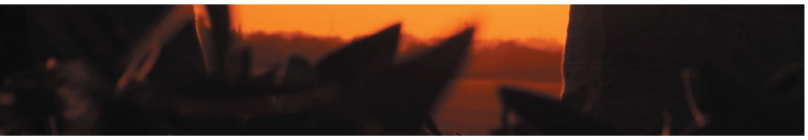
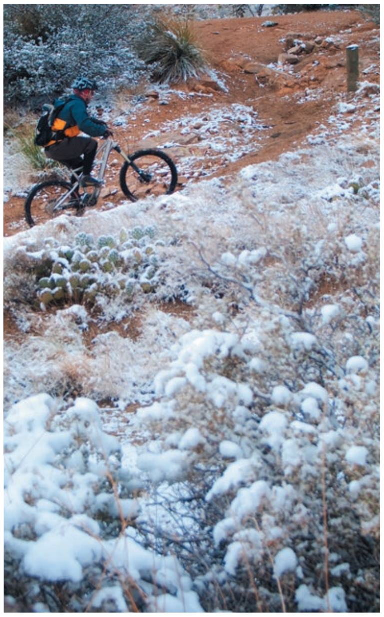



Diversifying Revenue on New Mexico's State Trust Lands









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About Headwaters Economics

HEADWATERS ECONOMICS Headwaters Economics is an independent, nonprofit research group whose mission is to improve community development and land management decisions. https://headwaterseconomics.org

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1 Executive Summary

New Mexico's management of revenue from state trust lands is model fiscal policy. While most other revenue is spent, all nonrenewable revenue generated from state trust lands—including oil and natural gas royalties—is invested in the Land Grant Permanent Fund (LGPF). This policy has done more to diversify and stabilize New Mexico's revenue from oil and natural gas than any other fiscal decision made by the state government. Nearly 90% of all state trust land revenue is allocated to the LGPF (figure E1). Prudent fiscal management has successfully built the LGPF to more than $23 billion as of June 2021. In FY 2020, beneficiaries (such as public schools) received $784 million in investment distributions from the LGPF, and distributions are on track to top $1 billion annually in the coming years. Thoughtful stewardship of New Mexico's state trust lands and prudent fiduciary management provide durable, predictable revenue for beneficiaries.

Given the stable position of the LGPF, the New Mexico State Land Office (SLO) has a unique opportunity to diversify revenue generated on state trust lands. State trust land revenue offsets the need to appropriate State General Fund revenue (from income or gross receipt taxes, for example) to support beneficiaries' budgets, allowing these other state revenues to be spent elsewhere. Successful revenue diversification combined with stable disbursements from the LGPF give the SLO capacity and flexibility to manage state trust lands for diverse land management activities.

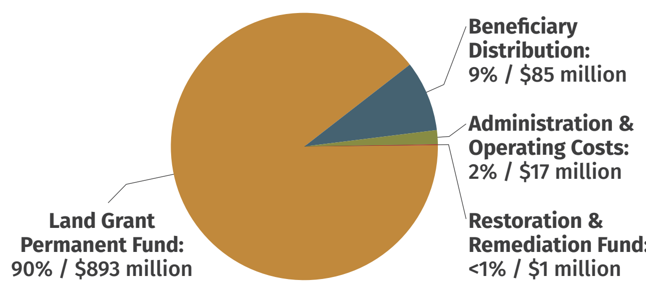

Figure E1. *State trust land revenue allocations, FY2020. The SLO raised $996 million in FY2020. Of this, 90% was allocated to the LGPF. The remaining 10% was allocated among distributions to beneficiaries, SLO administrative and operating costs, and the Restoration & Remediation Fund.*

In this report, we provide insights into how the SLO can diversify revenue; better align trust land management with state goals for economic development, energy, and policy; and further reduce dependence on oil and natural gas activity. This research is informed by interviews with SLO staff, staff in other state land offices, and experts familiar with state trust lands in New Mexico and nationally. Our research reinforces three focus areas: land management activities, fiscal and administrative strategies, and improved stewardship of oil and gas activities.

Land management activities that can help diversify revenue from New Mexico state trust lands.

Renewable energy: Expand solar and wind generation, energy storage, and transmission.

Commercial development: Develop the potential on state lands for manufacturing, real estate, and other development.

Outdoor recreation: Diversify revenues beyond recreation permit sales through leases and partnerships.

Conservation: Find ways to monetize the ecological and cultural values of state trust lands, via leases or participation in carbon markets.

Fiscal and administrative strategies that can help stabilize and diversify revenue.

Strategic planning: Identify new market opportunities and position state assets to capture those opportunities and evaluate outcomes.

Active revenue models: Increase the SLO's authority and capacity to direct how to prioritize, use, and allocate resources for state trust lands.

Portfolio management: Implement a strategy that provides the SLO with authority to invest and optimize revenue and mitigate risk across all state trust lands.

Partnerships: Expand resources and capacity to invest in, market, and manage state trust lands with partner organizations.

Improved stewardship of continued oil and natural gas activities will help stabilize revenue and avoid unanticipated costs and impacts.

Currently the SLO faces two key structural obstacles that permeate many of the ideas in this report. First, the SLO lacks the resources necessary to improve its own land for marketing and development, and there is uncertainty regarding its authority to do so. The SLO needs expanded funding and partnerships to grow and diversify revenue from new land management activities. Second, the SLO needs additional staffing capacity to proactively and strategically plan, partner, and implement revenue diversification activities.

While no land management activities can entirely replace royalties from oil and gas, New Mexico is in a fortunate position because it has built up its Land Grant Permanent Fund to more than $23 billion, ensuring continued distributions to beneficiaries. Prudent management of this fund can provide durable and predictable revenues for beneficiaries. Given the security of the LGPF, the SLO should be emboldened to try new strategies to diversify revenue.

2 Introduction

The U.S. Congress distributed trust lands to states when they entered the Union as an asset to be managed to generate revenue for public schools and other public institutions. Unlike many states, New Mexico has retained most of the original trust lands that were granted when it became a state in 1912. More than 1 in 10 acres in New Mexico are trust lands (11.4% of New Mexico's total surface land). In total, the New Mexico State Land Office (SLO) manages nine million surface acres and 13 million subsurface mineral acres across the state.

The trust is defined by two key principles:

1. The New Mexico State Land Office is obligated to generate revenue from state trust lands for beneficiary public institutions; and
2. The value of the trust should be maintained in perpetuity to benefit current and future beneficiaries.

The SLO implements the first principle by leasing state trust lands for "renewable activities" such as grazing, renewable energy generation, and commercial real estate leases; and for "nonrenewable activities" such as oil and gas extraction. The second principle is implemented by either maintaining the land holdings and using the land resources sustainably, and/or by saving revenue from activities that permanently deplete the resource (i.e., land sales or extraction of nonrenewable resources) and preserving the value of the revenue. In New Mexico, revenue from these nonrenewable activities is transferred to the Land Grant Permanent Fund (LGPF). The LGPF is managed by the independent New Mexico State Investment Council (SIC) to generate investment income for

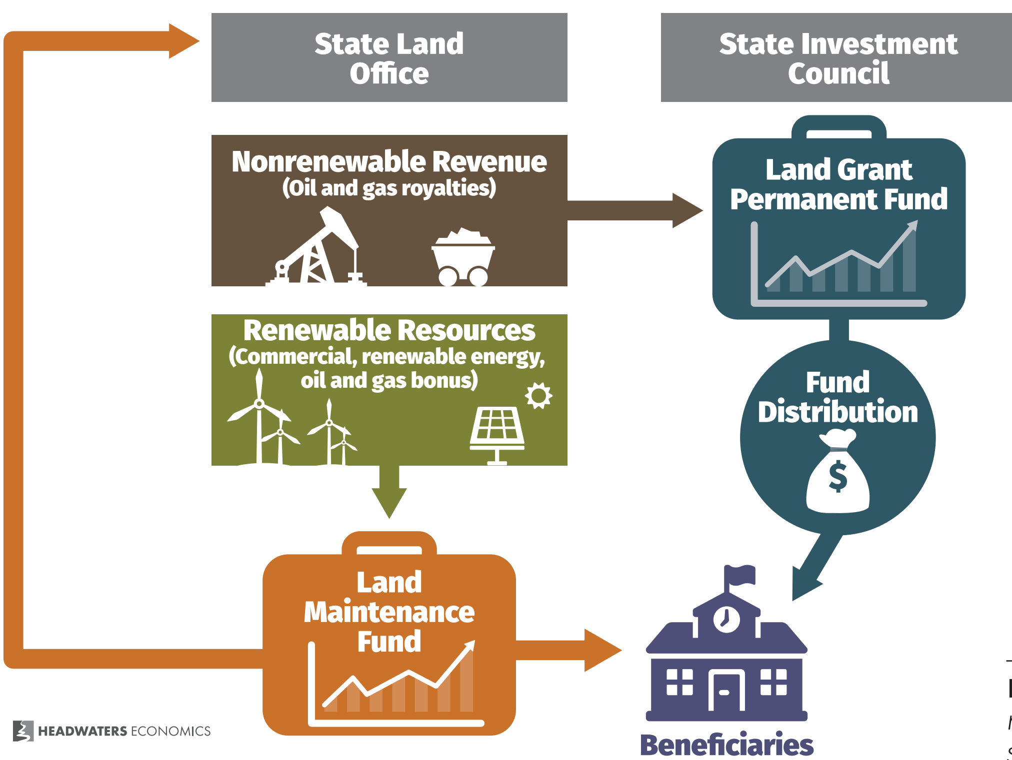

Figure 1. *The flow of revenue from New Mexico state trust lands*

beneficiaries. Revenue from "renewable activities" is put into the Land Maintenance Fund. A portion of the Land Maintenance Fund is used to pay for SLO operating expenses. The balance is distributed proportionally to the beneficiaries. Figure 1 shows the flow of revenue from New Mexico state trust lands.

In each of the last three fiscal years the SLO generated more than $1 billion in revenue from state trust lands, breaking previous records.[1] Nine out of every 10 dollars generated in these two years came from nonrenewable royalties on oil and natural gas production which were deposited into the LGPF. In FY 2020, beneficiaries received $85 million from renewable land management activities and $784 million in investment distributions from the LGPF (Figure E1).[2]

Diversification from Oil and Gas

The global pandemic and sharp downturn in energy prices have renewed concerns about New Mexico's dependence on the oil and natural gas industry.[3] State leaders are interested in ideas to reduce New Mexico's dependence on oil and natural gas revenue and ideas to diversify the state's economy and revenue streams.

First, it is important to recognize that the LGPF substantially moderates dependence on annual revenue from the oil and natural gas industry. The SLO has successfully built up the LGPF to more than $23 billion. Distributions of earnings from the LGPF made up 90% of revenue available for appropriation to beneficiaries in FY 2020.

However, the SLO remains dependent on the oil and natural gas industry in multiple ways. A substantial share of "renewable" revenue available for appropriation to beneficiaries each year is generated from activities directly related to the oil and gas sector, such as bonus payments, pipeline rights-of-way, and commercial leases for compressor stations. Ongoing oil and natural gas activity in the Permian and San Juan basins creates potential legacy risks, including abandoned wells, tank batteries, spills, and other resource damage.[4,5] A recent analysis found that New Mexico's oil and gas wells on state and private land are inadequately bonded, with a gap of more than $8.18 billion.[6] Finally, a transition from oil and gas may someday result in fewer royalties going into the LGPF. While this may be decades away because of the leases already in production, it is wise for New Mexico to anticipate an eventual slowdown in royalties.

The SLO is working to address the risks associated with dependence on oil and gas. Revenue diversification, in particular, offers opportunity to reduce dependence on oil and natural gas and continue to meet the fiduciary obligation to beneficiaries.

Risk, reward, and authority

With opportunities for diversification, however, may come some risk and the need to explore changes in authority. State land offices entrusted to raise revenue for public schools and other beneficiaries are challenged with needing to balance risk and reward within a complex system of governance. Historically, state land offices have taken a passive leasing approach, waiting to be approached by ranchers, oil and gas developers, and organizations with ideas for development on state lands. This model insulates the state—and beneficiaries—from risk but can also reduce the potential returns. A more aggressive approach, where a land management agency takes on all the risk (and reward) is rare and can be seen as unfairly competing with private sector. New Mexico—like many state land offices—takes a more moderate approach, relying on partnerships to share the risk and strengthen the reward. A state's portfolio of projects can also include projects across the spectrum, ranging from passive to aggressive (Figure 2).

In New Mexico, numerous legal entities have some level of authority over the establishment and management of state trust lands, including the U.S. Congress and state Legislature. However, the Commissioner of Public Lands plays the pivotal role over setting and managing leases and exchanges on state trust lands, on prioritizing how those lands are improved and used to benefit of the beneficiaries, and on ensuring efficient, sound management of the entire state trust land system. As an independent, elected official, the commissioner has autonomy and latitude in presiding over the State Land Office (SLO) because she does not answer to the governor or the state Legislature but rather to the mandate entrusted to her from Congress and the state constitution. Though rare, other legislatures have taken action to curb their elected commissioner's executive authority. (New Mexico is one of only five states with elected commissioners; the others are Arkansas, South Dakota, Texas, and Washington.[7]) The inherently political nature of the elected office creates some volatility. Establishing durable policies, systems, and culture that can withstand political change is a challenge for the State Land Office.

<< Less risk, less return		More risk, more return >>
Passive approach	**Moderate approach**	**Aggressive approach**
• The state waits for producers to request leases and develop resources. Lessee absorbs all risk. • The state receives fixed returns through rents and leases.	• Through partnerships with developers and others, the state shares upfront costs and risks. • The state receives income through rents and leases, as well as a share of returns.	• The state develops resources and produces commodities itself, paying all upfront costs and taking all risk. • The state receives all benefits and returns.

Figure 2. The continuum of risk and reward
Risk—and reward—vary along a continuum. In the passive approach, a state waits for others to develop resources and takes on little risk and little reward. In an aggressive approach the state conducts all development itself, absorbing all of the risk and reaping the reward. No state land office fits neatly into any single category. In addition, a state land office's portfolio may be diverse and include projects across the entire spectrum.

