



A REPORT
TO THE
MONTANA
LEGISLATURE

LEGISLATIVE AUDIT
DIVISION

24P-03

PERFORMANCE AUDIT

*Opencut Mining:
Permitting Efficiency,
Property Value and
Production Impacts, and
Tax Equity*

*Department of Environmental Quality
Department of Revenue*

JUNE 2026

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PERFORMANCE AUDITS

Performance audits conducted by the Legislative Audit Division are designed to assess state government operations. From the audit work, a determination is made as to whether agencies and programs are accomplishing their purposes, and whether they can do so with greater efficiency and economy.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Members of the performance audit staff hold degrees in disciplines appropriate to the audit process.

Performance audits are conducted at the request of the Legislative Audit Committee, which is a bicameral and bipartisan standing committee of the Montana Legislature. The committee consists of six members of the Senate and six members of the House of Representatives.

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June 2026

The Legislative Audit Committee
of the Montana State Legislature:

It is our pleasure to present the performance audit of the opencut mining permitting program managed by the Division of Air, Energy, and Mining within the Department of Environmental Quality.

This report provides the Legislature information about the department's regulatory oversight of opencut mining in Montana. This report includes recommendations for improving the permitting process and enhancing stakeholder engagement at the Department of Environmental Quality, and addressing the impact of opencut mining on nearby property values at the Department of Revenue. Written responses from the Department of Environmental Quality and the Department of Revenue are included at the end of the report.

We wish to express our appreciation to the Department of Environmental Quality and the Department of Revenue personnel for their cooperation and assistance during the audit.

Respectfully submitted,

/s/ Angus Maciver

Angus Maciver
Legislative Auditor

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Eric Dahlgren, Bureau Chief, Mining Bureau

Whitney Bausch, Section Supervisor, Opencut Section
(March 2022 through November 2025)

Bailey Tasker, Interim Section Supervisor, Opencut Section
(effective December 2025)

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Brendan Beatty, Director

Tracy Morano, Operations Director

Paula Gilbert, Administrator, Property Assessment Division

Robin Rude, Deputy Administrator, Property Assessment Division

Bryce Kaatz, Bureau Chief, Property Assessment Division



MONTANA LEGISLATIVE AUDIT DIVISION

PERFORMANCE AUDIT Opencut Mining

DEPARTMENT OF ENVIRONMENTAL QUALITY

DEPARTMENT OF REVENUE

A report to the Montana Legislature

BACKGROUND

The Opencut Section's responsibilities and duties are outlined in Montana statute as the Opencut Mining Act (MCA 82-4-4). Extraction of opencut materials, such as sand, gravel, bentonite, clay, and others, is important to the state's economy, and the Opencut Mining Act was intended to permit these mining operations in a way that preserves natural resources, protects wildlife and water resources, reclaims affected land, and promotes the health, safety, and welfare of Montana citizens.

Program: Opencut Mining Section,
Department of Environmental Quality

Program FTE: 11

Program Revenue FY 2025: \$1.9 million

Program Expenses FY 2025: \$1.2 million

The Opencut Section, which oversees the extraction of materials such as sand, gravel, bentonite, and clay, has come under media and public scrutiny in recent years, mainly since the implementation of House Bill 599 in 2021. While the statutory changes were intended to benefit production and expedite the process, they also introduced public concern of potential economic impacts on nearby residential properties and immediate procedural changes for Opencut staff. Staff struggled to review and issue permits under the new statutory timeframes, with compliance rates of 75 percent for completeness reviews and 69 percent for acceptability reviews across all permit types. Additionally, living near an opencut mining site negatively impacts property values. Homes located within half a mile of an active opencut mine experience an average reduction in sale price of 8.4 percent, a loss in value of approximately \$37,000 for a typical \$450,000 Montana home.

KEY FINDINGS:

Homes located within half a mile of an active opencut mine experience an average reduction in sale price of 8.4 percent, a loss in value of approximately \$37,000 for a typical \$450,000 Montana home. When the negative impacts of opencut mines and other disamenities are not consistently accounted for in property tax assessments, tax inequities can arise, especially in low-density and rural areas. In comparing our results to Department of Revenue property assessment data, we found that there is not a consistent, systematic mechanism to account for opencut mining impacts on property values across the state.

The Opencut Section does not have a singular application system to track and review permit applications, creating a lengthy and complicated permitting process. The Opencut Section was not equipped to manage the additional requirements and complexity of the opencut mining permit process with its current tools in response to House Bill 599.

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For the full report or more information, contact the Legislative Audit Division.

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While Opencut staff are committed to meeting statutory requirements, they frequently struggle to do so, particularly for more complex permits. Operators also widely viewed the application process as complicated, time-consuming, and resource-intensive, often requiring operators to hire external consultants.

Many operators and members of the public lack the necessary information to navigate the permit process efficiently. General confusion regarding the permit process not only impacts the efficiency of the permitting process, but also greatly affects stakeholder trust and statutory compliance. Transparency is key to an effective permitting process. It provides stakeholders with insight into engagement opportunities, allows for the timely resolution of any concerns or issues with the process, and facilitates accountability from the Department of Environmental Quality. Our work found that the Opencut Section struggled to keep pace with the stakeholders' communication needs due to limited staffing, staff turnover, and the introduction of the new statutory requirements in 2021. This lack of comprehensive outreach and education contributed to confusion and dissatisfaction among both operators and the public, increasing the risk of appeals, litigation, and opposition to mining projects.

RECOMMENDATIONS:

In this report, we issued the following recommendations:

To the Department of Environmental Quality: 2

To the Department of Revenue: 1

To the legislature: 0

RECOMMENDATION #1 (page 10):

State Compliance

We recommend the Department of Revenue investigate ways to accurately account for changes in property values near Opencut mines and other disamenities in low-density areas and areas without enough recent sales to affect the assessment model.

Department response: Concur

RECOMMENDATION #2 (page 19):

System and Information Management

We recommend the Department of Environmental Quality prioritize and implement an electronic application system for Opencut permitting to improve statutory compliance and promote clarity, efficiency, and stakeholder satisfaction.

Department response: Concur

RECOMMENDATION #3 (page 22):*Management and Operational Effectiveness*

We recommend the Department of Environmental Quality:

- A. Enhance communication and education for both operators and the public, with clear, accessible instructions and timely updates on legislative changes; and
- B. Simplify and clarify permit application instructions, especially for dryland permits.

Department response: Concur

Chapter I – Introduction and Background

Introduction

The Department of Environmental Quality (DEQ, department) oversees air, water, energy, and mining activities in the state. In 2021, the department created the Mining Bureau by merging the Hard Rock Mining Bureau and the Coal & Opencut Mining Bureau. This change placed all mining sections and staff under one bureau. The Opencut Section's duties are defined in Montana law under the Opencut Mining Act (MCA, 82-4, Part 4). The section oversees the extraction of materials such as sand, gravel, bentonite, and clay, which are important to Montana's economy because they are primarily used for construction and infrastructure projects.

The Property Assessment Division of the Department of Revenue (DOR) is responsible for appraising all property in the state to assess property taxes. During the appraisal process, the DOR assigns fair market value to properties and assesses the taxable value for property taxes. The DOR ensures that residential and commercial properties, and agricultural and forest land are valued uniformly within the state so that tax jurisdictions can obtain accurate property taxes to fund public services. Montana is one of only two states that conducts all property appraisals through a state department. Montana statute specifies that the DOR appraises properties at 100 percent of their market value as of January 1 each year. The DOR must also create a reappraisal plan to revalue residential and commercial property every two years.

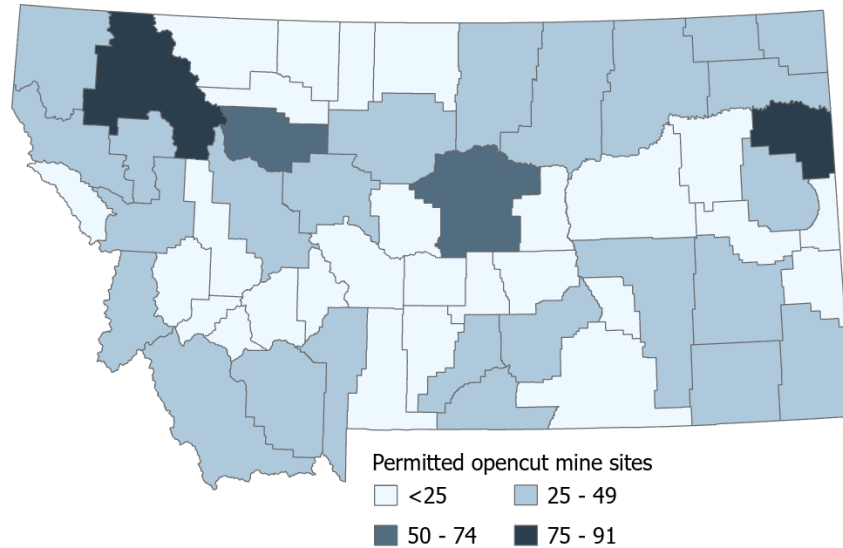
The Legislative Audit Committee selected the Opencut Mining Section for a performance audit in fiscal year 2024 due to growing interest in the permit process, such as public comment, statutory review timeframes, and mining site regulation. Since much of the public interest also includes impacts to nearby property values, we included the Property Assessment Division in the audit.

