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Energy, Minerals
and Natural
Resources Department
Annual Report



Governor
Susana Martinez

Ken McQueen
Cabinet Secretary

Matthias Sayer
Deputy Secretary

Bill Brancard
General Counsel

Beth Wojahn
Communications Director

Matthew Lovato, Director
Administrative Services Division

Christine Flores-Jimenez,
Administrator
Human Resources

Joe Montaña
Chief Information Officer

Louise Martinez, Director
Energy Conservation &
Management Division

Donald Griego, State Forester
Forestry Division

Fernando Martinez, Director
Mining and Minerals Division

Heather Riley, Director
Oil Conservation Division

Christy Tafoya, Director
State Parks Division

Edited by: Beth Wojahn
Designed by: Lauren Aguilar

Vision

A New Mexico where individuals, agencies and organizations work collaboratively on energy and natural resource management to ensure a sustainable environmental and economic future.

Mission

To position New Mexico as a national leader in energy and natural resources management.



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Message from Cabinet Secretary Ken McQueen

Energy, Minerals & Natural Resources Department

Every day, the Energy, Minerals and Natural Resources Department (EMNRD) strives to meet the mandate of the mission – to protect and conserve New Mexico’s natural resources while making New Mexico a better place to live, work and recreate.

Department highlights include:

- On behalf of the State, EMNRD spearheaded the signing of a Memorandum of Understanding with the U.S. Environmental Protection Agency (EPA) which calls for a working group comprised of state and federal regulators to draft a white paper surveying state and federal regulatory treatment of produced water, along with opportunities to treat and reuse water.
- The Carlsbad Brine Well Remediation Authority met three times in 2018, and the OCD continues to manage the Brine Well remediation project in Carlsbad. In January, Wood was awarded the contract for remediation. To date, Wood has finalized the completion of the accelerated design effort and has completed drilling shallow boreholes for monitoring system upgrades.
- The Oil Conservation Division initiated comprehensive reform of 19.15.29 NMAC to codify proper best management practices for addressing spills of oil, produced water, and other oil field waste. The Division also passed rules in response to SB189 increasing both blanket and single well financial assurance requirements to ensure the financial assurance required is in line with actual plugging expenses. Special rules for horizontal wells were also implemented in 2018, updating and clarifying horizontal drilling techniques and operator business practices established in 1912.
- The Energy Conservation and Management Division’s final New Mexico Energy Roadmap includes 15 consensus-based goals and multiple strategies aiming to position NM’s energy sector to take full advantage of the world’s changing energy landscape. This year, stakeholders developed new draft legislation to extend the Efficient Use of Energy Act beyond 2020 and successfully applied for and received a new US Department of Energy Grant to develop a statewide program for Financial Resiliency through Energy Efficiency.
- The Ute Park Fire was one of the most significant incidents for State Forestry in 2018, burning an estimated 36,740 acres of state and private land in Colfax County and forcing the evacuation of Philmont Scout Ranch and the communities of Ute Park and Cimarron. Forestry worked closely with numerous State, local and federal stakeholders to extinguish the blaze, prevent loss of life and continues post-fire recovery efforts from the fire and others around the state.
- The Mining and Minerals Division’s Abandoned Mine Land Program stabilized underground coal mine workings through surface drilling and injection grouting during Phase III of an emergency project in Allison, NM. The project abated subsidence conditions in a residential community.
- State Parks continues to play a key role in the Rio Grande Trail Commission and finalized a Master Plan for the trail. An additional 60.1 miles have been designated in 2018, for a total of 88.12 miles to date, a significant increase since 2015.
- In December, Governor Susana Martinez, along with the Governor of Arizona and Mexico’s Sonora state signed a MOU to study a plan to export natural gas to Asia using existing pipelines to move fuel to the Gulf of California.

I am pleased to submit the Energy, Minerals and Natural Resources Department’s Annual Report, which includes Fiscal Year 2018 accomplishments, data and statistics.



Organizational Chart



Ken McQueen
Cabinet Secretary



Matthias Sayer
Deputy Cabinet Secretary



Youth Conservation Corps*

Wendy Kent
Division Director



Communications Director

Beth Wojahn



General Counsel

Bill Brancard



Chief Information Officer

Joe Montaño



HR Administrator

Christine Flores-Jimenez



Department of Game and Fish*

Micheal Sloan
Director



Administrative Services Division

Matthew Lovato
Division Director



Energy Conservation & Management Division

Louise Martinez
Division Director



Mining & Minerals Division

Fernando Martinez
Division Director



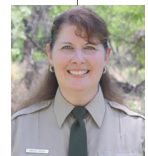
Oil Conservation Division

Heather Riley
Division Director



State Forestry Division

Donald Griego
State Forester



State Parks Division

Christy Tafoya
Division Director

*Administratively Attached



Office of the Secretary

Office of the Secretary (OFS) provides leadership, strategic planning and policy direction, and establishes procedures for the Department and program performance. OFS oversees all divisions within the Department and houses the Office of Information Technology, Communications/Public Information Office, and Office of General Counsel.

OFS serves as the focal point for the Department’s communications with the Governor, legislators and other state agencies. OFS establishes Department policies, and provides legal, programmatic, public outreach and marketing direction to the divisions.

New Mexico Energy Policy and Implementation Plan

In 2015, Governor Susana Martinez published the State Energy Policy & Implementation Plan, ‘Seizing our Energy Potential: Creating a More Diverse Economy in New Mexico’, New Mexico’s first energy policy and plan in nearly 25 years. Expanding our state and the nation’s efforts to achieve energy independence is the cornerstone of the plan.

The implementation phase of the Plan called the State Energy Roadmap project kicked-off in 2017 to determine future scenarios of the state’s energy landscape.

In 2018, the Energy Roadmap was released, which included 15 consensus-based goals and multiple strategies aimed at strategically positioning the state to maximize energy opportunities and potential.

The Energy Roadmap stakeholders’ accomplishments throughout 2018 are highlighted in the Energy Conservation and Management Division’s section.



Rio Grande Trail Commission

In 2018, the Rio Grande Trail Commission, led by the Energy, Minerals and Natural Resources Department and chaired by Secretary Ken McQueen, guided development of the Rio Grande Trail

Master Plan. The Master Plan identifies cultural and natural resources which could be impacted, proposes



alignment for the trail, and provides guidance on how to successfully design, construct, maintain and market the trail. The Master Plan was completed in late 2018 and may be found [here](#).

Throughout the year, Chairman McQueen and Vice Chair Christy Tafoya met with multiple agencies to encourage trail designation including the Bureau of Land Management (BLM), the US International Boundary and Water Commission, the Middle Rio Grande Conservancy District, the City of Taos, and Taos Pueblo. The Commission met five times during 2018 and voted to approve the official logo.



After working extensively with the BLM and numerous stakeholders, more than 60 miles of trail was designated in the Rio Grande del Norte National Monument. On October 2, the 50th Anniversary of the National Trails Act and the Wild and Scenic Rivers Act, Governor Susana Martinez, Deputy Secretary of Interior David Bernhardt, members of the Commission and other dignitaries led the celebration and ribbon-cutting at the Rio Grande del Norte Monument/Rio Grande Gorge Bridge.

To date, a total of 88 miles of Rio Grande Trail has been designated for trail users to explore, learn about and connect with a tapestry of diverse natural habitats, rich history and striking landscapes.

Oil and Gas Extraction Wastewater Management

In July 2018, the Energy, Minerals and Natural Resources Department spearheaded the signing of a Memorandum of Understanding between the U.S. Environmental Protection Agency (EPA), the New Mexico Environment Department, and the Office of the State Engineer to explore ways to reuse and recycle oil and natural gas wastewater for economic benefit.

The MOU will clarify existing regulatory and permitting frameworks related to the reuse and recycling of oil and natural gas wastewater and to explore wastewater reuse opportunities in New Mexico through a draft White Paper.

EMNRD created a [website](#) announcing the draft White Paper, with links to the MOU and a means for responding to the draft document.

Communications/Public Information Office

The Communications/Public Information Office manages communications with the public, media organizations and other inquiring entities. It coordinates and synthesizes information from divisions to write speeches, news releases and articles. The office works closely with all divisions and oversees marketing and public relations. The office provides project management support for Department-wide publications such as the annual report, strategic plan and other reports as needed. It coordinates and oversees internal communications, including intranet, newsletters, memos, award ceremonies and other Department-wide events.

Office of General Counsel

The Office of General Counsel manages all legal affairs for the Department. This includes representation of the Department in administrative and judicial proceedings as well as drafting and analysis of proposed legislation and rules, assistance with human resources issues and review of contract documents.

Administrative Services

The Administrative Services Division (ASD) oversees the Department's finances and property. Specific functions include budget, procurement, accounting, payments, federal grant reporting and property and material management. Among ASD's duties are the processing of payment vouchers, travel documents, purchase orders and deposits, for the Department's daily operations. ASD also coordinates the annual financial audit and prepares the annual financial

statement and related footnotes for governmental funds.

Information & Technology Office

The Information and Technology Office (ITO) is the central information technology and information systems provider for the Department's employees situated at 50+ separate facilities. It employs 21 technical positions that are responsible for maintaining and supporting the Department's computer systems, network telecommunications infrastructure and application development needs using the latest technology for Windows and Web applications on the intranet and internet.

Human Resources

The Human Resources Bureau (HRB), within the OFS, provides services and information for applicants, employees and employers throughout the state and is the liaison between the Department and the State Personnel Office's Center of Excellence. HRB verifies that the Department follows all state and federal rules, regulation and laws governing employment; guides managers and supervisors through a variety of employment issues; and assists employees in understanding state and federal rules, regulations and laws. HRB helps employees with position classification, compensation and discipline. HRB also provides guidance on medical leave and workers' compensation.



Clayton Lake State Park



Oil Conservation Division



Heather Riley
Division Director

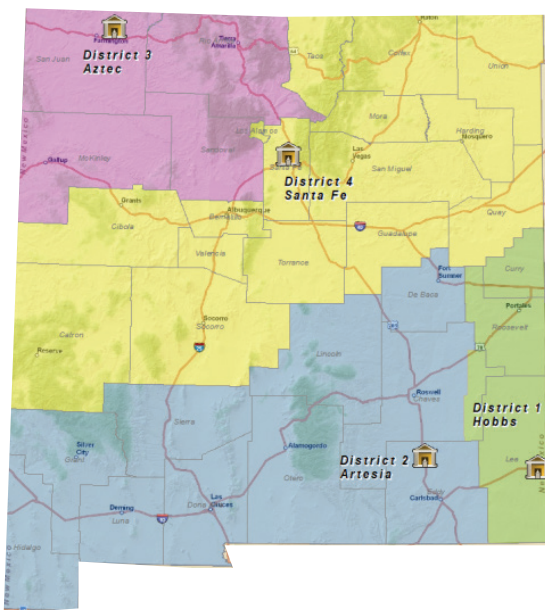


Oil Conservation Division

MISSION:

To ensure the protection, conservation, management, and responsible development of oil and gas through professional, dynamic, regulation and advocacy for the ultimate benefit of New Mexico.

OVERVIEW: The Oil Conservation Division (OCD) is organized into four district offices and four bureaus responsible for different aspects of regulating the oil and gas industry.



Four Districts:

The district offices issue drilling permits, inspect wells and associated facilities, respond to spills, investigate violations, and institute enforcement actions. The four district offices are:

- Hobbs – District 1
- Artesia – District 2
- Aztec – District 3
- Santa Fe – District 4

THREE BUREAUS:

The **Engineering Bureau** processes administrative applications for exceptions to OCD rules, and the staff serves as Director-appointed hearing examiners for OCD hearings.

The **Environmental Bureau** enforces environmental rules and programs in the oil and gas industry for the protection of New Mexico’s fresh water, public health, and the environment.

The **Field Operations, Administration and Compliance Bureau** ensures that activities comply with regulations and do not result in the waste of oil and gas resources and to protect human health and the environment. The bureau works with operators to develop agreed compliance orders. The bureau tracks statistics and oversees the division’s budget and procurement needs and provides administrative support, manages the plugging bond program, and maintains records of cases and orders. The bureau is responsible for overseeing the district offices and working with the district offices on compliance matters.

This year, the division heard 22 formal enforcement proceedings before division examiners that resulted in 14 operators returning to compliance directly or via settlement agreements and plugging orders for 565 wells. Outside of the hearing room, the Compliance and Enforcement Bureau has obtained judgment against Siana Operating LLC, which resulted in a penalty of more than \$2.2 million for violations of the Oil and Gas Act, and an injunction preventing Siana from operating in the State of New Mexico.

RULEMAKING:

OCD works with representatives from diverse groups to identify areas where OCD rules can be improved. OCD is actively involved in federal, state, and industry organizations that share information on new technologies and discuss



best practices on issues such as hydraulic fracturing and horizontal well drilling. The OCD is committed to promulgate regulations based on science by including university researchers in workgroups for rule development and amendment recommendation.

2018 RULE CHANGES

Rule 19.15.16.15: Special Rules for Horizontal Wells

New Rule 19.15.16.15 NMAC was implemented on June 26, 2018. The old horizontal well rule was established in 2012 and since then, horizontal drilling techniques and operator business practices have greatly advanced, necessitating the 2018 revision. The 2018 horizontal rule is an example of how the OCD is keeping pace with changing technology through rulemaking.

Rule 19.15.29 Release Notification and Rule 19.15.30 Remediation

The OCD passed a comprehensive reform of 19.15.29 NMAC to codify proper best management practices for addressing spills of oil, produced water, and other oil field waste. The new rule specifies requirements for contents of notification and specific timelines for specific corrective actions. The OCD, the public, and industry now have definitive and enforceable delineation, testing, characterization, remediation and closure requirements to safeguard the people and environment of New Mexico. The new “spill” rules were implemented August 14, 2018.

Rule 19.15.26 Financial Assurance

In response to new legislation (Senate Bill 189), the Division revised rules to increase both blanket and single well financial assurance requirements. The new bonding requirements reflect actual plugging expenses.

This rule change implements the higher cap enacted by the Legislature, a ladder of blanket bond amounts with steps at \$50,000, \$75,000, \$125,000 and \$250,000 depending on the total number of wells operated by the company.

To meet the statutory requirements that one-well financial assurance must be “sufficient to reasonably pay the cost of plugging the wells”, the financial assurance increased for single wells. The current formula of \$5,000 or \$10,000 per well plus \$1 per foot increased to \$25,000 per well and \$2 per foot.

The new rule was adopted December 19, 2018 and will be effective January 15, 2019.

19.15.26 Injection Rule

An application to amend 19.15.26 was submitted August 8, 2018, heard by the OCC, and was approved. Rule 26 provides for conformity within the Oil and Gas Act and rules and with EPA rules and became effective December 27, 2018.

OIL CONSERVATION COMMISSION (OCC):

The OCC is a three-member commission chaired by the OCD Director, promulgates rules governing oil and gas production in New Mexico, conducts hearings on matters of significant interest, and hears appeals of OCD examiner decisions. The Commission emphasizes the commitment to promulgate regulations based on science.

OCD PERFORMANCE

Inspection & Plugging

In FY18, OCD inspected more than 42,000 oil and gas wells and facilities. Moreover, many Underground Injection Control (UIC) inspections were conducted in the final quarter, meeting the goals set by the federal UIC program.

The OCD plugged 42 wells in FY18, above the performance target of 30 wells. Currently, there are approximately 317 wells available for OCD to plug using Oil Reclamation Fund monies, and OCD is waiting for approximately 38 plugging cases to be brought to hearing that may add an additional 67 wells to the plugging list.

Applications for Permit to Drill (“APDs”)

In FY18, the OCD approved 99.75 percent of all APDs within 10 business days of receipt, exceeding the performance target of 85 percent set by the Legislative Finance Committee. Approving APDs in a timely manner enables industry to plan and drill wells on schedule, thereby reducing down-time and additional rig expense waiting on regulatory approval. Timely turnaround also allows royalty and tax money to quickly flow to the state as reflected by the over one billion dollar budget surplus provided to New Mexico by oil and gas production.

Engineering

The Engineering Bureau processes administrative and hearing applications in a timely manner to avoid delays in drilling and producing operations. In FY18, the Division

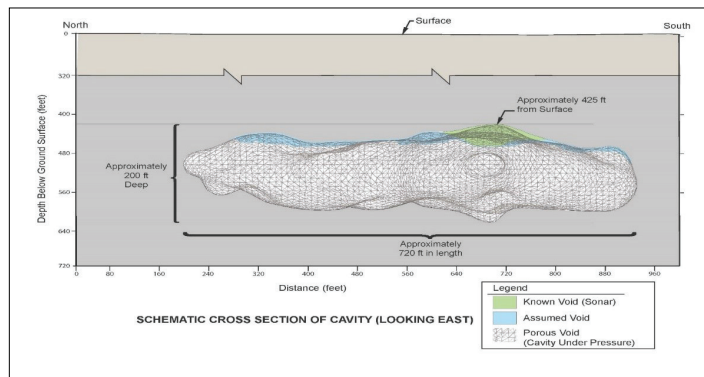
processed 72.5 percent of all administrative applications within 30 days of their receipt. The overall average turnaround time for all administrative orders issued was 39 days.

Brine Well Cavern

Beginning in 2009, the OCD has been the lead in characterizing and monitoring the large and unstable brine well cavern threatening a developed portion (~50 acres) of the City of Carlsbad in Eddy County. The brine well cavern was created when the responsible party, I&W, injected freshwater into the subsurface salt formation to produce saturated brine used for oil and gas operations. I&W filed for bankruptcy after having failed to monitor or remediate the cavern.

Catastrophic failure is predicted as soon as 2021. Collapse would result in serious surface-use disruption and groundwater contamination. OCD used monies from the Reclamation Fund and the liquidated bankruptcy estate to oversee the characterization of the cavern using multiple state of the art geophysical techniques. OCD installed and maintains an automated ground movement monitoring system integrated directly into the local emergency response infrastructure. Upgrades to the monitoring system continue to be made, and all historic data has been independently reviewed. Significant efforts have been made to ensure emergency response groups are kept up to date so their planned responses, if needed, can handle a cavern collapse.

To date, state expenditures for outside services on the project are approaching \$8 million, of which \$1.6 million was reimbursed by the bankruptcy estate. Division staff provide technical guidance to state and local entities involved in the project as well as providing regular updates to the executive and legislative branches.



Vickie Maranville with the Wood Group gives New Mexico Department of Transportation's District 2 team members a safety briefing at the site of the brine well cavern

During 2018 legislative session, a remediation fund was established for the project and the Carlsbad Brine Well Remediation Authority was created. The Authority has representation from the City of Carlsbad, Eddy County, the Carlsbad Irrigation District, the Office of the Attorney General, the Office of the State Engineer, the Department of Transportation, the Environment Department, and is chaired by the Energy, Minerals and Natural Resources Department. The Authority's purpose is to oversee OCD's continuing efforts to resolve the situation. The State issued a formal Request for Proposals to design and implement an in-place backfilling of the underground cavern. The selected engineering firm, Wood Environment and Infrastructure Solutions, was announced in April 2018. The estimate to complete the design, implement the backfilling program, and monitoring the area post-remediation to ensure its effectiveness is more than \$45 million over a five-year period. The stabilization process incorporates the displacement of brine currently in the cavern by the controlled injection of specialized grout and is scheduled to begin in early-2019.

Governor Susana Martinez signed Senate Bill 226, a law which distributes 4.15 percent of motor vehicle excise tax revenue to the state road fund. The remediation fund will receive \$10 million over a three-year period. The City of Carlsbad and Eddy County each committed \$4 million; \$3 million was appropriated from the General Fund; \$2 million from the Corrective Action Fund.

The Department's website has progress reports, meeting agendas, and meeting minutes at [Carlsbad Brine Well Authority](#).

PARTNERSHIP AND COLLABORATION

U.S. Environmental Protection Agency (EPA):

EMNRD led a joint New Mexico effort to sign a Memorandum of Understanding (MOU) with the U.S. EPA to explore ways to reuse and recycle oil and natural gas wastewater for the economic benefit of New Mexico. The New Mexico Environment Department and the State Engineer were also parties to the MOU. A joint New Mexico EPA work group produced a [draft white paper](#).

ELECTRONIC SYSTEMS LEADERSHIP

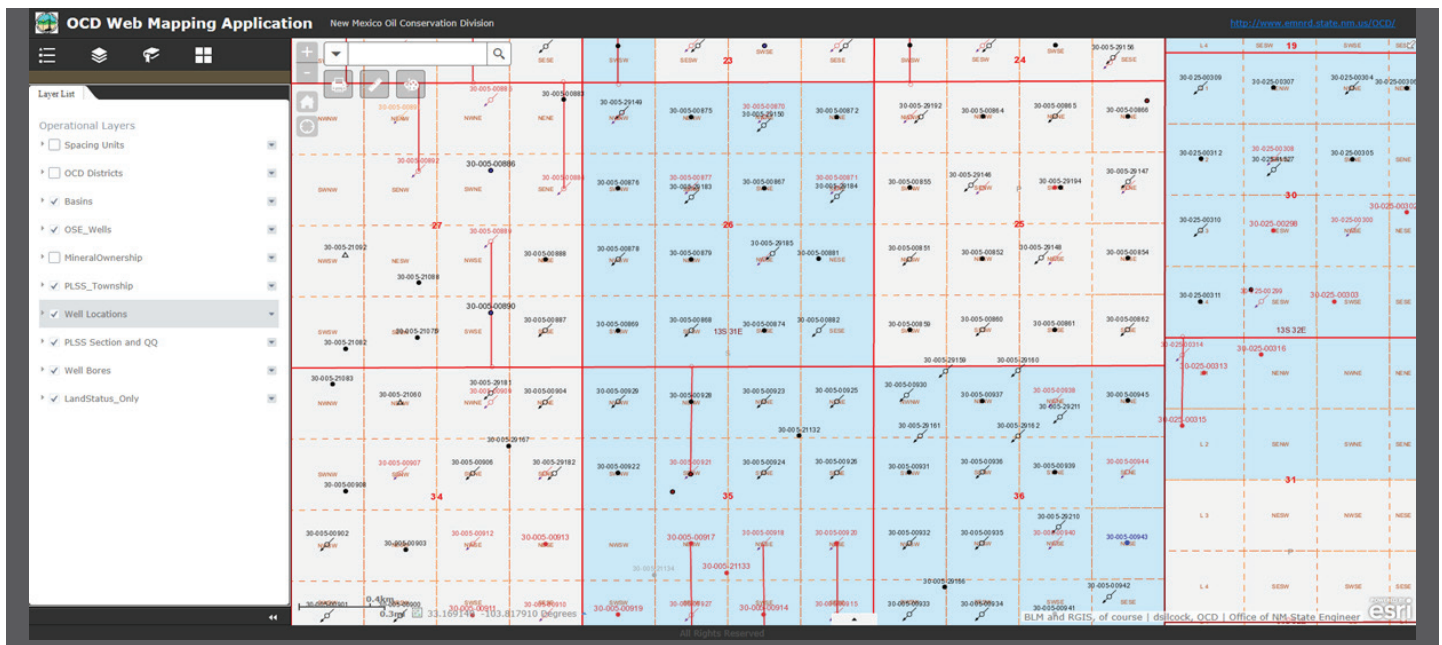
The Division worked with the agency's IT department to increase efficiency, transparency, and availability of information to the public. The IT department developed a replacement to OCD's Risk Based Data Management System, which is currently being implemented.

GIS (GEOGRAPHIC INFORMATION SYSTEM)

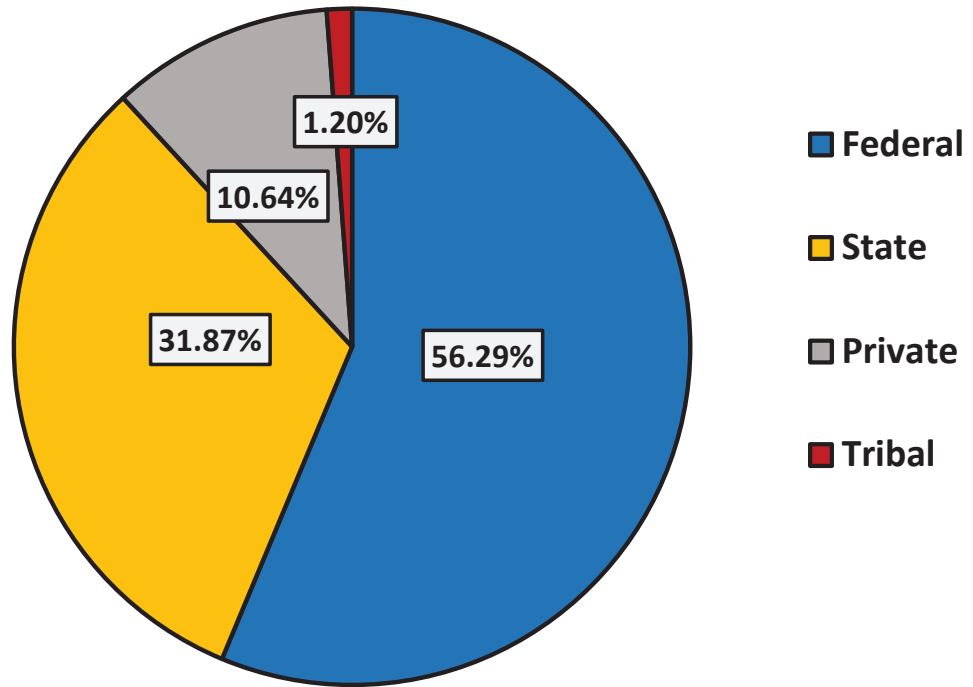
The OCD has developed a GIS module which is now publicly available on OCD Online. The GIS module contains a well data layer linked to OCD Online, land ownership, and spacing unit layers. Additional layers are being developed that will help the OCD protect the environment and regulate oil and gas operations.

