



Mining Program Summary

June 21, 2021

Brian Wrenn, Director, DEMLR

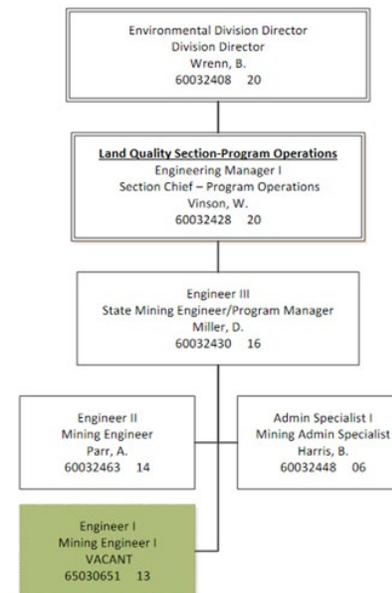
David Miller, PE, State Mining Engineer, DEMLR

Adam Parr, PE, Assistant State Mining Engineer, DEMLR



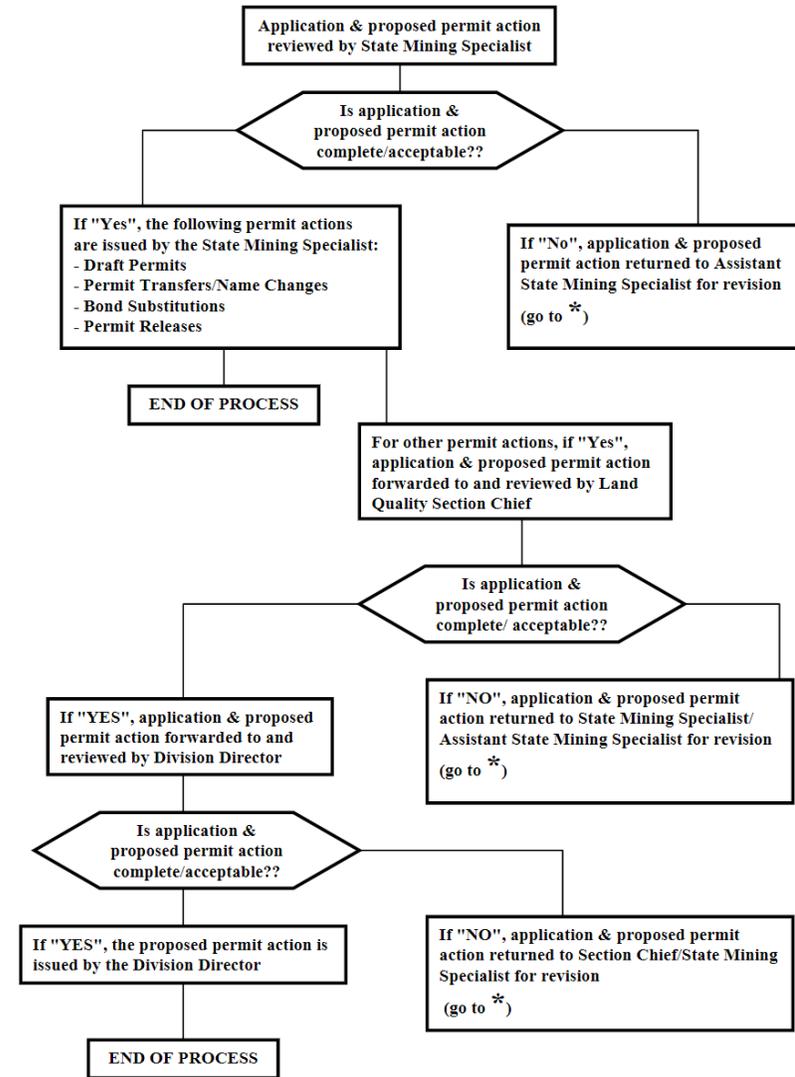
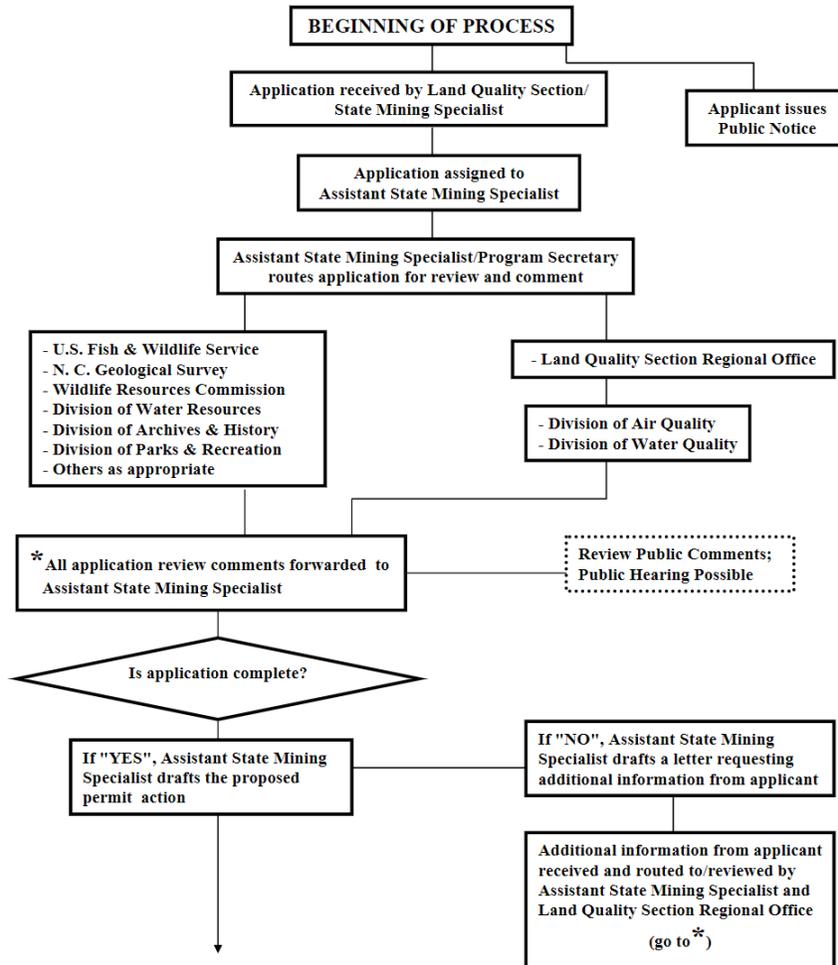
Mining Program Staff

