

e m n r d



2020
ANNUAL REPORT

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Message from Cabinet Secretary

Sarah Cottrell Propst



January 2020 began like most at the Energy, Minerals and Natural Resources Department. We prepared for the legislative session and identified top priorities for the year. The 2020 legislative session brought important legislative victories, but shortly thereafter everything changed due to the COVID-19 pandemic.

In mid-March almost all of New Mexico state government transitioned to working from home for the duration of the pandemic. I'm incredibly proud of how our staff have responded to working under COVID-safe practices. Our state park rangers have enforced public health order requirements with patience and safety top of mind. Our engineers and policy professionals are processing solar tax credits at an impressive rate. Mining and oil and gas inspectors are protecting public health and the environment. Our forests continue to be managed to adapt to a changing climate. Through it all, our administrative, information technology, and legal professionals found new ways to be productive and efficient as they supported the Department's mission. Our ability to continue to meet our statutory requirements while also implementing innovative new rules and procedures would simply have not been possible without the continued efforts of our Information Technology Office who have done incredible work throughout.

In addition to accomplishing our important work under unusual circumstances, I'm especially proud of our progress implementing the Governor's Executive Order (EO) on Addressing Climate Change and Energy Waste Prevention (EO 2019-003). After more than a year of public outreach activities, the Oil Conservation Division proposed robust rules that will be part of a statewide regulatory framework to reduce oil and gas sector methane emissions and to prevent waste from new and existing sources. This proposed rule will undergo a public hearing in front of the Oil Conservation Commission in early 2021. Pursuant to the EO, the Energy Conservation and Management Division supported adoption of the 2018 International Energy Conservation Code that will result in substantial emissions reductions and energy savings in the built environment. The 2020 "New Mexico Climate Strategy" report details our progress under the EO and also provides a clear, data-driven picture of the work left to do.

During the 2020 legislative session, a number of important climate and energy bills that EMNRD championed became law. The Solar Market Development Income Tax Credit and the Energy Grid Modernization Roadmap go hand in hand in expanding renewable energy. The solar tax credit reinstates a popular program aimed at making solar panel installation more affordable for more New Mexicans. We wasted no time in starting development of a grid modernization roadmap, convening a task force of experts from across the state to advise us on modernizing our electric grid.

Throughout this difficult year, we have never lost sight of our mission. I look forward to the time when we can all meet in person again. Despite the challenges of 2020, EMNRD continues to evolve into a more transparent, efficient, and science-driven department. I'm proud to present the work we've accomplished over the past calendar year in this Annual Report.

A handwritten signature in blue ink that reads "Sarah Cottrell Propst". The signature is fluid and cursive.

Cabinet Secretary
Sarah Cottrell Propst

Office of the Secretary

The Office of the Secretary (OFS) oversees all divisions within the Department, and includes the Office of Information Technology, the Public Information Office, and the Office of General Counsel. OFS provides overall policy direction, strategic direction, and measures program performance for the Department. OFS is also the main liaison between the Department and the Governor, other state agencies, and legislators.

Public Information Office

The Public Information Office fields media requests, creates and approves of all marketing materials, and works closely with all Divisions to promote programs. This office writes speeches for public events, distributes press releases, and promotes the work of the Department through the website, publications, and events. The Public Information Office also provides guidance to Divisions on overall communications messaging.

Information and Technology Office

The Information and Technology Office (ITO) is the central information technology and information systems provider for the Department's employees across the state. It employs 21 technical positions that are responsible for maintaining and supporting the Department's computer systems, network telecommunications infrastructure, and application development needs. They have played an especially crucial part in our work this year as most of the Department transitioned to telework.

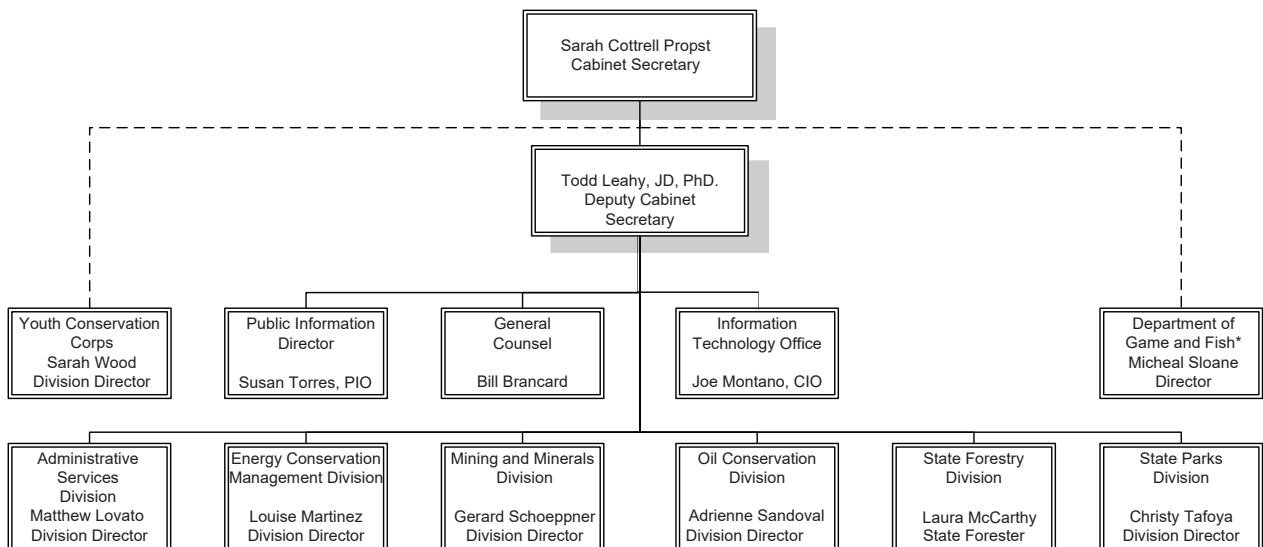
Office of General Counsel

The Office of General Counsel manages the legal affairs for the entire Department. This office reviews contracts, represents the Department in administrative and judicial proceedings, drafts and analyzes proposed legislation and rules, and assists with other legal matters as necessary.

Administrative Services

The Administrative Services Division (ASD) supports the day to day functions of the Department. Responsible for EMNRD's finances and property, the Division manages the budget, procurement, accounting, grant reporting, and processes payment vouchers, travel documents, purchase orders, and more. Crucially, ASD coordinates the annual financial audit and prepares the annual financial statement. ASD also manages the HR Department and is the primary liaison between EMNRD and the State Personnel Office.

Energy, Minerals and Natural Resources Department



* Administratively attached with no direct budget support from EMNRD.



Energy Conservation and Management Division

The Energy Conservation and Management Division's (ECMD) resiliency and innovation enabled several priority initiatives during this tumultuous year. Highlights include establishing a Grid Modernization Advisory Group, the adoption of new building codes, and implementation of new tax credits.



While the COVID-19 pandemic challenged New Mexico as a whole and the clean energy industry in particular, the state continued to prove it is a progressive leader in clean energy expansion. According to the 2020 State Energy Efficiency Scorecard, released yearly by the American Council for an Energy Efficient Economy (ACEEE), New Mexico had the biggest jump in ranking amongst states, moving up in rank from 33 to 24. This positive result is due to utilities strengthening their energy efficiency programs, building codes being updated, and 2019 legislation that requires public utilities to submit electric vehicle infrastructure plans by 2021.

Grid Modernization

In 2020, ECMD convened the Grid Modernization Advisory Group (GMAG) to begin plotting a roadmap for modernizing New Mexico's electric grid. ECMD staff developed a structure to engage experts across the state in this complex process remotely. As explained in this report, the effort culminated in a set of actionable recommendations.

Building Code Adoption

A second major accomplishment in 2020 was the adoption of new energy codes in the building industry. ECMD staff was instrumental in guiding the code adoption process by collaborating with stakeholder groups, providing technical review, and communicating the outcomes. This report provides more details about the new building code and the expected reductions in construction costs and greenhouse gas emissions.

Economic and Energy Diversification

To help New Mexico in both COVID-19 recovery and long-term economic diversification, ECMD, in partnership with the New Mexico Economic Development Department, applied for and received a U.S. Department of Commerce Economic Development Administration grant that will fund an Economic and Energy Diversification Coordinator position in ECMD. This position will focus on recruiting and supporting renewable energy companies, and on providing technical support and educational training related to creating jobs in the clean energy sector.

Clean Energy Tax Incentives

Additionally, ECMD developed rules to implement two clean energy tax credits that were enacted in the 2020 legislative session. A new Solar Market Development Tax Credit is now available to incentivize the purchase and installation of photovoltaic or solar thermal systems in a business, agricultural enterprise, or residence. The Agricultural Biomass Tax Credit Program was extended to 2030 to encourage the development of business opportunities for generating electricity from dairy waste. ECMD staff continues to improve the administrative architecture and process for administering these credits, with an eye toward evaluating these programs in the future.

The devoted subject matter experts within ECMD remain as committed as ever to expanding our mission to develop and implement effective clean energy programs, to promote economic growth, environmental sustainability, and energy efficiency that leads to the wise stewardship of our natural resources while protecting public health and safety for New Mexico and its citizens.

Louise Martinez, ECMD Division Director



Energy Conservation and Management Division

MISSION: The Energy Conservation and Management Division (ECMD) plans and administers clean energy programs for New Mexico. These programs focus on renewable energy, energy efficiency, and alternative and clean fuel transportation. They promote both economic growth and environmental sustainability in the state. ECMD's programs help to reduce energy consumption and expenditures; generate new jobs and revenues; protect the environment by reducing emissions of air pollutants and greenhouse gases; enhance public health; decrease consumptive water use in power generation; lessen our dependence on foreign oil; and provide greater energy security.

STAFFING

- 18 staff positions
 - 3 professional engineering staff for technical support and technology evaluation
 - 9 program management staff in energy efficiency, renewable energy, alternative fuels
 - 2 WIPP staff for safe transportation of transuranic waste
 - 4 administration and services

ECMD administers statutory programs in the following areas:

- Renewable Energy: Solar, wind, geothermal, biomass, and energy storage technology applications in all sectors; distributed energy technologies such as residential solar and co-generation (combined heat and power) systems.
- Energy Efficiency: Technology applications such as energy control systems and efficient lighting, motors and appliances, as well as behavioral practices, that reduce energy use and costs in buildings and the transportation sector; residential and commercial building energy codes and standards.
- Alternative Transportation and Clean Fuels: Ridesharing and carpooling; park-and-ride programs; vehicles and infrastructure for electric vehicles, clean-burning fuels such as compressed natural gas (CNG), propane, and biodiesel.

Administering and operating these programs requires ECMD to perform policy research and planning, engage in state and federal legislative activity, collect and analyze data, perform public education and outreach, provide technical assistance, administer federal grants for the deployment and demonstration of new technology, coordinate across departments and state agencies, and develop, implement, and

evaluate projects with both public and private sector partners.

ECMD provides oversight for clean energy tax incentive programs, collaborates with state, regional and national organizations related to climate action initiatives, administers federal grant programs, develops and manages regulations for implementation of geothermal resource development, collaborates with energy industry stakeholders and regulatory agencies on energy issues, reviews technical studies to provide certifications as required by law, provides third party oversight of performance contract projects, manages and administers policies for safe transportation of radioactive waste, compiles reports required under existing federal and state legislation, and reviews and monitors clean energy projects.

NEW MEXICO STATE ENERGY EFFICIENCY SCORECARD

According to the 2020 State Energy Efficiency Scorecard, released yearly by the American Council for an Energy Efficient Economy (ACEEE), New Mexico had the biggest jump in ranking amongst states, moving up in rank from 33 to 24. New Mexico moved forward on a number of important efficiency initiatives in the wake of a pivotal 2019 legislative session. Utilities are also strengthening efficiency programs in response to changes to the Efficient Use of Energy Act [NMSA 1978, § 62-17-1 et seq], which set a new energy savings target of 5% by 2020, raised the cap on efficiency spending, and enables decoupling, a type of utility rate design which in effect removes any disincentive for utilities to encourage energy savings among customers. Additionally, an executive order signed by the governor last year (EO 2019-003) moved the state to replace its long-outdated energy codes for new construction with the latest 2018 IECC model codes, turning the corner for buildings sector

efficiency. The governor has also called for the state's adoption of stronger fuel economy standards in 2020 which will be aided by the 2019 legislation titled PRC Application for Vehicle Electricity which requires public utilities to submit electric vehicle infrastructure plans to the Public Regulation Commission by 2021 and refile them every two years thereafter.

CLIMATE POLICY ACTION

In January 2019, Governor Lujan Grisham issued Executive Order 2019-003 on Climate Change and Waste Prevention, which created the state [Interagency Climate Change Task Force](#) (the Task Force) and included directives for agencies to incorporate climate adaptation practices into their policies and operations. ECMD's Sustainability and Resilience Program supports the Task Force through coordination, technical assistance, planning, and policy development. This program supports interagency work to reduce greenhouse gas emissions from electricity generation, transportation, industry, the built environment, and natural and working lands. Reducing these emissions contributes to climate change mitigation. The program also coordinates interagency efforts to integrate adaptation and resilience practices to (a) ensure the long-term sustainability and resilience of New Mexico and its infrastructure and resources; (b) prepare the state for climate change; (c) reduce the vulnerability of natural and built systems, economic sectors, natural resources and communities to risks; (d) promote long-term water and energy resource security; and (e) support state economic development and diversification.

Following the completion of the 2019 New Mexico Climate Strategy report, the Program created and continues to coordinate nine Climate Action Teams (CATs) within the Task Force. Five teams—Clean and Efficient Electricity and Buildings; Transportation Decarbonization; Industrial and Oil and Gas; and State Leadership primarily focus on reducing emissions. The other five focus primarily on resilience and adaptation. These teams are Economic Transition; Sustainable Infrastructure and Planning; Natural and Working Lands; Emergency Management, Health, and Resilience; and Cultural Heritage. Each team has two agency co-leads and maintains an internal working Climate Action Plan to document ongoing work and new initiatives as they arise.



Clean Electricity and Grid Modernization



Decarbonizing Transportation



Energy Efficiency



Methane

REDUCING GREENHOUSE GAS LEVELS



Climate Hub: Data, Outreach, & State Leadership



Economic Transition



Natural and Working Lands



Sustainable Infrastructure and Planning



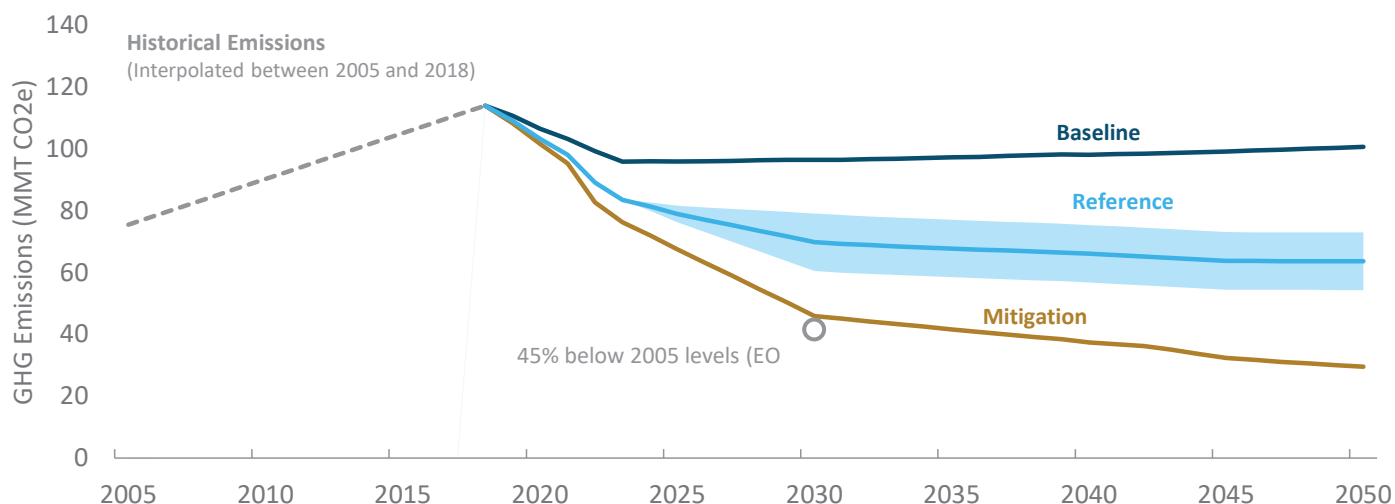
Emergency Management, Health, and Resilience



Cultural Heritage

ADAPTATION AND RESILIENCE

Figure 1. Climate Action Teams of the New Mexico Climate Change Task Force



Source: CSU Emissions Study. Baseline scenario represents policies in place in 2018; Current Policy represents current and pending policies resulting from EO 2019-003 and indicates range of possible effects of oil and gas sector regulation; Mitigation scenario represents level of ambition necessary to approach 2030 emissions reduction goal. For additional detail on policy assumptions, see the report at <https://cnee.colostate.edu/repowering-western-economy/>

ECMD staff facilitated Climate Action Plan development and used these plans to complete the 2020 New Mexico Climate Strategy report released in October 2020. This report documents climate progress and commitments across agencies and Climate Action Teams and includes new data on New Mexico's current and projected greenhouse gas emissions. These new data come from a study by the Colorado State University's Center for the New Energy Economy (CSU) on New Mexico's greenhouse gas emissions sources from 2005 to 2030. ECMD coordinated with CSU to produce this study, which found that current and proposed policies stemming from EO 2019-003 will reduce emissions significantly by 2030, and that the state will need to take extensive additional action to reach our target of reducing emissions 45% below 2005 levels by 2030.

ECMD has also contracted with the Earth Data Analysis Center (EDAC) at the University of New Mexico to develop a Climate Risk Mapping Tool to help agency and local government staff identify climate related hazards, vulnerability, and mitigation resources. This project is expected to be completed in February 2021. ECMD hired a Resilience Coordinator in October 2020 to support this project and other assignments pertaining to climate adaptation and resilience.

CONVENING EXPERTS AND THE PUBLIC ON CLEAN ENERGY

CAT Listening Sessions

Through the Climate Action Teams within the Task Force, ECMD staff convened three virtual stakeholder listening sessions on clean energy and energy efficiency, on transportation and sustainable infrastructure and planning, and on agriculture. The stakeholder meetings were held in collaboration with New Mexico Department of Transportation (NMDOT), New Mexico Environment Department (NMED), and New Mexico Department of Agriculture (NMDA). ECMD also conducted outreach to New Mexico's Metropolitan Planning Organizations, Regional Transportation Planning Organizations, and Councils of Governments to provide information on state climate efforts and learn what actions state agencies can take to enable climate action at the local level.

ECMD has also worked with the Consensus Building Institute on a project supported by the U.S. Climate Alliance to determine a strategy for continued Climate Change Task Force stakeholder engagement. This

¹Sharad Bharadwaj et al., "New Mexico Greenhouse Gas (GHG) Emissions Inventory and Forecast" (Prepared for Center for the New Energy Economy at Colorado State University by Energy and Environmental Economics, Inc., October 27, 2020), <https://cnee.colostate.edu/repowering-western-economy/>.

strategy will guide Climate Action Teams' planning updates for 2021 and ensure all teams understand and consider the equity implications of proposed climate policies and programs.

Grid Modernization

In early 2020, the New Mexico Legislature passed House Bill 233, the Grid Modernization Roadmap and Grant Program Act [NMSA 1978, § 71-11-1 and § 71-11-2.]. The law instructed EMNRD to draft a stakeholder-driven, research-based plan for upgrading New Mexico's electric grid to accommodate the transition to clean energy resources. ECMD staff worked throughout the summer to develop the roadmap stakeholder engagement plan, recruit participants, and draft a Baseline Report of New Mexico's electricity sector. The Grid Modernization Advisory Group (GMAG), comprised of representatives from investor-owned utilities, rural electric cooperatives, NGOs, Sandia National Laboratories, energy developers, and other policymakers, met regularly throughout September and October, with a final culminating meeting in December. The GMAG articulated big-picture drivers for grid modernization, envisioned operational and physical goals for the grid, and drafted technical whitepapers on specific action items. The GMAG identified feasible and impactful technical, regulatory, policy, and economic solutions for making electricity clean, affordable, reliable, and secure. The draft roadmap and supporting documentation will be available for review starting in early 2021. The 10-year horizon roadmap is expected to be finalized in April 2021, after which ECMD expects to convene a monthly working group to oversee implementation.

National Community Solar Partnership

The National Community Solar Partnership (NCSP), a U.S. Department of Energy program, selected ECMD as a technical assistance recipient for 2020. The NCSP program goal is to expand affordable community solar access to every American household by 2025. ECMD used this opportunity to neutrally explore proposal elements in community solar design that might increase stakeholder support in New Mexico. ECMD received technical assistance from the National Renewable Energy Laboratory (NREL) to identify creative community solar regulatory and financial designs that align sufficiently with current utility and rural electric co-op business models while simultaneously delivering on our goals of expanding

affordable and equitable access to solar, particularly for low-income New Mexico residents. NREL provided an impartial review summarizing the best options to meet New Mexico's needs. The report is available to review on the EMNRD ECMD homepage.



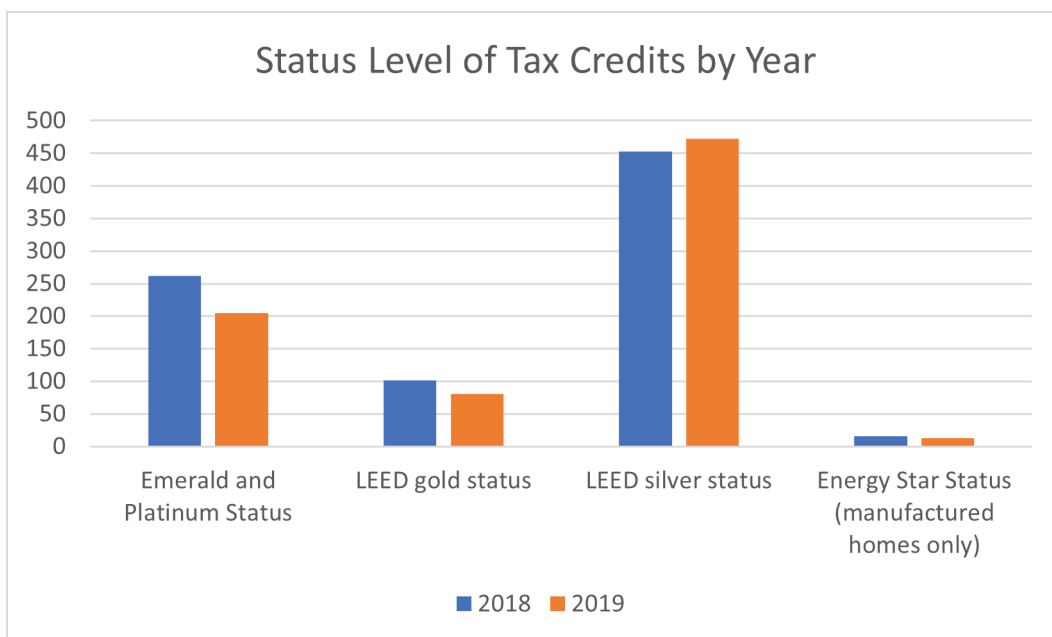
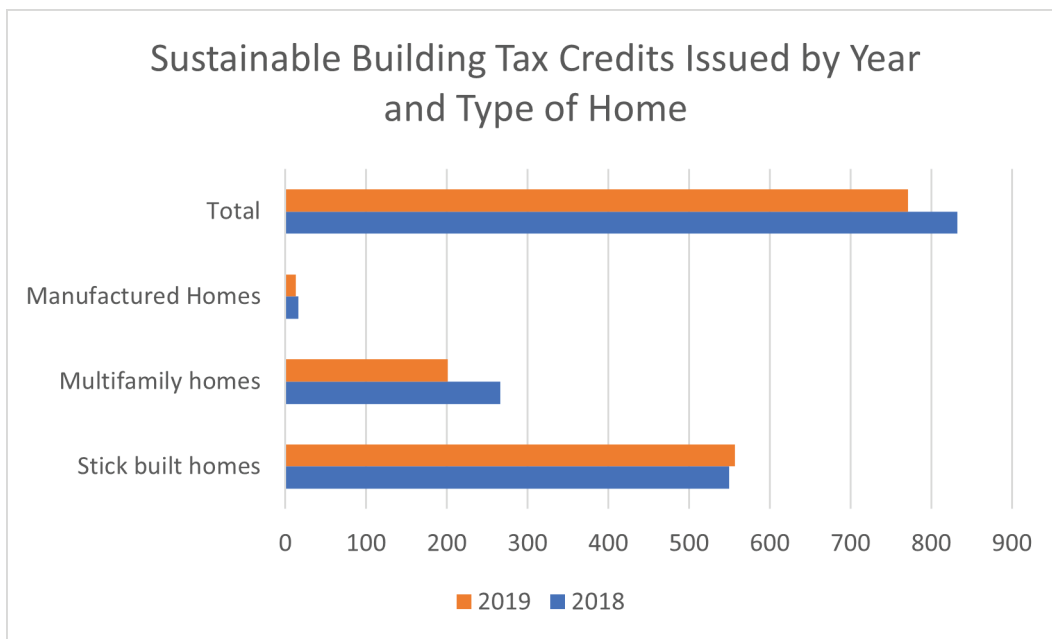
2 Plaza Cuidana, Albuquerque, NM

TAX CREDIT PROGRAMS

Sustainable Building Tax Credit

The New Sustainable Building Tax Credit program encourages homebuilders and homebuyers to build energy-efficient and sustainable buildings in New Mexico, by offering a credit on personal or corporate income taxes. The credit is dependent on the Build Green New Mexico or LEED rating of the building and on the building's square footage, up to 2,000 square feet. To be eligible for the credit, the home must also have water conservation features, including indoor plumbing and water-using appliances with average flow rates equal to or lower than EPA's "WaterSense" certification, as well as drip irrigation-ready water lines for any potential landscaping areas surrounding the home.

In 2020, ECMD reports the following results:





Solar panels at Taos High School

When we compare the number of tax credits to what was issued last year, one can see that the numbers were very similar. While the number of tax credits issued in 2019 were slightly less than in 2018, the average value of the credits in 2019 was slightly more (\$6,098.06 in 2019 to \$6,009.05 in 2018). So although COVID-19 may have impacted the construction industry, the impact was not felt in the issuance of the Sustainable Building Tax Credits.

