DEWATERING IS PROPOSED

ESTIMATED DEWATERING VOLUME: \_\_\_\_\_ (GAL/DAY)

NAME AND ADDRESS OF THE RECIPIENT OF THE DISCHARGE MONITORING REPORTS (DMRs), IF  
DIFFERENT FROM SIGNATORY: \_\_\_\_\_

\_\_\_\_\_

**DOCUMENTATION OF COMPLIANCE WITH OTHER REGULATIONS/REQUIREMENTS**  
Coverage under this general permit will not be granted until all other required MDEQ permits and approvals are addressed.

WILL THE CONSTRUCTION OR OPERATION OF THIS MINE INVOLVE THE RE-ROUTING, FILLING OR CROSSING OF A WATER CONVEYANCE OF ANY KIND? ☐ YES ☒ NO

If yes, contact the U.S. Army Corps of Engineers' Regulatory Branch for permitting requirements. If the mine requires a Corps of Engineers Section 404 permit, provide appropriate documentation with this MNOI that:

- The mine has been approved by individual permit, or
- The work will be covered by a nationwide permit and NO NOTIFICATION to the Corps is required, or
- The work will be covered by a nationwide or general permit and NOTIFICATION to the Corps is required.

LIST ANY NPDES PERMIT NO(s). \_\_\_\_\_ GEOLOGY APPLICATION/PERMIT NO. \_\_\_\_\_

LIST OTHER GEOLOGY PERMIT NUMBERS THAT APPLY TO COVERAGE AREA \_\_\_\_\_

IS THE MINE LESS THAN 4 ACRES AND GREATER THAN 1320 FEET FROM ANOTHER MINE?

☐ YES A "Notice of Exempt Operations" Form must be included with the MNOI or proof of prior submission, if previously submitted to the Office of Geology.

☒ NO A "Notice of Intent to Mine Class I or Class II Materials" Form must be filed before coverage will be granted under the Mining General Permit. For information on Office of Geology requirements, call 601-961-5515.

LIST ANY LOCAL STORM WATER ORDINANCES WITH WHICH THE OPERATIONS MUST COMPLY AND SUBMIT ANY ASSOCIATED APPROVAL DOCUMENTATION. N/A

IF IMPOUNDMENTS WILL BE CONSTRUCTED ABOVE NATURAL SURFACE ELEVATIONS, INDICATE WHICH, IF ANY, OF THE FOLLOWING APPLY.

☐ The impoundment will be constructed with a peripheral dam or levee 8 feet or greater in height, measured from the lowest elevation of its toe.

☐ The impoundment will have a maximum storage volume greater than 25 acre-feet.

☐ The impoundment will impound a watercourse with a continuous flow.

☐ The impoundment has the potential to threaten downstream lives or man-made structures.

If any of the impoundments meet any of the above criteria, the applicant will be required to obtain written authorization from MDEQ, Dam Safety Division before coverage will be granted under the Mining General Permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signature: \_\_\_\_\_

David McKellar

Printed Name

Date: 1/27/26

Title: Manager

<sup>1</sup>This application shall be signed according to the General Permit, Act 15, T-4 as follows:

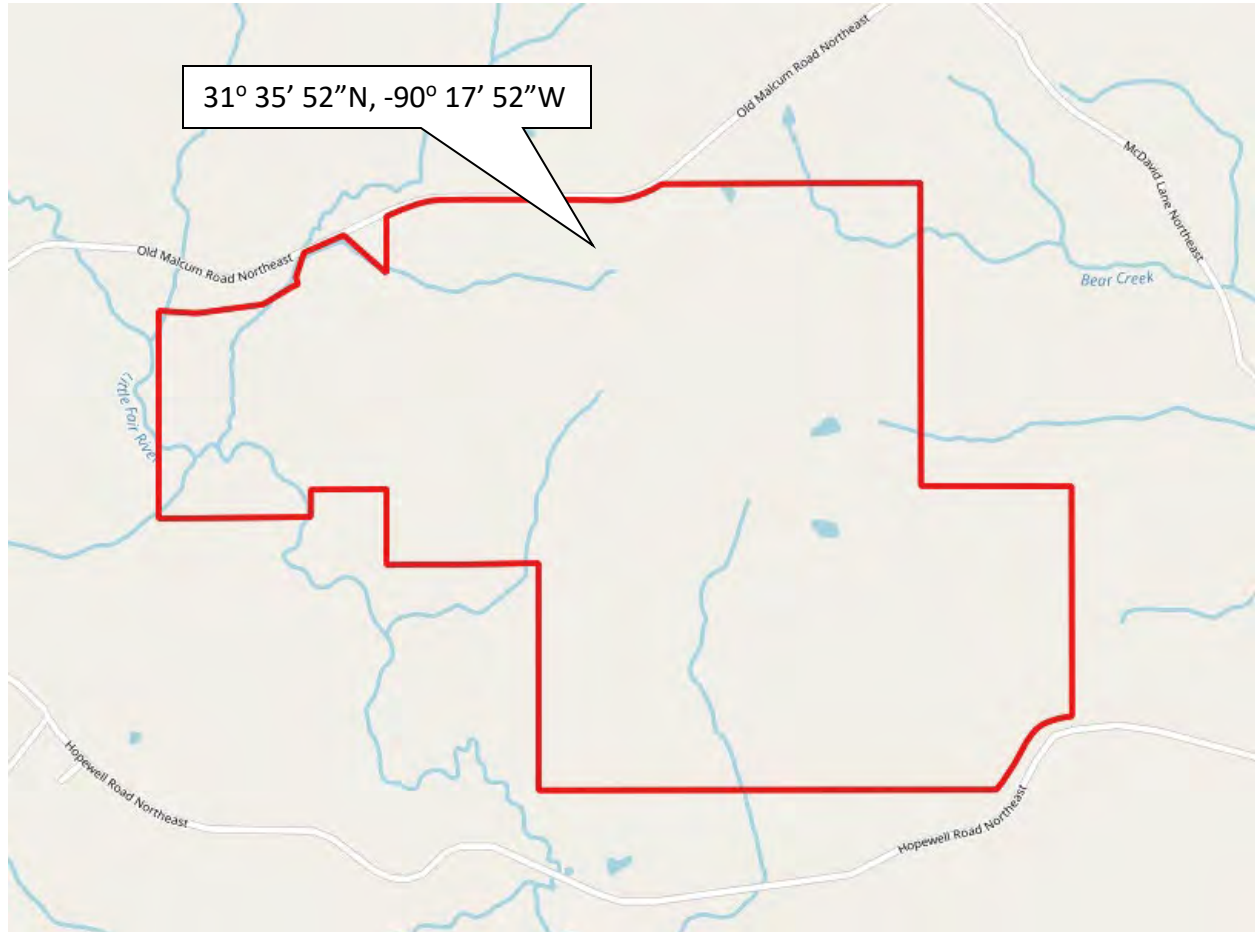
- For a corporation, by a responsible corporate officer.
- For a partnership, by a general partner.
- For a sole proprietorship, by the proprietor.
- For a municipal, state or other public facility, by either a principal executive officer, the mayor, or ranking elected official.
- Duly Authorized Representative

Please submit this form to: Chief, Environmental Permits Division  
MDEQ, Office of Pollution Control  
P.O. Box 2261  
Jackson, Mississippi 39225

**MINING STORM WATER GENERAL PERMIT  
STORM WATER POLLUTION PREVENTION PLAN**

**Malcum Road Mine**

**January 2026**



**Leaf River Conservancy, LLC**

**Section 9, Township 7N, Range 9E**

**Lincoln County, MS**

**Prepared by:**



**FC&E  
Engineering, LLC**  
Water ■ Soils ■ Air ■ Compliance

**917 Marquette Road  
Brandon, MS 39042  
(601) 824-1860**

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### NOTE TO PERMITTEE

This Storm Water Pollution Prevention Plan (SWPPP) was prepared by FC&E Engineering, LLC (FC&E) to help your facility comply with the Mining Storm Water, Dewatering, and No Discharge General Permit for Surface Mining Activities issued by the Mississippi Department of Environmental Quality (MDEQ). The permit requires you to prepare a SWPPP. This Plan has been prepared with the intent of meeting the SWPPP requirements.

The intent of the Plan is to minimize storm water pollution from your facility during mining activities associated with your facility. The Plan specifies the procedures your staff will follow, and the engineering controls your facility will implement to prevent or minimize storm water from coming in contact with potential pollutants, or to contain storm water that does come in contact with potential pollutants. Your permit requires that you comply with this Plan. Items that need your immediate attention include:

1. Coverage under the Mining Storm Water, Dewatering, and No Discharge General Permit is authorized by the MDEQ for mining storm water and dewatering discharges and operation of wastewater recirculation systems with no discharge. **The SWPPP and the Notice of Intent should be submitted to the Environmental Permits Division of the MDEQ.**
2. The completed SWPPP is to be kept on site and utilized by you to ensure that storm water leaving the site is uncontaminated. A copy of the permit and the Notice of Intent are included in **Appendix A**. This SWPPP has been written in consideration of the requirements of this general permit.
3. **Section 8.0** of this Plan describes the Monthly Site Inspections that must be conducted by the Site Manager (or someone designated by the Site Manager). This section also describes the required information to be included on the inspection form. **Worksheet 3** contains the required Inspection and Certification Form for mining activities requiring erosion and sediment controls. Completed inspections using **Worksheet 3** should be stored in **Appendix C**. In addition, the Annual Storm Water Site Inspection Report Form



(**Worksheet 4**) must be submitted to MDEQ by January 28<sup>th</sup> for the previous calendar year.

4. Based on the results of each inspection, the control measures and practices will be revised (if appropriate) immediately following the inspection or prior to additional mining activity taking place. In addition, if the inspection report lists changes at the facility that have a significant effect on the potential for the discharge of pollutants to surface waters, the SWPPP will be amended.
5. A copy of MDEQ's *Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas; Volume 1; Erosion and Sediment Control Practices* can be accessed on the internet via the following link for reference and use.

[http://opcgis.deq.state.ms.us/Erosion\\_Stormwater\\_Manual\\_2ndEd/Volume1/Volume\\_1.pdf](http://opcgis.deq.state.ms.us/Erosion_Stormwater_Manual_2ndEd/Volume1/Volume_1.pdf)

Specific BMPs referenced herein are based on the guidelines of this handbook.

6. Within 30 days of final reclamation and completion of the project, **a completed Notice of Termination (NOT) form, Worksheet 5, must be submitted for the termination of permit coverage.** Upon receiving the complete NOT form, the MDEQ staff will inspect the site. If no sediment and erosion control problems are identified and adequate permanent controls are established, the owner or operator will receive a termination letter. Coverage is not terminated until done so in writing.

## SITE INFORMATION

### Name of the Site

Leaf River Conservancy, LLC, Malcum Road Mine

179 Churchwell Rd. , Purvis, MS 39475

**Telephone No.:** (601) 543-6220

**County:** Lincoln **Facility Contact:** Malcum Road Mine, Operator

**Latitude:** 31° 35' 52.63922" N **Longitude:** 90° 18' 5.07877"W

**Drainage Basin:** Little Fair River/Pearl River

### Name and Address of the Owner/Operator:

Same as above

\_\_\_\_\_

\_\_\_\_\_ Telephone No.: \_\_\_\_\_

## CERTIFICATION

I certify under penalty of the law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Name: David McKellar

Signature: \_\_\_\_\_

Title: Owner, Leaf River Conservancy, LLC

Certification Date: \_\_\_\_\_

### **POLLUTION PREVENTION TEAM**

Name: David McKellar

Phone: (601) 543-6220

Responsibilities: Mr. McKellar is responsible for storm water pollution prevention activities at the facility. His role as leader of the Pollution Prevention Team includes the following responsibilities:

- (a) Updating the SWPPP as required.
- (b) Performing monthly inspections of the facility.
- (c) Ensuring that storm water pollution prevention is included in employee training classes.
- (d) Supervising spill and leak cleanup.
- (e) Supervising facility and procedural changes identified to minimize pollutant exposure to storm water.
- (f) Communicating with regulatory agencies as needed.

Name & Title: David McKellar, Owner

Phone: (601) 543-6220

Responsibilities: The operator is the responsible official for the facility. The operator is responsible for supporting the storm water management team by providing adequate resources to complete the activities identified in the SWPPP. The operator is also required to sign legal certification as identified in the SWPPP.