Background

The Opencut Section oversees more than 1,400 opencut mines that affect residents and the environment across the state. Towns, counties, and state agencies such as the Department of Transportation and the Department of Natural Resources and Conservation, as well as private individuals and companies, can hold permits. Operators are required to secure a bond for site reclamation before the site can be permitted. Government entities are the only operators who do not need to provide a bond or submit annual fees. According to the Mining Bureau, all 56 counties in Montana have opencut mining permits. Sites vary in size, ranging from a few hundred to thousands of cubic yards of material mined each year.

Figure 1
Map of Opencut Sites in Montana

There are over 1,400 opencut sites in Montana.



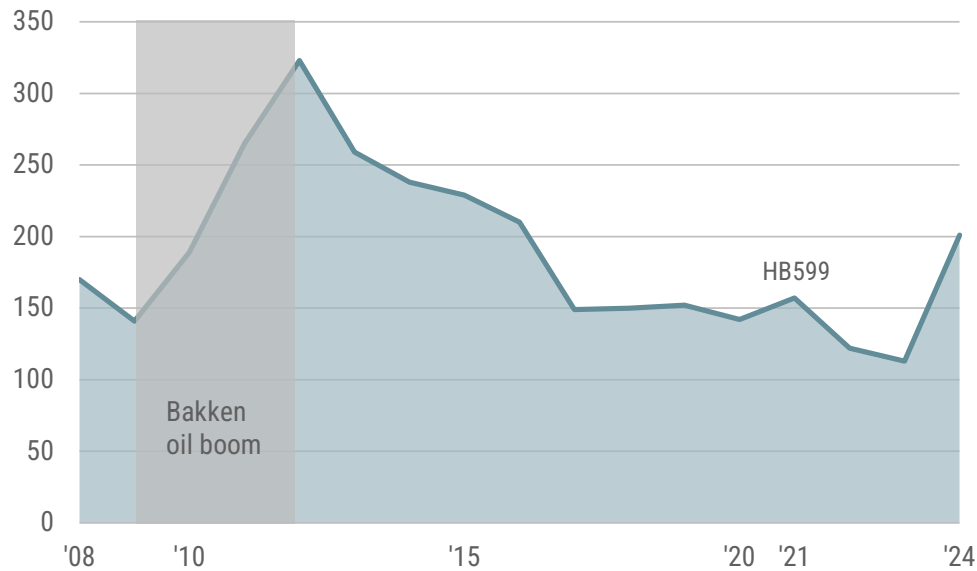
Source: Compiled by the Legislative Audit Division from department records.

The Opencut Section typically manages about 100 pending permit applications, up to 100 bond release requests that come in when a site has been reclaimed, and over 200 planned site inspections at any given time. Between 2015 and 2020, the section averaged 172 new permit applications each year. In fiscal year 2021, the department received 59 citizen complaints regarding violations of the Opencut Mining Act. Most complaints were referred to the DEQ's Enforcement Program. The Opencut Section can also issue violation letters to operators after site inspections for statutory violations and involves the Enforcement Program if operators do not respond.

The section's workload depends on factors like industry growth and changes in environmental laws. For example, during the Bakken oil boom from 2009 to 2012, new applications nearly doubled from about 150 to 300 per year. In recent years, the department has reported receiving more applications near urban areas.

Figure 2
Opencut Application Volumes

Opencut permit applications spiked during the Bakken oil boom. House Bill 599 made changes to the opencut permitting process in 2021.



Source: Compiled by the Legislative Audit Division from department records.

The Opencut Section is small, with 11 budgeted positions: one section supervisor, one unit coordinator, six reclamation specialists, and three program support specialists. The section supervisor assigns and approves applications and permits. The unit coordinator helps ensure consistency and supports staff with applications and permits. Reclamation specialists review applications, conduct environmental analyses, and inspect sites. A unit coordinator or senior reclamation specialist peer-reviews each application and inspection to ensure compliance with laws and procedures. Program support specialists check applications for completeness, manage bonds, and handle communications and data. Staff also track site reclamation, conduct inspections, and approve bond releases.

In 2021, the legislature passed House Bill 599 (HB599), which changed several mining site requirements and reduced permit restrictions to speed up application processing. Under the bill, the DEQ no longer regulates certain operational limits, such as specific hours, protections against fuel spills, noise, and fires. Many of these operations are now regulated under local authorities, the DEQ Water Protection Bureau, and others. The main change was a shortened review process for dryland permits (sites that do not affect ground or surface water) with shorter review times. These changes took effect immediately in May 2021. However, the Opencut Section did not receive additional funding to implement and meet these statutory changes.

Since HB599, the Opencut Section has faced increased public and media attention. Many citizens and groups have raised concerns that the DEQ cannot properly review permit applications under the new requirements, especially for dryland permits. Proposed operations, especially gravel pits, have faced opposition from nearby residents. Much of the concern centers on the loss of previous environmental and operational safeguards, like required hours of operation. Residents also questioned the effect of nearby mining sites on their property values.

While the statutory changes were intended to boost efficiency and economic growth, they also created administrative challenges. Staff had to learn new procedures quickly and manage more applications without established guidelines or enough training. As a result, while the permit process became faster, staff faced a heavier workload overseeing and enforcing the new requirements.

Audit Scope

We scoped our review of the DEQ’s Opencut Mining Program to focus on the Opencut Section’s permit review process, including statutory timeframes and requirements for permits applied for and issued from January 2022 to December 2023. We also examined how opencut mining affects property sales and the taxable values of nearby residential properties using the DOR’s assessment model and appraisal data to estimate, as well as the production levels of materials such as sand and gravel.

Audit Objectives and Methodologies

We developed two audit objectives to evaluate the Opencut Section’s compliance with permit requirements and the economic impacts of opencut mining:

1. What are the impacts of opencut mining on nearby property values and aggregate production?
2. Does the Department of Environmental Quality review and issue opencut mining permits within statutorily defined timeframes and requirements?

Figure 3
HB599 Changes

House Bill 599 significantly restructured Montana’s Opencut Mining Program.

- DEQ-Opencut Regulated
- Operator Responsibility
- Other DEQ Division or Other Entity
- Operator or County

Feature Changed By HB599	Pre-HB599	Post-HB599
Public Notice	●	●
Limits on Hours of Operation	●	●
Water Quality Protection	●	●
Noise & Visual Impacts	●	●
Protection of Lifeforms	●	●
Fuel Spill Prevention	●	●

Source: Compiled by the Legislative Audit Division from department records.

To answer these questions, we conducted the following methodologies

- Reviewed statute, rules, and department policies and procedures related to issuing opencut permits.
- Identified permitting best practices from other states and agencies.
- Interviewed Opencut Section staff and surveyed opencut mining operators about the permit process.
- Reviewed 126 permit applications submitted in 2022 and 2023 for compliance with statutory requirements.
- Analyzed Opencut Section resources and staff workloads.
- Visited opencut mining sites with section staff.
- Calculated statewide production of opencut materials.
- Identified trends in permit applications by county population.
- Interviewed property owners near opencut mining sites.
- Consulted Department of Revenue staff on valuation models for residential properties, especially for properties near opencut sites.
- Analyzed the impact of opencut mining on nearby residential property sales and taxable values.

Chapter II - Opencut Mining Impacted Nearby Property Values; Production Impacts Unclear

Introduction

Due to increased public interest and concerns from local property owners in the aftermath of HB599, we examined potential impacts of opencut mining on nearby property values and the production of aggregate materials. Our review of production data, population trends, and operator feedback suggest that while Montana's opencut mining industry is meeting current demand, there has not been an immediate impact on production of aggregate materials. We estimated that residential properties within 0.5 miles of an active mine sold for about 8.4 percent less than similar properties near inactive sites. For an average Montana home valued at \$450,000, this meant a loss of about \$37,000. We also examined whether the DOR adequately adjusted property tax assessments to reflect these lower values. We found the DOR inconsistently adjusted property values near opencut mines due to inherent constraints in the valuation model, leading to potential tax inequities, especially in rural areas.

Accurate Assessments Support Local Government Funding

Accurate property tax assessments are key to fair local government funding, as they affect resources for public services like schools, infrastructure, and emergency response. The Montana Code Annotated (MCA) 15-8-111 generally requires the DOR to appraise property at 100 percent of its market value. This law also requires the DOR to consider reductions in value from depreciation, including functional and economic changes. MCA, 15-7-111 directs the DOR to reappraise certain property classes, including residential property, every two years. The DOR compares nearby sales to assess a property's value. Properties are grouped into similar areas, such as clusters and neighborhoods, and sales are used to calculate the market value of a home. Property appraisals also rely on property characteristic data collected by the DOR appraisers. This data includes things like acreage, square footage, topography, location, and more. Appraisers can include additional influences in the DOR's property valuation model to address specific factors of a property that may differ from other homes in the area.

The statute instructs the DOR to use reliable information from any available source to ensure accurate appraisals. Following these requirements helps the DOR maintain public trust, ensure fair tax burdens, and support local community finances. Accurate assessments, based on these standards, are essential for fairness and accountability in property taxation.

