



STUDY ON MANAGEMENT OF PUBLIC LANDS IN WYOMING



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Executive Summary

Introduction to and Summary of Conclusions and Recommendations

In 2015, the Wyoming Legislature passed Senate File 56, *Study on Management of Public Lands*, which directed the Office of State Lands and Investments (OSLI) to commission a study and provide a report addressing the management of certain specified federally owned and administered public lands in Wyoming. This study solicited the potential for the State of Wyoming to assume the management (and only the management) of certain specified public lands. No transfer of ownership of federal public lands is contemplated by this study. Y2 Consultants was contracted to complete this study.

In essence this is a feasibility and efficiency study examining federal land management practices, costs and the revenues generated from federal public lands versus how the state manages its own lands and to explore the potential of the state taking over management of certain federal lands. The information contained in this study will be useful in a variety of ways beneficial to the people of Wyoming whether or not the state pursues a transfer of all management responsibilities of the specified public lands currently administered by federal agencies—potentially providing information that can facilitate better management of federal public lands within Wyoming by those federal agencies and assist in crafting new, creative, and practical ways to address the issues that currently exist and increase the involvement and influence of the state and local communities in management decisions.

Western states have a disproportionate level of federal public lands compared to eastern, mid-western, and central plains states. Over forty-eight percent (48%) of Wyoming is federal land. Access to and the use of public lands is critical to Wyoming and other western states' economies. Federal management practices have a direct effect on the lives of citizens and the economies of communities with large tracts of federal lands. Public lands support many uses from activities such as bird watching to energy development. Many species of wildlife, although owned by the state, spend a significant portion of their life cycle on federally-owned lands. Public lands provide extensive opportunities for recreation and a lifestyle that more and more people are seeking in our mobile economy. "Amenity migration" is the phenomenon of people moving to live and work in areas of high natural amenities (Marcouiller, 2012). Management decisions on federal public lands that drastically affect western communities are heavily influenced at the national level sometimes without regard to local needs and concerns and without utilizing the special knowledge a local community possess.

Legislation and studies have stemmed from the growing frustration of communities across the west and many citizens and legislators with the management practices of the federal agencies that are tasked with sustaining the health, diversity, and productivity of the public lands for the use and enjoyment of both present and future generations. Frustration has been expressed with current





management of federal public lands, the impact of federal land management decisions on local economies, the length of time it takes for federal management decisions, lack of access to resources such as timber and recreation, and in some cases concerns for human health and safety. Whether it is oil and gas, grazing, hunting, or recreational uses—the lengthy and protracted permitting processes and layers of regulations have a discernable effect on the economy of local communities and the lives of citizens. On the ground land managers in federal agencies with the best of intentions are routinely burdened by their own agencies’ bureaucracy and practices that seem to invite confrontation over collaboration, leading, in some instances, to “analysis paralysis” and litigation.

At the same time, many western states, in particular Wyoming, have effectively and responsibly managed their own state school trust lands far more efficiently and with greater financial returns despite the challenge of the checkerboard ownership pattern of most state lands. This has led several western states to study the question of whether or not the state could manage federal public lands better.

At the time the Wyoming legislature ordered this study, other states, including Utah, Nevada, and Idaho examined transferring title (ownership) of federal lands to the state to address concerns with federal management. The studies varied considerably in scope from Utah’s half a million-dollar study conducted by economists at three universities to interim committees of the state legislature with little or no express funding. The states studying a transfer of ownership of federal public lands generally contemplated changes to the land uses on public lands, in particular natural resource extraction, whether timber in Idaho and Montana or oil, gas, and coal in Utah. The studies were largely based on the premise that with a change in ownership the states would keep 100% of the revenue generated and that those revenues would be needed to pay for the management of these lands.

Identifying an appropriate and practicable outcome and recommendation from this study is dependent on identifying the goal in the beginning of the study. Examining the feasibility of a transfer of management of federally owned lands from federal agencies to the state gives rise to two overriding questions. Is the goal of the transfer to generate more revenue to financially support the state and/or to pay for the cost for the state to manage these lands, or is the goal to improve the management, condition, and access to the lands in question? Part of the challenge with proposing solutions is that either or both goals may apply to each resource being discussed. Another challenge is that the answer to that question will be different for different individuals, interest groups, and stakeholders.

Transfer of management of these federally owned public lands would require Congressional action to implement. If the legislature pursues this course of action, negotiating the details would be complicated and politically it appears it would be an exceptionally drawn out and contentious process. Even with political will, it appears there may be a vast number of entwined and overlapping federal laws that would have to be changed and unwound, as well as issues that would have to be





addressed both at the state and federal level. This would take a considerable amount of time and resources for the state as well as the federal government. A sizeable infrastructure of human capital, infrastructure, and administrative and technological resources would have to be developed by the state in order to manage an additional 25 million acres of federally owned public land in addition to the roughly 3.5 million acres that the state currently manages. It would be unlikely that Wyoming would be able to keep all or more of the revenue generated on federal lands than it already receives with a change in management only. A more likely scenario would involve negotiating a percentage of the revenue generated or receiving some sort of fee in exchange for management services.

Moreover, should the state take over mere management of federal lands they would not be able to manage these lands in the same manner they manage the state School Trust lands without significant changes in federal law. The mandates that drive management decisions on federal lands versus state lands are very different. The Bureau of Land Management (BLM) and U.S. Forest Service (USFS) manage with a multiple use mandate while states have a fiduciary duty to manage their School Trust land to generate revenue and long term financial returns for the benefit of public education and other beneficiary entities. These differing management objectives, while not the only reason, is a significant reason for the differences in the cost to manage and the revenue generated from School Trust lands versus federal public lands.

A potentially useful analogy that may be helpful in understanding the idea of transferring management of federal lands to the state is to consider the owners of a condominium complex or Home Owner's Association (HOA). The owners, represented by a board of directors, generally hire a property manager. The property manager handles day to day operations within the confines of the Covenants, Conditions, and Restrictions (CC&Rs), which is the law of the community. The board and/or property manager can adopt policies, rules, and regulations but they must be within the scope of the CC&Rs and adopted pursuant to the procedures required in the CC&Rs. If the owners, represented by the board of directors, decides that the property is not being managed effectively, they can hire an alternative entity to take over. The new manger may do things differently and even do things more efficiently but the new entity still has to operate within the same legal structure, the CC&Rs. In this scenario, the owner has not changed at all, only the company that enforces the CC&Rs and manages the property according to them. This analogy can be applied very generally to the idea of the state taking over only management of federal lands and potentially receiving a fee for its services from the federal government.

Transferring management alone (and not ownership) of federal public land would require the state to continue to follow all federal mandates and federal laws directing the use of these lands, including the Federal Land Policy and Management Act (FLPMA) and the National Forest Management Act of 1976 (NFMA). The directives provided by federal law for the management of federal lands are not the same as those of state owned and managed School Trust lands. While School Trust lands are not the only lands the state manages, they comprise the bulk of state owned and managed "public lands" and are the lands and management practices debates typically center around when discussions arise





comparing state versus federal management of similar activities such as oil and gas leasing and grazing. For this reason, this report and comparison focuses on the state's management of School Trust lands.

An important and often overlooked reason for differences in the uses permitted, revenue produced, and the costs to manage state versus federal public land, are starkly different management objectives. While there is without question ample room for improvement in the efficiency and effectiveness of federal management of public lands, understanding the vastly differing goals and objectives dictating the very purpose of federally owned public lands versus state owned School Trust lands is critical to any discussion.

School Trust lands are owned by the states as a result of land grants made from the U.S. Government to states at the time of statehood for the express purpose of generating revenue for common schools and other public institutions. When Wyoming became a state, the federal government granted approximately 4.2 million acres of land to the State of Wyoming to be held in trust to produce income to support public schools and other state institutions. There is, therefore, a fiduciary obligation to generate revenue and to manage the assets for the long-term, financial benefit of these beneficiaries. The Wyoming State Constitution and the Wyoming State Legislature direct that the lands be managed for two key purposes: (1) long-term growth in value, and (2) optimum, sustainable revenue production. This fiduciary obligation to generate long-term revenue is an important distinction between how state and federal lands are currently managed in Wyoming.

In stark contrast, the two overarching mandates that dictate the management of federal owned public lands administered by the BLM and USFS are multiple use and sustained yield (MUSY). For this discussion, we define multiple use as the use of land for more than one purpose. For example, livestock grazing, recreation, and timber harvest could occur on the same parcel. This definition extends to water bodies as well. We define sustained yield as a continuing supply of the natural resources which ensures replacement of the part harvested through regrowth or reproduction.

This study was directed to examine and compare the likely costs for the state to manage under a MUSY mandate comparable to current federal mandates. Senate File 56 directed that the Study on Management of Public Lands include:

A proposed plan for the administration, management, and use of federal public lands in the State of Wyoming under the principle of multiple use and sustained yield including, but not limited to the continuation of all existing public access to the lands for hunting, fishing and recreation subject to closure for special circumstances including public safety and environmental safety.

This is significantly different than the purpose of state trust lands. State trust lands are in no way required to be managed for multiple use. In fact, the fiduciary obligation to generate sustainable revenue may be mutually exclusive of the ability to manage for multiple use and this dichotomy



significantly affects program revenues and associated costs. As an example, the OSLI issues grazing leases based on market value and has the ability to exclude other uses on the property (i.e., hunting or camping) because they do not generate revenue and could have a negative impact to the livestock producer.

Conversely, federal land management agencies are not required to generate revenue let alone sufficient revenue to cover expenses. Revenue generation is just one of a multitude of purposes for these lands. Federal land agencies must allow and manage for multiple and frequently conflicting uses and objectives—most of which produce limited or no revenue and provide non-economic benefits. Although some of the uses on federal public lands have a marketable revenue generating component (energy and minerals, timber, grazing, hydropower, and recreation), they also encompass a large number of non-marketable public uses and benefits that produce little or no direct revenue especially in relation to their costs. The benefits to the public—both locals and visitors—of wildlife habitat (for viewing or hunting), preserving watersheds, scenic vistas, wild horses, and such are largely non-monetary.

The management objectives of the federal lands identified, as dictated by Congress in FLPMA and NFMA, is the use and enjoyment of the land by the public whether through natural resource extraction or recreation. However, the laws also direct that the lands be protected to ensure their health now and to ensure future generations may also use and enjoy them. These are inherently conflicting mandates and striking the right balance between use and protection is increasingly controversial and will continue to be a challenge. The National Environmental Protection Act was enacted to ensure that the environmental impact of all decisions be assessed through processes that ensure public notice and public participation. While decisions will increasingly be driven by data and science as it develops, ultimately decisions regarding multiple use are policy decisions and they will continue to be driven by politics no matter who manages these lands. At some levels, the many uses and differing values can generally be compatible. However, as demands on the federal lands have risen, the conflicts among uses and values have escalated. While some federal lands—notably those administered by the National Park Service (NPS) or U.S. Fish and Wildlife Services (USFWS)—have an overriding primary purpose (wildlife habitat and preservation), the conflicts are greatest for the multiple-use lands managed by the BLM and USFS because the potential uses and values are more diverse. In an ever increasing litigious society, the very concept of multiple use and the mandate of both using and protecting public lands invites litigation. Without significant changes to federal law, the state would inherit managing all of these conflicts over striking the right balance as land manager.

Not only would federally owned lands have to be managed differently than state trust lands, they could not necessarily be managed collectively themselves in exactly the same fashion. While there are many similarities in the federally mandated MUSY mandate that guides both lands administered by the USFS and those administered by the BLM, the lands must be managed according to separate laws—BLM lands by FLPMA and USFS by NFMA. Certain efficiencies would be lost in having one state agency managing public lands within the state according to two different, albeit similar, federal laws.





Unless legislation authorizing the transfer of management abolished those differences and consolidated the management mandate for all the federal lands identified for potential transfer it is hard to say that efficiency could be gained.

Unlike the fiduciary duties incumbent upon the managers of state trust lands, federal land managers have little to no incentive to generate more revenue or control costs because they generally don't retain or control the revenue and budgets. The funds they are allocated are generally based on a "use it or lose it" concept, which encourages spending even when not warranted or risk having reduced funds available in subsequent years, especially in light of dwindling appropriations paired with increasing management duties and additional layers of bureaucracy provided by Congress.

There is also a far heavier administrative burden to manage federal lands than state trust lands. FLPMA and NFMA both require comprehensive natural resource inventories and land use planning. For every decision, National Environmental Policy Act (NEPA) requires extensive public input and environmental impact analysis. Absent significant changes to federal law, these requirements for planning, public notice and public meetings and environmental analysis for virtually every decision would still have to be complied with following any transfer of management to another agency – state or otherwise. State land management agencies like OSLI do not have to comply with any of these laws except where federal funds are being utilized. NEPA alone, even if amended to function in a more cost efficient, predictable and timely fashion, would contribute to higher costs and longer time periods for the state to make management and other decisions regarding these lands than it would to make the same decisions on state owned lands.

In fiscal year 2014 alone, the BLM in Wyoming handled 1,500 NEPA actions including Environmental Impact Statements, Environmental Assessments, Categorical Exclusions, and Determination of NEPA Adequacy. For more detail on NEPA and Wyoming Statistics see Section 2.1.

Another additional administrative burden the state would have to comply with that affects the workloads of the federal land managers and costs, sometimes significantly, is the Freedom of Information Act (FOIA). Since 1967, FOIA has provided the public the right to request access to records from any federal agency. It is often described as the law that keeps citizens in the know about their government. Federal agencies are required to disclose any information requested under the FOIA unless it falls under one of nine exemptions which protect interests such as personal privacy, national security, and law enforcement. The BLM and USFS are subject to a large number of FOIA requests—more than almost all of the other agencies in the Department of Agriculture and the Department of the Interior. From 2010 to 2014 the BLM received between 760 to almost 1,100 FOIA requests annually and the USFS received between 1,900 to 2,771 requests annually. In FY 2014 the BLM in Wyoming processed 56 FOIA requests from a wide variety of organizations including law firms, trade associations, ranches, business consultants, environmental groups and NGO's like Western Watersheds Projects, Wild Earth Guardians, Powder River Resource Council and several wild horse advocacy groups. The FOIA workload is due in large part to the multi-use nature of federal



public lands and how the balance should be struck between them. FOIA requests frequently link to ongoing or future litigation and the substantial litigation over activities and decisions concerning federal public lands is driven by groups with very different agendas and ideas about what is appropriate under MUSY for all of the various uses whether oil and gas, grazing, wild horses or recreation. For more information on FOIA see Section 18.1.

To further complicate any potential transfer to the state, Congress could refuse to permit use of funds for certain activities despite the fact that they are in fact mandated by public land law. For example, should the state take over wild horse management, as part of its implementation of a new wild horse program, the state may choose to humanely euthanize excess animals removed from the range as permitted and mandated by the Wild Horse and Burro Act of 1976. Congress, however, through annual appropriations bills, has prohibited the use of federal funds to euthanize horses. The laws contradict each other. Should the state take over management it would inherit this dichotomy and these types of conflicting mandates created by Congress. This could be the outcome on many controversial, highly publicized public land management actions. Failure to fund mandates or the prohibition of the use of federal funds to fulfill existing mandates would hamper the state's ability to successfully manage many aspects of federal lands (as is currently the case with wild horses and the BLM). Prohibitions such as these can be imposed suddenly and somewhat arbitrarily by Congress in response to the dictates of political movements and political pressure over particular issues which may arise and gain momentum and support in Washington, DC.

No matter the mechanism—whether a fee or a share of revenue generated—the state would have to be compensated for managing federal public lands. While it is outside the scope of this study, no matter the possible method for payment, the state would be paid with federal funds to do work on federally owned land. Receiving payments from the federal government would potentially require the state to comply with a myriad of federal laws that come into play whenever spending federal money. These laws may require the state to develop additional administrative infrastructure to ensure compliance with federal labor law including developing affirmative action plans, diversity requirements and complex procurement and acquisition rules among others. Just one example of the types of impacts these requirements can have is the effect diversity requirements had on the Bridger-Teton National Forest Resource Advisory Council in recent years. The committee reviews and makes recommendations for how Title II SRS funds may be spent and the work of this committee was delayed and the Title II funds available were not spent for about a year because the committee make-up did not comply with federal diversity requirements. USFS had to make a special appeal to be allowed to take into account the demographics in the region to draw upon for members.

Currently there are a wide variety of revenues generated from activities on federal public lands that are placed into special permanent accounts and trust funds. The funds from each these accounts are used to pay for specific management activities mandated by law (mandatory spending). Sometimes where the money can be spent is limited geographically to where the revenue was generated—even to a specific campground or recreational area. Again, absent significant changes to numerous federal





laws, a transfer of management would require the state to comply with laws that govern the spending from these accounts were they to be used, as they likely would, to compensate the state for management. The state couldn't decide to use money from a permanent account for grazing if the law setting up the account mandated its use for recreation. The state would also have to have the administrative and accounting infrastructure to handle these restrictions and ensure compliance.