Purpose of this report

Headwaters Economics independently evaluated opportunities for the SLO to diversify revenue generated on state trust lands as a key strategy to reduce dependence and to align state trust land assets with state economic development, energy, and policy goals. To identify and assess revenue diversification options, we conducted interviews with SLO staff, staff at other state land offices, and experts in state trust land management, economic development, and natural resource fiscal policy. The goal of interviews was to learn about the SLO's current strategy for generating revenue from trust lands, options for revenue diversification and expansion, and the feasibility of revenue diversification ideas.

In the following sections, we offer ideas for:

- land management activities that offer the best opportunities to diversify revenue;
- key fiscal and administrative strategies necessary to diversify revenue from state trust lands; and
- improved stewardship for continued oil and natural gas activities.

Additional background on the legal and policy framework that governs how state trust lands are managed is included in Appendix A along with data on state trust land revenue, distributions to beneficiaries and to the LGPF, and statistics on the Land Grant Permanent Fund. Appendix B provides details on our interview and research methods. More detail on the legal authorities over leasing on state trust land in New Mexico is also available at the website hosting this report.

It is important to note that, while we identify several structural obstacles in this report—namely the need for more authority and staff capacity—it is beyond the scope of this report to provide recommendations on the specific legal or financial mechanisms to resolve those obstacles. Some of the recommendations included in this report would require legislation.

Spending Money to Make Money: Limits in the SLO's Ability to Invest in State Trust Lands

As noted throughout this report, investing in improvements to state trust lands could help raise more money for trust beneficiaries. For example, the State Land Office (SLO) may want to invest in infrastructure to make commercial development or renewable energy projects more feasible and make leases more lucrative. In other words, there are cases where New Mexico may need to spend money to make money.

However, a hundred-year-old state supreme court case narrows the SLO's ability to use funds derived from the state trust lands to improve those same lands. In 1921, the New Mexico Supreme Court decided the Lake Arthur Case, setting in motion decades of debate about agency authority to invest in state trust lands. In Lake Arthur, the state Legislature passed a law authorizing the SLO to "improve" state trust lands for the benefit of agricultural use; the law also required the SLO to pay for the cost of any improvements to state trust lands out of the trust fund.[a]

The state supreme court said that the statute violated the Enabling Act (the Congressional act authorizing New Mexico statehood) and the New Mexico Constitution. The court narrowly interpreted the Enabling Act's language regarding how the state could use revenue derived from the state trust lands—regardless of where the SLO held those funds—determining that the Enabling Act only allowed income derived from the state trust lands to be used for the "support and maintenance of the common schools or the institutions to which it was granted."[b] In other words, the Legislature could not direct the land commissioner to use money from the state trust fund for anything beyond what the Enabling Act specifically enumerated. The foundations laid down by Lake Arthur persuaded the state supreme court to decide later cases along the same lines.[c] It bears noting that both the U.S. Circuit Court and the U.S. Supreme Court have affirmed that the Enabling Act should be narrowly interpreted.[d]

Nothing in the case prevents state trust lands from being improved, but in its broadest interpretation it prohibits the SLO from using revenue derived from state trust lands to improve state trust lands. In its most permissive interpretation, it prohibits the Legislature from diverting monies from the state trust fund to improve state trust lands for particular purposes (like agriculture or renewable energy).

To overcome the limits in authority to invest in state trust lands, derived from the Lake Arthur Case, New Mexico has a few options:

- **Leverage partnerships and outsource improvements to third parties. This is a strategy already employed by the SLO, and which could be expanded as discussed elsewhere in this report.**
- **Pursue appropriations or other sources of funds from the Legislature for specific projects.**

More detail on the legal authorities over leasing on state trust land in New Mexico is available at the website hosting this report.

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a Lake Arthur Drainage Dist. v. Field, 27 N.M. 183, 199 P. 112 (1921)

b Lake Arthur Drainage Dist., 27 N.M., at 190-91 (citing Enabling Act for the State of New Mexico § 10, 36 Stat. 557, 563 (1910)).

c See, e.g., Bryant v. Board of Loan Commissioners, 28 N. M. 319, 211 P. 597 (1922); State ex rel. Yeo v. Ulibarri, 34 N.M. 184, 187, 279 P. 509 (1929).

d See, e.g., U. S. v. Ervien 246 F. 277 (8th Cir. 1917); Ervien v. U. S., 251 U. S. 41, 40 S. Ct. 75 (1919); United States v. New Mexico, 536 F.2d 1324 (10th Cir. 1976) ("In construing the Enabling Act the Supreme Court citing the restrictions placed on the use of the trust lands has consistently applied a narrow interpretation to the terms of the Enabling Act.") (cit. op.)

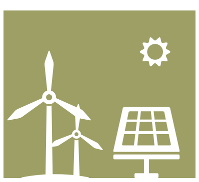
3 Land Management Activities to Diversify and Grow Revenue

In this section, we describe land management activities that can be pursued to diversify and grow recurring, sustainable revenue from state trust lands. However, it is important to note that there are barriers to fully optimizing revenue from these new activities. To overcome those barriers and fully realize the potential from new activities, a series of strategies must first be implemented that modernize and align New Mexico's practices with new economic and revenue models, and must be supported with sufficient staffing and budgetary resources to be successful. These fiscal and management strategies are discussed in the next section.

Revenue comes directly from land management activities. The SLO pursues a wide variety of land management activities, from oil and gas production to grazing to space tourism. Our research indicates four land management activities offer the greatest potential to diversify and grow revenue:

- Expand renewable energy development including solar and wind generation, energy storage, and transmission.
- Pursue non-oil- and gas-related commercial development (i.e., manufacturing and real estate development).
- Promote outdoor recreation and diversify revenue beyond recreation permit sales.
- Monetize conservation on state trust lands.

Each of these activities is described in detail below.



Renewable Energy

The opportunity to expand renewable energy generation, transmission, and storage on state trust lands is a key component of a revenue diversification strategy. Renewable energy is already a priority for the SLO,[10] and efforts to lease trust lands for renewable energy support energy, climate, and economic transition policy priorities for the state Legislature and the governor's office.[11]

What is the issue?

Renewable energy was consistently identified in interviews and the literature as a significant opportunity to expand and diversify revenue on state trust lands. The SLO has already taken steps to capture opportunities to site more renewable energy capacity on trust lands. For example:

- The current commissioner created the Office of Renewable Energy within the SLO in 2019. The office added staff capacity specifically for renewable energy leasing for the first time.[12] More than half of the renewable leases ever signed by SLO have occurred since the 2019 establishment of the Office of Renewable Energy.
- The SLO contracted with a law firm to develop a model renewable energy lease for wind and solar projects to ensure consistent, transparent terms to developers and to optimize revenue for beneficiaries.

The state Legislature, governor's office, the Energy, Minerals, and Natural Resources Department, and other state agencies have also made renewable energy a priority.

- New Mexico became a national leader in energy transition policy when the Legislature passed the Energy Transition Act (ETA) in 2019. The ETA establishes renewable portfolio standards, including 100% renewable power by 2050.[13]

- The New Mexico State Investment Council (SIC) released a strategic investment strategy for renewable energy in November 2020 in response to a House Memorial (a recommendation) that they partner with the SLO and other state agencies to create and implement a shared strategy.[14,15]

Las Cruces Community Solar Project

The New Mexico SLO recently partnered with the City of Las Cruces to establish four 25-year leases for community solar projects on state land. The city will pay approximately $20,000 per year to the SLO for use of 10 acres of land in areas of Las Cruces. When completed, the project will generate enough energy to power four utility-scale water wells that serve city residents and businesses. This project is a new model of municipal renewable leasing that could be repeated in other communities.

- New Mexico offers incentives to renewable energy developers, including a Renewable Energy Tax Credit[16] and Industrial Revenue Bonds that lower financing costs and limit tax liability. Tax incentives and public financing are justified on the basis that incentives result in additional revenue because they attract more projects to the state, many of which are located on trust lands and solicit bonus payments, rental payments, and generation fees.

Energy markets continue to move toward renewable energy. New Mexico's public utility (PNM) is in the process of being purchased by an out-of-state wind energy company. The purchase is expected to greatly increase investment in renewable energy capacity and technology. "Our combined companies provide greater opportunities to invest in the infrastructure and new technologies that will help us navigate our transition to clean energy while maintaining our commitments to our local teams and communities," said Pat Vincent-Collawn, PNM Resources' chairwoman, president, and CEO.[17]

The SLO has increased focus on renewable energy and synergistic market and state policy actions, shifting from a passive actor in renewable energy development. Even so, the SLO lacks staff capacity to process the volume of renewable energy leases. Complicating matters, state trust lands are often not contiguous, so planning and siting is fragmented and difficult.

Turning renewable energy into a durable and substantial revenue asset on state lands will require increased funding and staffing to process leases on trust lands, a renewable energy strategic plan developed with partners that is intentional about identifying locations for renewable energy infrastructure, and an implementation strategy that leverages funding and financing tools to lower risk for private developers by resolving environmental and infrastructure constraints and increasing private and public investment in New Mexico and on trust lands.

What can be done?

- **Increase capacity within SLO.** The current staff capacity of the new Office of Renewable Energy is insufficient to deal with current interest in renewable energy leasing. The office is managing a backlog of lease applications and needs additional capacity to keep up with requests. With just three dedicated full-time-equivalents, additional staff capacity at all levels is required not only to process requests, but to proactively conduct asset inventories, analyze the markets, and engage in long-term strategic planning with partners.

- **Engage in strategic planning to identify priority locations for renewable energy leasing.** Developers consider a wide variety of factors when choosing to site renewable energy projects, including the resource quality of a location, access to transmission infrastructure and markets, permitting and environmental requirements, and fiscal costs and incentives.[18] A renewable energy strategic plan would assess the resource value across landholdings and indicate priority locations for new development. Resource assessments can then be matched with infrastructure and market analysis to identify locations with the greatest economic feasibility. Cultural and natural resource assessments can also help ensure that any new development is balanced with protection of other values. Other emerging renewable energy opportunities, such as community solar and renewable leases with local governments, should be included in such a strategic plan. The Renewable Energy Office should work with other internal divisions, state agencies, and federal partners to address permitting issues and conduct socioeconomic analyses. A strategic planning process would clearly identify priority sites and streamline permitting. Benefits to developers include lower overall costs, greater certainty, and faster approvals.

Federal land managers have conducted strategic planning that facilitates renewable energy development by identifying priority resource locations and conducting environmental, cultural, and socioeconomic assessments within Designated Leasing Areas.[19] The Designated Leasing Area process and plans may be a model for the SLO to adapt to state trust lands.

- **Cultivate key partnerships.** Partnerships are important to the process of developing and implementing a strategic plan consistent with statewide renewable energy goals. Partnerships also increase capacity and resources to expand renewable energy development on trust lands. Key partnerships for the SLO may include:

    - New Mexico Renewable Energy Transmission Authority (RETA) established by legislation to "facilitate the development of electric transmission and storage projects." RETA's goal is to maintain New Mexico's status as an energy exporting state and develop transmission and storage to leverage the state's renewable energy resources for economic development.[20] Increasing transmission and generation capacity will be required to meet New Mexico renewable energy goals set out in the Energy Transition Act. RETA commissioned an important renewable energy generation, transmission, and energy storage study that could serve as the basis for a strategic plan on state lands.

    - New Mexico Economic Development Department has funding capacity through the Local Economic Development Act (LEDA) to provide grants and loans to renewable energy developers siting projects on state lands.[21]

    - Municipalities and county governments have industrial revenue bonding capacity to finance renewable energy projects on state trust lands and can also serve as a conduit for state Local Economic Development Act (LEDA) funds.

- **Create a new financing authority to invest in renewable energy projects on state trust lands.** The New Mexico House of Representatives passed House Memorial 9 in the 2019 session recommending that the State Investment Council (SIC) develop a renewable energy strategic investment plan.[22] The House Memorial noted that renewable energy represents a growing and competitive market and that the State of New Mexico could participate directly in financing renewable energy projects to secure economic and revenue benefits for the state. In response, the SIC completed its first renewable energy strategic investment plan in December 2020 that allows the SIC to invest more of the LGPF funds (and Severance Tax Permanent Fund) into New Mexico renewable energy projects.[23]

  Interviews suggest that more could be done to integrate a strategic investment plan into a broader renewable energy strategy on state trust lands. Focusing renewable energy development on state trust lands and utilizing state investment capital could produce multiple benefits: projects sited on state land generate greater leasing revenue benefits compared with projects sited on federal or private land; investing the LGPF into renewable energy projects creates a double bottom line as these investments receive both the financial returns to the LGPF and leasing revenue from the SLO; and direct investments by the SIC would eliminate fees paid to third-party managers.

  However, the SLO and SIC lack the resources necessary to make direct investments in renewable energy projects. The SLO also does not have the staff capacity or expertise to evaluate investment opportunities and would face challenges maintaining an arms-length distance between land managers, beneficiaries, and investment professionals.

  The SIC is responsible for making decisions about how to invest the LGPF to generate revenue for beneficiaries. The SIC does not invest money directly but relies on third-party investment professionals to invest the state's money. Investment professionals are selected to ensure the state's money is invested in a diversified portfolio of assets and that these investments are divorced from New Mexico's economy and politics. The renewable energy investment strategy allows the SIC to direct more of the LGPF to third-party investment professionals who invest in renewable energy. The SIC also may be able to work directly with an investment manager to specifically invest in New Mexico projects.

A new financing authority (or extended capacity for an existing authority such as the New Mexico Finance Authority) could offer an elegant solution to the lack of authority and capacity at both SLO and SIC. A finance authority is essentially a government-owned corporation that has capacity and authority to make investment decisions independent from the political appropriation process. A finance authority could be given the capacity and autonomy to invest directly into New Mexico renewable energy projects to meet the goals of House Memorial 9. A finance authority would not invest in projects below market to achieve renewable energy goals. A finance authority would seek a market rate return on investments to the Land Grant Permanent Fund, acting as a third-party investment manager with respect to the SIC. The advantage of investing in renewable energy through a New Mexico finance authority is the ability to invest directly into New Mexico and to integrate and investment strategy into a SLO renewable energy strategic plan for state trust lands described above.