Solar Market Development Income Tax Credit

The New Mexico State Legislature passed Senate Bill 29 in early 2020 [NMSA 1978, § 7-2-18.31]. This bill re-started the popular residential solar tax credit program. The credit provides 10 percent of the cost of a solar project for residents and business owners with a cap of \$6,000 per project. There is also an annual cap of \$8 million available for the tax credit on a first come first serve basis. This bill makes solar energy more affordable for more New Mexicans and promotes jobs in the solar industry.

The expectation is the tax credit will result in about 2,500 tax credit applications being submitted for review and certification in 2020. This represents a \$43.5 million investment in solar systems by the taxpayers, and an installation of 10 MW of system capacity. In installing these systems, New Mexico will create job opportunities across the state.







Renewable Energy Production Tax Credit

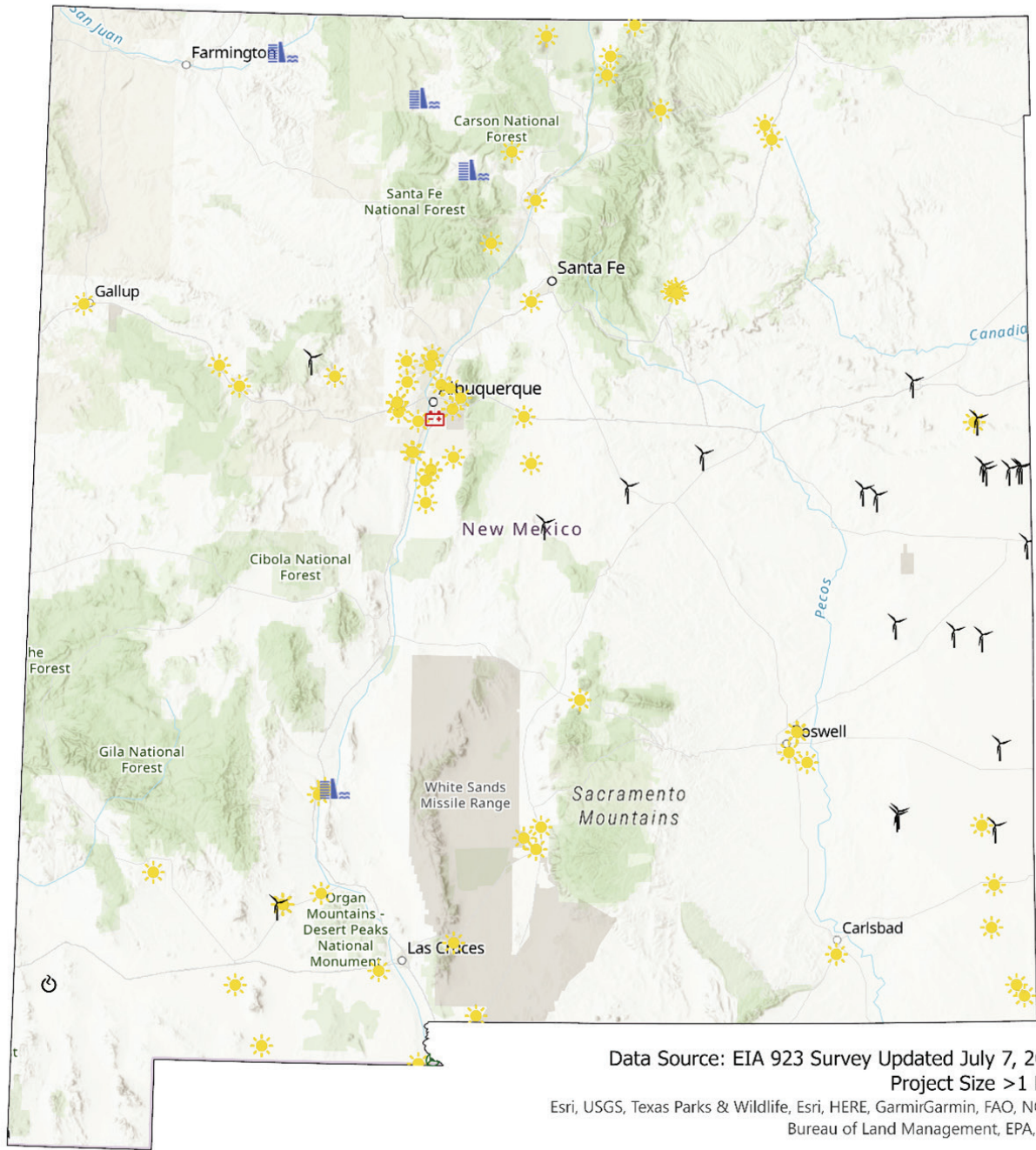
The Renewable Energy Production Tax Credit Program began in 2007 and in accordance to the statute, a corporate or personal taxpayer who owns a qualified energy generator is eligible for a tax credit for qualified renewable energy facilities that were constructed and generating electricity by January 1, 2018. The total amount of electricity generation that can qualify for the corporate and individual income tax credits is 2 million megawatts for wind and biomass with an additional 500,000-megawatt hours allowed for solar-generated power.

From the inception of the program and up to the expiration date of January 1st, 2018 for receipt of applications, EMNRD reviewed a total of 76 projects that are currently in different stages of eligibility for receipt of the tax credit (see chart below). ECMD continues to receive applications for allocation of production eligibility to claim the tax credits. The wait-list for credits still need to be managed by ECMD until 2028 because it is a ten-year credit.

In tax year 2020, ECMD reviewed and certified 23 letters of allocation to the facilities that applied for the allocation of the Renewable Energy Production Tax Credit.

New Mexico Clean Energy Resources Map

-  Energy Storage
-  Geothermal
-  Wind
-  Hydroelectric
-  Biomass
-  Solar



Data Source: EIA 923 Survey Updated July 7, 2020
 Project Size >1 MW
 Esri, USGS, Texas Parks & Wildlife, Esri, HERE, GarmirGarmin, FAO, NOAA,
 Bureau of Land Management, EPA, NPS

PROGRAM ACCOMPLISHMENTS: IMPROVING ENERGY EFFICIENCY IN THE BUILT ENVIRONMENT

ECMD is leading several major initiatives to improve energy efficiency in homes, businesses, and government buildings across New Mexico. Work has continued to promote energy efficiency and to identify financing mechanisms that can support improvement of public facility inventories. The ECMD Energy Efficiency Program's sustainability is supported by two state statutes, the Public Facility Energy Efficiency & Water Conservation Act [NMSA 1978, 6-23] and the Energy Efficiency & Renewable Energy Bonding Act [NMSA 1978, 6-21], that allow financing of public buildings retrofits. The Program has provided education and technical assistance that has led to eight new projects this year.

Energy Savings Performance Contracting

As part of our state's climate and energy goals, ECMD is helping to make buildings across New Mexico state government more energy-efficient and water-efficient. 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. The General Services Department is the first New Mexico state government agency to enter an ESPC project using the Energy Efficiency and Renewable Energy Bonding Act and with leveraged funding from a Capital Outlay appropriation.

Nine energy services performance companies (EPSC) were selected through a request for proposal (RFP) and awarded state price agreements to provide ESPC services, which eliminates the need for public entities to issue separate RFPs to conduct investment grade audits (IGA) and implementation of IGA recommendations. Four professional engineering companies were selected to continue to support public entities with technical expertise in performance contracting project oversight and to ensure energy cost savings.

This program has four professional engineering contractors that provide third-party review services and support public entities entering into performance contracts. Their tasks include reviewing Investment Grade Energy Audits (IGAs), providing

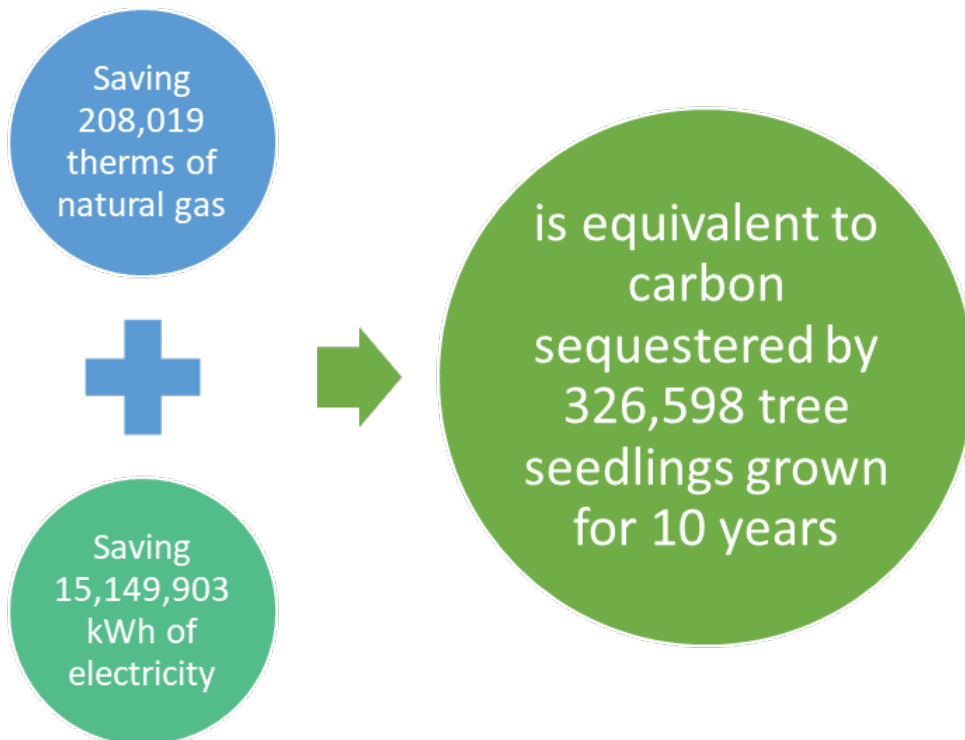
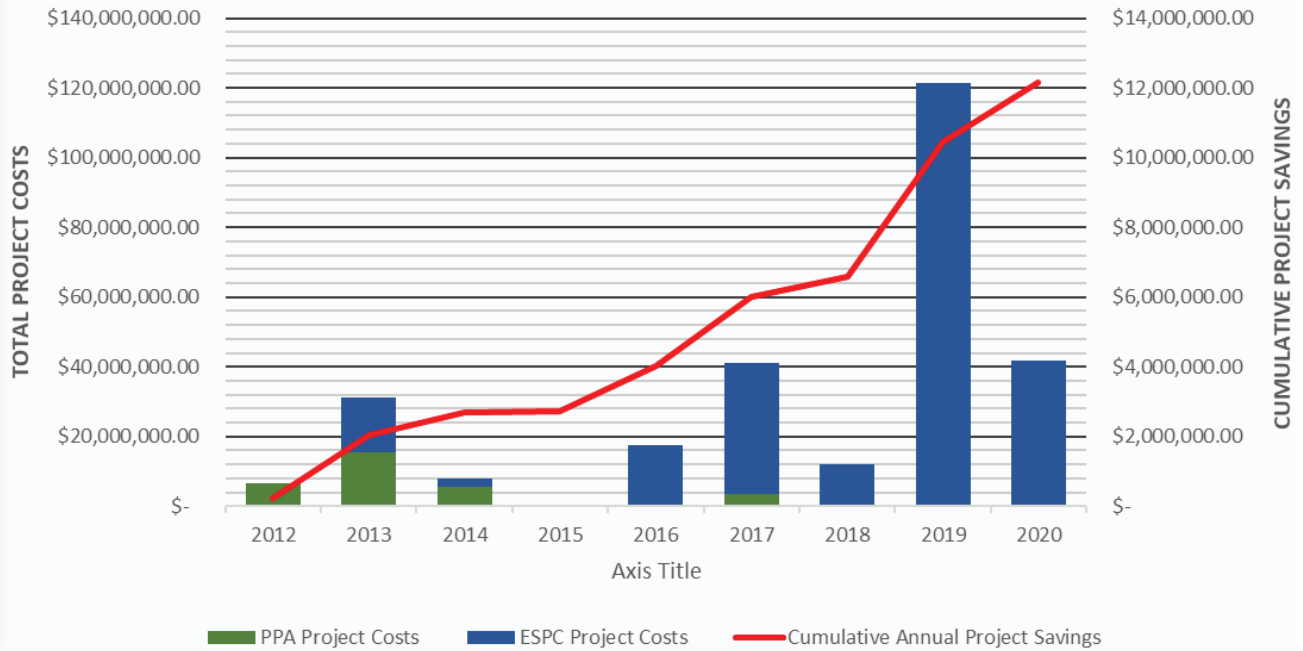
project oversight during construction to verify that systems are installed as per the IGA, and providing commissioning oversight through the first year of the performance period.

ECMD has completed the cumulative review of \$250.9 million in ESPC projects, with a total annual guaranteed energy cost savings of \$11.6 million. In addition, \$31.2 million in renewable energy projects using power purchase agreement (PPA) have been completed, equaling 12 million kWh of electricity generated per year.



Solar installation on the Las Cruces Convention Center

ENERGY SAVINGS PERFORMANCE CONTRACTING (ESPC) & POWER PURCHASE AGREEMENT (PPA) PROJECT COSTS AND CUMULATIVE ANNUAL SAVINGS



Emissions Equivalences for Savings Seen from Energy Performance Contracting Projects

In 2020, the ESPC Program has reviewed and certified five projects, totaling more than \$41.8 million in energy efficient upgrades, of which \$39.2 million was financed through the ESPC process. These projects will save the public entities more than \$2.1 million per year in utility spending. These monetary savings equate to 208,019 therms of gas, 15,149,930 kWh of electricity, and 2,007,000 gallons of water annually. These bring the ESPC program totals since 2011 to 1,192,002 therms of gas, 92,491,823 kWh of electricity, and 32,480,433 gallons of water annually. The five projects added 3,198 kW of solar PV capacity, guaranteed to produce 4,983,607 kWh of electricity.

ECMD has nineteen active ESPC projects in various stages of review, starting from the beginning audit stages, construction and in the measurement and verification process. ECMD conducts and provides for the review of all completed and active project Measurement and Verification (M&V) reports. The reports determine the extent of the savings realized from the implemented projects. Typically, ESCO will guarantee 80%-90% of the possible savings, which is what is used to pay for the project on an annual basis. If the guaranteed amount of savings is not achieved, the ESCO is responsible for the remaining savings if it determined that the projects underperformed. The projects that have been certified through ECMD have met energy savings performance and have not required an ESCO to make up a shortfall in monetary savings. The reports provided to ECMD show that the active projects are exceeding their savings guarantee by an average of 25%. These projects range from the first year of the performance period to the fourth year of the performance period. Verifying that these projects are performing as engineered is pivotal to the ESPC program. As these projects exceed their guaranteed savings, it allows entities to have flexibility in their funding, as those funds can be put to other uses.

New Mexico Energy Conservation Code

New Mexico has adopted the 2018 International Energy Conservation Code (IECC), fulfilling a directive from the governor in Executive Order 2019-003. New Mexico's energy code is now up to date. ECMD, the Construction Industries Division of the Regulation and Licensing Department (RLD), the residential and commercial construction industry, and various NGOs collaborated to achieve this major update. Information



Socorro High School Gymnasium LED Lighting Upgrade (Socorro Consolidated School District ESPC project)

provided by the Pacific Northwest National Laboratory demonstrated that it was cost effective to update the energy code from the 2009 IECC to the latest 2018 IECC. The savings come from reductions in construction costs for some types of commercial construction and reductions in energy costs and greenhouse gas emissions.

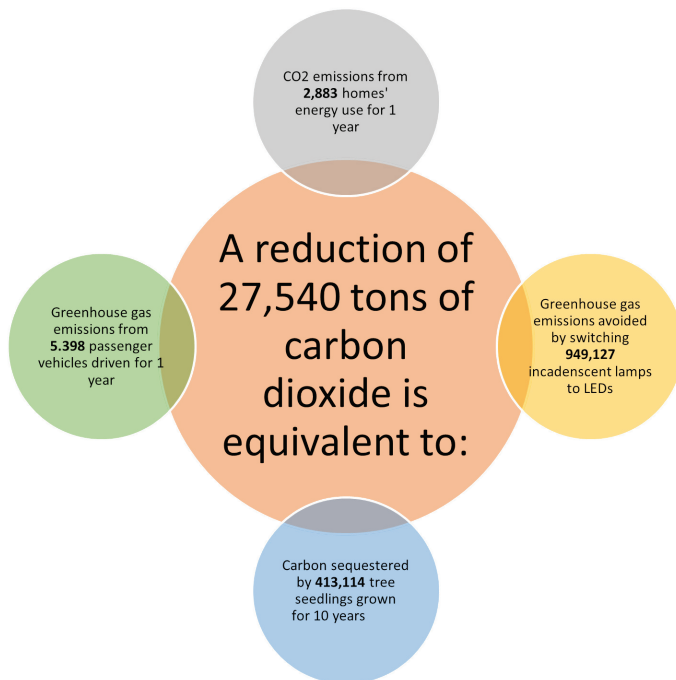
ECMD staff participated in a 12-member technical advisory committee that reviewed every provision of the energy code so the update would account for typical construction methods, types of buildings, and climate variability common in New Mexico. EMNRD and ECMD provided an environment for dialogue during development of the final version of the 2018 IECC. The new energy code goes into effect in March 2021. ECMD will provide technical assistance to Construction Industries Division and builders and homeowners as needed to help them comply with the new requirements. The adoption of the 2018 IECC will reduce greenhouse gases by 27,540 tons of carbon dioxide equivalent per year as a result of 18.322 million kWhs of electricity savings and 2.267 million therms of natural gas savings for residential construction as evaluated by the Pacific Northwest Laboratory for New Mexico.

Financial Resiliency through Energy Efficiency (FREE) Project

In February 2019, ECMD was awarded a federal grant from the U.S. Department of Energy to support the FREE project. The goal of the project is to develop and deploy statewide energy practices that reduce energy use while generating new revenue (i.e., tax revenues, job creation, and product exports) for New Mexico. In March 2020, ECMD contracted with a team of energy economists from the University of New Mexico and New Mexico State University to develop a robust systems dynamic modeling tool for evaluating potential energy efficiency practices. The team will use the tool to prioritize energy efficiency measures according to primary and secondary economic impacts, as well as environmental (e.g. emissions) impacts that could result from the deployment of new energy-savings programs. In the next phase of the project, the ECMD team will engage a professional facilitator to lead a series of discussion sessions in each of the state's key regions. The sessions will provide input for a final report and help ECMD define longer-term implementation in late 2021.



PV on a Pole installation on Nambe Pueblo.



PV on a Pole™

In 2016, New Mexico partnered with the Clean Energy States Alliance to design a community solar program called PV on a Pole. The project, supported in part by the U.S. Department of Energy's State

Energy Program, features a solar appliance that can provide 1 to 2 kilowatts of solar energy per system per household, depending upon module capacity. The solar appliance was designed to be installed rapidly with a small land footprint. The photovoltaic technology works with low-amperage service entrances, or homes that are limited by how many appliances can be run at once. This is an important feature for low-to-moderate income communities.

The PV on a Pole initiative generates clean electricity for residential and commercial buildings to use. In return, the electric utility sees a decreased demand for non-renewable electricity generation.

To ensure continuity of this initiative, in 2020 ECMD collaborated with Northern New Mexico College's Trade Training Program to expand it. The Clean Energy States Alliance provided funding for the purchase of more PV on a Pole kits for educational purposes. The training program will install the units on college grounds, which will provide solar generated electricity and reduce the utility costs for the campus, while also training the students in photovoltaic system manufacturing and installation.

MICROGRID PILOT PROJECTS

Energy Microgrid at Hyde Memorial State Park

One of the largest microgrid projects in a state park in the United States is now under construction at Hyde Memorial State Park. The project is part of the State Parks Division's **Next Generation of Adventure** campaign aimed at enhancing the visitor experience by upgrading facilities, adding interpretive programs, and improving technology. ECMD is providing technical, financial, and contractual support to the project.

When complete in spring 2021, the system will include an 81 kW DC solar photovoltaic (PV) array, a 352-kWh battery system, and a 150-kW propane generator. The microgrid's solar PV and battery system is designed to provide the park with more than 85 percent of its annual energy needs, only using the propane generator as back-up. The solar-plus-battery storage and back-up propane generator microgrid system will meet Hyde Memorial State Park's electrical needs year-round.

ELECTRIC VEHICLES AND ALTERNATIVE TRANSPORTATION FUELS

ECMD is responsible for policy development, technical expertise, and tracking of various statutory mandates associated with alternative fuel transportation fuels, electric vehicles and charging infrastructure.

Electric Vehicles and Infrastructure

In 2020, ECMD continued to provide technical assistance to the General Services Department to implement \$1.5 million in electric vehicles service equipment (EVSE) appropriated by the New Mexico Legislature in 2019. This investment has resulted in 30 new chargers being installed on the four campuses of General Services Department owned facilities around Santa Fe. The project included 8 DC Fast Chargers and 22 Level 2 Dual Port chargers. This brings the total number of EV chargers on State owned property

to 32, including the one Level 2 Dual Port charger at the Wendell Chino building in Santa Fe and a similar station at Bluewater State Park. The state currently owns 32 Battery Electric Vehicles (BEVs): a 2017 Chevrolet Bolt purchased by EMNRD and 31 BEVs owned by the GSD. The 31 BEVs are a mix of Nissan Leafs and Chevrolet Bolts.

In 2020, a segment of Volkswagen Settlement Funding became available for electric vehicle charging station development. ECMD provided input to the New Mexico Environment Department to help determine the projects that would be subsidized. This funding resulted in 116 new charging outlets around New Mexico, covering 23 of 33 counties.

ECMD continues our work with Regional Electric Vehicle West (REVWest) in 2020 to electrify New Mexico's major thoroughfares. In October of 2017, New Mexico committed to work with 7 other inter-mountain west states collaboratively on standards for the placement and operation of EV charging infrastructure along the major interstate corridors in each state. In December 2019, Governor Lujan Grisham recommitted to REVWest with a new Memorandum of Understanding.

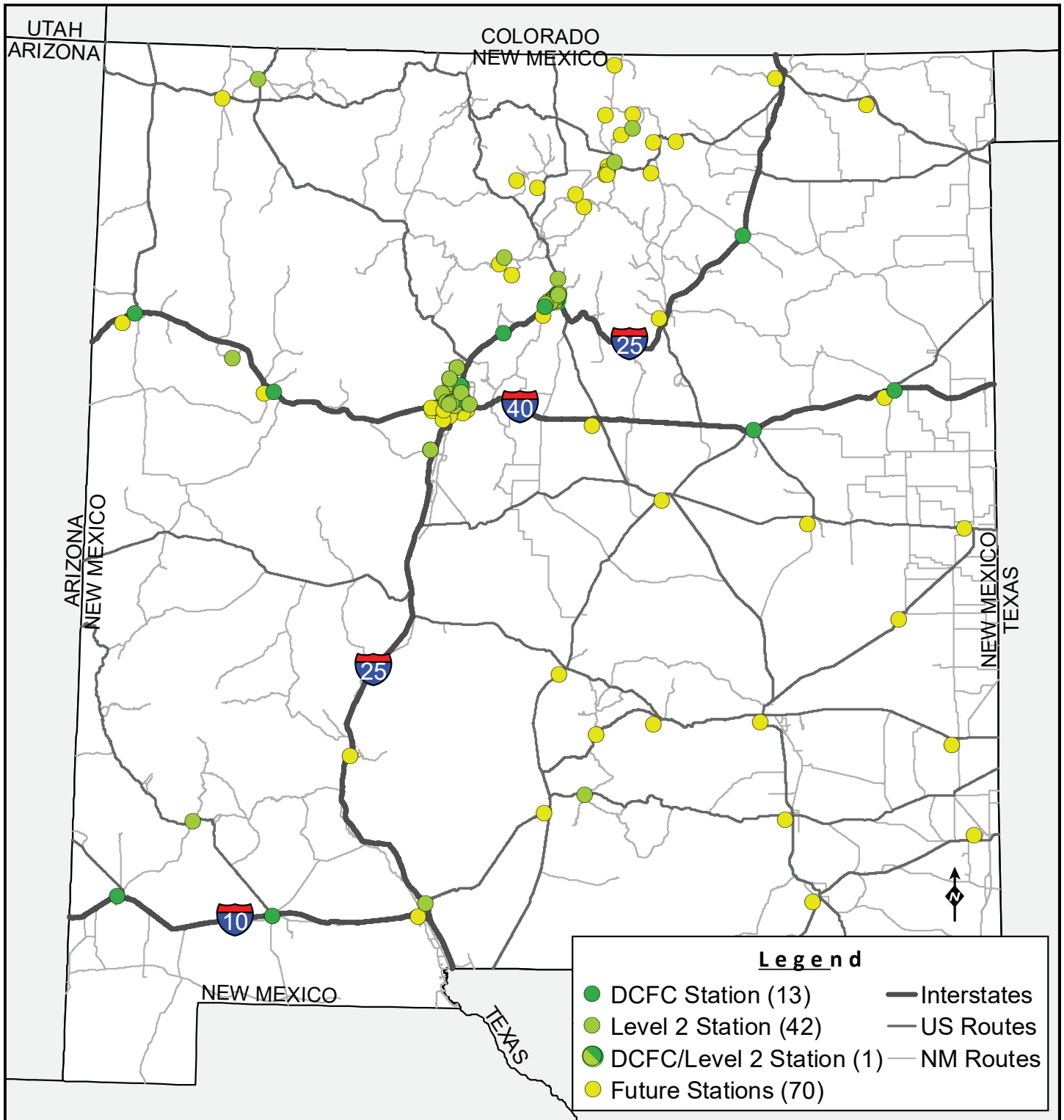
The states and their corridors included in the MOU are:

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


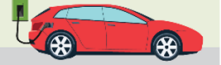



REV West Regional Planning Map highlighting existing DCFC stations and proximity to Interstate Highway corridors as of December 2020. Source: Utah Department of Transportation

Current and Future EV Charging Stations Map



Source: nmdot.state.nm.us

KNOW YOUR EV CHARGING STATIONS		
<p>AC Level One</p> 	<p>AC Level Two</p> 	<p>DC Fast Charge</p> 
<p>VOLTAGE 120v 1-Phase AC</p>	<p>VOLTAGE 208V or 240V 1-Phase AC</p>	<p>VOLTAGE 208V or 480V 3-Phase AC</p>
<p>AMPS 12–16 Amps</p>	<p>AMPS 12–80 Amps (Typ. 32 Amps)</p>	<p>AMPS <125 Amps (Typ. 60 Amps)</p>
<p>CHARGING LOADS 1.4 to 1.9 kW</p>	<p>CHARGING LOADS 2.5 to 19.2 kW (Typ. 7 kW)</p>	<p>CHARGING LOADS <90 kW (Typ. 50 kW)</p>
<p>CHARGE TIME FOR VEHICLE 3–5 Miles of Range Per Hour</p>	<p>CHARGE TIME FOR VEHICLE 10–20 Miles of Range Per Hour</p>	<p>CHARGE TIME FOR VEHICLE 80% Charge in 20–30 Minutes</p>

Source: Utahev.org

As of the end of this year, there are 97 publicly available EV charging stations with 302 charging outlets open to the public throughout New Mexico. In 2020, 17 new charging stations with an additional 98 charging outlets (which includes level 1, level 2, and DC fast charging) were installed at businesses, public parking areas and fueling stations across the state.