## **1.0 FACILITY INFORMATION**

### **1.1 Site Description and Activities**

The Malcum Road Mine is an approximate 400-acre surface mine operated by Leaf River Conservancy, LLC (LRC). The surface mine is located in Section 9, Township 7 North – Range 9 East, Lincoln County, MS. The surface mine is accessed via Hwy Old Malcum Road Lincoln County, MS. The primary purpose of the surface mine is the removal, washing and transport of sand and gravel. All surface mining is to be conducted by excavation. No dredging will be conducted. In addition, washing operations will be located at the site. The site will feature a wash pond designed with two separate sections: one serving as a freshwater reservoir and the other dedicated to sediment collection. Water will flow from the sediment pond into the freshwater pond making a closed loop system with no discharge. Water that accumulates in the excavation areas will be pumped into the closed loop system. Figures are attached to this plan showing size and location. The primary Standard Industrial Classification (SIC) Code for the operation is 1442.

The USGS Quad Map, showing the property and permit boundary on a USGS Quadrangle Map, is included as **Figure 1**. The proposed permit boundaries are shown on the Site Location Aerial Map (**Figure 2**) showing the features of the property, mining permit area, and required buffers throughout the site. **Figure 3**, the Site Drainage Map, shows the general site drainage features, stormwater flow directions, outfalls, drainage areas and sediment basin locations. Lastly, **Figure 4**, the Site BMP Map shows the locations of erosion controls and BMPs throughout the site in relation to the site's drainage features. No wetlands will be disturbed on this mine site. A copy of the desktop jurisdictional review is included in **Appendix G**. All figures are contained within **Appendix B** of this document.

The mailing address for the operation is:

Old Malcum Road Northeast  
Brookhaven, MS 39601

## 1.2 Facility Drainage

The mine will be an incised pit and storm water will be contained within the excavated area to be used in the washing operations. No discharge of mine water will take place from the wash pond.

Storm water contacting the western portion of the surface mine generally flows south and west toward the Little Fair River. Storm water contacting the eastern portion of the surface mine generally flows south to an unnamed tributary to the Little Fair River. In total eight (8) drainage areas have been identified, ranging in size from 16.8 – 122.8 acres. Sediment basins will be constructed as needed in these areas to collect and control sediment runoff. **Figures 3 and 4** show the locations and delineation of these elements, and **Appendix F** displays the dimensions and appropriate sizing of the sediment basins.

Discharges from the site flow into the Little Fair River to the south. The Little Fair River is not listed on MDEQ's 2024 303(d) list of impaired water bodies. The Little Fair River drains to the Pearl River. The Pearl River has Total Maximum Daily Loads established for Mercury, Pathogens, Sediment, Nutrients, DDT/Toxaphene, and pH. As stated in each TMDL, "properly designed and well-maintained BMPs are expected to provide attainment of water quality standards." This project is not expected to increase pollutant loadings for any of the listed TMDLs.

The existing pre-mining contours are shown in **Figure 5** of the mining permit application, while the post-mining alignment profiles and profile views are shown on **Figure 6** of the mining permit application. The drainage areas and general storm water flow direction during and after mining operations are expected to be similar.

## 2.0 INVENTORY OF EXPOSED MATERIALS

**Worksheet 1** contains a detailed inventory of materials used, stored, or produced onsite that are exposed to storm water.

### **3.0 SIGNIFICANT SPILLS AND LEAKS**

There have been no significant spills or leaks exposed to storm water over the last three (3) years. **Worksheet 2** is included so the facility will have a ready mechanism to record information on any spill exposed to storm water that may occur during the period of the permit. Completed **Worksheet 2s** will be stored in **Appendix E**.

### **4.0 EROSION AND SEDIMENT CONTROLS**

During ongoing mining operations, the ground will be disturbed and exposed. As such, the opportunity for storm water to be impacted by sediment runoff is likely unless measures are incorporated and implemented to ensure proper sediment control is in place. Site specific controls appropriate for the activities will be implemented by LRC and are identified on **Figure 4**, which is located within **Appendix B**. LRC will control sediment erosion during the mining activities. The planned control activities include:

- A. Silt fencing and/or straw bales will be installed as needed down gradient from disturbed areas to control sediment resulting from initial site clearing as well as mining activities. If necessary, straw bales will be staked in critical areas to reinforce the silt fencing. Silt fencing should be routinely inspected for proper installation and operation. Once sediment builds up to approximately one third to one half of the height of silt fencing, then sediment should be removed, and silt fencing replaced as needed.
- B. After the mining is complete, all exposed areas will be seeded with grass and/or mulched. When a disturbed area not being actively mined will be left undisturbed for 30 days or more, the appropriate temporary or permanent vegetative practices shall be implemented within seven (7) calendar days.
- C. Activities will be controlled and monitored to minimize the impact of heavy equipment which will be operating in the area during mining. Any temporary fuel tanks or other bulk liquids will be stored in a diked area to control spillage. LRC will advise its employees/contractors to perform

any equipment maintenance in a manner that will not lead to spillage of fuel, oil, antifreeze, etc.

D. Rock check dams may be utilized as necessary at points of concentrated flow. Rock check dams should be routinely inspected for proper operation and capacity. Once sediment builds up to approximately one half of the height of check dams, then sediment should be removed.

E. The new excavation areas will be mined in a way to divert storm water to the existing mine areas on the site to collect runoff from the surrounding drainage areas so water and the sediments can be collected. Accumulated sediment shall be removed when the capacity of the pond has been reduced by 50%. All removed sediment deposits shall be properly controlled and disposed of.

At a minimum, the controls will be designed, installed, and maintained to:

- Control storm water volume and velocity within the site to minimize soil erosion.
- Control storm water discharges, including both peak flow rates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion.
- Minimize the amount of soil exposed during mining.
- Minimize the disturbance of steep slopes.
- Minimize the sediment discharges from the site.
- Provide and maintain natural buffers around surface waters.
- All potential wetlands will be avoided and will not be impacted by surface mining.
- Maintain a 25-foot buffer from ephemeral streams for surface mining.
- Maintain a 50-foot buffer from intermittent streams for surface mining.
- Maintain a 150-foot buffer from perennial streams for surface mining.
- Minimize soil compaction and, unless infeasible, preserve topsoil.
- Direct storm water to vegetated areas, silt fences, straw bales, etc. to aid in filtration, infiltration, velocity reduction and diffusion of the discharge.

- Transport runoff down steep slopes through lined channels or piping.
- Minimize off-site vehicle tracking of sediments.

#### **4.1 Vegetative Practices**

Mine areas will not exceed more than 10 acres being disturbed at any time mining is being conducted. All disturbed areas will be managed and re-vegetated as soon as practicable upon completion of regular mining activities. Where applicable, disturbed areas will be stabilized by temporary seeding, permanent seeding, mulching and/or maintaining vegetative buffer strips as each case dictates. When a disturbed area not being actively mined will be left undisturbed for 30 days or more, the appropriate temporary or permanent vegetative practices shall be implemented within seven (7) calendar days.

#### **4.2 Structural Practices**

Structural erosion control measures shall be implemented as needed. The structural practices shall divert flows from exposed soils, store flows or otherwise limit runoff from exposed areas. The structural methods will include:

- A. Silt fencing will be installed as needed downgradient from all disturbed areas to control sediment resulting from initial site clearing as well as mining activities. If necessary, straw bales will be staked in critical areas to reinforce the silt fencing. See **Figure 4** for proposed locations of silt fencing.
- B. Activities will be controlled and monitored to minimize the impacts of heavy equipment which will be operating in the area during mining. Any temporary fuel tanks or other bulk liquids will be stored in a diked area to control spillage. LRC will advise its employees/contractors to perform any equipment maintenance in a manner that will not lead to spillage of fuel, oil, antifreeze, etc.
- C. Non-functioning controls shall be repaired, replaced, or supplemented with functional controls within 24 hours of discovery or as soon as field conditions allow. LRC will also be required to remove any excessive buildup of sediment from each silt fence, straw dike, or



sediment trap. Accumulated sediment shall be removed from structural controls when sediment deposits reach one-third the height of the control. All removed sediment deposits shall be properly disposed.

The controls will, to the extent practicable:

- Divert upslope surface water around disturbed areas by means of diversion dikes.
- Limit exposure of disturbed areas to the shortest practical time.
- Minimize the amount of disturbed areas at any given time.
- Implement best management practices to mitigate adverse impacts from storm water runoff.
- Slow rainfall runoff velocities to prevent erosive flows.

## **5.0 NON-STORM WATER DISCHARGES**

Provided they do not cause or contribute to a violation of water quality standards, the following are considered allowable non-storm water discharges from mining activities occurring on the Malcum Mine Facility:

- Discharges from actual fire-fighting activities.
- Water used to control dust.
- Potable water sources including uncontaminated water line flushing.
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used.
- Uncontaminated air conditioning or compressor condensate.
- Uncontaminated ground water or spring water.
- Uncontaminated excavation dewatering.
- Landscape irrigation.

- Water used to wash vehicles, wheel wash water and other wash waters where detergents are not used.

The above non-storm water discharges should be eliminated or reduced to the extent feasible and controlled with an appropriate best management practice (BMP). The existing and proposed BMPs are listed in **Worksheet 1**.

## **6.0 IMPLEMENTATION OF CONTROLS**

Controls shall be placed to minimize off-site vehicle tracking of sediments. Controls shall be implemented as needed to prevent adverse impact to receiving streams. When work is not being performed in a disturbed area, appropriate temporary and/or vegetative and structural practices shall be initiated.

Erosion and sedimentation control measures may include, but are not limited to, surface roughening, temporary seeding, permanent seeding, mulching, sod stabilization, vegetative buffer strips, earth dikes, brush barriers, drainage swales, check dams, silt fences and rock outlet protection.

Malcum Road Mine personnel shall:

- Implement the site-specific controls to effectively manage storm water for the area to be disturbed. A copy of the site-specific SWPPP must be retained on site.
- Implement the following pre-mining activities:
  - Delineate and clearly mark any areas such as steep slopes, highly erodible soils, or other sensitive areas; and
  - Preserve native topsoil on the site to the extent feasible.
- Amend the SWPPP if notified at any time by the Executive Director of the MDEQ that the SWPPP does not meet the minimum requirements. Unless otherwise provided, the necessary changes will be made within fifteen (15) days. LRC will certify in writing to the Executive Director that the necessary changes have been made.

- Amend the SWPPP whenever there is a change in design, mining, operation, or maintenance which may potentially affect the discharge of pollutants to waters of the State; or the SWPPP proves ineffective in controlling storm water pollutants.
- Install needed erosion controls even if they may be located in the way of subsequent activities.
- Install additional and/or alternative erosion and sediment controls when existing controls prove to be ineffective in preventing sediment from leaving the site.
- Comply with applicable State or local waste disposal, sanitary sewer, or septic regulations and provide and maintain a portable toilet for the site.
- Erosion and sediment controls shall be maintained at all times. Accumulated sediment will be removed from structural controls when sediment deposits reach one-third the height of the control. All removed sediment deposits will be properly disposed of. Non-functioning controls shall be repaired, replaced, or supplemented with functional controls within 24 hours of discovery or as soon as field conditions allow.

## 7.0 BEST MANAGEMENT PRACTICES

Best management practices (BMPs) are measures taken at the facility to prevent or mitigate water pollution from mining activities. BMPs are broad ranging and may include processes, procedures, human actions, or construction. BMPs are aimed at preventing contamination of storm water by mining activities and/or spills and similar environmental incidents by stressing the importance of management and employee awareness of potential spill situations. Locations of physical BMPs and erosion controls are shown in **Figure 4** and additional details of typical controls are shown in the Erosion Control Detail Drawings of **Appendix B**.

The following subsections describe BMPs that are to be included in the facility's SWPPP. These BMPs follow the guidelines described in the MDEQ's *Handbook for Erosion Control, Sediment Control and Storm Water Management on Construction Sites and Urban Areas; Volume 1*;

*Erosion and Sediment Control Practices* which can be accessed on the internet via the following link.

[Erosion and Stormwater Control Manual 2nd Edition](http://opcgis.deq.state.ms.us/Erosion_Stormwater_Manual_2ndEd/Volume1/Volume_1.pdf)

([http://opcgis.deq.state.ms.us/Erosion\\_Stormwater\\_Manual\\_2ndEd/Volume1/Volume\\_1.pdf](http://opcgis.deq.state.ms.us/Erosion_Stormwater_Manual_2ndEd/Volume1/Volume_1.pdf))

## **7.1 Good Housekeeping Measures and Controls**

Good housekeeping practices are designed to maintain a clean and orderly work environment and to prevent pollutants from entering storm water from mining sites. At this facility, the following types of good housekeeping measures should be implemented in an effort to prevent pollutants from entering storm water discharges.

### Operation and Maintenance

- Garbage and waste materials are regularly picked up and properly disposed of.
- All spillage is promptly removed. Where it is impractical to constantly remove spillage, spillage is contained in the immediate area temporarily until further removal can take place.
- Equipment is routinely inspected to make sure it is in working order and no leaks are occurring.
- The importance of spill cleanup procedures is communicated to employees.
- Provide a portable toilet where sanitary facilities are not available.