Pros and cons

Developing renewable energy infrastructure and generation capacity on state lands maximizes the returns to beneficiaries and taxpayers in New Mexico and helps diversify the state's economy. Leveraging partnerships and a new finance authority would make New Mexico competitive in regional energy markets, helping to achieve state energy, climate, and economic transition and development goals. In our interviews we received positive feedback on a more active approach to investment on state lands and to developing partnerships that do not compete with the private sector but streamline and lower costs to private developers.

Cons include potential public pushback on renewable energy impacts to viewsheds and cultural and environmental assets on public lands. New Mexico also has a history of political influence in state[24] that will caution legislators away from allowing greater investment authority within SIC or a development finance authority. Finally, finance and investment professionals may argue that public finance and investments compete with private capital in growing renewable energy markets.

Many States Lease State Trust Lands for Wind Energy Generation

Almost half of the states in the U.S. lease state lands for wind generation. Besides New Mexico, western states that lease state trust lands for wind energy include Alaska, Arizona, California, Colorado, Idaho, Montana, Texas, Utah, Washington, and Wyoming.

The Environmental Law Institute published a report in 2011 that describes the decision-making process for states that support commercial-scale development on wind energy on state-owned lands and waters.[a] The examples below are taken from the report, supplemented with a study by the Lincoln Institute of Land Policy (which also provides state examples for solar and geothermal development).

Arizona. Wind energy production can be leased on state trust lands managed by the Arizona State Land Department (ASLD) as either short-term agreements of up to 10 years, or long-term agreements of up to 90 years. Use permits cost $2,400 per year with an installation fee of $2,500 per turbine. During production, fees are negotiated on a case-by-case basis. An example is the 128 MW Dry Lake wind farm, on combined state and private lands, which produced approximately $120,000 per year for ASLD.[b]

Montana. The Department of Natural Resources and Conservation (DNRC) has authority over state trust lands and can issue use licenses for commercial wind farms on state lands. Trust lands may be leased for up to 99 years. Fees for wind energy generation are applied as the greater of (a) 3% of gross annual revenues or (b) $3,000 per MW of installed capacity.[c] An example of a lease is the 135 MW Judith Gap Wind Farm. It consists of 90 turbines, 13 of which are on state trust lands, with the rest on private lands. A per-megawatt fee applied to this project generates $50,000 to $60,000 per year for DNRC.[d]

Texas. The General Land Office (GLO) that administers the state's school fund state trust lands has the authority to lease land (and also state submerged lands, such as lakes, estuaries and coastal marine waters) for commercial wind energy generation. Revenues are collected via a royalty on energy production. For example, in the mid-1990s, the GLO entered into a 25-year lease agreement for the Texas Wind Project. The GLO leases state land to the Lower Colorado River Authority that pays a royalty based on electricity production. The 35 MW project, which started production in 1995, has generated $880,000 in royalties.

Utah. The School and Institutional Trust Lands Administration (SITLA) may issue special use leases, including for commercial wind energy generation, for up to 51 years on its 3.5 million acres of state trust land. Wind leases are categorized as "special use leases." Revenues for SITLA from wind energy production are based on the greater of (a) land rental, or (b) $4,155 per MW of installed capacity.[e] An example is the First Wind farm on 1,560 acres of combined state trust and BLM lands. With 159 turbines and 102 MW capacity, the facility generates $55,000 per year in revenue for SITLA.[f]

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a Environmental Law Institute. 2011. Siting Wind Facilities on State-Owned Lands and Waters. https://www.eli.org/sites/default/files/eli-pubs/d21_01.pdf.

b Berry, A. 2012. Leasing Renewable Energy on State Trust Lands in the Intermountain West. Lincoln Institute of Land Policy. https://www.lincolninst.edu/sites/default/files/pubfiles/2192_1518_Berry_WP12AB1.pdf.

c Berry, A. 2012.

d Berry, A. 2012.

e Berry, A. 2012.

f Berry, 2012.

Commercial Activities

Diversifying commercial activities on state lands—particularly where trust lands have high real estate and development potential—was consistently highlighted by interviewees as an opportunity both near population centers and in rural areas with critical infrastructure.

What is the issue?

Of the SLO's approximately 1,100 business leases, many are for operations that support oil and gas production, such as compressor stations and warehousing sites. Interviewees suggested that there is significant opportunity for the NM SLO to generate more revenue from commercial activities in growing sectors such as the space technology, renewable energy manufacturing, and film and media. Additionally, there are opportunities to partner with community organizations and local governments to simultaneously generate diverse revenue for beneficiaries and meet economic development goals.

The SLO is already taking steps in this direction. For example, the SLO recently leased state trust land for an affordable housing complex for senior citizens near Albuquerque, for community solar near Las Cruces, and for aerospace and film developments. Two unique mechanisms offer strong opportunities to broaden commercial development: planning and development leases and municipal leases.

Planning and development leases, governed by Section 19.2.22 of the New Mexico Administrative Code, permit the SLO to issue leases to: "generate value to the trust by planning and development of trust land for future sale, lease, or exchange through the process of obtaining government approvals and the placement of infrastructure pertinent to the planning and development of the land." A planning and development lease allows the SLO to share in the value added by the developer/lessee without taking risks or making direct investments with agency funds. The planning and development lease offers the SLO the opportunity to take a more active role in site planning and infrastructure investment for commercial development projects on trust lands. However, the planning and development lease can also pose some procedural hurdles when compared to a business lease. Planning and development leases must go through public notice and public auction processes, creating some uncertainty for developers who may have invested in appraisal, survey, and other due diligence upfront to initiate the lease.

The SLO is also leveraging municipal leases in partnership with local governments. For example, new community solar leases on state trust lands in Las Cruces will generate $20,000 per year for 25 years while also helping Las Cruces reach goals set forth in the Energy Transition Act.[25] Recent changes to municipal leasing statutes offer expanded opportunities. House Bill 176, passed by the Legislature and signed by the governor in 2020, increased the maximum term of municipal economic development leases from 25 to 40 years.[26] This change, designed to strengthen economic partnerships between the SLO and local governments, will help create a more attractive environment for municipal leases. Longer lease terms enable prospective developers to more easily secure financing and manage risk while creating a predictable source of longer-term revenue for the SLO. Passage of House Bill 176 indicates there is some traction in the Legislature to eliminate barriers to commercial development on trust lands. Already House Bil 176 has resulted in new opportunities. In June 2021, the SLO signed a new economic development lease with the City of Albuquerque and NETFLIX. The lease will result in over $25 million in revenue to trust beneficiaries and the project will create jobs and capital expenditures, aligning with the state's economic development goals.[27]

For the SLO to maximize revenue from commercial development, the SLO would require clear investment authority, the authority to own improvements, and the ability to market trust land assets. In other words, the NM SLO would need to behave more like a developer.

What can be done?

- **Inventory assets and prioritize trust lands ripe for commercial development as part of a strategic planning process** that includes a market assessment of existing and emerging opportunities to expand commercial development on trust lands near cities and critical infrastructure, including:
  - **Aerospace –** The state of New Mexico attracts the aerospace industry due to the Space Gross Receipts tax deduction and other incentives. The NM SLO could continue pursuing lucrative leases with the aerospace industry. For example, the NM SLO currently leases 18,000 acres to Spaceport America for

$37,000 per year and stipulates that the NM SLO collect 15% of each sublease (lease renegotiation in early 2022).[28] In comparison, a typical grazing lease of the same size would generate approximately $18,000 per year and require more staff capacity for management and administration.

- **Manufacturing –** A skilled workforce and has attracted diverse manufacturers to New Mexico. The SLO could market trust lands near cities and critical infrastructure to potential manufacturers or pursue economic development leases with cities and counties to attract manufacturing operations. Renewable energy manufacturing is a potential sector that can leverage market opportunities and related efforts to increase energy generation on state trust lands and within the state.
- **Filmmaking –** The digital media and filmmaking industries are growing in New Mexico. The SLO has begun and could continue pursuing leases with media companies. For example, the SLO recently negotiated a 130-acre municipal lease with the city of Albuquerque where all fees from the sublessee, Netflix, are paid to the SLO and directed to the assigned beneficiary (UNM). This lease will generate at least $24 million over the 40-year lease term.
- **Outdoor recreation** (see next section).

- **Leverage state trust assets to support an innovation cluster initiative.** Industry clusters are networks of like-minded companies, research institutions, specialized suppliers, investors and foundations, and public partners working together to coordinate research, development, and commercialization of novel technologies, services, or products. The SLO is already a major player in the Sandia Science & Technology Park in Albuquerque, a cluster associated with Sandia National Laboratories and Kirtland Air Force Base. This type of initiative leverages geographic proximity of partners and resources, such as research facilities and a skilled workforce. The SLO could support more innovation cluster initiatives by strategically co-locating lessees and developing facilities that can serve as hubs for industry clusters. SIC would need additional capacity to participate in innovation networks and authority to commit resources and land to support initiatives. SIC investment would be recouped by lease fees and other public-private partnerships that could generate income for beneficiaries.
- **Expand SLO authority to take greater risks.** Currently, the SLO is limited in its ability to charge lease rates beyond raw land values. Expanding authority to participate in the development process by engaging in planning, permitting, and by making investments in public works infrastructure, for example, could help the SLO recover the cost of investments while soliciting higher returns over the life of the lease.[29] Under the current planning and development lease process, upfront investments can be risky; developers must sink administrative time and money into a parcel without a guarantee that those costs can be recovered.

  However, risks can be minimized if undertaken using a portfolio approach and through strategic engagement with partners such as local governments and private developers. Partnerships allow the SLO access to additional resources and capacity to engage in site planning, permitting, and infrastructure development, thereby reducing the SLO's risk. Enhanced commercial activity could best be achieved if the SLO was able to market trust land assets to potential developers instead of waiting passively for developers to propose commercial projects. This would increase the probability that risks undertaken by the SLO associated with planning and improvements would solicit greater returns.

Pros and cons

Experts interviewed for this project agreed that commercial development is a lucrative opportunity. The SLO owns lands that would be prime for development near urban areas. Land exchanges could secure more lands with high development potential. Barriers could include concerns about smart growth principles that would advocate for the use of state lands used as open space, parks, and for recreation to contain urban sprawl.

Modifying the system to allow the SLO to market its assets, make investments, and invest in more improvements on its lands would require significant changes. Eliminating these constraints may unfairly challenge the private sector. With the SLO's extensive land holdings, tax-exempt status, and potential access to capital in the Permanent Fund, the state would likely outcompete any private developer. Instead, the goal could be for the SLO to position itself somewhere between a passive leasing approach and full public ownership of developments.

Phoenix, Arizona: A Total Asset Management Approach to Selling State Trust Lands

The Arizona State Land Department (ASLD) has taken an active and creative approach for its lands outside Phoenix, where commercial and residential development has high value. Rather than using a passive lease or sales model, ASLD is involved in a way that maximizes revenues by using a Total Asset Management approach. The ASLD engages in development design and permitting before leasing or selling state trust lands, leveraging the unique mixture of economic opportunities from commercial development, residential projects, and open space to maximize revenue. While disposition of state trust land is not necessarily a strategy for New Mexico to pursue, other components of the Arizona approach could be adapted to maximize opportunities, especially on large blocks of contiguous land.

The ASLD treats its lands near Phoenix as a mixed portfolio of assets consisting of open space, viewsheds, and recreational opportunities in addition to lands suitable for commercial and residential development. This approach mixes assets that generate different rates of return but, when taken as a whole, increases the value of the entire portfolio.[a] Because home prices are higher when they come with good views, access to open space and trails, setting aside some lands for recreation and viewsheds and foregoing revenues from these lands can have the effect of increasing the total value of the portfolio of all lands.

The ASLD also is more actively involved in the permitting process. In a passive leasing model, a lessee would be responsible for all development approvals. In contrast, ASLD is directly engaged in the planning process, securing zoning, subdivision review, and other permitting approvals before leasing or selling the land.

An analysis by the Lincoln Institute of Land Policy, using state lands near Phoenix as an example, has shown that an overall development scenario with large areas of public open space and preserved natural space, plus an investment in public transportation infrastructure, yields twice the return of its usual disposition strategy of selling small parcels individually.[b]

a For a good description of the conceptual planning process for Arizona State Land Department urban lands, see Friends of the Verde River, Trust lands and growth, https://verderiver.org/trust-lands-growth/.

b Culp, Susan and Joe Marlow. 2015. *Conserving State Trust Lands: Strategies for the Intermountain West*. Cambridge, MA: Lincoln Institute of Land Policy.

Outdoor Recreation

Enhancing recreation opportunities and access creates increased revenue from the amenity value of trust assets.

What is the issue?

Outdoor recreation plays a substantial role in New Mexico's economy and is growing nearly three times faster than the overall state economy.[30] The COVID-19 pandemic has encouraged a flood of outdoor activity across the United States. The state's newly established Office of Outdoor Recreation promotes recreation opportunities to leverage economic benefits across New Mexico. Within the SLO, a full-time Outdoor Recreation Specialist was hired for the first time in early 2020. State trust lands offer many outdoor recreation opportunities and can be important assets in a statewide recreation strategy.

Despite the growth and opportunity related to outdoor recreation, the SLO is limited in how it can generate revenue from recreation access and activities. Currently, recreational users are required to purchase a $35 permit. Although the permit process has recently been streamlined into an online system, it is unlikely to generate significant revenue for the state.

The SLO leases some trust lands for recreation, but the revenue generated by these leases is minimal (although it often exceeds revenue from grazing, which is currently the dominant use of state trust lands by acres leased). Even though recreation lease fees are relatively low (though they are often higher than grazing leases), these collaborations are successful in upgrading recreation areas on trust lands with infrastructure (e.g., parking lots), increasing sales of permits, managing trust land with other preserved public lands (state parks), and ultimately increasing visitation. For example, licensed hunters and anglers can access millions of acres of trust lands for hunting, fishing, and trapping through an ($800,000 annual) easement agreement with the New Mexico Department of Game and Fish. The easement also stipulates that the Department of Game and Fish "partner with the SLO for $200,000 worth of projects aimed to enhance access to state trust land."[31] This agreement generates revenue, brings recreationalists to trust lands, and has helped make infrastructural (road) improvements to facilitate access.