We would anticipate all of these examples would result in an increase in management costs to manage federal lands as compared to current spending by the state associated with management of its own land.

There is of course the issue of scope and workloads. In 2014, the BLM and USFS collectively managed over 27 million surface acres and 41.6 mineral acres in Wyoming. BLM administered more than 18 million surface acres and over 41.6 million subsurface acres and the USFS managed over 9 million acres. The state currently manages approximately 3.5 million surface acres and 3.9 million mineral acres. OSLI manages State Trust Lands for Wyoming and currently employs about 96 full time employees. Staff numbers can be highly variable from year to year within the federal land management agencies due to a variety of factors. However, the BLM generally employs over 800 full time employees in Wyoming. The Bridge-Teton National Forest alone employs just under 200 full time employees.

The enormous variance in acreage, personnel, and infrastructure is not the greatest challenge to a transfer of management. Ultimately, without significant changes to federal law, the greatest challenge would be that the state would be inheriting the same bureaucratic maze of overlapping, entwined, often conflicting federal mandates established in the labyrinth of laws and directives laid out by Congress. These mandates and directives are frequently underfunded, contradictory, and may regularly and suddenly change according to the political whims of a particular year. The land management trials, conundrums, and conflicts encountered would largely be the same for the state that exist under present management.

Management of federal public lands is an incredibly complex puzzle of interwoven and sometimes conflicting pieces. We believe the resources of the state would best be utilized if directed at tackling smaller pieces of this puzzle. Significant changes in legislation would be necessary to make the transfer of full management responsibility of all of the lands contemplated by this study a reality. Numerous impediments from the straightforward to the extremely complicated make the prospect of such a state takeover of the management of federal public lands unlikely to succeed. It may face fierce opposition legislatively and in particular in the short-term it would be unlikely to accomplish the goal of markedly better managed federal lands and management decisions that are more responsive to the concerns of the state and the local communities whose daily lives are so impacted by activities on public lands and who citizens possess unique and valuable knowledge about these lands that could substantially contribute to their stewardship if acknowledged, respected and incorporated more substantively into the decision making process. We believe there are existing



mechanisms in place that are underutilized that could improve the management of public lands and more importantly that can give the state and local communities far more influence over management decisions—not just a voice like any other public comment—but an actual say in these matters.

This report recommends using and expanding upon existing legislation that already authorizes certain mechanisms that allow for state and local community involvement in federal land management which are not currently being utilized to their fullest potential. For example, developing a Natural Resource Policy Plan at the state level as well as encouraging and facilitating their development at the local level (federal law refers to these plans as “land use plans” but they have nothing to do with zoning and therefore the term used in this report is a Natural Resource Policy Plan). The NRPP is a document which describes citizen's and the local government’s preferred environmental conditions (e.g., stated policy on livestock grazing, timber management, road maintenance/closure, oil and gas extraction), the local citizen's "custom and culture," and the local economic baseline and needs for a strong economy. The NRPP is based on sound data and local public input. Federal laws (NEPA, FLPMA, NFMA) require Federal agencies to give meaningful consideration to local governments’ land use plans (NRPPs) during federal agency decision making processes—generally referred to as consistency review.

These plans would allow for more timely and robust influence of federal land management actions across the state. While local governing bodies technically have status as a cooperating agency most communities do not have a written land plan for the purposes of a consistency review. The adoption of a well written, research and data driven Natural Resource Policy Plan by a local government is a critical tool that allows a local government to have a substantive impact on federal decisions, plans, policies, and programs. Federal agency consideration of a local land use plan, natural resource policy plan, or “officially adopted policy,” plays a key role in the success of a local government engagement as a cooperating agency or with consistency reviews under NEPA, coordination under FLPMA and NFMA, and in assisting in the Governor’s consistency review process. For more information on Natural Resource Policy Plans and their potential see Section 21.4 in Management Alternatives.

We also recommend that instead of pursuing and directing resources towards a full takeover of all lands and programs currently contemplated by this legislation that smaller specific pilot programs be creatively developed and aggressively pursued designed around specific land management programs and activities (grazing, oil and gas, wild horses) and/or geographic areas. These could be done through a variety of mechanism including Stewardship Agreements and Stewardship Contracts. For more information, see Section 21.4 in Management Alternatives.

In essence, our recommendation is to work to phase more management to the state gradually with the ultimate goal of providing the state and local communities with more influence over federal land management activities while avoiding inheriting the crippling bureaucracy, costs, and litigation and without jeopardizing the critical federal payments such as Payments in Lieu of Taxes (PILT) and Secure Rural Schools (SRS) that are made to states and local communities to compensate for the presence and financial impact of federal owned and managed lands in their communities. A phased





and targeted approach will also allow state agencies to engage in a significant way in management areas where current strengths exist—for example grazing administration within OSLI or utilizing the special knowledge of a particular geographic area possessed by a local community. This strategy will allow the state to effectively use existing program management knowledge within its agencies and enable them to add management experience working according to federal mandates and with additional requirements such as NEPA over time. Smaller programs can also be more versatile, more creative, easier to adjust to changing conditions, and more conducive to collaboration. Smaller programs can produce more effective change because they work from the bottom up and not from the top down. Good programs can be noted and studied and then adapted and implemented elsewhere gradually.

The seemingly impassible mountain of problems facing public lands management today may seem impossible. However, the resources of the State of Wyoming would be better utilized being directed at fixing the problems and working to encourage the development of a system more attentive and responsive to the voice of local communities instead of directing resources towards an effort that would ultimately merely pass on the myriad of problems that exist today to the state.

There is a tension between efforts to improve public lands management. On one hand there are efforts to make land use decisions that are more landscape based which is not in and of itself a problem except that it tends to make decisions more centralized, pulling decision making away from the local communities who are most affected and who have generations of knowledge and stewardship experience. There is also a gradual trend towards land management planning that is more collaborative and cooperative which can be more localized. The resources of the state should be directed to harnessing existing resources and building upon them to move public lands management in a direction that gives the state and local communities a larger voice by among other things building upon existing networks to leverage western rural communities political voice in Washington and with federal agencies. A good example is the Wyoming County Commissioners Association (WCCA)'s Public Lands Initiative which hopes to develop a locally-led, Wyoming-specific, legislative lands package to address designation, release, or other management for the Wilderness Study Areas (WSAs) in Wyoming. These lands have been locked in a holding pattern for decades because Congress will not follow the law and either designate them as Wilderness Areas or release them to a multiple use mandate.

The aim of this study is to provide an overview of the duties, responsibilities, costs, and conflicts inherent in managing federal lands for the Wyoming Legislature to evaluate in order to chart its future course. Overall costs to manage the lands identified and when possible the costs of specific programs and activities are presented. The amount of revenue generated from federal public lands and the share of those revenues currently received by the state and counties are included. The study contemplates a variety of mechanisms that could be implemented to help federal land managers meet management goals and objectives.



Identification of the Specified Federally-Administered Lands

The Study on Management of Public Lands was first to include an identification of the federal lands included for the study, specifically:

[A]n Identification of federally administered public lands within the State and the interests, rights, and uses associated with The Lands excluding currently designated wilderness areas; national conservation areas and land currently administered by the Department of Energy, Department of Defense, the Department of the Interior’s Bureau of Indian Affairs, United States Fish & Wildlife Service, and the National Park Service.

The term public land can be used quite differently by the lay public, academics, and land managers. Traditionally and legally, public lands refer to only those federally owned lands managed by the BLM. In 2008, BLM administered lands were officially designated as the “National System of Public Lands. Federal lands administered by the USFS are a part of the National Forest System. The term “public land” is frequently used, however, to refer to all federal owned lands generally available for use by the public such as National Parks, National Forests, BLM lands, Wildlife Refuges, etc. while not necessarily referring to federally owned land utilized for more strictly governmental purposes such as national defense or post offices. This report uses the term public land in the more general sense to refer to land owned (fee simple title) by the federal government on behalf of the people of the United States regardless of its manner of acquisition or the agency that manages them.

Of Wyoming’s approximately 62 million acres, over 30 million acres or about 48%, are federally owned and administered. The federal public lands included in this study total about 25 million acres. Approximately 5.4 million acres have been excluded from this study and include the approximately 2.3 million acres managed by the NPS, over 70,000 acres managed by the USFWS, just over 7,000 acres managed by the Department of Defense, and over 3 million acres of Wilderness Areas managed by the USFS.

National Conservation Areas (NCAs), also excluded from this study, are certain BLM administered public lands that have been set aside for special protection by Congress through legislation. NCAs are managed as part of the BLM’s National Landscape Conservation System (NLCS) which includes all areas administered by the BLM that have been designated for the different types of special protection directed by Congress or the President including Wilderness Areas, National Monuments, and National Historic and Scenic Trails. Wyoming’s two National Monuments, Devil’s Tower and Fossil Butte, are both excluded from this study because they are managed by the NPS. National Historic Trails (NHTs) are congressionally designated protected areas but in Wyoming they are co-managed by the BLM and the NPS. The approximately 340 miles of the Historic Trails within Wyoming on BLM administered lands and their costs are included in this study.





The roughly 25 million acres of federal public land in Wyoming identified for this study are generally those administered by BLM and the USFS and the Bureau of Reclamation (BOR). These three federal agencies collectively administer about 28 million acres in Wyoming (3 million of which is the excluded Wilderness Areas managed by USFS). BLM manages over 18 million acres or about 29% of the state and the USFS administers over 9 million acres or about 15% of the state and BOR administers about half a million acres. BLM also administers the federal mineral estate within Wyoming, about 41.6 million acres, regardless of which federal agency manages the surface. The mineral estate is generally comprised of 30 million acres where the federal government owns both the surface and mineral estate plus an additional 11.6 million acres of split estate mineral rights where the federal government only owns the mineral rights but not the surface.

Figure 1 and Table 1 illustrate and list the acreage of lands identified for this study within Wyoming and illustrate the lands excluded from the study as well as State and privately-owned acreage by County. Appendix D contains maps illustrating the identified lands within each county in Wyoming.

The public lands identified for study have a wide variety of interests, rights, and allowable uses that are dictated by complex, overlapping, and contradictory factors.

The first factor which may affect the interests, rights, and uses of certain federal lands and how particular lands are managed is whether they are “public domain” lands or “acquired” lands. Public domain land refers to land ceded to the federal government by the original states or obtained from a foreign sovereign (via purchase, treaty, or other means) and which have not left the ownership of the federal government. Acquired lands are those obtained from a state or individuals by exchange, purchase, or gift. About 90% of all federal lands are public domain lands, while the other 10% are acquired lands. The lessening of the historical significance of these distinctions was recognized in FLPMA, which defines public lands as those managed by BLM, regardless of whether they were derived from the public domain or were acquired. However, the legal distinction is still present. Different laws may still apply depending on the original nature of the lands involved. Many laws governing federal public lands and their management relate only to what is legally referred to as “public domain lands” and not acquired lands.

The second factor which would affect the interests, rights, and uses available is which federal law controls administration of the area and which federal agency currently makes management decisions. More specifically, whether the interests, rights, uses, and management decisions of the land manager dictated by FLPMA as BLM lands are or whether they are controlled by the NFMA as National Forest System lands.

The next layer dictating rights, interest, and uses would require an examination of whether a particular area has been given a particular designation such as Wilderness Study Area (WSA), Area of Critical Environmental Concern (ACEC), or Lands with Wilderness Characteristics (LWC). More information on WSA, ACEC, and LWC can be found in Section 9. and maps that illustrate these areas



in Wyoming within each of the three BLM Districts and the WSAs administered by USFS can be found in Figure 35 through Figure 41.

Further control over the interests, rights, and uses that exist within particular areas of the identified lands are dictated by the land use plans—either the BLM’s Resource Management Plans (RMP)s or the USFS Land Use Plans (LUPs). RMPs in Wyoming are generally done for a geographic area that comprises each Field Office and each National Forest has its own LUP. Absent changes in federal law, the state would be bound to have land use plans and to use the framework to develop and amend these plans found in FLPMA for BLM lands and NFMA for USFS lands. The process to develop and periodically amend these plans would also have to comply with NEPA. An overview of the NEPA process which is currently expensive, extensive, adversarial, and protracted can be found in Section 2.1 and an overview of the BLM’s RMPs in Wyoming is in Appendix C.

Maps which illustrate the rights and uses across the state such as agricultural allotments, mineral ownership, and oil, gas, and coal permits are in Figure 2 through Figure 13.

Current Management and Costs

This Study on Management of Public Lands was to include an analysis concerning management of the identified federal lands which identified the current costs to manage the federal lands, revenues currently generated, revenues currently received by the state, and a comparison of management of federal and state lands.

Costs Directly Incident to the Management of the Lands

Specifically, the legislation solicited the following information:

The identification of all costs directly incident to the management of The Lands incurred by the federal government and a comparison of likely costs for the State of Wyoming to manage The Lands. In determining likely costs, the comparison shall consider differing land management objectives and practices; and

A comparison of the likely costs for the State of Wyoming to manage The Lands and the costs incurred by the federal government to manage The Lands. In determining likely costs, the comparison shall consider differing land management objectives and practices.

The federally owned and administered lands identified by the legislature for this study have vastly different, even divergent, management objectives and practices compared to Wyoming’s School Trust Lands. The legislation ordering this study requested a review of the costs to manage the lands identified under a MUSY mandate with no loss of access for the public for recreation, fishing, and hunting. Moreover, since the state would only be taking over management they would not have the liberty to manage the lands differently—the directives would still come from and be dictated by Congress. The state would be required to manage federally owned lands according to the mandates and objectives of MUSY as set forth in FLPMA and NFMA rather than for the primary goal of revenue





production as is the case with State Trust Lands. The state would also have to manage according to most or all of the same practices required by FLPMA and NFMA as well as by NEPA including comprehensive land use planning, public comment, and environmental reviews of all decisions. The costs are therefore likely to be very similar. Because of this, this report lays out the approximate costs to the federal agencies of managing the lands in question over a five-year period—for FY 2010 through FY 2014. Due to the incredible complexities of the federal budgets for these agencies these figures are only approximate costs. There is a detailed report for each agency how this data on costs was gathered and organized with discussion of the challenges and limitations of the information provided in the Appendices.

There are also costs related to work done for management of federal land within Wyoming that are not captured because they are outside the budgets of the BLM and the National Forests and cannot be meaningfully separated for Wyoming. For example, the work of the Office of Natural Resource Revenue (ONRR) which administers the collection and disbursement of mineral revenues, the work of the Regional Headquarters for the National Forest, the USFS’s Albuquerque Service Center (ASC), the work of the National Operations Center (NOC) in Denver for the BLM, and the national headquarters of both the BLM and USFS in Washington, DC to say nothing of the considerable workload done to manage the litigation conducted by the legal departments of each agency which are not captured in this report.

Table 4. Total expenses incurred in Wyoming from BLM-administered programs, FY 2010–2014.

Management of Land and Resources					
Wyoming BLM Management Total	2010	2011	2012	2013	2014
	\$105,451,205	\$110,708,549	\$110,390,727	\$101,139,837	\$98,580,918
Activities					
Resource Protection and Maintenance	\$5,802,153	\$2,697,867	\$4,553,657	\$3,618,014	\$3,745,618
Land and Range Resource Management	\$20,320,994	\$23,368,652	\$22,621,829	\$19,533,014	\$20,242,307
Wildlife & Fisheries and Threatened & Endangered Species	\$5,843,530	\$5,050,853	\$5,195,692	\$7,296,354	\$6,638,478
Recreation Management	\$3,554,640	\$3,525,840	\$3,435,220	\$3,496,655	\$3,637,056
Energy & Mineral Management	\$40,508,181	\$39,683,230	\$40,763,318	\$36,145,064	\$38,561,289
Realty & Ownership Management	\$7,668,763	\$10,642,272	\$5,644,737	\$5,720,481	\$6,226,496
Communication Site Management	\$82,595	\$74,989	\$141,723	\$63,995	\$52,056
Challenge Cost Share (CCS)	\$509,276	\$451,568	\$725,389	\$243,503	\$261,332
Other Reimbursables	\$119,174	\$155,794	\$377,987	\$136,351	\$224,295
Wildfire Management	\$10,261,097	\$12,858,235	\$16,097,247	\$11,974,671	\$11,020,130
Transportation & Facilities Management and Construction	\$10,060,212	\$11,517,090	\$10,153,622	\$12,306,634	\$7,376,167
Workforce & Organization Support	\$720,591	\$682,158	\$680,305	\$605,102	\$595,694

Includes costs for administration of mineral operations on Tribal lands and administration of lands in Nebraska. Excludes costs for certain activities, such as land acquisition.





Table 6. Expenses Created In Wyoming From USFS-Managed Programs, FY 2010–2014.