Federal Highway Administration New Mexico Alternative Fuel Corridors

In May 2020, the Federal Highway Administration (FHWA) New Mexico Alternative Fuel Corridor Application was accepted and the FHWA Alternative Fuel Corridors were designated. The new corridors cover areas of I-25, I-10, US-70, and US-285. The new designated corridors cover approximately 293 miles of I-25, 82 miles of I-10, 373 miles of I-40, 298 miles of US-70, and 75 miles of US-285; for a total of 1,121 miles listed as new alternative fuel corridors. Stakeholders instrumental to the success of the application and the new designations included the Public Service Company of New Mexico, Land of Enchantment Clean Cities Coalition, New Mexico Department of Transportation, and EMNRD. The corridors are as follows:

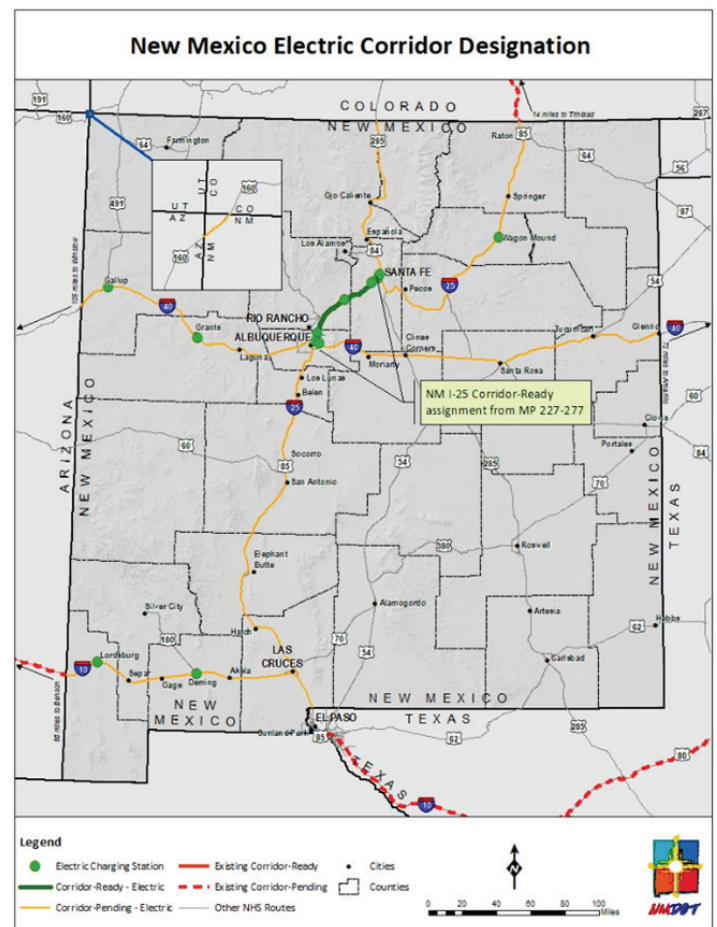
- Interstate 10: El Paso, TX to Benson, AZ
- Interstate 25: Trinidad, CO to El Paso, TX
- Interstate 40: Winslow, AZ to Amarillo, TX
- U.S. Route 70: Las Cruces, NM to Muleshoe, TX
- U.S. Route 160: Tuba City, AZ to Walsenburg, CO
- U.S. Route 285: Denver, CO to Santa Fe, NM
- U.S. Route 285: Clines Corners, NM to Pecos, TX

Natural Gas Transportation Fuel Infrastructure

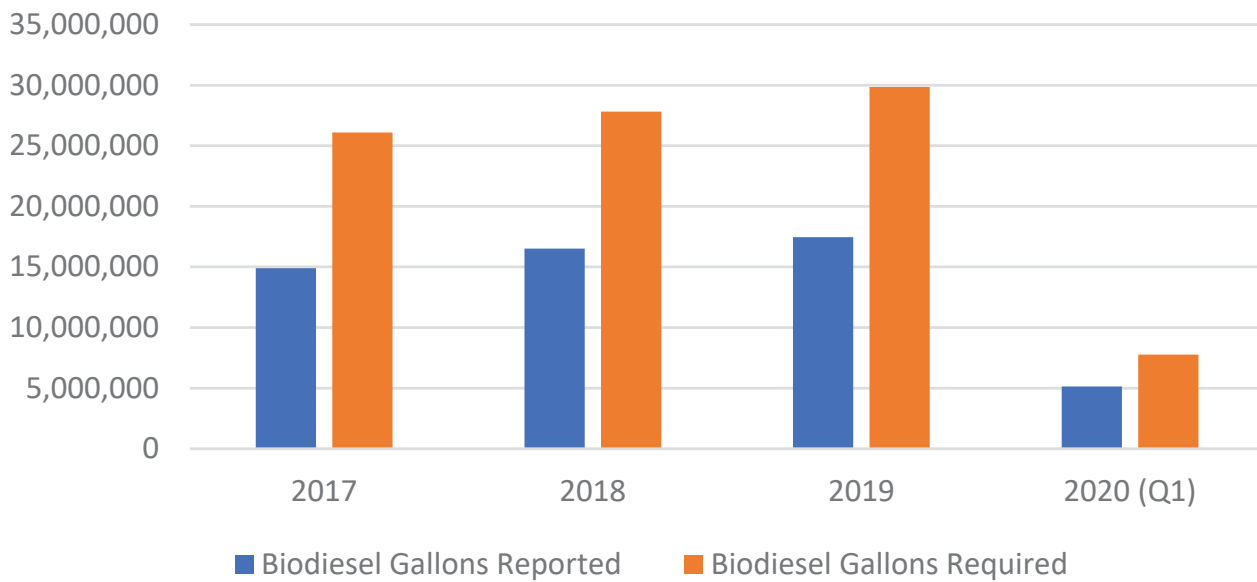
Currently there 8 public access compressed natural gas (CNG) stations operating in New Mexico and one liquefied natural gas (LNG) station. These stations are listed below. In addition, one new station is in development in Albuquerque.

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 – 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
- EMW Gas Association – I-40, Moriarty



2017-2019 and 2020 First Quarter (Q1) Combined Fuel Tax Distribution Biodiesel Report



**Source: May 28, 2020, Biodiesel Mandate Report from the New Mexico Department of Agriculture*

Biodiesel

The state biodiesel mandate was adopted by the New Mexico Legislature in 2007. This mandate is under the Petroleum Products Act [57-19-28 through 57-19-29 NMSA 1978].

The mandate requires that, “after July 1, 2010 and before July 1, 2012 all diesel fuel sold to state agencies, political subdivisions of the state and public schools for use in motor vehicles on the streets and highways of this state shall contain five percent biodiesel”.

The mandate also requires that, “on or after July 1, 2012, all diesel fuel sold to consumers for use in motor vehicles on the streets and highways of this state shall contain five percent biodiesel”.

The biodiesel mandate has been suspended every 6 months since it was adopted in 2007. Presently, there are no biodiesel refining plants located in the state. The the graph above shows the biodiesel gallons reported to the New Mexico Tax and Revenue Department and the biodiesel gallons required to meet the mandate under the Petroleum Products Act for 2017-2019 and the first quarter of 2020.

WASTE ISOLATION PILOT PLANT (WIPP) TRANSPORTATION PROGRAM

EMNRD has oversight of the Cooperative Agreement and annual funding for the state Waste Isolation Pilot Plant (WIPP) transportation program provided by the Department of Energy (DOE), and this oversight is housed within ECMD. The Cooperative Agreement is a partnership between DOE, EMNRD, and various state agencies charged with ensuring the safe and uneventful transportation of transuranic (TRU) waste in New Mexico. EMNRD, the Department of Homeland Security, the Department of Public Safety, the Department of Health, the New Mexico Environment Department make up the working group and provide the following:

- The Department of Homeland Security and Emergency Management (DHSEM) provides training to local communities along the WIPP route as well as assuring citizens of state readiness;
- 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 (equipment worn by personnel who work around radiological material) program;

- The Department of Health (DOH) provides donning and doffing of hazmat suits, and decontamination of radiation training to hospitals and clinics along the WIPP route to include the exchange of calibrated radiological monitoring instruments;
- The New Mexico Environment Department (NMED) provides sampling data along the WIPP route and assists the DOH in training hospitals and clinics. Activities not included in the WIPP Transportation Cooperative Agreement funding include the responsibility for all permitting and licensing of the WIPP site. This includes issuing the final decision on the Hazardous Waste Facility permit to the US Department of Energy (DOE) for the storage and disposal of transuranic mixed waste. NMED provides regulatory oversight of the hazardous waste facility permit to ensure compliance which includes review and issuance of permit modifications, and observation, review and approval of generator site audits.
- The State Fire Marshal's Office by statute provides training to fire services in hazmat awareness and operations along the WIPP route; and the Department of Transportation has statutory authority for all routing of WIPP shipments in New Mexico.

COVID-19 impacted training for the WIPP

Transportation Program across the entire corridor. All training halted in March as employees moved into a telework setting. While first responders focused on COVID-safe practices in their real time response, the WIPP Program Manager and Coordinators have been working to adapt training delivery into a virtual setting. This has proven to be a challenge in a world where hands-on delivery provides a real-time understanding of processes, but staff continues to look for solutions.

Through the Cooperative Agreement and EMNRD oversight and since the 2017 shipment restart, the WIPP Program has:

- Trained over 10,000 responders, medical personnel, and volunteers
- Provided over 100,000 radiation and hazardous material training hours
- Funded 250 NMSP officers to be classified as Emergency Response Officer
- Provided funding to certify six officers as trainers in Critical Incident Management (CIM)
- Assisted in training over 195 State Police Officers in CIM
- Provided funding for 60 Commercial Vehicle Enforcement Officers and Inspectors to become CVSA Certified Level VI Inspectors
- Provided funding for two officers to become trainers for CVSA Level VI
- Provided funding for recertification biennially
- Funded 15 local jurisdictions funded through a

Memorandum of Agreement

- Provided funding for over 2,500 fire fighters to be trained in Hazardous Materials Awareness and Operations, Hazardous Materials Technician, or Chemistry since July 1st, 2013
- Provided funding for seven fire departments along the shipping corridor to maintain a certification for FEMA Typed Hazardous Materials Team
- Implemented the in-state compliance review of the shipping carrier – placed on a biennial review process (second review was due March 2020 however, due to COVID-19 we were unable to conduct the carrier review)
- Developed a law enforcement centric course (LE MERRTT) for first responders accredited through New Mexico Law Enforcement Academy to be delivered by all police, sheriffs, and BIA officers along the shipping corridor

On the evening of July 2, 2020 two shipments from Sandia National Laboratories (SNL) safely arrived at WIPP. These are the first SNL shipments to make the 275-mile trip to WIPP since 2012. There have been only 10 shipments made from SNL throughout the life of the WIPP Transportation Program. Additionally, New Mexico has supported the Lawrence Livermore National Laboratory (LLNL) shipment campaign through monitoring via TRANSCOM, attending virtual planning meetings, and conducting inspections at the Raton Port of Entry. The LLNL has not shipped transuranic waste in nearly 10 years.

Total inspections conducted on WIPP shipments in New Mexico for calendar year through December 1, 2020:

- Two marked out of service
- One minor accident in Los Alamos; no injuries reported
- Model program for WIPP transportation safety across the nation

ECMD continues to work closely with NM Department of Transportation (NMDOT) to review the primary and alternate designated routes to the WIPP for the National TRU Program Southern Transportation Corridor. Currently, shipments from Savannah River Site and Oak Ridge National Laboratories use the designated alternate Southern Corridor approach entering New Mexico on US 176 from Andrews, Texas, proceeding south on NM 18, and then west on NM 128 to the WIPP site. ECMD will continue to work with NMDOT and the DOE to determine the safest routes for all radioactive waste transports in New Mexico.



State Forester's Letter



Resilience and adaptation are themes throughout the Forestry Division's report on programs and activities in 2020. For example, our workforce demonstrated their resilience when they transitioned from the office and field environment to telework and social distancing. And they quickly adapted to wildfire response with an array of new protocols to keep firefighters and the public safe. Through hard work and practice, Forestry staff and firefighters stayed healthy and delivered a high-level of results despite the difficult conditions.

In late summer of 2020, a spate of wildfires along the West Coast devastated entire towns and treasured forestlands – displaying in stark terms the antithesis of forest resilience to wildfire. The cost and scale of the impact to forests, wildlife and people's lives and livelihoods is hard to comprehend. Beyond that, the affected communities now face the danger of denuded watersheds that could lead to flash floods and debris flows.

In New Mexico, we watched the fires and their aftermath with horror, sending resources to assist and doubling down on prevention efforts. The 2020 fires coupled with our own experience with Las Conchas, Whitewater-Baldy and Little Bear megafires in 2011, 2012 and 2013 -- and the ensuing damage to watersheds and waterways -- remind us that it will happen here again. And the long-term fire history recorded in tree rings underscores the fact that adaptation is not a one-time occurrence or a linear process.

The future we face is not unforeseen. In fact, we began preparing for the new wildfire normal 15 years ago with adoption of the New Mexico Forest and Watershed Health Plan. The Plan's authors cautioned that while "it will take time for New Mexico to fully realize the benefits the consequences of inaction are severe and prompt us to act now." Climate change may bring those future conditions to us sooner than anticipated. To prepare, Forestry co-leads the Natural and Working Lands Climate Action Team with the New Mexico Department of Agriculture as part of the Climate Change Task Force. This team is focused on natural climate solutions including avoiding wildfires, reforestation, and conservation of forests, range and agricultural lands.

The 2020 New Mexico Forest Action Plan, completed in October, will be our roadmap to the future. The plan is an update to the first edition published in 2010 and includes ten strategies to guide the Forestry Division and partners in the management of forests and watersheds. The strategies build on Forestry's existing programs and flesh out the details of climate change response, burned area reforestation and outdoor recreation. Together the strategies guide the way to resilient forests for the future.

Resilience and adaptation are not just themes, they are skills for managing forests and wildfire. With the new Forest Action Plan as our guide, Forestry will work to keep New Mexicans safe from wildfire; train wildland firefighters to face the challenges of the future; protect critical watersheds, rare plants and conservation lands; and improve the health and resilience of forested lands throughout the state.

Laura McCarthy, State Forester



New Mexico Forestry Division

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

DIVISION OVERVIEW

- 43 million acres of wildfire suppression response area
- 24,700,000 acres of forest in New Mexico
- 10,700,000 acres of private forest
- 7,900,000 acres of National Forest
- 45 endangered plant species

The Energy, Minerals and Natural Resources Department (EMNRD), Forestry Division (Forestry) is devoted to addressing the critical needs of New Mexico's forests and watersheds by reducing the fuels that increase the dangers of wildland fires, identifying invasive insects that lead to mortality and disease, conserving rare plants, and promoting healthy forests and watersheds for generations to come.

STAFFING

78 staff positions

- 39 staff in fire protection, prevention and communication
- 26 staff in forestry and natural resource management
- 13 staff in administration and services

Forestry, headquartered in Santa Fe, supports satellite offices across the state, including the Forest and Watershed Health office in Albuquerque and six district offices in Bernalillo, Capitan, Chama, Cimarron, Las Vegas, and Socorro.

PRIORITIES

- Address climate change effects on forest and watershed health by accelerating the pace and scale of restoration projects that remove overgrown brush and trees that act as fuel for uncharacteristic, high-severity wildfire, improving conditions to expand the use of prescribed fire on private lands, and by implementing natural climate solutions to reduce carbon emissions.
- Assist rural communities and small businesses to restore forests and watersheds and use wood for subsistence and commercial products.
- Plan for the future with an initiative to reforest burned lands with native trees that are well suited to the

projected climate in 2100.

- Complete a science-based, collaboratively-developed state Forest Action Plan to guide Forestry's activities over the next ten years and set forth goals, strategies and actions as a roadmap for forest management across ownership and jurisdictional boundaries.

STATUTORY RESPONSIBILITIES

- Provide technical assistance to landowners across 33 New Mexico counties to improve forest and watershed health by developing resource management plans, providing insect and disease identification, facilitating forest health project funding, providing tree care training and distributing low-cost seedlings.
- Respond to and suppress wildfires on 43 million acres of non-municipal, non-federal, and non-tribal land and proactively mitigate wildfire risk by evaluating communities most at risk to wildfire, developing appropriate management programs, implementing fire prevention projects and managing disease and insect infestations.
- Regulate the harvest of commercial forest species on private forestland and support the development of a restoration-based forest products industry to use the wood byproducts of forest and watershed treatments.
- Conserve forested ecosystems by improving forest conditions and habitat through active management, and acquiring land and easements for conservation purposes.
- Protect New Mexico's rare and endangered plants by regulating the collection of endangered plants, maintaining a state list of endangered plants, and conducting inventory and research to document the state's plant diversity.

BUDGET

Forestry utilizes the annual operating budget and capital appropriations authorized by the New Mexico Legislature to leverage and match other funding sources to meet its mission and goals. Collaboration with the New Mexico Department of Game and Fish

(NMDGF) and State Land Office (SLO), as well as federal agencies including the USDA Forest Service (USFS) and Bureau of Land Management (BLM), allows Forestry to improve the health of our forests across ownership boundaries, protect critical water sources and valuable watersheds, assist communities to reduce the risk of wildfires, and improve wildlife habitat.

LEGISLATION

EMNRD was allocated \$1.8 million in severance tax bonds for forest and watershed restoration and community wildfire protection, as well as \$500,000 for fire engines and firefighting vehicles. The working group formed to respond to House Memorial 42 in the 2019 session delivered their report to the Governor and Legislature in June 2020 and presented their findings and recommendations to the Water and Natural Resources Interim Committee in July. The recommendations include clarifying liability for prescribed fire on private lands, establishing a voluntary training and certification program for prescribed burners and private landowners, and creating guidelines for prescribed fire ignition permits to provide consistency across the state.



Brian Filip, Inmate Work Camp Assistant Supervisor disinfects firefighting equipment during the COVID-19 pandemic.

ACCOMPLISHMENTS OVERVIEW

During calendar year 2020, Forestry incorporated COVID-19 health guidelines, including teleworking and social distancing, into every aspect of its work. Despite this unprecedented challenge, Forestry completed the treatment of thousands of acres of private, state, federal, and tribal land to reduce the wildfire risk and improve the state's overall forest and watershed health. This year, Forestry staff completed a wide range of activities across the state.

FIRE MANAGEMENT

- 46,209 acres burned on state and private land
- 504 total wildfires
- 30% increase in fire activity compared to same period in 2019
- COVID-19 protocols introduced
- Statewide fire restrictions implemented

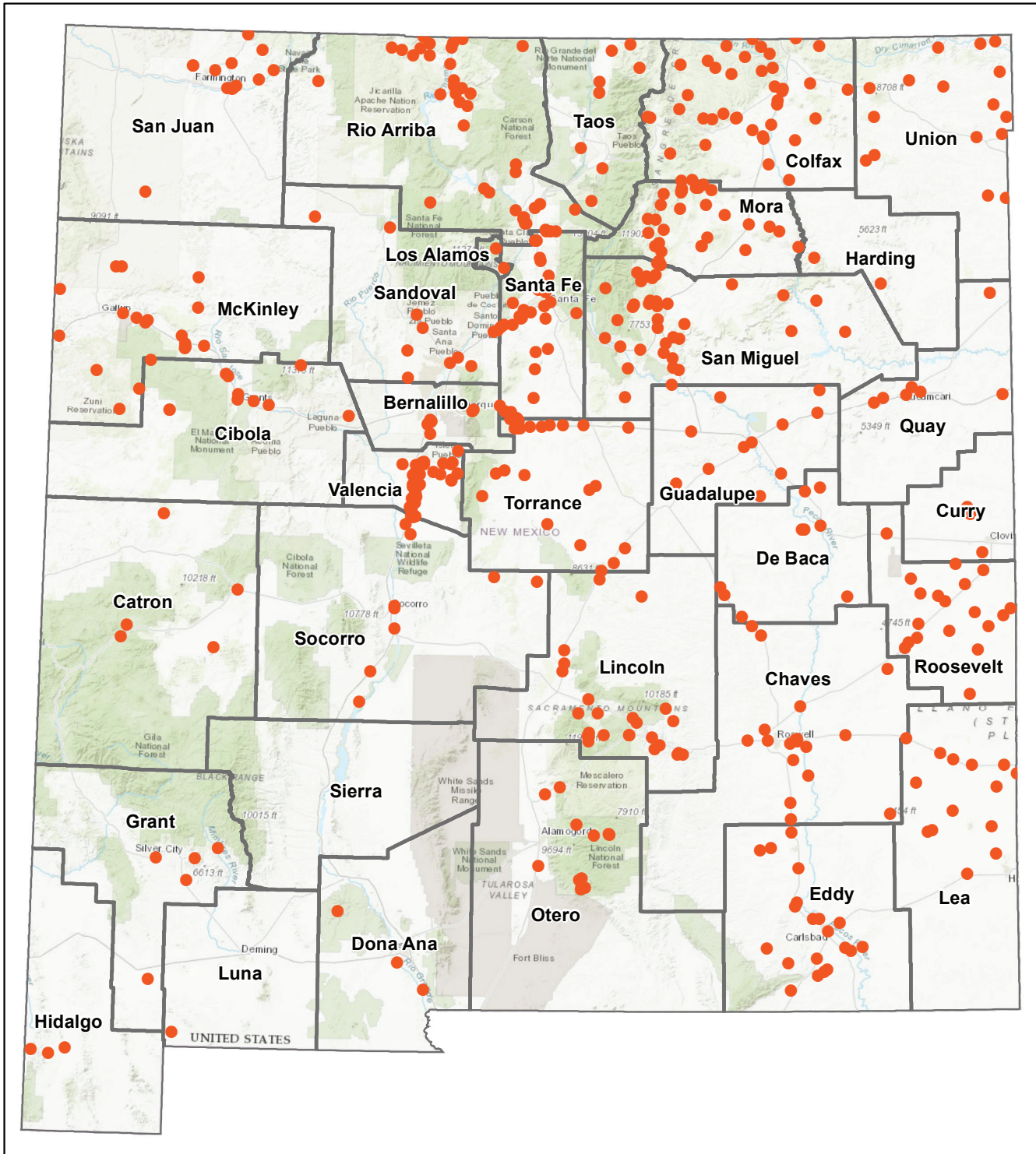
According to the National Interagency Fire Center, drier than average conditions associated with a developing La Niña weather pattern contributed to a dramatic increase in fire activity across the West beginning in August 2020. In New Mexico, this led to a lackluster monsoon that, coupled with abnormally high temperatures and prolonged drought, led to an extended fire season and a 30 percent increase in wildfire activity on state and private lands compared to the same period last year.

This year the COVID-19 pandemic prompted quick action by the Forestry Division to establish protocols for the safety of firefighters and the public. The pandemic innovations and social distancing practices included developing mobile decontamination units to disinfect tools and vehicles at the end of every shift and setting up fire camps comprised of separate sleeping areas for each division or crew. Forestry's firefighters did not have any positive COVID-19 cases during the 2020 fire season.

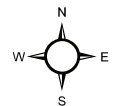
On May 13, 2020, the State Forester implemented statewide fire restrictions on all non-municipal, non-federal, and non-tribal lands in an effort to prevent unwanted human-caused wildfires that could put an additional strain on firefighting resources. The fire restrictions were rescinded on July 24, 2020 after a few weeks of light monsoonal activity.



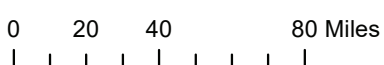
New Mexico Fires Calendar Year 2020



● NM 2020 Fires = 46,209 Acres Burned



Cartographer: Randall Fowler
 Data Source: NMSF
 Coordinate System: NAD 1983
 UTM Zone 13N
 Scale: 1:3,000,000
 Date: 9/28/2020



FIRE TRAINING AND EQUIPMENT

- 980 non-federal wildland firefighters provided training
- 216 local fire departments and at-risk communities provided with equipment or training
- 154 local firefighters hired for emergency response

Forestry trains and hires hundreds of firefighters annually to combat wildfires in New Mexico. Entry-level and advanced training takes place at all six Forestry Districts across the state, the Returning Heroes Wildland Firefighting Program (RHP) in Santa Fe, and the Inmate Work camp (IWC) in Los Lunas. Forestry's wildland firefighter training program is provided at no cost to students with support from state and federal funding.

To minimize physical contact during the pandemic, classwork shifted to an online environment in March 2020. This included instruction on basic principles and procedures for firefighter safety, understanding of wildland fire behavior, operational leadership, communications responsibilities, and identifying human factors and hazards on the fireline. Wildland firefighters are also required to undergo rigorous physical fitness tests to prepare them for the fireline, and where in-person testing was necessary, it was conducted in small groups of five.

FIRE PLANNING TASK FORCE

- 814 communities at risk
- 62 Community Wildfire Protections Plans (CWPPs) completed

The New Mexico Fire Planning Task Force is made up of local, state, federal, and tribal cooperators who assist Forestry to identify and protect areas most vulnerable to wildfires. The Task Force meets once per year to approve CWPPs, develop model ordinances and standards for building codes, and consider the benefits of thinning, prescribed burns, and defensible space to reduce the threat of wildfires to communities.



Forestry Division fire crews arrive at the 56A Fire in San Miguel County.



The Luna Fire in Mora County burned on both private and federal land in October of 2020. Photo courtesy: Polly Mullin

WILDFIRE PREVENTION PROGRAM

- \$22,160,482 total statewide lifetime Firewise USA™ investment
- \$15,248,238 Firewise USA™ investment since 2003 in the Village of Ruidoso
- 33 Firewise USA™ communities

Forestry collaborates with local, state, federal, and tribal partners to educate New Mexicans about fire prevention and preparedness using programs such as Fire Adapted Communities (FAC), Ready, Set, Go! (RSG), and Firewise USA™. This flagship national recognition program encourages neighbors to act together to reduce the wildfire risk to their communities. In 2020, four communities joined the Firewise USA™ program bringing the statewide total to 33. Despite the cancellation of public outreach events during the pandemic, many communities continued to work toward wildfire resilience by reducing hazardous fuels on their own properties, holding meetings virtually, and using social media and message boards to get the word out.