OIL CONSERVATION DIVISION GOALS

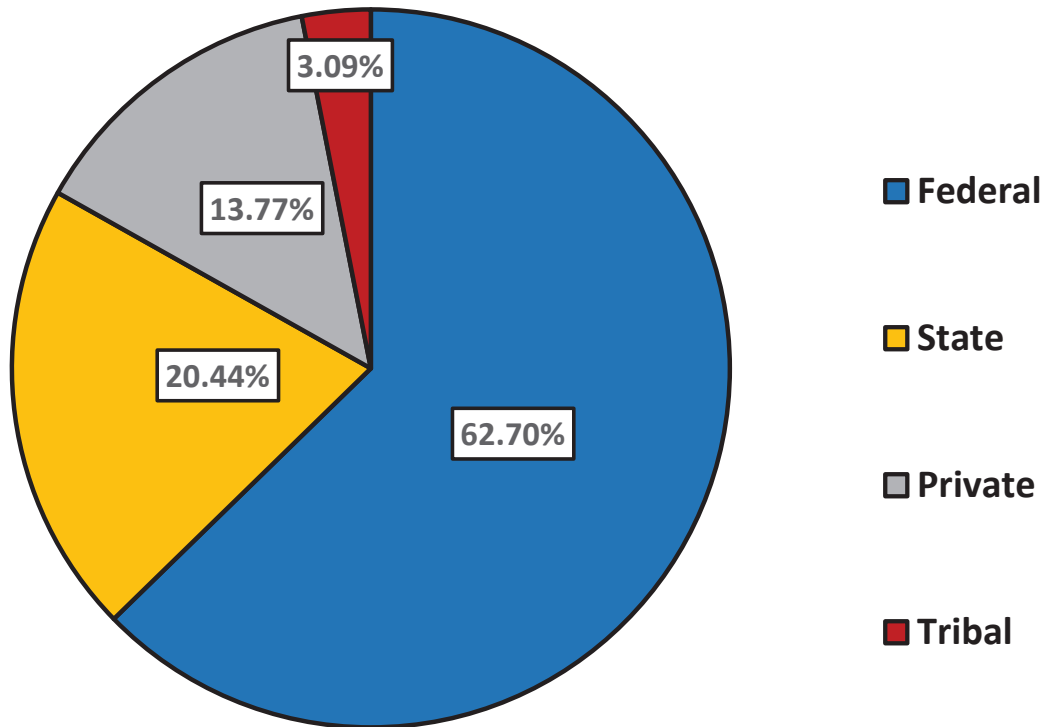
- To make decisions consistent with the Oil and Gas Act and Rules delivered in a timely and transparent manner
- To provide efficient processes that support industry's needs while ensuring compliance with the requirements of the Oil and Gas Act and Rules
- To provide public access to reports and information
- To strive for balance that allows for oil and gas production while protecting the environment, with decisions based on sound science and the Oil and Gas Act and Rules
- To fill vacancies to enhance public service, well inspections and application processing
- To work collaboratively with other agencies, industry and the public for the betterment of the division
- To continue to provide seamless oil and gas production data to the Taxation and Revenue Department and the State Land Office for the efficient processing and disbursement of taxes and royalties due to the state of New Mexico



Fiscal Year 2018 Oil Production by Land Type



Fiscal Year 2018 Gas Production by Land Type



Oil Production by Calendar Year

Fiscal Year	SE Crude	SE Condensate	NW Crude	NW Condensate	Total Oil
2014	105,049,545	2,794,545	3,371,008	1,584,268	112,799,366
2015	128,513,205	3,183,891	6,524,799	1,782,201	140,004,096
2016	133,248,798	4,664,239	6,215,348	1,828,345	145,956,730
2017	136,340,838	11,378,603	5,517,685	1,445,193	154,682,319
2018	171,931,450	18,880,328	7,120,629	1,727,082	199,659,489

Volumes are adjusted to reflect amended production reports filed with the Oil Conservation Division

Source: Oil Conservation Division as of November 15, 2018

2018 Oil and Condensate production is up to reporting period for June, 2018

Production is due 45 days after the close of the production month

Gas Production by Fiscal Year 2014-2018

Fiscal Year	SE Casinghead	SE Dry Gas	NW Casinghead	NW Dry Gas	NE Dry Gas	Total Natural
2014	335,836,821	130,825,194	13,643,257	722,699,736	25,397,912	1,228,402,920
2015	417,425,628	119,426,357	35,028,346	664,353,585	23,147,421	1,259,381,337
2016	461,825,000	113,087,721	43,927,161	621,583,197	21,791,371	1,262,214,450
2017	491,634,313	145,096,256	36,068,165	578,958,687	21,291,180	1,273,048,601
2018	563,401,459	184,659,216	38,957,061	555,363,024	18,806,052	1,361,186,812

Volumes are adjusted to reflect amended production reports filed with the Oil Conservation Division

Source: Oil Conservation Division as of November 15, 2018

Gas is reported in mcf

Gas in New Mexico is reported at a pressure base of 15.025

Production is reported through June, 2018

Total Oil and Gas Production by Fiscal Year 2014-2018¹

Year	Oil ²	Gas ³	BOE ⁴
2014	112,799,366	1,228,402,920	317,533,186
2015	140,004,096	1,259,381,337	349,900,986
2016	145,956,730	1,262,214,450	356,325,805
2017	154,682,319	1,273,048,601	366,857,086
2018	199,659,489	1,361,186,812	426,523,958

¹2018 includes all production through June - Source: OCD as of November 15, 2018

²Oil includes condensate and is reported in barrels (Bbls)

³Gas includes coalseam production and is reported in thousand cubic feet (Mcf)

⁴BOE converts gas to equivalents based on a 6 to 1 ratio and is expressed in Bbls

FY 2018 Oil and Gas Production by County				
Rank	Oil (Bbl)		Rank	Gas (MCF)
1. Lea	110,720,047		1. Eddy	395,284,906
2. Eddy	78,751,059		2. San Juan	350,516,019
3. San Juan	6,088,850		3. Lea	338,978,167
4. Sandoval	1,383,412		4. Rio Arriba	230,122,933
5. Rio Arriba	1,362,509		5. Colfax	18,806,052
6. Chaves	1,057,455		6. Sandoval	13,573,151
7. Roosevelt	283,217		7. Chaves	11,906,126
8. McKinley	12,940		8. Roosevelt	1,891,476
			9. McKinley	107,982
Total	199,659,489			1,361,186,812

Source: Oil Conservation Division as of November 15, 2018
Oil and Gas Production through November 15, 2018

Well Inspections by Fiscal Year 2013 - 2018						
	2018	2017	2016	2015	2014	2013
Quarter 1	10,066	9,805	12,431	15,420	8,782	8,235
Quarter 2	8,698	6,924	10,245	9,350	7,848	8,486
Quarter 3	11,011	10,885	13,379	9,477	8,327	8,597
Quarter 4	13,105	10,314	13,569	13,346	10,772	11,584
Total	42,880	37,928	49,624	47,593	35,729	36,902

The Oil Conservation Division performs well inspections throughout the year to ensure operator's are in compliance. Report ran on October 25, 2018.

Wells Drilled and Completed by Well Type Fiscal Years 2009 - 2018				
Fiscal Year	Gas	Oil	Other	Total
2009	1,062	1,058	127	2,247
2010	661	1,085	110	1,856
2011	523	1,264	120	1,907
2012	509	1,448	122	2,079
2013	321	1,349	81	1,751
2014	139	1,292	91	1,522
2015	115	1,177	51	1,343
2016	64	518	33	615
2017	111	461	26	598
2018	208	748	30	986

"Other" includes saltwater disposal wells, carbon dioxide, and injection wells.



Mining & Minerals Division



Fernando Martinez
Division Director



Mining & Minerals Division

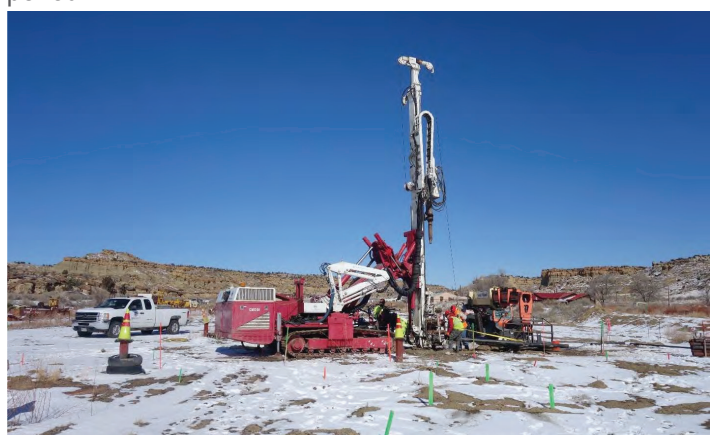
MISSION: The Mining and Minerals Division (MMD) seeks to promote the public trust by ensuring the responsible utilization, conservation, reclamation and safeguarding of land and resources affected by mining. MMD strives to make New Mexico a leader in responsible mine operation and reclamation. By statute, MMD enforces and administers laws and regulations relating to mine safety, coal surface mine reclamation and abandoned mine lands reclamation, and annually collects statistical information from operators.

PROGRAMS AND ACCOMPLISHMENTS

ABANDONED MINE LAND PROGRAM (AMLP)

AMLP works to identify and abate dangerous abandoned mine areas across the state. MMD estimates that more than 15,000 hazardous mine openings remain un-reclaimed throughout New Mexico. AMLP's primary source of funding is the U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement (OSMRE) through the Surface Mining Control and Reclamation Act and, secondarily, the U.S. Bureau of Land Management (BLM).

The AMLP completed the Allison Phase III Emergency Project in June 2018. The prime contractor for the project was Nicholson Construction of Denver, Colorado. The project in Allison, New Mexico, was developed to abate hazardous conditions in a residential community caused by open subsidence features above an abandoned underground coal mine. The scope of work for Phase III consisted of stabilizing underground coal mine workings through surface drilling and injection grouting; excavation of loose soils within and around open subsidence features followed by backfilling; reestablishing a drainage channel which passed through the project site and contributed to the growth of subsidence features; and replacement of a residential septic system adversely impacted by subsidence activity. More than 5200 cubic yards of grout were injected at the site, and the project was completed within a 6-month period.



Drilling and grouting at the Allison Phase III Emergency Project, west of Gallup

AMLP also addressed the Bethlehem Hill Adit Safeguard Project in Madrid, a hazardous condition in a town popular with tourists, where mining ceased in 1954. The three abandoned coal mine adit features addressed in this project had previously been safeguarded by the AMLP, first in the 1990s and again in 2014, due to subsidence at the mine openings. Continued subsidence at two of the features prompted a different approach to the closure method. The work encompassed reopening the adits, placing backforms in the voids, filling the voids with 12 feet to 15 feet of polyurethane foam plugs, backfilling over the plugs, and amending, seeding, and mulching the disturbed soils.



Pre-construction conditions at Bethlehem Hill in Madrid *Foam "bag bombs" were tossed into this reopened adit and punctured with a long pole to plug the sides of the backform and prevent foam drainage deeper into the adit* *Former AMLP Manager, John Kretzmann, observing the completed Bethlehem Hill Project with the contractor*

The BLM remains a strong programmatic partner with MMD, providing funding for abandoned hard rock mine reclamation project development and construction that supplements AMLP's annual OSMRE grants. This year, the BLM and AMLP partnered on the San Pedro Mine Safeguard Project – Phase II in the San Pedro Mountains near the Village of Golden, safeguarding approximately 40 abandoned mine features adjacent to a planned recreational trail.

AMLP continues to develop projects in areas of New Mexico impacted by historic mining including Gallup, San Pedro Mountains, Hansonburg, Madrid, Silver City, Cookes Peak, and Raton.

MINING ACT RECLAMATION PROGRAM (MARP)

MARP regulates, inspects and enforces on all hard rock or mineral mines on federal, state and private lands within



A safety closure at the San Pedro Phase II Project constructed over an old mine shaft collar by the BLM's contractor

New Mexico. MARP oversees the reclamation of all exploration and extraction activities conducted at all mines and mills, excluding coal, potash and aggregate mines. As of the end of 2017 (the latest data available due to operator reporting requirements), MARP has permitted approximately 362 mining and exploration projects encompassing more than \$700.4 million in financial assurance. The overall disturbed acreage under permit with MARP is approximately 26,567 acres as of December 2017. The total number of acres reclaimed since 1994, when the program started, is approximately 7,078 acres.

In 2018, reclamation and remediation continued at the permanently closed Questa Mine in Taos County, a Superfund site. Reclamation and remediation work have included demolition of the mill area, construction of a water treatment plant, removal and disposal of old tailings along the tailings pipeline corridor, and remediation of Eagle Rock Lake. Reclamation will continue for a number of years as plans are approved and then implemented to reclaim the mine waste, or “tailings,” and mine/mill areas. A number of pilot projects, or test areas, are now underway to help identify best available technologies for reclamation of these areas. Three agencies (MMD, New Mexico Environment Department and U.S. Environmental Protection Agency (EPA)) are working with Chevron Mining Inc. (CMI), to develop reclamation plans and agreements that follow the federal CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) process. As part of the settlement between the U.S. Department of Justice, EPA, and the State of New Mexico, CMI will finance \$143 million in cleanup work at the Chevron Questa Mine Superfund site. Additionally, the company will construct a pilot project to cover about 275 acres of the facility where tailings are stored, operate a water treatment plant, and install

groundwater extraction systems. CMI is also continuing the study of a pilot plot on the waste dumps at the Questa Mine; from this study will evolve best available technology approaches to reclaiming the waste rock piles at the mine, including the Goat Hill North and Capulin.

Permitting of revised closeout plans and expansions at the state's four largest copper mines in Grant County continued throughout 2018. Freeport-McMoRan Inc. (FMI) is expanding at four of its New Mexico operations. All permitting actions at the Little Rock, Tyrone, Chino and Continental mines concern expanding the mining operations. As these existing mines expand, they must comply with new regulatory standards designed to address new mining impacts. The Continental Mine ended standby status through a revision to the permit thereby allowing the mine to return to active mining status. The Continental Mine Revised Closeout Plan was approved in October 2018.



Tailings Pond Reclamation at the Tyrone Mine, Grant County, NM (2018)

During 2018, MARP staff continued the review process of two large-scale, Part 6 (New Mining Operations) permit applications – one uranium mine: Roca Honda; and one copper mine: Copper Flat. The Roca Honda project remains in the early stages of permit development; the federal government is conducting an Environmental Impact Statement (EIS) evaluation and state permits are under review. The Copper Flat Mine, a new mine application, continued to make substantial progress in development of technical aspects of their application throughout 2018, leading to MARP deeming their application “technically complete” in late 2018. In October 2018, MARP held a two-day public hearing in Truth or Consequences, New Mexico, to allow the public to comment on the application for Copper Flat.

As interest in uranium mining has tapered off, permitting actions related to earlier applications have followed suit. However, the Mt. Taylor Mine, an existing uranium mine in



Existing disturbance at the Copper Flat Mine, pit and pit lake, Sierra County, NM (2018)

Cibola County, on standby status since the inception of the Mining Act in 1993, recently applied to end standby status. In December 2017, the Mt. Taylor Mine was approved to come off standby status and restart mining and has been performing construction activities throughout 2018. Some of the local non-governmental organizations have opposed any permitting action for the Mt. Taylor Mine, other than reclamation, and appealed the MMD permit approval to the New Mexico Mining Commission in 2018, which upheld the approval. That approval is now under appeal to the New Mexico Court of Appeals.

The Picuris Pueblo requested a partial release of financial assurance for the old U.S. Hill Mica Mine and, in August 2018, MARP released a substantial amount of the financial assurance for completed reclamation work. The Pueblo has achieved a stable, well-revegetated natural landscape with a post mine land use of wildlife habitat.



Reclaimed mining disturbance at the U.S. Hill Mica Mine, Taos County, NM (2018)



Mining Act Reclamation Program Manager Holland Shephard and Clint Chisler, a reclamation soil scientist, inspecting U.S. Hill Mica Mine, Taos County, NM (2018)

MINE REGISTRATION, REPORTING AND SAFEGUARDING PROGRAM (MRRS)

MRRS provides comprehensive information to decision makers and the public on mineral resources, mine registration, reclamation and safeguarding efforts, legislation, and other MMD activities related to New Mexico's mineral extraction industry and mineral resources. Decision-makers throughout New Mexico benefit from the valuable information compiled and disseminated through this program. Mining sector information reported by more than 150 operators for calendar year 2017 is provided in the Mineral Resources section of this report.

The MMD Online web application enhances MMD's information dissemination and outreach, and provides daily updated information for New Mexico mines. Mine Registrations and Permits allows users to search by an individual parameter, or a multitude of combinations. (By statute, production information is kept confidential.) All query results are exportable to Excel spreadsheets containing as many as 30 fields of information, or to KML (Keyhole Markup Language) to display geographic data.

The other MMD Online web application, Coal Mines Query, provides more extensive coal mine information including the coal geology and quality, notices of violation, and water quality.

The screenshot shows the 'New Mexico Mining and Minerals Division' website. The main heading is 'Mine Registrations and Permits'. Below this, there is a 'General' section with input fields for Name, Operator, Status, Commodity, and Permit Number. There is also an 'Owner' section with dropdown menus for Mineral Owner and Surface Owner. At the bottom, there are 'Search' and 'Reset' buttons. A small note at the bottom of the form reads: 'To see all mine registrations and permits, leave all fields blank, then click Search and then click Export All to Excel'.

From MMD Online, the Coal Mines Query web application

Additional web applications are linked from the [GIS, Maps and Mine Data](#) page including Active Mines Web Map and Map Gallery.

Other pages within MMD's website provide information about abandoned mine safeguarding projects, and current and proposed mining operations. Projects can be tracked by status or county, and project documents are downloadable from various pages within the website.

Another public outreach component celebrates operators who perform outstanding reclamation in New Mexico. Annually, a nomination period is announced, then MMD staff select worthy recipients for the Excellence in

Reclamation Award which is presented at the New Mexico Mining Association's convention. The 2018 awardee was Miocene, LLC, for its successful reclamation of a small humate mining operation in McKinley County.



Secretary McQueen and Kris Lindgren, Mining and Product Improvement Manager for Miocene LLC

COAL MINE RECLAMATION PROGRAM (CMRP)

The Coal Program regulates, inspects and enforces on all coal mines on federal, state and private lands within New Mexico, excluding Indian lands. The program oversees more than 80,000 acres of permitted mine lands and over \$280 million in financial assurance. New Mexico has 100 percent third party surety bonds for all permitted coal mines.

Coal operators are eligible for Phase I partial bond release when the affected lands have been backfilled and regraded, and drainage control has been established in accordance with the approved reclamation plan. Lands are eligible for Phase II and Phase III release upon successful establishment of revegetation (Phase II), and after the minimum 10-year liability period and successful demonstration of the reclamation's capability to support the post mine land use (Phase III).

Two of the eight permitted coal mines were completely released from regulation having applied and been approved for Phase III Bond Release after completing all requirements under the Act and Rules: York Canyon Surface Mine, Phase III of 60 acres; and York Canyon Underground Mine, Phase III of 332 acres. Now New Mexico has only six actively permitted coal mines, three of which are in complete reclamation.

Evaluation of bond release applications continues to be a significant part of the workload for the Coal Program. All current bond release applications are posted on MMD's

website and the documents are available to the public. Applications for partial bond releases were received and inspected for Lee Ranch Mine, Phase I of 192 acres and Phase III of 318 acres; El Segundo Mine, Phase I of 321 acres, and Phase II of 275 acres; Ancho Mine for Phase III of 63 acres; and La Plata Mine for Phase III of 790 acres.

A court-ordered Environmental Impact Statement is underway for the San Juan Mine near Farmington. This resulted from a 2009 lawsuit that the federal Office of Surface Mining agreed to settle by redoing the environmental investigation; they were given three years to complete the study which is scheduled for final Decision of Record in 2019.

MMD and the U.S. Geological Survey have been studying groundwater flow pathways away from the San Juan Mine that could allow metals that may leach from the coal combustion byproducts stored in reclaimed mine pits to be directed to wells or streams. The studies were necessary to ensure that long term groundwater quality on federal lands is protected and offsite impacts are prevented. The modeling for this project was completed, and the final report published in 2018 may be found [here](#). Disposal of ash in the Juniper Pit was modified as a result of this report. This study will be used by the USGS and MMD to produce a predictive model



Successful reclamation of the Ancho Coal Mine, September 2018

MINERAL RESOURCES: CY2017

New Mexico Statute 69.26.2 states that mine operators shall submit an annual report to MMD on the previous calendar year's mine activities; and the rule in New Mexico Administrative Code 19.7.1.9 provides that calendar year reports are due by April 30 of the following year. Accordingly, this section reports on the most recently submitted mining data – for calendar year 2017.

Operators reported mineral production value of slightly more than \$1.74 billion extracted from New Mexico mining operations, virtually unchanged from 2016 (**Table 1** and **Figure 1**). Copper and potash production were down significantly, 28 and 36 percent, respectively, from 2016; however, the reported production values for both were fairly stable.

TABLE 1 New Mexico Summary of Commodity Production, Production Value, Employment, Payroll, Revenue and Ranking: 2017

Mineral	Production ¹	Production Rank ²	Production Value \$	Employment ³	Reclamation Employment	Payroll \$ ⁴	Revenue Generated \$ ⁵	
							State	Federal
Coal ⁷	13,846,050	12	\$ 413,321,043	906	93	\$ 89,241,571	\$ 11,384,432	\$ 6,029,406
Copper	276,246,058	3	\$ 774,663,009	1,592	8	\$ 101,302,143	\$ 6,264,962	\$ -
Gold ⁶	18,075	-	\$ 22,729,446	-	-	\$ -	\$ 237,098	\$ -
Industrial Minerals ⁷	2,403,373	-	\$ 163,189,215	561	8	\$ 26,984,440	\$ 179,597	\$ 330,109
Aggregates ⁸	8,913,111	-	\$ 79,284,218	873	57	\$ 22,896,681	\$ 6,270,066	\$ -
Other Metals	76,488	-	\$ 688,392	13	-	\$ 545,545	\$ 70,352	\$ -
Molybdenum	-	-	-	-	-	\$ -	\$ -	\$ -
Potash	401,627	1	\$ 283,353,622	732	15	\$ 60,212,928	\$ 3,923,246	\$ 3,847,018
Silver ⁶	338,720	-	\$ 5,780,342	-	-	\$ -	\$ 54,309	\$ -
Uranium ⁹	-	-	\$ -	8	16	\$ 848,310	\$ -	\$ -
TOTAL			\$ 1,743,009,287	4,685	197	\$ 302,031,618	\$ 28,384,062	\$ 10,206,533

Source: Operator reports submitted to the Mining and Minerals Division, unless otherwise noted

* Estimated production value; one operator withheld the information.

¹ Production is in short tons for coal, industrial minerals, aggregates, other metals, and potash; in pounds for copper; and in troy ounces for gold and silver.

² Production rank, where available, is based on 2017 production in relation to other states.

Sources: Copper and potash: Mineral Resources Program, United States Geological Survey

Coal: Energy Information Administration, United States Department of Energy

³ Employment category includes direct and contract employees.

⁴ Payroll does not include benefits.

⁵ State Land Office revenue: mineral lease royalties, rentals, bonuses; NM Taxation and Revenue Department reports severance, resource excise, and conservation tax revenues.

Federal revenue includes 50% state share of federal royalties.

Sources: State data: New Mexico Taxation and Revenue Department, New Mexico State Land Office

Federal data: Office of Natural Resources Revenue

⁶ Gold and silver are by-products of copper production. Employment/payroll for gold/silver included in copper.

⁷ Category includes brick clay, calcite, dimension stone, gypsum, humate, perlite, Portland cement, pumice, salt, silica, and zeolite; USGS ranks NM first in perlite and zeolite.

⁸ Category includes base course, caliche, clay and shale, crushed rock, flagstone, fill dirt, gravel, limestone, red dog, rip-rap, sand, scoria and topsoil.

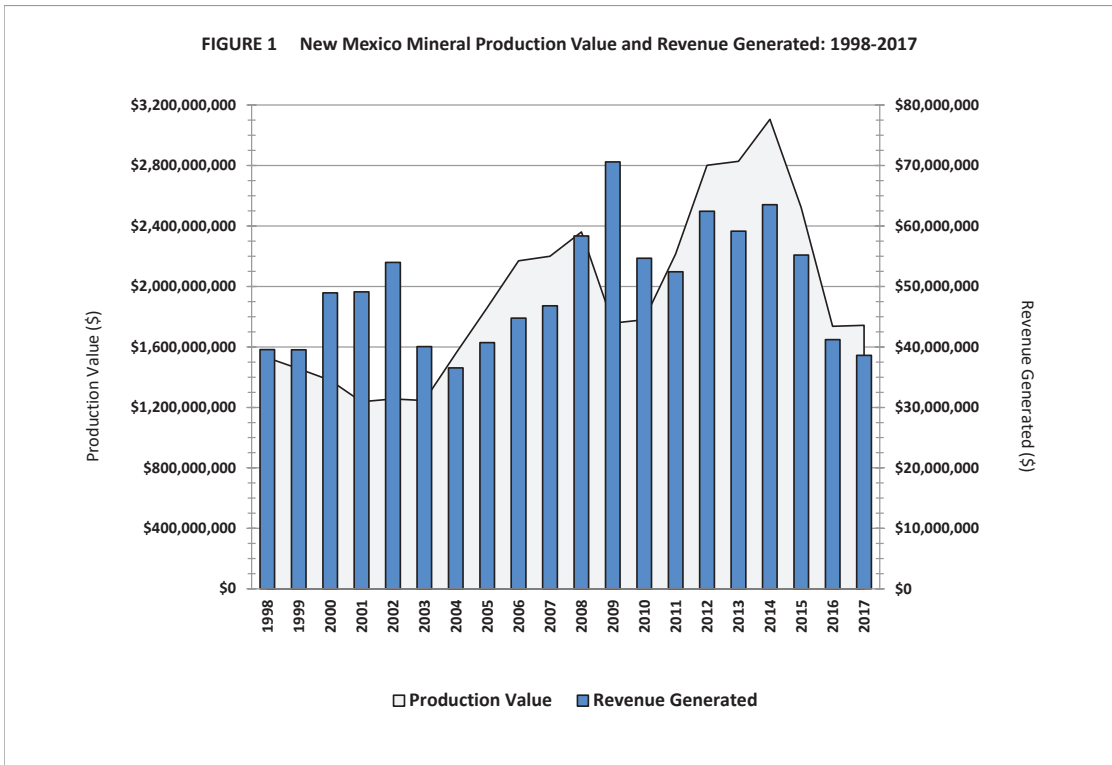
⁹ Employment/payroll numbers are for licensing/permitting at proposed uranium mines, and reclamation activities/maintenance at closed mines and mills.

FIGURE 1

New Mexico remains a leading United States mineral producer with 2017 rankings of first in potash (used primarily in fertilizer), perlite (used in building construction products, horticultural aggregate, and fillers) and zeolite (used predominantly in animal feed, odor control, and water purification applications), as reported by the U.S. Geological Survey (USGS); third in copper (USGS); and twelfth in coal, as reported by the U.S. Energy Information Administration (down from eleventh in 2016). The principal minerals, in descending order of 2017 production value, were copper, coal and potash. According to USGS, for 2017, New Mexico ranked eighteenth (up from twentieth in 2016) when ranking states by the production value of non-energy minerals, producing 1.74 percent of the total U.S. production value of non-energy minerals. USGS reports New Mexico's principal non-energy minerals, in order of value, were copper, potash,

sand and gravel for construction, crushed stone, and cement.

Total 2017 revenues generated by mineral production in New Mexico declined 6 percent from 2016 levels to \$38.6 million (Figure 1). State revenue information is provided by the Taxation and Revenue Department and the State Land Office and includes state trust land mineral lease royalties, rentals and bonuses and associated taxes. Revenues from aggregate revenues were nearly triple 2016's total due to a sharp increase of 58 new operations on state trust land in 2017. Federal revenue information is provided by the Department of Interior's Office of Natural Resources Revenue and includes a 50 percent state share of federal royalties. In any production year, these revenues only accrue if the lessee is mining and producing commodities on federal or state land.



Copper was the largest employer in New Mexico’s mining industry, followed by coal, and sand and gravel operations (Figure 2). Reported industry payroll (excluding benefits) decreased 9 percent from 2016 to just over \$302 million (Figure 3). Overall, reported employment decreased by 5 percent in 2017, from 4,943 employees to 4,687 (excluding reclamation employees). By category, compared to 2016, direct employment decreased 4 percent from 4,338 to 4,162 employees; contract employment decreased 10 percent

from 587 to 525; and reclamation employment decreased 14 percent from 230 to 197 employees (Figure 4).