Management of Land and Resources					
	2010	2011	2012	2013	2014
Wyoming USFS Management Total	\$49,362,130	\$49,587,466	\$44,984,411	\$46,373,111	\$44,106,052
Category of Work					
Land Management Planning	\$450,504	\$581,166	\$584,356	\$531,552	\$262,147
Inventory and Monitoring	\$1,653,767	\$1,841,311	\$1,748,290	\$1,377,469	\$1,280,905
Vegetation & Watershed Management	\$2,794,846	\$2,365,494	\$1,577,501	\$1,597,240	\$1,789,180
Wildlife and Fish Habitat Management	\$1,923,658	\$1,866,098	\$1,442,795	\$1,208,765	\$1,356,480
Recreation, Heritage, and Wilderness	\$4,619,571	\$4,782,773	\$4,481,267	\$4,329,361	\$4,122,657
IRR (Bridger Teton Only)	N/A	N/A	\$2,592,246	\$2,540,897	\$3,208,245
Other	\$3,964,136	\$5,902,123	\$4,269,866	\$4,956,755	\$3,591,205
Forest Products	\$2,505,242	\$2,482,769	\$1,449,997	\$1,990,840	\$2,588,220
Grazing Management	\$1,642,840	\$1,808,645	\$2,043,111	\$2,086,683	\$1,979,613
Minerals and Geology Management	\$768,069	\$1,125,470	\$881,615	\$814,293	\$944,636
Landownership Management	\$541,801	\$511,665	\$469,003	\$527,512	\$588,863
Wildland Fire Management	\$10,309,928	\$9,741,694	\$8,771,026	\$8,430,368	\$8,478,229
Administrative Expenses	\$8,655,070	\$8,150,085	\$8,211,512	\$8,157,854	\$7,476,838
Capital Improvement and Maintenance	\$9,532,699	\$8,428,173	\$6,461,826	\$7,823,522	\$6,438,834

Includes costs only for Forests wholly or substantially in Wyoming. Excludes costs for acquisition, forestry assistance, and research.

Revenue Currently Received by the State

Revenue Currently Received by the State in Connection with Activities on Federal Lands

The Legislation soliciting this Study on Management of Public Lands directed that the amount of revenue currently received by the state in connection with the federal lands be included in the study, specifically:

A determination of the amount of revenue that is currently received by the State of Wyoming, or any political subdivision thereof, in connection with the Lands, including but not limited to, any payments made in lieu of taxes, mineral royalties and leases and Secure Rural Schools and Forest payments.

Revenue received by the State of Wyoming and its political subdivisions in connection with the Lands includes the 48% of mineral revenue generated in the state that is distributed to the state, PILT payments, and Forest and SRS payment. The mineral revenue already being received by the state is a critical resource used to run the state and presumably none of it would be available for managing federal public lands contemplated in this study. Likewise, SRS and PILT payments are critical resources to local communities for a wide variety of government functions and purposes including but not limited to roads and schools. Receipt of this revenue would not necessarily change with a transfer to the state of management. SRS and PILT funds are both based on the presence of non-





taxable federal lands in each county and that would not change—the lands would still be owned by the federal government. Every state except Alaska receives 48% of the mineral revenue produced on federal lands in their boundaries. It is unlikely that Wyoming would receive more of that share with a transfer of management unless it were negotiated and written into necessary legislation as a form of payment for the state to take over the management duties of the federal agencies. However, only about 10% of the mineral revenue kept by the federal government is deposited in the U.S. Treasury. Approximately 40% of the other 52% is dedicated to the Reclamation Fund which is used to pay for water projects across the west administered by the BOR.

Mineral Revenue Currently Received by Wyoming

As noted, forty-eight percent (48%) of mineral revenue produced on federally owned and administered lands is returned to the state from which the revenue was produced. The disbursements of that revenue to Wyoming are below.

Table 21. Disbursements of Mineral Revenue to Wyoming, FY 2010-2014.

2010	2011	2012	2013	2014
\$886,871,352	\$971,498,012	\$995,169,510	\$932,475,424	\$1,007,269,375

PILT and SRS Payments Currently Received

Several programs compensate local governments for the financial impact from the presence of non-taxable federal lands in their jurisdictions and for federal policies regarding those lands. One of the largest programs that provides substantial federal payments to Wyoming counties is the Payment In Lieu of Taxes program (PILT). For many rural counties, particularly those with extensive federal public lands, these payments constitute an important portion of county budgets.

In FY 2015, Wyoming counties received over \$27 million in PILT payments. Total PILT funding to Wyoming from 2005 to 2014 is found in Table 55.

Appendix D has a chart for each Wyoming county illustrating PILT funds received over ten years—from 2005 until 2014 as well as each county’s SRS payments for those years.

In Wyoming, payments are made directly to the counties; every county has eligible lands and receives PILT payments. A complex formula is used to calculate how much money a community receives based on the number of acres of eligible federal land within each county, its population, annual inflationary adjustments, and factoring in payments received the previous year through other federal land payment programs such as Secure Rural Schools (SRS) payments. Ultimately, however, the amounts are dependent upon how much Congress appropriates to the program each year.

From 1994 until 2008, PILT was not funded by Congress to the full amount the law authorized, dropping to as low as 65% of authorization levels. In 2008, the Act was amended making the program a fully funded mandatory entitlement program rather than a discretionary program (subject to





annual appropriations) and Congress provided five years of funding from FY 2008 to FY 2012. However, since 2012, even though it is permanently authorized, Congress has only funded it one year at a time. Because it must again go through the annual appropriations process funding has become subject to unavoidable political whims and is unpredictable. During the budget battles of recent years PILT payments were subject to sequester. This uncertainty makes it challenging for counties to make long term budget plans and if it were not renewed it would deal a major blow to local services in rural Western communities with high percentages of federal land ownership.

Debates continue regarding PILT payments including whether it should be funded through mandatory or discretionary spending, whether it should be a fixed or an inflation adjusted amount, and there are controversies over inequities in the formula used to distribute PILT funds. However, there is little consensus in Congress on how to address these issues. These debates and inequities make the program vulnerable to criticism and support for PILT competes with proposals to modify or even eliminate the program to reduce the federal deficit. At present, every year it is a battle for rural communities to ensure funding is continued and that appropriations match the levels authorized by the PILT Act. Current PILT funding is scheduled to expire at the end of the 2016 fiscal year on September 30th. As of mid-August 2016, the Senate and House Interior, Environment and Related Agencies Appropriations bills for FY 2017 both include \$480 million in appropriations to fully fund PILT. However, differences between the Senate and House bills must still be reconciled, passed by Congress, and signed into law by the President.

Any transfer of ownership of federal public lands to the states would eliminate this important funding source because the lands would no longer be federally owned or tax exempt but a transfer of management only of federal public lands would theoretically not impact Wyoming communities receipt of PILT funds as the funds are based on the tax exempt status of federal lands in local communities. However, PILT funding is frequently tied up in debates about SRS funding which is more vulnerable because it was initially intended to be a temporary transition program. A takeover of management of federal public lands by the state could influence debates about the future of these programs and influence if not jeopardize both their existence and their funding mechanisms and levels. What any impact might entail is difficult to discern. More information on PILT and its legislative history can be found in Section 20.2.

Forest Service and Secure Rural Schools (SRS) Payments

Local counties have traditionally received a share of the revenue generated from USFS lands within their borders—predominantly from timber sales but also from all commercial receipts including recreational fees, communication site leases, and special use permits (ski areas, outfitting permits, etc.). Under the Twenty-Five Percent Fund Act of 1908, twenty-five percent of each national forest's gross receipts are transferred to the states (according to their forest service acreage) to be distributed to the counties for the benefit of roads and schools. Payments made to local communities under this receipt/revenue sharing program are referred to as “USFS Payments to States” as well as “1908 Payments” or “25% Payments.” Until 20 years ago, counties in the West with public lands with





extensive forests received substantial annual payments under this program largely from the sale of timber from the National Forests and BLM lands within their jurisdiction. New forest management policies, increased land planning and procedural requirements, efforts to preserve habitat of the spotted owl, changing preference of the general public, economic and timber industry dynamics, and other factors led to a substantial decrease in timber sales. This resulted in substantially lower payments to counties—in some cases by more than ninety percent (90%).

To compensate local governments, Congress enacted the Secure Rural Schools and Community Self Determination Act of 2000. Under the SRS program the federal government pays timber-dependent communities for the lost revenue from reduced timber sales due in large part to federal land management policies. SRS was intended to be a transition program. It was initially authorized for six years with the hope that communities and county budgets could become less reliant on volatile commodity driven revenues derived from public lands and diversify their economies with more attention given to recreation, conservation, stewardship, and forest restoration. SRS is an opt-in program as an alternative to the payments available under the 1908 revenue sharing program. In years when SRS funding is not reauthorized by Congress, for example in 2014, the payments revert to the mandatory 25% revenue sharing payments under the 1908 Act which results in dramatically lower payments. Revenue sharing payments for FY 2014 pursuant to the 25% program totaled \$50.4 million (before sequestration) as opposed to the approximately \$329 million in payments made to local communities in FY 2013 under SRS. To fund SRS, money is drawn from a trust account with forest revenue set aside for subsequent distribution to local communities under these laws. In most years additional funds must be appropriated by Congress to make the SRS payments —the program is heavily subsidized and requires significantly more money than what is available from USFS receipts.

Authorization for the original six year SRS payment program expired at the end of FY 2006 but it has been extended over the years since in a rather haphazard and unpredictable manner. Both the SRS program and the 1908 Program have also been legislatively modified periodically.

The Secure Rural Schools and Community Self-Determination Act once again expired in September 2015 and has not been reauthorized for FY 2016. This could create dramatic budgetary shortfalls for many rural communities. The availability of future SRS payments remains uncertain.

Currently four Wyoming counties have elected to receive 25% revenue sharing payments under the 1908 law—Converse, Crook, Teton, and Weston. The other Wyoming counties eligible to receive a share of Forest revenue receive their payments through the SRS program. Four counties do not have any forest acreage and do not receive any of these revenue sharing payments. The Table below illustrates the total amount of Forest Service payments made to Wyoming counties from 2005 to 2014 (whether through SRS or the 1908 payment). The charts in Appendix D illustrate the funds received by each individual county for those years. More information on the SRS program and 1908 revenue sharing program and their legislative history are found in Section 20.1.



Table 55. Payments to Wyoming in Millions, FY 2005-2014.

Program	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
WY PILT Total	\$14.81	\$15.22	\$15.36	\$24.16	\$25.53	\$22.71	\$25.63	\$25.32	\$25.32	\$27.14
WY SRS Total	\$2.4	\$2.43	\$2.42	\$6.65	\$4.71	\$4.61	\$4.37	\$4.24	\$4.12	\$3.74

All Revenue Currently Generated from The Lands

The Study on Management of Public Lands includes an identification of the revenue available from the federal lands included in the study, specifically:

The identification of sources of revenue to pay for the administration and maintenance of the Lands by the State of Wyoming including appropriate fees to charge the federal government for the management of the Lands Revenues generated on federal lands.

All current sources of revenue generated on federally owned and administered public lands are theoretically available to pay the state for the administration of the lands in this study and those sources are outlined and discussed below.

Energy and Mineral Revenue Generated

The use of public land that generates the most revenue in the US and in Wyoming is from oil, gas, coal and other mineral development. In FY 2014, mineral revenue generated from federal land in Wyoming was approximately \$2.1 billion. Onshore federal revenue is divided between the state where the production occurs (48%), the Reclamation Fund of the U.S. Treasury (40%), and the General Fund of the US Treasury (10%). The Reclamation Fund is used for water projects in the west—to build, maintain, and operate water and associated power projects on arid and semi-arid western lands. A significant portion of the U.S. BORs water resource development and maintenance work in the western United States is paid for from mineral revenue.

There would be a great deal of political resistance to giving Wyoming an additional share of mineral revenue that is not already given to the state as a mechanism of compensation for managing federal public lands.

While the BLM is responsible for onshore leasing, and related operational functions such as issuing drilling permits, production verification, diligence, onsite inspections, and enforcement on all federal lands and not just BLM lands, the ONRR is responsible for collecting, verifying, and disbursing all revenue from energy and other natural resource sources originating from all federal lands (both onshore and offshore). This report does not include the costs for the ONRR’s administration of mineral revenue generated on Wyoming lands. Currently that is handled by the 2% administrative





fee held back from each state’s 50% share of mineral revenue under the MLA (the fee was 1% until 2008).

Any transfer of management of mineral and energy leasing on public land in Wyoming would have to address whether the state would take over the money management of mineral revenue currently undertaken by ONRR or only the BLM leasing duties. The regulatory framework establishing ONRR was established in 2010 to create a meaningful separation of the revenue collection activities from the mineral leasing and regulatory functions to eliminate both real and perceived conflicts that existed in the previous program. To verify data and ensure its accuracy, ONRR utilizes various mechanisms including up-front system edits, data mining, compliance reviews, and audits. There is a three-year cycle of review and/or audit and properties and companies are selected using a risk assessment process across the entire scope of payors. Compliance reviews analyze the reasonableness of reported revenues and data mining is used to analyze volumes in production and revenue reports. ONRR has approximately 600 employees including accountants, auditors, computer specialists, engineers, geologists, economists, lawyers, and other professions. ONRR handles an average of \$11 billion in annual revenues from energy and mineral leases.

Other revenue derived from BLM administered lands is generated from the issuance of permits and fees for a wide variety of activities and uses, including grazing, recreation, timber, and Rights-of Way.

Table 3. Revenue generated in Wyoming from BLM-administered programs, FY 2010–2014.

Wyoming BLM Revenue Generated					
Program	2010	2011	2012	2013	2014
Wyoming BLM Revenue Total	\$1,883,074,472	\$1,978,145,452	\$2,169,013,120	\$2,029,150,589	\$2,107,895,048
Recreation Fees	\$189,618	\$100,881	\$111,470	\$172,817	\$205,028
Land & Realty	\$12,742,748	\$5,780,803	\$6,369,433	\$6,800,697	\$6,269,462
Timber	\$87,585	\$21,000	\$30,862	\$19,967	\$94,270
Grazing	\$1,938,099	\$2,145,312	\$2,053,262	\$2,053,262	\$1,839,363
Mining Claim Location/Maintenance	\$6,682,682	\$6,412,088	\$7,122,787	\$7,877,403	\$6,839,150
Mineral Materials	\$2,219,300	\$1,167,122	\$1,851,133	\$1,144,743	\$1,350,321
ONRR Revenue	\$1,859,214,440	\$1,962,518,246	\$2,151,474,173	\$2,011,081,700	\$2,091,297,454

Non-Energy USFS Revenue Generated on Federal Lands in Wyoming

The USFS collects revenue from a variety of activities and uses that occur within the National Forests including recreation, grazing, sale of certain mineral resources and forests products, ski operations, and other activities. Receipts from commercial activities are first deposited into the National Forest Fund (NFF) and then transferred to the US Treasury. These NFF receipts are used to make mandated payments to counties of a share of USFS revenue generated within their jurisdiction such as SRS payments and so data per state is available. The Table below shows NFF revenue generated in all of the National Forests in Wyoming. Most mineral revenue generated on USFS lands, such as oil and gas and coal is handled by the ONRR is reflected Table 3.





While the management costs listed above to administer USFS lands in Wyoming excluded consideration of those National Forests with acreage in Wyoming but without a significant presence in the state, the revenue tables presented include revenue generated in all of the Wyoming Forests. Data showing revenue generated specifically in Wyoming because unlike costs, the USFS and Department of Agriculture tracks the amount of revenue by states because under federal law many of these receipts must be shared with the state and community in which it was generated.

Table 5. Revenue Generated in Wyoming From USFS-Administered Programs, FY 2010–2014.

Wyoming USFS Revenue Generated					
	2010	2011	2012	2013	2014
Wyoming USFS Revenue Total	\$3,739,981	\$4,125,370	\$5,994,573	\$7,026,019	\$8,279,691
Timber	\$75,794	\$91,001	\$112,466	\$55,705	\$71,581
Land Use	\$243,899	\$239,112	\$232,512	\$230,428	\$364,050
Recreation Special Uses	\$1,944,039	\$2,270,031	\$3,671,101	\$4,168,416	\$5,155,146
Power	\$80,893	\$78,499	\$98,287	\$74,002	\$106,357
Minerals	\$8,015	\$17,205	\$432,250	\$1,013,126	\$1,213,422
Grazing West	\$347,148	\$332,783	\$344,397	\$315,379	\$335,974
Sub-total NFF Receipts	\$2,699,787	\$3,028,631	\$4,891,012	\$5,857,055	\$7,246,529
KV	\$595,784	\$688,491	\$569,636	\$637,932	\$696,680
Specified Road Credits	\$133,342	\$142,845	\$118,320	\$83,213	\$44,663
Salvage Sales	\$310,449	\$264,604	\$413,263	\$444,637	\$290,735
TPTP Revenue	\$618	\$800	\$2,342	\$3,181	\$1,083
Sub-total	\$1,040,194	\$1,096,739	\$1,103,561	\$1,168,964	\$1,033,161

Does not include receipts into special accounts and trust funds. (U.S. Department of Agriculture, 2015).

Potential Revenue from The Lands after Transfer

A determination of the potential revenue which may be received from the Lands by the State of Wyoming after the management of the Lands by the State of Wyoming and recommendation for the distribution of those revenues.