### Material Storage Practices

- Provide protected storage areas for chemicals, paints, solvents, fertilizers, pesticides, herbicides, detergents, and other potentially toxic materials. Adequate aisle space should be provided to facilitate material transfer and easy access for inspections.
- Containers, drums, and bags of material should be stored away from direct traffic routes to prevent accidental spills.

- Containers should be stacked according to manufacturers' instructions.
- Implement spill and leak prevention practices and response procedures if spills and leaks do occur.
- Minimize the exposure of building materials, building products, mining waste, trash, and landscape materials.
- As appropriate, containers should be stored on pallets to prevent corrosion.

#### Material Inventory Procedures

- An up-to-date inventory of hazardous and non-hazardous materials should be kept at the facility office.
- Containers are labeled with the name of the material, expiration date, and health hazards, as required.
- Storage areas with hazardous materials have been specifically designed to contain spills, as required.

#### Employee Participation

- Information on best management practices is discussed during employee training sessions.
- Good housekeeping measures are discussed at employee meetings.

#### Operation and Maintenance

- Designate and maintain areas for equipment maintenance and repair.
- Floors and ground surfaces should be kept clean by using brooms, shovels, or cleaning machines.
- Provide waste receptacles and regular collection of waste. Garbage, litter, and waste materials should be regularly picked up and properly disposed.
- Remove all spillage promptly. Where it is impractical to constantly remove spillage, spillage should be contained in the immediate area temporarily until further removal can take place.
- Inspect equipment routinely to make sure it is in working order and no leaks are occurring.

- Communicate the importance of spill cleanup procedures to employees.

## **7.2 Preventive Maintenance and Inspection**

The preventive maintenance and inspection program includes:

- Timely inspections and maintenance of storm water controls.
- Proper maintenance of facility equipment and systems.

## **7.3 Spill Prevention and Response Procedures**

Limited amounts of oil and/or chemical products are anticipated to be stored onsite during mining activities but should be below the 1,320-gallon threshold requiring compliance with the SPCC regulations during mining. This SWPPP will address some spill prevention and response issues for the mining phase of this project. In the event of a spill, employees are instructed to make every effort to contain the release, notify the SWPPP Coordinator and prevent any release from leaving the facility site. It will be the SWPPP Coordinator's responsibility to determine if the spill needs to be reported to the regulatory authorities. Records of significant spills and leaks and notifications to the appropriate agencies will be stored in **Appendix E**.

Additional preventative measures utilized by the site are: 1) proper storage and disposal of used batteries; 2) proper labeling of drums containing used oil and ensuring that stored drums are kept inside buildings and away from potential accidental tippage situations; 3) maintaining accurate labels and inventories of chemical materials, solvents, paints, lubricants etc.; and 4) storage of solvents and flammable materials in a proper and safe manner.

### **Likely Releases and In-place Preventative Controls:**

Spills and releases are most likely to result from potential equipment failure or operator error. This section summarizes potential causes of releases and associated in-place preventative controls.

1. Operator error during loading/unloading or refueling operations. Potential errors include overfilling not disconnecting lines prior to vehicle departure, drain valves left

open, or fill valves left open allowing precipitation to enter and cause tank overflow. Specific procedures have been developed to minimize this potential and include regular periodic inspections, locking valves when not in use, and on-the-job training in correct procedures.

2. Piping, pressure fittings, tank ruptures, or other forms of equipment failure. The rate and quantity of release would depend on the location of the rupture. Release rate could be assumed to be the total volume of the tank associated with the piping or fittings being released in a 15-minute timeframe. The release to the environment would be at that rate but the quantity would be the total volume minus the secondary containment volume. To minimize the potential for a significant release, regular inspections and maintenance are performed with noted problems addressed in a timely manner by repair, replacement, or equipment taken out of service.
3. Puncture of tank or associated piping by heavy equipment. Operators of equipment and vehicles must be well trained in operating large equipment on the facility. Rate and quantity to be released would be the same as that discussed in item 2. Additionally, tanks and piping are highly visible by size, signage, flagging, or protective paint color. In the event of night traffic, sufficient lighting is provided to make tanks and piping visible.
4. Small drips, leaks and spills from lines or valves. Release rates would be negligible and are not likely to produce significant quantities or environmental impacts. To minimize release quantities, equipment is inspected regularly, repaired in a timely manner when a problem is discovered, and corrective action implemented with released material promptly cleaned up. In general, this type of release presents a very low risk of potential impact.

#### **7.4 Employee Training**

Malcum Road Mine will train employees on the elements of this plan. LRC will periodically evaluate the effectiveness of the installed storm water pollution control measures. Following each periodic assessment, LRC will evaluate the successes and failures of the storm water pollution

control system at the site. Should an evaluation show additional measures are necessary to control runoff pollutants, LRC will make additions of sediment control structures or other reasonable adjustments to this plan.

New employees receive initial training in storm water pollution prevention before they begin their work assignments at the mining site. Thereafter, training is provided, and storm water pollution prevention discussed as needed at the safety meetings that employees attend.

Training records should be maintained for at least three (3) years. Training records should include an employee's name, worker identification number, contents of training, and the employee's signature acknowledging that training was received.

The training program addresses four (4) major areas:

- Elements of the Storm Water Pollution Prevention Plan
- Spill prevention and response
- Good housekeeping
- Materials management practices

A brief description of each topic covered as part of the training program is outlined below.

#### Elements of the Storm Water Pollution Prevention Plan

Employees/contractors are instructed on each of the elements contained in this plan related to the management of storm water from mining activities.

#### Spill Prevention and Response

Limited amounts of oil and/or chemical products are anticipated to be stored onsite during mining. **Employees should be made aware to contact Malcum Road Mine SWPPP Coordinator in the event of a spill of oil or potentially hazardous chemicals.** Training involving spills are discussed briefly in **Section 7.3** above and as follows:

- Employees involved in the storm water pollution prevention program are shown the potential spill areas and drainage routes at the facility.



- Employees are given instructions on how to report spills and the appropriate individuals to contact.
- Proper material handling procedures and storage requirements are discussed.

#### Good Housekeeping

- Employees/contractors are instructed to perform regular vacuuming or sweeping in their work areas to prevent storm water from becoming contaminated with waste materials.
- Employees/contractors are instructed to promptly clean up spilled materials to prevent storm water from becoming contaminated.
- Locations of housekeeping and spill response equipment and supplies are provided to all employees. LRC will be required to provide adequate housekeeping and spill response equipment to manage storm water for all areas under their supervision.
- Where appropriate, employees are provided with instructions on the proper methods to secure drums and other containers. Those working near containers/drums are also instructed to routinely check the integrity of the containers to make sure there are no leaks.

#### Materials Management Practices

- Employees/contractors are instructed to maintain materials in an organized manner.
- Toxic and hazardous substances onsite should be clearly marked.
- Proper and safe handling procedures are discussed with employees who are responsible for handling any toxic and/or hazardous substances.

## **8.0 MONTHLY SITE INSPECTIONS AND EVALUATIONS**

Best management practices (BMPs) must be in place to control run-off. Inspection of all receiving streams, erosion, and sediment controls, and other SWPPP requirements shall be performed during permit coverage by qualified personnel. The SWPPP Site Manager or his designee will conduct a monthly site inspection and as often as necessary to ensure appropriate erosion and sediment controls have been properly constructed and maintained. Inspections

must also be conducted within 24 hours of a rainfall event equal to or greater than a 2-year, 24-hour storm event (approximately 5 inches). Non-functioning controls shall be repaired, replaced, or supplemented with functional controls within 24 hours of discovery or as soon as field conditions allow. The purposes of the inspections are to:

1. Confirm the accuracy of the description of potential pollutant sources contained in the SWPPP.
2. Determine the effectiveness of the Plan and its BMPs for preventing storm water pollution due to mining activities.
3. Assess compliance with the terms and conditions of the General Permit and if necessary, implement new BMPs that will protect storm water runoff from polluting nearby streams.

During the evaluation, material handling and storage areas, mining activities, and other potential sources of pollution will be visually inspected for evidence of actual or potential pollutant discharges to the drainage system. Erosion controls and structural storm water management devices will also be inspected to ensure that each is operating correctly. **Worksheet 3** is provided to assist in the monthly inspections.

The results of each inspection will be documented on the form provided as **Worksheet 3** and signed by an authorized company official. The report will describe:

- Name and address of the person making the inspection.
- Date and time of the inspection; and
- Whether any deficiencies were noted. If deficiencies were noted, then list the corrective action taken.

Inspections must continue until the permit coverage has been terminated. Monthly inspection reports are to be stored in **Appendix C**. Based on the results of each inspection, the description of potential pollutant sources and measures and controls will be revised (if appropriate) immediately following the inspection or prior to additional mining activity taking place. In

addition, if the inspection report lists changes at the facility that have a significant effect on the potential for the discharge of pollutants to surface waters, the SWPPP will be amended.

## **9.0 RECORDS RETENTION**

All records, reports, forms, and information resulting from activities required by the General Permit shall be retained for a period of at least three (3) years from the date the document was generated.

## **10.0 TERMINATION OF PERMIT COVERAGE**

A completed Request for Termination of Coverage Form will only be submitted to the MDEQ Permit Board if all mining operations are ceased with no future plans to resume mining operations. Coverage is not terminated until notified in writing by MDEQ.

## **11.0 SPECIAL REQUIREMENTS**

### **11.1 MS4s**

Lincoln County is not covered under Mississippi's Small Municipal Separate Storm Sewer System (MS4) General Permit.

### **11.2 TMDLs**

The proposed mine is in the Pearl River Drainage Basin. This section of the Pearl River has Total Maximum Daily Loads established for Mercury, Pathogens, Sediment, Total Nitrogen, Total Phosphorus, DDT/Toxaphene, and pH. As stated in each TMDL in regard to Stormwater General Permits for Construction, "properly designed and well-maintained BMPs are expected to provide attainment of water quality standards." This project is not expected to increase pollutant loadings for any of the listed TMDLs as the "measures and controls are incorporated that are consistent with the assumptions and requirements of the TMDL" (ACT 2, T-3(4)).

## **WORKSHEET 1: MATERIALS EXPOSED TO STORM WATER**

### Worksheet 1: Materials Exposed to Storm Water

**Material:** Silt and soil from site groundwork.  
**Purpose:** Mining activities  
**Location:** Majority of the site.  
**Quantity Used:** Varies      **Produced:** N/A      **Stored:** N/A  
**Quantity Exposed to Storm Water in Past 3 Years:** N/A  
**Past Significant Spill or Leak Exposed to Storm Water:** N/A  
**If "Yes", Describe:**  
**Method of Storage or Disposal:** N/A  
**Description of Material Management Practice:** Best management practices used for clearing, site work and mining. Silt fences used to stabilize soil prone to erosion.

**Material:** Off-road diesel fuel, hydraulic oil, lubrication oil and motor oil.  
**Purpose:** Fueling and maintenance of on-site heavy equipment.  
**Location:** Throughout the mining area.  
**Quantity Used:** Varies      **Produced:** N/A      **Stored:** Varies.  
**Quantity Exposed to Storm Water in Past 3 Years:** N/A  
**Past Significant Spill or Leak Exposed to Storm Water:** No  
**If "Yes", Describe:**  
**Method of Storage or Disposal:** Horizontal Steel Closed Top Tanks and 55-gallon steel drums  
**Description of Material Management Practice:** Tanks are inspected routinely to ensure that no leaks are occurring; proper fueling techniques and training to ensure that overfilling and spills are minimized or avoided; proper cleanup and remediation as needed to cleanup spills before they can impact storm water. Secondary containment should be used for diesel/oil storage.

**Material:** Heavy equipment (tractors, track hoes, bulldozers, skidders, trucks, etc.)  
**Purpose:** Mining operations.  
**Location:** Throughout the proposed site location.  
**Quantity Used:** Equipment used as needed      **Produced:** N/A  
**Stored:** On-site and used as needed  
**Quantity Exposed to Storm Water in Past 3 Years:** N/A.  
**Past Significant Spill or Leak Exposed to Storm Water:** No  
**If "Yes", Describe:**  
**Method of Storage or Disposal:** N/A  
**Description of Material Management Practice:** Heavy equipment is inspected routinely to check for leaking hoses or other areas of potential oil or fuel leaks. Equipment is maintained in a manner to minimize the contamination of storm water. Required periodic preventive maintenance is performed on all heavy equipment.

