The United States Extractive Industries Transparency Initiative

Montana State Addition Visualization

May 2016

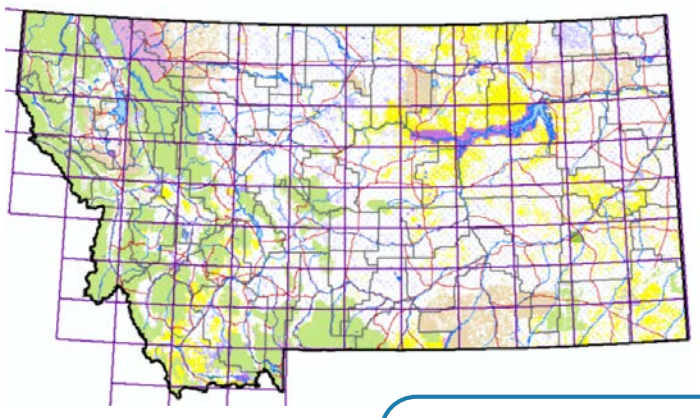
LAWS & THE LAND

Federal and State Land Ownership in Montana

The Federal Government administers just over 27 million acres in Montana, 29% of Montana's 93 million total acres. The U.S. Forest Service administers the majority of federal land, some 17 million acres concentrated in western Montana. (Source: Congressional Research Service)

The state government of Montana administers and manages 5.2 million surface acres and 6.2 million mineral acres of trust land across the state.[1] Congress granted the state of Montana the majority of its trust lands for the benefit of its Common Schools (K-12) through the Enabling Act of 1889. For more information, see the Trust Lands Management Division Annual Report available here. Additionally, Montana Fish, Wildlife, and Parks (FWP) administers 55 state parks, encompassing 46 thousand acres (Source: FWP Strategic plan). To see detailed maps of public and private land ownership at the county level, see the Montana State Library's Geographic Information website here.

Federal and State Land Ownership in Montana



Source: Montana State Lib

1. Mineral acreage exceeds surface acre
mineral rights when it sold or swapped st
States, surface rights and mineral rights
surface of the land may not own the right

Table can be seen in the "Enlarged Mock-Ups" file attached. It will be linked to a separate page on the website to be determined

Regulatory Agencies

Montana state agencies manage state-owned land and natural resources; enforce rules and regulations associated with extraction; and collect, manage and distribute revenue from the extractive industries. To see a table of laws and rules related to extractive industries in Montana, click here.

The Montana Department of Environmental Quality (DEQ) leads Montana's planning, permitting, compliance, enforcement, and remediation efforts for projects and incidents related to air, water, land, and energy.

The Montana Department of Natural Resources & Conservation (DNRC) manages Montana's natural resources, including administering state trust lands.

The Montana Department of Revenue (DoR) collects, manages, and distributes the majority of extractives revenues in Montana. Importantly, county governments collect many property taxes.

How It Works in Montana

An enlarged version of this section is included in the "Enlarged Mock-Ups" file attached to the email

These state agencies regulate extraction and interact with industry across the five stages of extraction in Montana, particularly on state and private lands. On federal lands, state agencies will be involved, but to a lesser extent, as federal agencies are primarily responsible for managing the land. To see how extraction occurs on federal land, see the federal "How it Works" section for more information.

Plan ❯ Lease ❯ Explore ❯ Develop ❯ Decommission & Reclaim

Oil & Natural Gas

Montana DNRC's Board of Oil & Gas Conservation permits all oil and gas wells while regulating the underground injecting program. It assists in remediation efforts and also inspects all oil and gas wells and operations to ensure they comply with all state environmental laws. For rules and regulations governing the Board of Oil & Gas Conservation, click here.

The Department of Revenue collects revenue from companies engaged in extraction. To see detailed explanations and authorizing statutes, click here.

DEQ's Waste Management & Remediation Division administers and oversees investigation and cleanup of any necessary remediation of sites. Click here for rules & regulations.

DEQ's Air, Energy, and Mining Division issues air quality permits for oil & gas wells. Click here for more.