The SLO also has partnered with nonprofit organizations to improve outdoor recreational access on state lands. For example, at Melrose Woods on state lands, the Audubon Society raises money to improve infrastructure including parking areas, signage, and trails, and provides a management presence that helps protect and improve trust land assets. Leases for recreation access and use can also generate spinoff economic development benefits for outdoor retailers in New Mexico, and recreation can help drive amenity migration and business relocation.

What can be done?

- **Maintain current collaborations/partnerships and actively cultivate others.** The SLO is already engaged in a series of successful partnerships with the Department of Game and Fish, the Audubon Society, and New Mexico State Parks, among others. The SLO benefits from these partnerships in ways that exceed leasing fees. Partners are not limited in spending money on marketing recreation amenities or improving access and management that protects resources and raises public awareness of trust land assets. Partnerships are increasingly important because improved recreational access can create a feedback loop of a need for more infrastructure and management/protection of recreation sites. SLO does not have the resources and capacity to absorb these costs, so partners that can help raise money and engage volunteers in fixing issues created by recreation (road problems, dumping/nuisance issues) are critical to avoiding loving state trust lands to death.

- **Improve access to state trust lands.** Negotiating easements with partners to access state trust lands across adjacent federal and private land and to provide for trail corridors on state trust lands could be prioritized. Easements on trust lands for trails, for example, do not require permission from an existing lessee. Pursuing recreational easements on agglomerations of trust lands could go far to increase public access. Potential land exchanges that improve access also could be considered.

- **Expand successful dispersed and backpack camping pilot program for hunters.** In 2020, the SLO launched a dispersed and backpack camping pilot program allowing hunters overnight backcountry access to certain state trust lands. The program aimed to increase access to state trust lands and enhance hunting opportunities in New Mexico. At the conclusion of the 2020 hunting season, the SLO deemed the pilot program a success. The SLO could actively pursue implementation of an expanded and permanent dispersed camping program making any necessary changes based on lessons learned from the summer 2020 pilot.

- **Develop standard commercial leases suited to popular or emerging recreational uses.** SLO has developed standard leases for renewable energy that provide for predictable rules and fees for potential developers. Developing a similar outdoor recreation lease template for commercial recreation activities could provide similar predictability and expectations for commercial recreation uses such as campgrounds, "glamping" and/or yurt sites, shooting ranges, and outfitting/guiding. In general, developed recreation and outfitting licenses on state trust lands are not a high-revenue opportunity unless other recreation users are prohibited, creating exclusive access for the lessee. However, charging fees through permits and excluding access to limited lessees (i.e., "pay-to-play" model) creates inequity and erodes the economic contributions of outdoor recreation to the state.

  New Mexico and other states have decided to prioritize public access over offering exclusive recreation leases. One option is a blanket recreational lease or easement (perpetual or renewable) for public access, to be held by a land trust or other government partner. In Whitefish, Montana, for example, such an arrangement has raised significant revenue for the state (see sidebar). Often the partner organizations that lease access to state trust lands are using state and/or federal tax programs and grants to pay for the lease (using public money to lease state trust lands)—a further argument against offering exclusive access to lessees.

- **Reform grazing leases to "stack" recreation uses and return revenue to the SLO.** Agricultural and grazing leases shift management costs and risks to grazing lessees. In return, lessees enjoy a high level of authority over how leased lands are utilized. Grazing lessees have the right to deny recreation access and additional revenue-generating activities and may have to be compensated for a loss in value. New lease template language that enables the SLO to more easily "stack" additional leases on top of grazing leases—for recreation uses, camping, rental cabin development, or outfitter leases for example—without consent of existing lessees would allow the SLO to generate more income from outdoor recreation on state trust lands. Negotiating market rates for grazing on "multiple-use" state lands may or may not reduce revenue from grazing, more likely than not generating net positive revenue for trust lands leased for multiple activities.

Pros and cons

The recreation economy in New Mexico is growing and the SLO holds lands with significant amenity value. Land exchanges could help secure additional land suited for a variety of recreational activities. Greater recreational use of trust lands will increase visibility and awareness of the SLO and trust land assets for New Mexicans and out-of-state visitors. The SLO's current focus on outdoor recreation is an opportunity to establish new partnerships and revenue streams although capacity challenges associated with their very recent establishment will need to be worked through.

Partnerships facilitate improvements to trust lands and assist with management, although increased recreation uses on state trust lands could leave SLO responsible for maintenance of improvements, enforcement, and resource protection. Negotiations and agreements could be clear about time horizons and maintenance responsibility. As a revenue generator, outdoor recreation cannot stand alone. It must be nested within a portfolio of other more lucrative activities. Outdoor recreation will never generate revenue comparable to oil and gas. Providing recreational opportunities on trust land requires significant staff capacity in program administration and to establish and maintain partnerships.

Whitefish, Montana: Leasing State Lands for Recreation

The City of Whitefish and a local nonprofit, the Whitefish Legacy Partners, have built 43 miles of trails and 14 trailheads, much of it on State Trust Lands.[a] The Whitefish Trail has had a significant economic impact. Every year almost 73,000 people use the trail, resulting in $6.4 million in annual consumer spending (57% by out-of-town visitors), which in turns supports 68 local jobs.[b]

The success of the Whitefish Trail came about as a partnership between the Montana Department of Natural Resources and Conservation (DNRC) and the community of Whitefish. Hikers, bicyclists, cross-country skiers, and other outdoor recreationists had for generations enjoyed access to State Trust Lands in the area, and in the early 2000s a partnership was formed between the city, a local non-profit, and the State Land Board, with the goal of creating a trail corridor encircling the greater Whitefish area.[c]

Today the Whitefish Trail cuts through 13,000 acres of state trust lands and is made possible through easements and several license agreements between DNRC and the city. The easements are relatively lucrative arrangements for the state. For example, in the 1,520 Beaver Lakes area of the trail system, the state earned $7.3 million by selling an easement that gives the public free recreation access (called a "public recreation use easement") while also foregoing development rights (this prevents the development of homes, for example). In addition, the state retains logging rights on easement lands, guaranteeing a return on the sale of timber. The leases also generate funds for the state, but at lower levels. For example, on the Spencer Mountain section of the trail system the 10-year license agreement generates $10,000 per year for the state.[d] These licenses allow for the construction, maintenance, and management of a recreational use trail, and occupation and use of state lands for the construction of trail-related amenities such as parking lots, trailheads and restrooms.[e]

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a Economic Impact of the Whitefish Trail. Whitefish Legacy Partners. https://www.whitefishlegacy.org/news/economic-impact-of-the-whitefish-trail/.

b Lawson, M. 2018. The Economic Impact of Outdoor Recreation and the Whitefish Trail in Whitefish, Montana. Headwaters Economics. https://headwaterseconomics.org/wp-content/uploads/whitefish-trail-use-full-report.pdf.

c A Trail Runs Through It Master Plan. 2006. Whitefish Legacy Partners. http://whitefishlegacy.org/docs/TRTI_Masterplan.pdf.

d Personal communication. Alan Myers-Davis, Director of Development, Whitefish Legacy Partners. https://www.whitefishlegacy.org/wlp-staff/.

e Montana Department of Natural Resources and Conservation. Management and Operations Plan 2017-2018. Whitefish Trail. https://www.whitefishlegacy.org/site/wp-content/uploads/2018/03/WT-Ops-Plan-Packet-2017-18-Final.pdf.

Conservation

State trust lands make up more than 10% of the area of New Mexico. These lands contain significant ecological and cultural values. The obligation to generate revenue for beneficiaries complicates protection of these values. Tools for evaluating, protecting, and monetizing environmental and cultural values will be an important component of an approach to diversifying the revenue potential of state trust lands.

What is the issue?

Significant ecological values and cultural sites are located on New Mexico state trust lands. Spending money to protect these values is often limited by the beneficiary mandate to generate revenue, although the SLO has worked to increase capacity and authority in recent years.

The SLO is advocating for conservation and has several tools at its disposal:

- The SLO can deny proposed land management activities if they adversely impact environmental, social, and cultural values.
- The SLO can offer conservation leases.
- The SLO has increasing authority to spend money to restore and protect state trust lands, such as vegetation projects that reduce wildfire severity and risk, using the Restoration and Remediation Fund.
- A new land use planner will allow the SLO to evaluate and incorporate ecological and cultural values into strategic planning and leasing decisions.

Identifying and accessing new markets and revenue models may complement existing conservation leases and resources to generate revenue from conservation of public resources.

What can be done?

- **Engage in planning activities that promote conservation.** The SLO has capacity to integrate habitat, wildlife, and other values into strategic planning for commercial uses in ways that were previously limited by staffing and data availability. For example, a wildlife corridor and critical habitat map layer can be used to identify locations appropriate for renewable energy generation and transmission facilities that do not threaten resource and cultural values. The new planning capacity can better protect resources on state trust lands.
- **Increase conservation leases and partnerships.** Conservation leases offer organizations and individuals the opportunity to lease state trust lands solely for conservation purposes. For example, an NGO may lease state trust lands with important wildlife habitat to protect these lands from certain commercial activities that would not contribute to wildlife protections.[32] Conservation leases are similar to other types of commercial leases on state trust lands in that they are term-limited and have negotiated fees and conditions with the lease. A conservation lease is not a conservation easement that is a one-time purchase of development rights that are extinguished forever by the easement. Conservation leases have been controversial in other states. For example, the Montana Legislature recently prohibited conservation on state trust lands after a group of landowners raised funds to lease state lands slated for a timber sale.[33] For conservation leases to be a viable strategy, the SLO could work to provide predictability and guidance for their use.
- **Participate in carbon markets.** Carbon trading markets are voluntary and regulatory markets where carbon producers pay managers of agricultural, timber, or other conserved land to offset their carbon emissions. Such markets are opening opportunities for land managers to monetize carbon sequestration.[34] In order for the SLO to participate in carbon markets, the SLO must sequester carbon that otherwise would not have been sequestered. In other words, the SLO cannot be paid for actions it is already taking. Carbon capture and sequestration in oil fields may be one opportunity (limiting flaring, capturing methane leaks, and carbon capture and storage on state trust lands, for example).

Perhaps the largest opportunity is in grazing management. Ninety percent of state trust lands have active grazing leases. Grazing practices can be changed to improve rangeland carbon sequestration. Requiring new grazing management when leases are up for renewal and documenting the carbon sequestration benefits of changed management practices can allow the SLO to participate in carbon markets. Though carbon markets are newly emerging and not yet operating at a large scale, the SLO could be developing strategies today so it is poised to take advantage when markets are more available. Because the process would be market-driven and a revenue opportunity, it may be more insulated from political challenge like that which sank New Mexico's now defunct cap and trade program.[35]

Pros and cons

Changes may be necessary to allow the SLO to participate in markets that currently may be monetized by the lessee via a traditional grazing lease. There may also be significant political opposition to requiring grazing lessees to change management practices so beneficiaries can participate in carbon markets, particularly if it imposes new costs on lessees. Conservation leases present some opportunities, but have been controversial in other states as noted by the Montana example above.

Bozeman, Montana: Neighbors Band Together to Buy Timber Rights on State Lands

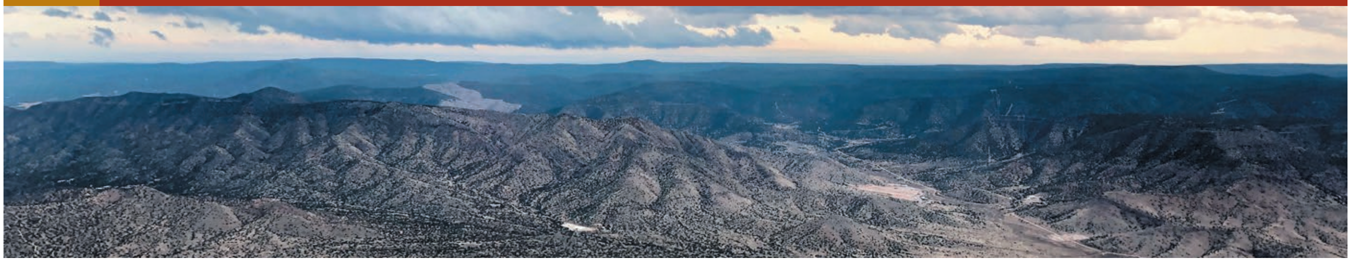
The Montana Department of Natural Resources and Conservation planned to harvest more than 400 acres of state trust lands on the south side of Bozeman, next to the wealthy neighborhoods of Triple Tree and Eagle Rock, whose landowners objected to the sale over concerns for their viewshed and impacts on wildlife. At the time Montana state lands offered an option: if nearby landowners object to the timber sale, they could bid for it themselves and exercise the option of not cutting the trees. That is exactly what happened. In 2019 landowners banned together, raised the necessary funds ($453,000) and outbid a logging company for the rights to the trees. Known as the Limestone Creek project, it was promoted by property rights advocates as an ideal solution for resolving conflicting values, i.e., let conservation groups be a player in the marketplace and if they object to a resource extraction project, they can offer a higher bid and exercise the option of not harvesting the resource.[a] However, this is also an example that illustrates how state lands operate in a political environment. The Limestone Creek project rankled the timber industry, who successfully lobbied the state Legislature to repeal the "timber conservation license" law that makes this sort of buy-out possible.[b] The timber industry had argued that harvesting was necessary to create jobs and reduce wildfire risk.[c]

a Regan, S. 2016. Opponents to Timber Sale Have an Option: Buy It. PERC. https://www.perc.org/2016/07/22/opponents-to-timber-sale-have-an-option-buy-it/

b Wright, M. 2019. Saving the Gallatin Front: How Locals Stopped a Timber Sale South of Bozeman With a Law the State Just Repealed. Bozeman Daily Chronicle. May 12. https://www.bozemandailychronicle.com/news/environment/saving-the-gallatin-front-how-locals-stopped-a-timber-sale-south-of-bozeman-with-a/article_1a6a0838-0294-5559-9693-a9219034a8fc.html.

c Wright, M. 2019. Bozeman Republican pushes repeal of law at center of Limestone logging fight. Bozeman Daily Chronicle. Feb. 21. https://www.bozemandailychronicle.com/news/environment/bozeman-republican-pushes-repeal-of-law-at-center-of-limestone/article_02b38412-f50f-5576-9a48-a63974c5ec82.html.