## **WORKSHEET 2: LIST OF SIGNIFICANT SPILLS AND LEAKS**

Leaf River Conservancy – SWPPP  
Malcum Road Mine

## Worksheet 2: List of Significant Spills and Leaks

Leaf River Conservancy, Malcum Road Mine, Lincoln County, MS				Completed by: Title: Date:						
Directions: Record below all significant spills and significant leaks of chemicals, petroleum products, or toxic / hazardous pollutants that occur at the facility. Maintain these records for 3 years after this permit has terminated.										
Definitions: Significant spills include, but are not limited to, releases of oil that cause sheen on waters of the United States (offsite ponds, creeks, rivers, etc.), or the release of a Reportable Quantity of any chemical. Consult MSDS sheet for spill cleanup and chemical information.										
Date (m/d/y)	Check One or Both		Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
	Spill	Leak		Type of Material	Quantity (Estimate)	Source	Reason	Amount of Material Recovered	Is Material Still Exposed to Storm Water? (Yes or No)	

**Worksheet 2** is provided for use in recording future spills. This form should be completed promptly after a spill has occurred to document the event and to provide information for future training topics. It is recommended that a monthly notation of “No spills have occurred during Month XX” be placed in **Worksheet 2** for any months in which no spills occur.

**WORKSHEET 3: MONTHLY INSPECTION FORM**



## Monthly Inspection Checklist

Facility:		Inspector:		Date:		Page 1 of 2	
Item No.	Item	N/A	Y	N	Comments / Corrective Action(s) / Date of Corrective Action(s) Completion		
<i>Inspections. During coverage under this permit, all areas contributing to storm water discharges associated with industrial activity (including aboveground storage tanks, piping, containment/collection systems, truck wash down, and equipment cleaning areas) must be visually inspected as often as needed but no less than once monthly. The inspection must evaluate whether the SWPPP adequately minimizes pollutant loadings and is properly implemented in accordance with the terms of this permit or whether additional control measures are needed. This includes observing storm water discharges for obvious industrial storm water pollution such as color, lack of clarity, floating solids, settled solids, suspended solids, foam, and oil sheens. Description of corrective actions and date of when the corrective action is completed must be documented for all deficiencies noted during inspections.</i>							
<b>SWPPP AREAS</b>							
SW-1	Visual inspection. Are all potential areas contributing to storm water discharges associated with industrial activity identified?						
SW-2	Are aboveground storage tanks/maintenance area contributing to storm water pollution?						
SW-3	Is mobile machinery contributing to storm water pollution?						
SW-4	Are dry wood storage areas contributing to storm water pollution?						
SW-5	Is portable sawmill area contributing to storm water pollution?						
<b>EROSION-PRONE AREAS</b>							
ER-1	Are drainage pathways at the site free of evidence of soil erosion?						
ER-2	Are ditches and ponds onsite free of significant depths of sediment?						
ER-3	If sediment controls (for example, silt fences, rock rip rap, seeding, hay bales, etc.) are used onsite (check N/A if not), are they in good shape and operating properly?						
ER-4	Does all sediment remain onsite? If not, explain what erosion control measures could help prevent it from leaving the site.						
<b>STORM WATER CONTROLS</b>							
SW-1	Are inlets, pipes, ditches, and ponds (check N/A if none) free of excess sediment?						
SW-2	Are inlets, pipes, ditches, and ponds (check N/A if none) free of debris, raw materials, waste materials, oil sheen, and other possible contaminants?						
SW-3	If outfalls leaving property are flowing during dry weather (check N/A if none are flowing), is flow due to permitted non-storm water discharge? If not, describe source of flow (for example, groundwater, unpermitted non-storm water discharge, etc.).						
<b>FACILITY EQUIPMENT</b> <i>Visual Site Inspection. Identified personnel shall at least monthly inspect facility equipment and material handling areas for evidence of pollutants entering the drainage system and verify the description of potential pollutant sources and the implementation of management controls. Establish tracking or follow-up procedures for appropriate inspection response.</i>							
FE-1	Is facility equipment polluting the drainage system?						
FE-2	Are material handling areas polluting the drainage system? If so, describe.						
FE-3	Do you see any equipment, materials, or conditions that could potentially pollute storm water runoff? If so, describe.						
FE-4	Observe the last monthly inspection report. Were deficient items or conditions identified in the last inspection report corrected? If not, correct deficiency or condition						
<b>PETROLEUM PRODUCT STORAGE TANKS</b>							
TS-1	Are tanks free of excess rust or other signs of compromised tank integrity?						
TS-2	Are all pumps, valves, hoses, piping, etc., intact and operating properly?						
TS-3	Are all pumps and valves closed and/or locked when not in use?						

## Monthly Inspection Checklist (Continued)

		Inspector:		Date:		Page 2 of 2	
Item No.	Item	N/A	Y	N	Comments/Corrective Actions/Date of Corrective Action Completion		
<b>DRUM &amp; TOTE STORAGE AREAS</b>							
DS-1	Are drums stored on pallets or racks above the ground surface?						
DS-2	Are all drums within a secondary containment system?						
DS-3	If some drums are not within secondary containment, are they fewer than 5 total and in active use in facility processes?						
DS-4	Are drums intact? If not, describe any leakage.						
DS-5	Are drums stacked or stored according to manufacturers' recommendations?						
DS-6	Are drums closed/sealed when not in use?						
DS-7	If secondary containment is used, then is the containment free of cracks, holes, or other breaches?						
DS-8	Are containment release valves closed and operating properly, if applicable?						
DS-9	Are storm water releases from the containment being properly documented, if applicable?						
DS-10	Is water in the containment (mark N/A if no water or no containment) free of any sheen?						
DS-11	Are the contents of each drum clearly labeled?						
<b>BATTERY STORAGE AREA</b>							
BS-1	Are batteries properly labeled including accumulation start date?						
BS-2	Are any batteries cracked/leaking?						
<b>STORAGE AREAS EXPOSED TO STORM WATER</b>							
SA-1	Are stored materials prevented from reaching inlets, pipes, ditches, or ponds?						
SA-2	Are storm water controls in good shape and operating properly? (for example, silt fences, hay bales, screens over inlets and culverts, etc.)						
<b>LOADING/UNLOADING AREAS</b>							
LU-1	Do previous spills in the areas appear to have been adequately addressed? If not, describe and list the outfalls that the areas drain to.						
LU-2	Is the area free of raw materials, waste materials, debris, and dust?						
LU-3	Are standard loading/unloading procedures prominently posted in the areas?						
LU-4	If there is a local drain (check N/A if none), is it free from obstructions?						
<b>DRINKING WATER</b>							
DW-1	Is the drinking water free of any unusual taste, odor, or color?						
<b>SPILLS OCCURRED</b>							
SO-1	Have any spills occurred?						
SO-2	Have spills been adequately addressed and recorded?						
Note: N/A = Not Applicable							

**WORKSHEET 4: ANNUAL INSPECTION REPORT FORM**

**COVERAGE NUMBER (MSR32 \_\_\_\_ \_ ) INSPECTION YEAR \_\_\_\_**  
**SITE INSPECTION REPORT AND CERTIFICATION FORM**  
**MINING GENERAL PERMIT**



**Results of the inspection by ACT7 of this permit shall be recorded on this report form and in addition, copies of all completed forms shall be retained onsite or locally available. Inspections must be performed monthly and after a 2-year, 24-hour storm event (approx. 6-inches on Gulf Coast to 4-inches at MS/TN State Line). The coverage number must be listed at the top of all Site Inspection Report and Certification Forms.**

**COVERAGE RECIPIENT INFORMATION**

COMPANY NAME: _____	MINE NAME: _____
MINE LOCATION: _____	GEOLOGY APPLICATION/PERMIT NO. _____
NEAREST PROJECT CITY: _____	COUNTY: _____
MAILING ADDRESS: _____	
MAILING CITY: _____	STATE: _____ ZIP: _____
CONTACT PERSON: _____	CONTACT PHONE NUMBER: _____

**INSPECTION DOCUMENTATION**

DATE (mm/dd/yy)	TIME (hh:mm AM/PM)	AFTER 2-YEAR, 24- HOUR STORM EVENT? (CHECK IF YES)	ANY DEFICIENCIES? (CHECK IF YES)	INSPECTOR(S)
		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	
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		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	

Deficiencies Noted During any Inspection (give date(s); attach additional sheets if necessary): \_\_\_\_\_

Corrective Action Taken or Planned (give date(s); attach additional sheets if necessary): \_\_\_\_\_

Based upon this inspection which I or personnel under my direct supervision conducted, I certify that all erosion and sediment controls have been implemented and maintained, except for those deficiencies noted above, in accordance with the Storm Water Pollution Prevention Plan filed with the Office of Pollution Control and sound engineering practices as required by the above referenced permit. I further certify that the MNOI and SWPPP information on file with MDEQ is up to date.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

**WORKSHEET 5: NOTICE OF TERMINATION FORM**

# Request for Termination (RFT) of Coverage

Mining General NPDES Permit No. MSR32 \_\_\_\_\_ County \_\_\_\_\_  
(Fill in your Certificate of Coverage Number and County)



Use this form to request coverage termination only after mining activities have permanently stopped and permanent erosion and sediment controls are successfully established. Inspections must continue until the coverage recipient receives written notice of coverage termination by MDEQ.

Please check which of the following apply:

- ☐ Non-Exempt Mining Operation (copy of Permit Board Order, authorizing 90% or final release of mining performance bond attached)
- ☐ Exempt Mining Operation (as defined in MDEQ's Mississippi Surface Mining and Reclamation Rules and Regulations)

(Please Print or Type)

Facility Name: \_\_\_\_\_ Closure Date: \_\_\_\_\_

Physical Site Street Address (if not available, indicate nearest named road): \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_

Landowner Company Name: \_\_\_\_\_

Landowner Company Contact Name and Position: \_\_\_\_\_

Street Address / P.O. Box: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Tel. # (\_\_\_\_) \_\_\_\_\_

Operator Company Name (if different than owner): \_\_\_\_\_

Operator Contact Name and Position: \_\_\_\_\_

Street/ Address / P.O. Box: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Tel. # (\_\_\_\_) \_\_\_\_\_

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. I understand that by submitting this Request for Termination and receiving written confirmation, I will no longer be authorized to discharge storm water associated with industrial activity under this general permit. Discharging pollutants in storm water associated with industrial activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this Request for Termination does not release an owner or operator from liability for any violations of this permit or the Clean Water Act.

\_\_\_\_\_  
Authorized Name (Print) Telephone Signature Date Signed

<sup>1</sup>This application shall be signed according to the General Permit, ACT 15, T-4 as follows:

- For a corporation, by a responsible corporate officer.
- For a partnership, by a general partner.
- For a sole proprietorship, by the proprietor.
- For a municipal, state or other public facility, by principal executive officer, mayor, or ranking elected official.

After signing please mail to: Environmental Permits Division, Office of Pollution Control  
P.O. Box 2261  
Jackson, MS 39225

