Mining Program Summary

June 21, 2021

Brian Wrenn, Director, DEMLR
David Miller, PE, State Mining Engineer, DEMLR
Adam Parr, PE, Assistant State Mining Engineer, DEMLR
Mining Program Staff

- Adam Parr, Assistant State Mining Engineer, he handles most of the permits.
- Brenda Harris, administrative assistant.
- Shawna Riddle, (Ashville Regional Office), 0.5 FTE funded through the Mining Program.
- James Edwards, (Washington Regional Office), 0.5 FTE funded through the Mining Program.
- The entry level engineer, is still open. The position has been posted three times. The position is being reclassified, which will open it to more professional fields and potential for higher recruitment salary.
- Requesting another entry level engineer.
- David Miller, planning to retire August 2023.
Permitting Process

MINING PERMIT APPLICATION REVIEW
PROCESS FLOWCHART

BEGINNING OF PROCESS

Application received by Land Quality Section
State Mining Specialist

Applicant issues Public Notice

Application assigned to Assistant State Mining Specialist

Assistant State Mining Specialist/Program Secretary
reviews application for review and comment

- U.S. Fish & Wildlife Service
- N.C. Geological Survey
- Wildlife Resources Commission
- Division of Water Resources
- Division of Archives & History
- Division of Parks & Recreation
- Others as appropriate

Division of Air Quality
Division of Water Quality

Land Quality Section Regional Office

END OF PROCESS

Is application complete?

Is application & proposed permit action complete/acceptable?

If “Yes”, Assistant State Mining Specialist drafts the proposed permit action

If “NO”, Assistant State Mining Specialist's letter requesting additional information from applicant

Additional Information from applicant received and routed to reviewed by Assistant State Mining Specialist and Land Quality Section Regional Office (go to 2)

Application & proposed permit action reviewed by State Mining Specialist

If “Yes”, the following permit actions are issued by the State Mining Specialist:
- Draft Permits
- Permit Transfers/Name Changes
- Bond Substitutions
- Permit Reissues

If “NO”, application & proposed permit action returned to Assistant State Mining Specialist for revision (go to 3)

For other permit actions, if “Yes”, application & proposed permit action forwarded to and reviewed by Land Quality Section Chief

Is application & proposed permit action complete/acceptable?

If “YES”, application & proposed permit action forwarded to and reviewed by Division Director

If “NO”, application & proposed permit action returned to State Mining Specialist/Assistant State Mining Specialist for revision (go to 3)

END OF PROCESS
### Program Numbers

**Number of Permitted Sites:**

- Total, as of June 5, 2022, 741 Life of Mine sites
- The break down is:
  - Sand and Gravel, 450 sites
  - Crushed Stone, 161 sites
  - Brick Clay, 35 sites
  - Sand Dredging, 20 sites
  - Sand Dipping, 16 sites
  - Other/Unknown, 10 sites
  - Dimension Stone, 9 sites
  - Flag Stone, 7 sites
  - Feldspar, 6 sites
  - Gemstone, 4 sites
  - Pyrophyllite, 4 sites
  - Mica, 3 Sites
  - Phosphate, Silica Sand, 2 sites each
  - Olivine, Lithium, Talc, 1 site each
Expired Permits, but Still Bonded

The Mining Program refers to these as Orphan Sites.
- 57 total orphan sites.
- This is down from approximately 90 sites in 2018.
- The oldest permit expired in September 1996.

The State is still responsible for these sites.

The securities for these sites total $3,114,512.75.

The Regional offices are starting to help get rid of this backlog.
Amount of area under Permits

A conceptual view of Mining Permit areas:

- Property area + leased area + access area (think rights-of-way or non-DOT roads used to access site) => Permitted Area => Disturbed/Bonded acres

As of December 31, 2021:

- There are 137,167 acres of permitted area (a little less than the area of Clay County).
- Bonded acres equals 81,093 acres.

In 2021, the Program released 451 acres, which means they have been reclaimed and removed from the bonded area.
Fees Coming into the Program

For the fiscal year 2021-2022

• Annual Fees: $280,750.00.
  • According to our records 79 sites have not paid.
  • Records need to be reconciled.
  • Hoping to address early July 2022.
• Permit fees: $114,650.00.
• Total: $395,400.00.

Comparison between the Mining Program and the State’s General Ledger:

Mining Program: $395,400.00
State’s General Ledger: $392,400.00
      $3,000.00

• Difference is likely late fees that go to public school system.
Enforcements/Civil Penalty Assessments

Four enforcements with civil penalty assessments since 2018.