4 Fiscal and Administrative Strategies to Diversify and Grow Revenue



While renewable energy, commercial development, outdoor recreation, and conservation are the land management activities with the most promise to diversify revenue, there are barriers to fully realizing their potential. Limited capacity, narrow authority, and political pressure restrict the SLO from proactively identifying the highest priority uses for state trust lands and actively engaging with partners and the private sector to coordinate and facilitate planning, infrastructure development, permitting, and incentives.

For example, interviewees described the SLO's current approach to land management as "passive" again and again. This means, essentially, that the SLO implements its obligation to generate revenue for beneficiaries primarily when private interests approach the SLO and propose to lease lands for a commercial activity. The SLO evaluates whether the parcel is available and suitable for the proposed activity, and if so, approves the lease. If the SLO had more staffing, capacity, and authority, it could be more proactive and better realize the potential of new revenue-generating land management activities.

Legal and regulatory hurdles may make pursuit of more capacity and authority difficult, but fiscal and administrative strategies can help the SLO become more deliberate and intentional in its pursuit of revenue, including:

- Conduct strategic planning to identify new market opportunities, position state assets to capture those opportunities, and evaluate outcomes.
- Develop active revenue models that increase the SLO's capacity to take greater risks to seek higher returns.
- Implement a portfolio management strategy that provides the SLO with authority to optimize revenue and mitigate risk across the entirety of state trust land assets.
- Create new partnerships that expand resources and capacity to invest in, market, and manage state trust lands.

Strategic Planning

The goal of revenue diversification is to create durable and diverse sources of income. A strategic plan helps achieve this goal by establishing a vision and direction to guide state land management. A thoughtful strategic plan could move the SLO from its relatively passive approach of leasing state trust lands to actively allocating resources toward priority activities.

What is the issue?

The SLO has a four-year strategic plan for 2019 to 2023. The vision statement is "to be the nation's model for state trust land management" and the mission is to "generate sustainable revenue for current and future beneficiaries." However, we heard that planning could become more of an ongoing process rather than a periodic event and could focus on issues faced daily: allocating resources and capacity to priority activities.

Making strategic planning a habit for the SLO is essential to transforming the agency to take a more active role in land management and revenue generation. In the best case, the SLO would identify the best locations for priority land management activities, evaluate constraints (e.g., cultural and environmental values, access to infrastructure), work across agencies and with partners to resolve constraints and invest in assets, and finally partner with the private sector to implement land management activities. The recent addition of a landscape planner in the SLO is an encouraging step, and additional capacity will be needed. Making the case for more staffing, authority, and risk-taking would be more possible and practical with a compelling and transparent strategic plan.

There was widespread agreement among interview participants that a dedicated strategic planning effort would be a valuable precursor to the implementation of revenue diversification and expansion ideas. However, enthusiastic recommendations for strategic planning were accompanied by acknowledgment that a strategic plan would face political and administrative challenges. For example, the New Mexico land commissioner is an elected official.[7a] A strategic plan drafted under the current administration may or may not be adhered to by subsequent land commissioner. In addition, real or perceived legal and financial constraints have made it difficult for the SLO to pursue long-term planning and strategic investments to improve the value of state lands, questioning whether the SLO could allocate resources to implement the outcomes of a strategic plan.

These challenges can and are being overcome. The SLO hired a full-time permanent land use planner—initially with grant money but followed with a commitment to use SLO appropriations. The SLO is continually improving GIS-based asset mapping and spending money from the Reclamation Fund to restore state trust lands. SLO's Commercial Division developed a strategic plan for outdoor recreation on trust lands. And our interviews demonstrated a clear understanding that a bipartisan and transparent planning process is more likely to be viewed as credible and useful by future land commissioners.

Making planning a practice within and across divisions will require more coordination and capacity. Integrating strategic planning into more of the SLO's activities will require assessment of broader market and policy trends in New Mexico to better anticipate and capture market opportunities and leverage partnerships. Strategic planning can also be shared and leveraged with other state departments. For example, the Economic Development Department recently began a new strategic planning process. They have identified several target industries, including: outdoor recreation, value-added agriculture, global trade, advanced manufacturing, bioscience, film and television, cybersecurity, aerospace, and renewable energy.[36]

What can be done?

- **Continue to improve asset mapping and data.** Some interviewees identified asset mapping as the single most important tool to facilitate strategic planning. Other participants agreed that asset mapping could be a priority for the SLO. An asset inventory would allow the SLO to better understand the characteristics and value of its landholdings and to evaluate constraints that may limit priority land management activities.

  Some states (Oregon,[37] Minnesota[38]) have drafted comprehensive asset management plans to inform agency-wide decision-making. One of the key goals of asset mapping is to identify the best sites for priority activities based on resource values, access to infrastructure, and potential constraints including environmental and cultural values and adjacent land ownerships and access issues. Identifying "landlocked" parcels that have public recreation values could help bring together partners to leverage funding, relationships, and resources (see sidebar). Asset mapping also can focus the SLO's efforts to resolve constraints on the highest-priority locations, which may be different than those prioritized through a political or an ad-hoc process where lessees and other stakeholders determine where resources are allocated.

  The SLO has a good GIS system and an asset inventory is already ongoing. SLO could accelerate the process with additional capacity within SLO or through strategic partnerships that leverage GIS capacity and data. Integration and identification of synergies across divisions could also improve data and planning. Asset mapping is a necessary and early component of strategic planning, but

Inaccessible Public Lands Reports

In 2019, onX and the Theodore Roosevelt Conservation Partnership produced a series of reports that analyzed and inventoried state trust lands and public access.[a] By identifying "landlocked" parcels, the reports provide an initial accounting of state trust lands that may be prioritized for access projects like easements, consolidation, and exchange.

a Souder JA & Fairfax SK. (1996). State trust lands: history, management, and sustainable use. Lawrence, KS: University Press of Kansas.

SLO staff also would benefit from a clear organizational vision that directs limited time and resources to priority geographic regions and issues.

- **Create a compelling vision and mission.** One outcome of strategic planning must be a compelling vision and direction for the SLO to attract talent, new partners, and new funding to state trust lands. Strategic planning can articulate and communicate a vision that would help coordinate resources and change the perception of the agency. For example, California is focusing its strategic plan around emergent issues, including public access, climate change and sea-level rise, environmental justice, tribal relations, sustainable economic development, and environmental protection.[39] Focused challenges—such as using trust lands to help meet New Mexico's renewable energy goals or linking wildlife corridors across state, federal, and private lands—can focus the SLO's energy and resources toward meeting shared goals that also better meet the fiduciary obligation.

  A shared vision can also help SLO resolve capacity issues. For example, limited staff capacity at SLO was a consistent theme across our interviews. The SLO struggles to hire at salaries commensurate with the private sector making it more difficult to attract specialized talent to meet emerging challenges. A compelling public purpose could attract skilled staff. An ambitious vision focused around important challenges facing the SLO and New Mexico can attract new partners, new and diverse sources of funding, and keep SLO an exciting place for talented staff. For example, a commitment to strategic planning attracted a grant from a private foundation for a two-year full-time staff person hired by SLO.

EXAMPLE: California

The California State Lands Commission is updating its strategic plan with an emphasis on current drivers of change in the state. The plan's goals are directly tied to urgent and compelling issues in the state, including climate change, environmental justice, tribal relations, technology, collaboration, and building a reimagined workforce.

- **Develop focused strategic plans for priority land management activities and geographies.** Although some states have successfully pursued comprehensive agency-wide strategic planning, a viable option for the SLO would be to begin with small-scale strategic plans focused on particular activities (such as the outdoor recreation strategic plan that was last updated in February 2020) or for coherent geographic regions. A focus on smaller-scale and targeted strategic plans may more effectively use the SLO's limited resources and begin to make strategic planning a practice rather than a periodic push. Integrating data, resources, and insight that exist across departments can improve innovation. And relationships established through continued planning will help the SLO better anticipate opportunities and challenges, prioritize responses, and maximize innovation and synergies across the SLO.

- **Align staff, spending, revenue models, and partnerships with strategic planning goals.** We heard that comprehensive strategic planning for economic development and land management are lacking across the New Mexico state government. The state has a history of making appropriations, offering grants and incentives, and investing in infrastructure and businesses through the political process. The result, as is the case in many states, is that funding is directed toward priorities held by political leaders rather than toward strategic priorities that may have the greatest impact. The absence of clear and consistent economic development and land management goals, funding, and rules also creates uncertainty for businesses and agencies. A bipartisan and data-informed strategic plan would establish priorities that are more durable and insulated from the political appropriation cycle.

  Implementing a strategic plan for the SLO could reduce the risk and uncertainty for lessees. This is best accomplished when the SLO has the capacity to participate in early-stage development, including planning, securing necessary permits, mitigating and protecting important environmental and cultural values, and even engaging in partnerships to access funding and capital to install infrastructure.

Active Revenue Models

The goal of more active revenue models is to provide the SLO with new tools that allow for greater risk-taking in return for additional revenue from existing and new land management activities. This will enable the SLO to be more intentional about pursuing priority activities that meet revenue diversification goals.

What is the issue?

The SLO is being asked to move from a passive approach to operating more proactively in making leasing decisions. Potential lessees generally approach the SLO first, so the decisions of what kinds of activities occur on state trust lands and where they occur are generally determined by lessees, not by the SLO. Equally important, the SLO has limited authority and political autonomy to take risks that all businesses, large and small, must take to grow. The SLO reduces risk to beneficiaries by shifting most costs and management responsibilities to lessees, including securing required planning and permitting approvals, financing and installing infrastructure, and marketing products.

Shifting risk to lessees minimizes up-front investment by SLO and improves the likelihood the lease will generate future income, but also has consequences for revenue diversification. In return for shouldering most costs and risks associated with commercial activities, the lessee receives an Improvement Value Credit, (IVC), generally calculated as the value added to the land by the permanent improvements. Prospective lessees who wish to use state land for a new use may need to compensate the existing lessee at fair market value for their improvements. For example, if a solar energy developer wants to lease trust lands with an existing grazing lease, the renewable energy developer may have to pay the grazing lessee for the value of improvements they had made to the land (e.g., fencing, water improvements, or other infrastructure). While this protects prior leaseholders, it can also increase costs to new lessees, potentially slowing conversion of state trust lands to higher-value uses.

Moreover, most commercial leases are written so that the SLO cannot lease trust lands for multiple uses on a single parcel without the written consent of the existing lessee (although recent changes to new leases provide pre-consent for renewable energy projects). For example, if a wind developer wants to site a project on land currently leased for grazing, the existing grazing lessee may decide not to provide consent, potentially blocking the higher-value wind project from moving forward. This rarely occurs but demonstrates another potential consequence of the passive position of the SLO in determining land management activities.

Finally, the SLO lacks mechanisms that allow it to invest in trust lands before offering them for leasing. (See "Spending Money to Make Money" sidebar in the Introduction). For example, Arizona takes a more active role in the development process (see sidebar). However, limits on risk-taking and spending SLO resources are not absolute and have changed over time, politically and administratively. For example, money from the Restoration and Remediation Fund can be spent on restoring and improving trust lands to protect their value. The SLO needs a framework to let lessees/partners know what the SLO can do and where the SLO can be creative.

Pursuing active revenue models has limitations. There may be trepidation that investments will go to political priorities rather than strategic opportunities. Politics can be decoupled from leasing and investment decisions by relying on asset mapping and strategic planning, as well as engaging in a portfolio approach that allows the SLO to balance risks across all assets. Existing lessees may feel less secure without ownership and the quasi-property right that comes with owning improvements and being able to recoup their value if the lease is terminated. Further, there may be valid reasons to limit the ability of the SLO to compete with the private sector. For example, the SLO pays no property taxes and could have an unfair advantage in some markets if SLO were allowed hire staff

EXAMPLE: Arizona

Arizona often spends significant time, resources, and dollars to improve land for commercial and residential real estate, including engaging in master planning, pursuing necessary permitting, and developing lots before trust lands are sold to a developer. As a result, the beneficiaries receive greater revenue from the sale or lease. By taking on more risk, Arizona increases the value of its assets and receives greater net revenue.

and utilize its land and financial assets to operate as a public corporation. However, limits on the SLO's authority to make any type of business decisions have likely gone too far, stripping the SLO of opportunities to grow and diversify revenue even where the private sector and communities may benefit from greater investment.

What can be done?

- **Build more public-private partnerships.** The SLO could further increase revenue by engaging in partnerships where the SLO retains some ownership stake in the commercial activity. For example, the SLO's model renewable energy lease includes lower base lease rates in return for a revenue-sharing component, levied as a percent of income once a project is generating electricity. The SLO trades short-term income for the potential of greater overall revenue across the life of a renewable energy project. The SLO is increasing its risk by delaying revenue and being more reliant on a project's success to receive overall returns. Leveraging more revenue-sharing agreements in other types of developments could allow the SLO to earn a share of the profits from successful activities.

- **Provide the SLO with resources to engage in the development process.** With funding and support from outside state trust land revenue, the SLO could invest in infrastructure that might increase total revenue and provide greater flexibility to actively participate in markets. This is the spend money to make money model. The SLO could engage in master planning and permitting for commercial leasing on state trust lands. By identifying state trust lands suitable for priority land management activities, securing development approvals, and financing necessary improvements, the SLO takes on risks associated with development. In return, the SLO would have greater intention in determining land uses, more control of how development occurs, and could generate additional revenue. Several priority land management activities lend themselves to a more active approach on the part of the SLO: commercial development near population centers, siting renewable energy on state trust lands, and developing outdoor recreation infrastructure and access. Due to constraints in how the SLO can use revenue derived from state trust lands (see "Spending Money to Make Money" above), the New Mexico Legislature would likely need to support these efforts with additional funding.