Revision: 2/16/2018

## **APPENDIX A**

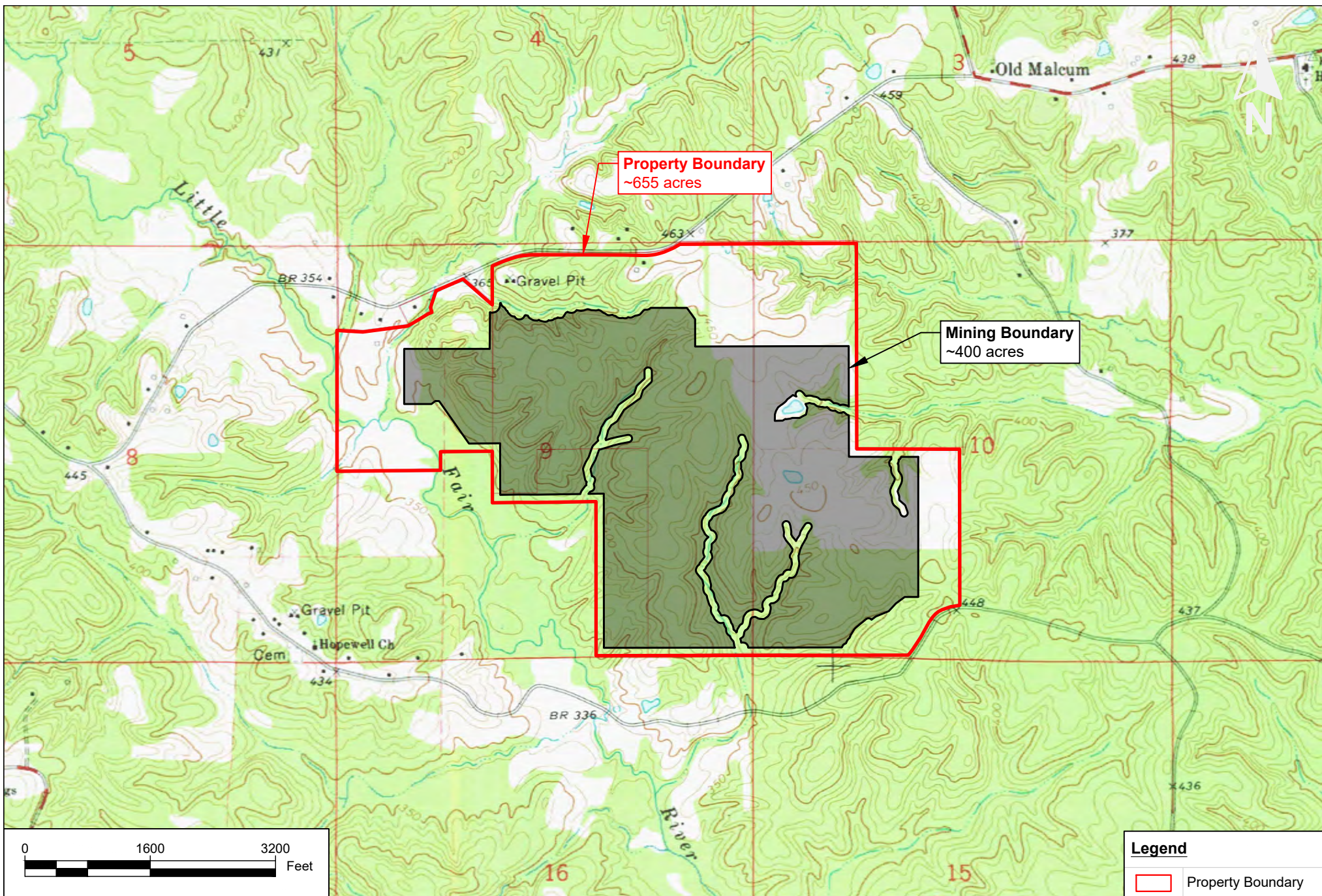
### **Notice of Intent**

#### **Mining Storm Water, Dewatering, and No Discharge General Permit**

## **APPENDIX B**

### **Figures and Erosion Control Drawings**

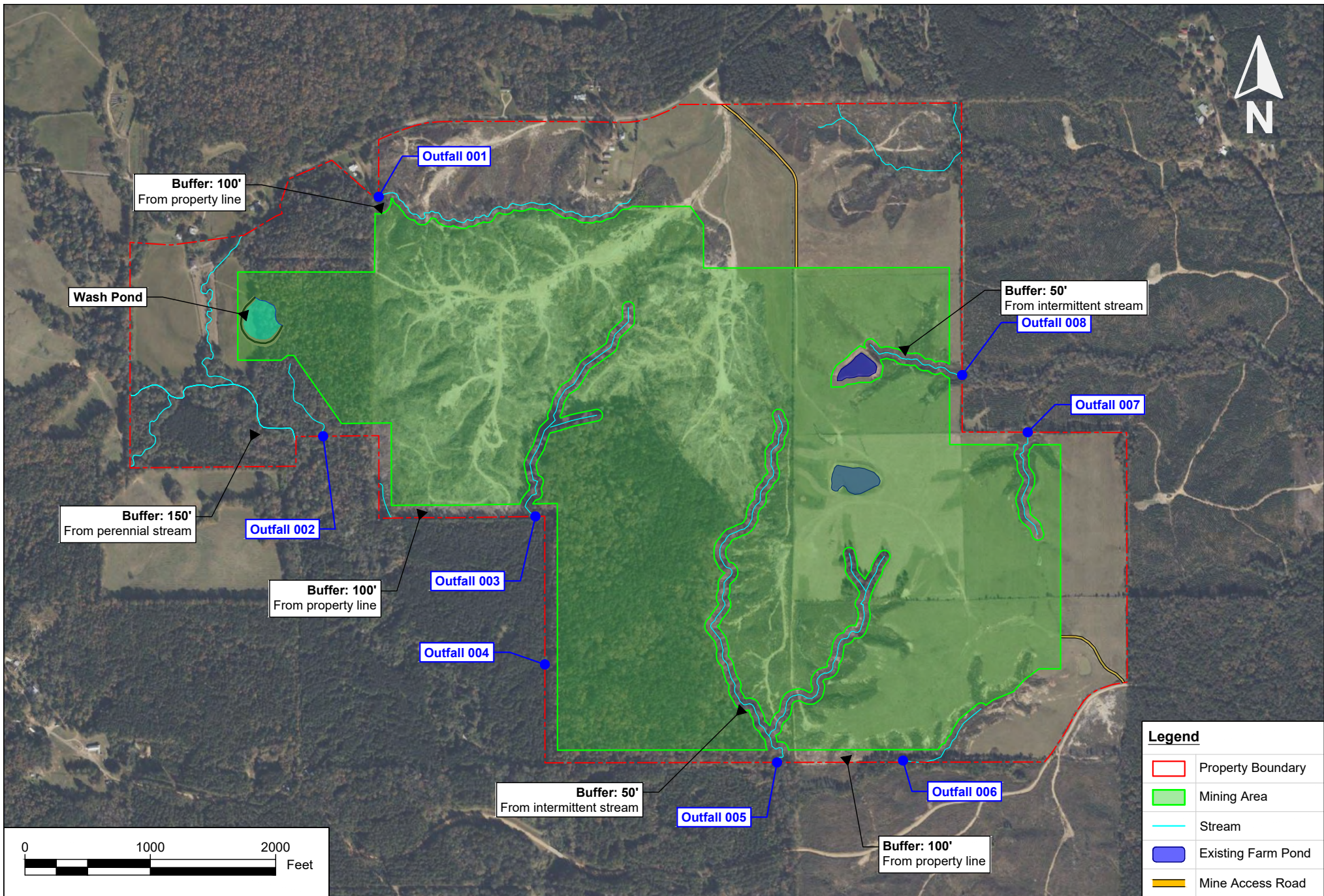




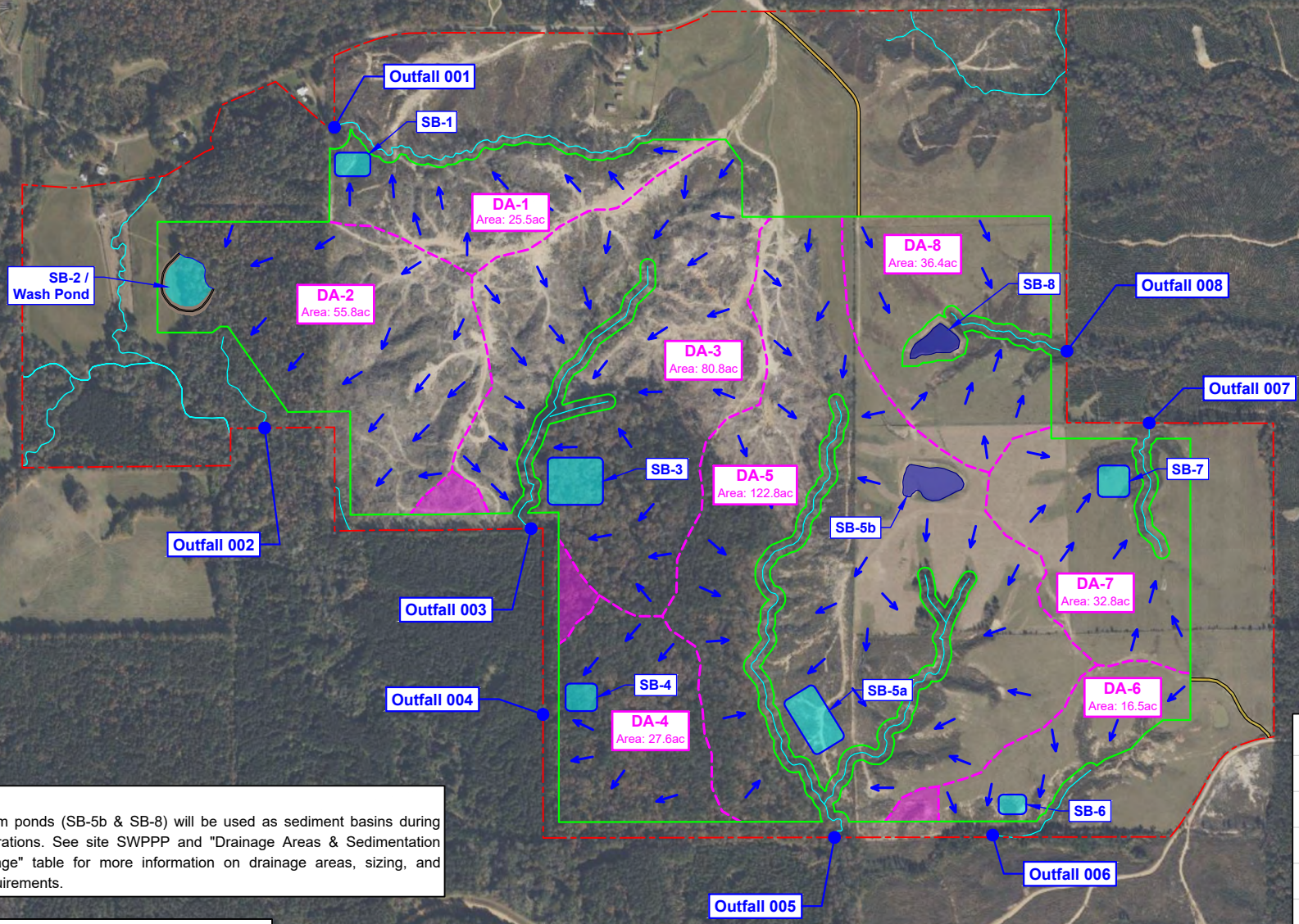
**Leaf River Conservancy, LLC**  
Malcum Road Mine  
N 31° 35' 52", W 90° 17' 52"  
Brookhaven, MS 39601

Drawing #:	Figure 1			
Drawing Name:	Topographic Quadrangle Map			
Project:	SWPPP			
Map Source:	USGS Topo			
Date Drawn:	12/29/2025	Upd:	1/28/2026	Drawn By: TF









**Notes:**

1. Existing farm ponds (SB-5b & SB-8) will be used as sediment basins during mining operations. See site SWPPP and "Drainage Areas & Sedimentation Basin Storage" table for more information on drainage areas, sizing, and volume requirements.

**Legend**

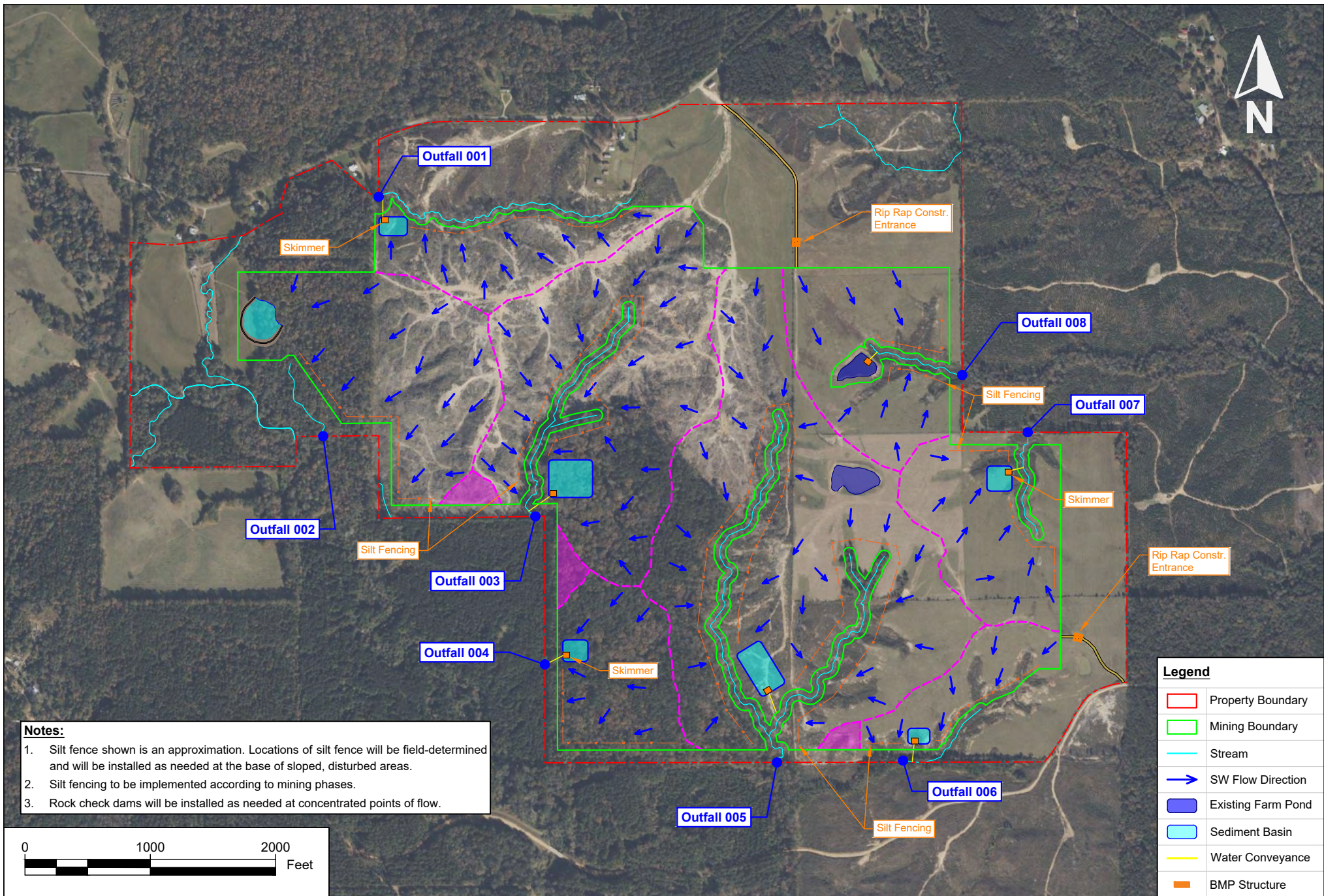
	Property Boundary
	Mining Boundary
	Stream
	SW Flow Direction
	Existing Farm Pond
	Sediment Basin
	Drainage Area



**Leaf River Conservancy, LLC**  
Malcum Road Mine  
N 31° 35' 52", W 90° 17' 52"  
Brookhaven, MS 39601

Drawing #:	Figure 3				
Drawing Name:	Site Drainage Map				
Project:	SWPPP				
Map Source:	Google Earth				
Date Drawn:	1/13/2026	Upd:	1/28/2026	Drawn By:	TF





**Notes:**

1. Silt fence shown is an approximation. Locations of silt fence will be field-determined and will be installed as needed at the base of sloped, disturbed areas.
2. Silt fencing to be implemented according to mining phases.
3. Rock check dams will be installed as needed at concentrated points of flow.