Operators’ capital improvement expenditures in 2017 declined by more than half from 2016, with the largest cutbacks reported by the coal and potash industries. New Mexico mining companies reported investments of just over \$51 million in capital improvements and equipment in 2017 (Figure 3), down from \$110 million in 2016.

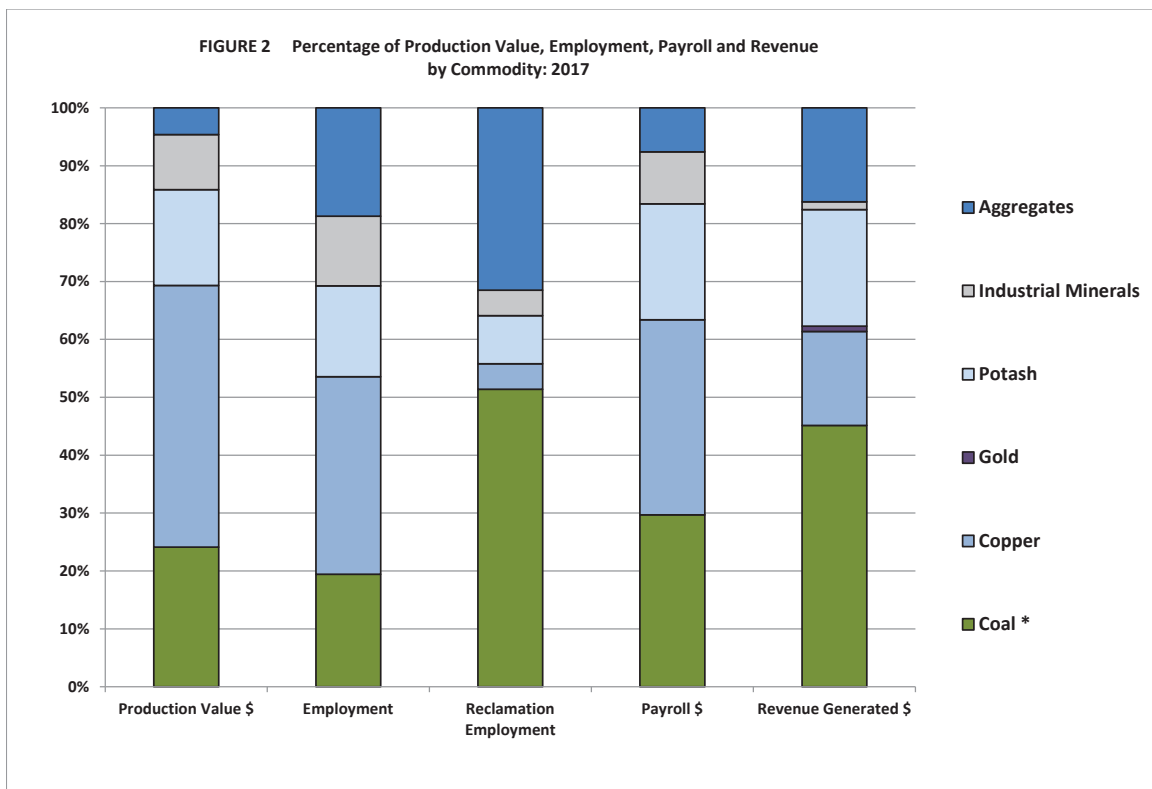


FIGURE 3 New Mexico Mineral Industry Employment, Payroll and Capital Improvements: 1998-2017

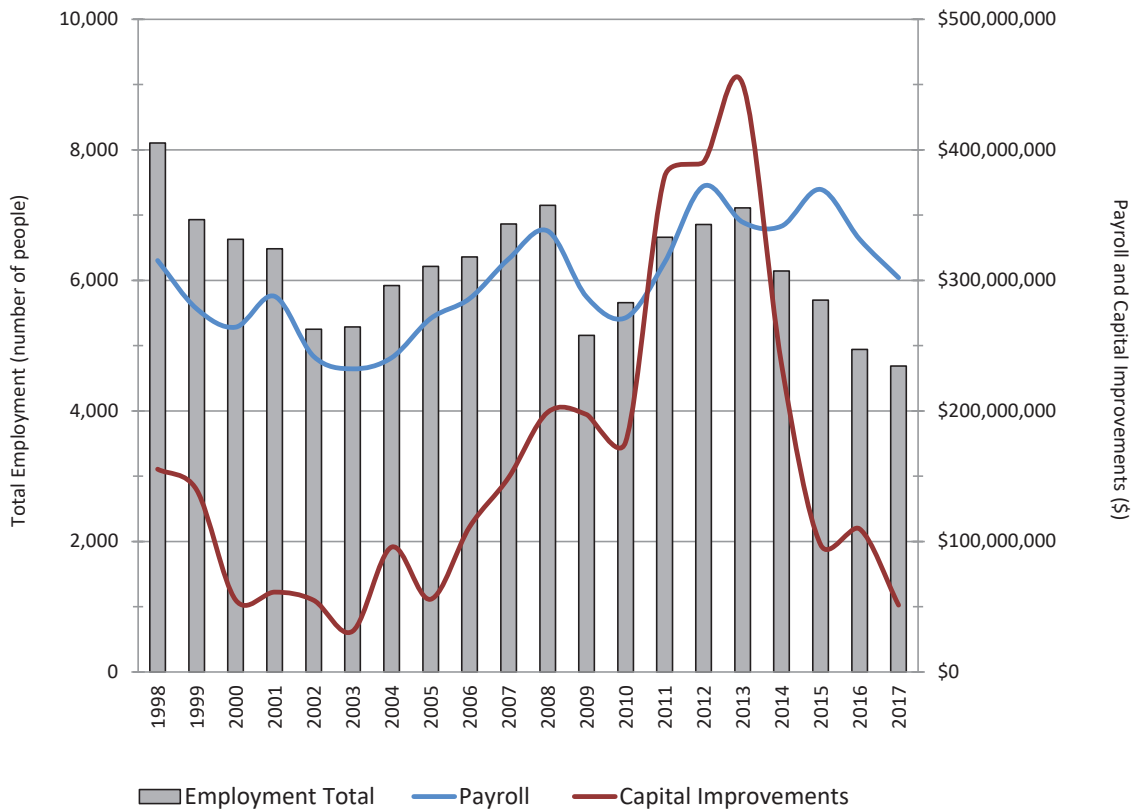
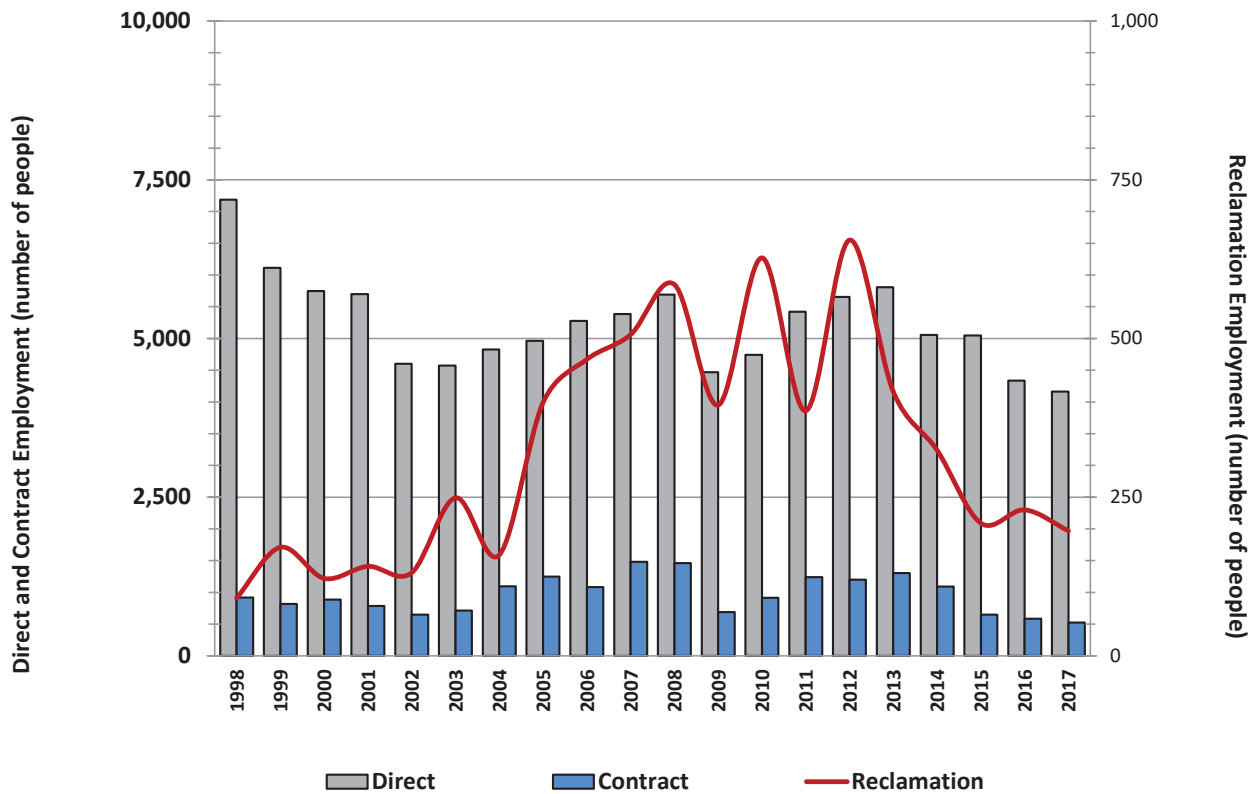
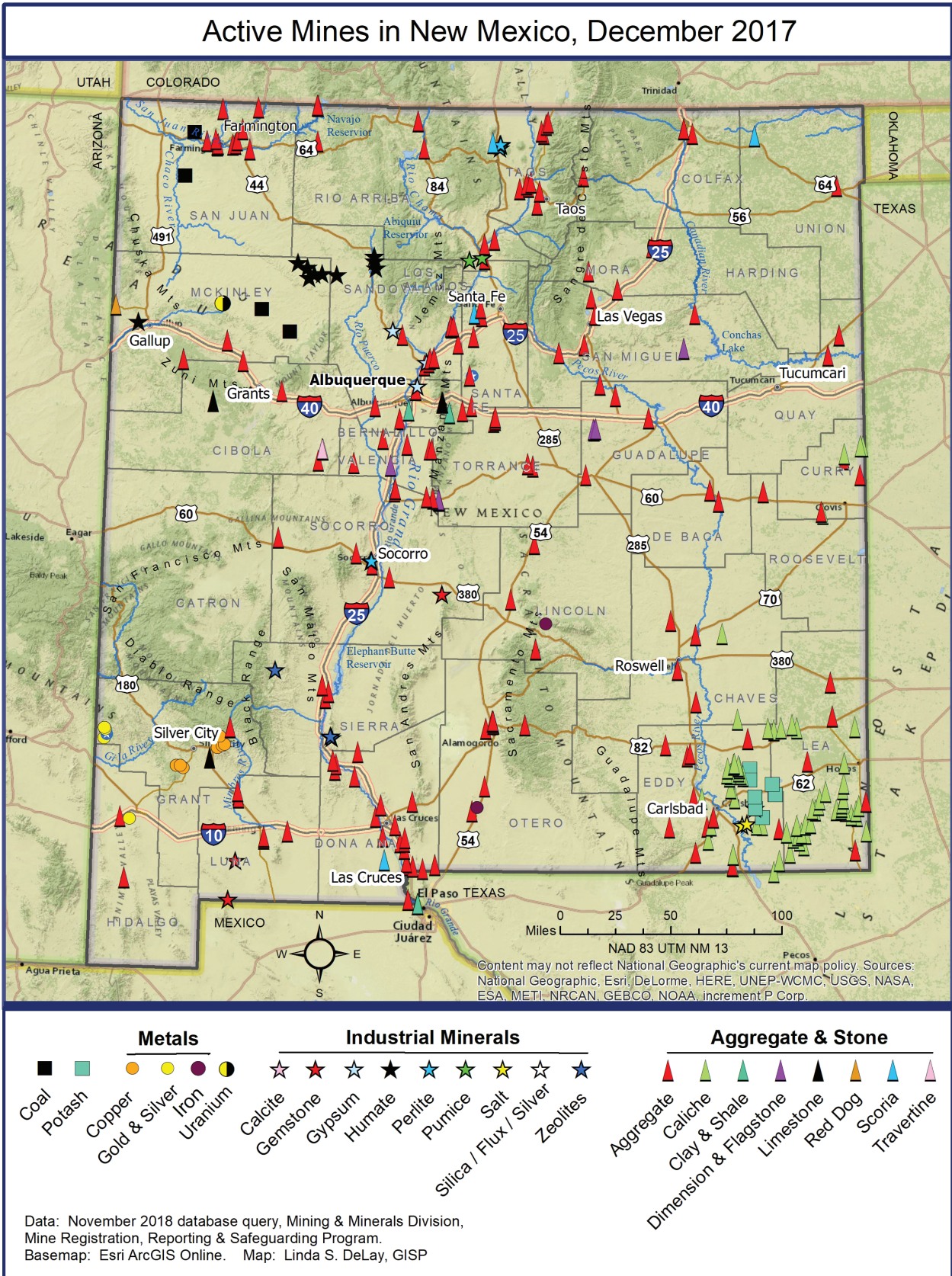


FIGURE 4 New Mexico Mineral Industry Employment: 1998-2017



Registered active mining operations in New Mexico in 2017 numbered 290: 4 coal mines; 7 potash operations (includes mines, refineries and compaction plants); 11 metal mines,

mills and SX/EW operations; 32 industrial mineral mines, mills, and smelters; and 236 stone and aggregate operations (Figure 5 – any discrepancies are due to data run date).



Figures 6 through 10 provide multi-year production amounts and sales values for coal, copper, potash, aggregate (base course, caliche, clay and shale, crushed rock, flagstone, fill dirt, gravel, limestone, red dog, rip-rap,

sand, scoria and topsoil), and industrial minerals (brick clay, calcite, dimension stone, gypsum, humate, perlite, Portland cement, pumice, salt, silica, and zeolite), respectively.

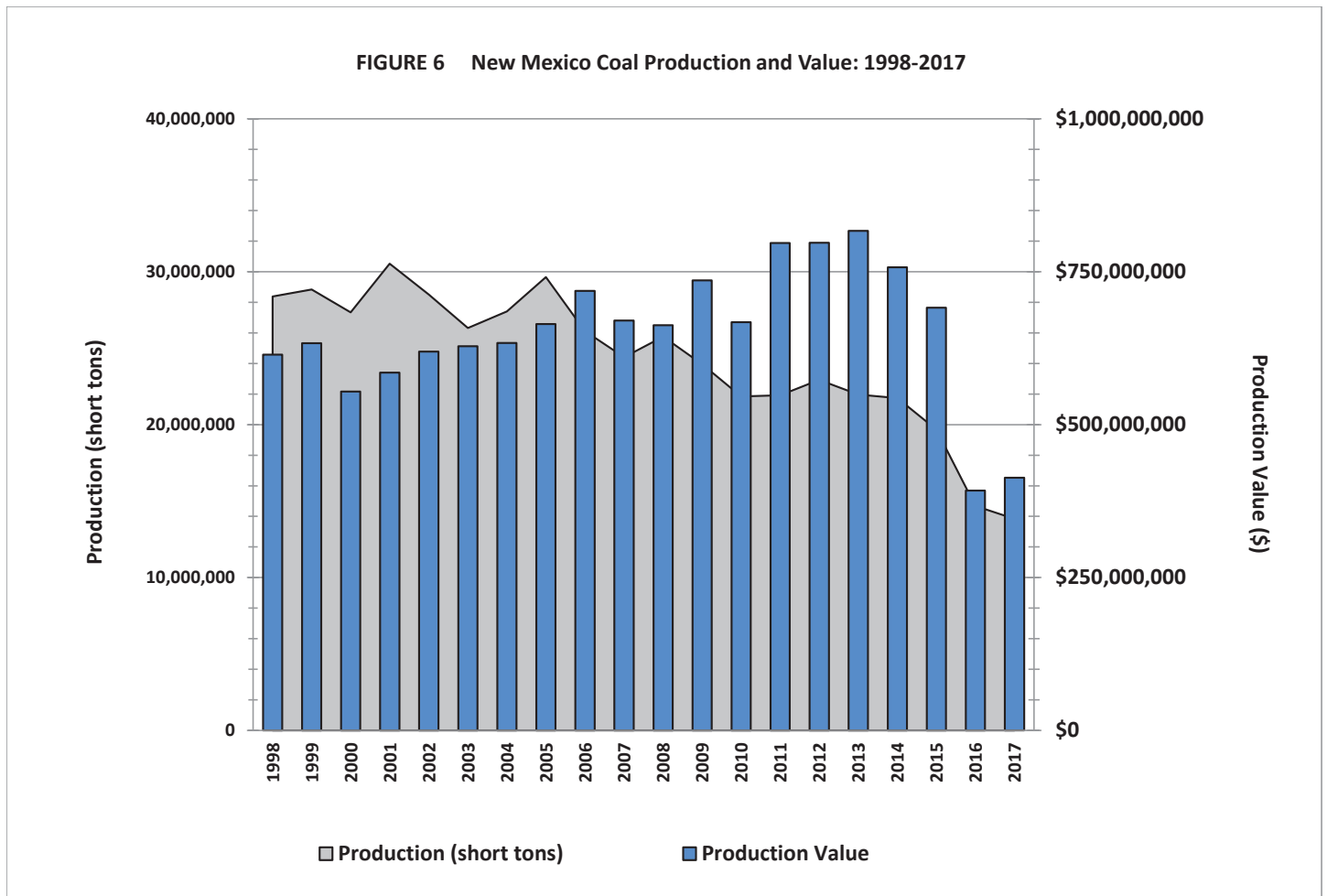


FIGURE 7 New Mexico Copper Production and Value: 1998-2017

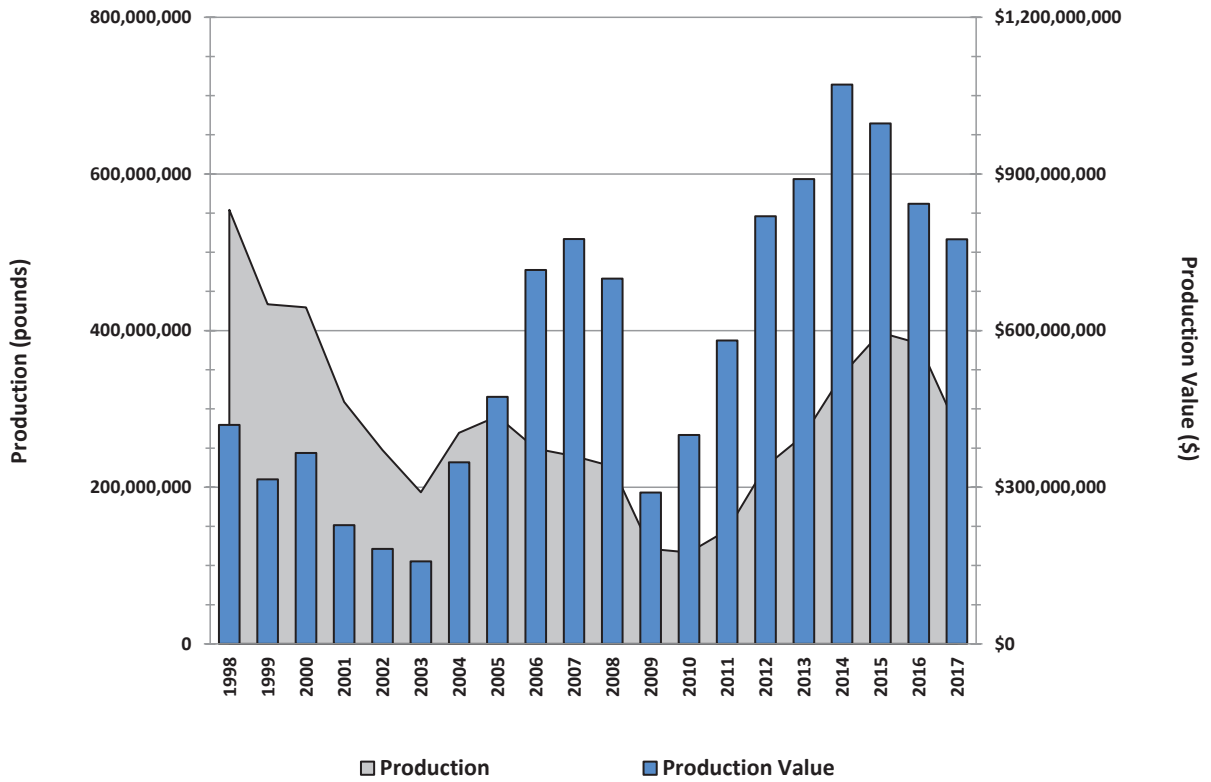


FIGURE 8 New Mexico Potash Production and Value: 1998-2017

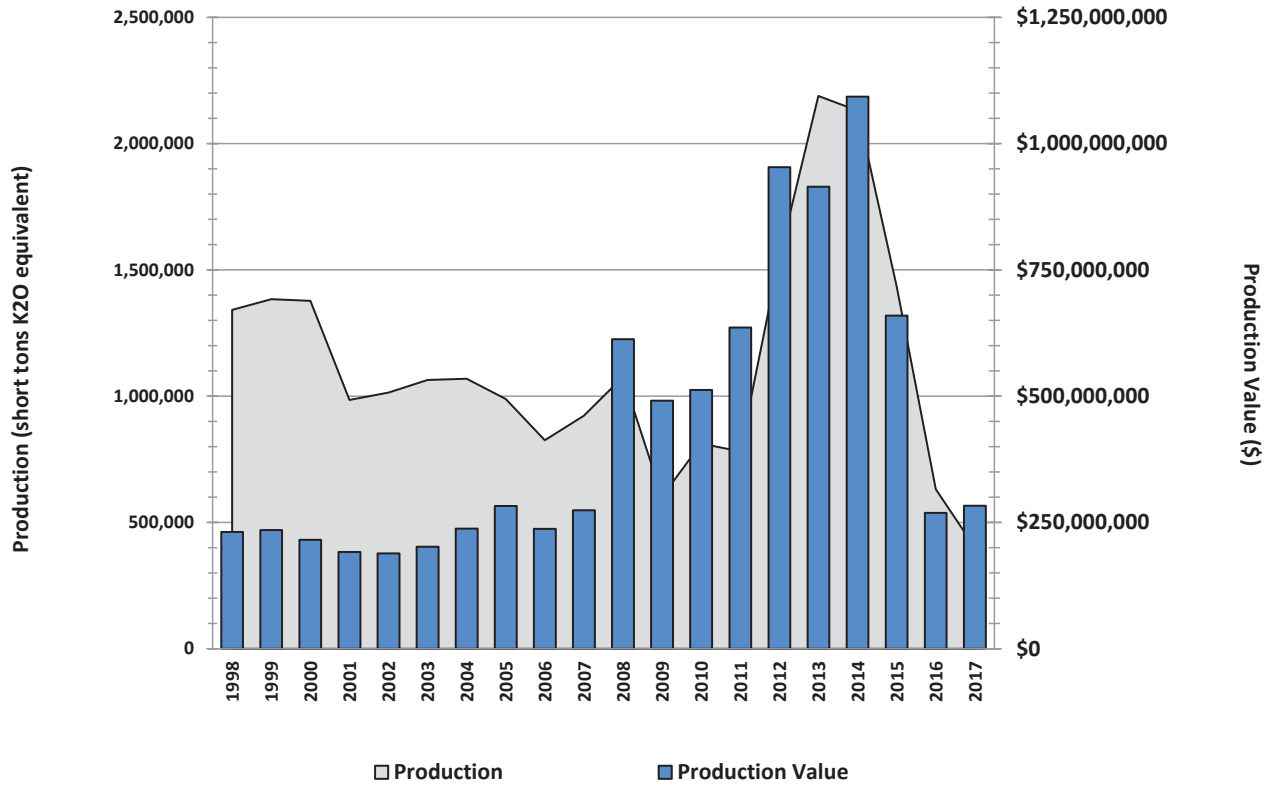


FIGURE 9 New Mexico Aggregate Production and Value: 1998-2017

Aggregate includes base course, caliche, clay and shale, crushed rock, flagstone, fill dirt, gravel, limestone, red dog, rip-rap, sand, scoria and topsoil

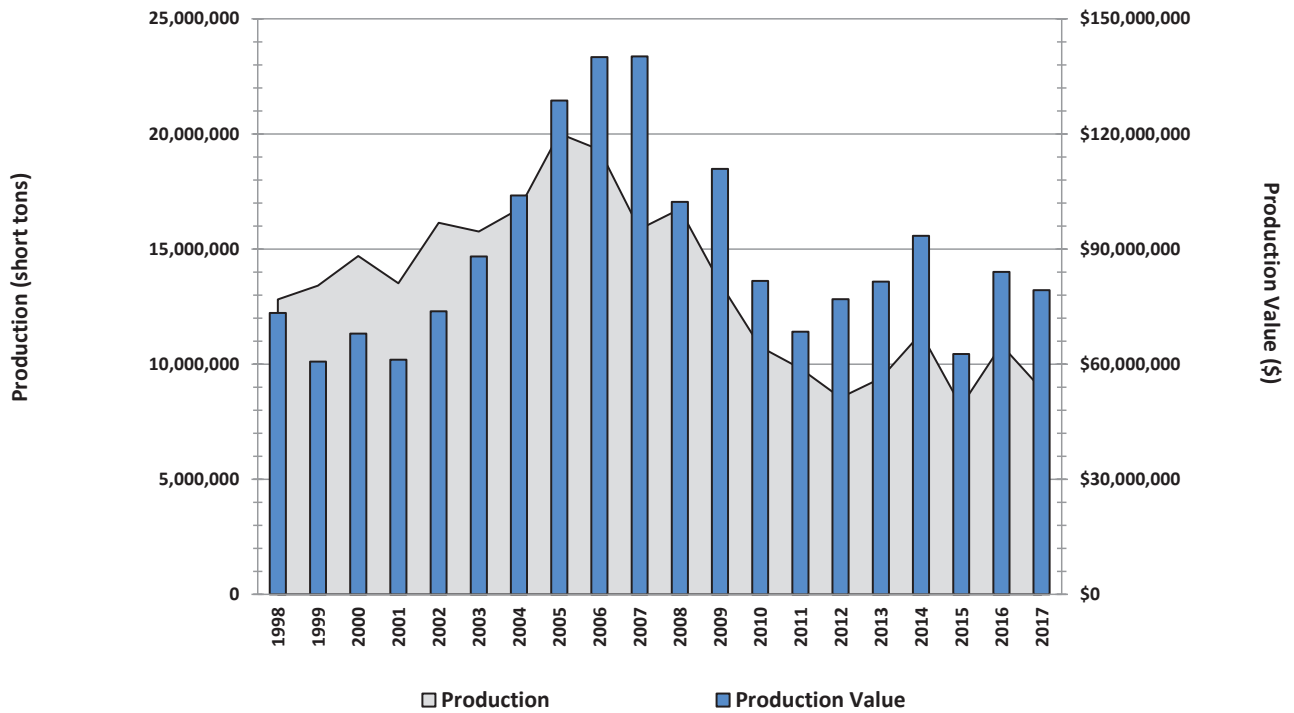
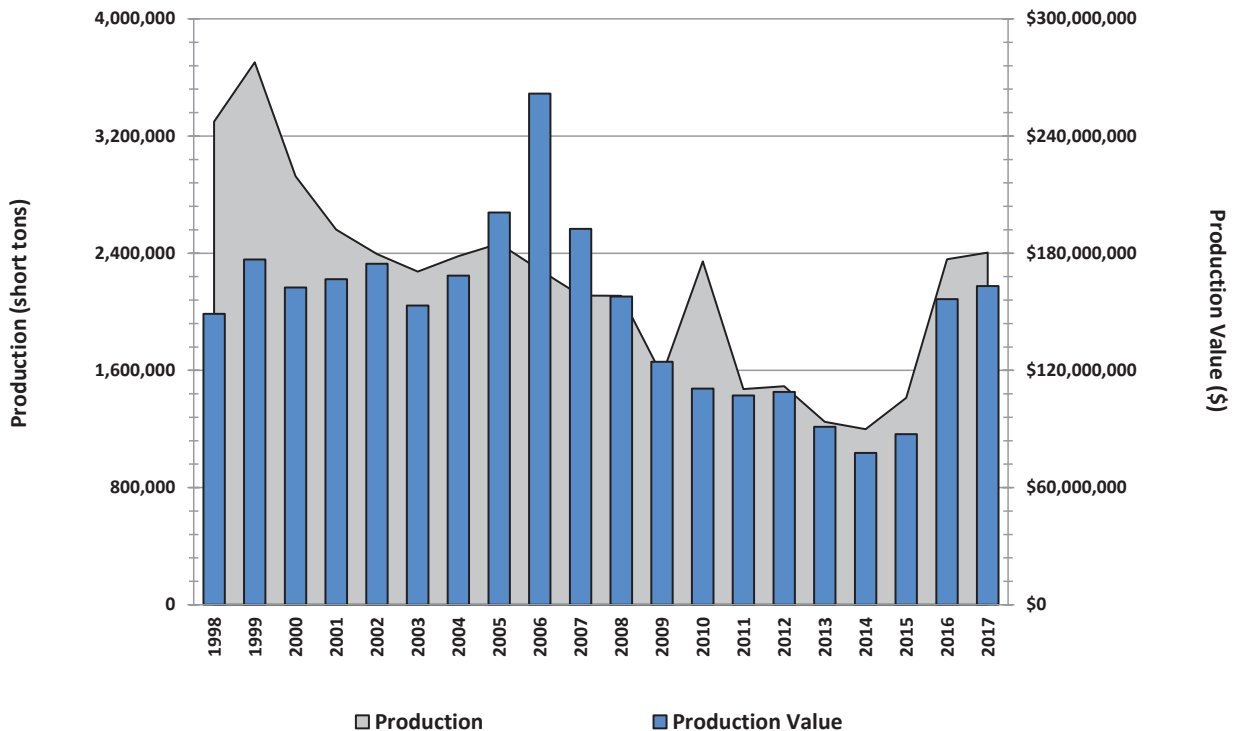


FIGURE 10 New Mexico Industrial Mineral Production and Value: 1998-2017

Industrial minerals include brick clay, calcite, dimension stone, gypsum, humate, perlite, Portland cement, pumice, salt, silica, and zeolite





Forestry Division

Donald Griego
State Forester





Forestry Division

MISSION: The New Mexico State Forestry Division (Forestry) retains lead responsibility for wildland fire management on non-federal, non-tribal, and non-municipal lands, maintaining fire suppression capacities and emphasizing public and firefighters' safety. Forestry promotes healthy, sustainable forests in New Mexico for the benefit of current and future generations.