Without significant changes to federal law, we would not anticipate any substantial gains in revenue production or additional sources of revenue with any transfer of management—certainly not enough to offset the enormous costs such an endeavor would likely entail.

Other Federal Actions That Could Impact Revenues to the State

The legislation directed that the Study on Management of Public Lands identify other federal actions that could impact revenues to the state, specifically:

Consideration of other relevant federal action or policies determined to impact revenues to the State of Wyoming due to federally managed lands.





Wyoming would unlikely to be able to negotiate management of these lands free from most of the constraints and impacts of many federal laws and actions taken through appropriations; they would be as bound to comply with federal law as the current federal agencies. All of these requirements affect management decisions which impact revenues. However, additional factors that could and have affected the revenues to the state and that could affect any funding mechanism designed to pay the state for the management of the federal lands if that option were pursued are discussed below.

Sequestration

Sequestration of mineral revenue, PILT, and SRS payments occurred during the budget battles in Congress of recent years. In March of 2013, federal expenditures became subject to automatic sequestration when Congress did not enact specified deficit reduction legislation pursuant to the Budget Control Act of 2011. The ONRR announced that the royalty payments made to states of their share of mineral revenue generated on public lands within their boundaries under the MLA was subject to mandatory budget cuts and 5.1% of the payments would be cut. The resulting sudden and unexpected decrease to Wyoming was \$53 million dollars—over \$10 million a month over 5 months. Wyoming objected vehemently, contending the royalty revenue was the legal property of the state payable pursuant to federal law and not subject to sequester and the payment merely passed through the US Treasury. The Department of the Interior (DOI) took the position that the royalty payments were an expenditure and subject to the Congressionally mandated cuts. The Governor came to the conclusion that the state would not be able to successfully pursue the matter legally but legislatively and by working vigorously with other western states. The Interior Department reversed its decision to withhold royalty payments and the sequestered 2013 funds were released, however the mandatory sequester continued and ONRR held back 7.2 % of the FY 2014 disbursements. In October of 2015 ONRR returned \$158.7 million of the \$162.2 million sequestered in 2014 but also sequestered 7.3% of revenue disbursements for FY 2015 (\$130 million) which was returned in October of 2015 (Malm, 2013) (Brown, 2013).

PILT payments were also subject to 5.1% mandatory sequestration in 2013. Forest service and SRS payments were also subject to sequester, and the USDA demanded repayment of 5.1% of the full payments that had already been disbursed in early 2013 before the sequester went into effect. Many western states argued that because the revenue was generated in FY 2012 and paid out to the states before the date the mandatory cuts went into effect in March those funds should not be subject to the sequester. Three states, including Wyoming, announced that they would not return the requested SRS funds. The Forest Service then merely withheld the disputed amount from Wyoming's SRS Title II funds.

Authorizations without Appropriations

Although an authorizing statute may authorize the subsequent enactment of appropriations to provide funds for agencies and programs, and may establish specific spending ceilings for them,



Congress may choose not to fund such program or activity or to provide a lesser amount. The lack of appropriation may be because Congress intentionally wanted to prevent something from happening or Congress may have failed to fund it for a variety of other reasons.

An excellent example of the grim predicament Congress's action can put land managers in is the Wild Horse and Burro Program. While the Wild Horse and Burro Act specifically authorizes and directs that excess wild horses and burros removed from the range be humanly euthanized, Congress, through annual appropriations bills, has prohibited the use of federal funds to euthanize these animals. This has resulted in approximately 46,000 horses in long term holding that are at capacity which is expected to cost one billion dollars over the course of their natural lives with another 40,000 animals on the range that by law should be removed.

Cooperative and Cost Sharing Opportunities

The Study on Management of Public Lands was directed to include:

Identification of traditional cooperative and cost sharing opportunities and programs associated with the Lands and state management agencies.

A number of examples of state agencies working closely with federal land management agencies are in the report in various program sections which have discussion about the state's management of its own lands and outlines the state agencies that could potentially assist in management of these federal public lands by Wyoming.

We recommend the State consider mechanisms such as natural resource policy plans, stewardship agreements, and memorandums of understanding to influence the management of federal lands. These mechanisms exist but are not currently utilized to their fullest potential. We further recommend the state dedicate resources to develop a permanent committee, agency, or create staff position(s) to identify potential projects within the state that could be accomplished through these mechanisms and oversee their implementation. Such a committee could work to increase the use of these existing mechanisms and develop new, unique pilot programs where the state and local communities would play a larger role or even take over some management responsibilities. It could identify funding options, identify priority projects, suggest legislation, and offer advice and technical support to encourage increased coordination, collaboration, and cooperative agreements between federal land management agencies and local and state agencies. For example, it would be very beneficial if the state could financially support the gathering of social and economic data that could demonstrate, with cold hard facts, the impacts of federal management decisions on communities. Well written and researched local Natural Resource Policy Plans, in particular those with policy positions backed by hard data, could provide far more influence and direction earlier in the process when local governments are acting as co-operating agencies with federal land managers or for consistency reviews under existing federal law.





The best innovation happens at the grass roots level with smaller projects where locals have more than a token roll. They avoid the current top-down command and control management that limits local voices. Local partnerships and stewardship agreements can lead to decisions that are more effective because they better represent a diversity of interests. People are more invested in the outcome because they participated meaningfully in the decision.

There is a myriad of examples of federal, state, tribal, and non-profit groups working collaboratively across the country to ensure successful management of public lands. Many of these examples are unique and representative of a region's specific challenges and goals, and while they cannot necessarily be applied wholesale to Wyoming's needs and issues, they illustrate the type of cooperative management that is possible. Please see Section 21. Management Alternatives, for further discussion.





1. INTRODUCTION



1. Introduction

In 2015, the Wyoming Legislature passed Senate File 56, *Study on Management of Public Lands*, which directed the Office of State Lands and Investments (OSLI) to commission a study and provide a report addressing the management of certain specified federally administered public lands in Wyoming.

This study has identified the potential for the State of Wyoming to assume the management (and only the management) of specific public lands. No transfer of ownership of public lands is contemplated by this study. The study excludes lands administered by the National Park Service (NPS), the US Fish and Wildlife Service (USFWS), all current congressionally designated wilderness areas, and national conservation areas (NCAs), as well as land under the jurisdiction of the Bureau of Indian Affairs, the Department of Energy, and the Defense Department.

In essence this is a feasibility and efficiency study of federal land management practices and of federal versus state practices. The information contained in this study will be useful in a variety of ways beneficial to the people of Wyoming should the State not undertake management of any of the public lands currently administered by federal agencies—including facilitating better management of public lands within Wyoming by those agencies and using the information to craft practical ways to remedy the issues that currently exist.

The idea behind the study, in part, stemmed from the recognition that certain western states have a disproportionate level of federal public lands compared to eastern, mid-western, and central plains states. Over forty-eight percent (48%) of Wyoming is federal land. Communities across the west and many citizens have grown frustrated with the management practices of the federal agencies tasked with sustaining the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations. On the ground land managers in federal agencies with the best of intentions are routinely burdened by their own agencies' bureaucracy and practices and a legal framework that seem to invite confrontation over collaboration, leading, in some instances, to "analysis paralysis" and litigation. Whether it is oil and gas, grazing, hunting, or recreational uses—the lengthy and protracted permitting processes and issues have become a concern.

At the same time many western states, in particular Wyoming, have effectively and responsibly managed their own state School Trust lands far more efficiently and with greater financial returns despite the challenge of the checkerboard ownership pattern of most state lands. While the differing management objectives may be a significant reason for the difference, it is not the only reason. The Bureau of Land Management (BLM) and U.S. Forest Service (USFS) manage with a mandate of multiple use while states have a fiduciary duty to manage state School Trust land to generate long term financial returns for the benefit of public education and other beneficiary entities.

Federal management practices have a direct effect on the lives of citizens and the economies of communities with large tracts of federal lands. Decisions drastically affecting western communities are heavily influenced at the national level sometimes without regard to local needs and concerns.



Access to and the use of public lands is critical to Wyoming's economy and its citizens' way of life. Public lands support many uses from activities such as bird watching to energy development. Many species of wildlife, although owned by the State, spend a significant portion of their life cycle on federally-owned lands. Public lands provide extensive opportunities for recreation and drive economic growth in our mobile economy. "Amenity migration" is the phenomenon of people moving to live and work in areas of high natural amenities (Marcouiller, 2012).

Wyoming is not the first state to consider the options that exist to overtake federally managed lands. Arizona, Nevada, Idaho, Montana, Colorado, New Mexico, and Utah have all considered or passed legislation to pursue the transfer of ownership of federal lands to the State. Utah has arguably led the charge to take over ownership of federal lands; the State wants ownership of 31.2 million acres of land and has committed to litigate if the federal government will not concede to the State's demands. The states studying a transfer of ownership of federal public lands generally contemplated changes to the land uses on public lands, in particular natural resource extraction, whether timber in Idaho and Montana or oil, gas and coal in Utah. The studies were largely based on the premise that with a change in ownership the states would keep 100% of the revenue generated and that those revenues would be needed to pay for the management of these lands.

Wyoming is the first state to study only the possible transfer of management. The aim of this study is to analyze the management of federal lands and the costs and complexities that accompany that management. The study contemplates a variety of mechanisms that could be implemented to help federal land managers meet management goals and objectives.

1.1 Why Consider a Transfer of Management?

The question of "why?" is often raised when discussing the potential transfer of management of federal lands to state management. Although the "why" has not been quantified specifically in Wyoming, a number of studies exist describing, at least in part, why the concept might be given any consideration. Public opinion about how public lands should be managed, and the overall satisfaction with ongoing management is highly variable. A study in Utah identified the following issues as key discussion points around the idea of a transfer of land ownership (Ruple & Keller, 2016):

- A fragmented landscape, leading to challenges in consistency in management
- Competing mandates when adjacent lands are managed for incompatible purposes
- Inflexible statutes hinder collaboration
- Unfunded mandates, whether through attrition or transfer to other programs such as wildfire
- Failure to keep pace with social and scientific changes and successfully manage competing interests

1.2 Land Ownership in Wyoming

Statewide, Wyoming lands are 48% federally (publicly) owned. These lands include national parks, forests, wildlife refuges, monuments, wilderness areas, and WSAs. A wide variety of activities occur



on public lands including commercial uses such as livestock grazing, logging and energy development; recreational uses such as fishing, hunting, hiking, biking, birding, off-road vehicle use, and boating; and the conservation of archeological, biological, and cultural resources.

The roughly 25 million acres of federal public land in Wyoming identified for this study are generally those administered by BLM, USFS, and the Bureau of Reclamation (BOR). These three federal agencies collectively administer about 28 million acres in Wyoming (3 million of which is the excluded Wilderness Areas managed by USFS). BLM manages over 18 million acres (29% of the state) and the USFS administers over 9 million acres (15% of the state). BOR administers about half a million acres. BLM also administers the federal mineral estate within Wyoming, about 41.6 million acres, regardless of which federal agency manages the surface. The mineral estate is generally comprised of 30 million acres where the federal government owns both the surface and mineral estate plus an additional 11.6 million acres of split estate mineral rights where the federal government owns the mineral rights but not the surface.

Figure 1 and Table 1 illustrate and list the acreage of lands identified for this study within Wyoming and illustrate the lands excluded from the study as well as state and privately acreage per county. Please note, the Other category in Table 1 includes Department of Defense and NPS lands, which are excluded from this study. Appendix D contains maps illustrating the identified lands and the excluded lands within each county in Wyoming.



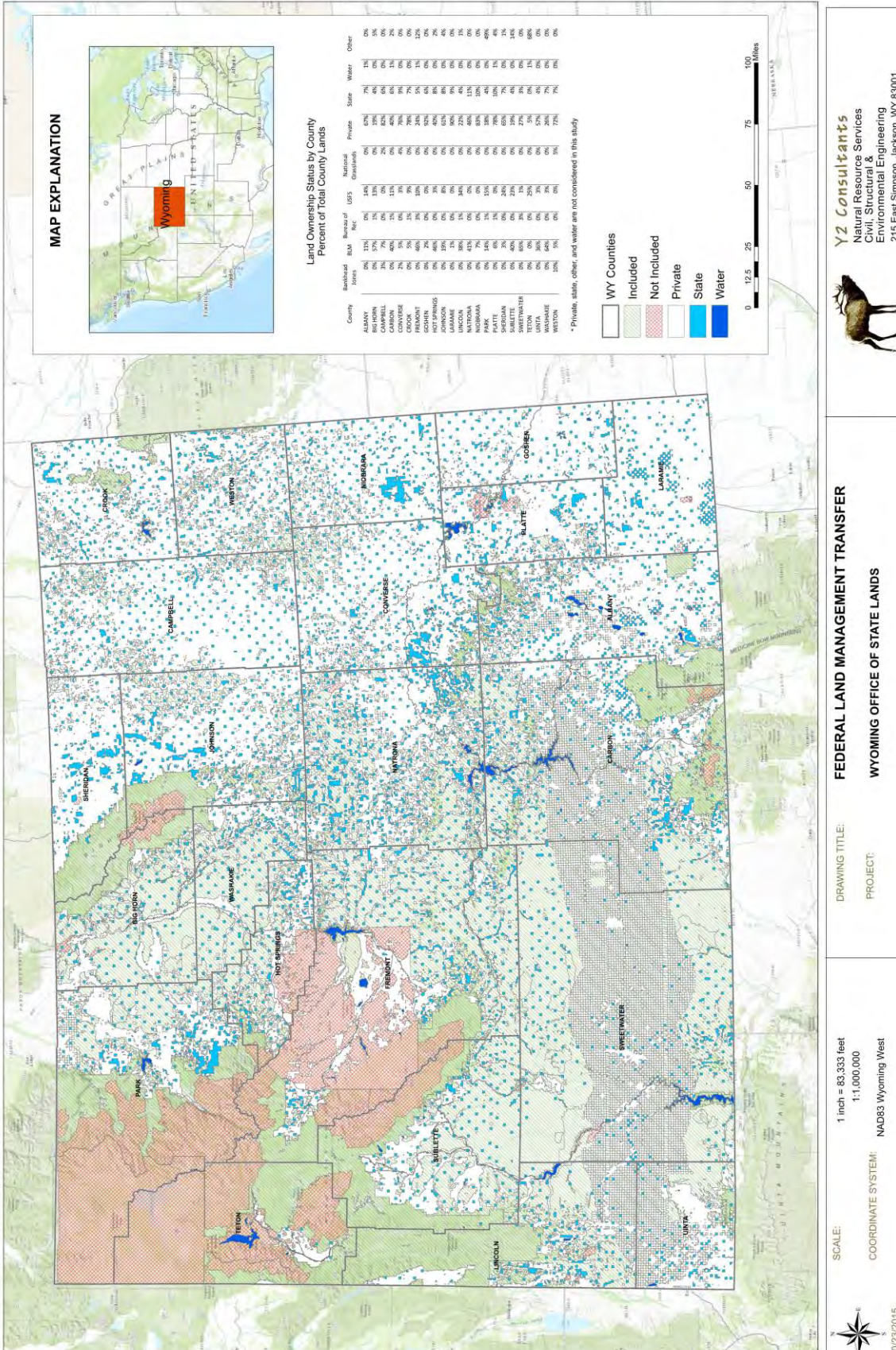


Figure 1. Lands included in this study.



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Natural Resource Services
Civil, Structural &
Environmental Engineering
215 East Simpson, Jackson, WY 83001

FEDERAL LAND MANAGEMENT TRANSFER
WYOMING OFFICE OF STATE LANDS

DRAWING TITLE:
PROJECT:

SCALE:
1 inch = 83,333 feet
1:1,000,000
COORDINATE SYSTEM:
NAD83 Wyoming West

10/23/2015

Table 1. Approximate acres of land ownership (in thousands of acres) by County.

County	Bankhead Jones	BLM	USFS	National Grassland	Private	State	Water	Other	Total
Albany	0	296	375	0	1,860	200	22	4	2,756
Big Horn	0	1,161	351	0	394	74	3	39	2,022
Campbell	87	224	0	53	2,514	189	0	0	3,066
Carbon	0	2,046	626	0	2,014	327	38	44	5,096
Converse	64	130	76	120	2,075	257	6	0	2,728
Crook	0	89	169	0	1,437	120	5	15	1,836
Fremont	0	2,103	985	0	1,101	252	41	1,471	5,955
Goshen	0	25	0	0	1,312	86	3	2	1,428
Hot Springs	0	503	54	0	439	86	3	208	1,293
Johnson	0	504	328	0	1,617	219	2	0	2,671
Laramie	0	9	0	0	1,551	151	0	6	1,718
Lincoln	0	989	902	0	588	108	11	29	2,628
Natrona	0	1,422	6	0	1,579	392	16	24	3,439
Niobrara	1	124	0	0	1,391	164	0	0	1,680
Park	0	626	1,708	0	785	159	7	1,185	4,469
Platte	0	83	1	0	1,054	132	18	63	1,350
Sheridan	0	53	389	0	1,057	116	0	5	1,619
Sublette	0	1,270	1,168	0	606	113	8	4	3,169
Sweetwater	0	4,400	55	0	1,839	185	33	215	6,727
Teton	0	3	1,378	0	138	5	30	1,162	2,716
Uinta	0	481	38	0	769	53	2	0	1,342
Washakie	0	904	36	0	370	101	1	2	1,413
Weston	159	75	6	69	1,112	114	0	0	1,535
Total	311	17,520	8,651	242	27,602	3,603	249	4,478	62,656

Acres may vary based on source used.