0 1000 2000  
Feet



**Leaf River Conservancy, LLC**  
Malcum Road Mine  
N 31° 35' 52", W 90° 17' 52"  
Brookhaven, MS 39601

<b>Drawing #:</b>	Figure 4		
<b>Drawing Name:</b>	Site Drainage Map		
<b>Project:</b>	SWPPP		
<b>Map Source:</b>	Google Earth		
<b>Date Drawn:</b>	1/13/2026	<b>Upd:</b>	1/28/2026
		<b>Drawn By:</b>	TF



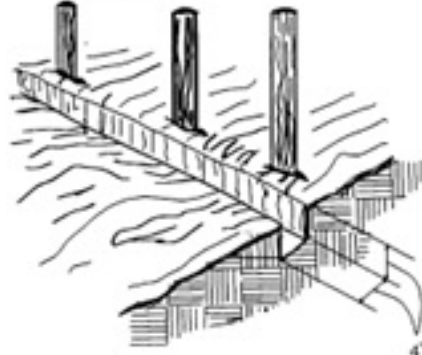
## Typical Silt Fence Installation

### CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)

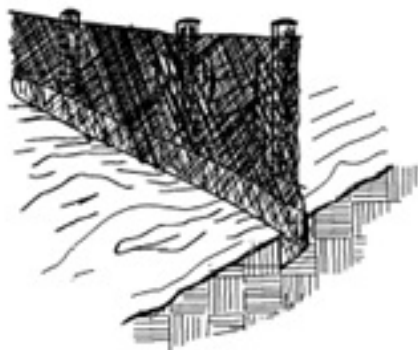
1. SET THE STAKES.



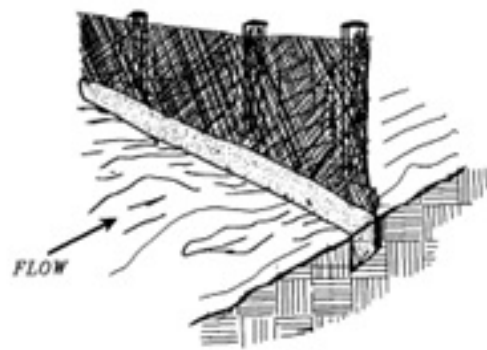
2. EXCAVATE A 4" X 4" TRENCH UPSLOPE ALONG THE LINE OF STAKES.



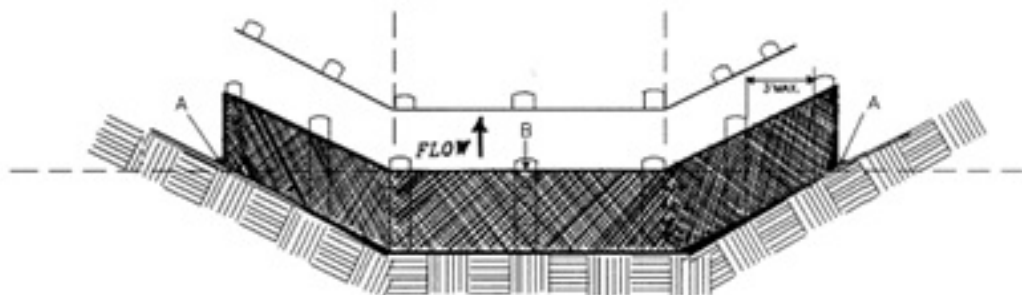
3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



SHEET FLOW INSTALLATION  
(PERSPECTIVE VIEW)



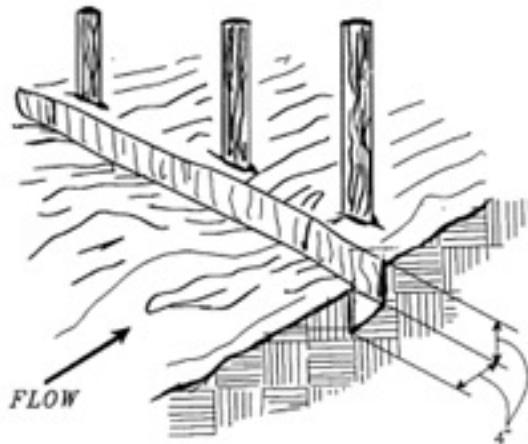
POINTS A SHOULD BE HIGHER THAN POINT B.

DRAINAGEWAY INSTALLATION  
(FRONT ELEVATION)

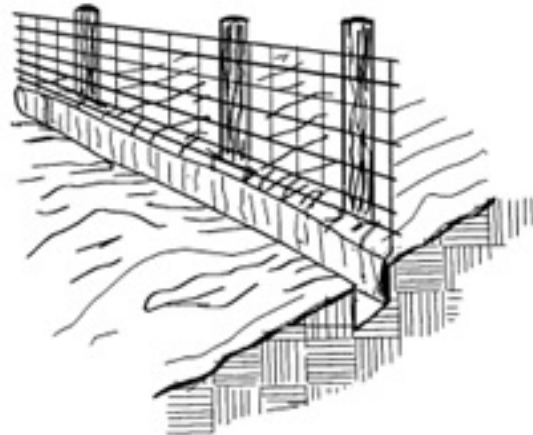
## Typical Silt Fence Installation

### *CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)*

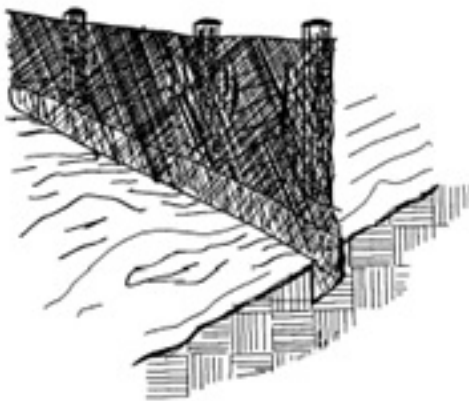
1. SET POSTS AND EXCAVATE A 4"X4" TRENCH UPSLOPE ALONG THE LINE OF POSTS.



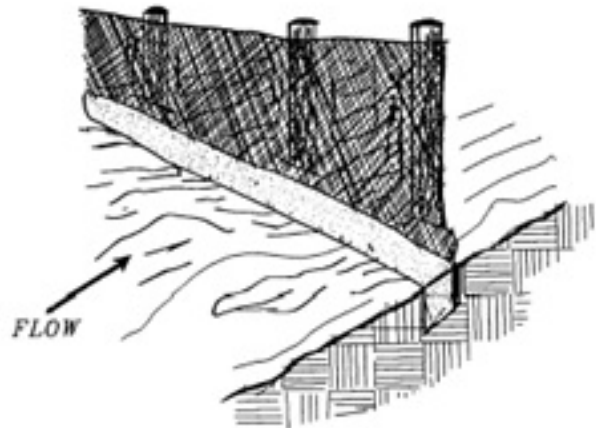
2. STAPLE WIRE FENCING TO THE POSTS.



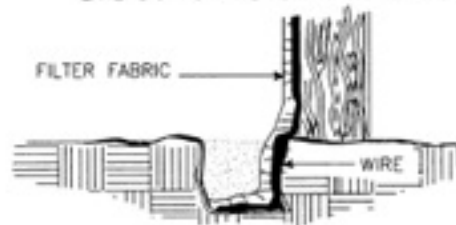
3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



4. BACKFILL AND COMPACT THE EXCAVATED SOIL.

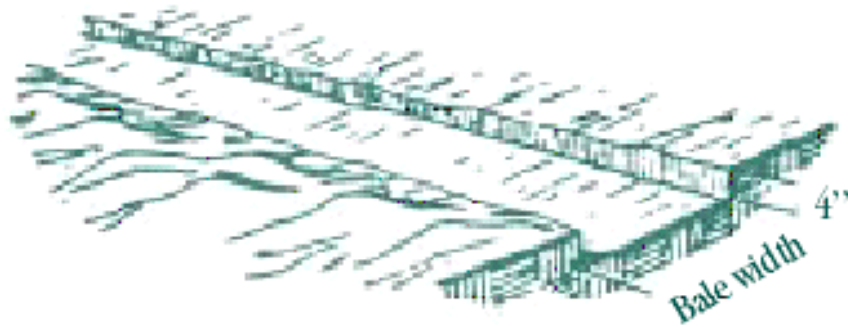


EXTENSION OF FABRIC AND WIRE INTO THE TRENCH.



## Typical Hay Bale Installation

- 1) Excavate the trench the width of the bale and 4" in height.



- 2) Place and stake the bales with 2 steel pickets or 2"x2" stakes. The first stake should be angled toward the previously laid bale. Trim or cap tops of stakes.

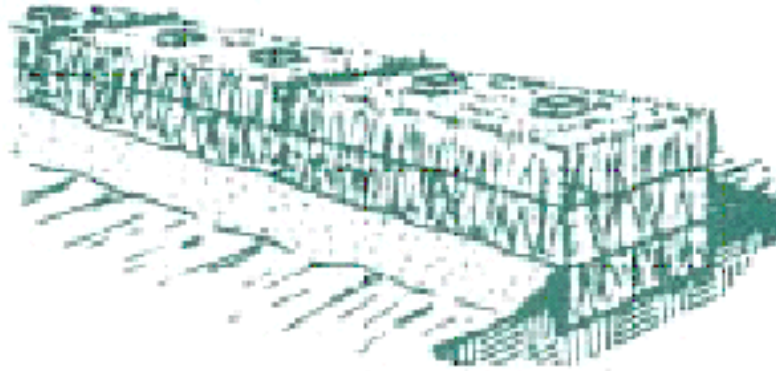


- 3) Wedge loose straw between bales.



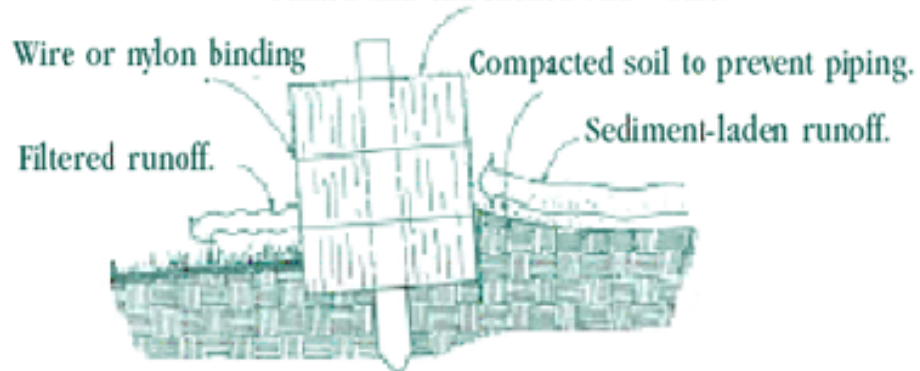
## Typical Hay Bale Installation

4) Backfill and compact the excavated soil.



5) Cross section of a properly installed straw bale.