Coal & Non-Energy Minerals

DEQ's Air, Energy, and Mining Division issues permits and monitors compliance for projects relating to coal and hard rock mines and applicable facilities, among other projects. It determines correct control measures and requirements needed to meet the laws and rules that have been enacted to protect the quality of the state's air, water, and land. If it finds violations, it provides technical assistance to bring violations back into compliance or prepares an enforcement request for the DEQ's Enforcement Division. It also holds and reviews reclamation bonds for coal and hard rock mining. For rules and regulations associated with coal, click here, for hard rock mining, click here.

The Department of Revenue collects revenue from companies engaged in extraction. To see detailed explanations and authorizing statutes, click here.

DEQ's Waste Management & Remediation Division administers and oversees investigation and cleanup of any necessary remediation of sites. Click here for rules & regulations.

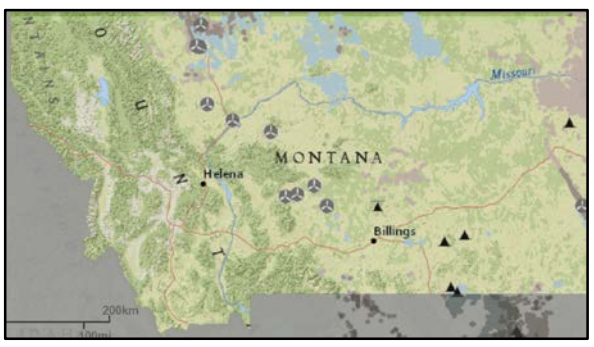
The DNRC's Reclamation & Development Grant Program funds select abandoned mine projects.

State Trust Land

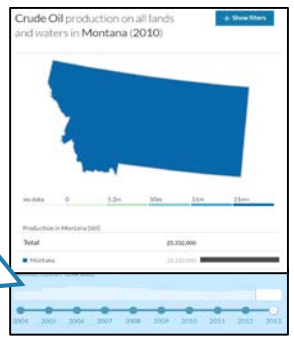
DNRC's Trust Land Management Division, specifically it's Mineral Management Bureau, permits, regulates, and collects revenue for extraction on state trust lands. Their work complements that of the Board of Oil & Gas Conservation and the Department of Environmental Quality which still have regulatory authority over mines on state lands. To read more, see their annual report or the statutes and rules for leasing state land.

PRODUCTION

Montana produces a significant amount of natural resource commodities, particularly oil and coal. With the exception of nonenergy minerals, the data below comes from the Energy Information Administration (EIA) and shows data for calendar year 2014. To learn more, read the EIA's State Energy Profile for Montana, available here. This data shows production for all lands, including federal, state, tribal, or private lands. To see production on state lands, see the Mineral Management Bureau's most recent annual report, available here.



The interactive charts and potentially maps showing production data will depend upon 18F's design of the overall state pages. The map at right gives a sense of what it will likely look like based on current state pages and the their current draft wireframe. County level data may exist for some types of production.
The map to left comes from EIA and shows where production occurs (major mines) and will either be linked to or interactive on the page. The content, below, shows the call-outs that will be presented, as well as the categories, type, and wording of the content that will be included.



Crude Oil

29,881,000 barrels | **13th among 31 U.S. states** | **0.8% of U.S. total**

Crude oil production and reserves are centered in northeastern Montana's portion of the Williston Basin, one of the largest accumulations of crude oil in the United States which includes the Bakken formation. (For more information on the Bakken broadly, click here.) As of 2013, Montana had proven reserves of 444 million barrels, or 1.2% of the U.S. total. In FY2014, Montana produced 1,505,356 barrels on state lands. (Source: MMB Annual Report) For detailed information and data on crude oil production in Montana, check the Board of Oil & Gas Conservation's website, data portal, or annual review.

Natural Gas

59,930 million cubic feet | **20th among 33 U.S. states** | **0.2% of U.S. total**

Natural gas wells are situated predominantly in the northern part of Montana, particularly the Williston Basin, and wells in south-central Montana. Montana has extensive underground natural gas storage capacity. Its Baker/Cedar Creek field in the Williston Basin is the nation's largest single underground natural gas storage facility. In FY2014, Montana produced 3,561 million cubic feet on state lands. (Source: MMB Annual Report). For detailed information and data on natural gas production in Montana, check the Board of Oil & Gas Conservation's website, data portal, or annual review.