Forestry is responsible for fire suppression on 43 million acres of non-municipal, non-federal, and non-tribal land across the state. Forestry also assists New Mexico's communities by evaluating those lands and forests most at risk to wildfire, disease, and insect infestation by developing appropriate land management and restoration programs and implementing mitigation projects.

Forestry staff provide technical assistance to private landowners for developing sustainable forests that enhance quality of life by providing tree care training, distributing low-cost seedlings, developing forest stewardship plans, and delivering insect and disease identification assistance as well as forest health project funding.

PROGRAMS

Forestry's main priorities are technical assistance to landowners, wildfire management and mitigation, and the assistance in the continued development of the forest workers industry (e.g. timber harvesting, arboriculture, construction, woody biomass, forest thinning and wildfire mitigation treatments).

Forestry regulates the harvest of commercial forest species on private forestland and conducts habitat improvement projects by studying plant species' abundance, defining ecosystems, acquiring easements and purchasing key properties.

Landowners and communities receive assistance with fire prevention and preparedness planning, forest management and improvement, urban and community forest development and management, conservation easement and tax incentive programs and numerous related outreach presentations. Forestry works to implement projects and programs with a goal of improving overall forest and watershed health statewide.

Forestry utilizes the annual operating budget and capital appropriations authorized by the New Mexico Legislature to leverage and match federal dollars to meet its mission and goals. Collaborators include the US Forest Service (USFS), Bureau of Land Management (BLM), New Mexico

Department of Game and Fish (G&F), and the State Land Office. The collaboration allows Forestry to greatly improve forest health, develop protection for valuable watersheds, assist communities at risk from wildland fires, and improve wildlife habitat.



ACCOMPLISHMENTS OVERVIEW

The 2018 fire season was one of the most active in recent history for the Forestry Division. An abnormally dry winter, coupled with ongoing moderate to extreme drought conditions, warmer temperatures and an abundance of fine fuels, leaves the state vulnerable to severe wildfire conditions year-round. New Mexico's fire season typically begins in May, but large wildfires began as early as March in 2018.

Severe wildfire conditions are becoming the norm all across the nation. This year, nearly 8 million acres burned between January 1, 2018 and October 1, 2018. Forestry mobilized hundreds of firefighters and firefighting equipment to multiple western states in a response to their requests for assistance with wildfire management.

Forestry continued to work with local, state, federal and tribal partners on a wide range of projects and programs to address not only wildfire, but the state's overall forest and watershed health. Forestry's work with partner agencies, non-governmental organizations, and private landowners resulted in the treatment of thousands of acres of private, state, federal and tribal land during the calendar year.

FIRE MANAGEMENT

During FY18, a total of 562 fires burned approximately 242,385 acres of state and private lands. This resulted in a 102 percent increase in wildfire activity for the Forestry Division compared to the prior fiscal year (FY17). Of these wildfires, approximately 43 percent were human-caused with equipment use and burning debris being the leading contributor. A total of 971 residences were threatened with 9 private homes lost.

The Ute Park Fire was one of the most significant incidents for Forestry in 2018. The wildfire burned an estimated 36,740 acres of state and private land in Colfax County. This fire included a significant section of private land on the 219 square mile Philmont Scout Ranch in the Sangre de Cristo mountains. The Ute Park Fire forced the evacuation of Philmont Scout Ranch and the communities of Ute Park and Cimarron. Forestry continues to work closely with numerous state, local and federal stakeholders on restoration and post-fire recovery from this fire, and others around the state.



Ute Park Fire 2018

FIRE PLANNING TASK FORCE

The New Mexico Fire Planning Task Force (Task Force) is charged with identifying areas of the state most vulnerable to wildfires. The Task Force also approves Community Wildfire Protection Plans (CWPPs), develops model ordinances and standards for building codes, and considers the benefits of thinning, prescribed burns, and defensible space to reduce the threat of wildfires to communities. Currently, each CWPP must be updated within five years of its adoption by the Task Force.

CWPP participants receive an updated guideline notification from the Task Force for assistance with their CWPP update efforts. In 2018, the Task Force reviewed and approved three updated CWPPs. Additionally, 32 communities were added to the list of those at risk of wildfire, making a total of 778 such communities identified in 2018.



Lt. Governor John Sanchez with Smokey Bear for Wildfire Awareness Week, Open Space Visitors Center, Albuquerque

FIRE PREVENTION PROGRAMS

As the threat from wildfires increases across Southwest and the rest of the western United States, the need for educating residents and visitors to New Mexico on wildfire prevention is more important than ever.

Forestry helps facilitate various educational programs including Ready, Set, Go! (RSG), Fire Adapted Communities (FAC), and Firewise USA™, the flagship of these educational endeavors. Firewise USA™ is a mitigation recognition program based and operated within a community focusing on residents, businesses, and elected bodies working together to address the issue of wildfire on a building and landscape level. In 2018, a total of 25 communities remain dedicated to the Firewise USA™ program. Numerous other communities are in the process of applying.

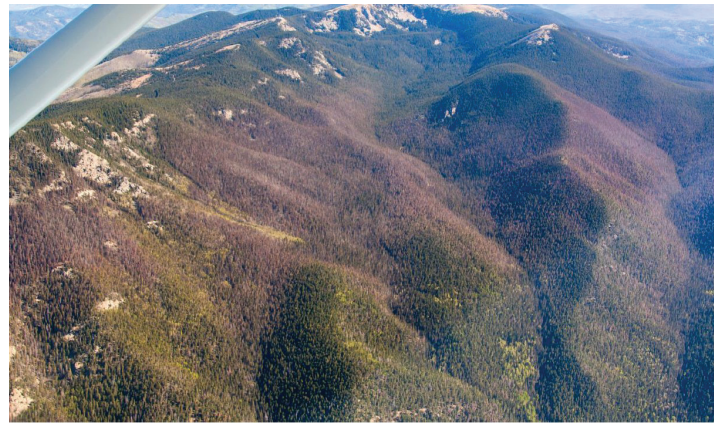
Additional wildfire prevention efforts include the Living with Fire Guide for the Homeowner, New Mexico. This publication has been updated for 2018 incorporating the Fire Adapted Community Concept in partnership with the University of Nevada Extension, Bureau of Land Management, U.S. Forest Service, Department of Homeland Security, Bureau of Indian Affairs, and the National Parks Service.

CONSERVATION SEEDLING PROGRAM

Each year, tens of thousands of tree and shrub seedlings are planted on private and public lands across New Mexico through Forestry's Conservation Seedling Program. The program provides economically priced tree and shrub species to New Mexican landowners for: the establishment of windbreaks; erosion control, reforestations, crop and livestock protection, energy cost savings, and to improve or create wildlife habitat.



Conservation Seedling Program, Bob Gerding Natural Resources Building, Expo New Mexico, State Fairgrounds



Janet's looper is a rarely encountered, native insect in New Mexico that has reached outbreak levels in areas of the Santa Fe National Forest. Working in cooperation with the US Forest Service, the NM Forest Health Specialist has been monitoring the outbreak in and around the Santa Fe Watershed.

In FY18, the Conservation Seedling Program distributed 68,292 seedlings through the bi-annual sales program, during the New Mexico State Fair, and during educational events. A total of 4,575 of those seedlings were sold to Soil and Water Conservation Districts, local municipalities, and tribes; and 443 seedlings were sold to the Hermits Peak Watershed Alliance as part of the Gallinas River Restoration Project west of Las Vegas, New Mexico.

COOPERATIVE FOREST HEALTH PROGRAM

The Cooperative Forest Health Program (CFHP) works within Forestry to deliver technical and monetary assistance to landowners and managers of forested lands throughout New Mexico via

education programs, trainings and field visits, and the Forest Health Initiative Program. CFHP's goal is to increase forest resiliency to harmful insects and diseases by increasing knowledge and improving management practices of state and private forests. The program provides federal dollars from the US Forest Service for administering cost-share funds to private landowners in the state to minimize the number of bark beetle-susceptible forest stands.

In FY18, the Forest Health Specialist aerially surveyed 2 million acres of tribal, state, and federal forest lands for insect and disease issues in cooperation with the USFS,



Forest Health Specialist John Formby (right) worked collaboratively with the Rocky Mountain Youth Corps and the US Forest Service to assess the impact of two native defoliators, Janet's looper and Douglas-fir tussock moth, currently in outbreak status in New Mexico.

Forest Health Protection New Mexico Zone. CFHP also provided technical assistance to private landowners, land managers, and Forestry staff by fielding 39 assistance requests, conducting 35 site visits, and identifying 5 insect and pathogen samples (more details in technical assistance summary chart).

ENDANGERED PLANT PROGRAM

Forestry's Endangered Plant Program (EPP) gathers information to develop conservation measures necessary for the survival of threatened and endangered species. EPP also promotes the conservation of listed endangered plant species through research, inventorying and monitoring, law enforcement, habitat maintenance, education and propagation. The EPP is primarily federally funded through Section 6 of the Endangered Species Act for endangered plant research and management.

The New Mexico Rare Plant Conservation Strategy (RPCS), developed in 2017 by the EPP and its partners, focuses on 235 rare and endangered plant species in the state, including 109 species that only occur in New Mexico and nowhere else in the world.

The overall goal of the RPCS is to protect and conserve New Mexico's rare and endangered plant species and their habitats through collaborative partnerships between stakeholders and interested parties to aid and improve the conservation and management of rare plant species and discourage federal listing. In FY18, recurring endangered plant projects included population trend monitoring and status evaluations of the Santa Fe cholla, Pecos sunflower, Wright's marsh thistle, Lee's pincushion cactus, Mancos milkvetch, Mesa Verde cactus, Knowlton's cactus, and Holy Ghost Ipomopsis. In addition, EPP evaluated the status of



Mogollon death camas recovering in burned area of the Gila National Forest

Mogollon death camas and heartleaf groundsel 6 years following the Whitewater-Baldy wildfire in the Gila National Forest, Catron County, and the swale paintbrush in Hidalgo County.

FOREST LEGACY PROGRAM

The Forest Legacy Program (FLP) is a federal partnership program that supports states' efforts to protect privately owned, environmentally sensitive forest lands. FLP

is an entirely voluntary program that helps New Mexico develop and carry out its forest conservation plans. It encourages and supports the acquisition of conservation easements that restrict development, require sustainable forestry practices and protect other values in perpetuity. Landowners who own a minimum of 40 acres with at least 75 percent forested land can receive up to 75 percent of the appraised value with a 25 percent donation.



Cibola National Forest, State Forestry Cimarron District

FOREST & WATERSHED HEALTH OFFICE

The Division's Forest and Watershed Health Office (FWHO) concentrated on three key work areas in 2018: (1) Supporting collaborations that expand the State's capacity to get more forestry done on the ground; (2) implementing the National Cohesive Wildland Fire Management Strategy in New Mexico; and (3) using science, policy and legislation to facilitate the Forestry Division mission. FWHO also initiated state engagement in USDA's new Shared Stewardship Strategy.

Since the establishment of the Watershed Restoration Initiative (WRI) in 2014, Forestry has been allocated \$13.3 million dollars in state funding for watershed restoration on public lands in New Mexico. The WRI funds have been matched with an additional \$9.4 million in federal Pittman-Robertson funds made available to Forestry

through the New Mexico Department of Game and Fish and have also leveraged federal funds from other agencies. The combined monies have funded 65 separate projects, targeting 32,388 acres of forest and woodland. Forestry has overseen treatments in 19 high-priority watersheds across the state. Work has been completed on 24,900 acres, or 91 percent of targeted acres to date.

Forestry's mission is to conserve, protect and enhance New Mexico's forests and watersheds. Division staff forge strong partnerships and collaborations between federal, state, tribal, and local governments, non-governmental organizations and private entities. Partnerships focus on important benefits that forestlands provide, particularly provision of clean and abundant water. One such partnership, the Rio Grande Water Fund, has gained wide recognition for being innovative and effective in its approach to protecting forested watersheds. Partners leverage resources to increase the pace and scale of treatments, enhance local capacity to do work, and attract investments by downstream water users to protect upstream water sources.

Other partnerships focus on the three tenets of the National Cohesive Wildland Fire Management Strategy: creating resilient landscapes, fire-adapted communities, and safe and effective wildfire response. The Forestry Division provides technical, organizational and financial support to collaborative groups that are using the Cohesive Strategy framework to accomplish those goals. Examples include the Greater Santa Fe Fireshed Coalition and the 2-3-2 Cohesive Strategy Partnership in the north-central part of the state.

The Greater Santa Fe Fireshed Coalition (GSFFC) is a collaborative of stakeholder groups focused on 107,000 acres of forestland bordering New Mexico's capital city. GSFFC's member organizations coordinate planning, funding and implementation of on-the-ground projects in the city's municipal watershed and other areas with high ecological, economic and cultural value. The Division continued funding public land projects in Hyde Memorial State Park, Aztec Springs and La Cueva, and oversaw federally-funded treatments on nearby private lands. Coalition partners garnered public support through an ambitious outreach program and helped get two National Environmental Policy Act analyses completed in 2018 so progress can continue.



The 2-3-2 Partnership is comprised of collaborative groups in the San Juan Mountains of northern New Mexico and southern Colorado who formed to pool their resources to address issues that are best tackled at the landscape scale.

The partners share a common desire to achieve healthier, more resilient forest ecosystems in this large and highly productive landscape. In 2018, approximately 10,000 acres had beneficial fire applied and 2,000 acres were thinned with mechanical treatments. Close to \$2.5 million additional dollars were granted for new projects under the 2-3-2 umbrella in 2018. The partnership hosted a Fall 2018 VIP tour demonstrating some of their successes in the region.

Division staff also assist Community Wildfire Protection Plan Core Teams and Regional Conservation Partnership Program efforts in all corners of the state, promoting use of their collective platforms for cross-boundary planning and actions.

FWHO facilitates collaboration at the statewide level through the Forest and Watershed Management Coordinating Group. The Coordinating Group, whose members represent agencies and organizations involved in natural resource management, meets quarterly to find opportunities and mitigate barriers to improving conditions in New Mexico's watersheds. Members lend their expertise to help the Division with actions that require cross-jurisdictional coordination such as identifying joint priority landscapes and updating the state Forest Action Plan.



The Forest and Watershed Health Office analyzes legislation and policies that relate to the Division's mission and makes recommendations for language or actions that will help protect and restore New Mexico's natural resources. FWHO represents State Forestry organizations on the Western Regional Cohesive Strategy Committee and participates in other regional efforts that promote policy and actions that align with the goals and objectives in New Mexico's Forest Action Plan.

FWHO promotes the dissemination and use of best science in forest and fire management in New Mexico through engagement with such federal and regional partners as the Joint Fire Science Program and the Southwest Ecological Restoration Institutes. The Division and the New Mexico Forest and Watershed Restoration Institute have an Agreement enabling them to jointly conduct work that improves forest management on state and private lands.

Completed in 2018, the New Mexico Opportunity Map and Vegetation Treatment Database project is an online resource that collects, tracks and spatially depicts project data for users to create maps and download reports for their particular area of interest.

FWHO manages a Cooperative Agreement between the Forestry Division and the Natural Resources Conservation Service. Latest available statistics (through the end of Federal FY17) show that the amount of forested land in New Mexico benefiting from this arrangement has grown significantly in the decade since the Division entered into this partnership, whether measured in terms of acres treated, contracts signed, or dollars committed to improve forest management on the ground. Of note are the increases in number of acres treated (84 percent) and dollars obligated for forestry practices (61 percent) in 2018 as compared to 2017. Increases are likely due to implementation of projects funded through NRCS' Resource Conservation Partnership Program (RCP) projects in New Mexico.

LAND CONSERVATION TAX INCENTIVE ACT TAX CREDIT PROGRAM

Forestry oversees the Land Conservation Tax Credit Program. Charitable donations of land, or an interest in land (conservation easement) for conservation purposes to a public or private conservation agency, are eligible for a state tax credit. Land conservation tax credits must be approved by the department's Cabinet Secretary in consultation with the Natural Lands Protection Committee.

A taxpayer has a maximum of 20 years to fully use the tax credit following the taxable year in which the donation was made, or the tax credit may be transferred (sold) to another taxpayer through a tax credit broker in minimum increments of \$10,000. In FY18, ten applicants applied for tax credits ranging from \$16,000 to \$250,000.

RESOURCE MANAGEMENT

Forestry works with private landowners as well as state and federal agencies to protect land from future development that could fragment the landscape. Through various incentive programs, landowners can place large tracts of land into conservation easements that allow them to retain ownership.

Forestry prepared 13 new forest stewardship plans in FY18, for a total of 12,253 acres on private forested land in New Mexico, bringing the total acres in the state covered by stewardship plans to 537,286. Additionally, 605 landowners received technical assistance on their private forest lands with another 837 landowners participating in educational programs related to forest stewardship, fire prevention and forest management.



Inmate Work Camp, Stateline Fire, Colfax County

INMATE WORK CAMP PROGRAM

Forestry's Inmate Work Camp Program (IWC) was established in 1997 to conduct forest health and urban interface projects on public land in the state. The crews are trained as wildland firefighters and function as an efficient, cost-effective resource for New Mexico.

In cooperation with the New Mexico Corrections Department, each inmate crew comprises 10 to 12 minimum security inmates from the Level 1 Minimum Security Prison Facility in Los Lunas. The IWC program has the capability and equipment to support 6 crews, but due to the lack of inmates at the Level 1 facility the program currently only supports three crews. The inmate crews are transported

from the Level 1 facility to project areas around the state, including critical wildfire suppression assignments. The inmates are monitored by Forestry Crew Supervisors and a Correctional Officer.

In FY18, the IWC program provided crews for 16 projects for nine different local, state and federal cooperators, performing 3,096 person-days of work and 26,316 person-hours of work. Crews were assigned to 21 wildland fires and two prescribed fires, performing 220 crew-days of fire suppression in New Mexico.

RETURNING HEROES WILDLAND FIREFIGHTER PROGRAM

In FY18, the Returning Heroes Wildland Firefighter Program (RHP) provided crews and wildland engines to fight a total of 42 wildfires, spending more than 46,000 person-hours, and a total of 227 days in New Mexico, Arizona, Idaho, Oklahoma, Oregon, Washington and Wyoming.

RHP provides essential wildland firefighting training courses at its headquarters in Santa Fe for seasonal and permanent firefighters. This year, the program trained 261 students from local, state and federal agencies. Out of those students, 47 were military veterans.

This year, RHP hired a total of 52 seasonal firefighters for wildfire assignments, with 11 of those firefighters being military veterans. Crews also worked on several watershed and forest projects, including an ongoing hazardous fuel reduction project with the New Mexico State Parks Division at Hyde Memorial State Park in Santa Fe. Additional forest and watershed restoration treatment projects are planned before year end.

URBAN AND COMMUNITY FORESTRY PROGRAM

The Urban and Community Forestry Program (U&CF) works to empower New Mexico communities to develop and sustain healthy community forests for the benefit of current and future citizens of the state. Community forests in New Mexico have significant, positive impacts on human and environmental health, community tourism and economics, but are challenged by drought, lack of management and planning. The U&CF program is guided by the Urban and Community Forestry Strategic Plan under the advisement of the New Mexico Urban Forest Council.

In FY18, U&CF strengthened the number of communities managing or developing programs to plant, protect, and maintain their urban and community trees and forests.



The Urban and Community Forestry Program joins forces with the New Mexico National Guard to plant the State Tree, a Piñon pine, at the NMNG headquarters in Santa Fe. Major General Kenneth Nava, EMNRD Cabinet Secretary Ken McQueen, and State Forester Donald Griego are present.

In New Mexico, 66 percent of the population lives in a community either fully managing an urban community forest program or developing one. This includes instituting a tree ordinance, developing a local advocacy/advisory board, adding professional staff, and creating a community forest management plan. Throughout the state, 76 communities have active local advocacy/advisory organizations such as tree boards, commissions, or non-profit organizations that are formalized to advise and advocate for planting, protection and maintenance of urban and community trees and forests. Ten communities were recognized for the national Tree City USA program in FY18.

The U&CF program provided additional support through Tree New Mexico, a non-profit community forest organization, which helped to launch the Albuquerque NeighborWoods program, a street tree-planting program that engages community members through education and outreach.

U&CF was awarded nearly \$300,000 in 2016 under the highly competitive USFS Western Landscape Scale Restoration grant to help improve the condition of community forests in historic areas throughout the state. In FY18, the first statewide inventory of urban forests was conducted in all of New Mexico's 33 county seats using these funds. The empirical data will inform both long and short-term community forest management planning to minimize tree risk while maximizing their economic, social, and environmental benefits.

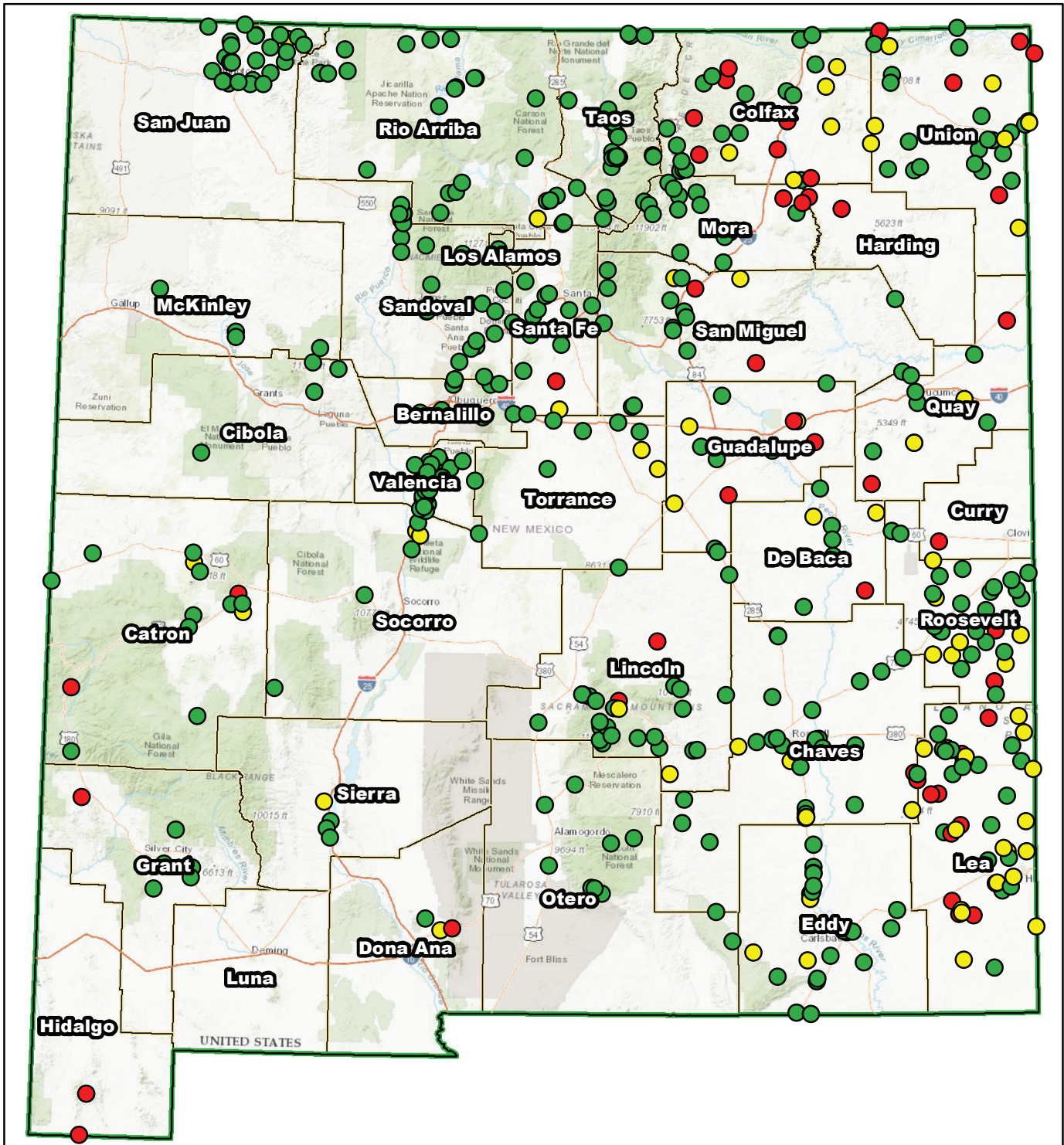
The New Mexico Forest ReLeaf program, established by the New Mexico ReLeaf Act, has provided funding for communities around the state to plant trees for more than 25 years. This program often provides the initial boost that introduces communities to the larger Urban and Community Forestry Program. Currently, the program is funded entirely by private donations that have waned over time, causing the program to be put on hold for the past two years.