RETURNING HEROES PROGRAM

- 45 Administratively Determined (AD) emergency wildland firefighters hired by the program
- 40 wildland fire assignments completed on state, private, and federal land
- 10 veterans applied to program

The Returning Heroes Wildland Firefighter Program (RHP) provides veterans of the U.S. Armed Forces and others interested in firefighting with training and work opportunities to fight wildland fires in New Mexico. The fire crew members are Administratively Determined (AD) and called upon to respond to wildland fire emergencies. During the 2020 fire season, the RHP fire crews were sent throughout New Mexico and to assist with firefighting in Arizona, California, Colorado, and Oregon. RHP staff work on watershed and forest health improvement projects when it is not fire season and they performed several projects for the EMNRD State Parks Division at Hyde Memorial and Fenton Lake State Parks.

INMATE WORK CAMP (IWC) PROGRAM

- 283 acres treated on the national forests
- 7 projects performed with eight different local, state, federal agency cooperators
- 2 wildland fire assignments before the pandemic
- 1 prescribed fire assignment to prepare burn units on the Santa Fe National Forest

Forestry's Inmate Work Camp Program (IWC) provides training and work opportunities for minimum security inmates and contributes to forest health maintenance 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 (NMCD), each inmate crew comprises 10 to 12 inmates from the Level 1 Minimum Security Prison Facility in Los Lunas. The inmates are monitored by Forestry Crew Supervisors and a Correctional Officer. Due to the COVID-19 pandemic, NMCD prohibited all off-site work details, such as firefighting. Instead, IWC staff

who would normally supervise the inmate crews assisted the Returning Heroes Program fire crews which helped sustain fire response capacity during the busiest times in the fire season.

SMOKEY BEAR HISTORICAL PARK

- 6,164 visitors
- Full closure due to COVID-19 restrictions from March 14 to June 7, 2020
- Interpretive gardens and memorials re-opened to New Mexico residents only June 8, 2020
- Operations adapted as necessary to each Public Health Order

Smokey Bear Historical Park was built to honor a tiny five-pound black bear cub rescued from the Capitan Gap Fire in 1950. The cub later became the living symbol of the Smokey Bear Cooperative Forest Fire Prevention Campaign (CFFP). Smokey lived out his life at the National Zoo in Washington D.C. and was secretly buried at Smokey Bear Historical Park where visitors learn about forest health, fire ecology, and the history of fire prevention.



A young Smokey Bear with future NM State Forester Ray Bell



Mountain snowmelt. Photo courtesy: Susan Rich, Forest and Watershed Health Coordinator

FOREST & WATERSHED HEALTH PROGRAM

- 47,648 of restoration treatment acres from 2014 through 2020
- 11,281 acres of forest and watershed treated with thinning and/or prescribed fire in 2020
- 192 action items in the 2020 Forest Action Plan supporting 10 statewide strategies
- 123 forest and watershed restoration projects completed or in progress since 2014
- 60+ agencies and organizations attending the statewide Forest and Watershed Health Coordinating Group's quarterly meetings in 2020
- 23 Pueblos, Tribes, and Nations invited to participate in Coordinating Group meetings
- 10 strategies in the 2020 New Mexico Forest Action Plan

The Forestry Division established the Forest and Watershed Health Office to focus on recommendations of the 2005 Forest and Watershed Health Plan and created an advisory body of partners engaged in restoration (the Forest and Watershed Health Coordinating Group) to help break down barriers and collaboratively plan, fund, and implement those

recommendations. Forestry incorporated the plan's principles and recommendations into the 2010 Statewide Assessment and Strategy. These concepts, updated with our current understanding of climate, fire, ecological and social sciences, are now integrated in the 2020 New Mexico Forest Action Plan. New Mexico has become a national leader in using science to guide our work and respond to climate change. Improved models, new and better data, and increased collaboration between scientists and practitioners enable us to collectively make more informed decisions and target dollars and effort to places where it will have the greatest impact. Coordination and collaboration have gradually replaced competition as the norm. We have been able to accomplish more by leveraging each other's resources, and in many cases do it more efficiently and effectively.

Restoration treatments have increased in number and size and are being paired up to affect change in larger landscapes and build climate change resilience.

The Medio Fire that started in August near Santa Fe demonstrated how working together pays off. Strategically located thinning treatments, fuel breaks, and a prescribed burn conducted by federal and tribal agencies working together allowed firefighters to contain the fire before it reached the Santa Fe municipal watershed and ski basin and minimized offsite impacts.

Forestry and the USFS Forest Service are finding better ways of doing business together under the New Mexico Shared Stewardship Agreement. The document provides a foundation for the two agencies to increase the pace and scale of restoration, and do so in concert with tribes, traditional and land grant communities, acequias, and partner agencies and organizations. Work to implement the Shared Stewardship Agreement began even before it was signed – with investment in the 2020 Forest Action Plan (FAP) and the statewide geospatial assessment upon which its strategies are based.

A broad range of stakeholders, scientists and subject matter experts were brought into the planning process. The resulting statewide assessment and plan are resources available to anyone involved in restoration and climate change adaptation and mitigation. Many of the agencies and organizations

that contributed input to the 2020 FAP also committed to implement one or more of the action items it contains. The Division will track progress with the help of the statewide Forest and Watershed Health Coordinating Group.

Recent analysis by the USFS Rocky Mountain Research Station used a cutting-edge scenario planning tool and new data developed for the 2020 statewide assessment to identify priority watersheds for restoration. Results indicate that treating areas prioritized for protecting water quality and water supplies in New Mexico have correlated reduction in wildfire risk to communities - and protect our state's biodiversity as well.

The strategies and actions in the 2020 Forest Action Plan set forth a path to accomplish those exact goals over the next ten years.

FOREST AND WATERSHED RESTORATION ACT

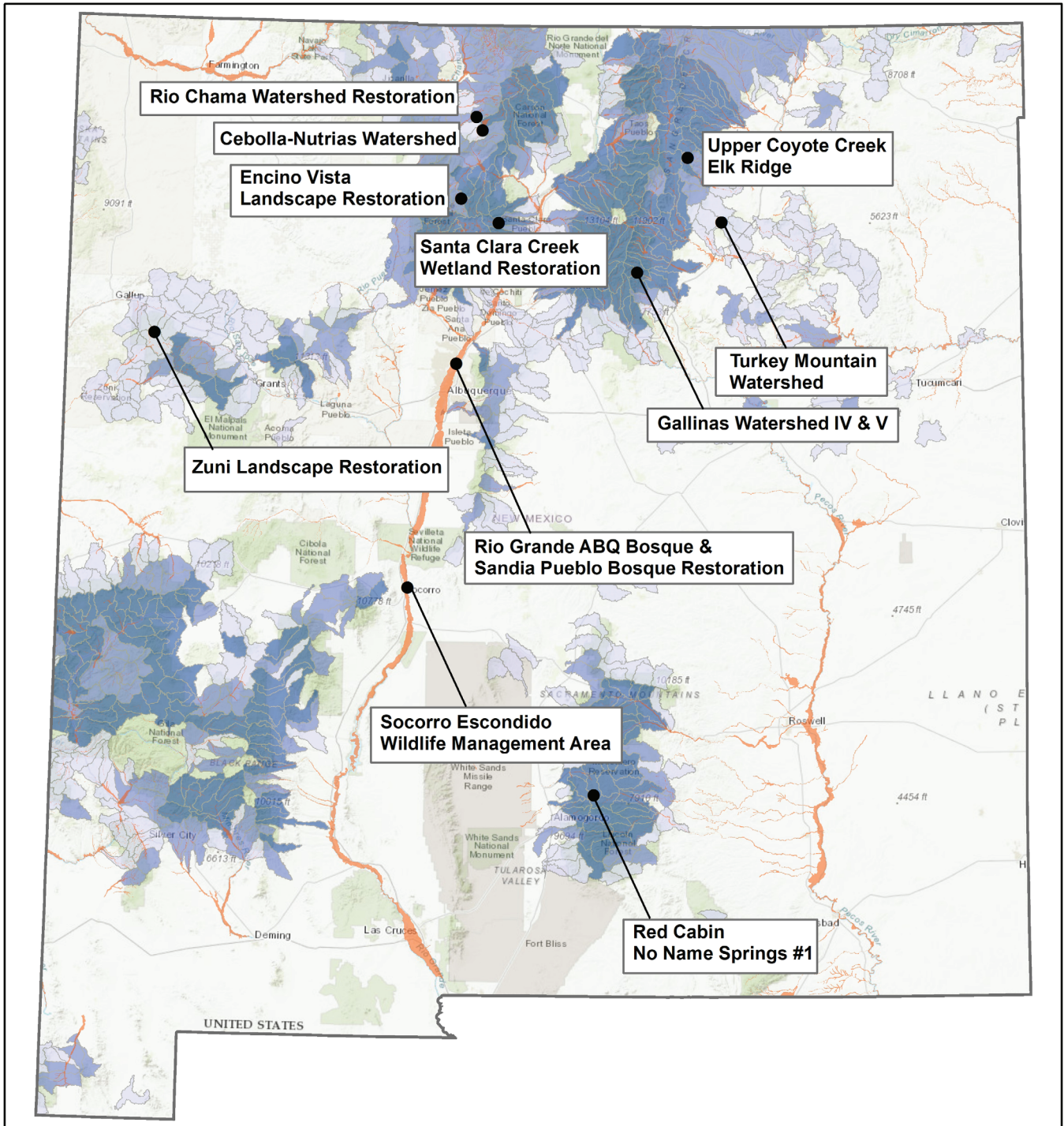
- \$2 million allocated annually
- 2,400 total acres completed from proposed projects
- 9 projects proposed in spring 2020

The Forest and Watershed Restoration Act (FAWRA) Advisory Board met twice in 2020 to review and recommend projects to enhance the adaptability and resilience of New Mexico's forests and watersheds to climate change and wildfires, improve water quality and support economic activity associated with wood harvest. The eight projects recommended for FY2021 include the continuation of landscape-scale thinning projects in the Turkey and Zuni mountains; a project on state trust lands near Angel Fire that expanded prior restoration work; a landscape-scale planning project in the Rio Chama watershed; a private lands thinning project in the Cebollas-Nutrias watershed; two bosque restoration projects located on public and Sandia Pueblo lands in the middle Rio Grande corridor; and a bosque restoration project near Socorro on New Mexico Department of Game and Fish (NMDGF) lands that will be matched at 75 percent with federal Pittman-Robertson habitat funds. The Advisory Board met a third time in 2020 to develop guidelines for selecting FY2021 projects and those guidelines were issued in October to allow plenty of time for collaborative project development.





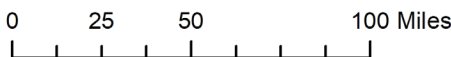
Statewide FAWRA Projects



Cartographer: Randall Fowler
 Data Source: NMSF
 Coordinate System: NAD 1983
 UTM Zone 13N
 Scale: 1:3,000,000
 Date: 11/13/2020

Top 500 Watersheds
 (Values at risk are wildfire damage, water sources and infrastructure, and wildlife habitat)

- 1 of 3 values are at risk
- 2 of 3 values are at risk
- 3 of 3 values are at risk
- Risk to Riparian



COOPERATIVE FOREST HEALTH PROGRAM

- 39 land management agencies, partners, and private landowners assisted with forest health diagnosis and cost-share treatments
- 34 site visits with 9 insect and pathogen samples identified
- 15 students at New Mexico Highlands University enrolled in a semester-long course on forest pest management

The Cooperative Forest Health Program delivers technical assistance and grant funding to landowners and managers to increase forest resilience to harmful insects and diseases. The program provides trainings, field visits, and education events that increase knowledge about native and invasive insect and disease outbreaks and improve management practices. Federal cost-share funding is administered to private landowners to improve forest resilience to bark beetles and other insects and diseases.

Drought conditions resulted in increased piñon ips (*Ips confusus*) activity throughout New Mexico in 2020. Extensive piñon ips-induced piñon mortality was found near Edgewood, around Santa Fe, and in Datil. This activity is expected to increase unless drought conditions improve over the next few years. An outbreak of the aspen leaf beetle *Chrysomela crotchii* that started near Pecos last year, continued for a second year and the area of infestation increased from 20 to 50 acres.

ENDANGERED PLANT PROGRAM

- 235 rare and endangered plant species in New Mexico
- 109 species only occur in New Mexico and nowhere else in the world
- 45 plant species listed as state endangered
- 13 plants federally listed as threatened or endangered
- 10 new plants species added to the state endangered plant list

Forestry's Endangered Plant Program maintains and updates the New Mexico Endangered Plant Species List. In 2020 the list was updated through rulemaking to add 10 new plants and remove one. The Endangered Plant Program gathers information on the status and distribution of rare plants and develops conservation measures necessary for the survival of rare and endangered plants. Forestry promotes the



Conservation Seedling Program

conservation of rare and endangered plant species through research, inventorying and monitoring, law enforcement, habitat maintenance, education and propagation of rare plants. The Endangered Plant Program is primarily federally funded through Section 6 of the Endangered Species Act for endangered plant research and management. A USFS grant is supporting habitat restoration and monitoring of the federally endangered Pecos sunflower in Santa Rosa. Other plants monitored or surveyed in 2020 included Knowlton's cactus, Holy Ghost ipomopsis, Wright's marsh thistle, Mancos milkvetch, Mesa Verde Cactus, Goodding's onion, and swale paintbrush.

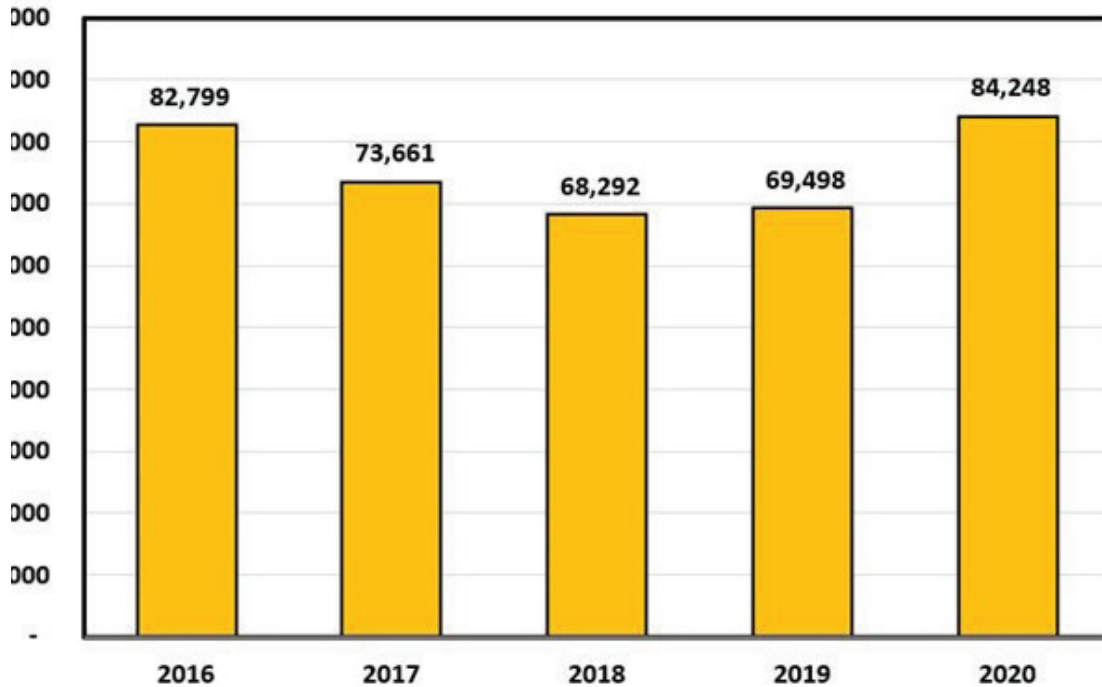
CONSERVATION SEEDLING PROGRAM

- 84,248 low-cost conservation seedlings sold
- 75 species of native trees and shrubs distributed

Forestry's Conservation Seedling Program provides economically priced tree and shrub seedlings to landowners who own one acre or more of land in New Mexico. Through the program, tens of thousands of seedlings are planted each year for the establishment of windbreaks, erosion control, reforestation, crop and livestock protection, to improve or create wildlife habitat, and provide energy cost savings when trees are planted to shade homes and businesses. Seedling sales continued through the pandemic from the Santa Fe tree house, but seedling distribution did not happen at the State Fair, which was cancelled in response to COVID.



Number of Trees & Shrubs Distributed Conservation Seedling Program Calendar Years 2016-2020



URBAN & COMMUNITY FORESTRY PROGRAM

- 31 communities with historic tree inventories and management plans
- 15 active partners serving on the New Mexico Urban Forest Council
- 10 communities recognized as Tree City USA's by Arbor Day Foundation
- 6 national champion Big Trees recognized by American Forests Foundation

The Urban and Community Forestry Program 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 program is guided by the Urban and Community Forestry Strategic Plan under the advisement of the New Mexico Urban Forest Council.

RESOURCE MANAGEMENT PROGRAM

- 157,155 acres total with forest stewardship plans in New Mexico
- 66,468 acres in new or revised forest stewardship plans
- 448 landowners participated in educational programs related to forest stewardship, fire prevention, and forest management
- 228 technical assistance requests performed
- 7 forest stewardship plans for private forest landowners

Forestry works with private landowners and state and federal agencies through the Resource Management Program to improve healthy and resilience forests and watersheds, and to protect land from future development that isolate and fragment forested areas. Forestry administers several incentive programs to place conservation easements on large, contiguous tracts of land.

Forestry provides technical assistance to Tribes, Pueblos and Nations and in 2020 supported a variety of projects from tree thinning and timber

sales to firewood collection and wetland restoration. Agreements and projects were planned and implemented in 2020 with Jemez Pueblo, Kewa Pueblo, Mescalero Apache Nation, Navajo Nation, Sandia Pueblo, San Felipe Pueblo, Santa Ana Pueblo, Santa Clara Pueblo and Taos Pueblo.

FOREST LEGACY PROGRAM

- 16,787 total acres protected with the Forest Legacy Program since its inception in NM
- 6,718 acres pending enrollment in the 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. The program 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 land value with a 25 percent donation.

An application for more than 3,600 acres, which includes the Brazos Cliffs in Chama, was funded in the fiscal year 2017 for \$3,480,000. A new FLP application was submitted and funded in FY2019 to conserve the remaining 2,740 acres, which has had 300 acres added for a total of 3,040 acres and scheduled for completion in the late summer of 2021.



Small diameter logs removed as part of a forest restoration project in the Zuni Mountains.

LAND CONSERVATION PROGRAM

- 214,514 acres of forest and rangeland conserved with state tax credits from 2004-2020
- 77,655 acres conserved in 2020
- 15 tax credits awarded

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. A taxpayer has a maximum of 20 years to fully use the tax credit following the taxable year in which the donation took place, or the tax credit may be transferred (sold) to another taxpayer through a tax credit broker in minimum increments of \$10,000. In 2020 fifteen applicants were awarded tax credits ranging from \$20,500 to \$250,000.

LAND CONSERVATION PROGRAM			
2020		2004 to Present	
Acres Conserved	77,655	Total Acres Conserved	214,514
Appraised Value	\$17,595,000	Total Appraised Value	\$100,682,644
Tax Credits Paid	\$3,258,000	Total Tax Credits Paid	\$29,588,787



Mining and Minerals Division



A note from the Director:

The Mining and Minerals Division (MMD) serves the public by ensuring the responsible utilization and safeguarding of New Mexico's lands affected by mining. MMD is a leader in responsible mine operation and reclamation and carries out its mission through four programs: The Abandoned Mine Land Program, The Coal Mine Reclamation Program, The Mine Registration, Reporting and Safeguarding Program, and The Mining Act Reclamation Program. A description of each program and accomplishments over the last fiscal year are included in each section below.

Mining and milling have played a large part in New Mexico's history as minerals used in everyday life have been extracted since humans first settled New Mexico. In many cases, mining established many cities and towns that are still in existence today. Along with the establishment of these communities, many mines left behind dangerous mine features such as adits and shafts as well as un-reclaimed mine-impacted areas. Since 1977, federal as well as state laws have been adopted to ensure that these legacy operations as well as existing mining operations are properly reclaimed. These laws include the federal Surface Mining Reclamation and Control Act (SMCRA - 1977) that assures the proper operation and reclamation of coal mines, and the New Mexico Mining Act (1993) which serves the same function but addresses hard rock mines, with few exemptions. MMD enforces both federal and state laws. An important aspect of implementing these laws includes facilitating public participation – a critical part of the process. MMD also enforces the requirement for current mining operations to put in place financial assurance to ensure funding is available to complete reclamation following cessation of mining.

As with everyone else, State agencies have been impacted by COVID-19. Department staff began teleworking in early March and will continue to telework for the foreseeable future. Fortunately, the transition to telework was seamless thanks to the use of technology and IT support. Office work proceeded without disruption and field work resumed after a short hiatus once protocols were established to conduct work in a safe manner for staff, contractors, and the public.

I hope you enjoy reading the division's descriptions, accomplishments, mineral resources report, and initiatives in the following sections.

Jerry Schoeppner, Mining and Minerals Division Division Director



Mining and Minerals Division

MISSION: The Mining and Minerals Division's (MMD) mission is to ensure the responsible utilization, conservation, reclamation, and safeguarding of land and resources affected by mining. 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 mine operators related to mineral extraction.

STAFFING

28 staff positions:

- Office of the Director - 3
- Abandoned Mine Land Program - 11
- Coal Mine Reclamation Program - 5
- Mine Registration, Reporting and Safeguarding Program - 1
- Mining Act Reclamation Program - 8

STRATEGIC PRIORITIES

- Ensuring responsible mine reclamation by restoring lands back to beneficial use
- Protecting the public from physical and environmental hazards of abandoned mines
- Developing proactive mining and mine reclamation initiatives to ensure reclamation and safeguarding of mine sites
- Providing annual reporting information for New Mexico from operators on mineral production, production value, employment, payroll, revenue, and production rank related to other states

PROGRAMS and ACCOMPLISHMENTS

THE OFFICE OF THE DIRECTOR:

Formulates division resource development, policy, planning, and administrative and fiscal management. The Director administers laws and regulations pertaining to hard rock and coal mining, mine registration and safeguarding, and annual industry reporting. The Director represents New Mexico on the Interstate Mining Compact Commission and is an ex-officio member of the New Mexico Mining Safety Board.



ABANDONED MINE LAND PROGRAM:

The Abandoned Mine Land Program (AMLP) identifies and abates 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).

Since AMLP is federally funded, all project expenditures must comply with the National Environmental Policy Act (NEPA). Due to this requirement, AMLP, at any given time, has multiple projects in various stages of development including obtaining landowner access permission, conducting archaeological and biological surveys, obtaining state and federal permits, and holding public meetings.

AMLP also develops engineering designs by working in coordination with the NEPA process.

After March 2020, all projects were completed in compliance with current COVID-19 protocols and restrictions in place.

Coal Mine Projects Completed by AMLP:

Vermejo Park Ranch - AMLP constructed two projects west of Raton on the Vermejo Park Ranch which has an extensive coal mining history. The Tin Pan Canyon Gob Reclamation Project involved reclaiming a large coal gob (waste) pile located adjacent to an ephemeral drainage. The dark surface, density, and lack of growing media of the gob pile makes it difficult for vegetation to grow without assistance. Therefore, terraces were built using straw bales and coir rolls with a large quantity of amendments mixed into the coal gob surface to create a growing medium. Seedlings grown by the State Forestry Division were planted on the terraces and the area was hydroseeded.

The nearby Swastika Mine and Dutchman Canyon Maintenance and Stream Restoration Project was the site of previous AMLP construction in 2012 where large coal gob piles were buried and a straightened stream channel was restored. The land was graded to mimic the adjacent natural area implementing a geomorphic reclamation technique. The project was delayed by multiple severe storms before the vegetation grew to protect from erosional features developing. To comply with an active water quality permit, the current project was undertaken to mitigate the erosion problems before they impacted the buried coal waste and to enhance water quality, stream stability and function, and expand wetland and riparian habitat. Allison - Following emergency subsidence abatement work



Constructed terraces with straw bale at the Tin Pan Canyon Reclamation Project will slow the water runoff and support newly planted seedlings.



Wild turkeys taking a drink of water from spring-fed pool just constructed at the Swastika Mine and Dutchman Canyon Maintenance and Stream Restoration Project.

completed in the community of Allison (McKinley County) in 2018, AMLP completed geotechnical and hydrologic studies which will be used to design comprehensive solutions to remediate hazardous conditions caused by open subsidence features above an abandoned underground coal mine. Other McKinley County projects under development include addressing four coal mine fires and a subsided mine adit (a horizontal passage leading into a mine for the purposes of access or drainage) near a housing community.

Madrid - In Madrid, AMLP completed conceptual engineering designs for the Madrid Stormwater and Erosion Safety Project that will address property damage, flooding, sedimentation, and fire safety issues resulting from historical coal mining. The design is moving forward in close collaboration with Madrid residents and the New Mexico Historical Preservation Division.

AMLP will continue to inventory and develop coal mine reclamation projects in areas of New Mexico impacted by historic mining including Gallup, Raton, Carthage Mining District, and Madrid.



An eroded drainage channel through a coal waste pile being constructed into an engineered rock rundown at the Tin Pan Canyon Reclamation Project.

Non-Coal Mine Projects Completed by AMLP:

The BLM remains a strong programmatic partner with MMD, providing funding for reclamation of abandoned hard rock mines that supplements AMLP's annual OSMRE grants. Through a Memorandum of Understanding and a Cooperative Agreement, actions funded by the BLM include site reconnaissance and assessments, mapping, archaeological surveys, environmental assessments and other environmental clearance requirements, engineering, construction, and post-completion monitoring and maintenance.

During the past year, the BLM and AMLP partnered to complete mine safeguarding construction activities on the Cookes Peak West Phase IIIB and Cookes Peak East Phase II projects, San Pedro Mine Safeguard Project Phase II, and the Bradley Mine Safeguarding Project Phase II. Over 120 mine features were safeguarded with the completion of these projects, with measures that included backfilling and installing steel gates that provide small animal habitat while keeping humans out.