Coal

44,562,000 short tons | **4th among 25 U.S. states** | **4.3% of U.S. total**

Five large surface mines provide the bulk of Montana's coal production, though it also has one sizable underground mine. Both Montana's coal production and reserves are chiefly located in the Powder River Basin in southeastern Montana. Montana has the largest estimated recoverable coal reserves in the United States as well as a quarter of the nation's demonstrated coal reserve base. In FY2014, Montana produced 4,465,582 short tons on state lands. (Source: MMB Annual Report)

Hydro-Electric

11,483,000 megawatt hours | **5th among 48 U.S. states** | **4.4% of U.S. total**

Montana has 25 hydroelectric dams, including six of the ten largest power plants in the state by generating capacity.

Wind Energy

1,974,000 megawatt hours | **21st among 39 U.S. states** | **1.1% of U.S. total**

Montana has several utility-scale wind farms in the center of the state and possesses significant wind generation potential. Wind electric power generation supplied 6.5% of the state's net electricity generation. For more information on wind energy in Montana, see DEQ's "Wind in Montana page" here.

Nonenergy Minerals

$1.4 billion in value | **15th among 50 U.S. states** | **1.9% of U.S. value**

Of nonenergy minerals, metals constituted 80% of Montana's nonenergy mineral production value in 2011, the year of the last USGS report on Montana. Montana produced copper, gold, molybdenum concentrates, palladium, platinum, and silver. Montana's main industrial mineral commodities were sand and gravel, portland cement, lime, and crushed stone. Montana also produces bentonite. To learn more, read the USGS Mineral Yearbook for Montana, available here. (Source: same as link)

REVENUES

Montana collects a significant amount of natural resource revenues across a number of revenue streams. In FY2014, the state of Montana and county tax collectors collected or received:

$446 million from **27 revenue streams**

A segmentation of the different natural resource revenue streams in Montana can be found below. Revenue streams fall into three chief categories: State & County Assessed Taxes (generally assessed on production); Rents, Bonuses, and Royalties (collected on state lands); and Federal Revenue Streams. To read more, click here.

This page, the "How it works/State Laws and Regulations" section of the website, will be updated to include this information