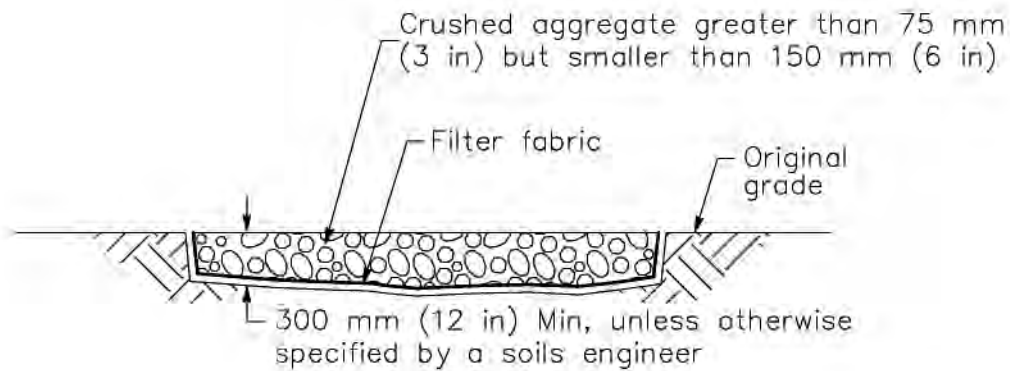
Staked and entrenched straw bale.



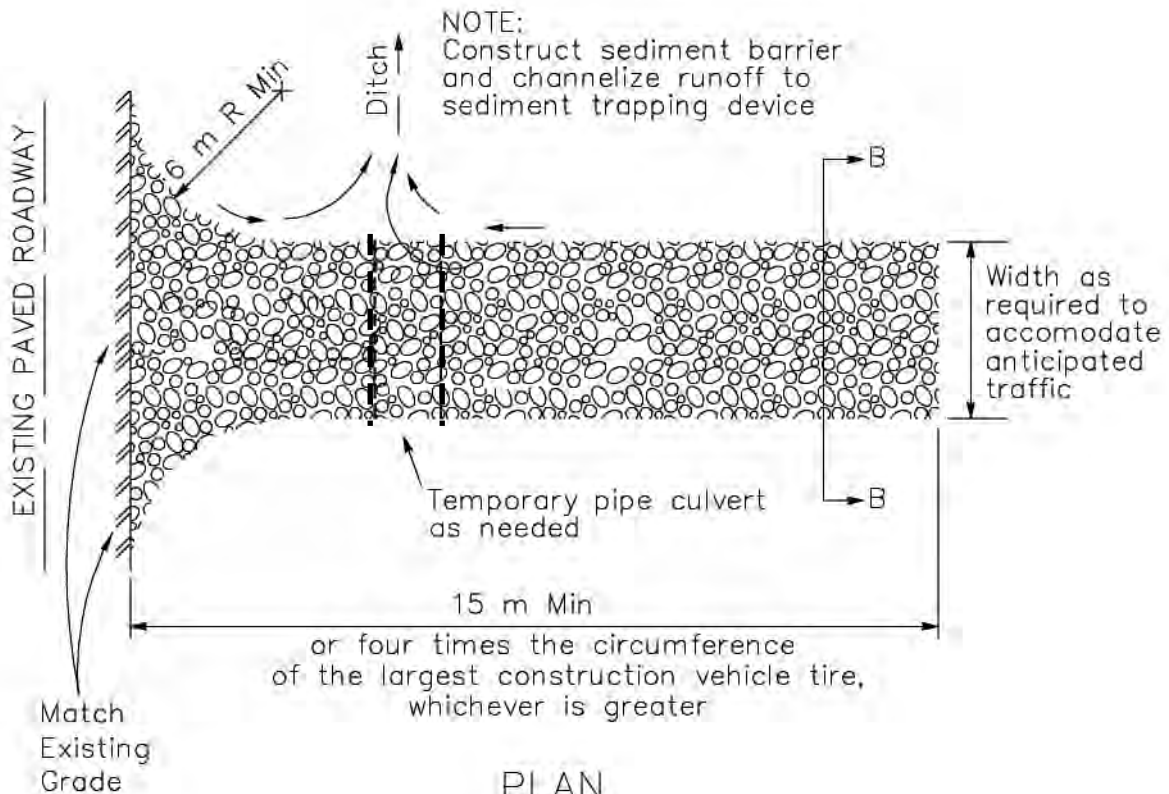


## Typical Construction Entrance/Exit Stabilization

### Type 1



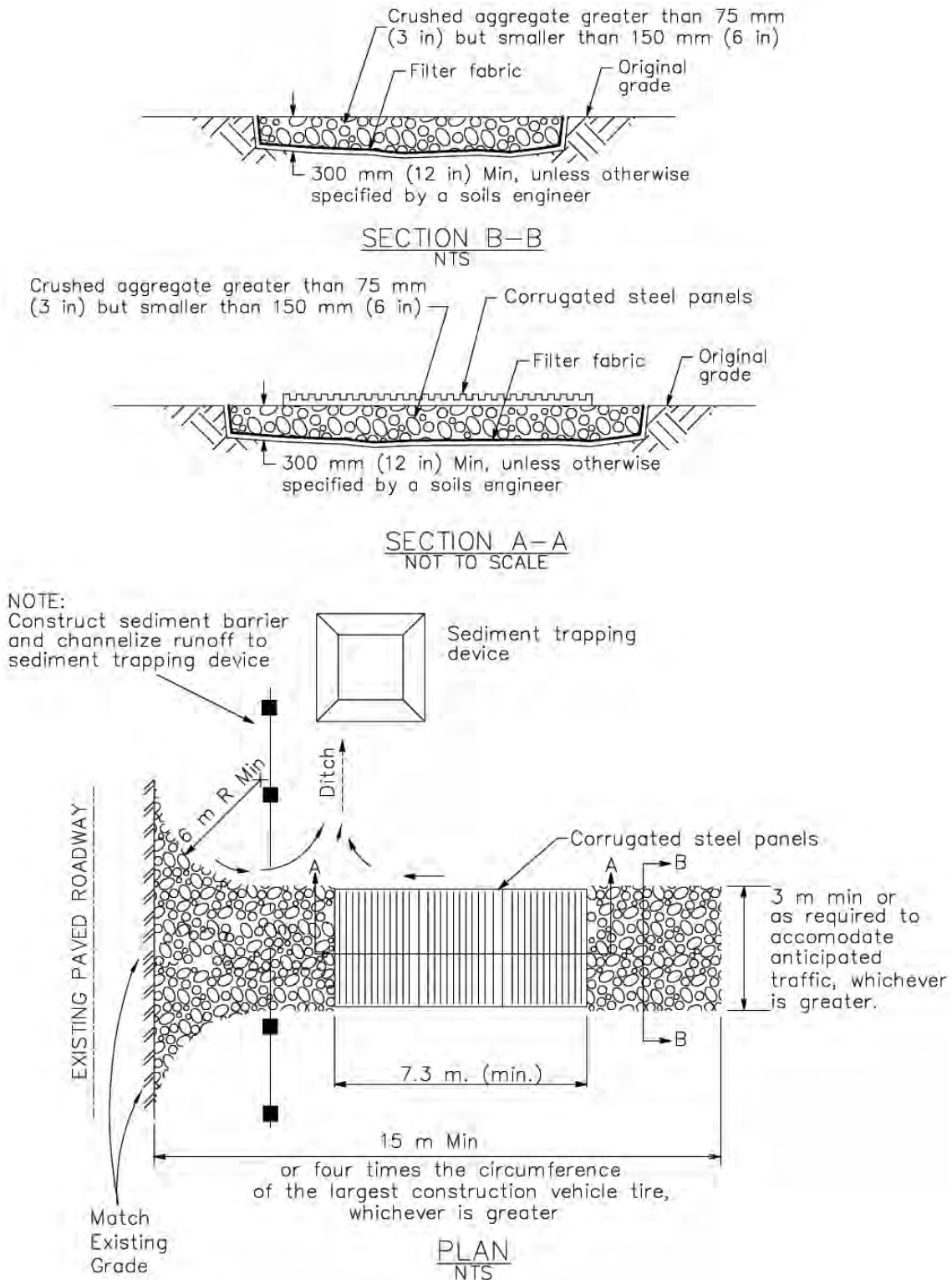
SECTION B-B  
NTS



PLAN  
NTS

## Typical Construction Entrance/Exit Stabilization

### Type 2



## **APPENDIX C**

### **Records of Monthly Inspections and Annual Report Forms**

## **APPENDIX D**

### **Records of Annual Training**

## **APPENDIX E**

### **Records of Significant Spills and Leaks & Notifications to Agencies**

## **APPENDIX F**

### **Drainage Areas & Sedimentation Basin Storage**

## Drainage Areas & Sedimentation Basin Storage

Drainage Area	Sediment Basin & Outfall		Drainage Area (ft²) *See Note 1	Drainage Area (acres)	Req'd Basin Volume (ft³) *See Note 2	Basin Volume Provided (ft³)
DA-1	SB-1	001	1,112,902	25.5	91,975.37	101,250.00
DA-2	SB-2	002	2,429,647	55.8	200,797.27	214,000.00
DA-3	SB-3	003	3,521,447	80.8	291,028.68	315,000.00
DA-4	SB-4	004	1,202,846	27.6	99,408.74	105,000.00
DA-5	SB-5a&b	005	5,349,024	122.8	442,068.10	461,580.00
DA-6	SB-6	006	719,511	16.5	59,463.72	65,625.00
DA-7	SB-7	007	1,429,032	32.8	118,101.82	120,000.00
DA-8	SB-8	008	1,584,123	36.4	130,919.26	138,138.00



Sediment Basin	Length (ft)	Width (ft)	Avg. Depth (ft)	Area (ft²)	Basin Volume (ft³)
SB-1	225	150	3	33,750	101,250.00
SB-2	300	225	3	67,500	214,000.00
SB-3	350	300	3	105,000	315,000.00
SB-4	200	175	3	35,000	105,000.00
SB-5a & SB-5b	400	225	3	90,000	270,000.00
	-	-	3	63,860	191,580.00
SB-6	175	125	3	21,875	65,625.00
SB-7	200	200	3	40,000	120,000.00
SB-8	* See Note 3		3.5	39,468	138,138.00



<=== see Note 4

### Notes

1. Drainage areas were derived using CAD software.
2. Standard 3,600 cubic feet per acre was used to calculate required volume.
3. Existing pond will be used as a sediment basin for DA-8. Area was calculated using aerial imagery and CAD software.
4. Proposed pond (SB-5a) and existing pond (SB-5b) will be used as sediment basins for DA-5. Their combined capacities make up the total basin volume provided.

## **APPENDIX G**

### **Wetlands Delineation**





## MEMO

**TO:** David Sanford  
**FROM:** Shawn Clark, P.E., BCEE  
**REFERENCE:** Dr. McKellar Mine Permit  
**SUBJECT:** Desktop Wetland Delineation  
**DATE:** December 5, 2025