Outreach on benefits and care of the urban forest is an ongoing, important effort in the Urban and Community Forest Program. Statewide, more than 2,000 volunteer hours were logged in support of urban forestry initiatives in 2018.



New Mexico Statistical Fires 2018

Fires on State & Private Lands
 July 1, 2017 - June 30, 2018



Statistical Fires for State FY 2018

Number of Fires: 527

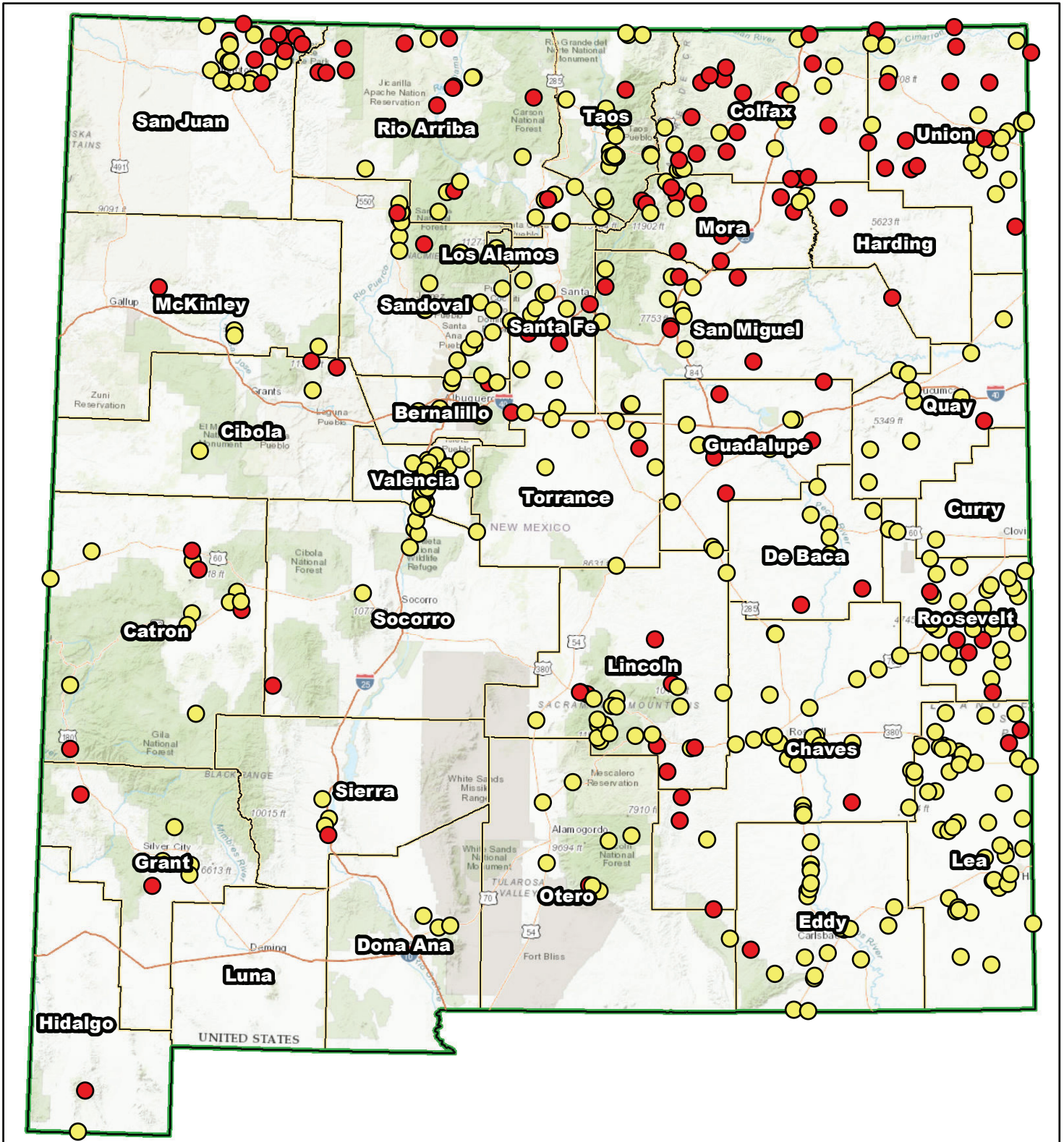
- 0 - 25 Acres (412)
- 26 - 250 Acres (68)
- 251 - 62000 Acres (47)

Acres Burned: 269,513



New Mexico Statistical Fires 2018

Fires on State & Private Lands
 July 1, 2017 - June 30, 2018

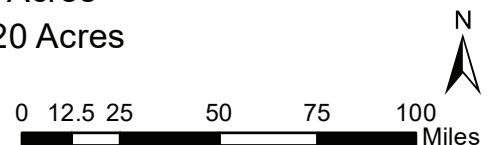


Fire Cause Count

- Human (406)
- Lightning (121)

Human Caused: 148,993 Acres

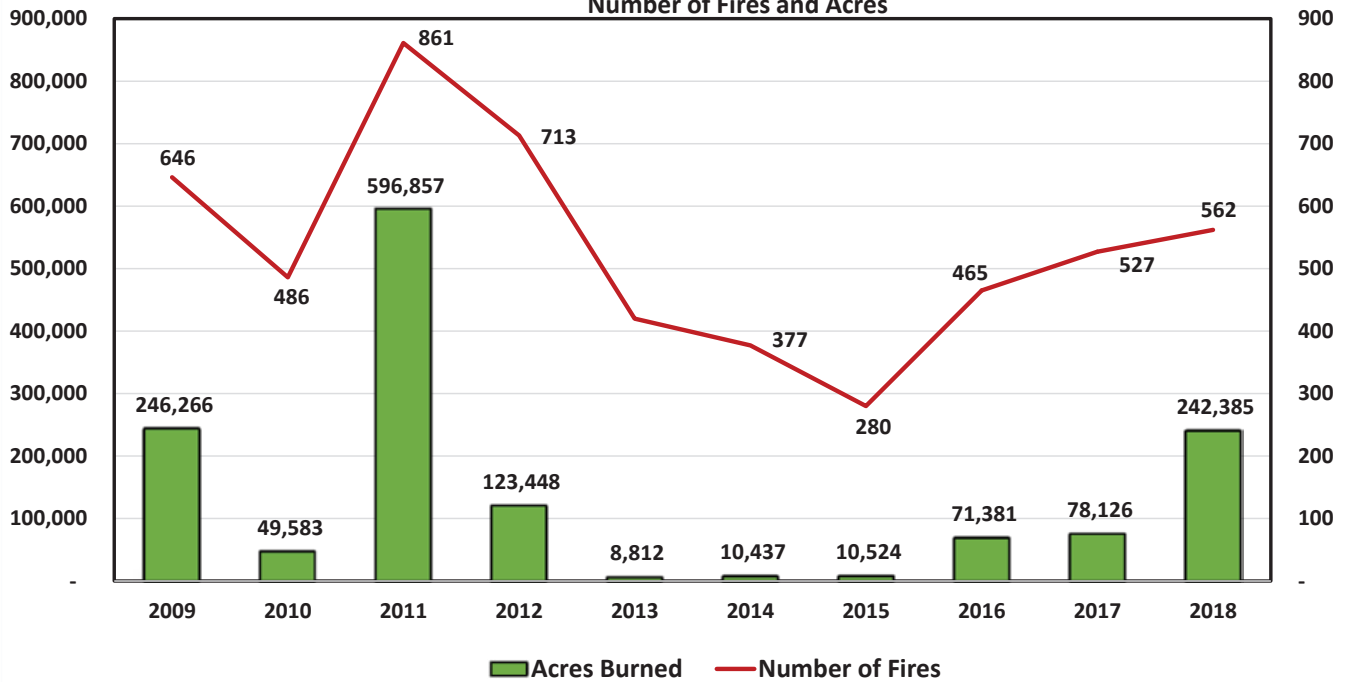
Lightning Caused: 120,520 Acres





**10 Year Statistical Data
Private and State Lands in New Mexico
Fiscal Years 2009-2018**

Number of Fires and Acres



COOPERATIVE FOREST HEALTH PROGRAM

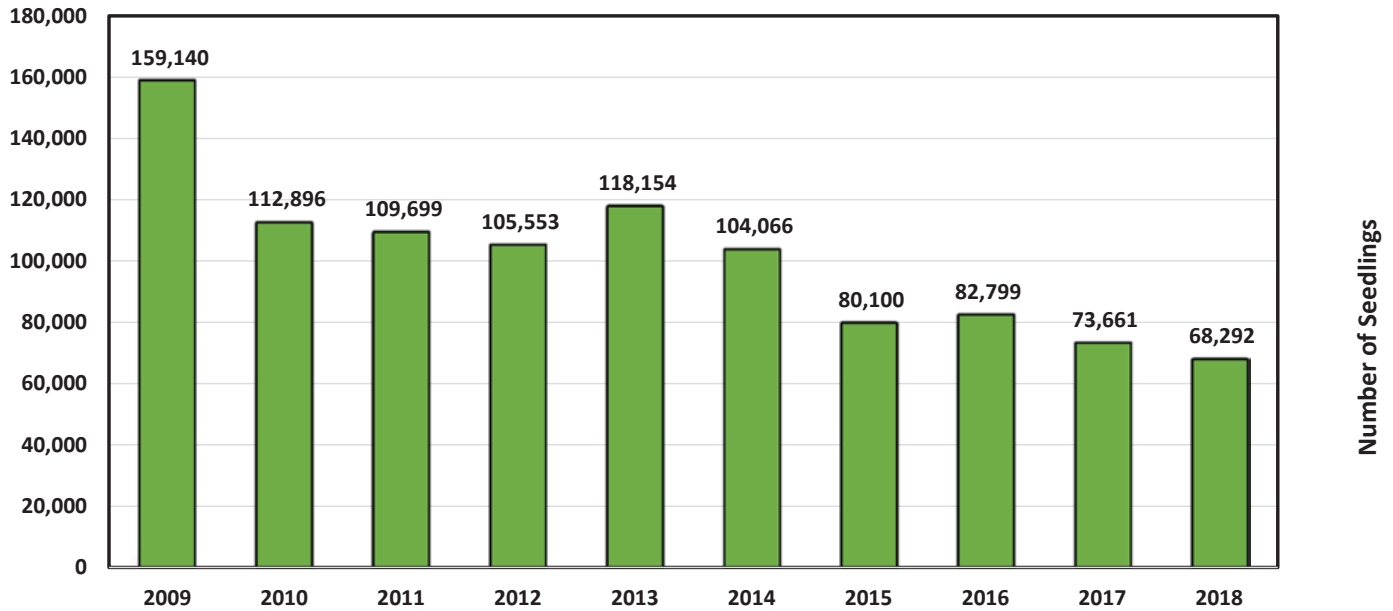
Summary of Technical Assistance given in FY18

SV = site visit

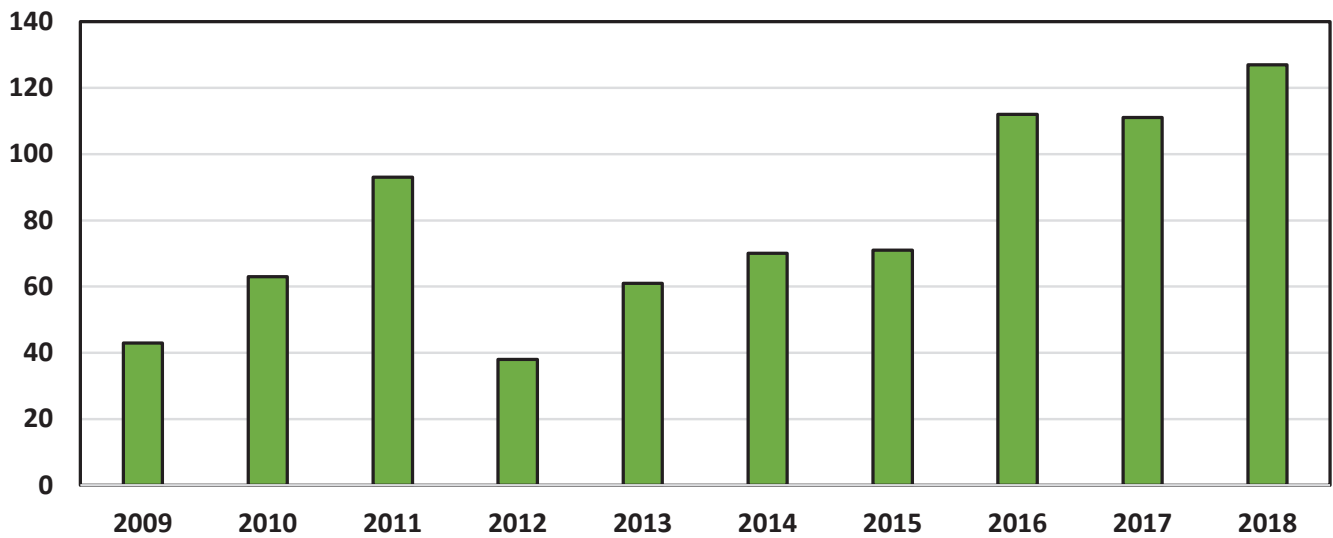
Issue	#	%	SV (#)	Confirmed damage agent(s)
request (info)	12	31	9	bark beetle management info, FHI funding info
request (identification)	5	13	4	field ants, conk on wisteria
defoliation (conifer)	10	26	10	piñon needle scale, Janet's looper, tiger moth
mortality (conifer)	5	13	5	piñon <i>ips</i>
dieback (conifer)	3	8	3	cytophora canker, pitch moth
defoliation (hardwood)	2	5	2	western tent caterpillar, honey locust plant bug
mortality (hardwood)	1	3	1	locust borer
dieback (hardwood)	1	3	1	cytophora canker
Total:	39	100	35	



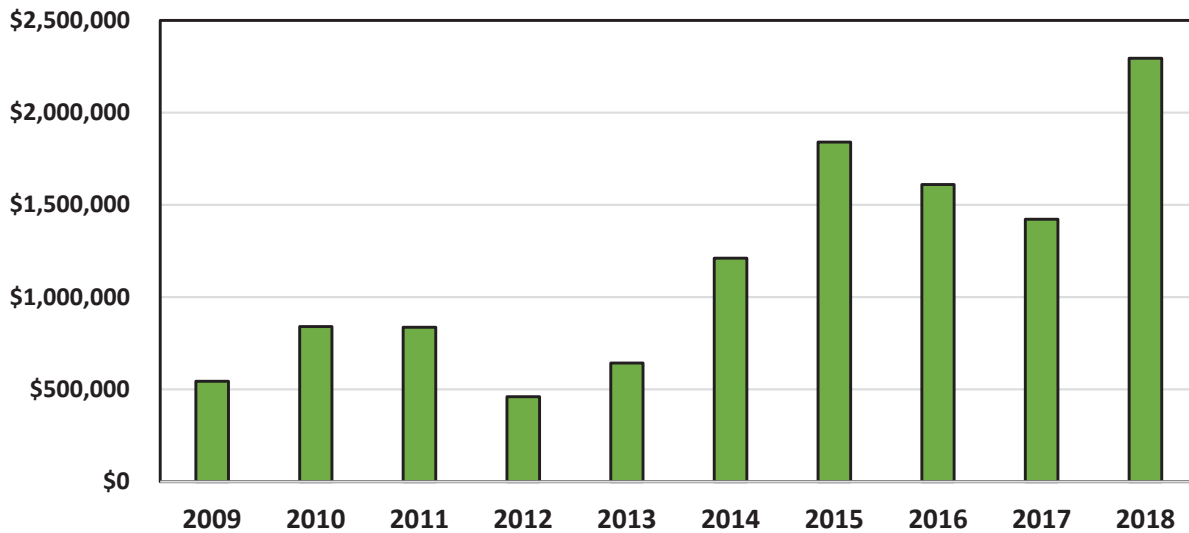
**10 Year Statistical Data
Conservation Seedling Program
Fiscal Years 2009-2018
Number of Trees & Shrubs Distributed**



**Number of Forest Stand and Improvement,
and Fuel Break Contracts (10 Years)**



Amount Spent on Forestry (10 Years)



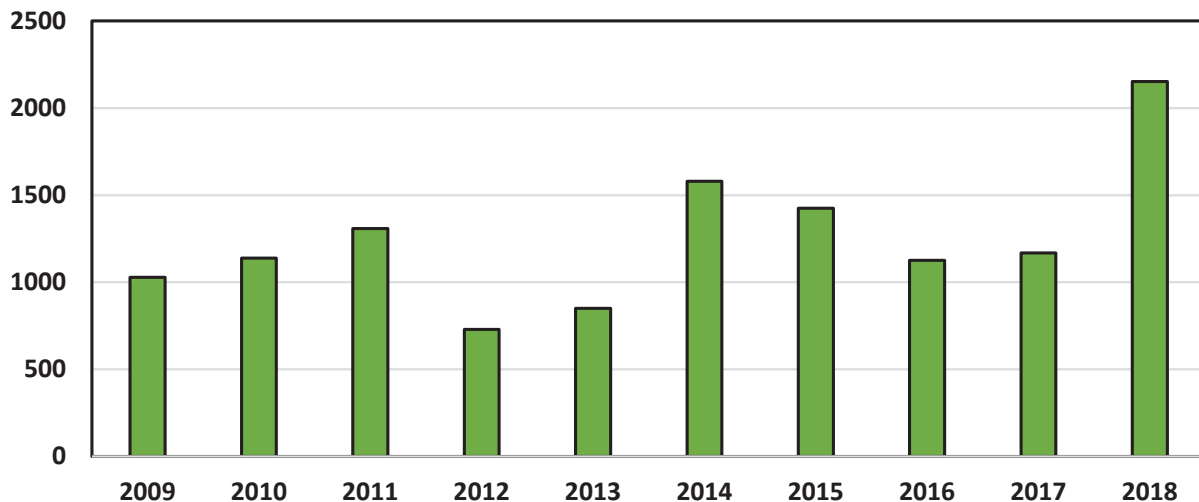
Dollars spent on Forest Stand Improvement, Fuel Break and Woody Residue Treatment by NRCS New Mexico through EQIP, WHIP and RCPP programs.

- NRCS – Natural Resources Conservation Service
- WHIP – Wildlife Habitat Incentives Program
- RCPP – Regional Conservation Partnership Program
- EQIP – Environmental Quality Incentive Program

Number of EQIP, RCPP and WHIP Contracts by NRCS New Mexico for Forest Stand Improvement and Fuel Break projects.

Acres of Forest Stand Improvement and Fuel Break treated through EQIP, RCPP and WHIP contracts by NRCS New Mexico.

Acres of Forest Stand Improvement and Fuel Break Treatments (10 years)



Forest Stand Improvement, Fuel Break and Woody Residue Treatment

As of December 1, 2017

EQIP, RCPP, WHIP

YEAR	CONTRACTS	ACRES	DOLLARS
2007	23	481	\$232,772
2008	22	569	\$336,003
2009	43	1028	\$543,507
2010	63	1,138	\$840,316
2011	93	1302	\$837,708
2012	38	730	\$460,714
2013	61	850	\$642,103
2014	70	1580	\$1,211,033
2015	71	1424	\$1,840,033
2016	112	1125	\$1,610,141
2017	111	1169	\$1,333,950
2018	127	2152	\$2,295,338

LAND CONSERVATION PROGRAM

2018		2004 to Present	
Acres Conserved	8,449	Total Acres Conserved	132,101
Appraised Value	\$2,353,000	Total Appraised Value	\$79,682,644
Tax Credits Paid	\$789,000	Total Tax Credits Paid	\$25,999,537



New Mexico State Parks

Christy Tafoya
Director





New Mexico State Parks

MISSION: Protect and enhance natural and cultural resources, provide first-class recreational and education facilities and opportunities, and promote public safety to benefit and enrich the lives of visitors.

State Parks is committed to this mission, employing professional, dedicated staff to ensure that parks are cared for and preserved to the highest professional standards. State park programs provide safe, fun and educational experiences – and a visit to a state park is a true value. Outdoor recreation is a driving force in New Mexico’s economy and State Parks is a key player. Connected to communities statewide, state parks are often economic drivers for local businesses, towns and cities. Many rural communities rely upon a state park as a major source of economic development.

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OVERVIEW

The State Parks Division (State Parks) oversees New Mexico’s 34 parks that offer a great diversity of natural and cultural resources, providing recreational and educational opportunities for 5 million visitors in FY18.

HISTORY

State Parks was founded in 1933 in conjunction with the Civilian Conservation Corps efforts during the Great Depression. The State Parks system began with four parks, and today there are 34 parks encompassing 19 lakes and 191,617 acres of land and water.

VISITATION & REVENUE

A total of 75 percent of State Parks’ budget is supported by self-generated revenue and 25 percent is general fund. Visitation in FY18 totaled 5,009,789 people. Revenue for FY18 was \$4.99 million.



CAPITAL PROJECTS

Oasis State Park: Construction of a new wastewater treatment facility to serve the park’s newly renovated comfort station and RV dump station was completed in FY18 at a cost of approximately \$320,000. Half of the funding for the new wastewater facility was provided by Federal Land and Water Conservation Funds. Also, a new well was drilled at a cost of \$130,000, and a new water supply line was constructed at a cost of \$32,000 from the new well to a new water treatment facility, which is expected to be completed in FY19. The new water treatment facility will remove nitrates from the water well will cost \$225,000.



Evapotranspiration bed at Bluewater Lake.



New blower building serves to aerate the septic tanks for odor control at Oasis.

Bluewater Lake State Park

Major improvements continued at Bluewater in FY18 with the completion of a new wastewater treatment facility and renovated RV dump station at a cost of nearly \$500,000. In addition, construction was begun on three new volunteer RV sites with full hook-ups near the visitor center and three new campsites, two of which are ADA accessible. This work will be completed in FY19 and included reconfiguration of the parking area and improvements to ADA accessibility for the vault toilet at a cost of \$335,000. Finally, the public water supply well at Stoneridge was rehabilitated and a new water treatment facility was constructed at a cost of \$225,000. All these improvements were funded 50 percent by Federal Land and Water Conservation Funds.



Navajo Lake State Park

A new pump house and pumping station were constructed at the Johnson Tract, bordering the San Juan River. The new facility, which cost \$200,000, will provide water for wildlife habitat improvements on the property, which will then be developed into a new campground to serve increasing demand for camping facilities at the popular park. All of the improvements to be made at the Johnson Tract, which will amount to nearly \$1,000,000 when completed in 2020, will be 50 percent funded by Federal Land and Water Conservation Funds



Improvements at the Pine Area were made to the maintenance shop facility to provide two full RV hook up sites for volunteers. That work, at a cost of \$260,000, included demolition of two obsolete houses

and reconfiguration of water and electric utilities, as well as construction of concrete pads and shelters for the sites.

Brantley Lake State Park

The water treatment facility and water distribution line at Brantley was renovated at a cost of \$178,000, half of which was funded by the U.S. Bureau of Reclamation. Additional work will be done on the system in FY19 to upgrade the water storage tank to ensure a safe drinking water supply to the park.

Leasburg Dam State Park

Capital improvements were made at the visitor center at Leasburg, amounting to \$86,000, and including roof repairs and re-stuccoing.



Coyote Creek State Park

A new entrance gate was constructed at Coyote Creek State Park at a cost of \$190,000. The new entrance was built in anticipation of future planned improvements at the park, which will significantly increase camping opportunities and upgrade infrastructure. Approximately \$1 million in Federal Land and Water Conservation Funds have been secured for planned improvements in FY19, FY20 and FY21.



VOLUNTEER PROGRAM

Volunteers have long augmented the New Mexico State Parks Division. In 2018, State Parks benefited from the work of more than 500 dedicated volunteers who contributed thousands of hours of service to park operations. The value of these hours translates to an equivalent of dozens of full-time employees, contributing to significant labor cost savings.

Park volunteers include camp hosts and day volunteers who assist with operational needs, staffing visitor centers, gardening and trimming vegetation, trail maintenance, cleaning camp sites, trash pick-up, assisting campers, gift shop sales and other critical needs. Volunteers are a devoted group of people from around the country, bringing talents and expertise to the parks. This year, 4 individuals received recognition from the Division for outstanding service during the year. One couple received the lifetime Emeritus Pass for volunteering more than 5,000 hours to Ute Lake State Park.

In addition, State Parks received ongoing support from 21 local Friends groups throughout the year. Friends groups hosted various park events and raised funds to carry out projects benefiting their park. The efforts help offset budget and staff shortfalls. This year, the Friends of Eagle Nest Lake and Cimarron Canyon State Parks received the Partnership Award for outstanding service.

In June, State Parks hosted a Friends Summit at the Rio Grande Nature Center, which attracted 58 attendees, both Friends group members and park staff from around the state. Friends networked and shared ideas to strengthen their missions in support of New Mexico State Parks.

New Mexico Volunteers for the Outdoors (NMVFO) and the Boy Scouts also pitched in and aided parks in trail restoration, providing visitors with an improved hiking experience. NMVFO also received a Partnership Award for making a significant contribution to the Division.

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RESOURCE PROTECTION PROGRAM

As part of its mission, State Parks documents and preserves the unique cultural and natural resources within its system. In 2018, much of the focus was on a series of maintenance and repair projects, and State Park staff reviewed dozens of park projects requiring compliance with various state and federal laws including the National Environmental Protection Act, National Historic Preservation Act and New Mexico's own Cultural Properties Act. In meeting these compliance requirements, Parks' resource protection staff successfully coordinated with partner and regulatory agencies that were critical to the compliance process, especially the State Historic Preservation Division.

In addition to regulatory compliance, State Parks continued important resource protection projects and partnerships with a variety of local, state and federal entities, including the New Mexico Forestry Department (hazardous fire protection), New Mexico Department of Game and Fish (San Juan River in-stream habitat improvements), New Mexico Department of Transportation (Cimarron Canyon road and river maintenance), U.S. Bureau of Reclamation, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and others.

OUTDOOR EDUCATION PROGRAM

State Parks provides quality interpretive experiences and educational programming for visitors. In 2018, a total of 697 interpretive and educational programs were delivered to 15,526 people visiting our parks. Programs range from Ranger-led talks about the ecology and history of the park to more formal programs that extend classroom learning to the outdoors.