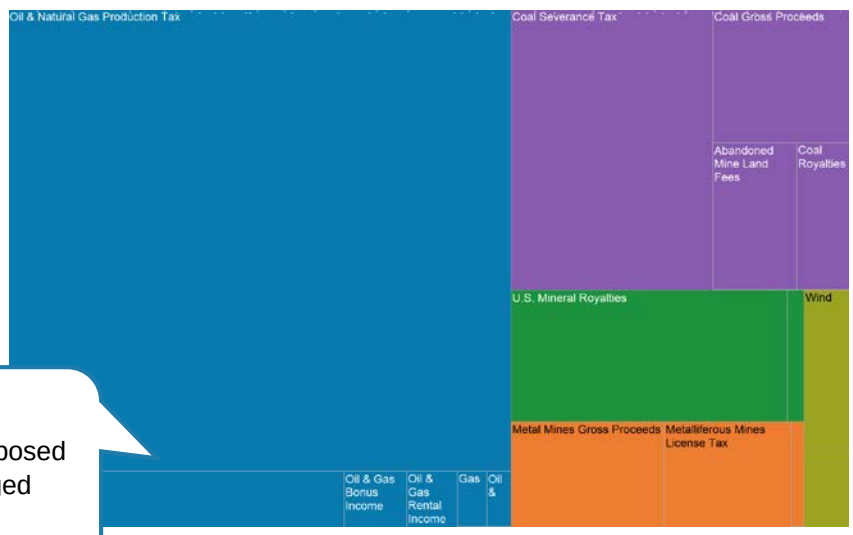
Commodity / Revenue Category	State & County Assessed Taxes *On Federal, State, and Private Land*						
	Severance & License Taxes	*Ad Valorem Taxes*	*Claim*	*Production*	*Production*	*(AML) Fees*	*Royalties*
Oil & Gas	**Oil Production Tax**: 15.08% of the gross value of production for royalty owner; working interest tax rates vary depending on a number of factors including when the well was first drilled, how long its been producing, and its level of production. For more detail, see the section on the oil & natural gas tax in the Department of Revenue's biennial report **Natural Gas Production Tax:** 15.00% of the gross value of production for royalty owners; working interest tax rates vary depending on a number of factors including when the well was first drilled, how long its been producing, and its level of production. For more detail, see the section on the oil & natural gas tax in the Department of Revenue's biennial report		**Bonus**: amount paid by the highest bidder	**Rents:** at least $1.50 per acre and no less than $100 per annum **Delay Drilling Penalties:** an additional $1.25 per acre in years 5-6 if no drilling has occurred and then $2.50 per acre in years 7-10 **Seismic Permits:** $10 application fee	**Oil Royalties:** 16.67% of amount produced **Gas Royalties:** 16.67% of amount produced and $400/well for gas not sold or used off premises **Shut-In Oil Royalties:** $100 per lease per year or amount of annual lease rental (whichever is greater) **Surface Damages**: calculated on a lease by lease basis		49% of royalty revenue collected by DNRR from extraction on federal lands in Montana
Coal	**Severance Tax**: Rates vary depending on quality and mining method range from 15% of value for surface-mined, >7,000 BTU/pound coal to 3% of value for underground mined, <7,000 BTU/pound coal. For more detail, see the section on the coal severance tax in the Department of Revenue's biennial report **Resource Indemnity & Groundwater Assessment Tax (RIGWAT):** 0.4% of gross value of taxable production	**Coal Gross Proceeds Tax**: 5% flat tax on the value of reported gross proceeds	**Bonus**: amount paid by the highest bidder	**Rents:** at least $2.00 per acre, the current amount set by the Board of Land Commissioners is $3.00	**Royalties**: at least 10% of fair market value of coal, current rates set by the Board of Land Commissioners at 12.5% for surface-mined coal and 10.0% for subsurface-mining	**AML Fees:** 50% of fees collected in state by OSMRE (per-ton fees of $0.28 for surface-mined coal; $0.12 for deep-mined coal; $0.08 for lignite)	
Non-Energy Minerals	**Metalliferous Mines License Tax:** 1.6% of gross value of ore/bullion/matte and 1.81% of gross value of concentrates **Resource Indemnity & Groundwater Assessment Tax (RIGWAT):** 4.0% (talc), 2.0% (vermiculite), 10.0% (limestone), 1.0% (garnets), 0.5% (other, excluding oil, gas, and metal production subject to the metal mines license tax) of gross value **Micaceous Mines**: $0.05/ton of concentrates mined, extracted, or produced	**Metal Mines Gross Proceeds Tax** (Class 2 Property): 101 state mills (1.01%) and an average of 407 county mills (4.1%) assessed on 3% of the merchantable value of severed gold, silver, copper, lead, or other metals **Miscellaneous Mines Net Proceeds Tax** (Class 1 Property): 101 state mills (1.01%) and an average of 319 county mills (3.2%) assessed on the net proceeds of talc, vermiculite, limestone, and industrial garnets and on the gross value for other mined products	**Metalliferous Bonus**: amount paid by the highest bidder	**Metalliferous Rents:** at least $1.00 per acre for the first year, $1.00 per acre for years 2-3, $2.50 per acre for years 4-5, and $3.00 per acre thereafter; at least $100 per lease per year	**Metalliferous Minerals or Gems Royalties:** rate determined by Board of Land Commissioners, no more than 8% of returns and no less than 5% of fair market value		
Renewables	**Electrical Energy Producers' License Tax:** $0.0002 tax per kilowatt hour of energy produced	**Wind Generation Class 14 Property Tax:** 101 state mills (1.01%) and an average of 424 county mills (4.2%) assessed on 3% of the market value of production **Wind Generation New & Expanding Class 14 Property Tax:** 101 state mills (1.01%) and an average of 177 local mills (1.8%) assessed on varying rates of the market value of production **Wind Generation Facility Impact Fee for Local Government Units and School Districts:** Rates vary but not to exceed 0.5% of the cost of construction					

To enable review, an enlarged version of this graphic is included in the "Enlarged Mock-Ups" file attached. It's been validated for both presentation and accuracy with Montana Department of Revenue, DNRC Trust Lands Division, and DEQ AML Program officials