Cookes Peak - The two projects in Cookes Peak Mining District in Luna County, northeast of Deming, were the most challenging. Located on steep and rugged terrain, many features required a helicopter to mobilize the equipment and supplies and, as a result, left minimal disturbance. Additionally, many features were in or adjacent to a BLM Wilderness Study Area that further restricted access. Safeguarding abandoned mines is unique work and whether backfilling a mine by hand or working around bird nesting and bat hibernation, AMLP implements a process to work within the restraints to complete the project.



A bat gate being constructed over a mine shaft at the Cookes Peak East Mine Safeguard Project – Phase II.



A finished bat gate constructed over a mine shaft at the Cookes Peak East Mine Safeguard Project – Phase II. The gate will allow birds and bats to come and go while safeguarding humans from a vertical drop.



A helicopter delivering a steel bat gate to remote location at the Cookes Peak West Mine Safeguard Project – Phase IIIB.

COAL MINE RECLAMATION PROGRAM:

The Coal Mine Reclamation Program (CMRP) enforces regulations and inspects all coal mines on federal, state, and private lands within New Mexico, excluding Indian lands. CMRP's mandate is to protect the public, adjacent landowners, and the environment from the effects of coal mining. CMRP oversees more than 80,000 acres of permitted mine lands and over \$286 million in financial assurance to ensure that these mines will be properly reclaimed. New Mexico has 100 percent third-party surety bonds for all six actively permitted coal mines, three of which are no longer producing coal and are in reclamation. Westmoreland San Juan Mining's San Juan Underground Mine, and Peabody's Lee Ranch Surface and El Segundo Surface mines are currently extracting coal while Chevron's McKinley and Ancho mines along with Westmoreland's San Juan Mining's La Plata Mine are in reclamation.

In the past, MMD allowed coal mines to be self-bonded; however, in the last several years, parent companies of four of the Coal Program's six permitted mines filed Chapter 11 Bankruptcy. Although all four companies emerged from bankruptcy, with the current uncertainty in coal mining, MMD now only allows third-party surety insurance companies as the guarantor. This practice ensures there is adequate bond money for the state to have a mine fully reclaimed in the event an operator is unable to complete reclamation.

Bond release occurs in stages throughout the life of a mine. A coal operator is eligible for Phase I partial bond release as the affected lands are 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).

Evaluation of bond release applications continues to be a significant part CMRP's workload. 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 El Segundo Mine, Phase 1 of 458 acres and San Juan Mine for phases II and III of 1,201 acres.



Helicopter delivery of a prefabricated steel mine gate on steep, rugged terrain at the Cookes Peak West Mine Safeguard Project – Phase IIIB.



Steel bat gate constructed in place at a mine adit as part of the Cookes Peak West Mine Safeguard Project – Phase IIIB.

AMLPL will continue to inventory and develop non-coal safeguarding projects in the Boston Hill (Silver City), San Pedro Mountains, Florida Mountains, Tres Hermanas, and Orogrande mining districts. There are still thousands of abandoned mines that pose hazards throughout the state. MMD advises all citizens to Stay Out and Stay Alive.



San Juan Coal Mine irrigated reclamation

MINE REGISTRATION, REPORTING AND SAFEGUARDING PROGRAM:

This program provides comprehensive information on mineral resources, mine registration, reclamation, and safeguarding efforts, 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 2019 (latest information available) is provided in the Mineral Resources section of this report.

MMD provides online web applications to enhance transparency and outreach and provides daily updated information for New Mexico mines. MMD Online links to the Mine Registrations and Permits web application which allows users to search by an individual parameter, or a multitude of combinations, with results exportable to Excel or to an Earth browser such as Google (By statute, production information is held confidential). The other link from the MMD Online web application page, Coal Mines Query, provides more extensive coal mine information including coal geology and quality, notices of violation, and water quality data. Additional web applications are linked from the GIS, Maps and Mine Data page including Active Mines Web Map, Map Gallery, and story maps.

Another important public outreach component of mine reporting, the Excellence in Reclamation Award, was instituted in 1996 to recognize and celebrate

excellence and innovation in coal, hard rock and aggregate mine reclamation, abandoned mine land reclamation projects, and other related efforts or initiatives deserving special recognition. The awards are presented annually at the New Mexico Mining Association's convention. Due to Covid-19 health restrictions, the 2020 conference was cancelled; however, MMD selected 2020 awardees which will be recognized at the 2021 conference.

Picuris Pueblo was chosen in acknowledgement of successful efforts to reclaim the U.S. Hill Mine, south of Taos in Taos County. This mica mine was acquired by the Pueblo in 2004 from the operator so that the Picuris Pueblo could reclaim these lands to a more natural state and secure access to important spiritual sites and traditional sources of micaceous materials that have been collected by many generations of Picuris Pueblo pot makers. The land will soon be integrated into Tribal Trust Land for protection in perpetuity.



U.S. Hill Mine photo series illustrates the reclamation progress that now shows natural regeneration of ponderosa pines: 2008, 2017, 2019

The Española Mercantile Company, owner and operator of the Las Conchas and El Cajete pumice mines, and Matt Lane of The Española Mercantile Company, were recognized for their efforts to remedy erosion features at these mines west of Los Alamos in Sandoval County in an innovative and permanent fashion. Complex reclamation challenges existed at these sites including loose, erodible pumice under the topsoil cover material, livestock trespassing onto the fenced reclamation sites, and the 2011 Las Conchas wildfire which burned the southwest edge of the El Cajete site. Matt Lane led a team to stabilize the material eroding out below the surface. Zuni Bowl constructions at both sites allowed for the capture of stormwater into an armored pool to slow water flow and prevent the growth of the headcut (an erosional feature with an abrupt vertical drop). At Las Conchas, water cells, a feature that roughens the surface and creates a pothole effect to slow overland water flow, increase water infiltration, and provide a microclimate for vegetation, were also incorporated above the headcut



Zuni Bowl construction to remediate headcut, 2019



El Cajete headcut, 2019



Zuni Bowl construction and associated fishbone style berm to remediate headcut and downhill erosion, 2020



El Cajete headcut

MINING ACT RECLAMATION PROGRAM:

MARP regulates and inspects all hard rock or mineral mines on federal, state, and private lands within 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 2019 (the latest data available due to operator reporting requirements), MARP has permitted approximately 639 mining and exploration projects and holds more than \$725 million in financial assurance for active mines and mines in reclamation. The overall disturbed acreage under permit with MARP is approximately 26,763 acres as of December 2019 and the total number of acres reclaimed since 1994, when the program started, is approximately 7,145 acres.

Questa Mine - In 2020, reclamation and remediation continued at Chevron Mining Inc.'s (CMI) permanently closed Questa Mine in Taos County, a Superfund site. Three agencies, MMD, New Mexico Environment Department (NMED) and the U.S. Environmental Protection Agency (EPA) are working with CMI to develop reclamation plans and agreements that comply with the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. As part of the settlement between the U.S. Department of Justice, EPA, and the State of New Mexico, CMI will provide \$143 million in cleanup work. Using those funds, the Eagle Rock Lake remediation project, just outside the Village of Questa, has already been completed. Other reclamation and remediation work will continue for several years and will include demolition of the mill area, construction of a water treatment plant, and removal and disposal of old mine waste (tailings) along the tailings pipeline corridor (most of which have already been completed, by the end of 2020).

Several pilot projects are underway at the Questa Superfund site to identify best available reclamation technologies, including a demonstration project, completed in the spring of 2020, to place approximately a million cubic yards of cover material over 275 acres of a 1,000-acre tailings facility. The designed cover will inform the development of a methodology to apply viable borrow materials from surrounding native soils, that will result in a functional store and release cover. During the summer of 2020, CMI installed instrumentation to measure soil water

properties in the cover and tailing materials, and the agencies completed a final construction walk-through in the fall of 2020. A six-year monitoring period will take place to evaluate the effectiveness of the designed cover and, if successful, will be applied to the remaining portion of the tailings facility. In another area of the mine, CMI operates a water treatment plant and installed an upgraded groundwater extraction system



Seeding and mulching at Dam 1 tailings pond reclamation at the Questa Mine, Taos County (2020)

Additionally, another large pilot study is being developed to address several waste rock piles. Chevron is completing the final engineering design of a pilot plot project on two large waste rock piles, the Capulin and Goathill North, totaling approximately 109 acres. This study will determine best practices to reclaim the waste rock piles and will be used to address the remaining piles at the mine. The study will include the conversion of run-of-mine rock overburden materials to a viable store and release cover. In the fall of 2020, CMI began construction of a haul road expansion project in preparation for this multi-year construction project which likely will be limited seasonally due to snowpack on steep slopes.

Permitting - An equally important part of MARP's workload is permitting. MARP is permitting the revised closeout plans and expansions at the state's four largest copper mines in Grant County, in 2020. Freeport-McMoRan Inc. (FMI) is proposing expansions at four of its New Mexico operations. All permitting actions at the Little Rock, Tyrone, Chino, and Continental mines address the expansion,



Main haul road between Continental and Chino, showing bridge and Overlook Tunnel across State Hwy 152, Continental Mine, Grant County (2019)

continued operation, and reclamation of these 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. With a revised Closeout Plan in place since 2018, mining at the Continental Mine continues in 2020 with much of the top of Hanover Mountain reduced to about 30 percent of its original size. The Chino and Tyrone closeout plan renewals were completed at the end of 2020, leaving the Little Rock Mine plan to be completed in early 2021. As a result of the Covid-19 pandemic impacts on miners and the economy, mining has slowed appreciably at the Chino and Continental mines, with furloughs occurring in mid-2020, and planned layoffs by the end of the year. FMI plans to continue mining at these sites, but at a reduced scale.

During 2020, MARP staff continued the review process of two large-scale permit applications under Part 6 of the New Mexico Mining Act; one uranium mine, Energy Fuels' Roca Honda Mine, and one copper mine, New Mexico Copper Corporation's (NMCC) Copper Flat Mine. The Roca Honda Mine project remains in the early stages of permit development as the federal government is conducting an Environmental Impact Statement (EIS) evaluation and state permits are under review. With uranium prices remaining low, the permitting of the Roca Honda Mine continues at a slow pace.

MARP continues to work on the Copper Flat Mine application. MARP deemed the application "technically approvable" in July 2018 and in December 2018 NMED approved the discharge permit which



Rubio Peak test plot, testing material to be used as cover on the waste rock piles at the Chino Mine, Grant County (2019)



Active mining in 5A Stockpile Area, Tyrone mine, part of the expansion of the West Main Pit, Grant County (2019)

was appealed and is pending a hearing. In April 2019, the Bureau of Land Management issued the Final EIS, and the Record of Decision in August 2019 and is reviewing the Plan of Operations and associated financial assurance. In March 2020, MMD issued A Director's Order (Order) rescinding the notice of technical approvability and reopened the review of the Copper Flat application. In June 2020, MMD withdrew the Order and adopted a Settlement Agreement with NMCC which requires NMCC to demonstrate the ability to acquire water rights necessary for operation and reclamation of the proposed mine, submit a supplement financial assurance proposal to include contingent costs of acquiring water rights if necessary, and complete remaining steps under the regulations prior to MMD continuing the application review process.

In June 2019, MMD received an application from Comexico LLC (a subsidiary of New World Resources, West Perth, Australia) for a Regular Exploration Permit (Part 4, New Mexico Mining Act), for the Tererro Exploration Project. Comexico proposed to conduct exploration drilling of up to 30 drill holes (each up to 4,000 feet deep) exploring for gold, silver, copper, lead, and zinc deposits in the Santa Fe National Forest (SFNF) near the historic Jones Hill Mine in Santa Fe County. The application includes the improvement of existing SFNF roads and the creation of additional access roads or pathways and drill pads for the exploration drilling project. In October 2020, Comexico LLC submitted an amended application to MMD proposing a total disturbance of 7.72 acres which is under review by MMD and SFNF/United States Forest Service (USFS), as are the other portions of the application. SFNF is analyzing the proposed project under NEPA guidelines. Once the SFNF completes the NEPA process, it will provide guidance for MMD on how to proceed with processing the exploration permit application. If SFNF issues a permit following completion of the NEPA process, MMD will continue to process the application. The proposed exploration project has generated much public interest from the nearby town of Pecos, several environmental and public interest groups, tribal entities, and from the public throughout the Pecos canyon area. Based on this interest and if the SFNF issues a permit based on their determination under NEPA, MMD will hold a public hearing on the application as part of the review process under the regulations. The hearing likely will be online due to Covid-19. The hearing will not be held until the recent amendments to the original application



Reclamation has begun at Mt. Taylor Mine. The South Waste Rock Pile has been covered and revegetated, Cibola County (2020)

have been reviewed, by the state agencies, and the USFS has made further progress in their technical evaluation of the application.

Permitting actions related to earlier uranium mine applications have waned as has the interest in uranium mining overall. The Mt. Taylor Mine, an existing uranium mine in Cibola County formerly on standby status since 1999, is an exception. The operator, Rio Grande Resources (RGR), applied to terminate standby status. In December 2017, the mine received MMD approval to come off standby status and restart mining. RGR performed construction and some reclamation activities throughout 2018 and 2019. However, some local non-governmental organizations (NGOs) opposed any permitting action for the mine, other than reclamation, and appealed the MMD permit approval to the New Mexico Mining Commission in 2018. The New Mexico Mining Commission upheld the permit approval in July 2018. In 2019, RGR conducted a substantial amount of work toward reopening the mine including cleaning sediments from and lining two large water treatment ponds; adding to, expanding, and initiating reclamation of a large waste rock pile including installation of a lined waste disposal cell; and reducing and hauling a large ore pile to a mill in Utah. In December 2019, RGR informed MMD of its decision to reclaim the mine instead of developing it and renewing mining. Consequently, RGR and MMD are updating the permit for reclamation and permanent closeout. There is a great deal of interest in the outcome of this permitting action from the local NGOs and tribal entities. MMD will evaluate and communicate further with these entities in developing the permitting approach for the Mt. Taylor Mine and final disposition of the reclamation plan.

MARP is examining some of the state's older mine sites that have been under reclamation for over 12 years for reclamation release. One such site is the U.S. Hill Mine in Taos County, acquired by the Picuris Pueblo in 2004, reclaimed in 2007, and now ready for reclamation bond release; this project received a 2020 Excellence in Reclamation Award (see previous section for more information and photographs). Other sites under MARP consideration for bond release are FMI's Brockman Mine in Grant County and American Minerals' Deming Jigging Mill in Luna County.

MINERAL RESOURCES: CY2019

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 19.71.9 provides that calendar year reports are due by April 30 of the following year. Accordingly, the following mineral resources report covers the most recently reported mining data – for calendar year 2019.

Mine operators reported mineral production value of more than \$1.8 billion extracted from New Mexico mining sites, a slight increase from 2018 (Table 1 and Figure 1).

TABLE 1 New Mexico Summary of Commodity Production, Production Value, Employment, Payroll, Revenue and Ranking: 2019

Mineral	Production ¹	Production Rank ²	Production Value \$	Employment ³	Reclamation Employment	Payroll \$ ⁴	Revenue Generated \$ ⁵	
							State	Federal
Coal	14,535,660	10	\$ 514,046,745	1,089	150	\$ 93,934,523	\$ 10,758,905	\$ 3,751,723
Copper	180,326,518	3	\$ 606,694,358	1,345	6	\$ 85,435,348	\$ 5,052,285	\$ -
Gold ⁶	14,524	-	\$ 20,225,792	-	-	-	\$ 181,709	\$ -
Industrial Minerals ⁷	2,050,738	-	\$ 261,946,198	584	16	\$ 30,802,477	\$ 201,032	\$ 382,667
Aggregates ⁸	12,183,823	-	\$ 114,456,076	992	24	\$ 33,403,683	\$ 4,635,202	\$ -
Other Metals	-	-	-	-	-	-	\$ -	\$ -
Molybdenum	-	-	-	-	-	-	\$ -	\$ -
Potash	407,905	1	\$ 292,254,849	680	21	\$ 59,977,488	\$ 3,234,937	\$ 4,084,674
Silver ⁶	332,346	-	\$ 5,227,855	-	-	\$ -	\$ 44,799	\$ -
Uranium ⁹	-	-	\$ -	22	0	\$ 978,682	\$ -	\$ -
TOTAL			\$ 1,814,851,873	4,712	217	\$ 304,532,201	\$ 24,108,869	\$8,219,064

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

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 2019 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 NM State Land Office revenue: mineral lease royalties, rentals, bonuses; NM Taxation and Revenue Department revenue: severance, resource excise, and conservation taxes.

Federal revenue includes 50% state share of federal royalties.

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

Federal data: Office of Natural Resources Revenue

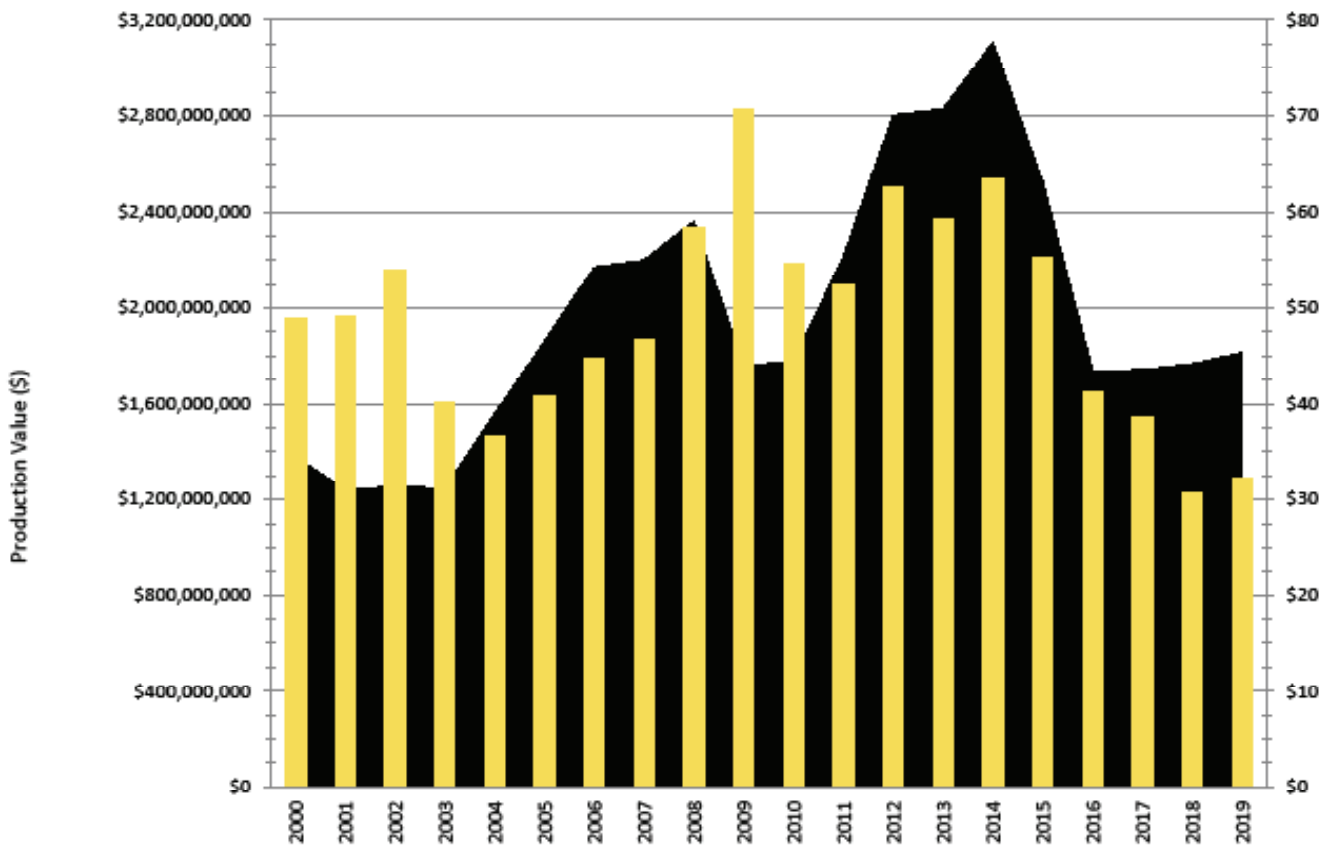
⁶ Gold and silver are by-products of copper production. Employment/payroll for gold/silver included in copper.

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 Mineral Production Value and Revenue Generated: 2000-2019



New Mexico remains a leading United States mineral producer in the 2019 commodity rankings provided by reports from the U.S. Geological Survey (USGS) and U.S. Energy Information Administration (coal):

- Potash – 1st (50 percent of total U.S. production, used primarily in fertilizer)
- Perlite – 1st (used in building construction products, horticultural aggregate, and fillers)
- Zeolite – 1st (used in animal feed, odor control, and water purification applications)
- Copper – 3rd (used primarily in building construction, transportation equipment, and electrical and electronic products)
- Coal – 10th (up from 14th in 2018, due to decreased production in other states)

Total federal and state revenues generated by 2019 mineral production in New Mexico increased 5 percent from 2018 levels to \$32.3 million. 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. 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 3 percent from 2018 to \$304 million (Figure 3). Overall, reported employment decreased in 2019, from 5,000 employees in 2018 to 4,715 employees (excluding reclamation employees). By category, compared to 2018, direct employment decreased 4 percent from 4,299 to 4,120 employees; contract employment decreased 15 percent from 701 to 595 employees; and reclamation employment decreased 14 percent from 253 to 217 employees (Figure 4).

FIGURE 2 Percentage of Production Value, Employment, Payroll and Revenue by Commodity: 2019

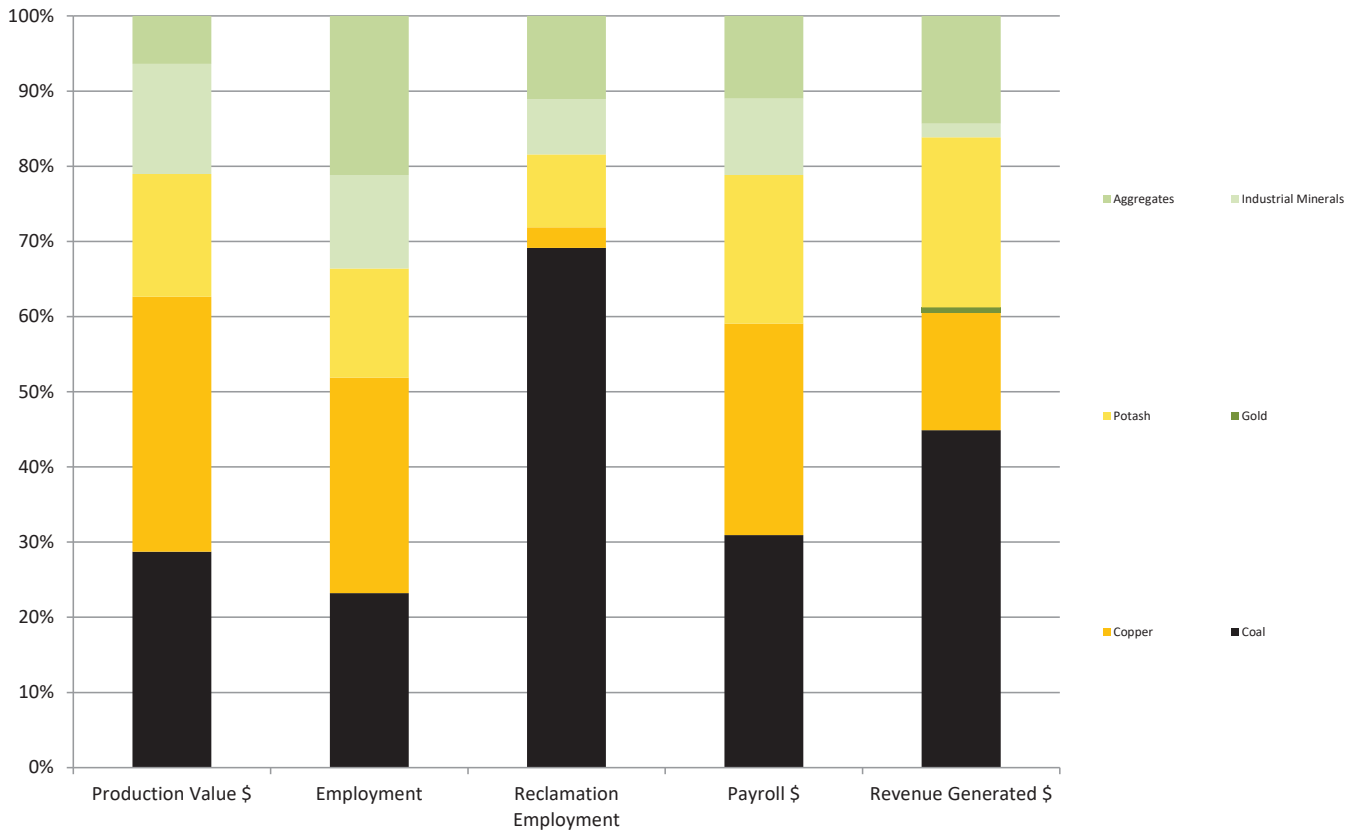


FIGURE 3 New Mexico Mineral Industry Employment, Payroll and Capital Improvements: 2000-2019