The Statewide Outdoor Classroom Program provides students with hands-on, curriculum-based outdoor experiences. One of the program's most successful components is the Transportation Grant program that provides funding to schools to help pay for the cost of buses to get students to a state park where students experience outdoor education programming. The program is heavily funded by taxpayers through the Kids 'n Parks Personal Income Tax Check-off. Since 2007, State Parks has provided outdoor classroom experiences for more than 173,775 kids statewide. In 2018, \$14,081 was awarded to 31 different teachers which will result in 2,952 students visiting the parks and receiving outdoor education programming. Overall, more than 13,900 students visited New Mexico State Parks in 2018 for outdoor education programming.

Finally, State Parks is working through a formal cooperative agreement with the Girl Scouts of NM Trails and programming with the Girl Scouts is a part of the strategic plan. It is hoped that in the coming year, increased events between Girl Scout troops and camps will be undertaken statewide to include a national Girl Scout camping event in mid-July.



BUSINESS ENTERPRISE

State Parks relies heavily upon relationships with concessionaires and private business to provide services in our parks that we would not otherwise provide. In doing so, these businesses generate additional revenue for the park system. State Parks manages 16 concessions throughout its system. Concessions include the state reservation system, marinas, fishing outfitters, a horseback riding concession, stores, food trucks and gift shops. In 2018, State Parks successfully completed a Request for Proposals and identified the next operator for the marina at Rock Canyon

at Elephant Butte Lake State Park. Total revenue collected from all concessions in FY18 was \$1,301,837 compared to \$1,179,735 in FY17.

As in years past, State Parks had another successful year with ReserveAmerica (RA), the online reservation system for reserving our campsites. State Parks saw a 13.3 percent increase in the number of reservations made on RA with a total of 27,188 reservations made in FY18. People from Colorado, New Mexico and Texas made the most reservations. People from other countries also used RA, including Canada and France. A 6.3 percent year-over-year increase in revenue was generated through RA in FY18. State Parks also has a donation feature on the RA website and collected \$8,669 in FY18 compared to \$7,500 in FY17. The top five parks in both total nights booked on RA and in revenue generated are Navajo Lake State Park, Elephant Butte Lake State Park, Brantley Lake State Park, Bottomless Lakes State Park and Santa Rosa Lake State Park.

State Parks is currently working with Aspira (owner of ReserveAmerica) to increase the inventory of reservable campsites on RA and to improve the convenience of making reservations online. Because of our strong marketing message encouraging people to “book now”, the Division is hopeful that the added convenience of reserving campsites online throughout the year will drive more people to New Mexico State Parks.



RIO GRANDE TRAIL COMMISSION

In 2018, the Rio Grande Trail Commission, led by the Energy, Minerals and Natural Resources Department and chaired by Secretary McQueen, met five times - once each in Albuquerque, Taos and Las Cruces and twice in Santa Fe. The Commission is charged with developing

a trail which will run the length of the state from Colorado to Texas - nearly 500 miles - minimizing environmental impacts and preserving sensitive habitat while providing visitors with unique recreational and viewing opportunities. The Commission makes recommendations to the legislature as needed and reports annually to the governor and appropriate interim committees.

This year, the Commission guided the development of a Rio Grande Trail Master Plan to identify a proposed alignment for the trail across the state and provide

guidance to the state on how to successfully design, construct, maintain and market the trail.

The Commission also forwarded a proposal to the Governor to designate an additional 30 miles of Rio Grande Trail in the Rio Grande del Norte National Monument. Governor Martinez approved that designation on October 2, 2018 at a ribbon-cutting ceremony overlooking the Rio Grande Gorge Bridge outside of Taos. A total of 86.65 miles of trail have been designated since FY15.

Finally, the Commission voted to approve a logo for the trail that will be used on all trail signage, advertising and merchandise.



Rio Grande Trail Commission Chairman Ken McQueen addresses the crowd at Rio Grande del Norte National Monument as Acting Secretary of Interior David Bernhardt and Governor Susana Martinez look on.

LAW ENFORCEMENT & BOATING SAFETY PROGRAMS

State Parks is dedicated to achieving compliance with parks and recreation management laws. Law Enforcement and Boating Safety programs provide responsive visitor services, resolution of conflicts within park jurisdictions, and promotion of cultural and natural resource protection. State Parks currently has 76 park law enforcement officer positions. These officers partner with local communities, visitors, and other agencies to develop and sustain the diverse environments in New Mexico's state parks while balancing the demand for recreation.

In FY18, State Parks continued to partner with federal, state, county, and local entities to provide all state park rangers with accredited advanced law enforcement training. In FY18, boating officers attended the following trainings:

Interview and Interrogation by FLETC (April 2018); NASBLA Boat Accident Investigation (March 2018); MEO Basic (April 2018).

Partnerships with other key agencies enhances the ability of emergency response agencies to communicate and work with each other, and to improve search and rescue skills to better serve the recreational boating public on New Mexico's lakes. The partnerships allow State Parks to leverage and effectively manage a modest law enforcement program budget while supporting officers' ongoing professional development recreational boating opportunities.

State Parks' primary goal is zero boating-related injuries and fatalities each year while ensuring safe and memorable experiences for boaters. Statistically, New Mexico is below the average of other states in boating-related deaths per year. This can be attributed to the dedicated efforts of boaters being more safety-minded, and park officers and other partners who provide educational programs regarding operator and equipment requirements, navigation, and boating hazards. Park officers and staff stress the importance of wearing life jackets, operating safely in inclement weather, and not operating under the influence of alcohol or drugs.

Boating safety classes are provided throughout the state in person and via the Internet, and many school-aged children receive boating and water safety instruction. In FY18, 965 students successfully passed a boating safety course.

Partnerships with volunteers, non-profits, local, county, state, regional, and federal agencies are critical to fulfilling the boating safety mission. For example, State Parks receives support from the U.S. Coast Guard Auxiliary through assistance with various boating safety programs.

In FY18, the US Coast Guard (USCG) conducted a site visit to check compliance with our program and Federal Guidelines. The inspection was both for the program and financial aspects of our boating safety program. The inspection showed no deficiencies with management of the Boating Safety monies granted by the USCG.



State Parks Officers attended a two-day class sponsored by the New Mexico Broadcasters Association to learn more about how to be a spokesperson, how to develop key messages for traditional and social media, and work with the media to broadcast and effectively deliver the Division's message. In addition, Law Enforcement Officers earned 14 hours of NM Law Enforcement Academy credits.

EMPLOYEE RECOGNITION

State Parks recognized multiple excellent employees this year. The Governor's Award was given to Superintendent Heather MacCurdy from the Rio Grande Nature Center State Park.



Heather MacCurdy and Cabinet Secretary Ken McQueen (photo by Greg Wood)

Fran Chavez, Senior Budget Analyst from the Santa Fe Office received the Secretary's Award. The Exemplary Park Award went to Leasburg Dam State park. The Ranger of the Year was Kevin Wilcox from Caballo Lake State Park. In addition, four Director's Awards, and multiple customer service, lifesaving, partnership and volunteer awards were given as well as the spouse award, and the first State Park Legacy Award.

MARKETING PROGRAM

Throughout 2018, the marketing team had great fun promoting State Parks' distinctive campaigns and special events through effective buys in print, radio, television, social and digital media, consistent public relations and outreach; and through solid partnerships with organizations, communities and state agencies.

Solid Partnerships

ReserveAmerica (RA) is the online campsite reservation system State Parks uses and the marketing team worked closely with Aspira (RA) to develop and design a new landing page for New Mexico State Parks under Campsite Reservations. The new page features captivating pictures with links to Find an Adventure, the best fishing holes State Parks has to offer, and special events. The fresh page is already seeing positive results.

Marketing also sends out monthly email -blasts, also through RA, featuring parks and special events and a “book now” link to encourage reservations. These email blasts are proven to generate revenue and create a national awareness of New Mexico State Parks. The marketing team collaborates regularly with Aspira to feature events and topics that may drive traffic to the nmparks.com website and ultimately book reservation.

New Mexico Magazine

For the second year in a row, State Parks had a special category in New Mexico Magazine’s annual photo contest. Through this partnership, “Enchanted Adventures” inspired instate travel, exposed 150,000 of the Magazine’s monthly readers to New Mexico’s gems, and increased Marketing’s photo library to use in future endeavors.



State Parks Director Christy Tafoya, JP Reed, Timothy Reed, Gary Gallegos, Chuck Gallegos, Elena Cargo Reed, and current Villanueva State Park Superintendent John Villanueva

State Parks Director Christy Tafoya kicked-off the event in front of Cargo Rock by recognizing the families of two prominent figures in Villanueva State Park’s history – former governor David F. Cargo who dedicated the park on October 29, 1967, and Fortunato Gallegos, the park’s first superintendent.



#OptOutside

The National Association of State Parks Directors (NASPD) and State Parks teamed up with REI for the third year in a row to OptOutside, an initiative to get people outdoors and in state parks on Black Friday. The promotion was well received on Instagram, Facebook was featured in the local media. #OptOutside will continue to gain momentum as State Parks offer free guided hikes and other activities that day.

First Day Hikes

Hundreds of New Mexicans started off 2018 on the right foot by joining in on the First Day Hikes on New Year’s Day. First Day Hikes is another national initiative of the NASPD, and in 2018, State Parks hosted guided hikes at 13 State Parks on New Year’s Day. The hikes provide a means for individuals and families to welcome the new year in the outdoors, exercising and connecting with nature. Public outreach opportunities included television and radio appearances and social media posts. More than 153 visitors hiked a total of 497.2 miles.

Highlighted State Parks Programs

Villanueva State Park 50th Anniversary

In April 2018, Villanueva State Park celebrated its 50th anniversary with music, a car show and a fantastic community turnout. Park Manager John Villanueva and

‘Tis the Season

Whether you enjoy bird-watching, hiking or stargazing, State Parks is your official sponsor of holiday adventure. New Mexico culture is rich with celebrations and this year is no exception. State Parks hosted numerous holiday season events to enjoy the warm glow of traditional luminarias throughout the state.

Night Sky Program

New Mexico State Parks are a perfect place to view the state’s beautiful night skies. Interpretive rangers throughout the system host special events in State Parks which feature night sky programming and world-class observatories with volunteer astronomy experts. The New Mexico Tourism Department promoted the [Dark Skies Trail](#) in 2018 featuring Peter Lipscomb, park superintendent at Cerrillos Hills State Park.

Promoting Boating Safety is a priority for State Parks. In 2018, spring and winter boating safety campaigns focused on promoting boating safety classes and ‘Stay Afloat, Don’t Drink and Boat’ primarily on radio and bilingual television where the target audience is male aged 18-54 years with saturation in Albuquerque, Farmington and southern New Mexico. ESPN, IHeart Radio, Citadel and Santa Fe’s Que Suave were included in the mix. Boating safety is also heavily promoted through social media and public relations.



Social Media Marketing

Along with engaging in a new marketing plan for promoting the latest and greatest assets State Parks offers, the marketing team produces daily content of the most compelling, engaging and current events. Marketing loves to find and repost visitors' amazing images via Facebook, Twitter and Instagram. Display ads and

social media promotions such as 'Fall in Love with New Mexico State Parks,' 'New Mexico State Parks – Official Sponsor of Adventure', 'Boat Safe, Boat Smart', 'Hug a Volunteer for National Volunteer Month', "and "Yurts Soooo Good" indicate that social media is a positive influence on the demographics that State Park seeks - people of all ages.

Effective Media Buys

This year, the marketing team strategically managed and optimized campaigns for displaying and retargeting across channels through search engine marketing and social media. Through Local Digital Reach, a digital advertising company out of Albuquerque, NM state parks' signature events, special promotions and camping opportunities were promoted on the Internet. Using geographic and behavioral targeting, more than 1.6 million people in New Mexico, Texas and Arizona have seen State Parks' digital advertising (up 300,000 from 2017). More than 101,029 of those impressions (up 23,000 from last year) have been re-targeted and served the advertisement again to the potential customer. Significantly, digital advertising brought nearly 40,000 people to nmparks.com. Nearly 10,000 customers either booked camping reservations or explored individual parks under "Find a Park."



In addition, State Parks was well represented in Northern New Mexico with Hutton Broadcasting promoting, "Summer Will Soon Be Here"; State Parks also has radio media buy with Que Suave to sponsor the Great Outdoor New Mexico Show. A "Park of the Week" is featured throughout the year, as are special events. For the Safety Campaign, the media buy with KOAT-TV which included commercials, digital creative and station promotion, provided a clear return on investment for State Parks.

Marketing took advantage of the Albuquerque Journal's Advantage Club - digital and print advertising for small

businesses in the New Mexico's largest newspaper with more than 100,000 subscribers daily. As of July 1, 2018, three new yurts at Hyde Memorial State Park are on the reservation system. The marketing team took advantage of UNM Anderson School of Management's 2016 Small Business Scholarship's winning pitch – a marketing plan for the Yurts using existing marketing buys. Yurts have been promoted in radio, print (New Mexico Magazine and Vacation Guide 2018, Santa Fe New Mexican's Back to School insert, Discover Taos Summer and Winter Guides) and on television.



Blog for NM State Parks

In January, NM State Parks engaged in a partnership with Greg Wood, official "blogger" and his wonder pup, Freddy. Greg and Freddy traveled across the state and photographed parks. Wood featured State Parks' amenities, events and trails in his blog posts at wgwood.blogspot.com and was the photographer for the Division's annual awards ceremony

Instagram Photo Contest

This summer, the NM State Parks teamed up with Simply Social Media (#travelnewmexico) for a Great Outdoors Photo Contest on Instagram. The contest encouraged New Mexicans and tourists to post pictures of their experiences in New Mexico State Parks on Instagram, and more than 600 posts were created using the #NMStateParks hashtag.

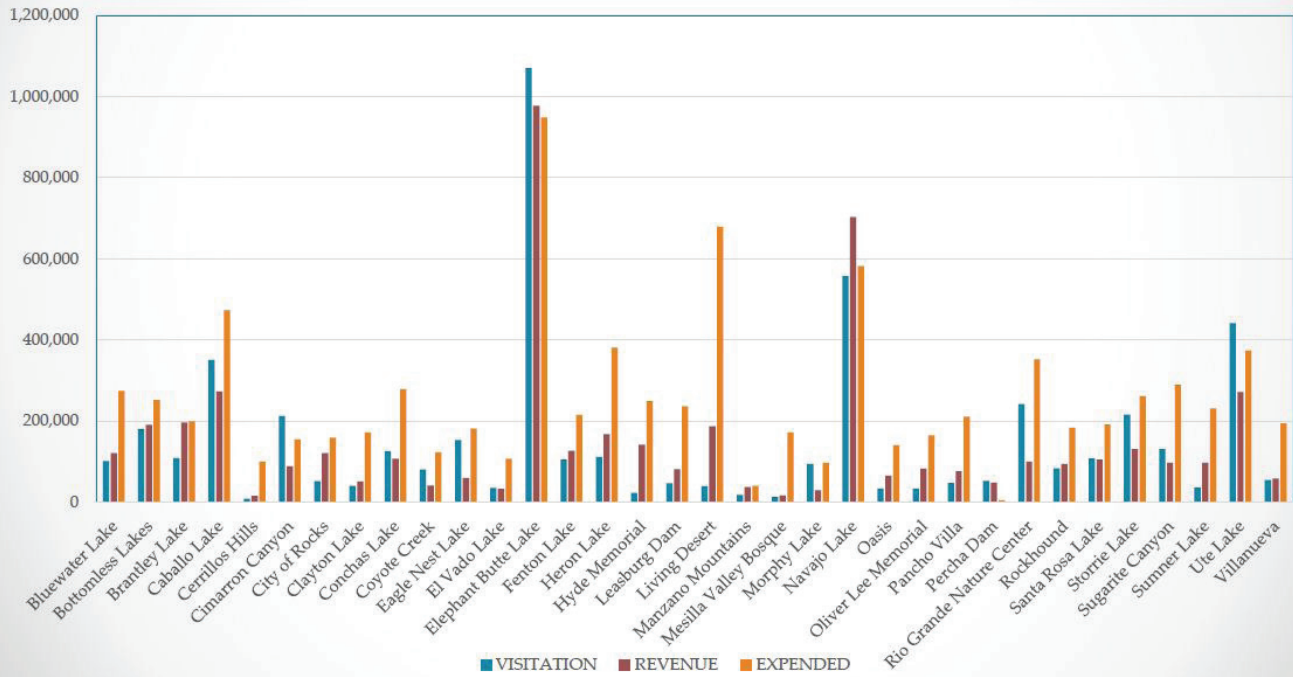


Finally, the marketing team presented Dan Monaghan from the New Mexico Tourism Department a Partnership Award at State Parks Annual Awards Banquet for his exceptional videography in promoting New Mexico State Parks, including the Dark Skies Trail.

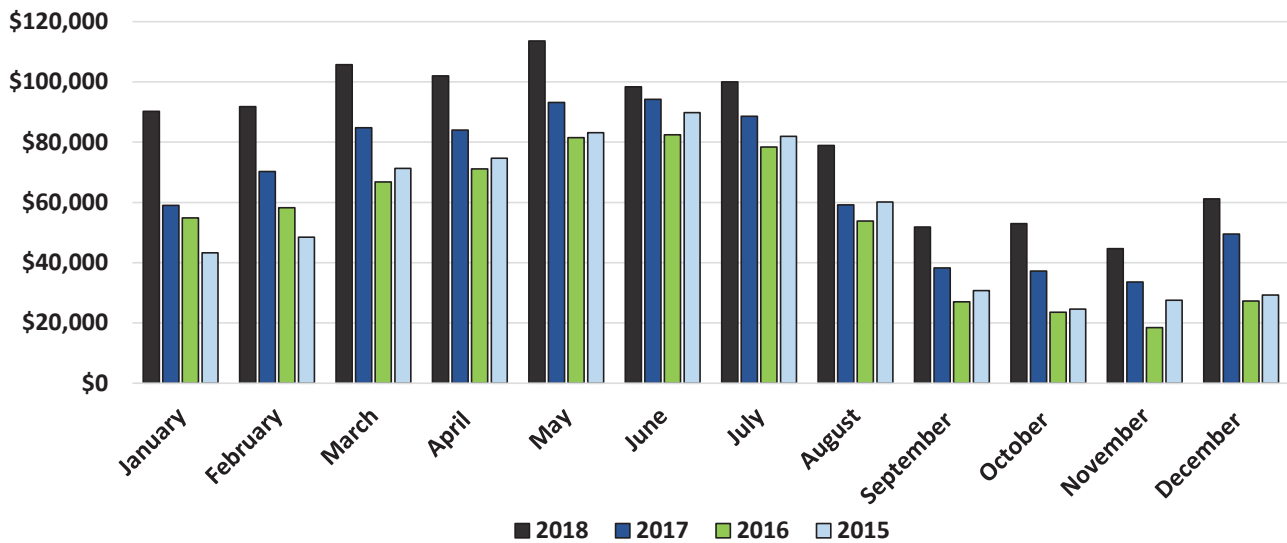
Marketing's Beth Wojahn, Christina Cordova and Lauren Aguilar present Dan Monaghan from the New Mexico Tourism Department a Partnership Award.



Visitation, Revenue & Expenditures FY18



ReserveAmerica Online Revenue



*Does not include online sales of ADU'S or ACP's



Energy Conservation & Management Division

Louise Martinez
Division Director



Energy Conservation & Management Division

Mission: The Energy Conservation and Management Division (ECMD) develops and implements effective clean energy programs - renewable energy, energy efficiency, alternative fuels, and safe transportation of radioactive waste - to promote economic growth, environmental sustainability, and wise stewardship of our natural resources while protecting public health and safety for New Mexico and its citizens.

Programs:

ECMD programs are implemented through a combination of system certifications, clean energy projects, and public outreach. Diverse stakeholders participate in focused working groups to address rapidly changing themes in clean energy. Through these efforts, ECMD encourages public and private organizations to use energy more efficiently, more economically and with less dependence on foreign sources. Benefits to New Mexico include economic development, modern infrastructure, and strength through diversity and job creation.

Accomplishments:

State Energy Roadmap Project

ECMD applied for and received a federal grant from the U.S. Department of Energy (DOE) to define a direction and sequence of strategies required to strengthen, diversify and to ensure New Mexico's energy economy is resilient to global changes. The New Mexico Energy Roadmap Project kicked-off in 2017 with a series of four energy stakeholder steering committee meetings. From these meetings, the Energy Roadmap was developed and a final document was released in January 2018. The final New Mexico Energy Roadmap includes 15 consensus-based goals and multiple strategies that aim to position NM's energy sector to take full advantage of the world's changing energy landscape.

During 2018, Energy Roadmap stakeholders and our EMNRD team accomplished the following:

- Clarified ownership of produced water from oil and gas extraction; determined that state rules do have the needed level of flexibility for produced water recycling and reuse outside of the oil and gas industry
- Updated and expanded the state's Alternative Fuels Loan program
- Developed new draft legislation to extend the Efficient Use of Energy Act beyond 2020 and

- Successfully applied for and received a new US Department of Energy grant to develop a statewide program for Financial Resiliency through Energy Efficiency

For the next decade, New Mexico's public and private energy stakeholders will work in cooperation under the guidance of the roadmap to strengthen and diversify New Mexico's energy economy. The Energy Roadmap is built upon the work done while developing the 2015 New Mexico Energy Policy and Implementation Plan.

State Energy Policy & Implementation Plan

Throughout the year, ECMD has explored and developed new energy technologies; toured the only geothermal plant in the state located near Lordsburg, NM; and continue to work with the Natural Gas Vehicle Association (NGVA), the New Mexico Gas Co./Emera and Land of Enchantment Clean Cities Coalition (LOECCC) to assist fleets in the border region of the state to convert from diesel trucking fleets to compressed natural gas (CNG) and track energy performance and usage in public buildings. In 2018, ECMD began discussions on the potential development of a facility in the state that would collect 200,000 barrels of produced water daily from oil and gas extraction to remove mineral salts including lithium salts and produce clean water. This type of development could provide a new revenue stream from the state's produced water as well as assist the state in water conservation.

Energy Efficiency

The New Mexico Energy Roadmap points to energy efficiency in three of the fifteen goals: advance strategies to strengthen New Mexico's overall energy economy by 2027; New Mexico to become a top 20 state for energy efficiency by 2027; and measurably increase energy efficiency behaviors by New Mexicans by 2027. To advance the state's current rank of 36th in the 2018 American Council for an Energy Efficient Economy, State Energy Efficiency Scorecard, New Mexico will work to address building energy codes, financing opportunities of Property Assessed Clean Energy Financing (PACE), and common-sense

advancements such as combined heat and power (CHP). The state anticipates higher energy savings in 2018 from greater levels of investment in energy efficiency measures including utility programs and guaranteed energy savings performance contracts.

Energy Efficiency Working Group

In the past ten years, ECMD has hosted more than 50 meetings of the Energy Efficiency Working Group, a platform for local and state energy efficiency experts to hear about the latest clean energy activities and visit clean energy projects. In 2018, five meetings featured site visits to affordable, energy efficient housing in Albuquerque, Santa Fe, and Hatch. Two other meetings explored utility-based energy efficiency programs and how to strengthen reach.



The El Camino Real apartment complex in Hatch. The LEED-Platinum rated facility provides rental housing for farm workers; and its solar panels considerably reduce their utility bills.

Whole-building Investment for Sustainable Efficiency

The Whole-building Investment for Sustainable Efficiency (WISE) Program's purpose is to achieve energy savings in public buildings through a sustainable program and process. The program was seeded through a U.S. Department of Energy (DOE) federal competitive grant that provided for strategic planning support via the WISE Team of EMNRD, General Services Department (GSD), and New Mexico Finance Authority (NMFA). The joint effort established an energy efficiency process focused on a whole-building evaluation approach. The goal: a 20 percent reduction in state government facilities by 2020 compared to a 2011 baseline energy usage.

The evaluation began with the GSD-owned buildings inventory development. GSD owns 6.5 million square feet of public buildings floor area and manages buildings on behalf of other state government agencies in the Executive Branch. The initial project funded by WISE included

development of an Investment Grade Audit (IGA) of Santa Fe's South Capitol complex buildings that included the State Data Center's air-and-water -side economizers to justify design work and funding of \$2.1 million for the Energy Efficiency Measures (EEMs). GSD chose to use funding from the Capital Building Repair Fund instead of using other financing mechanisms to implement the selected EEMs. The implementation of the EEMs achieved a reduction of 19.88 percent energy savings (2.3 million kWh and 10,950 therms) close to the 20 percent target.

The WISE program's sustainability is supported by two state statutes that allow financing of public buildings retrofits based on future energy savings and with the goals of the New Mexico Energy Policy and Implementation Plan. Recently, the General Service department began a project to conduct investment grade audits of all GSD owned facilities in Santa Fe to then utilize the Public Building Energy Efficiency and Water Conservation Act to improve their infrastructure, reduce energy costs and consider addition of renewable energy to their facilities.

Clean Energy Revenue Bond

The Public Building Energy Efficiency and Water Conservation Act [NMSA 1978, 6-21D] is referred to as the Clean Energy Revenue Bonds (CERB) Program, was established in 2005 to provide for financing clean energy projects. CERB has \$20 million in low-interest bonding available for state agencies and public schools. Santa Fe Public Schools was the first public school district to utilize the CERB for a renewable energy generation project. The \$2.96 million project installed approximately one megawatt of solar panels. Post project review of the solar system operation indicates that the school district is realizing the projected electrical generation with approximately \$193,000 in electricity and electrical demand savings annually.

Energy Savings Performance Contracting

Energy Savings Performance Contracting (ESPC) has been available to New Mexico's governmental agencies since 1993 through the Public Facility Energy Efficiency & Water Conservation Act [NMSA 1978, 6-23]. New Mexico's governmental agencies may finance energy-saving facility improvements using future energy savings created by energy efficiency and renewable energy measures. New Mexico has implemented ESPC throughout the state since 2009, equating to more than \$110 million in energy retrofits and renewable energy generation. In 2018, ECMD oversaw the completion of \$14 million of energy performance contracts making infrastructure improvements saving more

than \$815,000 in utility costs annually for the life of these projects. EMNRD originally committed to completing \$50 million of ESPC projects in partnership with DOE and the ESPC Accelerator Program. The implementation of ESPC projects has surpassed the goal, and the number of projects continues to increase. Currently, there are 14 projects in various stages. The Department has won several DOE competitive grants to implement programs that support the process and provide quality projects.

The Local Energy Efficiency Performance (LEEP) Program began as a DOE grant competitively awarded to ECMD in 2014. The program provides technical assistance and third-party review of energy efficiency and conservation projects. ECMD worked with four local government partners: McKinley County, City of Santa Fe, City of Las Cruces, and Bernalillo County. Due to the overwhelming success of the LEEP program, there are now more than 10 local government projects in various stages in the process.

Sustainable Building Tax Credit

The Sustainable Building Tax Credit incentivizes private sector design and construction of energy efficient buildings for commercial and residential use. Since it was established 11 years ago, 7,235 tax credits have been processed covering 9 million square feet of energy efficient buildings being built in New Mexico. The program has reduced energy utilization index (EUI) of buildings by saving 19.82 thousand BTUs per square foot annually. The Sustainable Building Tax Credit program has been extended through 2026. The value of the Tax Credit has been worth \$60.2 Million in construction activity to new home and commercial building owners.