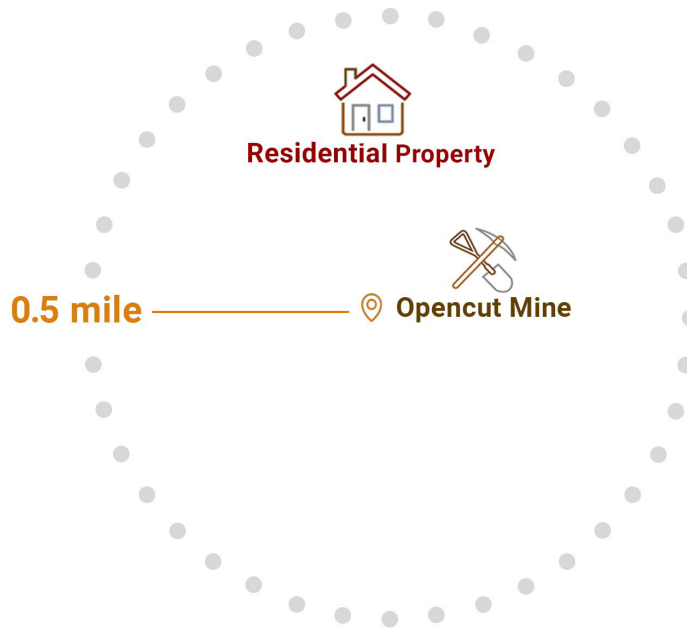
Home Values Impacted Near Active Mining Sites

We used a difference-in-differences regression analysis to estimate the effect of opencut mining on nearby property values. By applying a difference-in-differences approach, we compared changes in residential property prices over time between properties near active opencut mines and those near inactive sites, which we define as mine sites that were not yet established or had already been reclaimed.

We estimated that properties within half a mile of an active mine sell for about 8.4 percent less on average, or roughly \$37,000 less for a \$450,000 home. This impact decreases at one mile and is not statistically significant beyond two miles. More information about our methodologies is included in Appendix A.

Figure 4
Property Impacts from Opencut Mines

On average, a \$450,000 **residential property** would sell for \$37,000 less if within half a mile of an **opencut mine**.



Source: Compiled by the Legislative Audit Division from department records.

The Impact of Opencut Mines on Property Assessments is Highest for Rural Property Owners

Since we found that opencut mines negatively impacted nearby residential property values, we conducted further analysis of the DOR assessment data to see if the DOR's sales model adequately accounted for this effect. The DOR staff suggested we exclude the 2023 and 2025 assessment years from our statewide regression due to unprecedented growth in property values. Our analysis did not show a statewide reduction in assessed values unless those years were excluded. The DOR classifies a property with nearby, similar properties into appraisal "neighborhoods." In rural and low-density areas, few comparable sales make it hard for the DOR's models to detect and adjust for local impacts, such as opencut mines, within these neighborhoods. As a result, rural properties near mines may stay overvalued for several assessment cycles, while urban properties with more frequent sales get quicker, more timely adjustments. This creates a disadvantage for rural property owners.

Owners of a \$450,000 Home Near a Mine Could Overpay up to \$240 in Annual Property Taxes

We estimated the property tax effects for properties near recently permitted mines and those in low-density areas. We found 482 properties within 0.5 miles of opencut mines permitted in 2021 and 2022. These properties may take up to two assessment cycles to update, according to the DOR. We explored the property tax effect of not updating these properties within one cycle. Given our analysis identifying that opencut mines decrease property value by an average of 8.4 percent, we estimate that an average Montana home valued at \$450,000 within 0.5 miles of an active mine would overpay between \$50 and \$240 in property taxes per year.

Failing to account for disamenities can lead to higher tax bills for some and lower contributions from others, affecting community equity and resource allocation. Addressing these issues requires timely property value adjustments, regardless of sales volume, to ensure tax equity and support the financial stability of Montana's rural and low-density communities.

The Sales Model Does Not Always Account for Opencut Mines

In comparing our results to the DOR property assessment data, we found that the DOR did not consistently account for the impact of opencut mining on property values across the state because of limitations in the sales model. The DOR primarily uses local sales to adjust for differences in location across properties. For localized issues like opencut mines, which affect properties within a two-mile radius, the DOR depends on having enough sales in that area for the model to detect changes in value. In low-density areas, there are often too few sales to use in the DOR's sales model to accurately reflect the mine's impact. As a result, properties near mines in rural areas are unlikely to receive accurate value adjustments. However, the DOR appraisers can adjust variables in the property valuation model through influences and desirability factors, if appropriate, to better reflect the market property's value.

The Department Has an Opportunity to More Accurately Account for Opencut Mines

In discussions with the DOR, we learned there are several options the DOR could consider to better account for the impact of opencut mines on residential property values. One option is for the DOR to expand the neighborhoods around the mines so the sales model can include potentially affected properties. The DOR also uses a condition and desirability unit in their appraisal model, and could consider whether to include opencut mines in the desirability factor for a property. Although the DOR was hesitant due to limited staffing, a third option for the DOR could be to conduct its own analysis for properties near opencut mines (and properties in low-density areas) to determine if applying an influence factor in the appraisal model would be suitable for properties near mines. In addition to staffing limitations, the DOR was unsure if it could fully address the issue as long as Montana relies on a sales model for property appraisals, which requires sales of nearby properties. However, while the current model provides constraints in capturing these effects, it is important that the DOR more accurately account for the tax inequities associated with opencut mines and other disamenities.

RECOMMENDATION #1

We recommend the Department of Revenue investigate ways to accurately account for changes in property values near Opencut mines and other disamenities in low-density areas and areas without enough recent sales to affect the assessment model.

Montana Relies on Opencut Materials for Development and Growth

Production of opencut materials is important to Montana's infrastructure needs, as materials like sand and gravel are critical resources for development and growth throughout the state. Opencut mining operations supply the gravel and aggregate materials necessary for constructing highways, rural roads, bridges, and residential and commercial buildings. The availability of locally sourced gravel also helps keep construction costs lower, which is especially important for rural areas in the state.

We conducted multiple methodologies related to identifying production needs and calculating production of opencut materials in recent years. Using state and national sources, such as the Montana Department of Transportation, the U.S. Geological Survey (USGS), and the Federal Highway Administration, we were able to estimate certain amounts of material needed for roads and infrastructure development. We also calculated production in the state from 2020 to 2023 with operators' Annual Production Reports (APRs) obtained from the DEQ, compared population growth (and decline) in Montana counties to permit applications in those counties, and included questions related to production and production changes in our survey to active opencut operators.

Opencut Materials Necessary for Infrastructure Needs

To aid in answering our objective, we attempted to quantify the general volume of aggregate material and its importance for housing development, construction, road building, and other infrastructure projects. According to the American Society of Civil Engineers, Montana's roads were graded at a C- due to infrastructure needs outpacing long-term funding levels. The USGS also estimates that upgrading the country's transportation infrastructure would require a 70 percent increase in aggregate production. Montana currently has over 152,000 highway lane miles, and one mile of single-lane road is estimated to need 38,000 tons of gravel to pave.

Other states are similarly dealing with the increased demand in development for population growth and the availability of aggregate resources and have recently adopted regulations or approved studies to begin understanding and addressing the demand for aggregate materials. The Utah Legislature passed a bill in 2024 for the Utah Division of Oil, Gas, and Mining to conduct a study of aggregate materials and critical infrastructure needs. The study estimates that the demand for materials will exceed 70 million tons per year by 2060 and costs will likely increase by \$10 per ton. This would mean a \$4,000 increase in the cost to build a house and a \$1 million increase in the cost to construct one mile of highway.

Washington requires cities and counties to update plans and development regulations for aggregate needs and to identify long-term aggregate needs to aid in land-use planning decisions. The Growth Management Act requires that cities and counties identify and designate commercially-significant aggregate and base their land-use decisions on mineral resources. The goal is for cities and counties to make more informed decisions for mineral resource lands and plan how to protect them.

Aggregate costs also become more expensive the farther the materials have to be hauled from the mine site to the construction site. However, the closer mining sites are to urban centers, the more complaints and concerns there are from local communities for the negative impacts like dust, noise, traffic, water quality, and air quality. While sand and gravel make up about 42 percent of the country's aggregate production (according to the USGS), resource availability for the materials is constrained by geology. Much of the Midwest and southeast regions of the country have limited sources of aggregate material such as sand, gravel, and crushed stone. Some Montana counties also have deep layers of overburden, the earthen material above aggregate deposits, left behind by glacial remnants. Those conditions make aggregate mining uneconomical.

In addition to geologic limitations in aggregate mining, there are also environmental and societal issues that can prevent or limit mining. The USGS estimates that nearly a quarter of potential aggregate sources in the Minneapolis and St. Paul area of Minnesota are covered by development and no longer available for use. The USGS recommends considering resource availability for plans of growth and development, minimizing costs of aggregate transport by mining as close as possible to the final location of the materials, and designing projects with appropriate materials in mind as solutions to address shortages, quality, and environmental concerns.