1.3 Interests, Rights, and Uses

The public lands identified for study have a wide variety of interests, rights, and allowable uses that are dictated by a number of complex, overlapping, and contradictory factors.

The first factor which may affect the interests, rights, and uses of certain federal lands and how particular lands are managed is whether they are “public domain” lands or “acquired” lands. Public domain land refers to land ceded to the federal government by the original states or obtained from a foreign sovereign (via purchase, treaty, or other means) and which have not left the ownership of the federal government. Acquired lands are those obtained from a state or individuals by exchange, purchase, or gift. About 90% of all federal lands are public domain lands, while the other 10% are acquired lands. The lessening of the historical significance of these distinctions was recognized in Federal Land Policy and Management Act (FLPMA), which defines public lands as those managed by BLM, regardless of whether they were derived from the public domain or were acquired. However, the legal distinction is still present. Different laws may still apply depending on the original nature of the lands involved. Many laws governing federal public lands and their management relate only to what is legally referred to as “public domain lands” and not acquired lands.

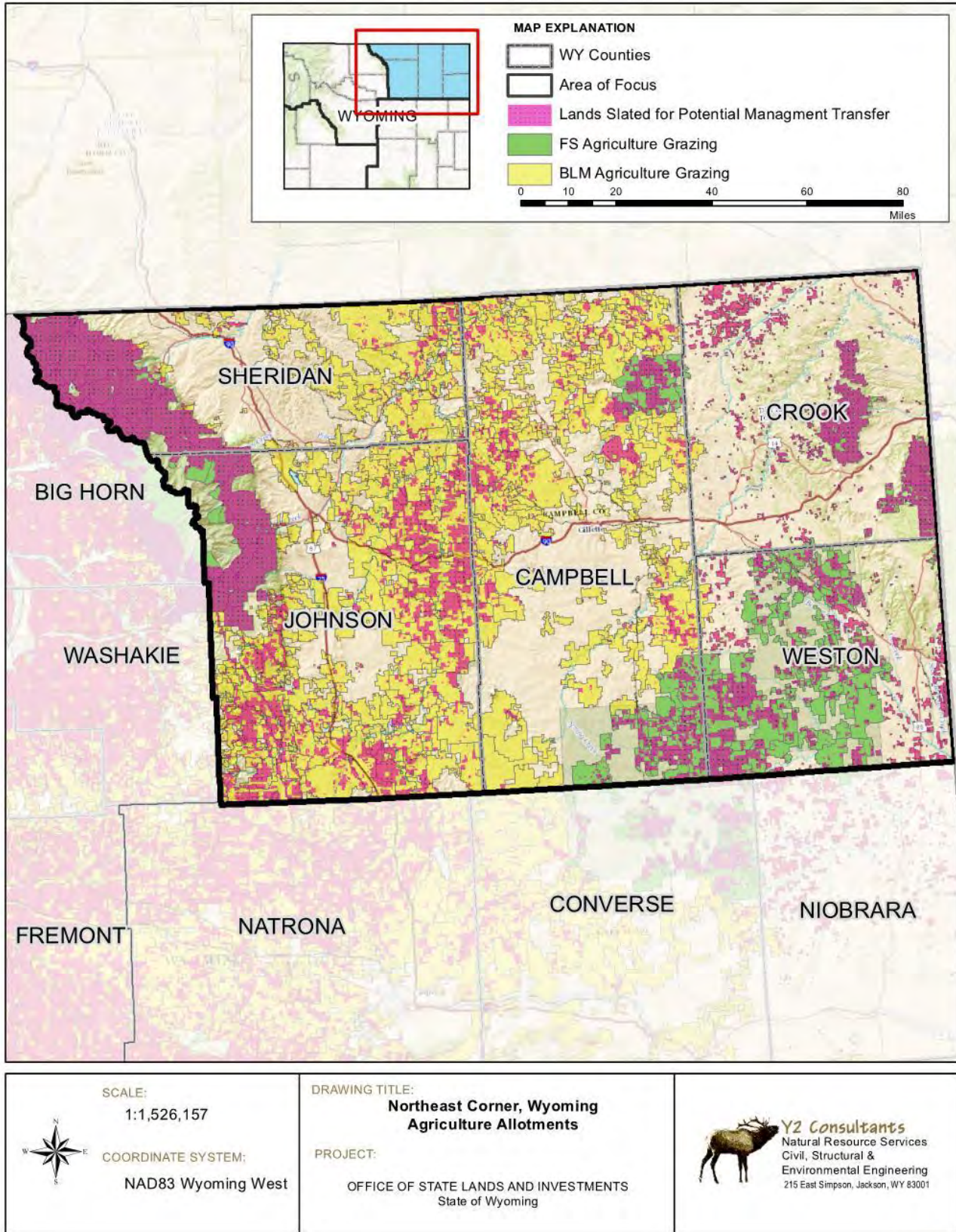
The second factor which would affect the interests, rights, and uses available is which federal law controls administration of the area and which federal agency currently makes management decisions. More specifically, whether the interests, rights, uses, and management decisions of the land manager dictated by FLPMA as BLM lands are or whether they are controlled by the NFMA as National Forest System lands.

The next layer dictating rights, interest and uses would require an examination of whether an area has been given a particular designation such as Wilderness Study Area (WSA), Area of Critical Environmental Concern (ACEC), or Lands with Wilderness Characteristics (LWC). More information on WSAs, ACECs, and LWCs can be found in Section 9. and maps that illustrate these areas in Wyoming administered by the BLM and USFS can be found in Figure 32 through Figure 38.

Further control over the uses, rights, and interests that exist within particular areas of the identified lands are dictated by the land use plans—either the BLM’s Resource Management Plans (RMP)s or the USFS’s Land Use Plans. RMPs in Wyoming are generally done for a geographic area that comprises each Field Office and each National Forest has its own Land Use Plan. Absent changes in federal law, the state would be bound to have land use plans and to use the framework to develop and amend these plans found in FLPMA for BLM lands and NFMA for USFS lands. The process to develop and periodically amend these plans would also have to comply with NEPA. An overview of the NEPA process which is currently expensive, extensive, adversarial, and protracted can be found in Section 2.1 and an overview of the BLM’s RMPs in Wyoming is in Appendix C.

Maps which illustrate the permitted uses of particular areas across the state are illustrated below.

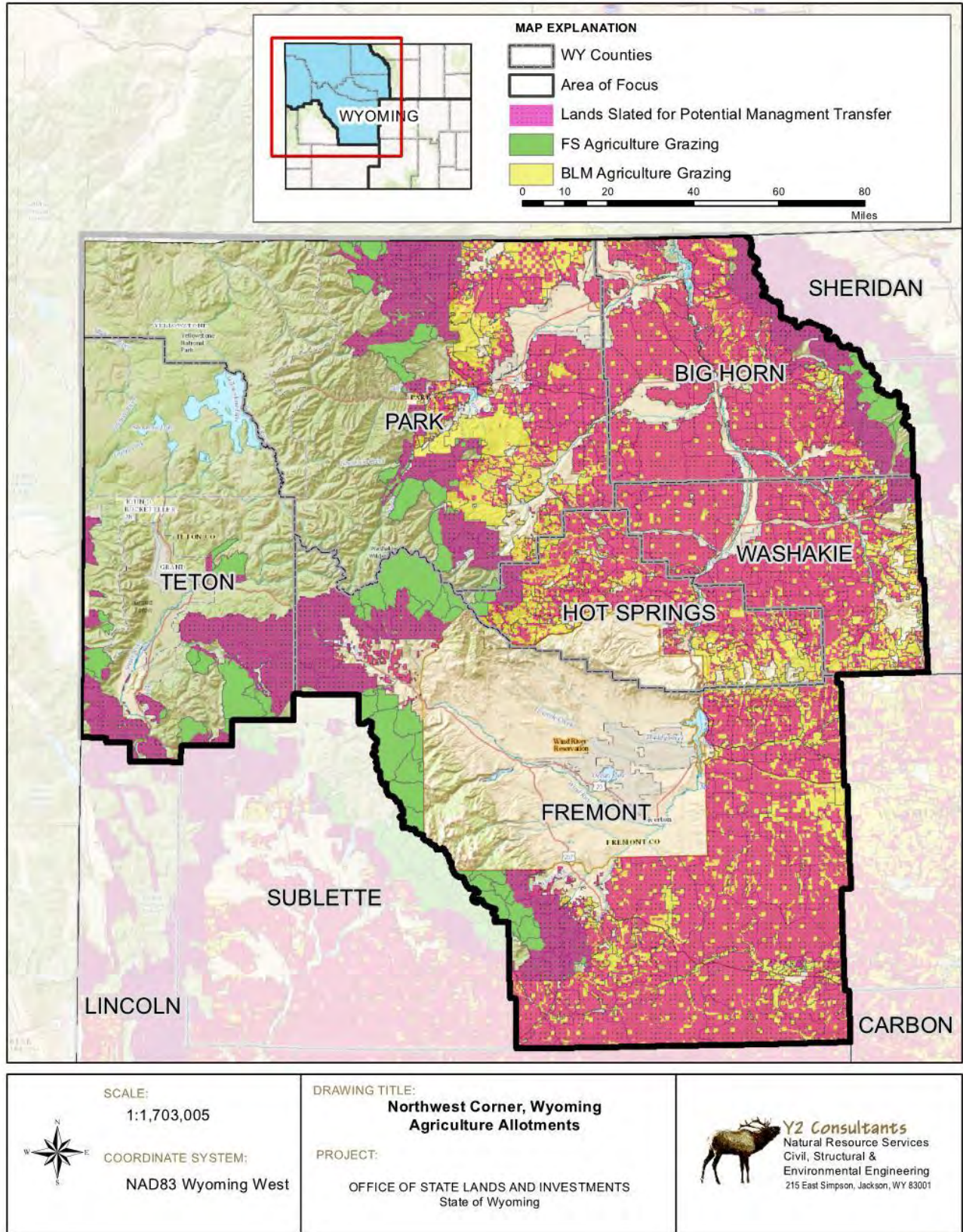




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Figure 2 Wyoming Agricultural Allotments, Northeast Corner, as of August 2016.

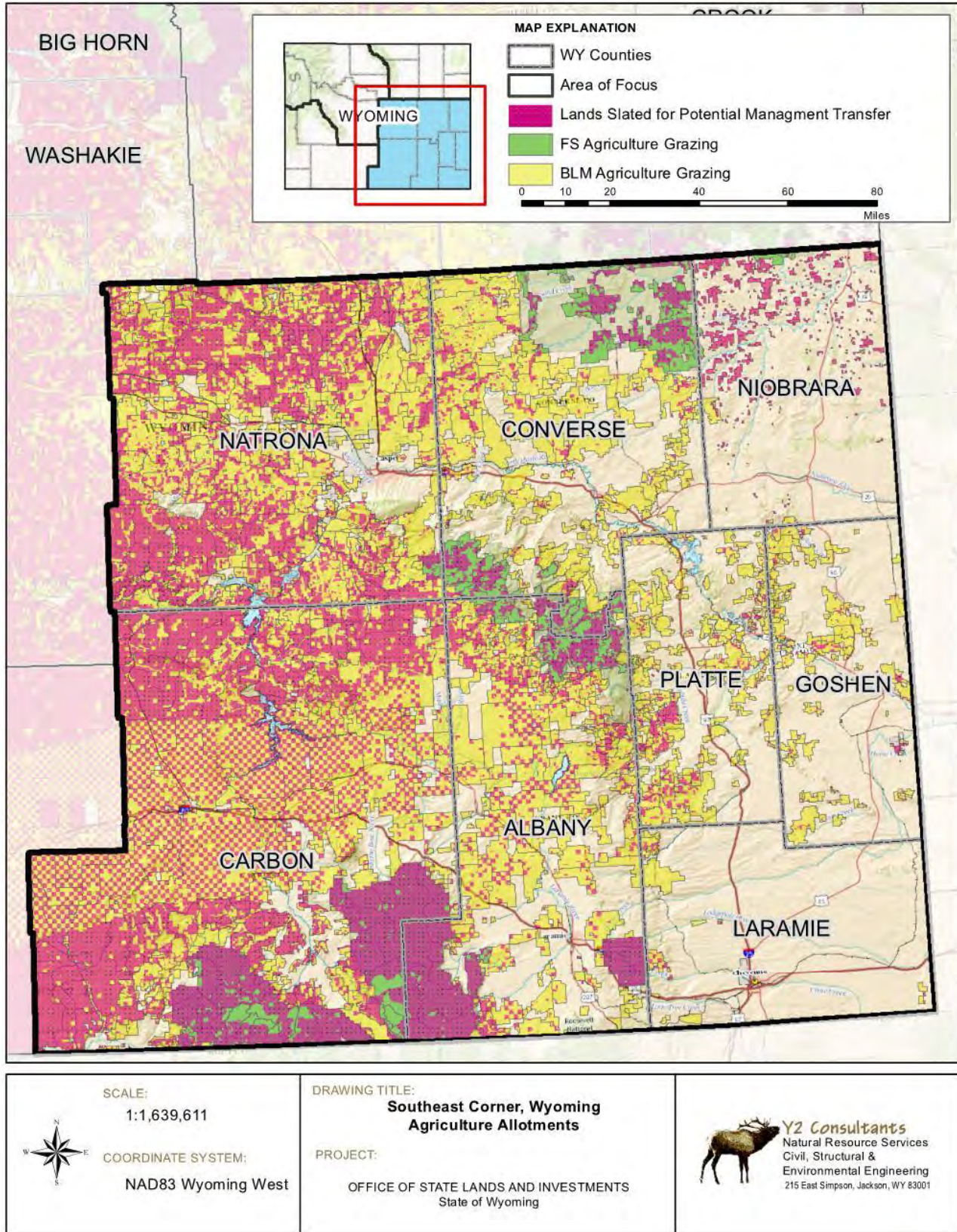




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Figure 3. Wyoming Agricultural Allotments, Northwest Corner, as of August 2016.

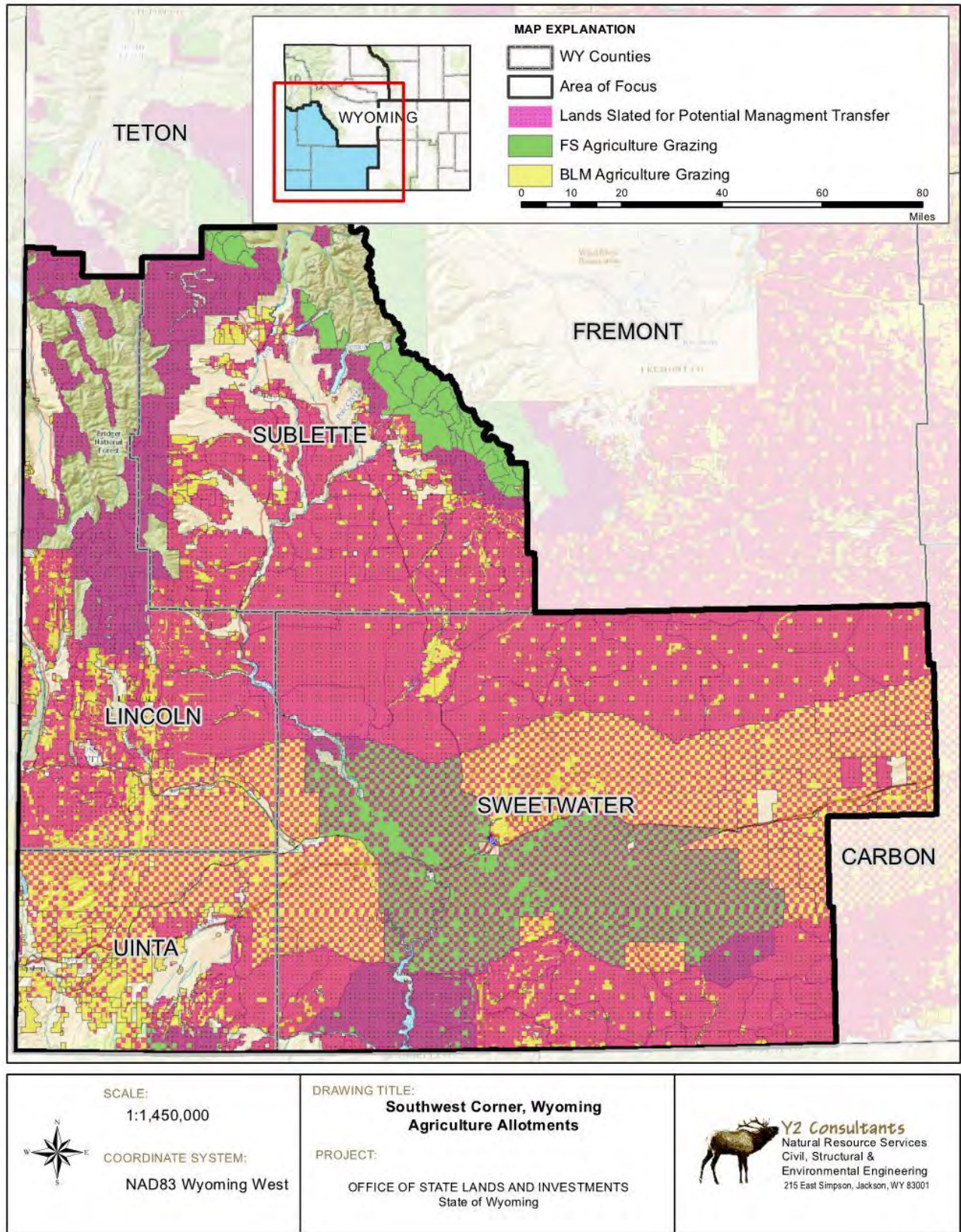




8/23/2016

Figure 4. Wyoming Agricultural Allotments, Southeast Corner, as of August 2016.