Waste Not

The Waste Not program supports partnerships with local governments to incentivize and remove barriers to energy efficiency and renewable energy investments in wastewater facilities. ECMD is assisting four communities in New Mexico to implement energy efficiency and renewable energy solutions that reduce costs of operating wastewater facilities. Each partner community has the findings from their energy audit of its wastewater facility and are seeking financing to implement their most pressing needs. The steps for this process will inform developing a “how-to” guide for other local governments in New Mexico to promote similar energy reductions. Ultimately, this will build experience and capacity in managing and reducing costs to operate wastewater facilities at the local government level and encourage additional rural communities to undertake energy

efficiency and renewable energy projects.

Renewable Energy Storage Working Group

ECMD continues to host the Renewable Energy Storage Working Group, a gathering of diverse energy professionals to explore the latest on energy storage technologies, policies and practices.



This year they commenced work on the New Mexico Energy Roadmap strategy calling for an expansion of energy storage capacity. The group also learned about Kit Carson Electric Cooperative’s approach to solar and energy storage.

Distributed Solar

The year 2018 marked the two-years since the ending of the Solar Market Development Tax Credit program and ECMD continued to provide information and statistics to taxpayers.

The Solar Gross Receipts Tax exemption remains active and staff answered questions about the exemption from homeowners, commercial groups, and utility-scale installers.

The Property Assessed Clean Energy (PACE) program received emphasis by local groups this year and ECMD provided contacts to various individuals and groups to connect their efforts in moving the PACE program forward in New Mexico. Bernalillo County Economic Department made significant strides in their Commercial PACE implementation this year, and ECMD helped in this process by connecting the US DOE PACE Program Manager to the county staff.

PV on a Pole™

EMNRD received seed money through the Clean Energy States Alliance to develop a program to provide an option for low to middle income households living in manufactured housing to have access to solar energy. With assistance from program partners, EMNRD has been developing “PV on a Pole™,” which is a 1.2 kW solar array with a tracker mounted on a pole, then screw-mounted into the ground. PV on a Pole™ is intended to be standardized, mass-produced, and easy to deploy.

Program partners include Kit Carson Electric Coop, Jemez Mountains Electric Coop, City of Truth of Consequences

Municipal Utility, Santa Fe Community College, Northern New Mexico College, Clean Energy States Alliance, Cornerstones, Nambe Pueblo, and Taos Pueblo. Strong interest in selling and/or installing poles have come from solar installers, mobile home dealers, local government public housing managers, Native American housing authorities, and sister state energy offices in Oregon, New York State, and District of Columbia.

Among various financing options to go along with the technical breakthrough promised by PV on a Pole™ are (1) involving mobile home dealers in offering the pole as part of a package when selling new homes, and (2) having rural electric coops and other utilities offer on-bill financing.

The first prototype was displayed at a 2018 Earth Day Fair in Española, with the first two installations at Nambe Pueblo. The projected commercial price is under \$5,000.

November 2018, Nambe Pueblo – First Installation of PV on a Pole™



Geothermal Power

Since the 2016 passage of the Geothermal Resources Development Act, which moved resource development and regulation implementation from the Department's Oil Conservation Division to ECMD, the Division has drafted new regulations that meet the legislative goals of streamlining and targeting the rules to better meet the needs of the industry. Drafting of these rules was completed in late summer of 2017 and were placed on public notice on November 14, 2017. The public hearing for the new rules took place January 3, 2018 and the rules became effective February 27, 2018.

Biomass

In 2018, ECMD funded work through the US Forest Service-US Department of Agriculture (USFS-USDA) grant to develop plans, blueprints and cost estimates to dismantle

and relocate a Hurst Scotch Marine Package Fire tube woody biomass boiler that is no longer used at the Ft. Bayard Medical Center. A study will be conducted to evaluate the possibility of producing electricity and biochar with wood biomass in northern New Mexico.

Assembly of a Statewide Wood Energy Enterprise Team is underway from USFS-USDA funding that will bring together individuals representing agencies and organizations with the expertise necessary for successful wood energy enterprises. The team will work within New Mexico's landscapes comprised of federal, state, private, land grants and tribal forests. The team's purpose is to provide coordination between projects within and around New Mexico, improving communication and outreach statewide to advance the use of wood biomass energy.

Renewable Energy Production Tax Credit

The Renewable Energy Production Tax Credit (REPTC) incentive program expired on January 1, 2018. The program provided tax incentive to developers to build utility-scale wind, biomass, and solar projects that, in turn, assisted investor owned utilities in meeting the Renewable Portfolio Standard. Renewable energy projects in New Mexico have a production capacity of 1863.9 MW. The REPTC Program certified:

- 15 Wind Energy projects with production capacity of 1,485 MW
- 18 Solar Energy projects with production capacity of 201 MW

Currently, there are 320 MW of wind and solar projects that have been constructed and under production awaiting certification for tax credit eligibility. These projects are on the REPTC waiting list until certified projects reach their ten years of tax credit eligibility and open the tax incentive cap to additional production. The pending projects represent potential new development of 590 MW in wind and 1,104 MW in solar power, and an additional \$3 billion in construction activity for rural communities. The pending projects may see a limited period of eligibility as the tax credit will not be available after December 31, 2027 - ten years after the projects began generating electricity.

Most renewable energy projects take advantage of the REPTC ten-year tax credit, and these utility scale projects provide a steady source of revenue for the next 30 years to the New Mexico State Land Trust. The direct revenue supports the trust beneficiaries and education in New Mexico through the leasing of public lands for wind,

solar, geothermal power plants, and electric transmission infrastructure. Private landowners also realize significant revenues from the lease of their lands.

Geothermal Ground-Coupled Heat Pump Tax Credit

The Geothermal Ground-Coupled Heat Pump Tax Credit, in effect since 2010, helps make the system-type more affordable for homeowners and commercial building owners. In 2018, there were 5 applications received, reviewed, and certified by ECMD for systems installed in the counties of Dona Ana (4 systems) and Otero (1). The \$36,426 in tax credit support of this technology created construction activity of \$121,420 in 2018. Additional incentives are available for customers of Roosevelt County Electric Cooperative through its Thermal Energy Service Program.

Clean Fuels & Efficient Transportation

ECMD purchased a Chevy Bolt through a federal grant in 2017. This is the first all-electric passenger vehicle to be acquired for the state’s vehicle fleet. In 2018, ECMD has showcased the Chevy Bolt at many electric vehicle (EV) ride and drive events throughout the state as well as at the state fair. In June 2018, ECMD assisted the State Parks Division in acquiring and installing the first New Mexico State Park EV charging station at Bluewater State Park near Grants, New Mexico. The charging station is a Level 2 EV Charge Point station with two charging cables.



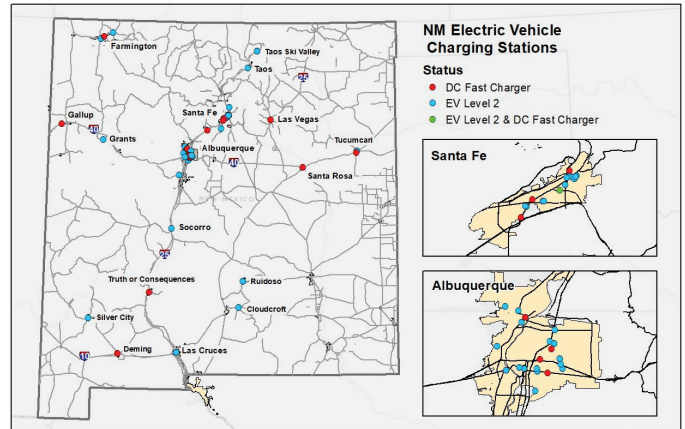
ECMD’s David Griego and Jeremy Lewis show Deputy Secretary Matthias Sayer how the EV charging station works at Bluewater Lake State Park.

At present, there are very few electric vehicles owned by state employees at the state-owned complexes. The state is focusing on the installation of EV charging infrastructure and the acquisition of electric vehicles for campuses with EV charging available.

In October of 2017, New Mexico became one of the seven inter-mountain west states to commit to placing EV charging infrastructure along the three major interstate corridors in New Mexico, I-10, I-25, and I-40. In 2018, New Mexico continues to work with this regional working group, now called REV West, to electrify New Mexico’s major thoroughfares.

The other states and their corridors included in the MOU are:

- Colorado: Interstates 25, 70 & 76
- Arizona: Interstates 8, 10, 15, 17, 19 & 40
- Utah: Interstates 15, 70, 80 & 84
- Nevada: Interstates 15 & 80
- Idaho: Interstates 15, 84, 86 & 90
- Wyoming: Interstates 25, 80 & 90
- Montana: Interstates 15, 90 & 94



Natural Gas Transportation Fuel Infrastructure

Currently, 14 compressed natural gas (CNG) stations operate in New Mexico – six are private and eight are public access. One station includes liquefied natural gas (LNG). These stations are listed below. In addition, one new station is in development in Albuquerque.

Compressed Natural Gas Fueling Stations - Public

- Clean Energy, University of New Mexico – 1140 University Blvd. NE, Albuquerque
- LCNG Clean Energy, Pilot/Flying J – 9911 Avalon Road. NW, Albuquerque
- City of Deming – 116 N 8th St., Deming
- City of Deming – 1315 W Pine St., Deming
- Clean Energy, Santa Fe Trails Transit – 2931 Rufina St, Santa Fe
- City of Socorro – 3000 Old US Highway 85, Socorro
- Bubble City Truck Stop – 3125 Bloomfield Hwy., Farmington
- Love’s Travel Stop – 12605 Central Ave. NW, Albuquerque

Compressed Natural Gas Fueling Stations – Private or Fleet Only

- Clean Energy – ABQ Ride, 601 Yale St, Albuquerque
- Apache Artesia – 1945 Bluestem Road, Artesia
- Apache Eunice – 31 S NM Highway 207, Eunice
- Apache Hobbs – 2350 W Marland Blvd., Hobbs

- City of Deming, Construction Shop – 1401 Santa Clara St., Deming
- City of Deming, Transfer Station – 5470 New Mexico 549 SE, Deming

Electric Vehicle Charging Infrastructure

Throughout New Mexico there are 64 electric vehicle (EV) charging stations with 151 charging outlets open to the public. During 2018, many charging stations were installed at businesses, public parking areas and fueling stations.

Charging Level	Kilowatt (KW) Power	Miles of Range per Hour of Charge	Time for Full Charge		Usage
			*BEV	**PHEV	
Level 1	1.4 - 1.9 KW	3-5 miles	17 hours	7 hours	<ul style="list-style-type: none"> • At home Charging • Top off • Slower Charging
Level 2	2.5 - 19.2 KW	10-75 miles	4-7 hours	2-3 hours	<ul style="list-style-type: none"> • Work Place Charging • In-town Errands • Hotels • Multi-Family Housing • Medium Charging
DC Fast Charge	> 50 KW	200-500 miles	30-60 minutes	10 minutes	<ul style="list-style-type: none"> • Road Trips • Interstate Travel • Fast Charging

*Battery Electric Vehicle

** Plug-in Hybrid Electric Vehicle

The EV stations throughout New Mexico:

Electric Charging Stations in Albuquerque Metropolitan Area - Public

- Dave & Buster's, Winrock Mall - 2100 Louisiana Blvd. NE – Level 2 Charger
- Montgomery Plaza - 4575 San Mateo Blvd. NE – DC Fast Charger
- O'Neill's Pub, 4310 Central Ave. – DC Fast Charger
- BMW Sandia - 6001 Pan American Fwy. – Level 2 Charger
- City of Albuquerque Department of Municipal Development Parking Facility - 201 Marquette Ave. NW – Level 2 Charger
- City of Albuquerque - Department of Municipal Development Parking Facility - 400-498 3rd St NW – Level 2 Charger
- Melloy Nissan - 7707 Lomas Blvd. – Level 2 Charger
- Reliable Nissan - 9951 Coors Blvd. NW – Level 2 Charger
- Freddy's Frozen Custard & Steakburgers, Corrales Center - 10701 Corrales Rd. NW – DC Fast Charger
- Latitudes - 2401 Highway 528, Rio Rancho – Level 2 Charger
- Sandia Peak Inn – 4614 Central Ave. SW– Level 2 Charger
- University of New Mexico – 2401 Redondo S. Dr. –

- Level 2 Charger
- University of New Mexico – 1913 Las Lomas Dr. NE – Level 2 Charger
- Don Chalmers Ford – 2500 Rio Rancho Dr. SE – Level 2 Charger
- Applebee's – Tesla – 2600 Menaul Blvd. NE – DC Fast Charger
- Sheraton ABQ Uptown – Tesla – 2600 Louisiana NE – Level 2 Charger
- Bella Roma Bed and Breakfast – Tesla – 1211 Roma Ave. NW – Level 2 Charger
- Cutter Aviation – Tesla – 2502 Clark Carr Loop SE – Level 2 Charger
- Petroglyph National Monument – 6501 Unser Blvd. NW – Level 2 Charger
- Breve Crepes and Coffee – 6001 Osuna Rd. NE – Level 2 Charger
- Springhill Suites – 5910 Holly Ave. NE – Level 2 Charger

Electric Charging Stations in Santa Fe – Public

- Sprouts, San Isidro Shopping Plaza - 3201 Zafarano Dr. – DC Fast Charger
- City of Santa Fe - Railyard Parking Garage - 503 Camino de la Familia – Level 2 Charger
- City of Santa Fe – Genoveva Chavez Community Center – 3221 W. Rodeo Rd. – Level 2 Charger
- Fashion Outlets of Santa Fe – Tesla – 8380 Cerrillos Rd. – DC. Fast Charger
- City Shoe and Book Repair - 847 Ninita St. – Level 2 Charger
- Fiesta Nissan - 2005 Saint Michaels Dr. – Level 2 Charger
- The Inn of the Five Graces – 150 E De Vargas St. – Level 2 Charger
- Luna Santa Fe – 505 Cerrillos Rd. – Level 2 Charger
- Santa Fe BMW – 2578 Camino Entrada – Level 2 Charger
- Wendell Chino Building – 1220 S. St. Francis Dr. – Level 2 Charger
- Rancho Gallina – Tesla – 31 Bonanza Creek Rd. – Level 2 Charger
- The Inn and Spa at Loretta – Tesla – 211 Old Santa Fe Trail – Level 2 Charger
- Don Gaspar Inn – Tesla – 623 Don Gaspar Ave. – Level 2 Charger
- Four Seasons Resort Rancho Encantado – Tesla - 198 State Rd. 592 – Level 2 Charger
- De Vargas Center – 564 N Guadalupe St. – DC Fast Charger

- Santa Fe Mini Cooper – 2544 Camino Edward Ortiz – Level 2 Charger

Electric Charging Stations Outside Santa Fe and Albuquerque - Public

- Hampton Inn – Tesla - 111 Twin Buttes Rd, Gallup, NM – DC Fast Charger
- Marriott Towneplace Suites - Tesla - 4200 Sierra Vista Dr. Farmington – DC Fast Charger
- Casa Blanca Inn – Tesla – 505 E. La Plata St., Farmington – Level 2 Charger
- Comfort Inn – Tesla - 2500 N Grand Ave, Las Vegas – DC Fast Charger
- Holiday Inn Express – Tesla - 2516 Historic Route 66, Santa Rosa – DC Fast Charger
- Holiday Inn Express – Tesla - 2624 S Adams St, Tucumcari – DC Fast Charger
- The Blue Swallow Motel – Tesla – 815 E. Route 66 Blvd., Tucumcari – Level 2 Charger
- City of Las Cruces City Hall – Tesla – 700 N. Main, Las Cruces – Level 2 Charger
- Best Western Socorro Hotel and Suites – Tesla – 1100 N. California St., Socorro – Level 2 Charger
- Blake Hotel – 106 Sutton Pl., Taos Ski Valley – Level 2 Charger
- Taos Mesa Brewery Taproom, 10 Thunderbird Rd., Taos Ski Valley – Level 2 Charger
- Adobe & Pines Inn – Tesla – 4107 State Rd. 68, Ranchos de Taos – Level 2 Charger
- Comfort Inn – Tesla – 2709 Sudderth Dr., Ruidoso – Level 2 Charger
- Hotel Ruidoso – Tesla – 110 Chase St., Ruidoso – Level 2 Charger
- Murray Ryan Visitor Center – 201 N Hudson St., Silver City – Level 2 Charger
- Bluewater Lake State Park – NM 412, Prewitt – Level 2 Charger
- Otero County Electric Co-op – 404 Burro Ave., Cloudcroft – Level 2 Charger
- Aztec City Hall – 110 Ash St., Aztec – Level 2 Charger
- Holiday Inn Express and Suites – Tesla – 2201 F.G. Amin St., Truth or Consequences – DC Fast Charger
- 5R Travel Center – Tesla – 1695 Highway 180 – DC Fast Charger
- Facebook Data Center – 4250 Messenger Loop NW, Los Lunas – Level 2 Charger

Waste Isolation Pilot Plant

The Department has oversight of the Cooperative Agreement and annual funding for the state Waste

Isolation Pilot Plant (WIPP) program provided by DOE. The agreement is a partnership between DOE, EMNRD, and six state agencies charged with ensuring the safe and uneventful transportation of transuranic (TRU) waste in New Mexico. The Department and five agencies make up the working group and provide the following:

- The Department of Homeland Security and Emergency Management (DHSEM) provides equipment training to volunteer fire departments and emergency managers along the WIPP route, as well as ensuring equipment is calibrated
- The Department of Public Safety (DPS) provides point of origin inspections for all shipments, Level VI inspections for TRU waste entering the state, training of emergency response officers (ERO) for hazmat situations, and management of the state dosimetry program
- The Department of Health provides donning and doffing of hazmat suits, and decontamination of radiation training to hospitals and clinics along the WIPP route
- The New Mexico Environment Department provides sampling data along the WIPP route and assists the DOH in training hospitals and clinics
- The State Fire Marshal's Office provides training to fire services in hazmat awareness and operations along the WIPP route
- The Department of Transportation (unfunded in the Cooperative Agreement) provides oversight on roadway safety and manages funding provided directly to the department for road repair
- Since the restart of shipments in April 2017, the WIPP Transportation Safety Program has trained more than 2,500 responders and medical personnel and provided over 44,000 training hours. The Department continues to monitor the shipments, ensuring each one is tracked in real-time. Currently, the projected weekly shipments range is from 5-8, not to exceed 10. The DOE has completed more than 12,000 shipments to the WIPP since it began shipping in 1999. The State of New Mexico has inspected each of those shipments, maintaining a high pool of inspectors ready to respond.

The Department completed the Roswell/Chaves County WIPP Transportation Exercises (WIPPTREX) in 2018. The purpose of each exercise is to ensure that training and response funded under the Cooperative Agreement meet the goals and objectives of the WIPP Transportation Safety Plan Implementation Guide. During the ten-month preparation more than 200 personnel were trained in radiological and hazardous materials awareness, response, and operations. The WIPPTREX was a two-day rodeo style event with over 120 personnel participating to include two hospitals, three clinics, and players from the New Mexico Military Institute Youth Challenge Program.

The Department worked with the DOE Carlsbad Field Office (CBFO) and the NM Department of Transportation (DOT) to route shipments away from the SR-285 corridor and onto the Jal alternate designated route for safety reasons. The Jal route enters from Andrews, Texas on Highway 176, south on Highway 18, and West across Highway 128 to the WIPP site. The Department will continue to work with the DOE-CBFO and Lea County to gain access to the Hobbs bypass for TRU waste shipments.

The WIPP Transportation program continues its focus on local and state response to a radiological event involving a WIPP shipment. The Working Group met with Raton/Colfax County personnel in November 2018 to commence planning the next WIPPTREX. Additionally, in collaboration with the DOE-CBFO, local law enforcement, the NM Law Enforcement Academy, and the State Fire Academy, the Working Group will develop a local law enforcement hazardous materials awareness course. This course will help local law enforcement establish the scene for hazmat response. The Department continues its evaluation and audit of the program to ensure that it and each Department funded under the Joint Powers Agreement are meeting the deliverables defined within the Project Workplan Cooperative Agreement.

Western Interstate Energy Board Radioactive High-Level Waste Committee

New Mexico is now represented on the Western Interstate Energy Board (WIEB) with the Cabinet Secretary as the governor's designated member. The Department continues to participate in committee meetings concerning radioactive materials storage and transportation. The DOE suspended meeting with states and tribes regarding the development of a Spent Nuclear Fuel (SNF) transportation program. The WIEB HLRW committee is in the process of developing

Policy and Recommendations to the DOE regarding the shipment and interim storage of SNF with nine papers approved by the Board. Three states (NM, TX, WY) have entities that have expressed interest in becoming interim storage sites for SNF. New Mexico and Texas each have a private entity with an application submitted to the Nuclear Regulatory Commission (NRC) to store spent nuclear fuel.

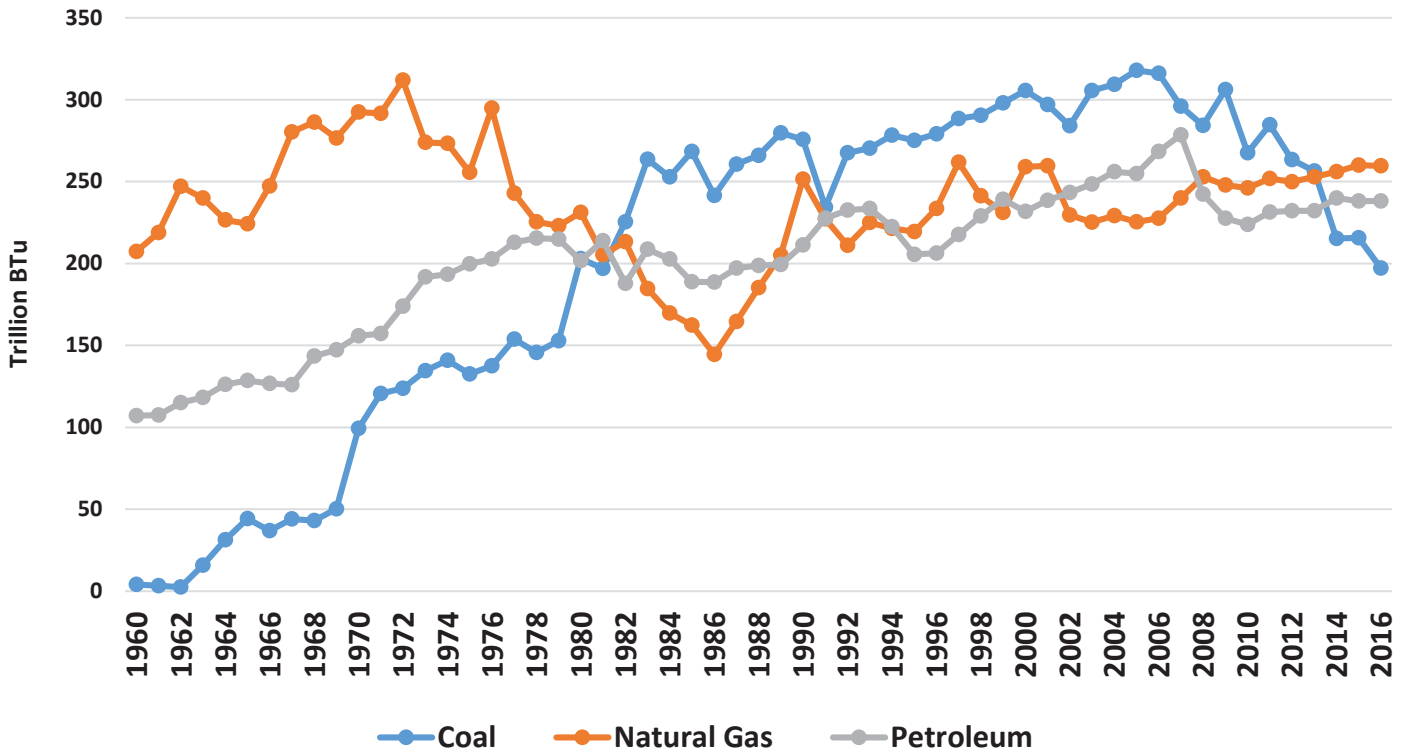
Data & Statistics:

Energy Consumption by Source

In 2016, the latest data available, total New Mexico energy consumption was 753 trillion BTU (tBTU). Most of the energy consumed in the state came from natural gas, petroleum and coal, each of the three fuels, historically, making up about 30 percent of total energy consumption. However, for the first time since 1981, coal consumption fell below the 200 tBTU level. As of 2016, coal contributed approximately 26 percent of New Mexico's total energy consumption. This trend will continue downward with the 2017 retirement of two generating units, representing over 800 MW of coal-fueled electric generating capacity, at the San Juan Generating Station. Most of the oil is used in the transportation sector, while coal is dedicated to electricity generation. Natural gas is used both for heating and in an increasing proportion of the state's electricity generation. Renewable energy contributed almost 8 percent or 58.3 tBTU of New Mexico's energy consumption and it is primarily used in the transportation (fuel ethanol) and electricity sectors.

In support of the Energy Roadmap Project's baselining efforts, Lawrence Livermore National Laboratory created a Sankey Diagram that displays the flow of energy in New Mexico during 2016. The Sankey Diagram can be found on the ECMD website.

Fossil Fuel Consumption in NM 1960-2016



Fossil Fuel Consumption in New Mexico 1960-2016, all sectors
 [Source DOE Energy Information Administration]

Energy Consumption by Sector: 2016 net energy consumption for in-state needs was 667.8 tBTU, after subtracting the fuels consumed in-state for exported electricity generation, which for the second year in a row has remained below 1970 levels. When looked at by end-user, the industrial and transportation sectors consume the most energy in New Mexico, followed by the commercial and residential sectors. All sectors saw a decrease in energy consumption from the previous year. Compared to national averages, residential users in New Mexico use less energy per capita while all other sectors in New Mexico use more energy per capita, particularly the transportation sector.