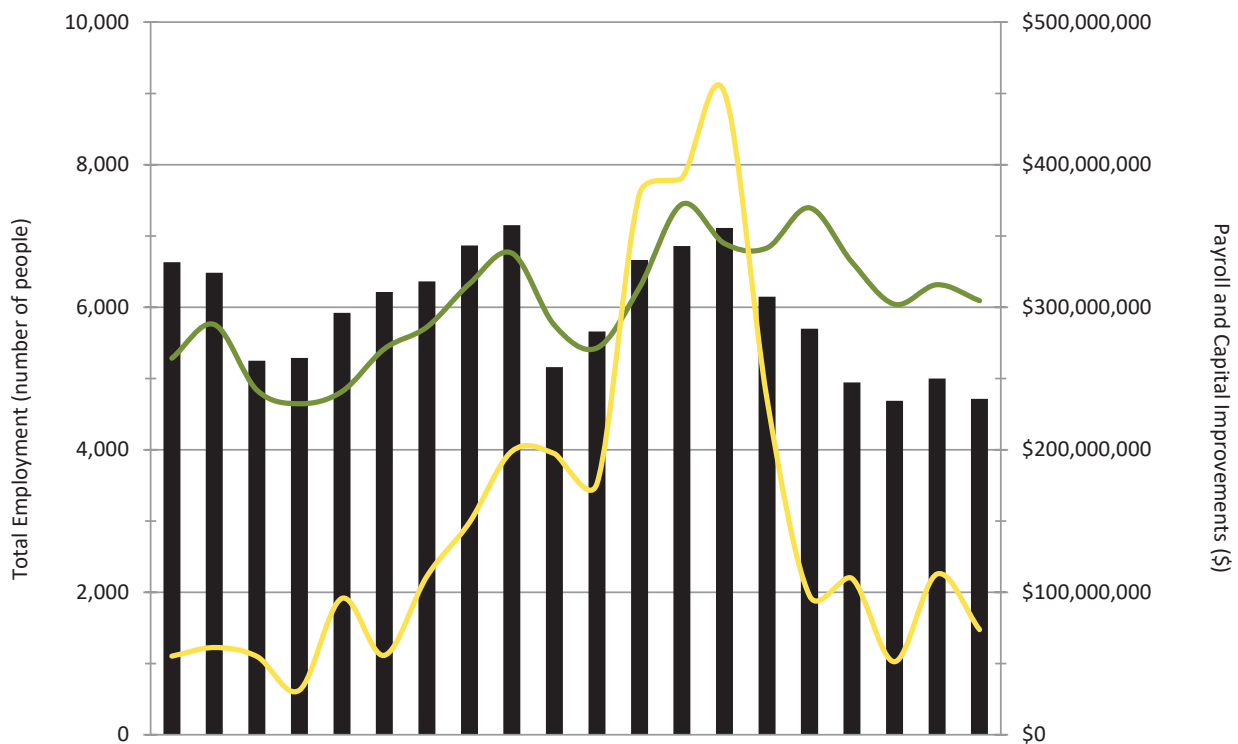
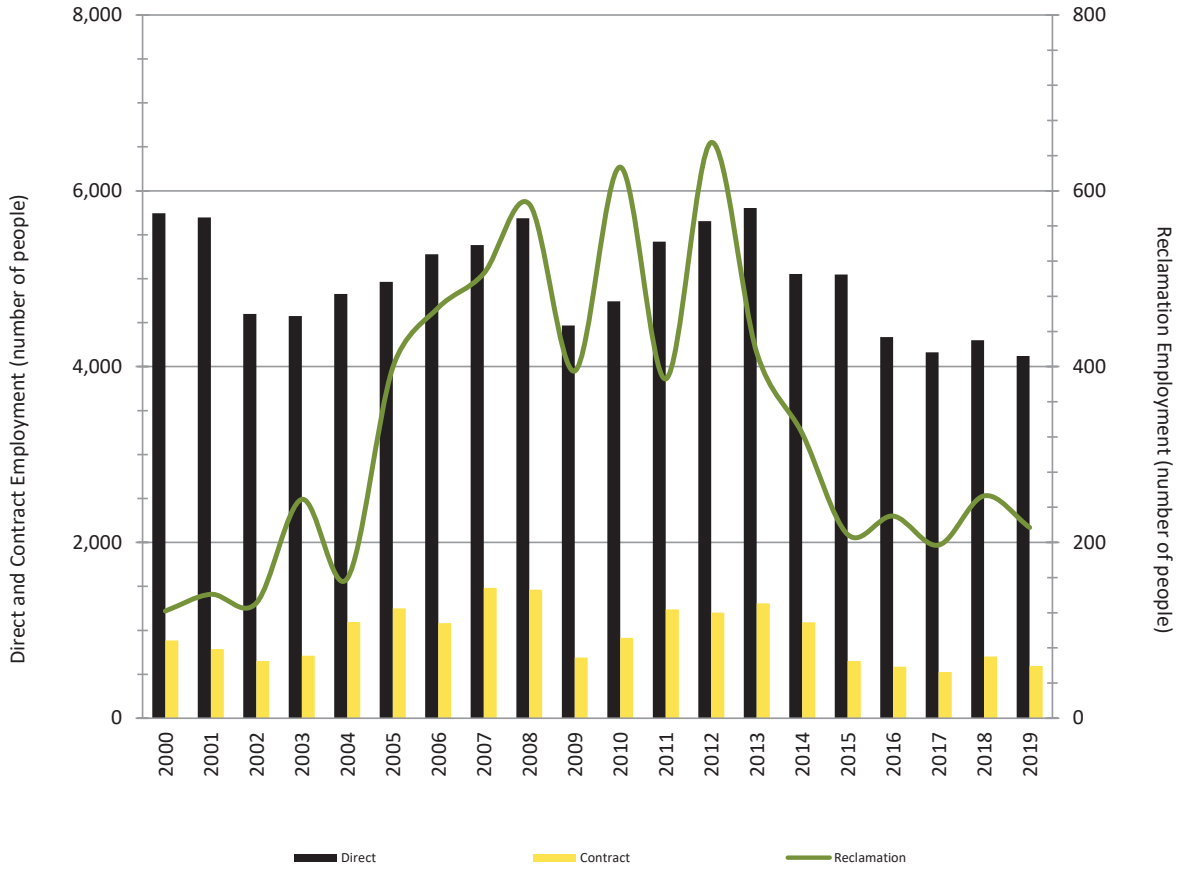


FIGURE 4 New Mexico Mineral Industry Employment: 2000-2019



Figures 6 through 10 provide 20-year snapshots of 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, riprap, sand, scoria, and topsoil), and industrial minerals (brick clay, calcite, dimension stone, gypsum, humate, perlite, Portland cement, pumice, salt, silica, and zeolite), respectively.

FIGURE 6 New Mexico Coal Production and Value: 2000-2019

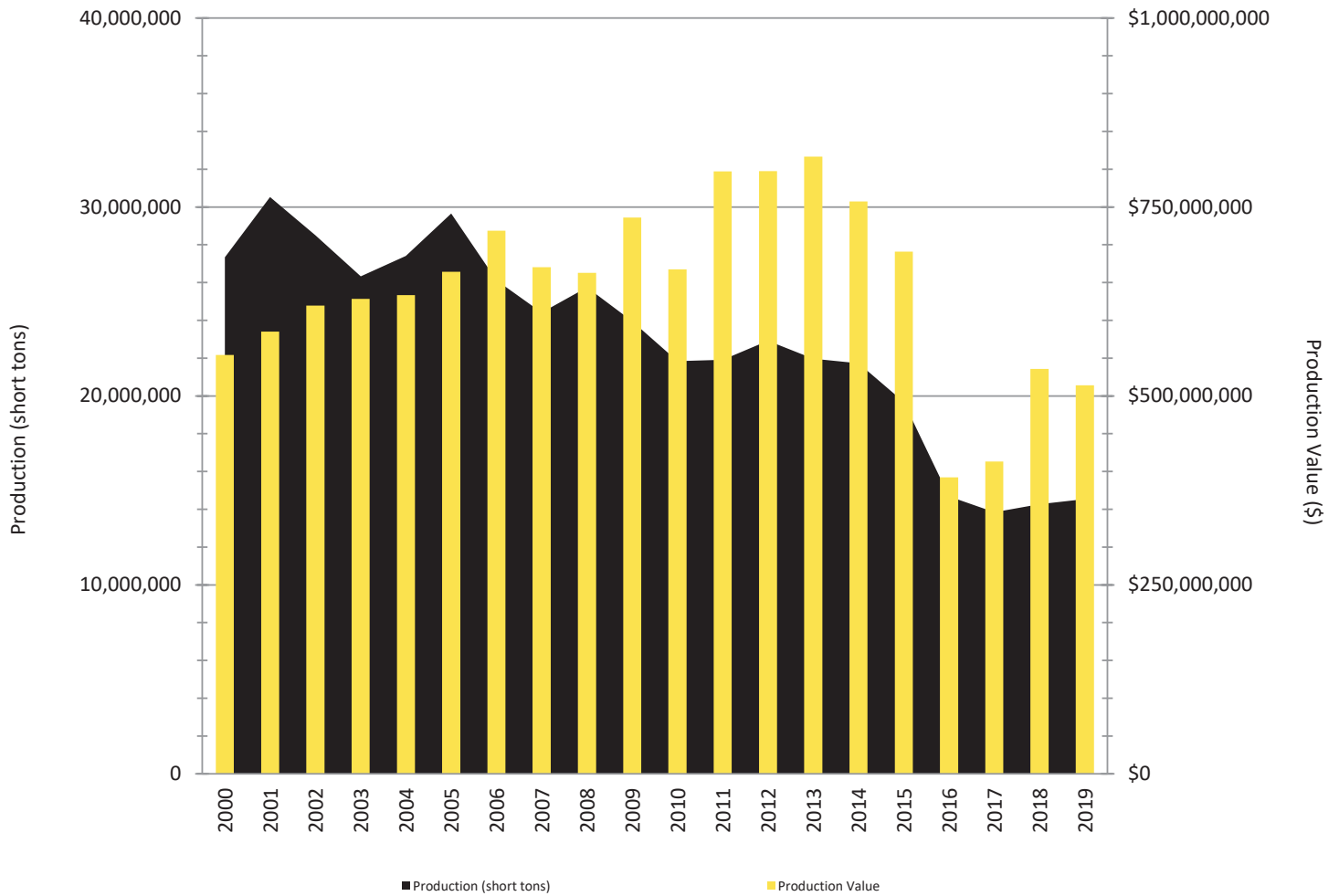


FIGURE 7 New Mexico Copper Production and Value: 2000-2019

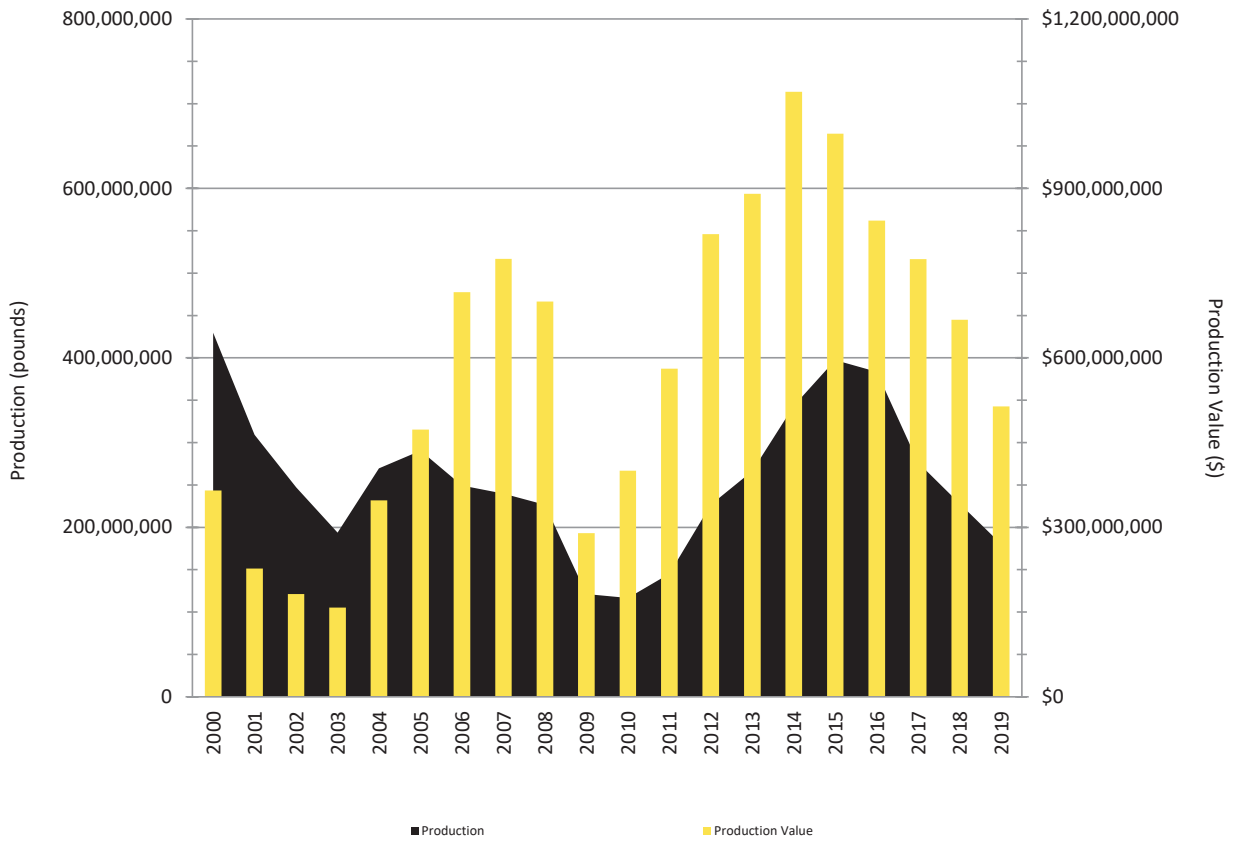


FIGURE 8 New Mexico Potash Production and Value: 2000-2019

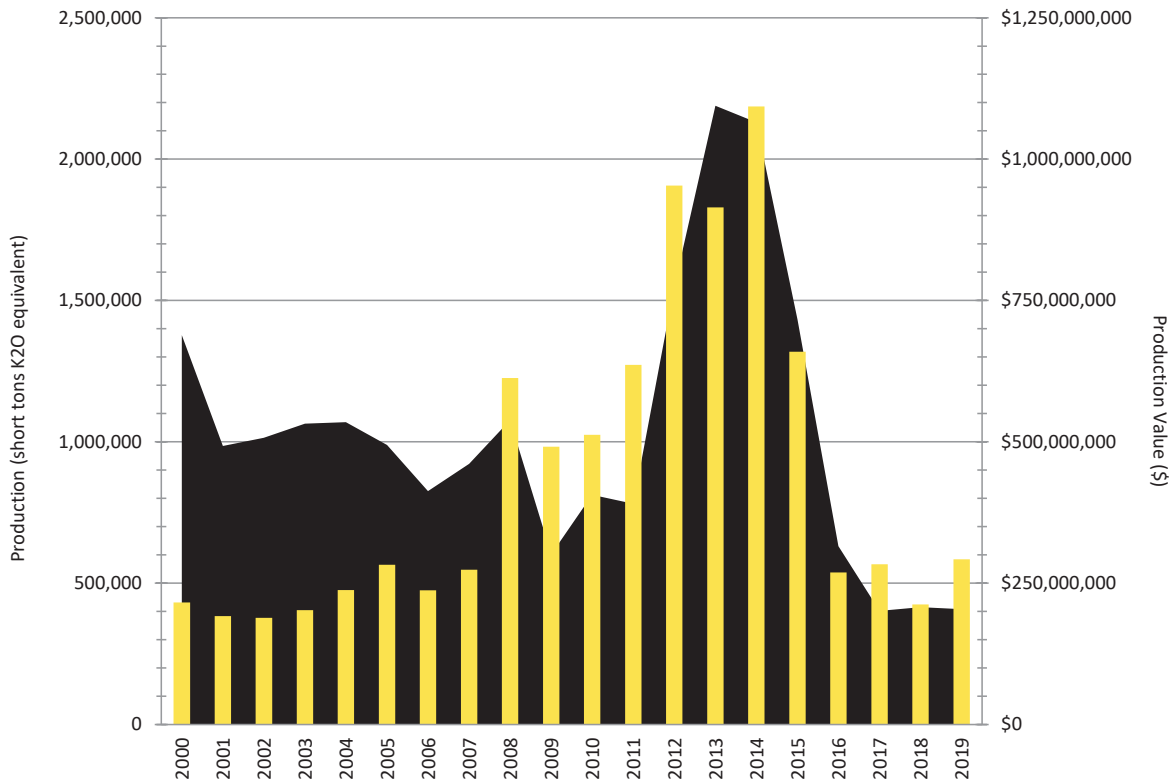


FIGURE 9 New Mexico Aggregate Production and Value: 2000-2019

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

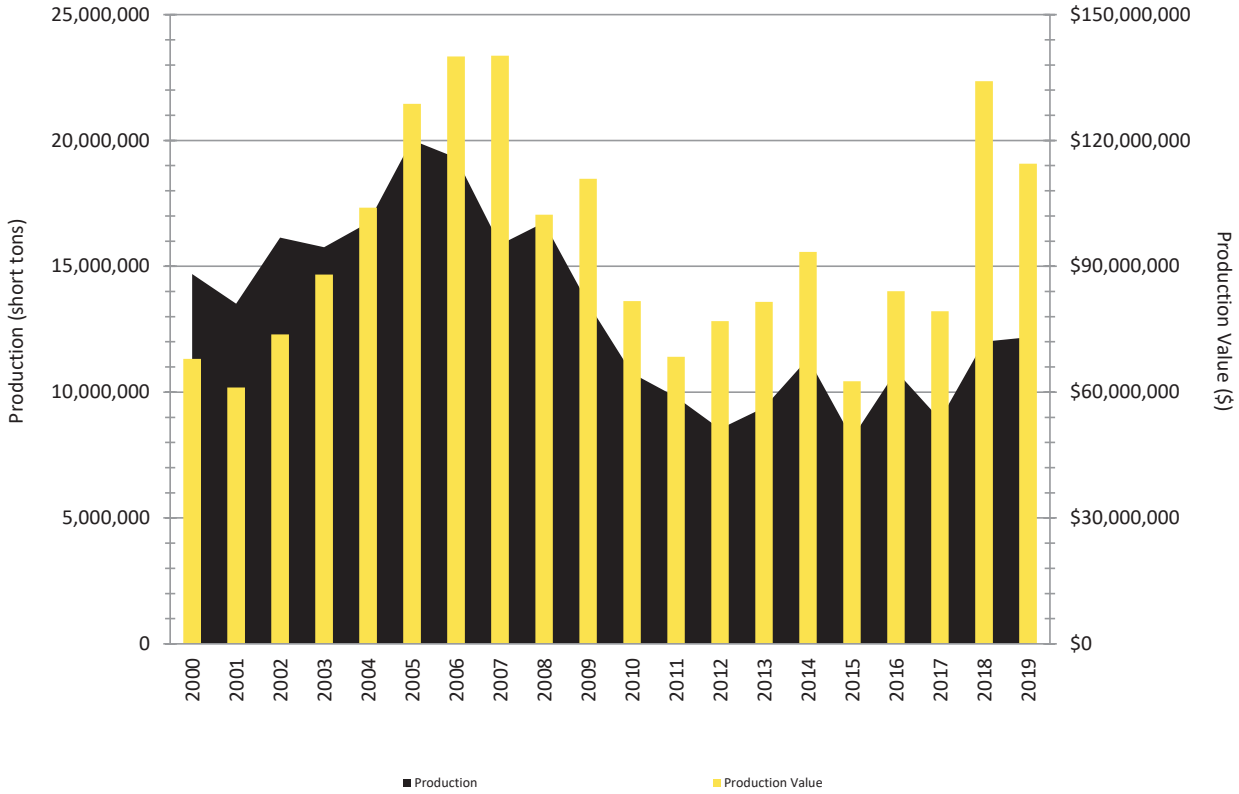
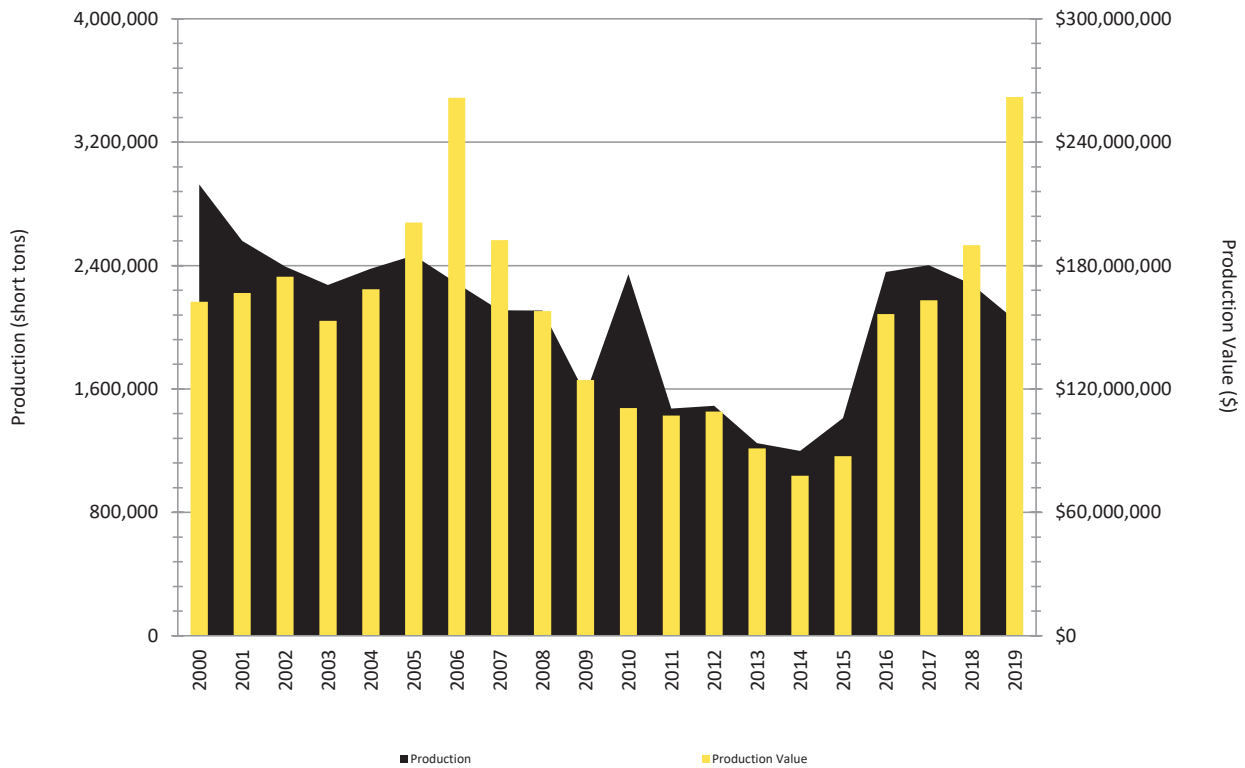


FIGURE 10 New Mexico Industrial Mineral Production and Value: 2000-2019

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



Oil Conservation Division



Letter from the Director:

When 2020 began, New Mexico was in the midst of a production boom thanks to new technology in the Permian Basin. The Oil Conservation Division was making steady progress reorganizing the Division to make sure our staff were working to regulate the industry as efficiently as possible.

Then the COVID-19 pandemic hit. As travel came to an almost virtual stop overnight the demand for gas plummeted, sending prices to historic lows. The OCD had to quickly adjust to the new needs of regulating the industry while also transitioning the staff spread out across the state to a work from home setting.

I'm proud of how our staff have responded. Within a couple weeks of stay at home orders we had issued new guidance on how to work with the OCD and new directives for requesting temporary shut-ins due to economic hardships. We found ways to reduce paper and work more efficiently. Inspections that did not require multiple people on site continued so we could continue regulating the industry.

In addition to meeting the changing needs of our work, we also moved forward with our methane waste reduction strategy. In Executive Order 2019-003, Governor Lujan Grisham directed EMNRD and the New Mexico Environment Department (NMED) to jointly develop a statewide, enforceable regulatory framework to secure reductions in oil and gas sector methane emissions and to prevent waste from new and existing sources. In coordination with NMED, EMNRD's OCD held virtual public information meetings to wrap up our stakeholder engagement before the writing of the rule got underway. These were in addition to in-person public meetings conducted in 2019 pre-pandemic.

In July we released our draft rules for public comment, then revised and submitted our proposed final rule to the Oil Conservation Commission in the fall. It is scheduled for a hearing in January 2021 and calls for a robust data collection and reporting program and 98 percent gas capture by 2026.

My vision for the Oil Conservation Division is to be an innovative, efficient, and transparent office that serves New Mexico. In the face of unusual circumstances our staff have continued their important work ensuring we are protecting the environment. I'm proud of the work accomplished so far and look forward to the work still left to do. I hope you enjoy reviewing the OCD's 2020 accomplishments.

Adrienne Sandoval, OCD Division Director





Oil Conservation Division

MISSION: The Oil Conservation Division (OCD) regulates oil and gas activity in New Mexico. It gathers oil and gas well production data, permits new oil, gas and injection wells, enforces the Division rules, develops administrative orders to which operators are subject, enforces the State's oil and gas statutes, ensures abandoned wells are properly plugged, and that the land is responsibly restored once production activities are done. The division's goals are to promote balanced, consistent, fair and transparent regulation of the oil and gas industry, to prevent the waste of oil and gas resources within the state, to protect the correlative rights of resource owners, to foster efficient development, and to protect human health and the environment.

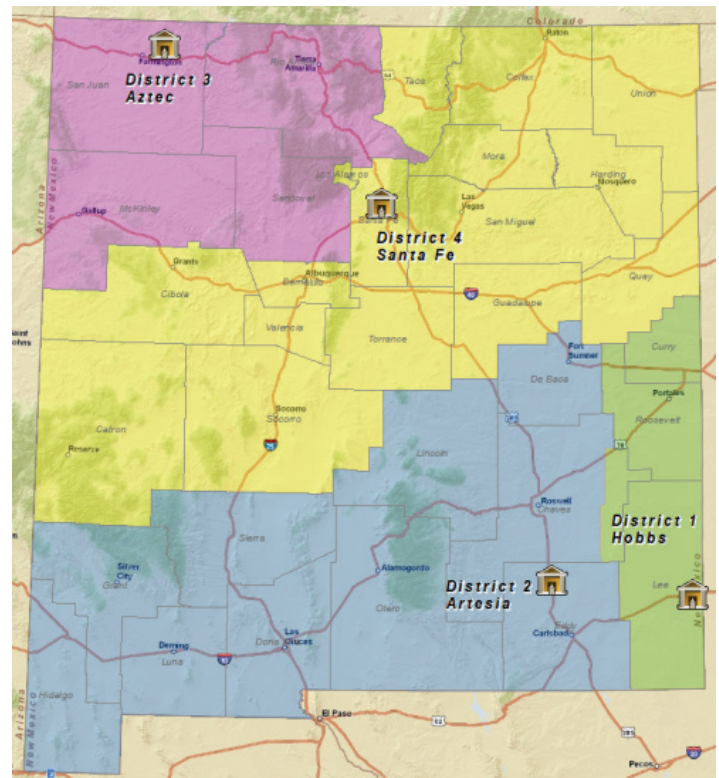
OVERVIEW: The OCD is organized into four district offices and three bureaus responsible for different aspects of regulating the oil and gas industry.

The OCD District Offices are in Hobbs, Artesia, Aztec, and Santa Fe. They issue drilling permits, inspect wells and associated facilities, respond to spills, investigate violations, and institute enforcement actions.