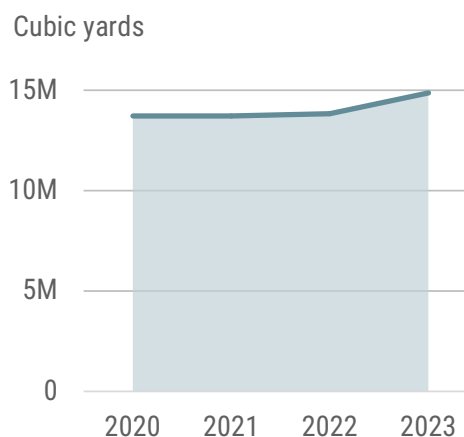
Annual Production of Montana Operators is Steady

We also calculated the total production of opencut materials from operators in the state. The Opencut Section, by state law, requires operators to submit yearly production reports (APRs) along with the annual fee which is calculated from the amount of materials mined. We reviewed the APRs for the calendar years 2020–2023 for all 574 opencut operators licensed during that time period.

In addition to the operators' APRs, we supplemented our data with production estimates from the USGS data for sand and gravel production in Montana from 2020–2022. The USGS maintains data on aggregates like sand and gravel, as well as the unit value of these materials.

Figure 5
Opencut Production 2020–2023

Production from opencut mines has been relatively steady, but increased slightly in 2023.



Source: Compiled by the Legislative Audit Division from department and federal records.

We confirmed through this data that Montana's average annual production is roughly 14,000,000 cubic yards of material mined as of 2023. This is estimated to value \$141 million. Production did appear to increase slightly in 2023; however, it is too soon to tell if there has been any real change in production levels.

Smaller Operations are Prevalent in the State

In addition to the above audit work, we surveyed of opencut operators to gather insights into the production activities of operators and the impacts of recent statutory changes on their operations. The survey targeted all operators who had submitted APRs between 2020 and 2023, ensuring comprehensive coverage of active industry participants. The survey included questions specifically focused on production volumes and changes in production, in addition to questions about the permit application process and operators' awareness of regulatory changes.

The survey was distributed to 443 operators, with a response rate of approximately 18 percent (81 completed responses). We conducted a nonresponse analysis to confirm our respondents were representative of the total population of operators in terms of production size, with the majority (86 percent of respondents and 88 percent of the population) producing under 200,000 cubic yards annually. This alignment suggests that the survey results reflect the experiences and perspectives of the overall operator population.

Regarding production, we asked operators to estimate their annual mined material and to describe any recent changes in production volume. The responses indicated a wide range of operation sizes, from small-scale sites mining less than 10,000 cubic yards per year to large operations exceeding 1,000,000 cubic yards. However, most respondents (76 percent) reported annual production of 100,000 cubic yards or less, highlighting the prevalence of smaller operations within the industry. The majority of operators reported either a slight increase or no significant change when asked about changes to production in recent years. We found no clear correlation between the size of the operation and the direction or magnitude of production changes. However, the survey also highlighted challenges related to the permit application process, including complexity, time requirements, and the need for external assistance, that operators face.

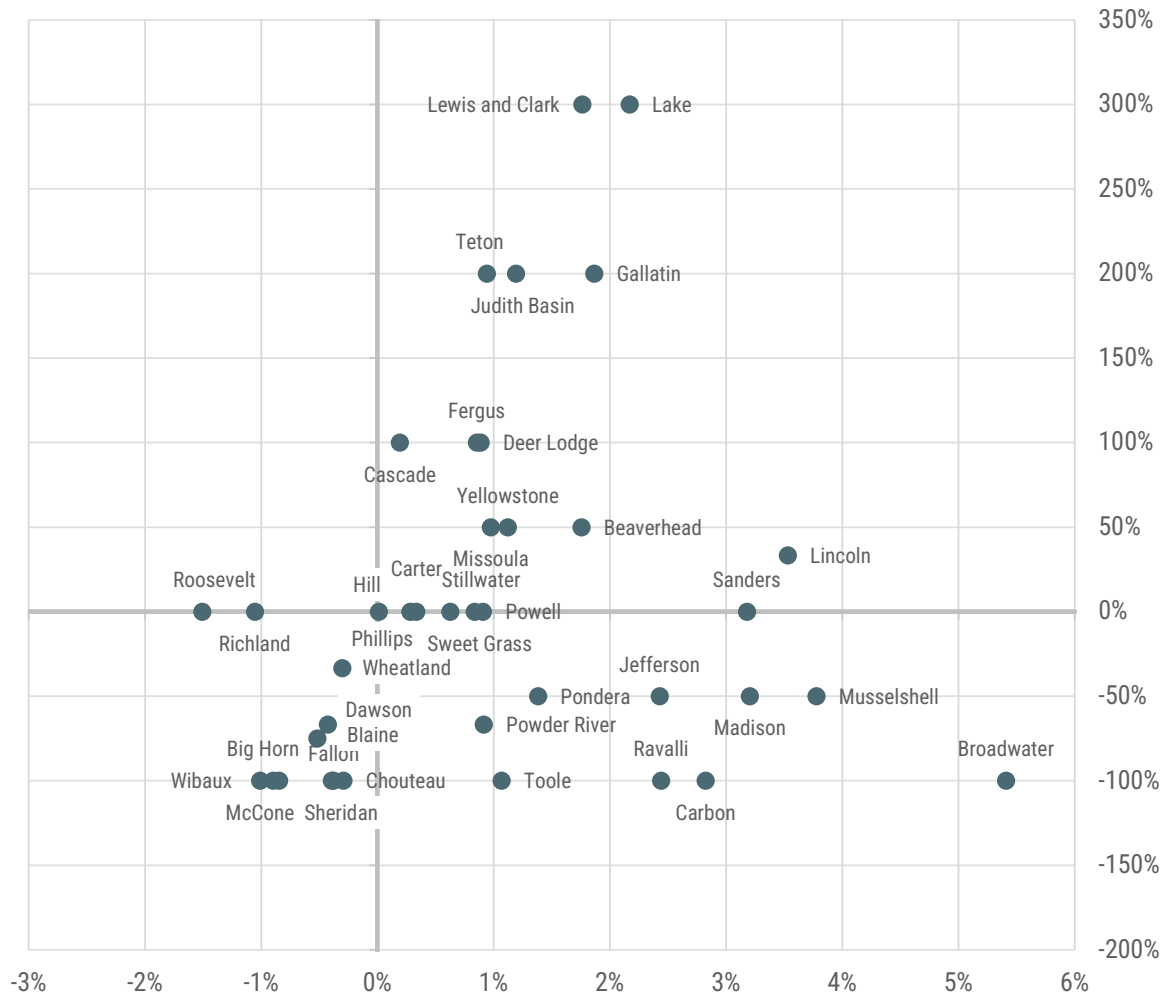
Population Growth and the Effect on Applications

In recent years, according to the US Census Bureau, Montana has had one of the fastest growing populations in the country. We compared population by Montana county from the US Census Bureau to the number of opencut sites permitted by county for the same years (2020–2023) to identify if there are any trends in the number of permits for any changes in population. As populations grow, there is more need for infrastructure to meet the needs of the growing population, and should increase construction and development within these counties, and vice versa for declining populations and less infrastructure needs. However, we did not see an increase in permits in the areas of high growth. Based on our research, gravel is more abundant near rivers and historic river beds, which could explain why we did not see more permits in areas of high growth that did not have easily attainable open-cut materials. The department also speculated that zoning in urban areas could affect the permitting of opencut sites.

In addition, the small increases in production for 2023 could be the result of current permit-holders producing more materials at already permitted sites. If population increases led to more permits in those counties, we would expect to see a strong, positive correlation in Figure 6. However, there is no clear correlation between population changes and permit amounts between 2020 and 2023.

Figure 6
Opencut Permit Numbers by County Population

County population increases between 2020 and 2023 did not consistently lead to increases in permits in those counties.*



*This chart excludes counties with no permits in 2020.

Source: Compiled by the Legislative Audit Division from department and federal records.

Montana's Production of Aggregate Materials is Meeting Demand, But Improvements to Permitting Process are Needed

With recent population growth and demand for development in the state, there has been increased public and legislative interest in the production of opencut resources, as seen from HB599. Through our review of production data, population trends, and operator feedback, we found that annual production of sand, gravel, and other aggregates has remained relatively stable from 2020 to 2023. This steady output aligns with the current infrastructure needs across Montana. While Montana's opencut mining industry is meeting current demand, we identified opportunities for improvements to streamline permitting and provide clearer guidance to operators. The Legislature should maintain close and ongoing awareness of the opencut mining industry, as proactive planning and consistent regulation are essential to balancing resource availability, environmental concerns, and community impacts.

Chapter III - Permitting for Opencut Mining

Introduction

The Opencut Section faced major challenges adapting to new requirements from HB599, which created a second permit type and shortened review timelines. The section struggled to meet deadlines because it relied on outdated and scattered tools, had high staff workloads, and lacked clear guidance for staff and operators. Staff turnover and limited resources also caused delays, reduced stakeholder trust, and increased compliance risks. Our audit highlights the need for better workload management, more efficient application systems, and improved communication to ensure compliance, transparency, and stakeholder satisfaction in the permitting process.