- **Adjust leases to retain more authority at SLO.** By shifting risk to lessees, the SLO creates a de-facto property right where the lessee has significant authority to determine land management, subleasing, and other aspects of land management. For example, lessees—rather than the SLO—have authority to approve stacked leases, can sublease state trust lands and retain revenue, and are sometimes eligible to receive federal payments and incentives for certain land management practices. The SLO could review leasing terms to ensure SLO retains more autonomy to modify leases, determine additional land uses, and that the SLO is eligible for economic development, conservation, and nuisance payments from state and federal partners. For example, when the White Sands Missile Range conducts launches, adjacent landowners must evacuate the area and the military makes payments as compensation. On state lands, the entire payments go to lessees without a share to beneficiaries.

Portfolio Management

Portfolio management is defined as a strategy where all lands are managed together as a balanced portfolio of assets rather than passively leasing each individual parcel to the highest bidder. Portfolio management can identify synergies among assets to increase total revenue and is an effective way to balance risks, allowing for some higher-risk, higher-return activities than what would be tolerated when leasing on a parcel-by-parcel basis.

What is the issue?

Portfolio theory is inspired by principles of financial management and "describes the efficient allocation of resources through diversification to reduce risk in the form of fluctuating revenues."[40] Portfolio management has two primary tenets. First, financial risk is managed across a diversified portfolio of activities, allowing for higher-risk strategies with some lands balanced by lower-risk activities elsewhere—the way a financial manager might build a portfolio that includes risky technology stocks balanced with relatively safer U.S. Treasury bonds. Second, portfolio management allows the SLO to leverage synergies, or contributory value among portfolio assets. For example, permitting easements or leases for recreation trails or energy transmission lines may result in lower than maximum revenue for the parcel where these assets are sited, but the assets contribute to higher values on adjacent state trust lands for real estate or renewable energy development.

What can be done?

Implementing a portfolio management strategy would facilitate revenue diversification by allowing for large-scale planning and integrated management of assets. Portfolio theory provides the management framework to assess widely distributed assets—each with different resource values, management requirements, and potential synergies with partners—as a single whole.

- **Strategically participate in land exchanges and pursue a land bank to balance the SLO's portfolio of assets.** The SLO's current transaction with the Bureau of Land Management (BLM) to exchange lands from inside newly designated national monuments will trade state trust lands with high conservation value to the federal government. In return, the SLO has an opportunity to take ownership of lands with higher commercial value and/or agglomerate state trust land into more cohesive units to lower administrative costs and provide new management opportunities.

  Adopting a portfolio approach would allow the SLO to select lands with varying revenue potentials to increase the total value of the state's portfolio of assets and implement actions identified in a strategic plan and through partnerships. For example, the SLO may select lands along energy transmission corridors to facilitate permitting of new transmission infrastructure that would increase the value of state trust lands for renewable energy development.

  Beyond the current land exchange with the BLM, the SLO could use additional land exchanges or establish a land bank to strategically reposition trust lands to diversify revenue and pursue strategic goals. If carefully managed, a land bank would allow the SLO to sell state trust lands and hold the proceeds of the sale in a land bank trust fund. The resources in the fund would be used to purchase other lands that have greater value to beneficiaries because they enhance the SLO's portfolio of assets, while retaining land as a trust asset that can be leased at a higher rate for future generations to come. A new mechanism allowing land banking would be required, as SLO currently lacks the legal authority to sell lands, save the proceeds in a fund, and later use the proceeds for acquisition.

- **Make decisions based on the contributory value of conservation, recreation, and infrastructure.** Contributory value refers to the contribution of separate but complementary land uses to the value of the total portfolio. The value of certain state trust lands could be increased by managing proximate trust lands for uses that may not maximize revenue on their own but grow the total value of the portfolio. Economists and land use planners have long understood the value of open space and recreation amenities to adjacent communities. Land available for infrastructure development can also increase the value of adjacent lands for energy production and other industrial uses. It would be necessary for the SLO to have a framework in place to connect strategic planning goals to the management of individual parcels that does not require each parcel to be managed for maximum revenue generation.

New Partnerships

The goal of partnerships is to expand the SLO's capacity. For example, partners do not have limits on spending money on trust lands; partners can provide management, research, and planning services, engage a wider range of stakeholders, and perform important education, marketing, and outreach activities.

What is the issue?

Expanding partnerships can be an effective way to diversify revenue from state trust land without needing to change constitutional or state law. The SLO actively engages in a wide range of partnerships and collaborations. Partnerships allow the SLO to pursue more active revenue models, navigate limits on spending authority, engage in planning activities, and partnerships help increase the SLO's visibility. Examples of current partners include:

- **Local governments.** Partnerships with cities, counties, or school districts offer advantages. The SLO can enter into a 40-year lease agreement with another government entity, whereas leases with private interests cannot exceed five years without going to competitive bidding. Leases with local governments are often organized to bring a particular economic and/or commercial development project to trust land within a county or city. For example, the Northwest New Mexico Council of Governments recently approached the SLO to initiate development of a business park on trust lands after the loss of a coal plant, coal mine, and oil refinery. The SLO and the Council of Governments entered into a short-term evaluation lease to assess the project. If the project is pursued, the SLO will negotiate a graduated fee structure and receive a percentage of all sub-leases.

- **Other state agencies.** The SLO and New Mexico Department of Game and Fish have entered into an easement agreement to improve public access and infrastructure on state trust lands for which the SLO could not otherwise spend money. The easement allows anglers and sportsmen access to more than 8 million acres of trust lands.

- **Nonprofit organizations.** The SLO has a partnership with the Continental Divide Trail Association that allows the NGO to sell recreation access permits. The Association keeps a small portion of sales and the SLO benefits by way of increased compliance, sales, and visibility.

- **Foundations.** Foundations can provide grants to the SLO to add staff capacity, conduct research, and facilitate strategic planning. For example, a private foundation funded a full-time land use planner position within SLO.

The SLO's extensive experience engaging with collaborators and managing partnerships is an asset that can be leveraged to increase revenue for beneficiaries.

What can be done?

- **Expand partnerships to increase public access and outdoor recreation on trust lands.** Partnerships are particularly helpful around public access and recreation on state trust lands. Recreation access can be expensive, requiring access easements (on state and adjacent lands), infrastructure including parking areas, signage, trails, and trash cans, and a management presence to protect resources and public safety. The SLO currently has limited options for generating revenue from public access and recreation. Partnerships lower management costs (because lessees conduct management activities), increase spending (lessees and partners raise money for improvements and marketing), and improve protection of state trust lands.

- **Maintain and cultivate new partnerships with synergistic interests to further the SLO's mission.** Although the SLO already manages many successful partnerships, additional opportunities remain. For example, closer coordination with the New Mexico Economic Development Department could provide incentives for trust land projects and grants/loans to businesses operating on trust lands. This collaboration would increase private investment and public revenue while supporting community development across the state. Under the existing SLO Community Partnership Program, the SLO partners with municipalities and counties that have trust land near or within their borders to develop the land in a manner consistent with local values and vision while generating revenue for the trust. The Community Partnership Program could be enhanced by a formal partnership between the SLO and Economic Development Department.

5 Improve Stewardship of Oil and Gas Activity

Revenue diversification can be achieved through new land management activities and fiscal and administrative strategies, but it is important to also acknowledge the ongoing role of oil and natural gas extraction and revenue. This section addresses how the SLO can continually assess and improve revenue management, monitoring, and regulation to stabilize revenue and avoid unanticipated costs or impacts.

What is the issue?

New Mexico has generated significant revenue from oil and gas production and has managed the income prudently. In 2020, the SLO generated nearly $1 billion in revenue from leasing and producing oil and natural gas. New Mexico's management of oil and natural gas royalty revenue from state trust lands is model fiscal policy. The SLO distributes all royalty revenue to the LGPF and prudent fiscal management by the State Investment Council (SIC) built up a more than $23 billion permanent fund. In FY 2020, disbursements from the LGPF made up 90% of revenue available for appropriation to beneficiaries.

While energy markets are volatile and resources are finite, New Mexico's oil and gas production is likely to continue for many years. Prices and production are likely to recover somewhat from the recent economic downturn. Some sources predict that New Mexico is likely to see a relatively gradual and consistent increase in oil prices back to about $60 by 2022,[42] while others estimate prices below $50.[43] The decline in oil production will likely be less severe in New Mexico than in other producing states (e.g., North Dakota) because of geological, geographic, and resource quality advantages; the Permian is relatively easy to frack, the oil is high quality, and it is closer to pipeline hubs and markets. Companies are pulling out less sharply in New Mexico—indicated by a rising percent of total U.S drilling rigs operating in New Mexico (from 11% in February 2020 to 16% in January 2021). Jobs are less likely to rebound when prices and production recover as companies have increased productivity and cut costs—similar to the trend in lower employment after a price bust in 2015.[44] Continued oil production is primarily a revenue opportunity, not an area for job growth.[45]

Existing oil and gas leases will help grow the LGPF for years to come, regardless of whether or not new leases are developed or future production slows. Continued oil and gas production offers the state an opportunity to further grow the LGPF, generating stable and strong returns for beneficiaries. Improvements to the management of oil and gas resources and revenue can help the SLO stabilize income and avoid unanticipated costs or impacts.

What can be done?

- **Mitigate resource impacts from oil and gas production.** Oil and natural gas activity carry risks of spills, abandoned wells, and other resource damage that can impose restoration costs on the SLO or taxpayers and can leave lasting damages that reduce revenue potential of land and water resources. SLO is taking actions to mitigate impacts and protect resources, such as improving data and monitoring to identify spills early, reviewing and potentially increasing bonding requirements, working with industry to clean up abandoned wells, and taking appropriate enforcement efforts to require cleanup of sites when necessary. Staffing and capacity could be aligned to ensure these issues can be addressed in a timely and effective manner.

- **Establish fiscal rules for LGPF distributions.** The LGPF needs to be protected with a fiscal rule that limits distribution to an amount equal to or less than the average income net of inflation. The fiscal rule can easily be designed to distribute an optimal amount of revenue. Any changes to the fiscal rule should ensure that the corpus is preserved and the balance remains robust enough to continue to generate large distributions into the future, keeping the permanent fund permanent while balancing current and future needs.

- **Increase royalty rates on new leases.** Using a progressive rate structure—for example, increasing royalty rates above certain price thresholds—would maximize royalty revenue from remaining oil and natural gas extraction. There is likely room for higher royalties—Texas already charges higher royalties on its Permian Basin production. However, most of the Permian is already leased. New royalty rates would only apply to new leases.

- **Reclassify bonus payments and other "renewable" revenue associated with the oil and gas industry.** The SLO defines "renewable" revenue as "revenue from activities that do not permanently deplete a resource." Renewable revenue is distributed to the LMF, which funds SLO operations and distributions to beneficiaries. By this definition, leasing the right to drill for oil and natural gas, business leases for pipelines and oil- and natural gas-related infrastructure, and easements for water used in hydraulic fracturing does not, in theory, directly deplete a resource. However, the practice of distributing oil- and natural gas-related revenue directly to beneficiaries each year creates fiscal risks because this revenue is directly tied to and dependent upon nonrenewable resource extraction.

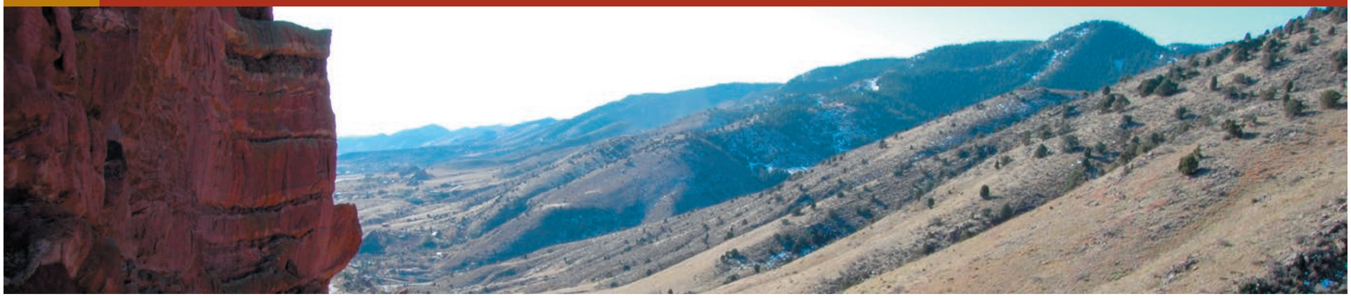
  A more prudent fiscal approach is to consider all oil- and gas-related revenue as "nonrenewable" and transfer it to the LGPF instead of to the LMF. For example, since FY 2003 the SLO has distributed nearly $1 billion in "renewable" oil and natural gas revenue, primarily bonus payments. Had these revenues been saved instead, the LGPF would have distributed two-and-a-half times more revenue in FY 2020 ($50 million) than was generated in bonuses in the same year ($20 million). LGPF and LMF allocations are set by statute, so this approach would require new legislation. Other allocations or appropriations may be needed to adequately fund SLO operations.

6 Conclusion

State lands comprise more than 10% of New Mexico's land area and are used to generate revenue that helps pay the budgets of public beneficiaries including K-12 schools. In the two most recent fiscal years, the SLO generated more than $1 billion in revenue, of which 90% was nonrenewable oil and gas royalty revenue saved in the LGPF.

While no land management activities can replace royalties from oil and natural gas, SLO is well positioned to continue meeting the fiduciary duty to beneficiaries and to diversify revenue beyond oil and natural gas. Opportunities to diversify revenue will likely come from four land management activities: renewable energy generation, commercial development near cities, outdoor recreation, and conservation. The SLO also will need to pursue fiscal and management strategies to optimize revenue, including strategic planning, active revenue models, portfolio management, and new partnerships. Finally, the SLO will need to continually improve revenue management from ongoing oil and gas activity to protect the LGPF, the LMF, and the natural resources on state trust lands.

A Appendix A: New Mexico State Trust Lands in Context



Trust lands in New Mexico have a unique history and legal and policy context that define how they can be used. This appendix provides additional background on the trust model and New Mexico's state trust lands that is important to understand in order to determine revenue diversification opportunities.