OCD BUREAUS

The Engineering Bureau manages the administrative permitting program of the Oil Conservation Division (OCD) to ensure program goals and regulatory objectives are met. The bureau supports the OCD by providing the technical expertise needed to design and develop programs that address new issues arising from new advances in the oil and gas industry; processing administrative permit applications pursuant to the New Mexico Oil and Gas Act; acting as hearing examiners for protested applications and for applications requiring an adjudication process; and overseeing activities including application processing for the Underground Injection Control (UIC) program. The bureau monitors and enforces the UIC program with the assistance of the personnel of the Field Operations, Administrative and Compliance Bureau who conduct inspections and document conditions for UIC wells.

The Field Operations, Administration and Compliance Bureau ensures industry activities comply with OCD rules and regulations, and do not result in the waste of oil and gas resources while protecting human health and the environment. The bureau works with operators to develop agreed compliance orders to attain compliance with rules and regulations. The bureau tracks statistics, provides administrative support, manages the orphan well plugging program, the US Bureau of Land



Management well plugging program, the tracking of operator financial assurance, and production reports. The bureau is responsible for overseeing the district offices and working with those offices on compliance matters.

The Environmental Bureau enforces both the State's Oil and Gas Act and Water Quality Acts in protecting public health, groundwater, surface water, and the environment in relation to the activities of the oil and gas industry in New Mexico. This involves complex technical issues of geology, hydrology, and engineering.

OCC & RULEMAKING

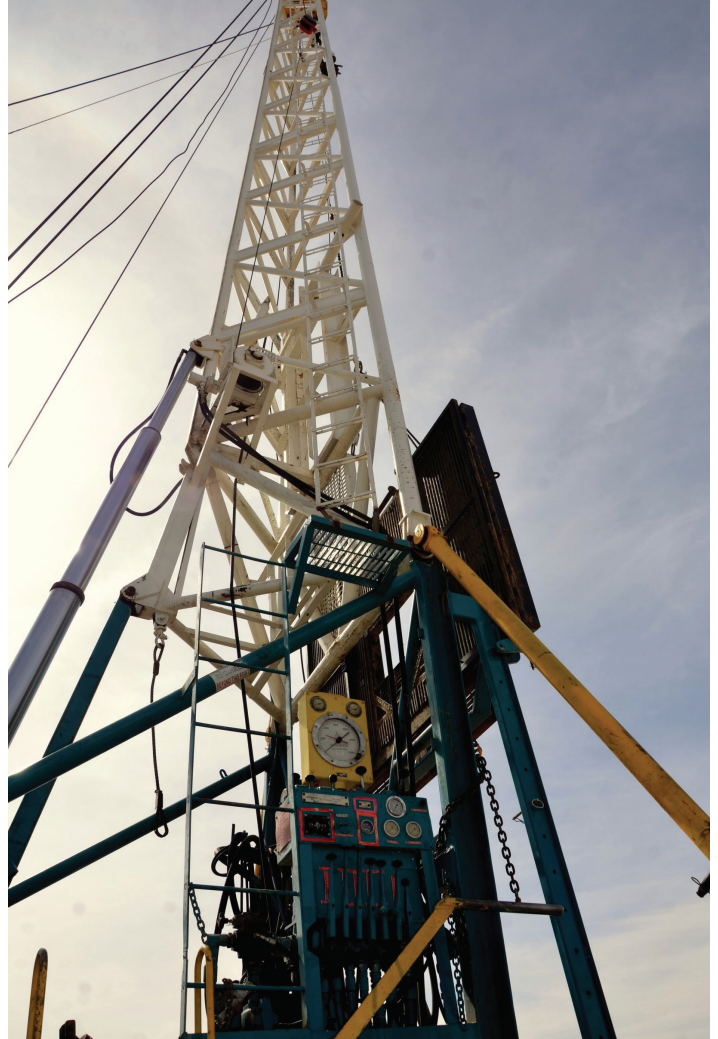
OIL CONSERVATION COMMISSION (OCC):

The OCC is a three-member commission chaired by the OCD Director with a designee of the Commissioner of Public Lands and a designee of the Cabinet Secretary of the Energy, Minerals and Natural Resources Department. The OCC promulgates rules governing oil and gas production in New Mexico, conducts hearings on matters of significant interest, and hears appeals of OCD examiner decisions.

OCD RULEMAKING:

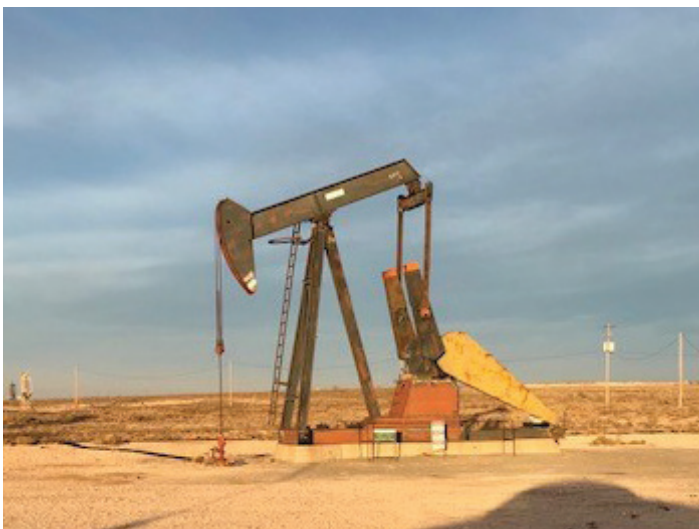
The OCD works with representatives from diverse groups to identify areas where rules need to be updated. The Division is actively involved in federal, state, and industry organizations to share information on new technologies and discuss best practices on issues such as hydraulic fracturing and horizontal well drilling. We are committed to promulgating regulations based on science and technology and include university researchers in workgroups as needed for rule modification and development.

In January of 2020, the OCC heard a rulemaking petition from the OCD to allow the OCD to administratively fine operators who are out of compliance. This rulemaking stemmed from the 2019 legislative session and the Produced Water Act which authorized OCD to fine operators who are out of compliance with regulatory requirements. The rulemaking was finalized in January and went into effect in February of 2020. On October 1, 2020 the OCD sent a report to the legislature, as was required, listing all of the penalties that OCD had issued in the past year.



In July of 2020, the OCC heard another rulemaking petition from the OCD that also stemmed from the Produced Water Act. The proposal aligned OCD's rules with the Act and added a reporting requirement for operators. This requires operators to report the types and amounts of water that is used in their drilling and completions operations. This data will help the OCD to understand what the scope of water usage is and use that data to determine the most appropriate path forward. A new online system for reporting went live at the end of November.

In October of 2020, the OCD petitioned the OCC to schedule a rulemaking on natural gas waste. In Governor Lujan Grisham's EO 2019-003, she charged the OCD to develop a regulatory framework to reduce natural gas waste from the oil and gas industry. The OCC heard the petition for rulemaking in November of 2020 and set the petition for rulemaking in January of 2021.



OCD PERFORMANCE

Inspection & Plugging

In calendar year 2020 the OCD inspected 36,779 oil and gas wells and facilities out of 66,954 total facilities. Inspections consist of site inspections of oil and gas wells, associated facilities, releases, and general site conditions. Underground Injection Control (UIC) well inspections are conducted to meet the goals set by the federal UIC program, overseen by the US Environmental Protection Agency. These inspections are performed to verify wells are operating under the terms of their permits and are tested to ensure integrity of the well bores for the protection of underground sources of drinking water.

To date, the OCD has plugged 4 wells in 2020.

Applications for Permit to Drill (“APDs”)

In FY20, the OCD approved 94.63% of all APDs within 10 business days of receipt, exceeding the performance target of 85% set by the Legislative Finance Committee.



Carlsbad Brine Well Remediation

Since 2009, EMNRD has been the lead in characterizing and monitoring a large and unstable brine well cavern threatening a developed portion of the City of Carlsbad in Eddy County. This brine well cavern was created beginning in 1978 when the operator began injecting freshwater into the subsurface salt formation to produce saturated brine used for oil and gas operations. The most recent operator, I&W, went bankrupt while failing to monitor or remediate the cavern.

Given the size and characteristics of the cavern, the potential for catastrophic failure is significant and would result in serious disruption to local infrastructure, tourism, oil and gas logistics, and agriculture, as well as contaminating groundwater. Using the Oil Reclamation Fund and I&W’s liquidated bankruptcy estate, OCD completed an assessment of the cavern in 2014 using multiple state of the art geophysical techniques. The OCD also installed and is maintaining an automated ground movement monitoring system integrated directly into the local emergency response infrastructure for safety precautions.

During the 2017 and 2018 legislative sessions a fund to mitigate the problem was established, along with the creation of the Carlsbad Brine Well Remediation Authority, to oversee future actions relating to the brine well. 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





yards in volume and extended beneath US 285 to the north. Injection of grout into a large open void is cost-ineffective so Wood made a determination that the backfilling material should be changed to sand which provides equivalent stability at a lower unit cost.

Due to the size of the void and the infiltration of injected sand into the rubble at the bottom, EMNRD projected available funding was not sufficient to completely fill the northern void. Injection operations at the site were paused on July 24, 2020 after the introduction of 100,563 cubic yards of sand into the void. EMNRD, in collaboration with the Authority, continues to seek additional funding to mitigate the most serious impacts of a cavern failure.

PARTNERSHIPS AND COLLABORATION

Descartes Labs

In October 2019 the Governor announced a public private partnership between the state of NM and Descartes Labs. Descartes Labs is a data firm who uses and analyzes large data sets to solve problems. In conjunction with the OCD, Descartes Labs is using satellite data to detect methane hot spots coming from oil and gas sites. The field portion of this work is underway with the OCD doing field checks of sites to validate the data from the satellite.

Transportation, and the Environment Department, with the Secretary of the Energy, Minerals and Natural Resources Department serving as the chair. After a robust request for proposal period, Wood Environment and Infrastructure Solutions, Inc. was contracted to design and implement an in-place grouting program. The in-situ backfilling effort began in September 2019 with the drilling of wells penetrating the southern portions of the cavern followed by pressure injection of grout while simultaneously extracting brine from the cavern. Two drilling rigs were used concurrently operating on a 24 hours per day/7 days per week basis using multiple crews.

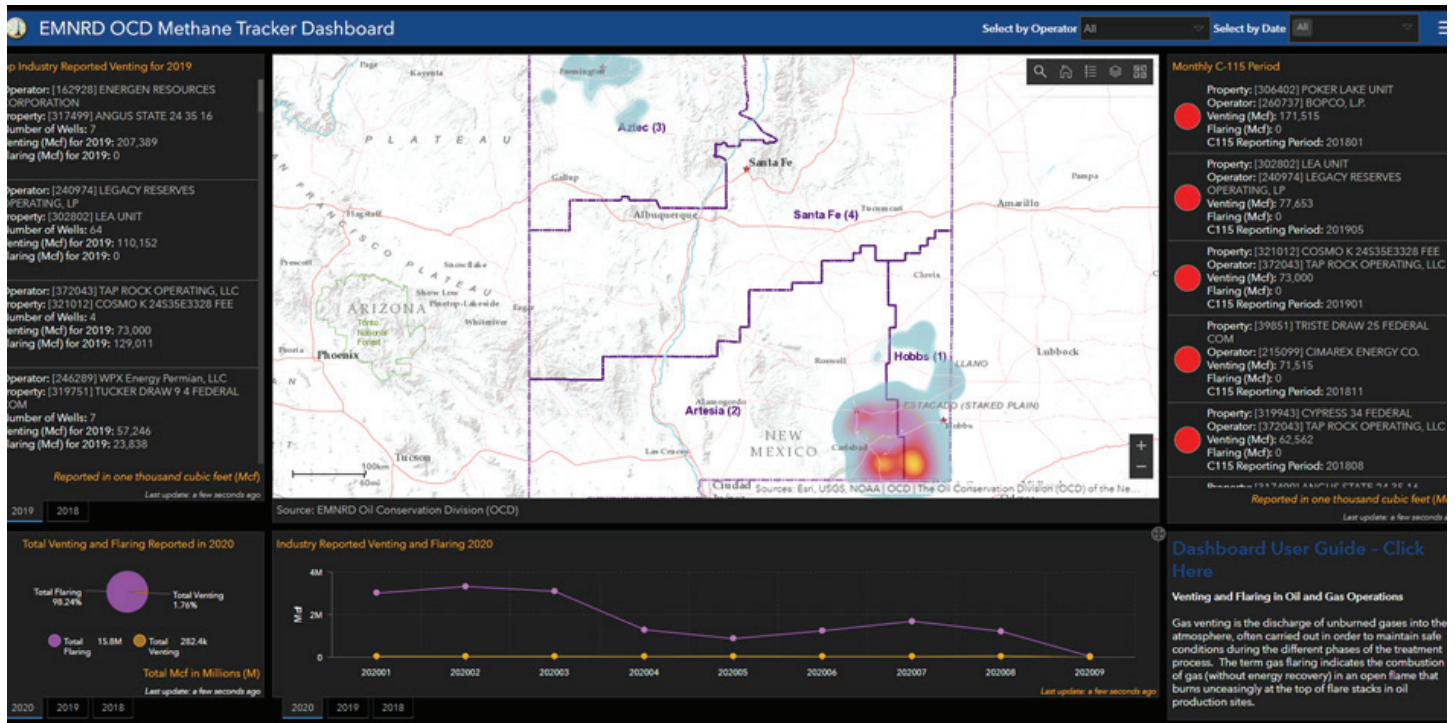
In the southern portions of the cavern this approach was very successful such that the Carlsbad Irrigation District canal, the trailer park south of the canal, and the Jehovah's Witnesses church to the east are no longer at risk.

However, as the drilling program extended into the northern portions during December 2019, an unexpected, large void was encountered that is the result of significant undetected roof failures occurring over the past 20+ years. Sonar logging in January 2020 determined the void was more than 98,000 cubic



NEW GEOGRAPHIC INFORMATION SYSTEM (GIS) Module:

The OCD developed and launched a venting and flaring map this year to visualize the venting and flaring data that OCD receives on a monthly basis. The map is updated each month and allows users to search by well, company, and additional queries. This map helps to increase transparency and make data more usable to the public.



Oil & Gas Produced by Volume by Year

*measured
in MCF

**measured
in BBLs

Year	Gas Sold*	Year	Oil Sold**
2014	1,155,357,288	2014	124,859,060
2015	1,172,993,175	2015	148,337,428
2016	1,177,458,165	2016	146,717,731
2017	1,231,918,269	2017	172,526,968
2018	1,415,560,809	2018	248,739,596
2019	1,175,110,261	2019	208,831,227
2020	1,348,876,695	2020	254,277,766

Well Inspections by Fiscal Year 2016 - 2019

	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Quarter 1	10,049	9709	10066	9805	12431
Quarter 2	6,356	7900	8698	6924	10245
Quarter 3	6338	6004	11011	10885	13379
Quarter 4	14,147	7430	13105	10314	13569
	36,890	31043	42880	37928	49624

Well inspections increased in FY 2020 due to the two additional compliance officers that were hired in OCD field offices. The reorganization of the Division and new recruiting methods underway should increase the inspection numbers moving forward.

Number of Wells

Well Type	Approved APDs, Not Plugged, Not Cancelled	Completed Wells
Carbon Dioxide	752	733
Gas	28763	27081
Injection	3320	3288
Misc	130	114
Oil	32962	27781
Salt Water Disposal	982	851
Water	45	44
Total	66954	59882

Number of Wells by Land Type

Land Type	Approved APDs, Not Plugged, Not Cancelled	Completed Wells
Federal	36888	31289
All Tribal	2828	2749
Private	10975	10615
State	16263	15239
Total	66954	59892

New Mexico State Parks



LETTER FROM THE DIRECTOR

To Our Visitors and Citizens of New Mexico:

State Parks Are Essential

A remarkable and challenging year is behind us. We have all had to adjust our view of the world and have managed for continuous change through the summer of 2020. Through it all we have worked hard to protect ourselves and our visitors, acknowledge grief and losses, and recommit ourselves to the important things in life. And one of the most important things that our citizens have told our agency repeatedly is that they need and rely upon State Parks in ways that we never realized. They have told us that the amazing park resources provide solace, support, and hope. State Parks are not just fun places to recreation on sunny summer days, State Parks are essential to our state and to our citizens.

Visitors flocked to the outdoors in incredible numbers in 2020 throughout the state and many are new to these types of experiences. This has allowed people to make meaningful outdoor memories and to heal in this difficult time. Some of our visitors have shared their experiences with our staff and volunteers, relying upon our staff to listen and show compassion and relying upon the heart of a ranger mindset to get them through more than ever.

We have also had to learn to do things in a very different way in State Parks during the COVID-19 pandemic. The "safety" and "educational" aspects of the State Park mission took on a different sense of urgency in 2020. State Park staff have been on the front lines of this pandemic, enforcing Public Health Orders (PHOs), educating visitors about social distancing and face mask wearing, while still performing core park operations and functions.

I am very proud of the dedicated State Parks staff who have kept our agency moving forward during this time—closing and protecting parks and visitors early on in the pandemic and determining safe and practical ways to

reopen State Parks for residents. I am also grateful to our administration in supporting State Parks through the pandemic and in providing resources for our operations. And we could not do what we do without our faithful visitors, communities, and partners.

Key Accomplishments

Despite the many challenges that State Parks has faced, we have made a great deal of progress in 2020. Following the Next Generation of Adventure modernization vision to improve visitor services and park operations, modernize and upgrade facilities, create new park opportunities, support staff leadership, and increase outreach programs, State Parks accomplished much in 2020.

New Park Opportunities

Streamlined payment options are critical for State Park visitors and staff alike particularly in the time of COVID-19. In order to allow for cashless, non-contact payments, State Parks worked with Reserve America (RA) to increase campsite inventory to 80% and to require reservation-only access for campers. In addition, State Parks and RA set up online day use pass purchases, which allows visitors to purchase passes at home or from mobile devices, moving away from cash transactions. State Parks will to deploy self-pay kiosks as well.

The opening of the 35th State Park in Pecos Canyon was a huge accomplishment in 2020. While the park was not open for camping during 2020, it has opened for day use. State Parks hired staff and seasonal positions, cleaned and patrolled recreation units, and began educating visitors about State Parks' role in the canyon. In addition, State Parks partnered with the Department of Game and Fish to establish an administrative office and warehouse space for staff. Visitors have been very grateful to enjoy the new and improved Pecos Canyon State Park.

State Parks also worked with the town of Clayton, the Department of Game and Fish and State Land Office partners to rename Clayton Lake State Park to Clayton Lake State Park and Dinosaur Trackways. This ties to the town's economic development planning efforts by drawing attention to one of the area's most exciting



natural resources—the internationally renowned dinosaur trackway within the park.

Upgrade Infrastructure

Park infrastructure is critical to the effective functioning of the system. In 2020, State Parks undertook and completed many important construction projects across the state. Upgrades began at the new Pecos Canyon State Park. A new visitor center was completed at Caballo Lake State Park. Intensive campground upgrades were completed at Morphy Lake State Park and a new campground was built at Navajo Lake State Park. Critical water and wastewater projects were completed at Bluewater Lake, Oasis, Navajo Lake and Sugarite Canyon State Parks. Multiple projects were completed at Hyde Memorial State Park including a new solar microgrid project. Construction began this year in partnership with the Energy Conservation and Management Division to provide clean power to the park and replace an aging electric line.

The Design and Development Bureau leveraged capital, General Gross Receipts Tax, federal Land and Water Conservation Funds (LWCF), as well as US Bureau of Reclamation Title 28 funds in order to most effectively complete these projects.

Staff Leadership

State Parks worked hard in 2020 to recruit and train exceptional staff to build a very strong team. This teamwork was evident in the agency's management of the COVID-19 pandemic response. Staff throughout the system provided swift response to PHOs and were provided with resources such as Personal Protective Equipment (PPE) and training to manage for the crisis. Staff pulled together through the system to communicate effectively with the public and to keep them safe.

Increase Partnerships

State Parks increased partnerships in 2020 to best manage the COVID response and to continue critical programming. State Parks worked with federal, state and local partners to communicate each phase of the COVID response, ensuring that partners were aware of PHOs and operational changes.

State Parks also began work on the critical Statewide Comprehensive Outdoor Recreation Plan (SCORP), tied to federal LWCF grants, in order to create a five-year strategic plan for outdoor recreation in the state. The newly formed Office of Outdoor Recreation, within the Economic Development Department, has proven to be a key partner in the plan's development. But this effort pulls in partners and stakeholders statewide, providing an incredible opportunity to re-frame the discussion of the importance of economic development around outdoor recreation in a COVID and post-COVID world.

Outreach Programs

Providing outreach and programming for our visitors, both virtually and in-person where possible, has been more important than ever. State Parks launched the Heart of a Ranger virtual series, creating fun and hands-on interpretive programs for the public starting in the spring. The national Girl Scouts Love State Parks partnership continued in its second year and saw an increase in participation both from Girl Scouts and the inclusion of a total of 10 State Parks. Finally, State Parks partnered with the Upper Pecos Watershed Association and many partner agencies to complete the socially distanced Dia del Rio clean-up event in Pecos Canyon, bringing many volunteers together to make a difference in responsible recreation and resource protection.

In this challenging year, I'm proud to offer the following update on how we managed our State Parks in line with ever-changing COVID guidelines and our efforts to improve our park services.

Sincerely,

Christy Tafoya
Director NM State Parks

New Mexico State Parks



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

OVERVIEW

The State Parks Division (State Parks) manages 35 State Parks and provided recreational and educational opportunities for 3.95 million visitors in FY20, which generated \$3.5 million in revenue. Fifty-seven percent of the State Parks budget is self-generated, 29 percent comes from the general fund, and 14 percent from other revenue sources.

State Parks in New Mexico were first created in 1933. There were four original State Parks, two of which, Bottomless Lakes and Hyde Memorial, are still part of our system today. For almost a century, State Parks have been part of the lifeblood of local communities and are an important economic driver in the state.

STAFFING

235 Total Full Time/Seasonal Employees comprised of the following:

- 29 Operations, Administrative and Program Support Staff located in the Santa Fe Office;
- 10 Operations and Administrative Support Staff at (5) Region Offices;
- 150 Field Operations Management and Staff at (35) parks; and
- 46 Field Operations positions that support up to 136 seasonal hires system wide.



Secretary Cottrell Propst, Director Tafoya, and Superintendent Perea at the Dia del Rio Event, Pecos Canyon State Park

FIELD OPERATIONS BUREAU

The Field Operations Bureau oversees the daily administration, management, and operation of 35 State Parks to ensure that park resources, grounds, and facilities are maintained and that services are provided in accordance with Division standards. State Parks are organized into five geographic regions (Northwest, Northeast, Southeast, Southwest, and Central). Each region is staffed with a Regional Manager and Regional Administrator.

Field operations this year have been responsive to the COVID-19 public health emergency. With the understanding that State Parks are centers for public gathering, especially in the spring and summer months, State Parks have been specifically referenced in the series of Public Health Orders (PHO) and Executive Orders issued since mid-March in response to the public health emergency. On March 13, State Parks were directed to close camping and overnight use. On March 15, the Governor directed all state parks, museums, historic sites, and cultural institutions to close temporarily.

During the closure period, park operations shifted to providing asset protection, emergency response, addressing deferred maintenance needs, and preparing for reopening parks with COVID-safe measures in place. The closure of State Parks came with administrative and operational challenges. During this period, the State Parks Division increased communications and coordination with all managing partners across the State Parks system, as well as our federal and state agency counterparts. Understanding the importance of State Parks to regional economies, local communities, and many user groups, the Division maintained open lines of communication with these stakeholders as well.

Once it was deemed safe to do so, a plan was developed to reopen parks using a phased approach. The primary goal of the plan was to minimize the spread of COVID-19 and give park visitors, employees, volunteers, and park partners the confidence to return and enjoy the benefits of parks, while complying

with the conditions of the PHO and following recommended public safety practices.

To implement the phased approach, the Division conducted a risk assessment for each park considering many factors including park staffing, the character and activities within each park, and local government and local public health considerations. The plan proposed three phases in reopening parks: 1) Day-use only with limited amenities; 2) Overnight camping with limitations; and 3) Near-normal levels of service.

In preparation for reopening parks, personal protective equipment (PPE) and cleaning supplies were obtained to safely operate under revised and enhanced cleaning and sanitation standards of care. Field staff were trained in the proper use of PPE and new cleaning standards. Updates on all park operational changes and guidelines were shared via news releases, public service announcements, the main website, and social media channels.

Beginning May 1, a phased approach to reopen parks was initiated. By June 1, 31 parks were open for day-use activities. Camping and overnight use was not permitted. Visitor centers, indoor spaces, group shelters, playgrounds remained closed and large special events were prohibited. Park visitors were advised of the public health order guidelines that included wearing face coverings, social distancing, and maintaining a group size of five or less. Even under these conditions, there was an enthusiastic public response to reopening parks. All parks experienced high levels of visitations; many parks experienced record levels of visitation.

Based on a rise in new cases of COVID-19, the PHO issued on July 13, 2020 directed more strict measures, including limiting State Parks visitors to New Mexico residents only.

On October 1, camping reopened in 26 State Parks for New Mexico residents by reservation only. Camping was restricted to developed campsites. Dispersed camping was not allowed. In preparation for camping by online reservation only, parks added significant numbers of campsites to the reservation system. During this transition, day-use passes were made available for purchase online for the first time. These



Bluewater Rangers helping distribute water to their community in Prewitt.

modernization efforts enhanced visitor convenience, reduced cash-handling in the field, and offered a safe, contactless way to manage park fees.

The Division developed a COVID-19 Decision Matrix to guide management actions in response to potential COVID-positive cases in the workplace. The document referenced NM Department of Health, NM Environment Department, Centers for Disease Control and Prevention, and Occupational Safety and Health Administration guidelines.

During this extraordinary time, the public's response has continued to remind us of the value of State Parks, public lands, and outdoor recreation. The physical, mental, and spiritual benefits of access and exposure to the outdoors cannot be overstated, especially during trying times. The circumstances have provided a renewed opportunity for park staff to foster a stewardship ethic in park visitors.

ADMINISTRATIVE BUREAU

The Administrative Bureau ensures the delivery of office and park supplies to park staff and visitors to ensure good customer service. Staff in the Administrative Bureau help prepare and track the Division budget and support the fiscal needs of the Division. This Bureau also oversees Division procurement, fixed assets, and the annual surplus auction.