States decide individually their rates and methods of taxation, though they will compare rates and policies to those of other states and the U.S. government. To see a comparison of oil & natural gas rates, see the Department of Revenue's 2014 biennial report available here or this report on oil & gas production tax rates, also from the Department of Revenue. The top ten natural resource revenue streams in Montana account for 95% of the revenue from extraction. The Oil & Natural Gas Production tax accounts for roughly half of Montana's extractives revenues. It's important to note that the Montana Department of Revenue collects all of Montana's oil & natural gas production tax and then distributes it to local and county governments. In some states, the state will collect a tax at one rate while counties may collect taxes at another. (Source: Department of Revenue Biennial Report)

Revenue & Distribution Mapping: The size of the area corresponds to relative amount of revenue generated by that revenue stream. The color indicates commodity type.

Key: Oil & Gas, Coal, Non-Energy Minerals, Renewables, Multiple Commodities



Proposed interactivity can be seen on the next page, "Distributions." An enlarged version of this view and the proposed interactive distributions view can also be seen in the "Enlarged Mock-Ups" file attached to the email.

Top Revenue-Producing Counties

The Montana Department of Revenue collects tax revenue related to natural resources from 45 of Montana's 56 counties. The Department of Natural Resources & Conservation collects revenues from state lands in 27 counties. Companies producing in 26 counties contribute more than a million dollars in revenue, with the top 5 counties (as shown on right) contributing 59% of Montana's revenues from natural resources.

Source: Montana Department of Revenue data; MMB Annual Report FY15

Top 10 Counties by Natural Resources Revenues Collected

Richland County	$	108,525,468
Big Horn County	$	46,745,070
Fallon County	$	42,475,506
Rosebud County	$	34,939,710
Roosevelt County	$	29,113,029
Silver Bow County	$	10,224,977
Sheridan County	$	9,843,251
Toole County	$	6,964,902
Sweet Grass County	$	6,675,871
Dawson County	$	6,529,615

Expenditures

4 tax expenditures totaling **$60.5 million**

The U.S. Department of Treasury defines tax expenditures as "revenue losses attributable to provisions of the federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability." Governments can use tax expenditures as policy instruments, similar to spending or regulations. Montana's Department of Revenue outlines tax expenditures in its biennial reports. In FY2014, Montana had four tax expenditures related to natural resources, totaling $60.5M. The new production tax holiday on oil production accounted for $55.9M, or 92% of that total. The natural gas new production tax holiday accounted for the second largest amount, $2.0M. (Source: Department of Revenue 2014 Biennial Report)

DISTRIBUTION

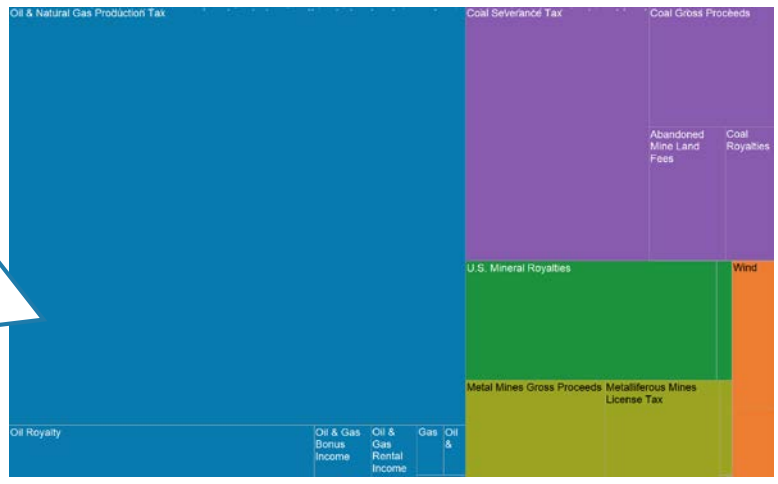
Montana relies upon revenues from the extractive industries as a primary source of income for the state. These revenues come from production on all lands (federal, state, or private).

The Montana Department of Revenue and the Montana Department of Natural Resources Conservation collect the state's natural resource revenues and distribute them across the state, to the general funds of both state and county governments, as well as to other beneficiaries, including schools, universities, and natural resources projects and operations. County tax collectors also collect and distribute the county portion of ad valorem taxes (with the exception of the coal gross proceeds tax) at the local level.