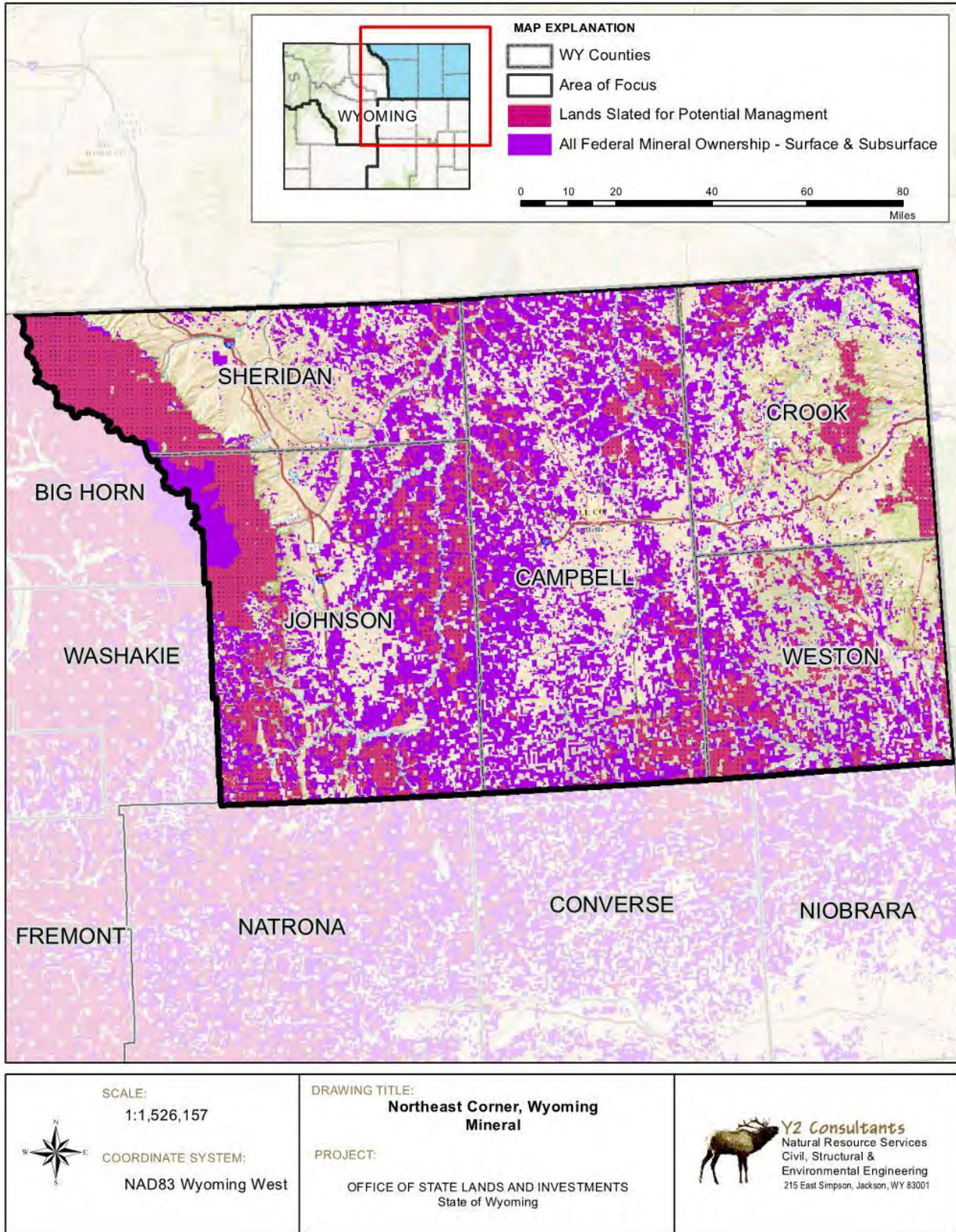




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Figure 5. Wyoming Agricultural Allotments, Southwest Corner, as of August 2016.

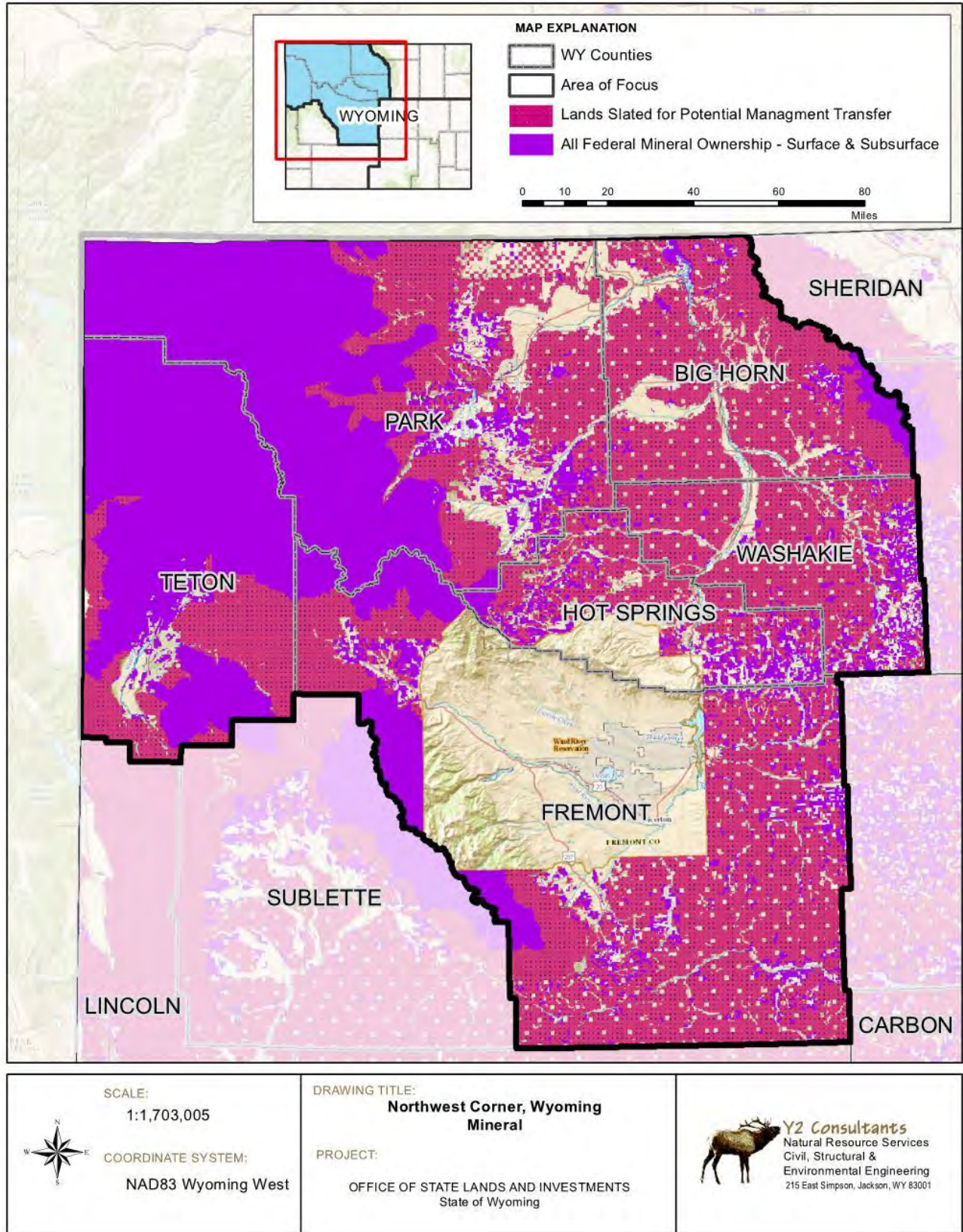




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Figure 6. Wyoming Mineral Ownership, Northeast Corner, as of August 2016.

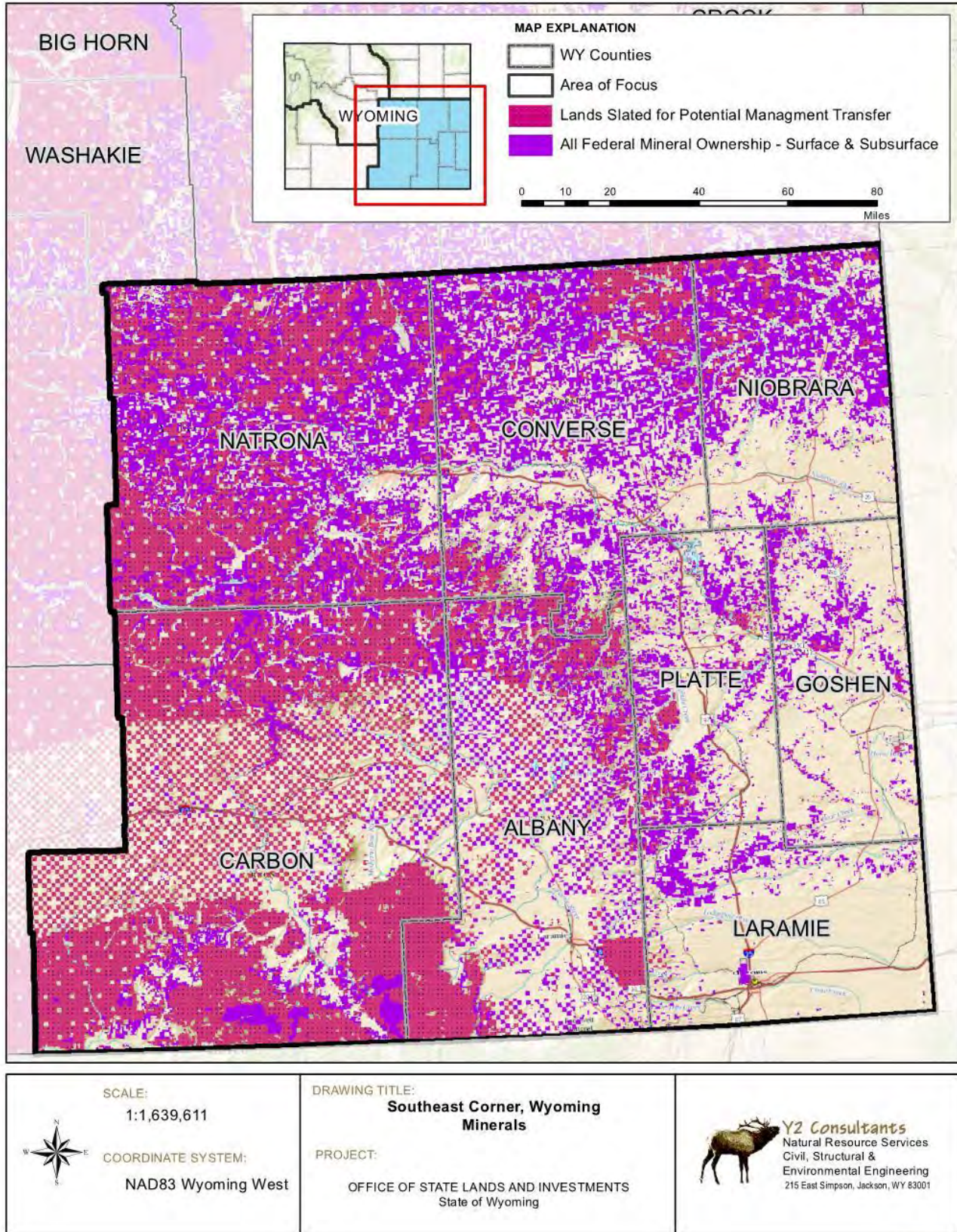




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Figure 7. Wyoming Mineral Ownership, Northwest Corner, as of August 2016.

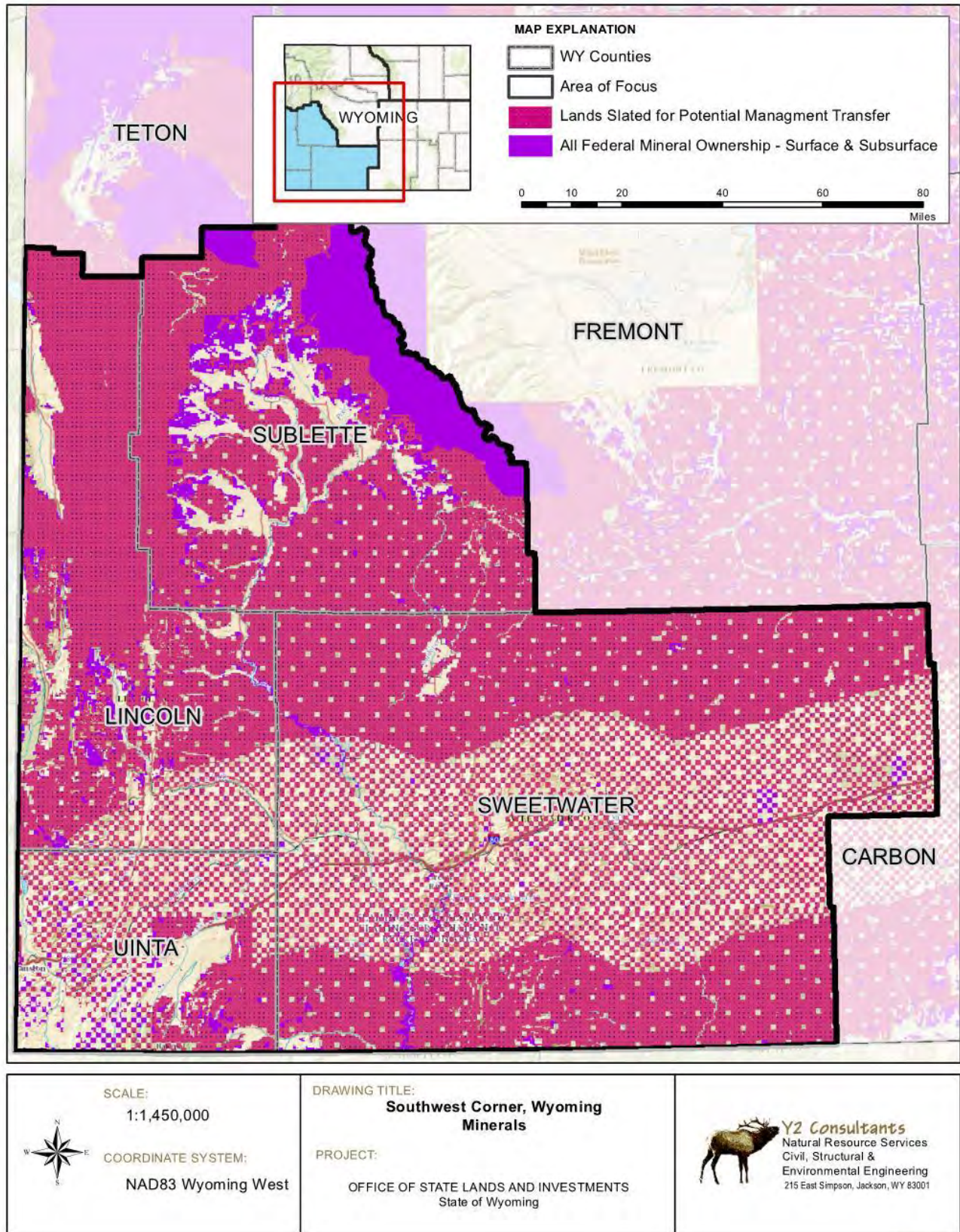




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Figure 8. Wyoming Mineral Ownership, Southeast Corner, as of August 2016.