- Adam Parr, Assistant State Mining Engineer, he handles most of the permits.
- Brenda Harris, administrative assistant.
- Shawna Riddle, (Asheville 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

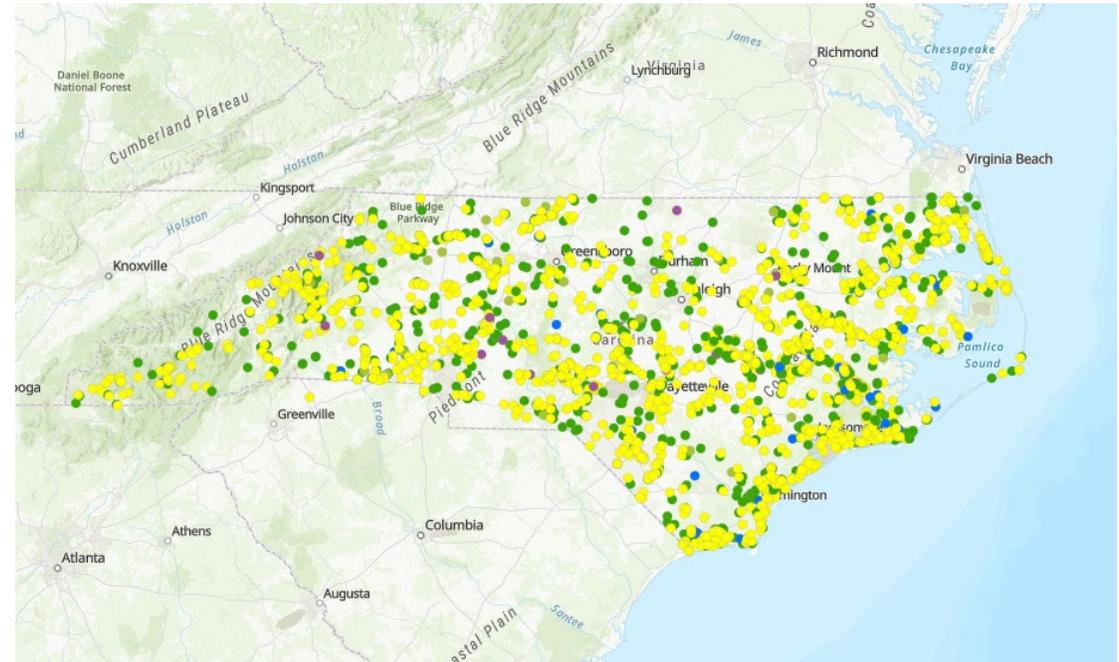
MINING PERMIT APPLICATION REVIEW PROCESS FLOWCHART



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.