- Hughes-Smith Road 2 Pit (Bellamy Pit), Brunswick County, mining outside of pit boundary, mining wetlands.
  - U.S. Army Corps of Engineers were involved.
  - The ~$18,700 fine has not been collected.
  - Collection is in the hands of the Attorney General Office.
- Casey Bailey Mine, Davie County, mining without a Mining Permit.
  - The ~$5,000.00 fine has been paid.
- Anderson, Craven County, mining without Mining Permit.
  - The ~$5,000.00 fine has been paid.
- Tony Merritt Gravel Pit, Orange County, multiple permit violations.
  - The ~$19,600.00 fine has been paid.

Three additional case under review.

All penalties go to the public school system.
Program Initiatives

Increase staffing. There is a need of 4 engineers/professional people

- State Mining Engineer: management, enforcements, annual fees, safe, inspections, mining commission, special projects, and permitting.

- Assistant State Mining Engineer: permitting, digital management, safe, enforcements, inspections, training, and special projects.

- 2 State Mining Specialist: permitting, inspections, Annual Reclamation Reports, and special projects.
Program Initiatives

Conduct regular audits of the Reclamation Security safe.

- The “safe” is used to store the original securities submit to the Program by the permittees.
  - It appears the “safe” has not had a complete audit since the early 1990s.
  - Records in the electronic database maintained by the Program do not match physical counts done on the securities in the safe.
- Some banks have been escheating accounts for inactivity.
Program Initiatives

Resolve “Orphaned permits”
- Reconcile the ~57 sites whose permits have expired but have not been released.

Update and evaluate current Reclamation factors.
- Reclamation Factors have not been updated in over ten years.
- Factors were not documented as how they were derived, hence cannot be adjusted.
- Reclamation Factors do not meet the level of review required by the Department of Interior mining projects. This is not a requirement but should be noted as a benchmark.

Mining Program website revisions to make more user-friendly and interactive.
Department Initiatives

CRM --- a new management database.
  • Electronic submittals of application.
  • Electronic tracking of submissions.
  • Electronic billing.

Will most likely start seeing implementation in 2023.
Emerging Issues

Issues from Life of Mine permits
- Site maps are getting outdated.
- Reclamation securities are increasing due to inflation factors.
- Outdated contact information.
- This is sometimes being addressed through the Annual Reclamation Reports.

Back filling pits
- Concerns with subsidence and leaching of pollutants from fill.
- Beneficial fills could be affected by this.
- DWM is in the discussion about these activities.
- A recent quarry fill has been approved where the operation proposed to “dome” the site for positive drainage and subsidence. Prior to release a note will be placed on the site’s deed/in the registry of deeds stating the site was a mine and has been backed filled.

Coastal discharge of mine dewatering to saline estuarine environments
- DWR and DMF have identified potential adverse impacts to HWQ:SA where mine dewatering could impact temperature and salinity of receiving waters.
Emerging Issues

Mine legacy

- Division of Waste Management raising concerns about leaching and material degradation from industrial mineral operations.
  - The Program is requiring new/modification application for lithium operations to perform Leaching Environmental Assessment Framework Test Methods. (LEAF)
  - LEAF designed to consider the effect of key environmental conditions and waste properties on leaching.
- The above lithium operations could be subject to EPA’s regulation for managing hazardous waste under Subtitle C of Resource Conservation and Recovery Act (RCRA) unless exempted as part of the Bevill Amendment (section 3001(b)(3)(A)).
  - The Bevill Amendment exempts waste from the extraction, beneficiation, and processing of ores and minerals. (Ore or mineral is physically and chemically similar, however particle size has been reduced.)
  - The Bevill Amendment does not exempt waste from Mineral Processing that changes the chemical composition or physical structure of the ore or mineral, such as smelting, electrolytic refining, and acid attack or digestion.
  - Co-mingling exempt and non-exempt waste could subject the entire site to regulation under RCRA.
  - https://www.epa.gov/hw/special-wastes

Emerging Issues

Mine legacy (continued)

- The pyrophyllite and silica operations are exempted under Beville.
- There is indication that the pyrophyllite operations could have leachable material associated with them.
- The Department will evaluate further actions based on LEAF results.
- The Program may need to develop guidance for testing at industrial mineral sites or other mining sites where there might be a leaching issue (think metals).