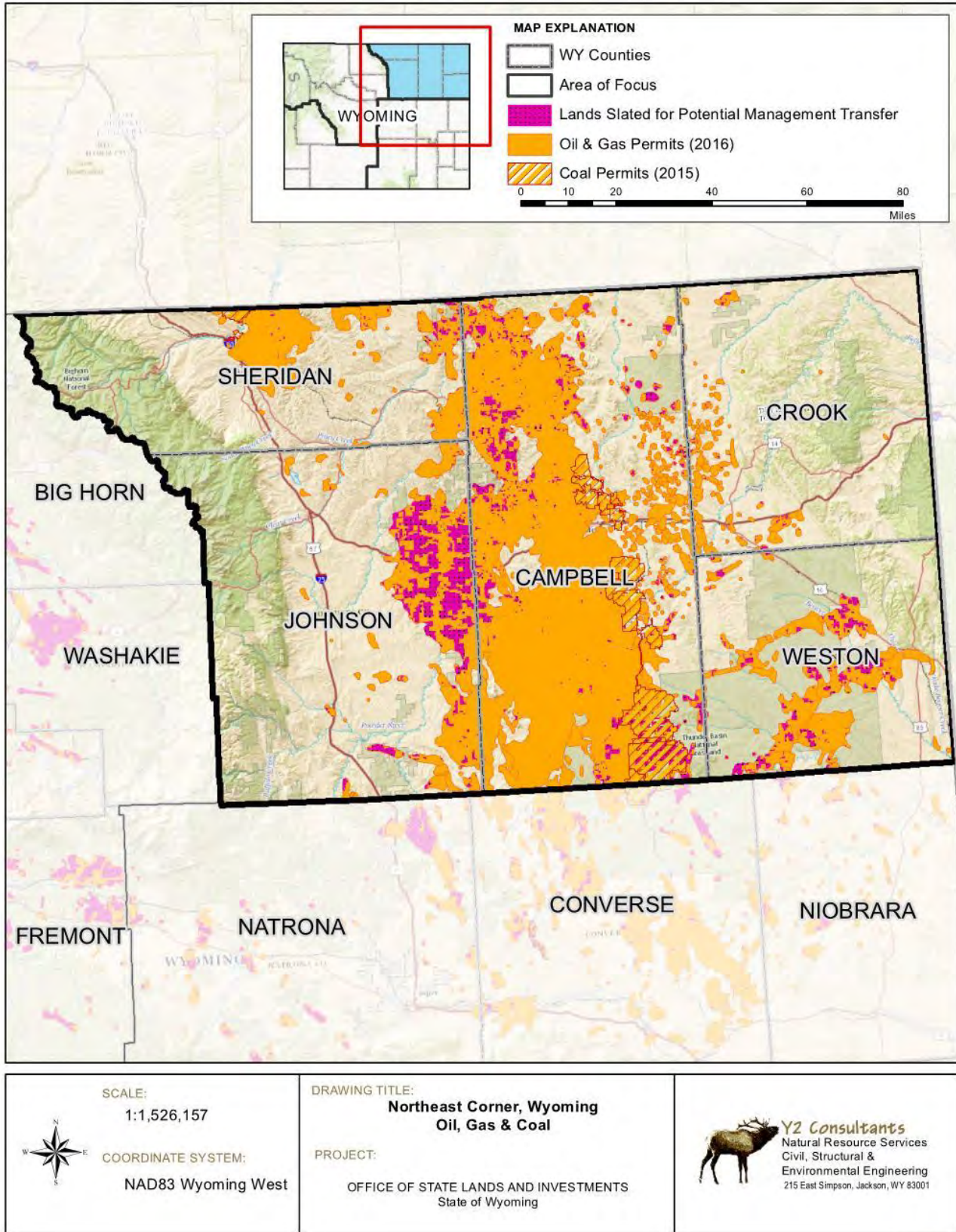




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Figure 9. Wyoming Mineral Ownership, Southwest Corner, as of August 2016.





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Figure 10. Wyoming Oil, Gas, and Coal Permits, Northeast Corner, as of August 2016.



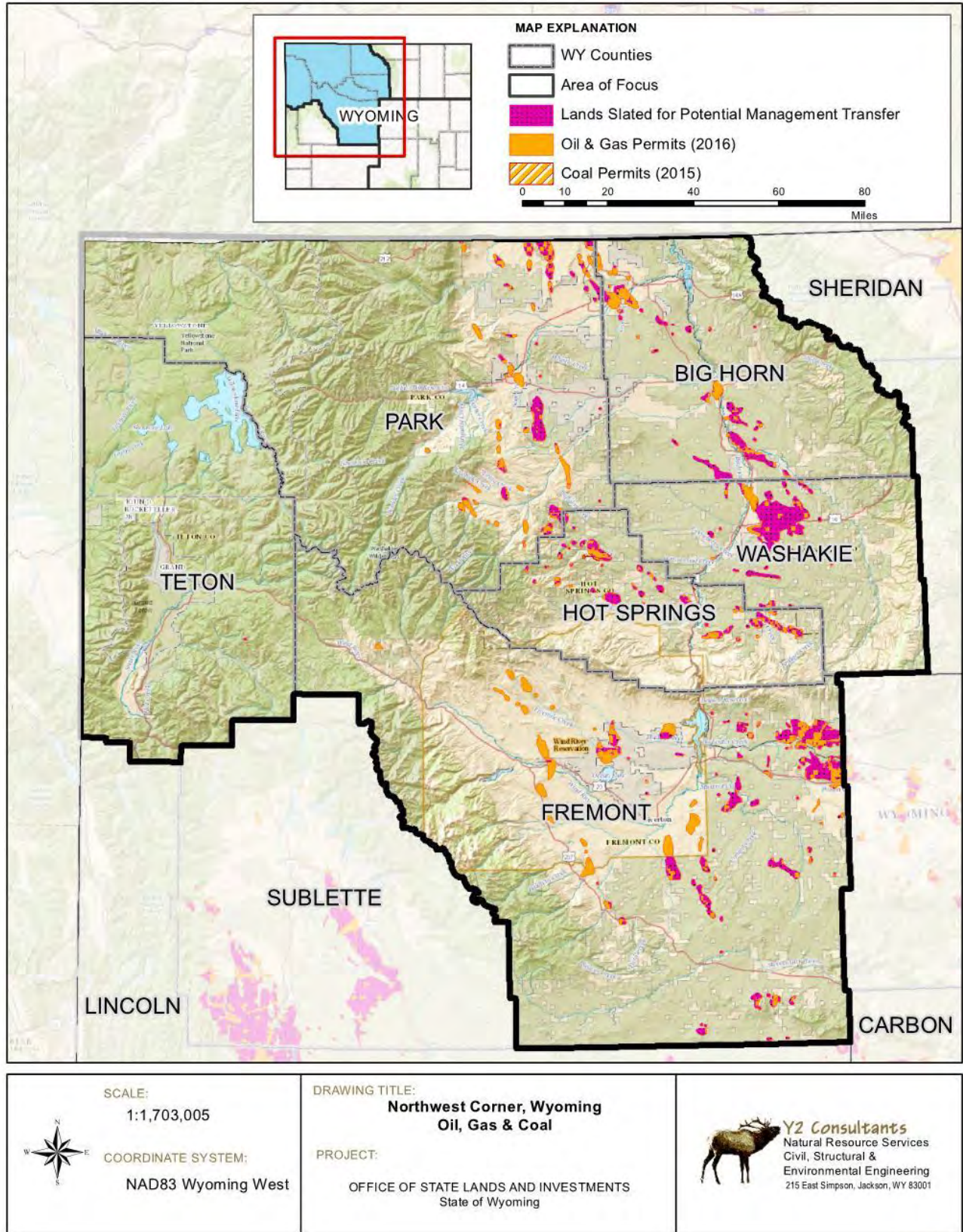
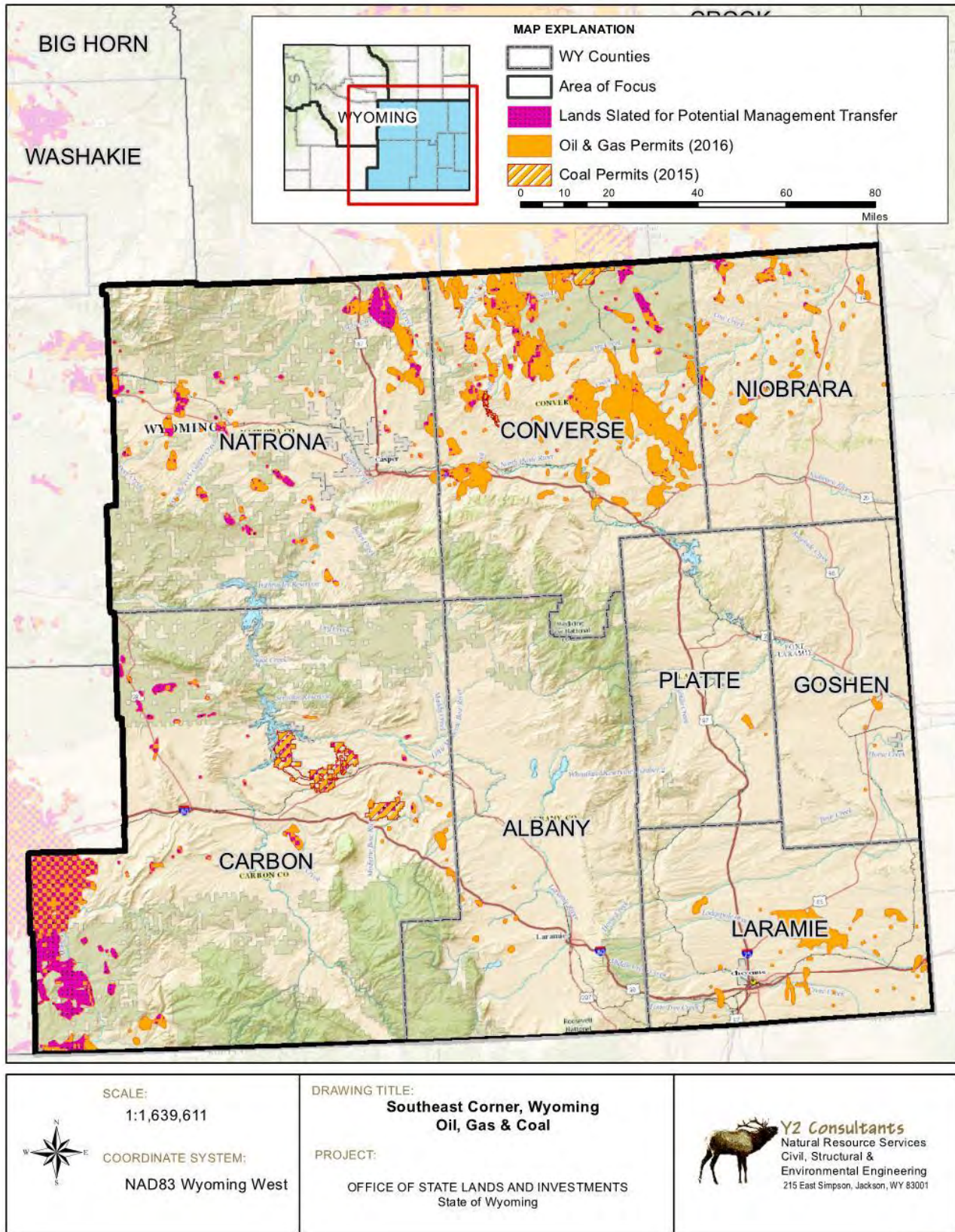


Figure 11. Wyoming Oil, Gas, and Coal Permits, Northwest Corner, as of August 2016.

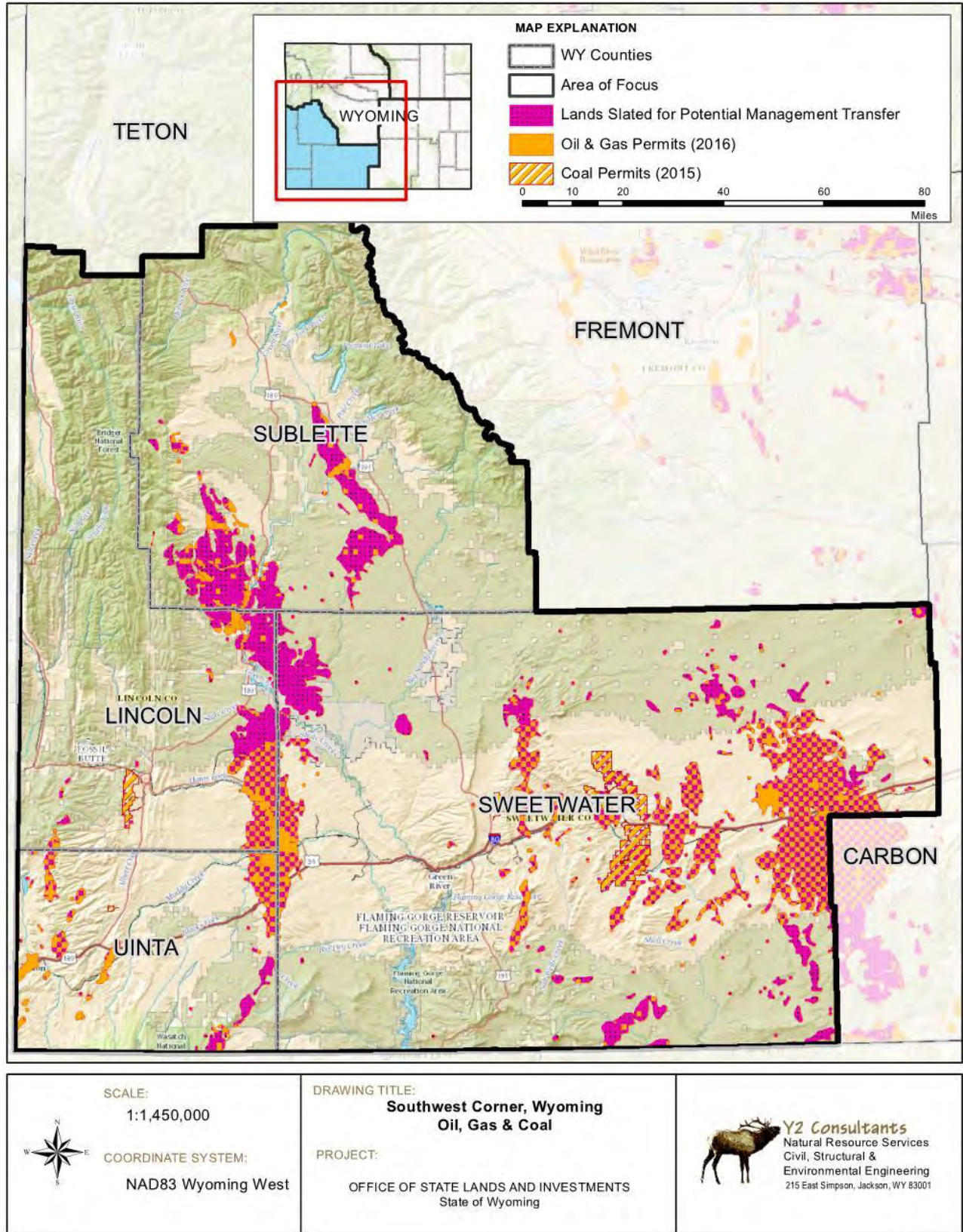




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Figure 12. Wyoming Oil, Gas, and Coal Permits, Southeast Corner, as of August 2016.





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Figure 13. Wyoming Oil, Gas, and Coal Permits, Southwest Corner, as of August 2016.



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2. LAWS GUIDING
FEDERAL LAND
MANAGEMENT



2. Laws Guiding Federal Land Management

Regardless of who is directing management on federal lands, the same federal laws will direct management of these lands. There are literally hundreds of laws that govern uses and activity on federal lands. The following discussion provides background on the laws most directly affecting federal agency establishment and public involvement. Many other laws and guidance are referenced throughout the document although a comprehensive list of laws governing federal land management are not included.

2.1 National Environmental Policy Act (NEPA)

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970. NEPA requires federal agencies to assess the environmental effects, and related social and economic effects, of their proposed actions prior to making decisions. The range of actions covered by NEPA is broad and includes any project using federal funds. Agencies are required to provide opportunities for public review and comment on their evaluation.

Title I of NEPA contains a Declaration of National Environmental Policy. This policy requires the use of all practicable means to create and maintain conditions where humans and nature can exist in productive harmony.

Section 102 of NEPA requires federal agencies to incorporate environmental considerations in their planning and decision-making process through a systematic, interdisciplinary approach. All federal agencies are required to prepare detailed statements assessing the environmental impact and alternatives to major federal actions significantly affecting the environment. Statements with significant environmental effects are Environmental Impact Statements (EIS). Environmental Assessments (EAs) describe activities that have no significant environmental impact.