State trust lands in New Mexico

New Mexico was among the last states to enter the union, in 1912. Consistent with the evolving trust mandate, the state received more surface lands and mineral rights in the form of four disbursed sections per township compared to states that entered the Union earlier. New Mexico has retained most of the original trust lands that were granted. More than one in 10 acres in New Mexico are trust lands (11.4% of New Mexico's total surface land). In total, the SLO manages nearly 9 million surface acres[46] and 13 million subsurface mineral acres across the state. The way trust lands were distributed created a fragmented patchwork of lands often described as a "checkerboard" pattern (Figure A1). State trust lands are interspersed among private and federal landholdings. This checkerboard of land types, each with different mandates, can either constrain state revenue goals or foster coordination among landowners to leverage additional opportunities.

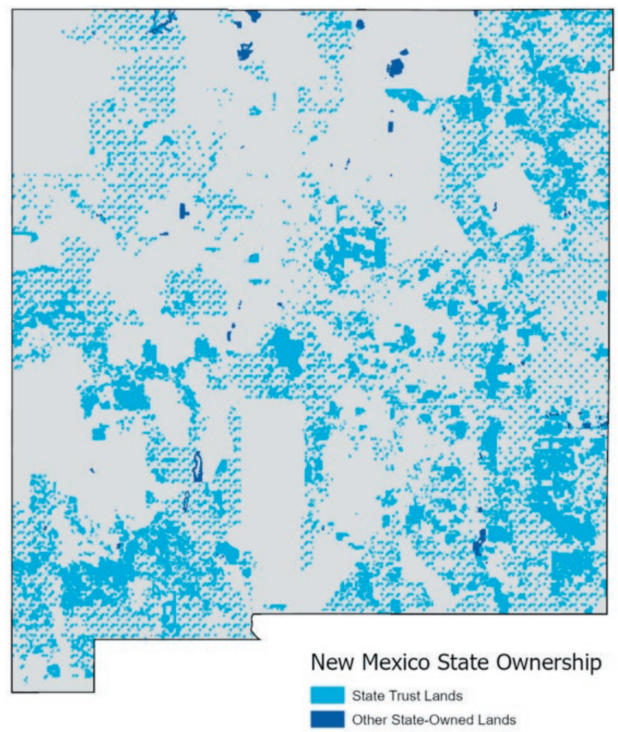


Figure A1. *Map of New Mexico state trust lands*

In instances where designated sections were unavailable—for example, they had already been settled or granted to other purposes—New Mexico was allowed to select lands from other eligible federal holdings. This facilitated larger agglomerations of state trust lands in some areas (the larger blue blocks on the map). Today, these blocks allow for different management strategies, offer some efficiencies, and may indicate the extent to which land exchanges and collaboration among adjacent landowners are beneficial.

Whole trust mandate

State trust lands are a unique model for managing natural resources in the United States. State trust lands are managed for the narrow purpose of generating revenue to support public institutions. This "fiduciary" obligation to beneficiaries means that trust lands are not public lands as they are commonly understood. Public access, recreational use, and conservation that are mandated uses on federal public lands are not a priority on state trust lands unless they contribute to maximizing income for beneficiaries.

The trust is also defined by a mandate that the value of the original trust assets (land and mineral rights) transferred from the federal government to states be protected in perpetuity to benefit current and future generations. New Mexico has retained most of the original lands; the trust lands are managed for renewable activities, such as grazing or leasing for real estate. If physical assets are sold, including land and nonrenewable resources such as oil and gas, coal, or minerals, the proceeds from these sales must be retained and invested in the Land Grant Permanent Fund (LGPF). The LGPF replaces depletable natural resources with new financial assets that produce wealth in perpetuity.

In practice, adherence to the fiduciary obligation and permanence responsibilities is difficult. States continually weigh incentives to spend savings to meet current needs against intergenerational commitments, with varying results. New Mexico has increased spending from its Permanent Fund without raising taxes. The pressure to increase state spending while maintaining low taxes has increased pressure to maximize annual revenue from renewable uses of state lands.[47]

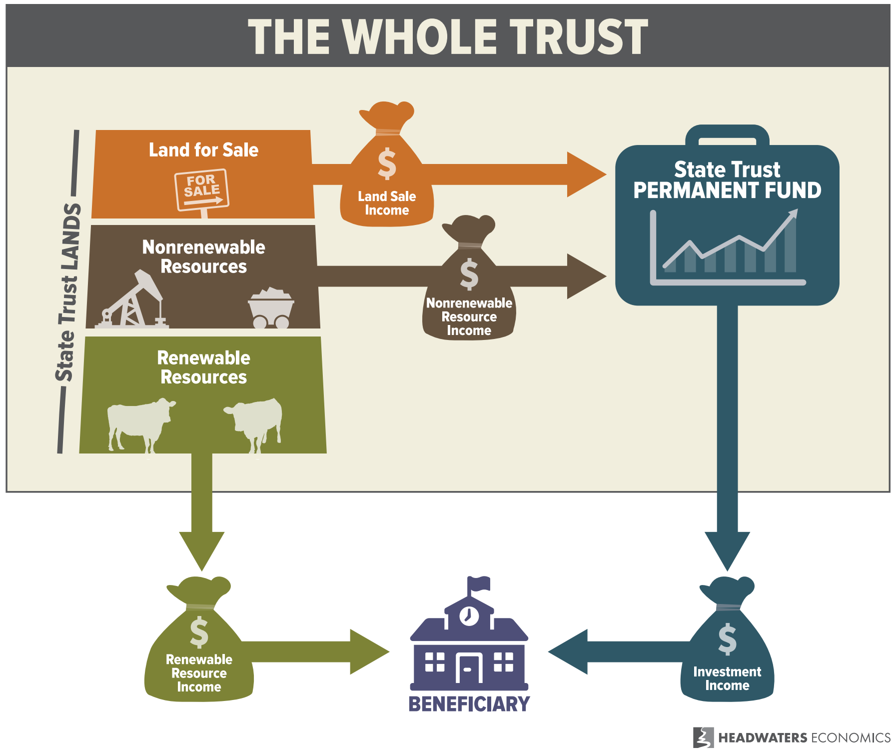


Figure A2. The "whole trust" model
The diagram shows a model in which the state trust lands (on the left) and the Land Grant Permanent Fund (on the right) comprise the "whole trust." Each part of the irreducible whole trust is managed to earn income for beneficiaries through renewable land management activities and financial investments.

Revenue models for generating revenue from state trust lands

To meet their fiduciary responsibility to beneficiaries, the mission of the New Mexico SLO is to "use trust land to raise revenue for New Mexico public schools, hospitals, colleges, and other public institutions." The SLO is organized into seven divisions, each responsible for overseeing a set of activities (oil and gas, commercial activities, administrative, etc.) that occur on trust lands. State trust lands are leased to generate revenue from a variety of land management activities, including agriculture, commercial real estate, and industrial uses such as transmission lines. Revenues are also derived from the sale of resources, including fossil fuels, minerals, or the permanent sale of trust lands themselves.

The New Mexico SLO relies on a suite of revenue models to generate revenue including lease payments, bonus payments, resource royalties, and permit fees. Revenue models can be confusing for several reasons. First, revenue models are applied to land management activities that are considered renewable (such as grazing) and nonrenewable (such as oil and natural gas extraction). For example, a rancher leases state trust land for the right to graze cattle. An oil company leases state trust land for the right to drill for oil. In both cases, the lease revenue is classified by the SLO as "renewable" revenue because, in theory, the lease does not permanently deplete a resource. Other revenue considered "renewable" includes bonus payments associated with the sale of oil and natural gas leases at competitive auctions and right-of-way easements for oil and natural gas pipelines. Even though these revenues are associated with a nonrenewable activity, they are considered renewable revenue for the purposes of allocating revenue to beneficiaries.

When state trust managers sell depletable resources, including land or resources such as fossil fuels and minerals, the proceeds from these sales are considered "nonrenewable" revenue. Royalties paid on oil and natural gas extracted from a state lease are considered nonrenewable revenue because the resource is extracted and permanently depleted.

In general, the SLO does not make any improvements to state trust lands before leasing them for commercial activities. Lessees generally pay for infrastructure and land management costs associated with commercial activity. In return, lessees can own the value of improvements on state trust lands and may need to be compensated for these improvements when trust lands are leased for another land use or to a different lessee. This revenue-sharing arrangement maintains the basic risk relationship of a lease where beneficiaries are guaranteed a fixed share of revenue (no matter the profitability) and the lessee is responsible for the costs to extract the resource.

State trust managers also sell depletable resources, primarily fossil fuels and minerals but sometimes trust lands themselves. Private interests pay a "bonus" to win a competitive auction for the right to extract nonrenewable resources from trust lands. In addition, a royalty is paid when the resource is extracted. The royalty rate is a percent of the value of the resource.

Constraints on State Land Office Spending and Autonomy

The New Mexico SLO faces legal and constitutional constraints that impact its operations and ability to generate revenue. As a result of the Lake Arthur Supreme Court decision, the SLO has been historically limited in its ability to upgrade or improve its lands. Improvements can be made by lessees, but the SLO does not generally own them. The SLO is limited to leasing parcels based on raw land value for maximum revenue. This prevents the SLO from building infrastructure to support higher-value land uses that could recover higher returns. Moreover, the SLO is building capacity in new sectors that have the potential to be highly lucrative, like renewable energy, but are still not able to meet demand.

Beneficiaries of the SLO's management of state trust lands are not as dependent on oil and gas revenue as current receipts from land management suggest. In FY 2020, beneficiaries (such as public schools) received $784 million in investment distributions from the LGPF and only $85 million from renewable revenue (less than 10% of the total). This section provides important context related to the geography and management of trust land assets in order to understand revenue diversification opportunities, and it reviews revenue data to evaluate dependence on oil and gas.

State Land Office revenue by type

In fiscal years 2019 and 2020, state trust lands in New Mexico generated more than $1 billion in revenue. Nearly all revenue earned from trust lands is derived from oil and natural gas activities. In FY 2020, nearly 90% of total revenue came from nonrenewable oil and natural gas royalties generated in southeast New Mexico's Permian Basin. Figure A3 shows that oil and gas royalties have made up the majority of total revenue from trust lands since at least 2007.

Oil and natural gas also contribute a majority of "renewable" revenue, including bonus payments, rentals, and right-of-way leases associated with oil and natural gas pipelines. By definition, renewable activities are those that will recur in perpetuity if managed sustainably. The New Mexico SLO defines renewable revenue as "oil and gas rentals, renewable energy land rentals, grazing rentals, and any other income that doesn't deplete a resource."

In FY 2019, the State Land Office received $144 million in oil and gas bonus payments, $3 million in rental and interest payments, and another $16 million in pipeline

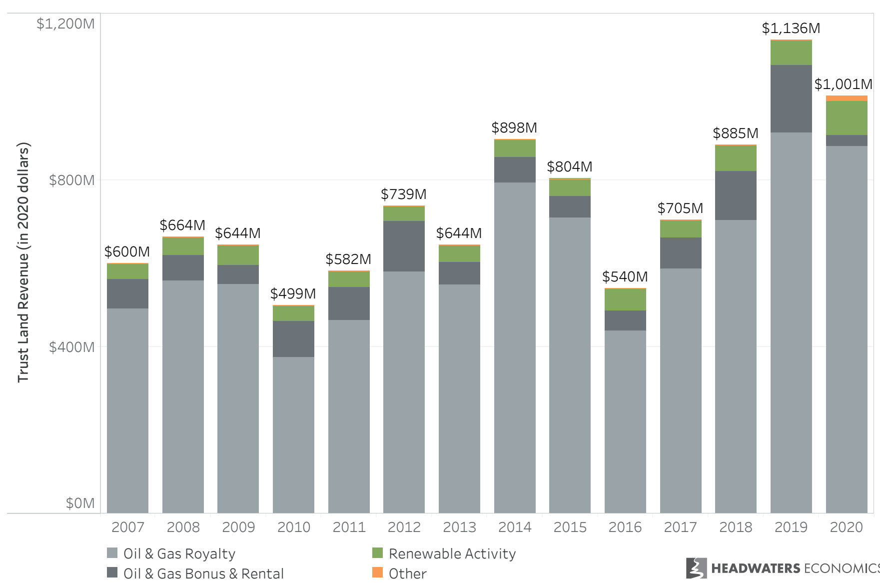


Figure A3. *Trust land revenue by type of activity, New Mexico, 2007-2020 (2020$s)* right-of-way payments (the only year where right-of-way rentals are broken down by type). In total, oil and gas accounted for 82% of total "renewable" revenue sources in FY 2019. Oil and gas "renewable" revenue fell in FY 2020 due to substantially lower oil and gas bonus payments of $21 million. Bonus payments are likely to continue at levels well below the FY 2019 peak. Examination of renewable revenue sources show that since 2007, the SLO distributed nearly $1 billion in oil and gas bonuses, rentals, and right-of-way payments to beneficiaries on an annual basis.

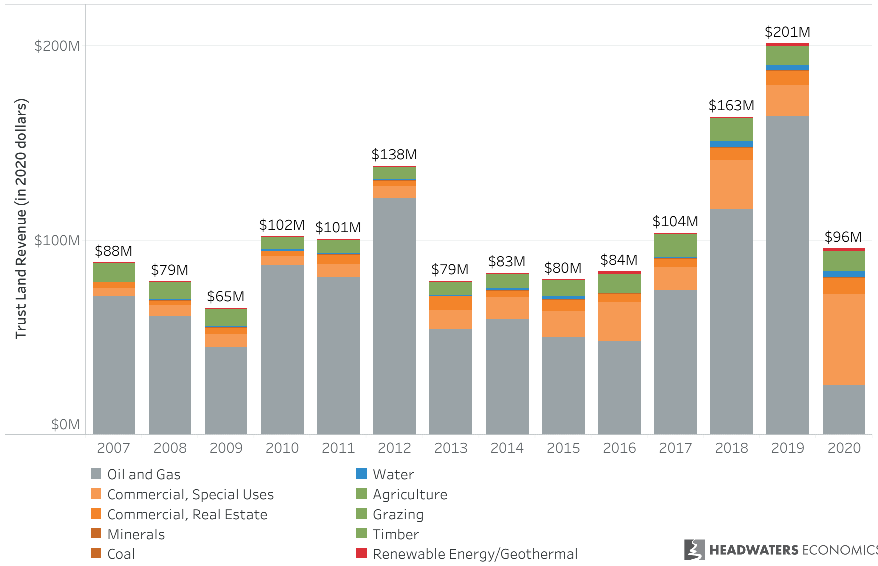


Figure A4. *Renewable trust land revenue generated in New Mexico, 2007-2020*

Figure A4 shows that commercial uses and real estate are the second largest source of renewable revenue, followed by agriculture, including grazing and timber. Small but growing sources of revenue include aquatic (water leasing) and renewable energy.