State agencies distribute revenues according to formulas defined by the Montana State Code, as defined by the legislature. In the case of the coal severance tax, however, the Montana State Constitution delineates that 50% of revenue collected must go to the coal trust fund. The state general fund and county and local governments receive the bulk of revenues related to extraction. Other major recipients include the state university system and Montana's public schools.

For the most complete breakdown of Montana's state revenues, their authorizing statutes, their history of rates and distribution, and how the Montana State Code and Montana State Constitution mandates they be distributed, see the Department of Revenue's latest biennial report. For revenue distribution from state trust lands, see the DNRC Trust Lands Division Minerals Management Bureau's latest annual report.

A user would hover over a section to see the total amount collected for a revenue stream and then click to see where the revenue gets distributed to (below)



Key:
- Oil & Gas
- Coal
- Non-Energy Minerals
- Renewables
- Multiple Commodities

Key: SUM(Amount) 2,454,052 – 110M

This shows the view that would be displayed had a user clicked on Oil & Natural Gas Production Tax. One can see that the largest recipients are the State General Fund and Counties. Hovering over a section would show the total amount distributed to that recipient.

Distribution to Counties

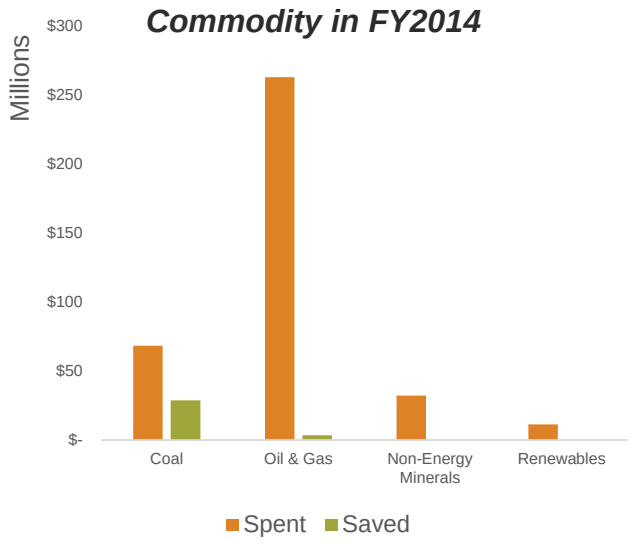
44 counties received a total of **$137M** in distributions
17 counties received **>$1m** in distributions

The Montana Department of Revenue transfers money to county governments for four of the revenue streams outlined above: oil & natural gas production tax, coal gross proceeds tax, metalliferous minerals license tax, and federal mineral royalties. They also distribute revenue from the Oil & Gas Resource Account, which receives its funds from the oil & natural gas production tax. Counties collect their own portions of the other ad valorem taxes assessed. Additionally, the percentage of oil & natural gas production tax distributed varies by county. To read more, see the Department of Revenue's latest biennial report.
Source: Montana Department of Revenue FY2014 Biennial Report

Top 10 County Recipients of State-Collected Natural Resources Revenues

Richland County	$	47,971,189
Fallon County	$	19,339,069
Big Horn County	$	10,463,295
Roosevelt County	$	9,981,705
Rosebud County	$	5,632,272
Sheridan County	$	5,380,243
Wibaux County	$	3,348,544
Dawson County	$	3,054,682
Powder River County	$	2,357,268
Carbon County	$	2,210,709

Amount Saved and Spent by Commodity in FY2014



Saving and Spending

States must choose how much of their revenues from extractives to save or spend in a given year. Many states establish trust funds to save revenue and better enable them to weather occasional volatility of extractives revenues. To read more about state trust funds, click here.

The Montana State Constitution established Montana's first trust fund, the coal trust fund. Fifty percent of coal severance tax revenues must first go to the trust fund before the Montana Department of Revenue distributes the remainder. The coal trust fund's estimated balance at the end of FY2014 stood at $963 million. (Source: Department of Revenue Biennial Report)

Montana divides the coal trust fund into multiple sub-funds, with the interest funding projects related to economic development, water, and infrastructure projects. You can read all of the details in the Department of Revenue's biennial report.