DEQ Faces Challenges Meeting New Permit Requirements

The DEQ and the Opencut Section were not equipped to handle the additional requirements and complexity introduced by the bill using their current tools. The opencut mining permit process is complex and requires staff expertise to meet legal requirements. Both standard and dryland permit applications begin with a completeness review, during which staff verify that all application fields are filled out and that a reclamation bond is posted. Staff must conduct the completeness review within five working days after the application is received. If the application is incomplete, the staff will notify the operator of that determination. Operators can then submit the missing information for another review. Once complete, the application moves to the acceptability review, which differs for standard and dryland permits.

Standard Permit Applications Must Meet Various Requirements

The acceptability review for standard permits is more detailed than for dryland permits. Staff must analyze environmental impacts on soil, water, air, cultural and historical sites, and local plants and animals following the requirements of the Montana Environmental Policy Act (MEPA). The process may also include a public meeting if a proposed site boundary is within half a mile of 10 or more occupied dwelling units (ODUs). Operators have 15 days after staff deem the application complete to issue public notice in local newspapers and to county commissioners. Residents in these ODUs may vote for a public meeting; at least 51 percent must agree, and if there are only 10 ODUs, all must vote yes. The DEQ does not manage the public notice requirement, but staff can verify through operator-provided documentation, like the landowner notification form, that it was conducted and are responsible for hosting the public meetings. If required, staff have 30 days from the voting deadline to hold the meeting.

At the end of the 45-day acceptability review, staff either issue a deficiency letter or approve the application. If no public meeting is possible due to less than 10 ODUs, staff have 30 days to review the application. Operators have one year to fix deficiencies. If they do not respond, the application expires. If they address the issues, staff review the application within 10 working days, repeating the cycle until approval or expiration.

Dryland Reviews Were Intended to be More Concise

Dryland permits require a more streamlined permit approval process because these sites do not affect ground or surface water. Staff has 15 days to complete the acceptability review and follow the same process for deficiencies and approvals as standard permits. Operators must dig three test pits to confirm the amount of overburden on the site with their application. Previously, one test pit per three acres was required, but now only three test pits are needed, regardless of site size. Dryland permits also apply only to sites with fewer than 10 ODUs within a half-mile radius. Operators must notify the public, but no public meeting is required.

Figure 7

Review Timelines for Opencut Mines

The general review process is divided into two sections for each permit: a **completeness review** and then the **acceptability review** with a **public meeting** if possible.

Dryland Permit

5 days

15 days



Standard Permit

5 days



30 - 45 days



30 days



Source: Compiled by the Legislative Audit Division from department records.

Complex Processes Delay Standard and Dryland Permit Approvals

While Opencut staff work to meet statutory requirements, they often struggle, especially with complex acceptability reviews. Our review of the permit process shows a need for better workload management through improved tracking procedures and more efficient internal processes.

Permit Review Found Noncompliance with Statutory Timeframes

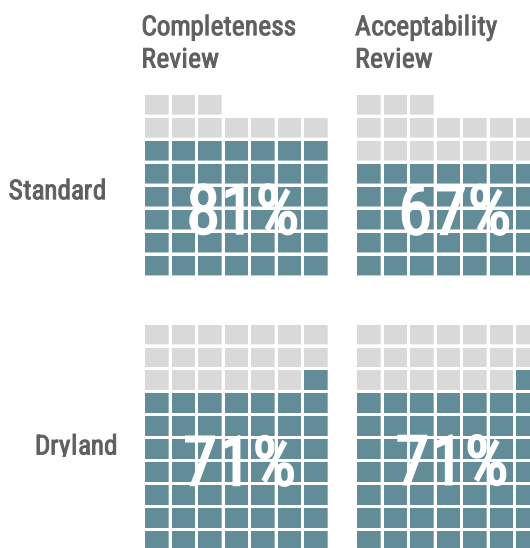
We reviewed how Opencut staff process and issue dryland and standard permits, as well as amendments. Operators can apply for either a standard or a dryland permit, depending on site conditions. They may also apply for amendments after the site is permitted for changes such as new reclamation dates or increased acreage. Our audit focused on two main review stages: the completeness review, which checks that all required materials and bonds are submitted, and the acceptability review, which assesses whether the application meets the requirements in the Opencut Mining Act and administrative rules.

To assess the DEQ’s performance, we reviewed 126 permit and amendment applications issued between January 2022 and December 2023. We tracked key dates for compliance with statutory timeframes for both standard and dryland permits.

For standard permits, staff completed the completeness review on time for 81 percent of applications, with 19 percent missing the five-day deadline. The acceptability review met deadlines for 67 percent of all standard permits and amendments. The average completeness review for dryland permits was faster than for standard permits, but only 71 percent met the five-day requirement. Staff met the 15-day acceptability review deadline for 71 percent of dryland permits. Dryland amendments, though few in our sample, were reviewed on time 100 percent of the time.

Figure 8
Permits Reviewed for Timeliness

Not all of the tested standard and dryland permits and amendments **met statutory timeframes**.



Source: Compiled by the Legislative Audit Division from department records.

Staff Rely on Disconnected Tools for Permit Management

The Opencut Section does not use a single application system to track and review permits, which makes the permitting process lengthy and confusing. Staff rely on several tools: FileNet for document storage, the Opencut App for site details, spreadsheets for tracking pending applications and release requests, and Microsoft Outlook tasks for assignments. This approach creates risks, including weak procedures and policies, lack of deadline notifications, data quality issues, limited access controls, no backups for spreadsheets, and inefficiencies from switching between multiple systems.

Internal Guides Help Staff Through the Process

The Opencut Section has implemented strategies to improve efficiency and uses “How To” documents to guide staff through key processes, such as permit amendments, violations, and bond release requests. These guides outline steps and decision points, and specify which information system to use. The section created these documents to ensure staff follow procedures and legal requirements. However, working across multiple programs still creates additional administrative burdens for staff.

Online System for Permit Applications

The Opencut Section has recognized the need and has worked for about two years on a new electronic application system. Throughout audit work, the department worked with the contractor to identify Opencut's needs in an application system and began configuring a system within Opencut's existing budget. The new system aims to simplify the permit process for both staff and operators. Operators would need to upload and complete all required information before submitting an application, reducing incomplete submissions and back-and-forth communication. This change would help program support specialists meet the completeness review faster, allowing reclamation specialists to start the acceptability review sooner. Staff also expect the new system to manage tasks more efficiently, reducing reliance on Microsoft Tasks, spreadsheets, and personal to-do lists. Staff believe a single system will help them work more effectively and meet statutory deadlines.

Best Practices Improve Efficiency in Environmental Reviews

We identified several best practices and sources for environmental permitting. In 2017, the Federal Permitting Improvement Steering Council (FPISC) released a report with best practices for environmental reviews and authorizations. The report aims to help federal agencies use procedures and tools that shorten review and decision times while improving transparency, accountability, and outcomes for communities and the environment. FPISC states these recommendations help agencies balance regulatory duties with the need to protect resources.

Administrative Burdens Delay Process

One best practice is to reduce information collection processes and administrative burdens. The report's first recommendation is to use online or electronic tools to make reviewing and issuing permits more efficient. Applicants should be able to submit applications and supporting documents electronically in easy-to-use formats. Agencies should also offer ongoing training and clear instructions to help applicants submit complete applications. This reduces the need for repeated requests for more information and speeds up the review process. Many federal agencies provide review guides to help applicants and the public understand the requirements of environmental and historic preservation projects.

Other States Face Similar Challenges

Opencut mining is not a widely regulated industry, and many states have varying requirements. Oregon, however, regulates aggregate mining and has statutory review requirements similar to those in Montana. Oregon's Department of Geology and Mineral Industries' Mineral Land Regulation & Reclamation Program's authority is limited to operational and reclamation regulations, with land use decisions made at the county level. Their permitting process similarly involves administrative and technical reviews, site inspections, and coordination with other agencies, but public comment occurs only at the county stage. Statutory review timeframes are set at 90 days. Still, an audit of the program revealed that actual review times average nearly a year, largely due to staffing constraints (13 staff for over 1,400 permits). Because of this, the program is working to implement an electronic permit system to help staff meet review timeframes and eliminate the administrative burdens of the permit review process.

Streamlined Applications Reduce Administrative Burdens

Addressing these challenges would help the DEQ maintain statutory compliance and improve transparency, efficiency, and applicant satisfaction in the opencut mining permit process. An online application system could reduce administrative burdens, increase consistency, and help staff meet deadlines without lowering quality. Ultimately, our findings highlight the need to balance statutory compliance with thorough, transparent reviews, and that technological improvements could benefit both Opencut staff and permit applicants.

RECOMMENDATION #2

We recommend the Department of Environmental Quality prioritize and implement an electronic application system for Opencut permitting to improve statutory compliance and promote clarity, efficiency, and stakeholder satisfaction.