How beneficiaries receive state trust land revenue in New Mexico

The singular goal of the SLO is to generate revenue for beneficiaries. Beneficiaries' budgets are not set by the amount of revenue generated by the SLO. Instead, budgets are set by the state Legislature through the political appropriation process each year. The appropriations available to pay for beneficiaries' budgets come from three sources:

- renewable revenue from land management activities (including renewable and nonrenewable land management activities) is available for annual appropriation;
- the Land Grant Permanent Fund makes a distribution based on a fiscal rule defined in state statute that provides additional revenue available for annual appropriation; and
- the Legislature appropriates general taxpayer revenue.

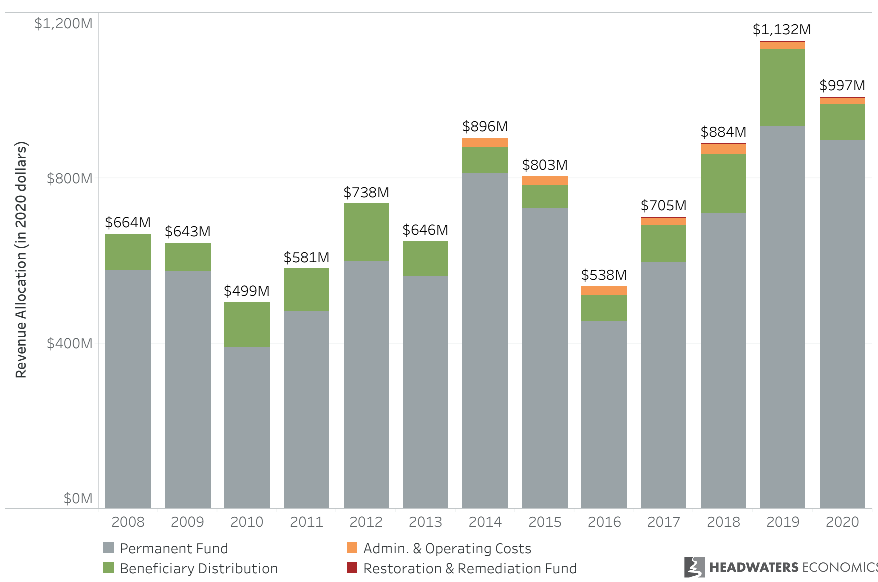


Figure A5. *Revenue allocation in New Mexico (2008-2020)*

In New Mexico, annual revenue from renewable activities on state trust lands is distributed to the Land Maintenance Fund. Figure A5 shows that in FY 2020, the SLO generated $104 million in renewable revenue (out of $997 million total) that was deposited in the Land Maintenance Fund, of which $85 million was distributed forward to beneficiaries, $17 million financed the SLO's annual operating budget, and $1 million was distributed to the Restoration and Remediation Fund. In 2019, the Restoration and Remediation Fund supported riparian restoration, noxious weed management, illegal dump clean up, and archeological service projects among others.

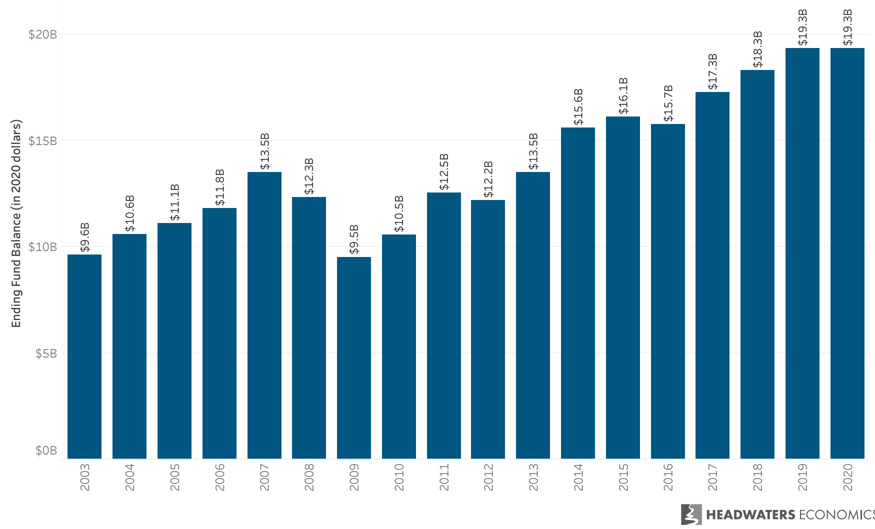


Figure A6. *Growth of New Mexico Permanent Fund balance, 2003-2020*

Even though the SLO's operating and administrative costs are entirely funded by revenue deposited into the Land Maintenance Fund, the state Legislature still has to appropriate the funds, similar to the way any state agency must request funds. For fiscal year 2021, the SLO requested a budget appropriation of $19.7 million or 1.8% of the total receipts the land office is predicted to collect.[3]

Nonrenewable revenue from land management activities is distributed to the Land Grant Permanent Fund managed by the New Mexico State Investment Council. The LGPF converts a depletable physical resource (i.e., fossil fuels and minerals) into a permanent financial asset that can be invested to earn recurring income. The LGPF is managed by the State Investment Council to earn income from investments in stocks, bonds, real estate, and other financial assets in the same way that land may be leased for grazing, timber, or real estate to generate revenue. The SIC makes an annual distribution from the LGPF based on a fiscal rule that aims to maintain the permanent value of the LGPF. The fiscal rule requires SIC to distribute 5% of the average ending fund balance of the LGPF for the most recent five years. If approved by voters, a constitutional amendment would distribute an additional 1.25% from the five-year average ending fund balance as long as the LGPF balance is above $17 million. The new distribution would be used for early childhood education and K-12 public schools.

In FY 2020, the SLO deposited $893 million into the Permanent Fund. Figure A6 shows New Mexico's Permanent Fund has grown significantly over the last decade as oil and gas production in the Permian Basin increased. At the end of FY 2020, the Permanent Fund had a balance of nearly $20 billion, and by June 2021 it was more than $23 billion indicating that New Mexico has been successful in saving revenue from oil and gas.

B Appendix B: Literature Review, Methods, and Research Questions

This appendix includes a brief literature review that informs our initial research questions and describes our methods, including interviews, document review, and data analysis.

Literature Review

Meeting the fiduciary obligation to beneficiaries and the permanence mandate is not as straightforward as it appears. One challenge state trust lands managers face is associated with the geographic distribution of trust assets. The federal government granted four sections in each township as trust lands to New Mexico, but the sections were not contiguous, resulting in a checkerboard pattern of state lands interspersed with federal and private landholdings. Fragmented land ownership makes managing resources more difficult. Trust lands can also become landlocked if adjacent private property owners restrict access, which limits management options.

Fragmentation of trust lands can be addressed through land exchanges where landlocked parcels are exchanged for higher-value land or parcels adjacent to other trust lands. To improve and increase management options, there have been calls to amend the Federal Land Policy and Management Act to simplify land exchanges and thereby create administrative efficiencies that save time and money for state land offices and the federal government. The NM SLO is currently in the process of a federal land exchange to trade approximately 130,000 acres of trust lands inside newly designated national monuments. The SLO can select federal lands of similar value that are available for disposal elsewhere in New Mexico. The land exchange is expected to take three years to complete, speaking to the need for a more streamlined process.

Additionally, trust lands face two key pressures: the increasing role of services and amenities in the economy and changing public attitudes about uses of public lands. State land offices are mandated to maximize revenue, and new interests including economic and commercial development, recreation, conservation, and renewable energy compete with current lessees. In New Mexico, approximately 90% of trust lands are leased for agriculture.[52] Historic land uses on trust lands, including grazing, have cultural significance that outweigh their revenue-generating potential. In fact, some have argued that “devoting state trust lands to activities at below-market value—for example, grazing leases—violates the trust.”[53] Nonetheless, grazing lessees work to maintain their status on the landscape for a variety of financial, political, and cultural reasons. In New Mexico, a typical grazing lease will retrieve $1 per acre, whereas a solar energy lease will yield a minimum of $7 per acre during initial development, increasing to a minimum of $10 per acre once the project is operational.

To meet their fiduciary obligation to beneficiaries, state land offices are asked to operate like businesses to reduce costs and maximize revenue. However, in New Mexico, legal and legislative restrictions prevent state trust land managers from doing things that a private land management or development company would do, such as invest in assets, advertise and market assets, and go into debt to finance deals. Instead, the SLO relies primarily on leasing which is a passive approach that does not yield the highest possible returns from activities on trust lands.[54] If states could spend resources and take more risk, they would be positioned to secure higher returns. This may include investing in strategic planning and market analysis, securing development approvals, installing infrastructure and services, and using public finance to provide incentives to developers.

Souder and Fairfax note that there is a continuum that extends from passive leasing that minimizes risk and secures minimal returns all the way to public enterprise where state trust managers own and operate commercial activities and retain all revenue for beneficiaries.[55] While public enterprises exist in the United States and around the world, no state trust land offices operate this way—they instead choose to lease the rights to commercial value on state lands.

A portfolio approach to trust land management would allow trust land managers to balance risk across all assets. Portfolio theory is inspired by principles of financial management and "describes the efficient allocation of resources through diversification to reduce risk in the form of fluctuating revenues."[56] Building a robust portfolio requires inputs (i.e., costs) to enhance value across all resources. Portfolio management can enhance revenue and mitigate potential losses associated with riskier activities by engaging in lower-risk activities elsewhere to maintain the portfolio's value. If a state chooses to take more risks, it needs to implement a portfolio approach to risk management.

Although a variety of reports have been commissioned by state land offices or published as white papers, to-date efforts to enhance diverse revenue streams from state trust lands have been ad hoc and no systematic assessment of diversification strategies has been conducted. A 2011 report titled *School Trust Lands Analysis of Funding Mechanisms for Private and Public Use* thoroughly assesses various revenue diversification strategies for the state of Minnesota but does not provide an explanation of how the evaluation was performed.[57] Various policy white papers including *Strategies for Renewable Energy Projects on Arizona's State Trust Lands*[58] and *Conserving State Trust Lands: Strategies for the Intermountain West*[59] address strategies around a single land management activity or policy priority. These reports are important but in conflict with the reality of trust land management, which relies on many different activities. Without an understanding of methodology and the suite of potential diversification strategies, the efficacy and utility of potential ideas is unclear.

Research Questions

This paper explores solutions for the New Mexico SLO to grow revenue from new or expanded land management activities, enhanced internal operations, expanded partnerships, and an improved investment approach. The analysis provides a roadmap for the SLO to evaluate the advantages and drawbacks of different possible opportunities for revenue diversification. Six guiding research questions, based on a review of the literature and Headwaters Economics' previous work on state trust lands, are investigated in this report:

- Can the commercial uses of state lands be diversified to generate revenues from a variety of sources within the current leasing model?
- What creative management ideas have other states tried (successful or not) to diversify revenues from state lands?
- In what ways could New Mexico leverage financial capital built up from oil and gas to invest back into physical capital (land and infrastructure) to increase the returns from existing and new uses of state trust lands?
- What are the institutional, legal, and cultural barriers to New Mexico achieving a diversified portfolio of funding from state lands? What institutional impediments exist that make it difficult for New Mexico to invest in state lands?
- What are the potential benefits from formalizing collaborations between state government departments and local governments?
- In what ways can New Mexico state lands—and public access to them—be used as a tool for economic development and revenue diversification?

Expert Interviews

To address research questions and identify and evaluate ideas for revenue diversification on New Mexico trust lands, we conducted 16 semi-structured interviews with 20 individuals internal and external to the SLO, including state land managers, policy experts, and economic development professionals in New Mexico and other states with trust lands. Interviews followed a pre-determined list of questions designed for different stakeholders. The interview questions were informed by the literature review, discussions with the New Mexico SLO, and based on Headwaters Economics' previous research on state lands, rural economic development, and fiscal policy related to the use of federal lands for commercial activities. The goal of interviews was to learn about the SLO's current strategy for generating revenue from trust lands, options for revenue diversification and expansion, and the feasibility of revenue diversification strategies.

Document Review and Data Analysis

Initial document review included publicly available annual reports and strategic plans from New Mexico and other states with trust land. As directed by interviewees, our review expanded to include policy white papers, law review articles, lease templates, and audit reports. Documents were evaluated in a manner consistent with information collected from interviews and the overarching research questions. A separate review of the legal authorities over leasing on state trust land in New Mexico was also conducted. A synthesis of the legal analysis is available at the website hosting this report. We also collected data to evaluate revenue dependence on oil and gas (described above).

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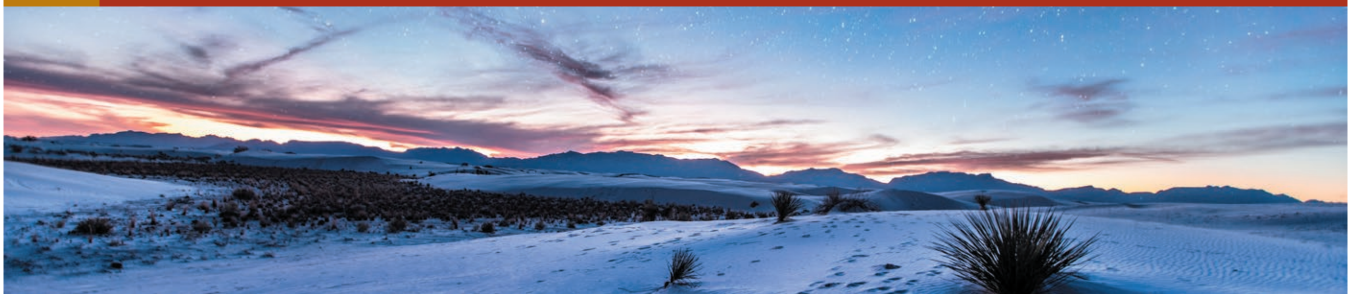

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