IMPACT

The extractive industries play an important role in Montana's economy, particularly in the eastern portion of Montana where the level of mining and economic activity in the Bakken oil fields has a strong impact on the local economy. To read more on their impact on Montana's economy, see the Montana Department of Labor and Industry's most recent Labor Day Report.

$2.3B (5.3%) of GDP

Mining is the 8th largest industry in Montana by share of the economy. The largest, Financial Activities, accounts for 17.5% of the GDP. GDP from mining decreased 2.7% from 2013 to 2014, but overall increased 3.5% in the last five years.

Source: Montana DoL

8.5K* (1.9%) in Jobs

Mining contributes the 11th largest share of jobs in Montana by industry. Its high annual wages increase its contributions to GDP and Personal Income. In the last five years, from 2010 to 2014, the number of wage and salary jobs grew 24.5%. From 2013 to 2014, however, it declined 2.6%.

Source: Montana DoL, USEITI Data Portal (BLS)

*This figure only includes wage & salary jobs, not self-employed or sole proprietors.

$1.2B (4.8%) of Personal Income

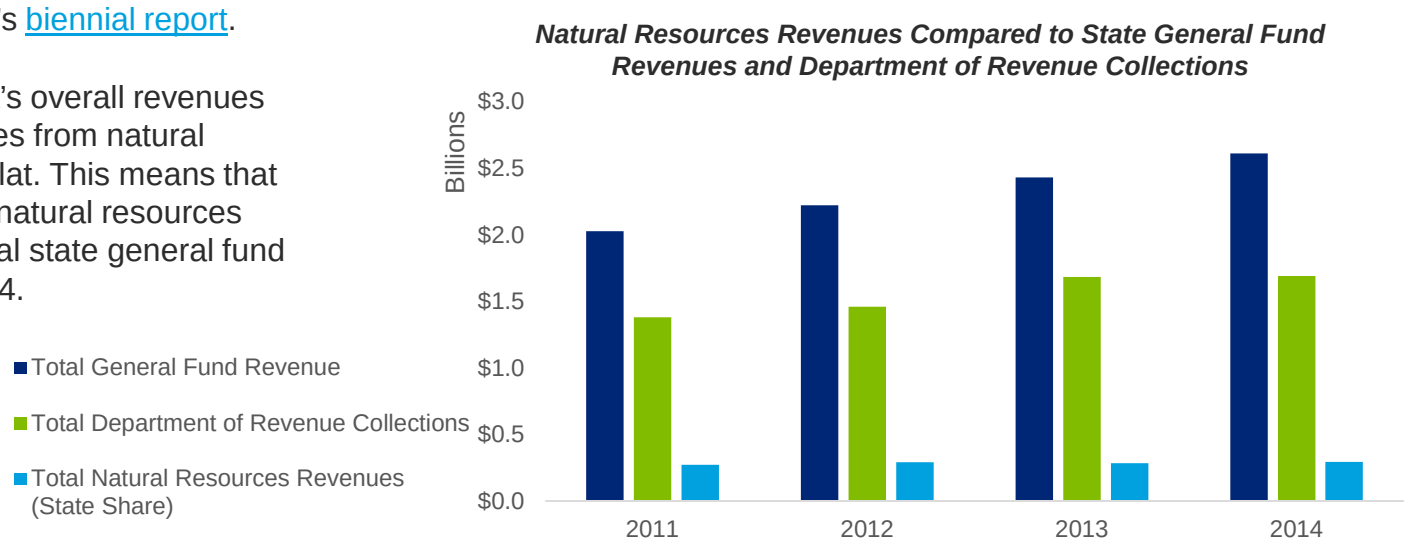
The average annual wage within the in 2014 stood at $86,496, a 4.9% growth from 2013 to 2014. Given high annual wages relative to other industries, mining contributes a greater percentage of personal income than it does jobs. Its percent share, however, remains the 11th largest.