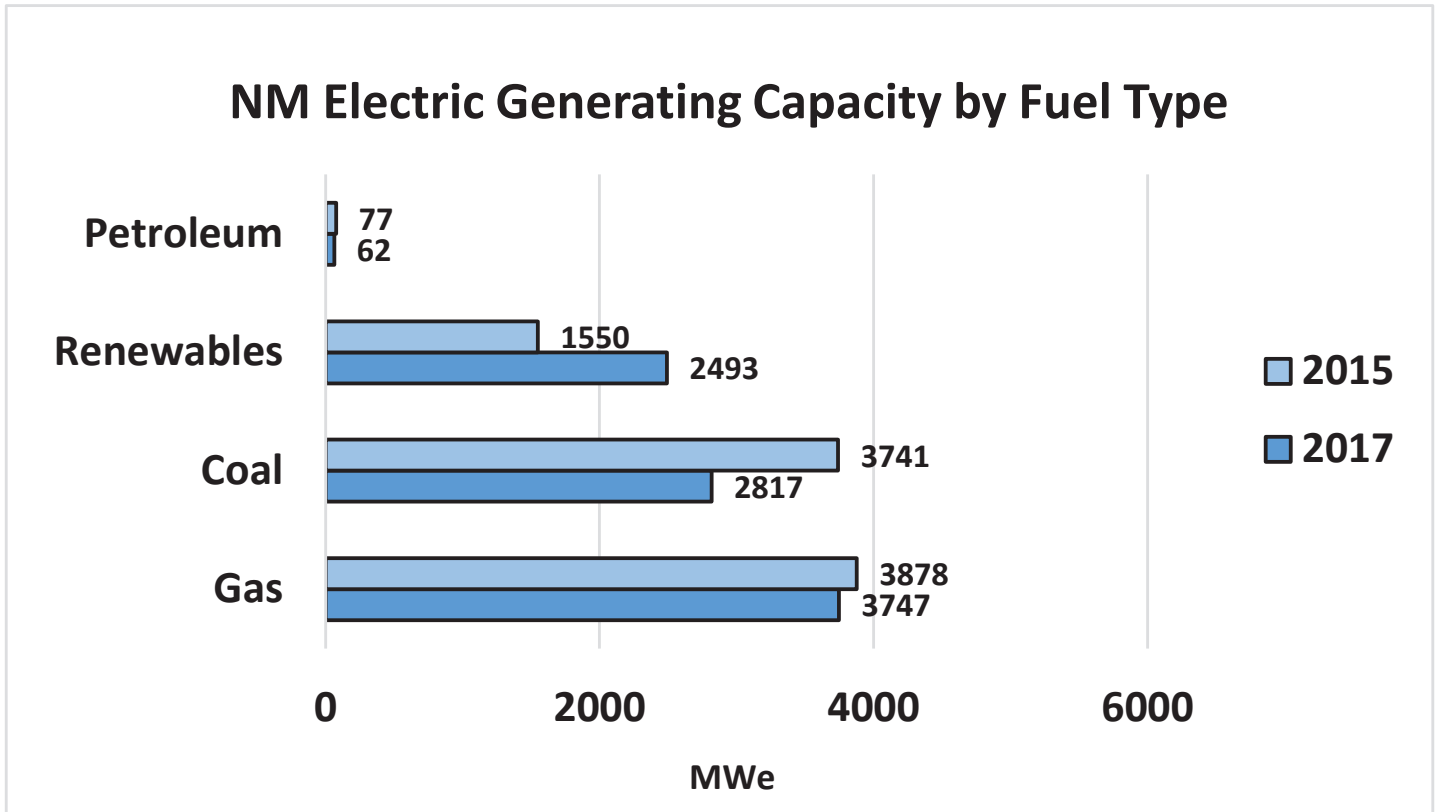
Energy consumption per capita, 2016	New Mexico (million BTU)	National Average (million BTU)	Difference from National Average	National Rank*
Residential	54.3	62	-12%	46
Commercial	59.1	55.6	6%	24
Industrial	107.2	97.3	10%	19
Transportation	99.5	86	16%	16
Total consumption	320.2	300.9	6%	21

2016 energy consumption per capita by sector, compared to national averages [Source: DOE Energy Information Administration]

*For the national rank category, number 1 uses the most energy per capita (number 51 would be the lowest per capita energy user, as rankings include the District of Columbia).

Energy Production -

The figure below depicts the New Mexico electric generating capacity by fuel type as of the end of 2015 and 2017. Only renewable energy capacity experienced an increase between the two years. Renewable resources are further broken out in the following section.



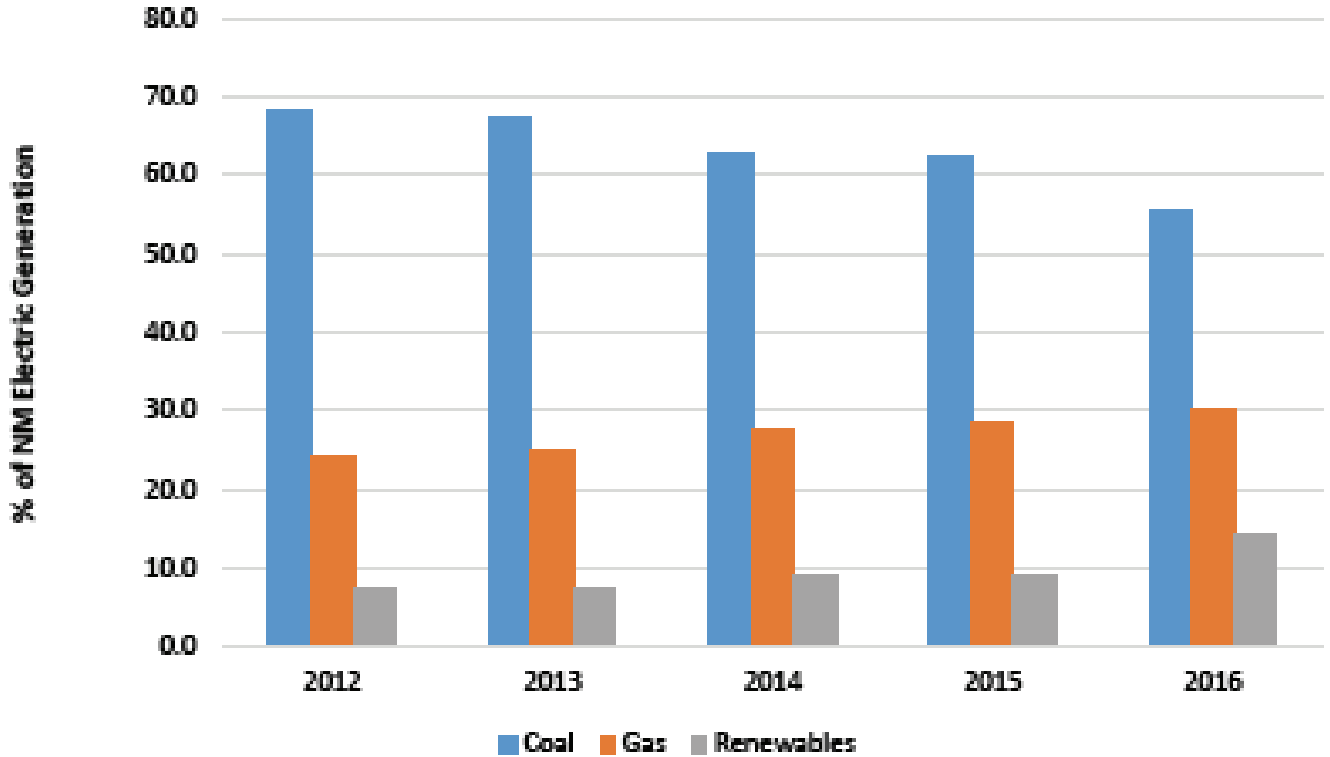
Installed nameplate capacity of electric generation in New Mexico by primary fuel type (2015 and 2017). [Source: DOE Energy Information Administration]

Net-electric generation in New Mexico by primary fuel type (2012-2016). [Source: DOE Energy Information Administration]

The following figure shows the change in energy source consumption (i.e. fuel mix) that has occurred in the electric power sector over the past five years. In 2016, net electric generation in New Mexico from each major fuel type was 56 percent coal, 30 percent natural gas, and 14 percent renewable energy. 2016 was the first year in which renewable energy contributed over 10 percent to the state's annual net electric power generation.

Renewable Energy

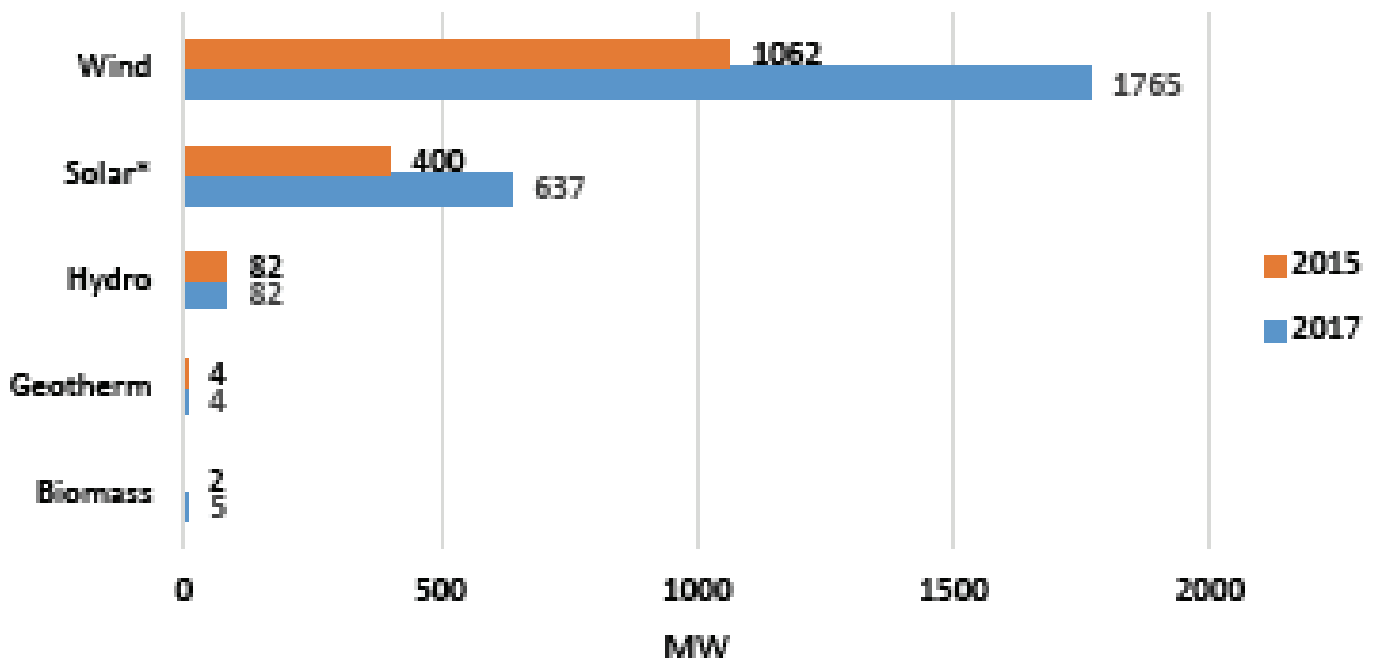
New Mexico Net-Electric Generation By Fuel Type 2012-2016



Of the total renewable electricity produced in 2016, 77 percent was from wind, 19 percent was from solar, and 3 percent was from hydroelectric power, with biomass and geothermal energy making up the remaining 1 percent. New Mexico continues to expand its renewable electric generating capacity. According to the American Wind Energy Association, in 2017, wind energy grew faster in New Mexico than in any other state. The graph below visualizes the growth in both wind and solar from 2015 to 2017. In addition, the state's only geothermal power plant is in the process of increasing capacity by 150 percent and thus add more renewable baseload power to the grid by early 2019.

The rapid growth in renewable energy installed capacity has subsequently resulted in rapid increases in renewable

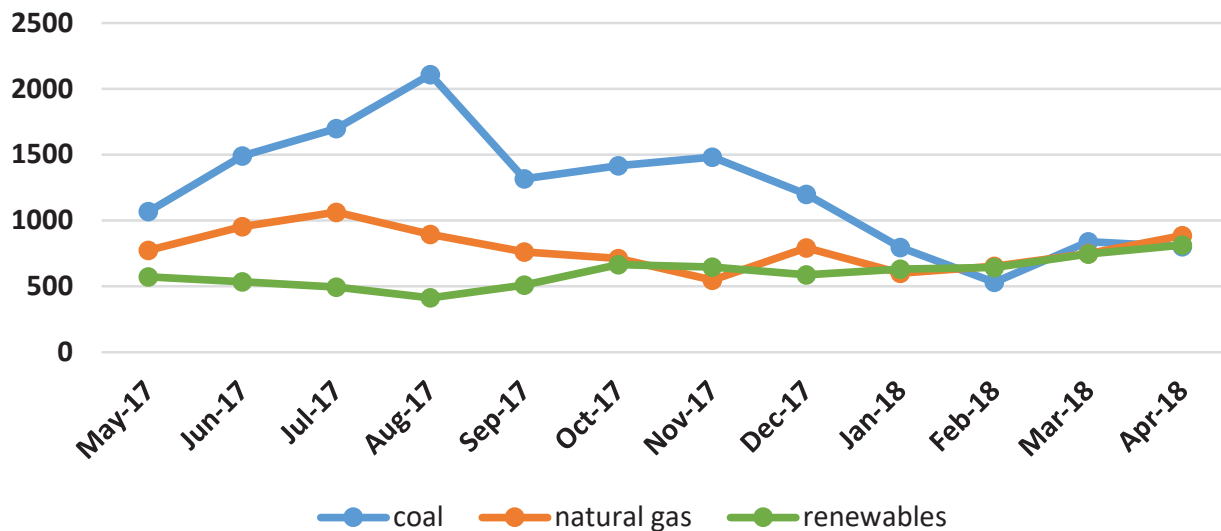
NM Renewable Electric Generating Capacity



electricity generation. During the entire first quarter (January-March) of 2018, renewable energy accounted for more than 30 percent of all electric generation in New Mexico and in April 2018, renewable electricity generated (814 Gwh) in New Mexico equaled more than 45 percent of all electricity consumed in the state during that month (1776 Gwh). The chart below illustrated the growing diversity of the state’s electricity generation.

According to Lawrence Berkeley National Laboratory, New Mexico utilities failed to meet their overall Renewable Portfolio

Net Electricity Generation in New Mexico by Fuel Type



Monthly net electricity generation by fuel type, May 2017 through April 2018. Conventional Hydroelectric data is not available and thus not included for months in 2018. [Source: DOE Energy Information Administration]

Standard (RPS) in 2017. The 2017 RPS for Investor Owned Utilities (IOUs) requires that 15 percent of all non-exempt retail electricity sales be generated from renewable sources. Starting in 2015, the requirement for Rural Electric Cooperatives was 5 percent, increasing 1 percent per year and Municipal Utilities are exempt from the RPS requirements. The RPS regulations also include diversity targets for IOUs which were not met in 2017. The table below shows RPS compliance data for the last five years of available data. The RPS obligation (target) listed in the table is a gross value and does not account for the, IOU applicable, large customer deduction from the RPS obligation.

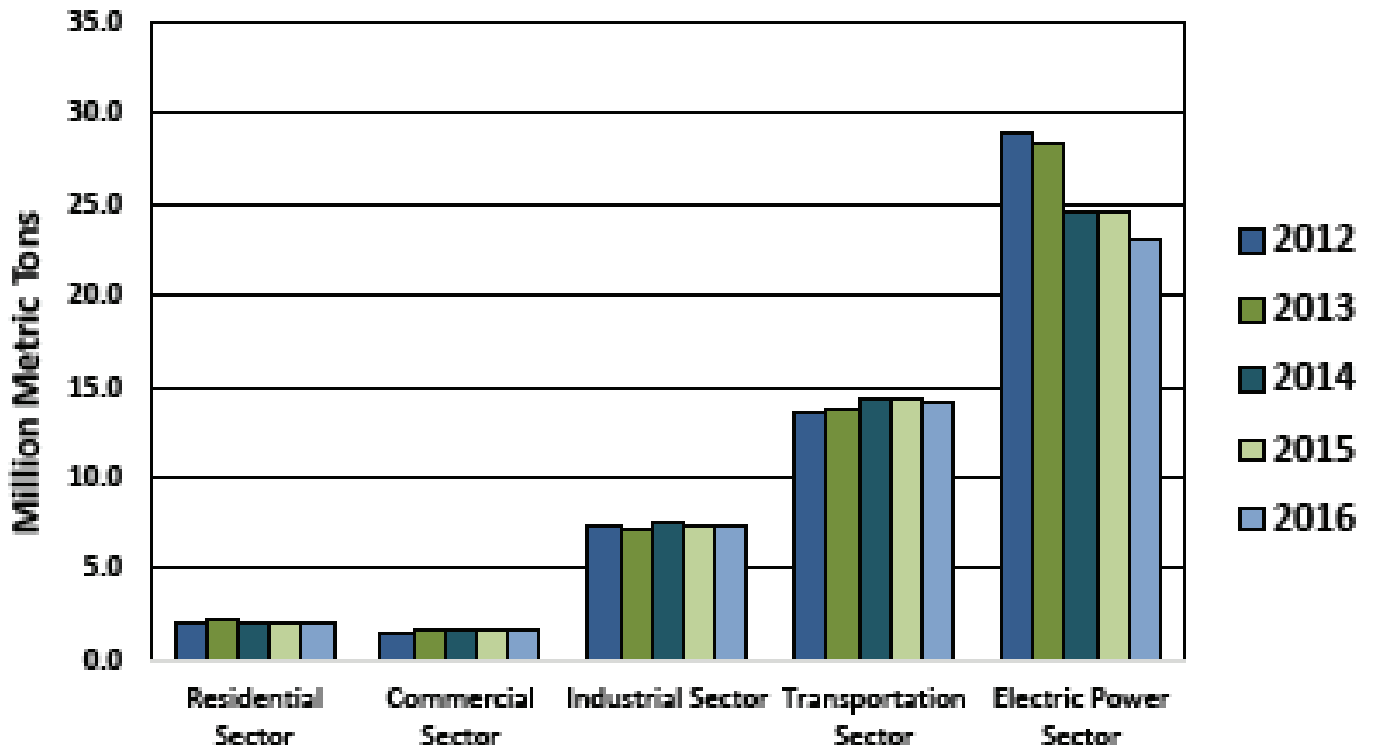
RPS Compliance Summary for New Mexico [Source: Lawrence Berkeley National Laboratory]

	Reported RPS Obligation - Prior to Deductions (MWh)				
	2013	2014	2015	2016	2017
Total RPS Obligation	1,504,299	1,492,148	2,495,653	2,556,798	2,593,274
Wind Carve-Out (30%)	451,290	447,644	672,285	677,586	678,902
Solar Carve-Out (20%)	300,860	298,430	448,190	451,724	452,602
Biomass/Other Carve Out (5%)	72,215	74,607	112,048	112,931	113,150
Distributed Generation (DG) Carve Out (1.5% 2013-2014 and 3% in 2015-2017)	22,564	22,382	67,229	67,759	67,890
RPS Achievement (% of RPS Obligations)					
Total RPS	89%	92%	80%	86%	83%
Wind	100%	100%	100%	89%	89%
Solar	77%	100%	90%	89%	86%
Biomass/Other	0%	15%	13%	14%	12%
DG	100%	100%	84%	85%	83%

Electricity and Water Use - The electricity sector uses large quantities of water for cooling of thermal (coal and natural gas) and nuclear generation facilities. While there are no nuclear generating facilities in New Mexico, Public Service Company of New Mexico and El Paso Electric own and purchase power from Palo Verde, a nuclear generating station in Arizona.

While most solar and all current wind technologies do not require any water for operation, other traditional power generating facilities (e.g., coal, gas, biomass or nuclear), geothermal and concentrated solar facilities that generate power by producing steam to turn a steam turbine generator use water at varying rates. The bulk of a steam plant's water consumption is used to condense the steam in the steam cycle and to cool mechanical and electrical equipment. The rate of water usage, on a gallon per megawatt-hour basis, depends on many variables including available water quality, water treatment systems and environmental discharge limits where applicable. Peaking plants that operate only gas/oil turbine engines to generate power directly through the mechanical motion of the engine consume less water due to the absence of the steam cycle. In addition, facilities (steam cycle or no steam cycle) equipped with "dry cooling" or hybrid cooling use the least water of all, but these systems can compromise plant efficiency.

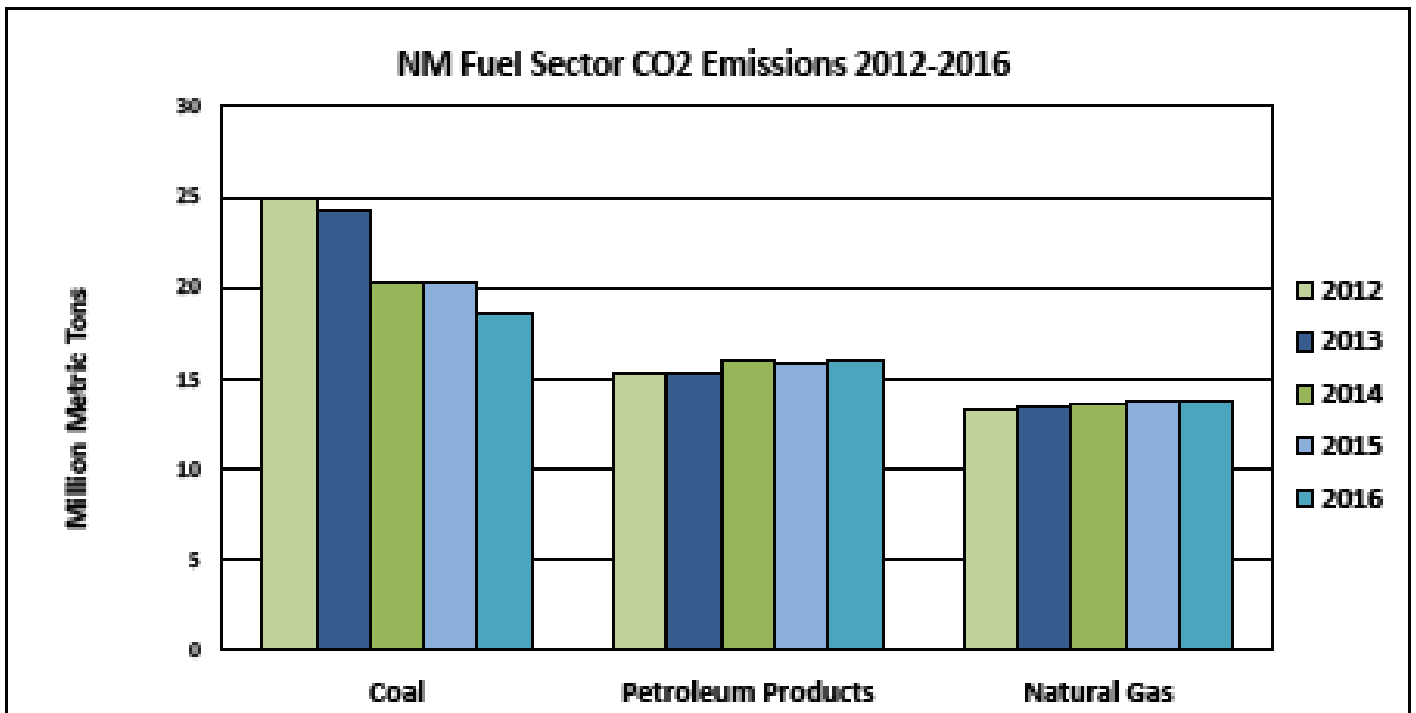
NM Energy Sector CO2 Emissions 2012-2016



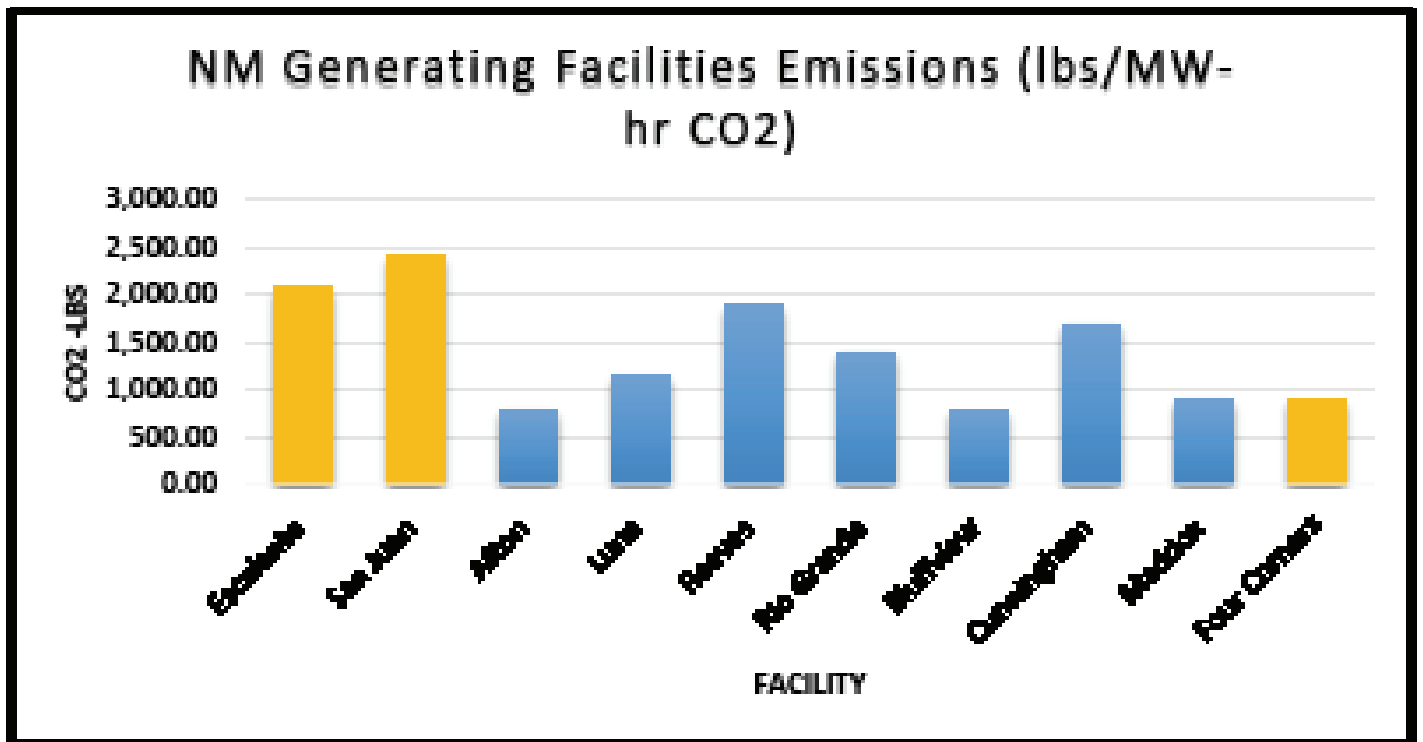
Carbon Dioxide Emissions - Despite the repeal of the Clean Power Plan in 2017, carbon dioxide (CO₂) emissions related to energy production have fallen since 2013. The chart below shows the CO₂ emissions for the state. As the chart below shows, CO₂ emissions have increased slightly or stayed relatively the same for all sectors except for electric power.

Source: DOE Energy Information Administration

New Mexico has three coal-fired power plants and 18 natural gas-fired power plants. Of the two fuel types, the state has seen some reduction in CO₂ emissions from the coal-fired power plants over the last five (5) years and relatively little



change in CO2 emissions for the natural gas facilities. The two charts below show a comparison of the CO2 emissions



Source: EPA Facility Level Information on Greenhouse Gases Tool (flight)

Energy, Minerals & Natural Resources Department

Data and Statistics: Collected and published pursuant to the authority of the New Mexico Energy, Minerals and Natural Resources Department:
NMSA 1978, Sections:

69-5-7 (1933, as amended through 2007)
69-11-1 (1933, as amended through 1989)
69-11-2 (1933, as amended through 1989)
69-11-3 (1933, as amended through 1989)
69-25A-10 (1979)
69-26-1 (1933, as amended through 1989)
69-26-2 (1933, as amended through 1989)
69-26-3 (1933, as amended through 1989)
70-2-12 (1978, as amended through 2004)

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www.emnrd.state.nm.us

Acknowledgments:

Teams make it happen at EMNRD—thank you to Lauren Aguilar, Graphic Designer; Division authors and editors Scott Dawson, Jane Tabor, Christina Cordova, Jeremy Lewis and Wendy Mason; and to the private and public organizations and individuals who contributed to this document.

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