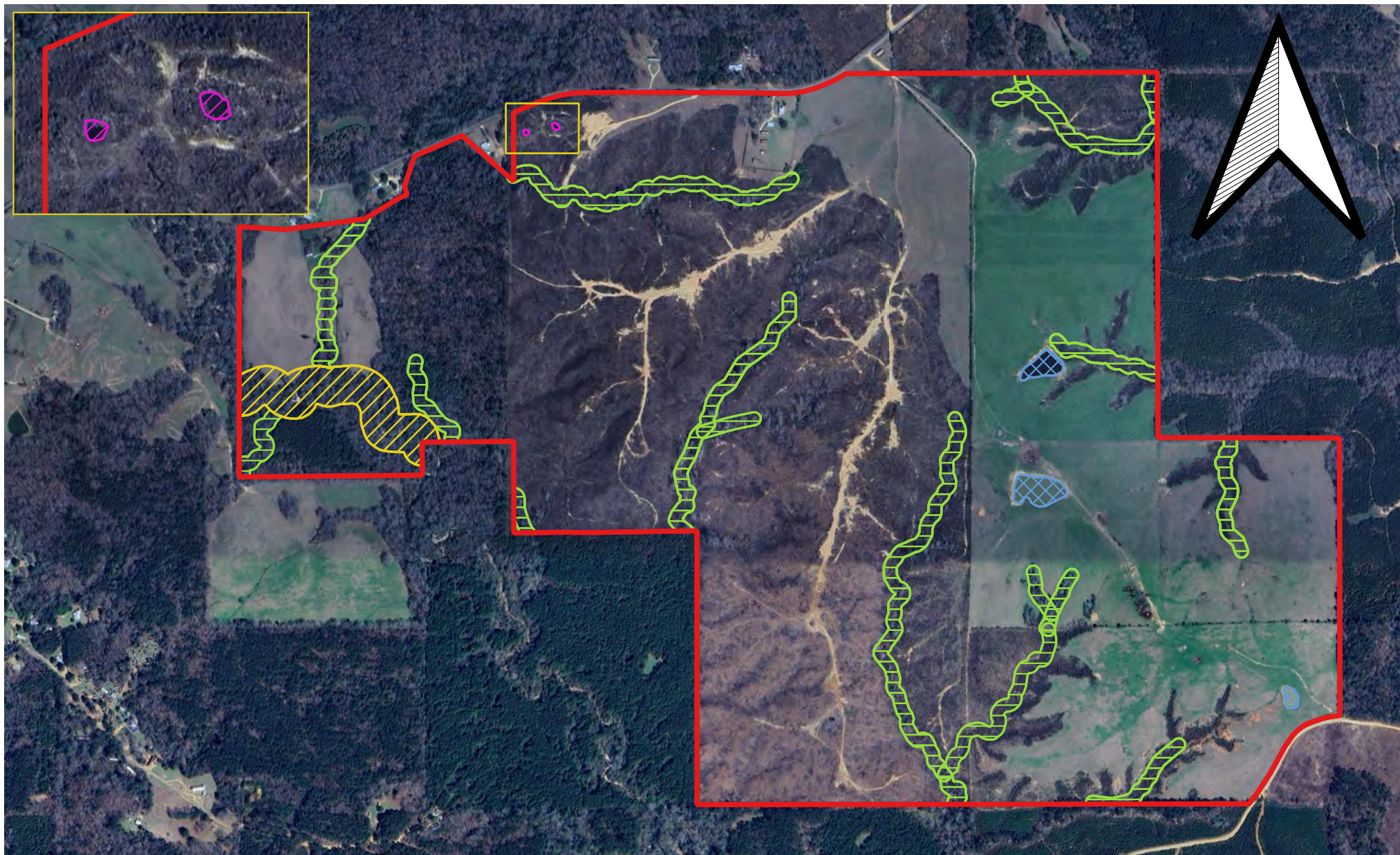
Per your request I conducted a desktop wetland evaluation on the property as shown in the map below. I reviewed the available information including the USFWS National Wetland Inventory (NWI), the National Hydrography Dataset (NHD), and a custom soil report using NRCS WebSoil Survey (attached). The soils in the area are not typically associated with wetlands or floodplain features. None of the mapped soil units are typically hydric nor do they contain hydric inclusions. NHD shows seventeen (17) potential intermittent stormwater features and one probable perennial stream as shown on the map below. The perennial water is labeled as "Fair River" and shown as a solid blue line on the USGS Quad map. These features range from 223 feet to 3,445 feet in length. Aerial photographs also show three (3) potential ponded areas probably constructed from uplands as farm ponds. Aerial photographs also show two (2) potential ponded areas. It appears they were excavated as part of a historic mining operation in the northwest portion of the property that began within the last five years.

It's my opinion that these linear features are potentially jurisdictional. The section of the Fair River running through the property is labeled as perennial and would be considered "relatively permanent" and thus jurisdictional to MDEQ and USACE. A 150-foot buffer zone is recommended as shown on the map below. The intermittent waters would probably not be considered "relatively permanent" and thus not jurisdictional to the USACE. However, MDEQ may consider them intermittent waters under state statute and a 50-foot buffer is recommended. The farm ponds would not be jurisdictional as they would fall under the exclusions found in 40 CFR 120.2 (b)(5) as an "artificial pond created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering..". Similarly, state law excludes ponds which are "wholly landlocked and privately owned". So, the ponds would not be considered a Water of the State. The two ponded areas in the previously mined area would also be covered by (b)(1) Exclusion: Waste treatment systems. This exclusion covers treatment ponds or lagoons designed to meet the requirements of the Clean Water Act.

Please let me know if you have any questions.

## Figures





- Property Boundary
- Intermittent Buffer
- Perennial Buffer
- Farm Pond
- Mine Pond

Dr. McKellar Mine  
Desktop Wetland Delineation  
Sec 9, T7N, R9E Lincoln County  
December 2025

0 250 500 FT



## Soil Report





United States  
Department of  
Agriculture

**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for **Lincoln County, Mississippi**

**McKellar Mine**



# Preface

---

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Legend.....	7
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Map Unit Descriptions.....	9
Lincoln County, Mississippi.....	11
BuB2—Bude silt loam, 2 to 5 percent slopes, eroded.....	11
Cs—Collins and luka soils.....	12
DbB2—Dulac and Boswell soils, 2 to 5 percent slopes, eroded (kolin and lorman).....	13
Fa—Falaya silt loam (oaklimeter).....	15
Fm—Falaya silt loam, local alluvium (oaklimeter).....	16
GbF—Guin and Boswell soils, 17 to 40 percent slopes (saffell, sweatman).....	18
GbF2—Guin and Boswell soils, 17 to 40 percent slopes, eroded (saffell, sweatman).....	19
GgF—Guin gravelly sandy loam, 17 to 40 percent slopes (saffell).....	21
HfB—Hatchie and Freeland silt loams, 2 to 5 percent slopes (bude and providence).....	22
OaB—Ora silt loam, 2 to 5 percent slopes (providence).....	24
OaB2—Ora silt loam, 2 to 5 percent slopes, eroded (providence).....	25
OaC2—Ora silt loam, 5 to 8 percent slopes, eroded (providence).....	26
OaC3—Ora silt loam, 5 to 8 percent slopes, severely eroded (providence).....	27
OrC2—Ora and Ruston soils, 5 to 8 percent slopes, eroded (providence and ruston).....	28
PhB2—Pheba silt loam, 2 to 5 percent slopes, eroded (savannah).....	30
PrB—Providence silt loam, 2 to 5 percent slopes.....	31
PrB2—Providence silt loam, 2 to 5 percent slopes, eroded.....	32
PrC2—Providence silt loam, 5 to 8 percent slopes, eroded.....	34
RuD2—Ruston soils, 8 to 12 percent slopes, eroded (smithdale).....	35
RuD3—Ruston soils, 8 to 12 percent slopes, severely eroded (smithdale).....	37
RuE—Ruston soils, 12 to 17 percent slopes (smithdale).....	38
RuE3—Ruston soils, 12 to 17 percent slopes, severely eroded (smithdale).....	39
RuF—Ruston soils, 17 to 35 percent slopes (smithdale).....	40
RuF2—Ruston soils, 17 to 35 percent slopes, eroded (smithdale).....	41
W—Water.....	42
<b>References</b> .....	43

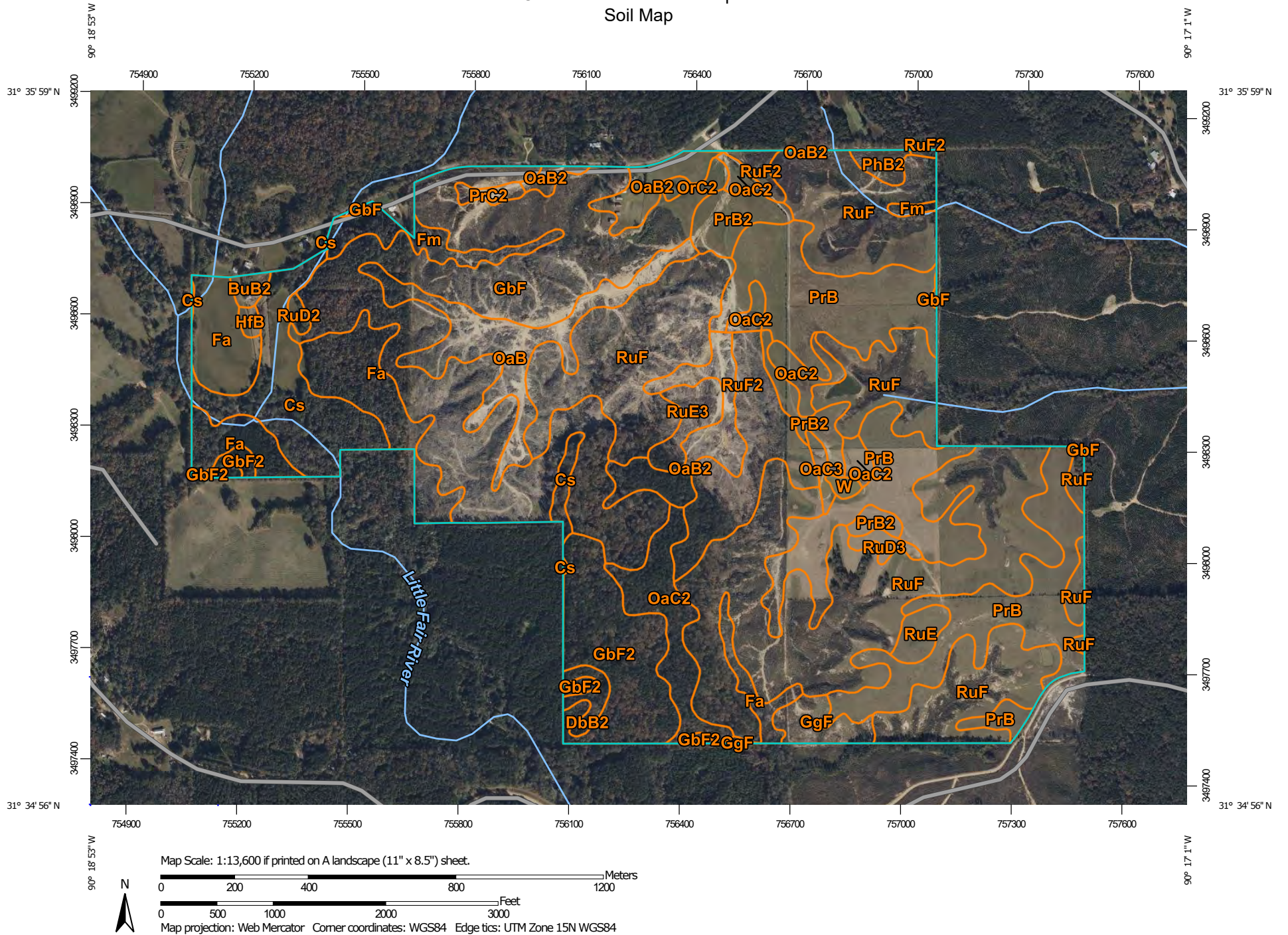


# Soil Map

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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.


# Custom Soil Resource Report Soil Map



# Custom Soil Resource Report

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals

### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lincoln County, Mississippi

Survey Area Data: Version 23, Sep 8, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 16, 2021—Dec 23, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BuB2	Bude silt loam, 2 to 5 percent slopes, eroded	1.8	0.3%
Cs	Collins and Iuka soils	28.1	4.3%
DbB2	Dulac and Boswell soils, 2 to 5 percent slopes, eroded (Kolin and Iorman)	3.0	0.5%
Fa	Falaya silt loam (Oaklimer)	41.5	6.3%
Fm	Falaya silt loam, local alluvium (Oaklimer)	9.0	1.4%
GbF	Guin and Boswell soils, 17 to 40 percent slopes (Saffell, Sweatman)	116.5	17.8%
GbF2	Guin and Boswell soils, 17 to 40 percent slopes, eroded (Saffell, Sweatman)	30.3	4.6%
GgF	Guin gravelly sandy loam, 17 to 40 percent slopes (Saffell)	6.2	0.9%
HfB	Hatchie and Freeland silt loams, 2 to 5 percent slopes (Bude and Providence)	1.0	0.2%
OaB	Ora silt loam, 2 to 5 percent slopes (Providence)	23.7	3.6%
OaB2	Ora silt loam, 2 to 5 percent slopes, eroded (Providence)	22.8	3.5%
OaC2	Ora silt loam, 5 to 8 percent slopes, eroded (Providence)	24.2	3.7%
OaC3	Ora silt loam, 5 to 8 percent slopes, severely eroded (Providence)	1.7	0.3%
OrC2	Ora and Ruston soils, 5 to 8 percent slopes, eroded (Providence and Ruston)	0.9	0.1%
PhB2	Pheba silt loam, 2 to 5 percent slopes, eroded (Savannah)	2.6	0.4%
PrB	Providence silt loam, 2 to 5 percent slopes	91.0	13.9%
PrB2	Providence silt loam, 2 to 5 percent slopes, eroded	15.0	2.3%
PrC2	Providence silt loam, 5 to 8 percent slopes, eroded	1.9	0.3%
RuD2	Ruston soils, 8 to 12 percent slopes, eroded (Smithdale)	2.0	0.3%
RuD3	Ruston soils, 8 to 12 percent slopes, severely eroded (Smithdale)	2.0	0.3%

## Custom Soil Resource Report

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
RuE	Ruston soils, 12 to 17 percent slopes (smithdale)	3.9	0.6%
RuE3	Ruston soils, 12 to 17 percent slopes, severely eroded (smithdale)	6.0	0.9%
RuF	Ruston soils, 17 to 35 percent slopes (smithdale)	194.3	29.6%
RuF2	Ruston soils, 17 to 35 percent slopes, eroded (smithdale)	25.1	3.8%
W	Water	1.0	0.2%
<b>Totals for Area of Interest</b>		<b>655.5</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The