Improving Awareness and Understanding of Permit Requirements

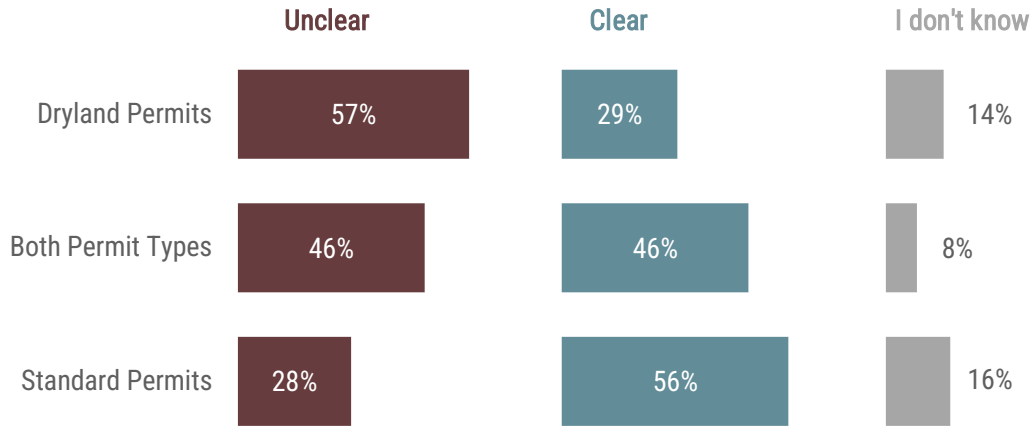
There is a clear need for better communication and education about the permit process, especially regarding permit types and recent legislative changes. Many operators and members of the public lack the information needed to navigate the process efficiently.

Operator Survey Suggests Better Communication is Needed

To better understand the operators' perspectives of the permit process, we included questions related to the ease of the permit process in our survey. Most operators responding to our survey found the application process complicated, time-consuming, and costly, often requiring outside consultants. Many described instructions for dryland permits as vague or unclear, making it hard to gather required documents and meet multi-agency requirements. The survey findings suggest a broader issue. When permit requirements are unclear and coordination is fragmented, even routine applications can become burdensome for operators and regulators. That challenge highlights the need for strong review practices. Clear standards, defined roles, and efficient processes help agencies protect natural resources while giving applicants a more predictable permitting path. We also focused survey questions on operators' knowledge of the 2021 statutory changes. We expected operators with dryland permits, created under the new law, and those who applied after 2021 to be aware of these changes. However, many operators were not aware of the statutory updates.

Figure 9
Survey Results on Clarity of Permit Instructions

How clear are DEQ's instructions for what to include in your permit application?



Source: Compiled by the Legislative Audit Division from department records.

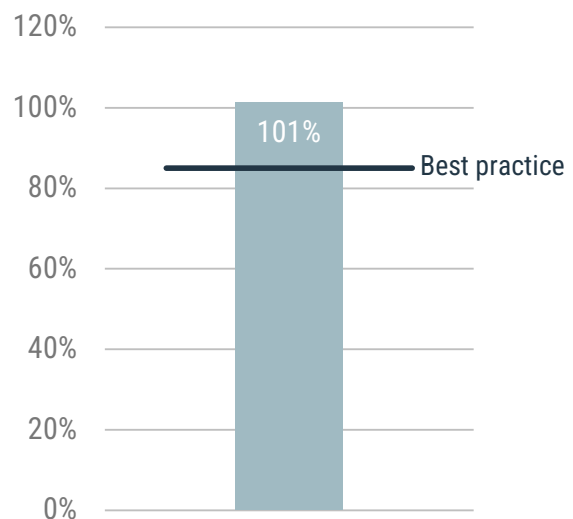
Operators also found the deficiency review process frustrating, reporting little guidance from the department and inconsistent responses from staff, which the department links to staff turnover. These problems worsened due to limited resources and the rapid rollout of statutory changes, which outpaced updates to guidance, staff training, and operator communication. The DEQ can better support operators, especially those applying for dryland permits, by clarifying instructions, ensuring consistent staff responses, and providing more resources to help operators meet application requirements.

Department Staff Face Heavy Workloads and Turnover

High staff turnover made these problems worse, leading to inconsistent guidance and less support for applicants. This reduced trust in the department's ability to regulate fairly. Staff burnout and turnover increased, with many staff citing work-life balance as a main reason for leaving. High workloads and organizational changes were also mentioned as causes of recent departures. The small team of 11 reported being at or near capacity, especially with strict deadlines for permit reviews and inspections. As of audit work, most staff had less than three years of experience, and only three had over a decade.

Figure 10
Workload of Opencut Staff

Opencut staff operate at a **capacity** above best practice.



Source: Compiled by the Legislative Audit Division from department records.

These issues delayed permit reviews and increased the workload for remaining staff, some of whom were already working at or above full capacity during the audit. We conducted a workload analysis for Opencut staff by tracking time spent on key tasks, such as completeness reviews, environmental assessments, site inspections, and more. Staff interviews showed that, in addition to issuing and amending permits, Opencut staff review bond release requests, inspect mining sites, and enforce the Opencut Mining Act. We tracked nine staff over a standard pay period and found the group averaged 101 percent capacity during this time. Best practices recommend the most productive capacity for staff workloads should be 85 percent to avoid burnout and turnover.

Managing workloads remains a challenge, as staff must respond to unpredictable operator submissions and meet tight deadlines. The Mining Bureau's 2025 goal to complete inspection reports within 14 days of site visits added stress. Opencut staff inspect many sites statewide, and the inspection season (April to October) is short. Staff worry that quick turnaround requirements may reduce inspection quality. The federal ban on Chinese-made drones also removed a key inspection tool, forcing staff to use less efficient methods and increasing the time needed for reports. This makes it even more important to decrease administrative burdens and increase knowledge in the permit process.

Staffing Issues Can Threaten Confidence in Process

Ultimately, these issues caused delays, higher costs for operators, lower stakeholder trust, and greater compliance risks. They also limited the Opencut Section's ability to meet its mission and ensure responsible mining in Montana. Improving communication and information sharing is essential to strengthening the effectiveness, transparency, and stakeholder confidence.

Early Stakeholder Engagement Improves Permit Review Outcomes

One of the main recommendations from the FPISC report is for agencies to engage applicants, operators, and required stakeholders early and improve communication. Early and clear communication can improve permit review times, build trust, and lower the risk of legal challenges. The permitting process should include informed and meaningful discussions with all required parties. Transparency is essential for an effective permitting process. It gives clear information about how to participate, helps resolve concerns quickly, and holds agencies accountable. Presenting findings in plain language, without unnecessary technical terms, makes information easier to understand. A well-informed audience leads to better environmental outcomes and can lower project costs.

Statutory Changes Out-Paced Department Response

Our work found that the Opencut Section could not meet stakeholders' communication needs due to limited staff, high workloads, and new statutory requirements introduced in 2021. The small team had to adapt to a new permit type, shorter review periods, and increased complexity while maintaining compliance and communicating with operators and the public. When HB599 became law, changes to the Opencut Mining Act took effect immediately, requiring staff to quickly adjust operations and develop new processes.

The department could not update guidance, train staff, or inform stakeholders fast enough to keep up with these changes, which disrupted communication. For example, the new dryland permits introduced requirements that many operators still do not fully understand. Many operators remain unaware of the statutory changes or are unclear about the needed documentation. Some operators hired outside consultants at significant cost, while others struggled to complete applications themselves. Staff turnover made these problems worse, as new employees often lacked the experience to give consistent guidance. This led to conflicting information and reduced trust in the department's oversight. The department has tried to engage and educate stakeholders through quarterly meetings, both in person and via Zoom, and by following Montana Environmental Policy Act (MEPA) requirements for public participation. However, members of the public reported feeling uninformed and concerned about the permitting process.

Insufficient Communication Creates Dissatisfaction

Limited outreach and education led to confusion and frustration among operators and the public. Resource constraints, frequent staff turnover, and rapid legislative changes outpaced the department's ability to update processes, train staff, and engage stakeholders. Informed stakeholders are essential for an effective permitting process. The department can improve communication to promote transparency, accountability, and public trust in the permitting process.

RECOMMENDATION #3

We recommend the Department of Environmental Quality:

- A. Enhance communication and education for both operators and the public, with clear, accessible instructions and timely updates on legislative changes; and*
 - B. Simplify and clarify permit application instructions, especially for dryland permits.*
-

Appendix A - Estimating the Effect of Opencut Mining on Nearby Property Values

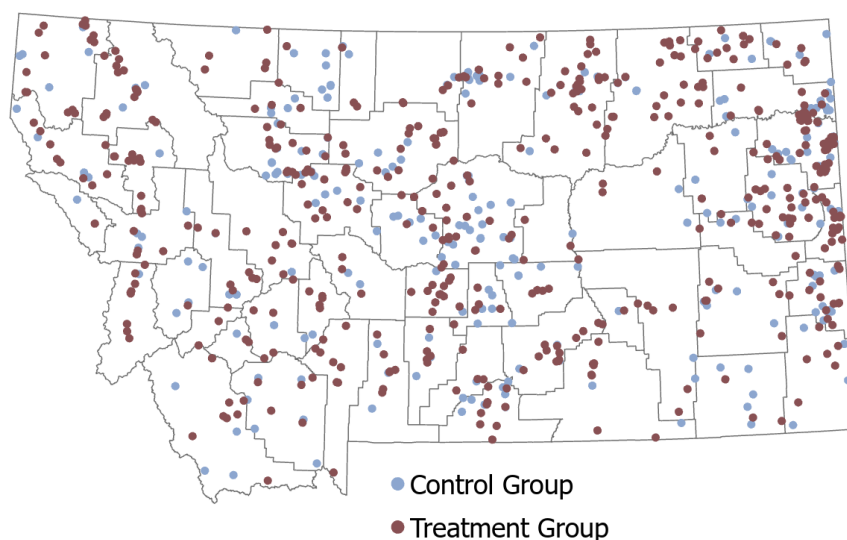
Introduction

A major methodology of this performance audit estimated the potential impact on property values from opencut mines. Public and legislative interest have raised concerns about this issue in recent years. We identified several studies that used rigorous methodologies to estimate the impact of disamenities on property values. We largely drew on a specific study on the impact of quarries on nearby property values (Ford and Seals, 2018) to develop our own methodology. This appendix explains how we estimated changes in property values when an opencut mine started operations close to a residential property. A second piece of our analysis examined whether the Montana Department of Revenue's (DOR) property tax assessment model adequately accounted for the negative effect that nearby opencut mines had on residential property values.