The Administrative Services Bureau provided vital assistance with COVID-19 support services. Staff assisted with answering emails and telephone calls. Staff worked with the Administrative Services Division on monitoring the budget for COVID-19 purchases of PPE items and the proper management of timesheets during the pandemic.

PROGRAM SUPPORT BUREAU

The Program Support Bureau consists of five primary areas of expertise that provide statewide support to our parks, regional, and Santa Fe offices. Those areas of support focus on volunteer engagement, natural and cultural resource protection and compliance, outdoor education, business enterprises, and workplace safety and loss control.

VOLUNTEER PROGRAM

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.

While the pandemic forced us to ask all of our camp hosts to leave the parks in mid-March, we welcomed them back mid-summer under COVID-safe practices and conditions to assist with managing for day-use visitors. When camping reopened to New Mexico residents on October 1, the camp hosts were already in place and provided an invaluable service to our visitors and park staff. In 2020, State Parks benefited from the work of hundreds of dedicated volunteers who contributed thousands of hours of service to park operations.



Rio Grande Nature Center State Park volunteer Rick Tiedman planting Firewheel, part of a Grow at Home collaboration with Valle de Oro.

In addition, State Parks also received vital support from 22 local Friends Groups throughout the year. Friends Groups hosted park events prior to COVID's arrival and raised funds to complete park projects. These efforts help offset budget and staff shortfalls. Parks hosted some popular events early in the year thanks to local Friends Groups and volunteers. A few highlights include:

- Friends of Rio Grande Nature Center hosted the Nature in Winter Festival in January at Rio Grande Nature Center State Park.
- Friends Groups and volunteers at Brantley Lake and Ute Lake State Parks assisted with St. Patrick's Day fun runs in March.

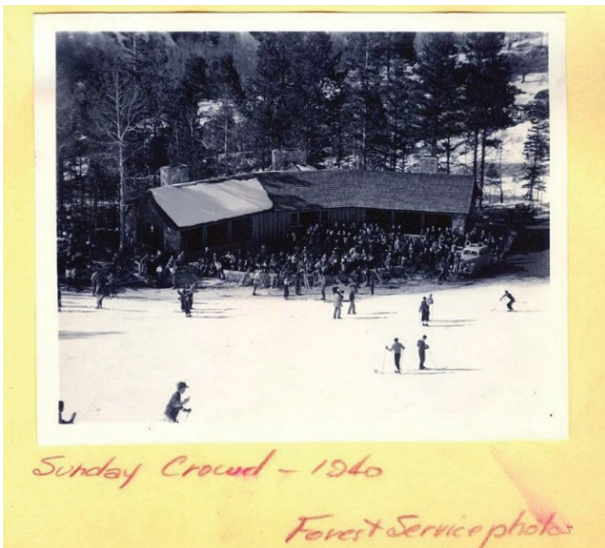
RESOURCE PROTECTION

As part of its mission, State Parks documents and preserves the unique cultural and natural resources within its system. In 2020, much of the focus was on a series of maintenance and repair projects, and State Park staff reviewed several 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. Finally, the State Parks Division is coordinating with other EMNRD Divisions to enter into a Department-wide agreement that will allow all Divisions to share access to environmental and cultural resource consultants that assist with our compliance needs.

In addition to regulatory compliance, State Parks Division continued important resource protection projects and partnerships with a variety of local, state, and federal entities. For example, State Parks Division continues to work with the SiteWatch program at several parks as a means of further protecting cultural resources. This important program pairs trained volunteers with archaeological sites that are at risk of damage from unauthorized excavations. The volunteers document any new damage at the site(s) they oversee and pass it on to the State Historic Preservation Division and State Parks. SiteWatch has been particularly important in assessing damages at Cerrillos Hills State Park this year and their presence appears to have slowed unauthorized digging. In 2020 the Division's Archaeologist undertook 37 new park-related projects, and continued work on 24 projects from previous years. The majority of these were in advance of planned maintenance or improvements within various parks.

In addition, the State Parks Archaeologist continued to work with a contractor on the nomination of Hyde Memorial State Park for listing in the National Register of Historic Places. This process is in the final stages of review and preparation by the State Historic Preservation Office.



Hyde Memorial State Park Ski Run and Lodge 1940. NMSP Archives.



Camp Furlong Recreation Hall at Pancho Villa State Park. NMSP Archives.

Planning has also moved forward this year on the renovation of the 1916 Camp Furlong Recreation Hall at Pancho Villa State Park. The assessment of the extent of the renovations will be completed by the end of this year.

State Parks also continues to work with Eastern New Mexico University's Department of Anthropology and Applied Archaeology on an archaeological field school that took place at City of Rocks State Park in 2019. Unfortunately, with the campus closed due to the pandemic, artifact analysis has been paused. A second field school was slated for June of this year, but it was canceled due to the pandemic.

OUTDOOR EDUCATION PROGRAM

State Parks provides quality interpretive experiences and educational programming for visitors. In 2020, several interpretive and educational programs were offered to visitors prior to the parks closure in mid-March. In-person programs have been paused due to the pandemic; however, virtual programming has become a critical component of our outdoor education program.

The Heart of a Ranger initiative was developed to provide online educational programming that gives viewers a chance to see "behind the scenes" at some of our parks along with some more traditional learning content including, "Wildlife at Sugarite Canyon State



Girl Scouts Love State Parks! video can be found on New Mexico State Parks YouTube Channel

Park” and “Caught on Critter Cam”. There are 15 videos with more planned for the near future.

In September, New Mexico State Parks partnered with Girl Scouts USA and New Mexico Girl Scouts Trails and hosted the 2nd annual Girl Scouts Love State Parks event highlighting the importance of young people connecting with the large array of outdoor opportunities that our state parks provide. Over 100 Girl Scouts participated in live online activities as well as taking advantage of day-use visits to several of our parks. A total of 10 State Parks participated in the program.

Today’s children truly represent the next generation of adventure in New Mexico. The knowledge and experience gained through State Parks’ Outdoor Classroom Program will shape the future of resource protection and recreation. State Parks is working with the Office of Outdoor Recreation to plan statewide outdoor education.

BUSINESS ENTERPRISE

The State Parks Division had another successful fiscal year working with ReserveAmerica (RA), our online reservation system. State Parks initiated an increase in the inventory of reservable campsites on RA up to 80% of total inventory to meet the customer demand to make reservations online. The Division and RA have also implemented a process for visitors to purchase a Day-Use Pass online. This new function will allow visitors to purchase a pass before they arrive at a park, reducing the Department’s cash-handling and adapting to COVID-safe practices. Because of our

strong marketing message encouraging people to “Book Now” and “Know Before You Go”, the Division hopes the added convenience of reserving campsites and purchasing Day-Use Passes online throughout the year will drive more people to our parks.

State Parks saw a slight decrease in the number of reservations made on RA with a total of 36,615 reservations in FY20 compared to 37,268 reservations made in FY19, although many of those reservations were cancelled in the last quarter of the year as a result of the pandemic. There was a decrease of \$355,096 year-over-year in revenue generated through RA in FY20. However, donations were up this year. A donation feature on the RA website led to \$13,769.00 in donations in FY20 compared to \$12,049.00 in FY19. The top five parks in both total nights booked on RA and in revenue generated (from RA) remain the same for the calendar year: 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 relies heavily upon relationships with concessionaires and private business to provide services in our parks that would not otherwise be provided. In doing so, these businesses generate additional revenue for the park system. State Parks currently administers 16 concessions through contracts or permits. Concessions include the state reservation system, marinas, fishing outfitters, horseback riding services, stores, food trucks, and gift shops. Total revenue collected from all concessions in FY20 was \$1,236,768.22 compared to \$1,653,276 in FY19, primarily due to the effects of the pandemic.

SAFETY AND LOSS CONTROL

The Division’s Safety and Loss Control Program took on an even more important role this year as it participated or led operational changes related to staff and visitor safety in response to the pandemic. Safety-related developments include a revised Standards of Care outlining enhanced cleaning procedures, a decision matrix that created a process for reacting to a positive COVID-19 test, and guidelines for reopening indoor public spaces. Also, our Safety and Loss Control Coordinator has initiated an effort to get all parks, offices, and concessionaires certified by NM Safe Certified through the Department of Tourism. We believe that this will provide an even greater sense of safety for our visitors.

In addition to the many COVID-related tasks taken on by this program, we have continued to monitor and improve on all aspects of safety and loss control across the Division by carrying out regular physical inspections; providing reporting and follow-up on sub-standard safety practices or conditions; tracking, coordinating and providing required safety training (e.g. First Aid/CPR/AED); and coordinating with Risk Management on a variety of property loss claims. Overall, this program is critical to the safety of our staff and visitors and benefits the Division in its efforts to reduce and manage for excessive property loss.

LAND AND WATER CONSERVATION FUND

The Division received its annual Stateside apportionment from the Land and Water Conservation Fund (LWCF) administered by the Department of the Interior, National Park Service (NPS). This year's amount was approximately \$2.5M, which represents a significant increase over previous years and is due to the addition of funding authorized by the Gulf of Mexico Energy Security Act (GOMESA). Infrastructure projects across the parks system are among proposed uses for LWCF and GOMESA funds.

For example, Hyde Memorial State Park has long been plagued by problems with its existing buried underground electric power line. The Division will use LWCF and other funds to construct a solar microgrid at the park to mitigate the power supply issues and to provide a renewable source of energy to the park. We have also proposed to build a new comfort station at Storrie Lake State Park using these funds.

This year's signing of the Great American Outdoors Act fully and permanently funded LWCF. This is expected to lead to significant additional funding for the program starting in 2021. As a result, the Division has hired a new, full-time Program Coordinator to administer the funds and create a grant program that will provide funding opportunities for public entities around the state to plan, design, and create additional outdoor recreation opportunities.

Every five years, the Division is required to complete a Statewide Comprehensive Outdoor Recreation Plan in order to continue to receive LWCF funds. Work began on the plan this year, with a tentative completion date of December 2021. This document is



Hyde Memorial State Park

the state's strategic plan for outdoor recreation and requires significant collaboration with other state and federal agencies, private outdoor-oriented groups, and individuals with expertise and interest in this issue. In addition to identifying action items to be implemented over the next five years, the plan will focus on four key areas:

1. Outdoor Recreation Trends and Economic Development
2. Inventory of current outdoor recreation resources
3. Resource Protection (including wetlands resource inventory and prioritization)
4. Outdoor Learning

LAW ENFORCEMENT AND BOATING SAFETY BUREAU

In 2020, the Law Enforcement and Boating Safety Bureau worked diligently serving park visitors by maintaining compliance with laws relating to parks and recreation management, providing responsive visitor services, resolving conflicts within park jurisdictions, and promoting natural and cultural resource conservation and preservation. Much of this work was accomplished while park law enforcement officers responded to the ongoing public health emergency.

The Division currently has 82 park law enforcement officer positions distributed across the system. Park law enforcement officers continue to cultivate



Kerry Rice

agencies and supporting the public. This summer, all park law enforcement officers successfully completed 16 hours of Cultural Awareness and Diversity training covering topics of ethics, diversity, inclusion, equity, and bias. Park law enforcement officers remain committed to improving their knowledge and awareness of cultural identity in relation to their colleagues, customers, and their communities to provide better service to the public. Park law enforcement officers have and continue to be committed to fulfilling their primary mission of conservation, preservation, education, and customer service. The Division's law enforcement and boating safety program constantly faces and responds accordingly to new challenges, whether they are threats to our natural and cultural resources, new laws to administer and enforce, new guidelines to follow, or events that may impact public safety and recreation within or adjacent to state parks.

relationships with local communities, visitors, and partner agencies.

Over the last year, there have been many changes in the ways New Mexicans and other visitors to the Land of Enchantment recreate in State Parks primarily due to the impacts of COVID-19. Our park law enforcement officers continue to navigate the COVID-19 public health emergency as "essential workers", taking on active roles in their parks and communities. In direct support of our State's Public Health Orders park law enforcement officers have been on the front lines modeling face mask wear, educating visitors, and facilitating access to State Parks for 2.4 million visitors across the system. More specifically, from July through October, COVID-19 public health order enforcement activities in State Parks resulted in the following actions:

- Non-resident denial of park access: over 12,00 vehicles
- Directed warnings for face mask wear/social distancing: over 36,000
- Ejections for violating public health order restrictions (day-use hours, closed areas, non-compliance with face masks): over 1,110 ejections
- Citations issued for enforcement of PHO (conduct, park hours or trespass violations): 29

To manage these challenging circumstances, park officers continue to improve professionally by expanding partnerships with local, state and federal



Text



Pecos Canyon State Park

DESIGN AND DEVELOPMENT BUREAU

The Design and Development Bureau is responsible for the planning, design, and construction of park facilities and infrastructure statewide, including park buildings and recreation facilities, roads, trails, and water-wastewater projects. The following are key construction projects from 2020.

Pecos Canyon State Park

Park Development

The Design and Development Bureau completed a great deal of work at Pecos Canyon State Park, New Mexico's 35th State Park. The Bureau finalized the design and management plans for the park. The park opened for day-use only in the spring of 2020.

Work was completed on the final survey and electrical evaluation at the park. State Parks completed an agreement with the Department of Game and Fish to house State Park staff and provide office and warehouse space. In addition, discussions for future administrative space in the canyon were undertaken. State Parks installed signage and access gates, and design is currently underway for site improvements at Bert Clancy Campground, Mora Campground, and Mora Day Use Areas. Planning is also underway for future site improvements at the Tererro Campground and Jamie Koch Day Use Area. The park management plan has been drafted and will be released for public comment before the early next year.

Navajo Lake State Park

Crusher Hole Campground

A new 21 campsite campground was constructed on the state-owned Johnson Tract property at Navajo Lake State Park. The 21 sites included: 18 standard sites, 2 accessible sites, and one host site all furnished with a concrete pad, shelter, grill, fire ring, and tent pad. The two accessible sites and the one host site received accessible furnishings. Two double vault toilets were installed that have accessible concrete parking and access pads. The entrance into the Park was widened and finished with concrete. Total project cost \$1,594,000 (Land Water and Conservation Fund with 50% state match).

RV Dump Station

A new Recreational Vehicle (RV) dump station was constructed at Sims Mesa Campground. Total project cost \$51,000.





Morphy Lake State Park

Campground Renovation

The park has been completely renovated through a joint effort by the State Parks Force Account Crew, a statewide roving construction crew, and the Design and Development Bureau. All campsites were reconstructed with the addition of two new dedicated accessible sites and one dedicated host site. All sites were equipped with new picnic tables and fire rings. The accessible sites were equipped with accessible picnic tables and fire rings. Five new accessible vault toilets were installed, that included dedicated perimeter accessible concrete parking spaces. The existing boat ramp was extended 100' in length. This extension will enhance lake access as water levels fluctuate. A six-foot coyote fence with vehicle access gate was constructed around the Park storage buildings. The Park entrance (extending down to the boat ramp and first ADA Vault toilet) was regraded and paved. A stone pay-booth was also constructed that included new entry gates and (in the exit lane) a one-way ground barrier. Total project cost \$730,000 (USFWS Wildlife and Sport Fish Restoration Program and State match).



Clayton Lake State Park and Dinosaur Trackways

Stone Entrance Sign

A stone entrance sign was constructed for the newly renamed Clayton Lake State Park and Dinosaur Trackways. Total project cost \$43,000.



Hyde Memorial State Park

Solar Microgrid Project

In August 2020, State Parks in partnership with EMNRD's Energy Conservation and Management Division, began construction of an off-grid solar microgrid project at Hyde Memorial State Park that will provide the park with all of its electrical needs 24-hours per day, 365 days per year. When complete in the spring of 2021, the system will include an 81 kW DC solar PV array located within the park, along with solar plus battery storage and a back-up propane generator.

Footbridge over the Little Tesuque Creek

A new footbridge was installed to replace one in the same location that was damaged by a fallen tree. The bridge connects a group shelter with the playground, providing visitors easy access to both. Total project cost \$42,000.

Visitor Center and Historic Lodge Renovations

The Visitor Center portal was reconstructed and the Historic Lodge central fireplace and flagstone steps were renovated.

These three projects were important in protecting and preserving historic buildings at Hyde Memorial State Park for maintenance or damage repairs. Total project cost \$64,000.



Caballo Lake State Park

New Visitor Center

Construction of a new 1200+ square foot visitor center was completed. The building is super-insulated, has an electric heating and cooling system and is equipped with an 8.9 kW ground mounted photovoltaic array. The Park entrance and the area around the new building was repaved and the parking area reconfigured to add additional parking, better lighting and a dual port electric vehicle charging station. The project also included constructing a standalone heated and cooled pay booth (matching the new visitor center building architecture style) and installation of building perimeter and site landscaping. \$1,188,000 (Bureau of Reclamation with 50% state match).



Brantley Lake State Park

Limestone Campground Comfort Station Renovation and Septic System Upgrade

The comfort station at the Limestone Campground was renovated with all new systems and finishes and additional single user restrooms. The septic system and leach field that serves the comfort station was also upgraded. Total project cost \$1,155,000 (Bureau of Reclamation with 50% State match).

Bluewater Lake State Park

Group Shelter Renovation

Improvements were completed at the group area, including renovation of the group shelter, installation of an accessible vault toilet, accessibility improvements for the site furnishing and parking area, and electric and lighting upgrades. The improvements will make the area more attractive for group activities and educational events. Total project cost \$182,000 (Land Water and Conservation Fund with 50% State match).

Photovoltaic System at Visitor Center

A 15.010 kW photovoltaic system was installed on the roof of the visitor center. The system will power the visitor center and the adjacent comfort station. The use of solar energy will reduce the cost of operating the park and is more sustainable than fossil fuel generated electricity. Total project cost \$51,000 (Land Water and Conservation Fund with 50% State match).

Water System Upgrades

The well water at Bluewater Lake State Park is high in naturally occurring iron and manganese. These minerals are regulated for drinking water due to taste and discoloration and because they cause staining. A greensand filter was added to the water system to reduce iron and manganese levels in the water supply. Total project cost \$438,000.

Oasis State Park

Water Treatment System Upgrade

The State Parks Division has been working diligently to bring the water system at Oasis State Park into compliance with the Safe Drinking Water Act. A new ion exchange treatment system was installed in the water system to remove nitrates from the drinking water. This completes the upgrades that were necessary to bring the water system back into compliance. Total project cost \$70,000.

Sugarite Canyon State Park

Water Treatment System Upgrade

This project was completed to protect the water system at Sugarite Canyon, in order to provide system upgrades and ensure clean water delivered to a majority of the park. This project has been ongoing for several years and has been finalized. Total project cost \$415,000.

Rio Grande Nature Center State Park

Visitor Center Restroom Renovations

The restrooms at the Visitor Center were renovated, including accessibility upgrades, plumbing repairs, and new finishes. Total project cost \$64,000.

Living Desert Zoo & Gardens State Park

Prairie Dog Exhibit Renovation

Renovation of the prairie dog exhibit involved removing 5 feet of existing soil, installing a concrete base with vertical drainpipes for the entire exhibit, refilling the exhibit with native soil and building a contoured mound for prairie dogs to view their surroundings. The renovation also included patching and color coating the entire exhibit perimeter walls, installing new irrigation, a heated prairie dog water bowl and new vehicle access gate. Total project cost \$68,000.

MARKETING

At the onset of the current global health pandemic, our marketing team had to quickly adjust their messaging strategy from planning and promoting big, special events and activities, to informing our visitors about guidelines in place with new Public Health Orders. The public was kept informed through press releases, radio and television interviews, digital advertising, and a “Know Before You Go” page on the website with frequently asked questions.

At the same time, the Marketing Bureau highlighted some important accomplishments during 2020. The following are several initiatives that were marketed successfully.

Clayton Lake State Park and Dinosaur Trackways

Cabinet Secretary Sarah Cottrell Propst announced the official name change of Clayton Lake State Park to Clayton Lake State Park and Dinosaur Trackways at the Union County legislative luncheon in Santa Fe in February 2020. Renaming the park is part of EMNRD State Parks Division’s Next Generation of Adventure campaign to enhance the visitor experience through improved access, upgraded facilities, and expanded partnerships. By adding “Dinosaur Trackways” to its name, EMNRD can better promote the park’s most unique feature, bringing in new visitors and generating more outdoor recreation spending for the local economy.

Pecos Canyon State Park

New Mexico’s 35th State Park opened to visitors in the spring. In October, 150 people volunteered to help clean up Pecos Canyon during the annual Día del Rio y Camino Litter Pick-up event. This event was in partnership with the Upper Pecos Watershed Association and other stakeholders and was completed in a COVID-safe way as a drive-through event. The event was part of an ongoing campaign to encourage the public to recreate responsibly.

Heart of a Ranger Series

When State Parks closed temporarily at the beginning of the pandemic, Interpretive Rangers and the marketing staff connected with the public through social media and online. Staff began highlighting “behind the scenes” videos from the parks and created educational, fun activities on our website for families to share while in quarantine.



Heather MacCurdy, co-chair of the Heart of a Ranger Series and Superintendent of the Rio Grande Nature Center State Park in Albuquerque partnered with the STEM Grab and Go initiative while students were being offered free lunches throughout Albuquerque. As part of the collaboration, State Parks provided 750 copies of 12 different bosque education related activities given to the APS Grab and Go lunch program in early June. APS then distributed the 12 different activities to students at 25 sites. Park staff also collaborated with our partners in the 37 different STEM activities, created by community partners in both English and Spanish. Those partners included: Environmental Education of New Mexico, NM MESA, UNM School of Law- Wild Friends, Valencia Soil and Water Conservation District, Bosque Ecosystem Monitoring Program and ABC Water Authority. The Heart of a Ranger Series has reached another 250 children through a collaboration with the Pueblo of Isleta in the fall of 2020.

Safe Boating Practices

The marketing team adjusted media buys in broadcast and in print to inform park visitors that the COVID-19 public health guidelines were being enforced. When parks reopened for day-use, recreational boating was the biggest draw for most parks over the summer months. Digital ads were placed, television commercials were on the air and our webpage was updated with current information regarding boating safety tips.

Girl Scouts Love State Parks

The Girl Scouts Love State Parks weekend took place September 12-13, 2020. State Parks and the Girl Scouts of NM Trails created videos that were featured on the national website of Girl Scouts of America. These videos invited Girl Scouts and their families to visit parks in person (socially distanced) or virtually during the fun and educational weekend. Girl Scouts gained outdoor skills and how to be great stewards of the environment by exploring State Parks.



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Good News

NEW MEXICO STATE PARKS IS OPEN TO CAMPING!

Now booking camping reservations
online at the following state parks:

- Bluewater Lake
- Bottomless Lakes
- Caballo Lake
- Cimarron Canyon
- City of Rocks
- Clayton Lake and
Dinosaur Trackways
- Conchas Lake
- Coyote Creek
- Eagle Nest Lake
- Elephant Butte Lake
- Fenton Lake
- Heron Lake
- Hyde Memorial
- Leasburg Dam
- Navajo Lake
- Oasis
- Oliver Lee Memorial
- Pancho Villa
- Percha Dam
- Rockhound
- Santa Rosa Lake
- Sugarite Canyon
- Sumner Lake
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Pecos Canyon State Park

Pecos Canyon, New Mexico's 35th state park, is a jewel near the Pecos Wilderness of the Sangre de Cristo Mountains in north central New Mexico. Just a short drive from Santa Fe and north of the Village of Pecos, this newly created state park is currently under development and will offer fishing, camping, hiking and more!

Go to NMParks.com to learn more.

NM 63 • PECOS CANYON, NM

Restroom, Campground, Group Shelter, Park Boundary, Trailhead, Fishing Access, Trail, Road, River

Go to NMParks.com to learn more.

Public Outreach

CORONAVIRUS NEW MEXICO

Eight state parks reopen Friday with more to come



8 STATE PARKS RE-OPEN

ON THE PHONE:

CHRISTINA CORDOVA
NM STATE PARKS

Good Solutions Brochure

New Mexico State Parks *adventures await you...*



Enjoy an enchanted evening under the stars. Unique camping experiences are available, so whether you like to roll out your sleeping bag or curl up in your RV, New Mexico State Parks have it all.

Connect with Nature

New Mexico State Parks have many tranquil spots designated for "primitive" camping. These quiet sites may have a tent pad and can include boat-in and beach camping.

Let Us Hook You Up!

New Mexico State Parks accommodate a wide range of developed camping experiences from the smallest camp trailer or pop-up, to a fully loaded RV. Many developed sites have electric hookups (30 or 50 amps), sewage, water hookups or both, as well as shelters, picnic tables and grills.

Eat, Camp, Play!

Your well-being is important to us during your stay. The ability to take a shower while camping in the great outdoors is a luxury that our parks provide with our Comfort Stations. Campground amenities may include playgrounds, large group shelters and vault toilets. We'll leave the cooking up to you.

Be a Trail Blazer

Easy to moderate trails show off the best features of New Mexico state parks. The geology of New Mexico can be explored at City of Rocks State Park. This 3.25-mile loop showcases the unique volcanic boulders and provides stunning views.

Enjoy the Lake View Trail at Eagle Nest Lake State Park. This easy, tranquil path from the Village of Eagle Nest to the Moreno Day Use Area at the park offers excellent views of wildflowers, lakeshore wildlife, and the beautiful Moreno Valley.

Life at a Higher Level

The Jemez Mountains provide the backdrop for Fenton Lake State Park. The park is surrounded by ponderosa pine forests that attract campers, hikers, and cross-country skiers.

World-Class Fly-Fishing

Enjoy world-class fly fishing on the quality waters of the San Juan River at Navajo Lake State Park. Camp in the park or picnic at one of the day use areas along the river. Navajo Lake offers some of the best boating, fishing, hiking, and camping in the state. Make sure to check out the fun things at the Navajo Marina. Rent a houseboat, play on the bumper boats or dine in the floating restaurant.

Stay Cool

You don't need an ocean to sail, scuba dive, kayak or jet ski. Visit our largest body of water at Elephant Butte Lake State Park, or scuba dive in the clear blue waters at Bottomless Lakes State Park.

Reserve a Campsite or Yurt today!

Same day reservations are now available or can be made up to 6 months in advance.

Go online at NMParks.com or call 1-877-664-7787 to make reservations.



Pecos Canyon State Park is New Mexico's 35th state park. Located near the Pecos Wilderness this jewel will offer fishing, camping, hiking and more!





The Energy, Minerals and Natural Resources Department proudly presents the work of our Department in calendar year 2019. EMNRD looks forward to continuing our work managing resources sustainably for all New Mexicans in 2020.

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)

For more information on the Energy, Minerals & Natural Resources Department visit:
www.emnrd.state.nm.us

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