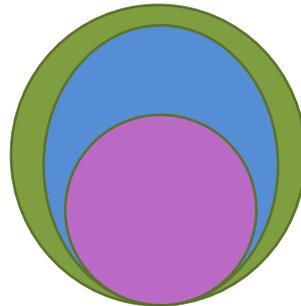
The Regional offices are starting to help get rid of this backlog.



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:	<u>\$392,400.00</u>
	\$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.

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Mining Program

Regulatory Authority

N.C. Mining Act of 1971 - G.S. 74, Article 7
Note: This copy of the state Mining Act does not reflect changes enacted during the 2017 legislative session. Please see below for more information on the 2017 changes.

NCAC Title 15A, Chapter 5: Mining, Mineral Resources

Mine Permit Changes 2017

During the 2017 session of the N.C. General Assembly, an amendment was made to the N.C. Mining Act of 1971, which affects the permit term of existing mining permits. Pursuant to the passage of House Bill 56 that became law on Oct. 4, 2017 as SL 2017-209¹⁴, all existing mining permits and any newly issued mining permits are to be issued for the life of the site or lease term.

The state Division of Energy, Mineral and Land Resources plans to issue mining permit modification letters to all existing mining permit holders notifying them that the letter shall serve to modify the existing mining permit to remove all references to the prior expiration date, and to convert any existing permit to a life of site or lease permit effective immediately. The division will require each permit holder to attach this letter to the existing mining permit for future reference. The mine name and permit number on the permit document, and all existing operating and reclamation conditions contained therein, shall remain in full force and effect. Furthermore, all provisions of GS 74-51 and GS 74-52 still apply for new, transferred and modified mining permits.

In addition to the life of site or lease mining permit provision, SL 2017-209 also enacted a new annual mining permit operating fee of \$400 per mining permit number. The \$400 annual Reclamation Report as required by GS 74-55. Failure to submit the fee by the required deadline will result in a \$50 per month late fee and could result in the denial of future permit actions and/or reclamation of a mining permit.

Lastly, pursuant to GS 74-54, the cap on reclamation bonds has been raised from \$500,000 to

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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.



STREAMLINE PERMITTING PROCESS
Ensure a consistent, transparent and efficient permitting process across DEQ



MODERNIZE PERMITTING SYSTEM ONLINE (AccessDEQ):
Create a web-based solution for applying, tracking and paying for applications



CREATE PUBLICLY ACCESSIBLE DATA DASHBOARDS
Develop an interactive, web-based publicly accessible system for DEQ data, including permits, records, compliance issues and enforcement actions



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

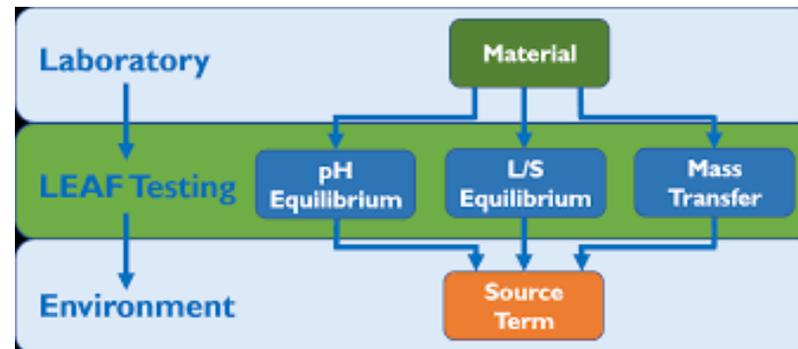
- DWR and DMF have identified potential adverse impacts to HWQ:SA where mine dewatering could impact temperature and salinity of receiving waters.



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 were there might be a leaching issue (think metals).



Photo: Geology Page, <http://www.geologypage.com/2014/07/pyrophyllite.html>