Difference-in-Differences Analysis Used to Estimate Impact on Property Value

We conducted a regression analysis to estimate the effect of opencut mining operations on residential property values. We used a difference-in-differences (DiD) approach to compare changes in housing prices over time between properties near active opencut mines (the "treatment" group) and properties near inactive mine sites (the "control" group). This method allowed us to focus on price trends and isolate the effect of mine activity, assuming parallel trends across groups. The opencut mine sites in the treatment and control groups (for January 2021) in our analysis are shown in Appendix Figure 1.

Appendix Figure 1
Treatment and Control Group Properties in January 2021



Source: Compiled by the Legislative Audit Division from department records.

Our analysis relied on three main datasets. First, we used property sales and characteristics data from the DOR, which included sale prices, sale dates, finished square footage, acreage, effective age, structural condition, heating and cooling systems, and property type. Second, we used 2023 Montana Cadastral parcel location data to geocode sales and link them to mine sites. Third, the Montana Department of Environmental Quality's (DEQ) opencut mine dataset provided approval dates, reclamation dates, and locations for over 3,200 mines statewide, with 1,358 active during our study period (2006 to early 2025). We matched property sales to the nearest mine site and included only properties within five miles of a mine. Approximately 96 percent of sales were successfully matched to a geographic location, resulting in a large and detailed dataset.

Since mines opened at different times, we used a staggered-adoption DiD design, comparing sales before and after a nearby mine became active. We classified properties as "close" if they were within 0.5 miles of a mine and as "after" if the mine was active at the time of sale. The main coefficient measured the change in property value for homes near active mines, accounting for general price trends and distance. The regression model used logged sale price as the dependent variable and controlled for a number of property characteristics, including finished square footage, parcel acreage, effective age, condition, heating and cooling systems, housing density, property type, as well as year and county fixed effects. We measured housing density with a spatial point-density algorithm to separate rural and urban areas. Model variables were largely drawn from similar research as well as from interviews with department staff on factors that could affect property value. Appendix Table 1 (page 27) lists the variables in our statistical model and the source of the data.

Appendix Table 1
Defined Characteristics and Sources in Our Model

Variable	Description	Source
Condition (new)	The weighted average of the DOR's new condition score for all structures on the parcel.	DOR Property Records
Condition (old)	The weighted average of the DOR's old condition score for the structures on the parcel in the sale record.	DOR Property Records
County	The county in which the sale took place.	DOR Property Records
Distance	Denotes whether the distance from the location of the parcel to the relevant nearby mine site for a sale record was within 0.5 miles (1) or greater than 0.5 miles (0).	MT Cadastral
Effective Age	The weighted average effective age of the structures on the parcel in the sale record.	DOR Property Records
Housing Density	A measurement of the relative housing density in the area of each sale.	MT Cadastral
HVAC	A categorical variable that denotes the best kind of HVAC system had by a structure on the parcel in the sale record.	DOR Property Records
Property Type	The category of the property (e.g., townhouse, condominium, apartment, etc.).	DOR Property Records
Time Period	Denotes whether a sale happened during the period when the nearby mine site was active (0 when the site was inactive, 1 if the site was active).	DOR Property Records
Total Acreage	The acreage of the parcel in the sale record.	DOR Property Records
Total Finished Area	The total amount of finished area for all structures on the parcel in the sale record.	DOR Property Records
Year	The year in which the sale took place.	DOR Property Records

Source: Compiled by the Legislative Audit Division from department records.

Results Showed a Significant Impact Within Half a Mile of an Opencut Mine

Our analysis showed that active opencut mines lowered the value of nearby properties. Residential properties within 0.5 miles of an active mine sold for about 8.4 percent less than similar residential properties not near active mine sites (a decrease of about \$37,000 for a \$450,000 property). An earlier version of our analysis included both residential and commercial (Class IV) properties prior to 2017. Using Class IV data in our regression, we estimated the impact to nearby properties to be a 5.4 percent decrease on property values within 0.5 miles of an active opencut mine. However, we ultimately decided to remove commercial properties from the data altogether, assuming that they would be less susceptible to the effects of nearby opencut mines than residential properties. This gave us a better estimate of an 8.4 percent decrease specific to residential properties.

The regression results (Appendix Table 2) showed that the negative impact on property value decreases as the distance from the mine increases. Residential properties within one mile of an active mine sold for about 8.3 percent less, and the effect remains significant up to about two miles from the mine site. Beyond two miles, we did not find a statistically significant impact on residential property value. We could not draw firm conclusions for homes closer than 0.5 miles due to a small sample size, but the effect may be larger for these properties. Appendix Table 2 illustrates our regression output.

Appendix Table 2
Regression Table for Property Impact

Variable*	Point Estimate	Lower Bound (95% CI)	Upper Bound (95% CI)	Statistical Significance
Time Period	1.01E-02	1.17E-03	1.90E-02	p < 0.05
Distance	-1.30E-02	-5.95E-02	3.35E-02	
Housing Density	2.97E-06	-3.88E-07	6.32E-06	
Total Acreage	9.27E-03	5.78E-03	1.28E-02	p < 0.001
Effective Age	6.10E-03	5.78E-03	6.41E-03	p < 0.001
Condition (old)	1.29E-01	1.23E-01	1.34E-01	p < 0.001
Condition (new)	-6.89E-02	-2.13E-01	7.55E-02	
Total Finished Area	1.63E-04	1.60E-04	1.66E-04	p < 0.001
HVAC (central)	1.20E-01	1.10E-01	1.31E-01	p < 0.001
HVAC (noncentral)	-9.72E-02	-1.08E-01	-8.59E-02	p < 0.002
HVAC (none)	-3.54E-01	-4.33E-01	-2.76E-01	p < 0.003
Group: Distance	-8.36E-02	-1.63E-01	-3.76E-03	p < 0.05
Group: Housing Density	2.49E-05	2.20E-05	4.42E-05	p < 0.001
Distance: Housing Density	1.95E-05	-5.20E-06	4.42E-05	
Condition (old): Condition (new)	-5.19E-03	-3.48E-02	2.45E-02	
Group: Distance: Housing Density	5.70E-05	-9.97E-05	-1.42E-05	p < 0.01

* The County, Year, and Property Type variables are excluded from this table for readability.

Source: Compiled by the Legislative Audit Division from department records.

These results held across different model versions and tests. We found weak evidence that higher housing density might reduce the negative effect, but this did not change our main findings. We also performed robustness checks, including alternative distance cutoffs, different model specifications, tests for collinearity and heteroskedasticity, randomized treatment assignment, and explicit tests of the parallel trends assumption using pre-treatment data. These checks support the reliability of our findings. Overall, the analysis provided strong evidence that opencut mine operations near residential properties in Montana lowered property values.

Comparing Our Findings to Property Assessments

Since we found a negative effect of nearby opencut mines on property value, we then conducted an analysis to determine whether the DOR’s valuation of properties adequately captured this effect. Unlike our property value analysis, which used sales data and cross-sectional comparisons, this analysis used panel data (multiple years of assessed values for the same homes) to track how the DOR’s assessments changed before and after a mine was permitted. This approach allowed us to control for fixed property characteristics and focus on changes in assessed value linked to mine activity.

We used nearly 20 million of the DOR’s assessment records for residential properties from 2008 to 2026. We merged these records with Cadastral parcel location data and the DEQ opencut mine permitting data using the same spatial datasets as the original analysis. Because each property appeared in multiple years, we compared a property’s assessed value in the year before a nearby mine was permitted to its value in later years.

Results Showed Inconsistent Adjustments for Low-Density Properties

We used a panel DiD regression, estimated in logarithmic form. The model compared assessed values in the year before mine permitting (“before”) to the year after (“after”) for homes within 0.5 miles of a mine. The regression included year and county fixed effects to account for differences in price growth across counties and to avoid bias from mines being permitted in faster-growing areas. The following output in Appendix Table 3 shows the results of the original panel regression.

Variable	Point Estimate	Lower Bound (95% CI)	Upper Bound (95% CI)	Statistical Significance
Time Period Before	-5.48E-02	-1.01E-01	-8.43E-03	p < 0.05
Year (2017)	5.20E-02	-3.08E-02	1.35E-01	
Year (2019)	-5.76E-01	-7.12E-01	-4.40E-01	p < 0.001
Year (2021)	-5.55E-01	-6.52E-01	-4.59E-01	p < 0.001
Year (2023)	-2.31E-01	-2.90E-01	-1.73E-01	p < 0.001

Source: Compiled by the Legislative Audit Division from department records.