Source: Montana DoL

Revenue Sustainability

Natural resources provide a significant source of revenue for state and local governments in Montana. In 2014, the revenue streams outlined on this page contributed $294M to the state general fund's revenues, accounting for 11.3%, of the state general fund's revenue and 17.4% of the Montana Department of Revenue's collections. These figures, and the graph below, reflect revenues at the state level; revenue sustainability considerations are magnified at the local level. You can read more about the impact of natural resources at a local level in USEITI's county case studies, and you can see how Montana's tax system and structure compares to other states in the Montana Department of Revenue's biennial report.

Over the last four years, Montana's overall revenues have increased, while the revenues from natural resources have stayed relatively flat. This means that the percentage of revenues from natural resources has decreased, from 13.5% of total state general fund revenues in 2010 to 11.3% in 2014.



Costs

In addition to generating government revenue, extractive activities also bring associated costs to state and local communities. The USEITI MSG prioritized four types of fiscal costs in last year's report: Transportation, Water, Reclamation, and Emergency Services. In Montana, these costs have been concentrated in eastern Montana due to increased activity in the Bakken Formation in Montana and in neighboring North Dakota. To read more about the impact on eastern Montana, you can read the Eastern Montana Impact Coalition's Regional Impact Analysis available here.

Transportation

Extraction can bring increased traffic to roads and highways that exceeds the capacity of existing infrastructure. This can necessitate investments in infrastructure improvements or increased maintenance costs.

The Montana Department of Transportation estimates an additional **$52M per year in increased pavement needs** for highways in eastern Montana. Local governments in eastern Montana also saw increases in **budgets for streets and roads increase 44% to 345% from 2000 to 2013.** To read more, see the Department of Transportation's report on their efforts in response to the impacts from oil exploration and production in eastern Montana, available here.

Water

Increased extraction puts added demand on both water supplies and water infrastructure in communities. This can lead to increased rates and needs for infrastructure investments.

Surveyed communities in eastern Montana reported that **water rates increased an average of 86.4% from 2011 to 2014 and sewage rates increased 302.9%.** The Eastern Montana Impact Coalition also estimates that **$33.8M to $80.6M will be needed for incremental improvements to support growing demand** on water, sewage, and transportation systems. These figures don't include large projects.

Additionally, the Department of Environmental Quality plans, monitors, assesses, and enforces water quality in Montana. Activities it carries out relevant to the extractive industries include targeted water quality monitoring related to oil & gas development in eastern Montana and coal mining near Lake Koocanusa, and running the Montana Ground Water Pollution Control System and its permitting process. If you want to learn more, you can visit DEQ's water page here or read Montana's most recent Clean Water Act Integrated Report here.

Emergency

An uptick in extraction can lead
and the population around the a
increases place demands on th
and police services of the st

Law enforcement at mu
Montana have increased efforts
to increases in oil & gas activity. The State Highway Patrol **added a new detachment** to eastern Montana, county **sheriff offices have seen costs rise $13.4M,** and surveyed **police departments have seen an average budget increase of 128.9% between 2000 and 2013.** Surveyed local governments also reported an **average increase of 169.2% in emergency spending from 2000 to 2013.**

To enable reviewing, an enlarged version of this graphic is included in the "Enlarged Mock-Ups" file attached.

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as
has
been certified by the federal Abandoned Mine Land Reclamation program (click here for more information), meaning that it has reclaimed its identified, high-priority abandoned coal mine areas. Current projects include addressing acid mine drainage in the Great Falls coal field, which is projected to cost $96M, and managing subsidence events and the potential for subsidence in Red Lodge. To learn more about AML in Montana search here for Montana's most recent Annual Evaluation Report. To read more on bonding of active mines, click here.

DNRC's Conservation and Resource Development Division runs the Reclamation and Development Grants program to fund projects that "compensate Montana citizens for the effects of exploration and mining on Montana lands." You can apply and read program abstracts here.

The Montana Department of Justice Natural Resources Damage Program administers grants for the restoration of the Upper Clark Fork River Basin's natural resources "due to mining and mineral processing operations." **Between 2000 and 2011, the Governor approved 121 projects totaling $121M.** You can read more here.

Sources: Linked sources, particularly Eastern Montana Impact Coalition's Regional Impact Analysis 2015, DEQ's AML Annual Evaluation Report to OSMRE, and Montana DoT State Highway System: Eastern Montana Impacts from Oil Exploration & Production: Summary of MDT's efforts