Since the DOR reassesses properties on an alternating-year cycle, and before 2015 on a six-year cycle, we ran additional regressions comparing assessed values across odd-year assessments and the second assessment cycle after mine permitting. The DOR staff indicated that mine effects would likely be reflected in this later cycle. We excluded misclassified commercial properties, addressed heteroskedasticity with robust standard errors, and conducted mine-specific panel analyses for recently permitted mines with many nearby homes. These analyses followed the same logic as the property value impact analysis.

The results showed that the DOR's process did not consistently reflect the negative impact of opencut mines within a single assessment cycle. In a single cycle, the regression output showed that assessed values for homes within 0.5 miles of a new mine increased by about seven percent after permitting, rather than declining. This increase is statistically significant and differs from our earlier estimate of an 8.4 percent market value reduction, indicating that the DOR assessments did not initially capture mine-related impacts within a single assessment cycle.

When we adjusted our analysis to align with the DOR's reassessment cycle (every two years), the results were mixed. Some statewide regressions still showed rising assessed values, while others were closer to zero change. Only after excluding the high-growth years of 2023 and 2025 did the statewide regression show a significant reduction in assessed values, with a midpoint decline of about 13 percent.

Mine-specific panel analyses gave clearer evidence that the DOR sometimes adjusted values, especially where many homes were near a new mine. For several recent mines in Missoula, Flathead, and Yellowstone counties, Did estimates showed large, significant reductions in assessed values for nearby homes, ranging from about 15 percent to over 40 percent. Individual property analyses showed that some homes receive delayed or uneven adjustments, while others see large increases that, after adjusting for statewide growth, still indicate real declines in value. Adjustments usually happened when enough nearby sales data existed, which was more common in densely populated areas. Properties near mines in rural or low-density areas often did not receive timely adjustments, even though market evidence suggested they experienced similar value reductions.

Because property taxes are based on a property's market value, we then estimated the property tax effects for properties near recently permitted mines and those in low-density areas. We found 482 properties within 0.5 miles of opencut mines permitted in 2021 and 2022. These properties may take up to two assessment cycles to update, according to the DOR. We explored the property tax effect of not updating these properties within one cycle. Given our analysis identifying that opencut mines decrease property value by an average of 8.4 percent, we estimate that an average Montana home valued at \$450,000 within 0.5 miles of an active mine would overpay between \$50 and \$240 in property taxes per year.

For the properties within 0.5 miles of mines permitted in 2021 and 2022, the total assessed value was \$69,590,249 in residential property value (as calculated from the 2023 assessment). Using our estimate that opencut mines reduce residential property values by an average of 8.4 percent and assuming an average millage rate of 500 with 75 percent of taxes going to local jurisdictions with a fixed budget, we estimated that these properties overpaid about \$8,000 from fixed mills and may have faced up to about \$29,000 in property tax inequity.

We also identified 242 properties near a low-density mine in 2023, defined as having fewer than 50 nearby properties. The total market value for these homes was \$57,634,188. Using the same parameters, we estimate these properties overpay about \$6,500 dollars in taxes from fixed mills and may experience up to \$24,000 in property tax inequity if their values are not updated due to limited sales data. In total, for 2023, these two situations could result in about \$14,000 in overpaid taxes from fixed mills and up to \$54,000 in property tax inequity for the year.

DEPARTMENT RESPONSES

DEPARTMENT OF
ENVIRONMENTAL
QUALITY
DEPARTMENT OF
REVENUE



May 26, 2026

Mr. Angus Maciver
Legislative Auditor
Legislative Audit Division
PO Box 201705
Helena, MT 59620-1705

RECEIVED
May 26, 2026
LEGISLATIVE AUDIT DIV.

RE: Opencut Program Performance Audit #24P-03

Dear Mr. Maciver,

Thank you for the opportunity to respond to the performance audit of the Opencut program for the Department of Environmental Quality (DEQ). We have reviewed the recommendations contained in the report and provided our responses below. We are not responding to Recommendation #1, because it was directed toward the Department of Revenue.

Recommendation #2

We recommend the Department of Environment Quality prioritize and implement an electronic application system for Opencut permitting to improve statutory compliance and promote clarity, efficiency, and stakeholder satisfaction.

Response: Concur

DEQ acknowledges that limitations within the systems currently used by staff to track applications have created substantial administrative burdens and have, at times, contributed to noncompliance with statutory processing deadlines. With that, implementation of this recommendation is already well underway. DEQ has identified the need to implement an electronic application management system to address these issues. In response, DEQ has engaged Tyler Technologies to develop an online application system to improve compliance, accuracy, and operational efficiency. DEQ is planning to release the online application system for production use by December 31, 2027.

Recommendation #3

We recommend the Department of Environment Quality:

- A. Enhance communication and education for operators and the public, with clear, accessible, instructions, and timely updates on legislative changes; and
- B. Simplify and clarify permit application instructions, especially for dryland permits.

Response: Concur

- A. DEQ acknowledges the recommendation to improve communication and educational outreach for operators and the public by providing clear, accessible instructions and timely updates regarding statutory and regulatory changes. DEQ recognizes that limited resources, accelerated implementation timelines, and periodic staff turnover have, at times, affected its capacity to update and distribute guidance materials. DEQ is committed to strengthening

communication through the development and implementation of an online permitting system. This system will provide structured step-by-step guidance to applicants, including required information, documentation needs, and submission procedures, thereby reducing confusion and improving the completeness and accuracy of applications. In addition, DEQ will develop educational materials to accompany the online system. These materials will assist operators in understanding how to complete various sections of the application and will support consistent, clear, and accessible guidance statewide. DEQ will commit to posting educational materials, including videos as well as written instructions, in coordination with the online application system for production use in 2027.

For the last decade, DEQ has communicated with stakeholders through quarterly program updates, which include hybrid stakeholder meetings designed to share program developments, discuss upcoming changes, provide timely updates on legislative changes and solicit feedback to support continuous improvement. In addition, DEQ meets regularly with the Montana Contractors' Association to exchange information, gather input, and address emerging concerns relevant to the regulated community. DEQ also maintains frequent direct interaction with members of the public through phone calls and individual meetings providing guidance and clarification on permitting requirements. To further strengthen public engagement and improve understanding, DEQ commits to further developing online educational materials. These materials will guide stakeholders through each stage of the permitting process and outline opportunities for public participation. This initiative will increase transparency, improve accessibility of information, and support consistent, informed engagement across all stakeholder groups. DEQ commits to developing and publishing this training by December 31, 2026.

- B. DEQ acknowledges the recommendation to clarify permit application instructions. Limited staff resources and the rapid rollout of statutory changes have, at times, outpaced DEQ's ability to update associated guidance materials. In response, DEQ has worked closely with stakeholder groups and internally to identify the most common deficiencies observed in submitted applications. Using this information, DEQ implemented revised application forms in February 2026, including a substantially updated Dryland Application, which requires applicants to provide more complete information at the outset to reduce the number of questions generated during the application review process. DEQ will incorporate these changes into the online application system. DEQ will revisit FAQ's and other educational materials that were posted following the changes made by the Legislature in 2021 and ensure those materials are up-to-date and useful.

I want to thank you and your staff for your professionalism and fairness during the fieldwork and audit sessions. We appreciate the willingness of the auditors to discuss recommendations and respond to our questions. We also appreciate the recognition of the substantial workload that this section carries. We look at the audit process as an opportunity to improve the department's operations and performance.

Sincerely,

Sonja Nowakowski

Sonja Nowakowski

Director, Department of Environmental Quality



GOVERNOR GREG GIANFORTE
DIRECTOR BRENDAN BEATTY

May 28, 2026

Mr. Angus Maciver, Legislative Auditor
Legislative Audit Division
PO Box 201705
Helena, MT 59620-1705

RECEIVED
May 29, 2026
LEGISLATIVE AUDIT DIV.

RE: Opencut Program Performance Audit #24P-03

Dear Mr. Maciver,

The Department of Revenue submits this response to the Opencut Program Performance Audit.

Recommendation #1

We recommend the Department of Revenue investigate ways to accurately account for changes in property values near Opencut mines and other disamenities in low-density areas and areas without enough recent sales to affect the assessment model.

Concur. The department will evaluate ways to better account for the impact of opencut mines and similar disamenities on property values in low-density market areas and areas with limited recent sales activity. Because a credible market analysis requires a sufficient number of verified sales to identify and support any market influence, the department will identify and analyze all valid sales occurring within one-half mile of active mine sites. Using multiple regression analysis, the department will determine whether the current valuation models accurately reflect market influences on properties near active mine sites.

In market areas with enough verified sales, the department will measure any demonstrated negative market influence associated with proximity to active mine sites. In rural or low-density areas where there are not enough recent sales to reliably measure the impact, the department may apply supported negative influence factors derived from comparable market areas with sufficient sales data and similar property and market characteristics.

Thank you for the opportunity to respond to the Opencut Program Performance Audit. The Department values the audit process and appreciates the recommendation provided.

Sincerely,



Scott Mendenhall
Deputy Director
Montana Department of Revenue