Title II of NEPA established the President's Council on Environmental Quality (CEQ) to oversee NEPA implementation. The CEQ has three main functions:

1. Ensure that federal agencies are meeting their obligations under NEPA
2. Oversee federal agency implementation of the environmental impact assessment process
3. Issue regulations and guidance to federal agencies regarding NEPA compliance

In 1978, CEQ issued regulations to implement NEPA (40 CFR [Code of Federal Regulations] § 1500-1508). These regulations address the procedural requirements and administration of NEPA and are binding for all federal agencies. CEQ has also issued numerous guidance documents on the implementation of NEPA.

The BLM and USFS have also developed their own NEPA procedures to supplement CEQ NEPA regulations and guidance. The BLM has a Departmental Manual (Department of the Interior, 2008) and Handbook (Bureau of Land Management, 2008) providing guidance. Although some states have additional guidance, Wyoming BLM relies on the National documents. The USFS also has directives specific to the implementation of NEPA. Approved in 2012, Forest Service Manual (FSM) 1900



Chapter 1950 provides environmental policy and procedures (U.S. Forest Service, 2012) and Forest Service Handbook (FSH) 1909.15 National Environmental Policy Handbook (U.S. Forest Service, 2012).

The federal agency is generally the lead agency in the NEPA process depending on the agency's expertise and relationship to the proposed action. The agency implementing the federal action is responsible for NEPA compliance; if the federal action involves state, tribal, or local agencies there may be joint lead agencies.

A federal, state, tribal, or local agency having special expertise with respect to an environmental issue or jurisdiction by law may be a cooperating agency. A cooperating agency has the following responsibilities:

- Assist the lead agency by participating in the NEPA process at the earliest possible time
- Participate in the scoping process
- Develop information and prepare environmental analysis that the agency has special expertise in
- Make staff support available

Steps in the NEPA Planning Process:

1. Notice of Intent. Publish a Notice of Intent (NOI) to inform the public, local and state government, other federal agencies and Indian Tribes of its intent to prepare or revise a land use plan for a particular area. Simultaneously the agency sends out scoping notices to appropriate parties. This formally initiates the planning process.
2. Analysis of Management Situation. Prepare an Analysis of Management Situation (AMS), which is required by law. This is a profile of the current planning area and current RMP and a description of issues, concerns and changes in the area as well as nationally that prompted the determination that revisions to the current RMP are warranted. BLM must use available data in its report and analysis. Examples of data typically included are the condition of the soil, water, vegetation, and wildlife and wildlife habitat, overall ecosystem function, resource use levels, recreation activities, as well as the social and economic condition of the surrounding communities (and applicable national and global conditions) and their relationship with the public lands. The AMS is made available to the public either during or after the public scoping process.
3. Scoping. Scoping is required under NEPA and the CFRs. Scoping is the process by which the public and cooperating agencies collaborate with the land managers to identify issues that should be addressed in the planning process including levels of resource production, recreation use, management practices, new data, emerging challenges and issues, changed circumstances and the planning criteria. A minimum of thirty days must be provided for the public to address the planning criteria and to raise issues A scoping report is prepared summarizing all of the comments.



4. **Formulate Alternatives.** The land management agency must develop formal alternatives to propose for new/revised RMPs. Each alternative includes a different but appropriate mix of uses and restrictions for the planning area and a different suite of potential planning decisions to address issues. The goal is to help the federal agency, cooperating agencies, and the public to understand and vet the different ways to address the planning issues raised and the various scenarios for management of the resources and uses in the planning area - scenarios for allowable uses such as mineral leasing, locatable mineral development, recreation, timber harvest, utility corridors, and livestock grazing. Each alternative includes desired outcomes (goals and objectives) and the allowable uses and actions anticipated to achieve those outcomes. All reasonable alternatives must be considered, including an alternative of no action (the continuation of present system of management). Ideally and to the extent possible, alternatives are to be developed in an open, collaborative manner.
5. **Analyze Effects of Alternatives.** A supporting EIS is required under NEPA. The EIS is prepared as well as a draft proposed RMP which lays out the various management alternatives formulated. Both the initial Draft RMP and the EIS are developed concurrently with a full range of public participation. The EIS must estimate and describe the physical, biological, economic, and social effects of implementing each alternative considered in detail, including the no action alternative. The effects are described in the draft RMP and /draft EIS. NEPA requires an EIS for new RMPs and revisions to RMPs. Amendments to RMPs may require a full EIS but depending upon the scope of the amendment and anticipated impacts of the amendment, the simpler analysis of an EA/Finding of No Significant Impact (FONSI) may be utilized. EA-level planning efforts are completed mainly for minor plan amendments. In general, there are fewer planning steps involved in EA-level planning. A draft RMP amendment and EA/FONSI must be prepared when it is determined that a public review and comment period are appropriate (for example, when proposed ACEC designations are being considered per 43 CFR 1610.7-2(b) or to meet NEPA requirements under certain limited circumstances per 40 CFR 1501.4(e)(2). Otherwise, a draft plan amendment is not required, the agency can simply go from analyzing the effects of alternatives to preparing a proposed RMP amendment/EA/FONSI. The number of steps and extent of work involved with each step varies. This document describes the purpose and need for the plan, the affected environment, the alternatives for managing public lands within the planning area (including the preferred alternative), the environmental impacts of those alternatives, and the consultation and coordination in which the agency engaged in developing the plan.
6. **Select a Preferred Alternative.** By evaluating the alternatives in the EIS, the agency must determine which combination of potential planning decisions contained in the alternatives best meets the MUSY mandates of the agency. If any one alternative contains the desired combination of potential planning decisions, then that alternative should be identified as the preferred alternative. If the combination of potential planning decisions is drawn from different alternatives, then those potential planning decisions should be compiled into a new alternative (identified as the preferred alternative) and the impacts analyzed accordingly.



7. Publish a notice of availability and provide a public comment period. Draft RMPs and EISs must be published in the Federal Register. The agency must provide at least 90 days for the public to comment on the draft RMP (amendment) and draft EIS. This public comment period officially starts with the Environmental Protection Agency's (EPA's) publication of a Notice of Availability (NOA) for the document in the Federal Register. The agency also publishes a NOA in the Federal Register to provide information not contained in the EPA's NOA about the project, comment period, contact information, and other supplemental information. The agency may also announce the start of the comment period (and the dates, times, and locations of public meetings) through other mechanisms, such as press releases, planning bulletins or newsletters, direct mailings and e-mailings, and Internet postings.
8. Prepare and publish a proposed RMP (amendment) and final EIS. The proposed RMP (amendment) and final EIS builds on the draft RMP (amendment) and draft EIS to include appropriate responses to public comments received on the draft RMP (amendment) and draft EIS as well as a description (either verbatim or summary) of the comments received. It also corrects errors in the draft RMP/EIS identified through the public comment process and internal BLM review. The proposed RMP and final EIS may also contain modification to the alternatives and the accompanying impact analysis contained in the draft RMP/EIS. However, substantial changes to the proposed action, or significant new information/circumstances collected during the comment period would require supplements to either the draft or final EIS (40 CFR 1502.9(c)). The proposed RMP (amendment)/final EIS should clearly show the changes from the draft RMP (amendment)/draft EIS. The proposed RMP/final EIS should also display land use plan and implementation decisions (and clearly distinguish between the two types of decisions).
9. Provide a Governor's consistency review period. In addition to a 30-day protest period, the BLM must also provide a 60-day review period to the governor of the state in which the RMP (amendment) is being proposed to ensure consistency with state and local plans, policies, and programs. CEQ recommends that the protest period and the governor's review period occur simultaneously in order to save time. State or regional offices can potentially negotiate a shorter review period with the Governor. Any responses from a governor on consistency must be resolved before the agency issues a Record of Decision (ROD).
10. Determine need for a notice of significant change and provide a comment period if necessary. The protest letters and comments from the Governor could result in the need to significantly modify the proposed RMP (amendment)/final EIS. For planning purposes, "significant" is the equivalent of "substantial" as used in 40 CFR 1502.9(c). If the change is significant, the agency must announce the intended changes to the public and provide a 30-day comment period. Without this step, the public would not have an opportunity to understand and respond to the potential change (40 CFR 1505.2). The agency must then respond to the comments as described previously. Should the agency issue a notice of significant change, it may also be necessary to issue a supplemental proposed RMP (amendment)/ final EIS (see 40 CFR 1502.9(c) (1-4)).
11. Finalized RMPs are announced in a ROD which are published in the Federal Register. The ROD documents the determination that a new RMP was necessary, approval of the RMP, describes



the modifications and clarifications made to the Proposed RMP after release of the Final EIS, outlines the alternatives that were considered in the Proposed RMP, explains rationale for the decisions, describes the process of soliciting and incorporating public involvement and the inclusion of local and state and governments and other cooperating agencies, how planning decisions will be implemented, and how goals and objectives will be measured and evaluated.

These steps outlined above are specific to RMPs but are also applicable to USFS Land and Resource Management Plans.

There are also “Programmatic” Land Management Plans and EISs that address specific issues, activities, and uses that affect a larger swath of public land. Examples include Greater Sage-grouse conservation, geothermal leasing, wind energy development, herbicide use, and oil shale development. These programmatic management plans supersede other plans, amend existing land use plans with any contrary provisions and establish parameters that dictate future revisions to management areas.

Consultation Process

Consultation involves a formal effort to obtain the advice or opinion of another agency regarding an aspect of land use management for which that agency has particular expertise or responsibility, as required by statute or regulation. For example, the Endangered Species Act requires consultation with the U.S. Fish and Wildlife Service (USFWS) or National Oceanic and Atmospheric Administration (NOAA) - Fisheries regarding land use actions that may affect listed species and designated critical habitat (see 50 CFR 402.14). Agencies are directed to keep informed of other Federal agency, state, and local land use plans; ensure that consideration is given to those plans in the development of land use plan decisions; and assist in resolving inconsistencies between Federal and non-Federal plans.

Additional Statutory Requirements

In addition to the consistency provisions discussed above, the land use planning process, where applicable, must comply with the following statutes and Executive orders:

- a. Section 101(d)(6) of the National Historic Preservation Act (NHPA). This act requires the BLM to consult with Indian Tribes when historic properties of traditional religious or cultural importance to a Tribe would be affected by BLM decision-making.
- b. The American Indian Religious Freedom Act. This act requires the BLM to protect and preserve the freedom of American Indians and Alaska Natives in exercising their traditional religions, including access to sites and the freedom to worship through ceremonials and traditional rites.
- c. Executive Order 13007 (Indian Sacred Sites). This requires the BLM to accommodate access to and use of sacred sites and to avoid adversely affecting the physical integrity of sacred sites to the extent practicable, permitted by law, and not inconsistent with essential agency functions. The agency must ensure reasonable notice is provided to Tribes, through government-to government relations, of proposed actions or land management policies that may restrict future access to or ceremonial uses of, or adversely affect the physical integrity of, sacred sites, including proposed land disposals.



d. Executive Order 12898 (Environmental Justice). This requires the agency to take into account the relevant CEQ and agency guidelines.

Protective measures for culturally sensitive Native American resources are established through consultation and coordination with the appropriate Native American tribes. Pursuant to the NEPA, NHPA, FLPMA, American Indian Religious Freedom Act (AIRFA), and Executive Order 13007, the agency has engaged in consultation with Native American representatives for the RMP planning process.

Cooperating Agency Status

The CEQ regulations implementing NEPA allow federal agencies (as lead agencies) to invite tribal, state, and local governments, as well as other federal agencies, to serve as cooperating agencies in the preparation of EISs.

Cooperation is the process by which another governmental entity works with the lead agency to develop a land use plan and NEPA analysis, as defined by the lead and cooperating agency provisions of the CEQ's NEPA regulations (40 CFR 1501.5 and 1501.6). Cooperating agency and related roles should be formalized through an agreement before the scoping process begins.

The CEQ defines cooperating agency in regulations implementing NEPA, particularly at 40 CFR 1501.6 and 1508.5. CEQ regulations specify that a federal agency, state agency, local government, or tribal government may qualify as a cooperating agency because of “. . . jurisdiction by law or special expertise.”

Table 2 outlines an example of average workload for an agency during a calendar year.

Table 2. Wyoming BLM 2014 NEPA Activity.

BLM Wyoming 2014 NEPA Activity	
Environmental Impact Statements	21
Environmental Assessments	330
Categorical Exclusions	1113
Determination of NEPA Adequacy	128

2.2 Federal Land Policy and Management Act (FLPMA)

The FLPMA of 1976 provided a multiple-use management and sustained yield policy for all BLM lands. FLPMA directed management to protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archeological values. BLM is required to establish a planning process for the management of public lands and periodically inventory all public lands and the resources on those lands. FLPMA's goal was to establish a unified, systematic framework for the management of BLM administered public lands, and it granted BLM new authorities and responsibilities, amended or repealed previous legislation, and prescribed specific management techniques. While systematic land use planning had been developed for a significant percentage of BLM administered lands in the 1970s through Management Framework Plans (MFPs),



following passage of FLPMA, BLM began developing RMPs, which were to be prepared in conjunction with the EISs required by NEPA.

FLPMA outlines the functions of the BLM, provides for administration of public lands through the BLM, provides for management of the public lands on a multiple-use basis, and requires land-use planning including public involvement and a continuing inventory of resources. The Act establishes as public policy that, in general, the public lands will remain in Federal ownership, and authorizes the following:

- Acquisition of land or interests in lands consistent with the mission of the Department and land use plans
- Permanent appropriation of road use fees collected from commercial road users, to be used for road maintenance
- Collection of service charges, damages, and contributions and the use of funds for specified purposes
- Protection of resource values
- Preservation of certain lands in their natural condition
- Compliance with pollution control laws
- Delineation of boundaries in which the Federal government has right, title, or interest
- Review of land classifications in land use planning and modification or termination of land classifications when consistent with land use plans
- Sale of lands if the sale meets certain disposal criteria
- Issuance, modification, or revocation of withdrawals
- Exchange or conveyance of public lands if in the public interest
- Outdoor recreation and human occupancy and use
- Management of the use, occupancy, and development of the public lands through leases and permits
- Designation of Federal personnel to carry out law enforcement responsibilities
- Determination of the suitability of public lands for rights-of-way purposes (other than oil and gas pipelines) and specification of the boundaries of each right-of-way (ROW)
- Recordation of mining claims and reception of evidence

2.3 National Forest Management Act (NFMA)

The National Forest Management Act (NFMA) is an amendment of the Forest and Rangeland Renewable Resources Planning Act of 1974. The NFMA establishes standards for how the USFS manages national forests, requires the development of land management plans for national forests and grasslands, and directs the USFS to develop regular reports on the status and trends of renewable resources on all forests and rangelands.



In 2012, the USFS issued proposed planning rules for the National Forest System. Final planning directives were issued in January 2015. The new planning directives emphasize collaboration and working across landscape boundaries.





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3. MANAGEMENT AGENCIES



3. Management Agencies

Three agencies are discussed in this section. The scope of the federal land management agencies, primarily BLM and USFS, are discussed in general with some reference to overall mission and focus. The BOR is the third federal landowner discussed. Agencies within the State of Wyoming, as the potential manager of these federal lands, are discussed in the context of similarity of (and differences in) programs to the federal agencies.

3.1 Bureau of Land Management

The General Land Office was created in 1812 to oversee the disposal of western public lands, primarily through sales and land grants. The Taylor Grazing Act of 1934 (43 USC 315) established the U.S. Grazing Service, which regulated the use of public lands for grazing and “embodied the view that public lands should be retained in federal ownership and scientifically managed in the public interest” (Denver, 2013). The General Land Office and the U.S. Grazing Service were combined into the Bureau of Land Management and into the Department of the Interior. Under the Classification and Multiple Use Act in 1964 (CMU Act), BLM no longer classified lands on a case-by-case basis, evaluating petitions from land users, but planned how lands and resources would be managed. CMU also introduced a definition of multiple-use as the “combination of surface and subsurface resources of the public lands that will best meet the present and future needs of the American people,” although there was a great deal of disagreement over the interpretation and implementation of the law (U.S. Department of the Interior, 2008). The Public Land Law Review Commission was created in 1964 to clarify the nation’s public land management and use policy, as well as the mission of the BLM. In 1970, the Commission recommended that land disposal policies be abandoned and that future disposal actions should be only of those lands that would achieve maximum benefit for the general public in non-Federal ownership.

The BLM today, within the Department of the Interior, is tasked with the administration of over 248 million acres of public lands in the United States, more than any other federal agency in the United States, representing approximately 13% or one eighth of the United States (U.S. Department of the Interior, 2008). The BLM also manages 700 million acres of sub-surface mineral estate throughout the nation. Most of this land is located in the 11 western states and Alaska. BLM lands are three times the size of the National Park System and almost a third bigger than the National Forest System. They are also the only lands technically legally termed “public.” BLM lands are sometimes unfairly labeled as the “land nobody wanted” or the “leftover lands” because they generally represent the lands not selected for homesteading, transferred to the states on statehood, transferred to railroads, sold off, or otherwise conveyed to private interests during the period when our nation’s public lands policy was disposal, nor were they were selected for withdrawal and designation as national parks, national forests, or wildlife refuges (Wilson, 2014). In Wyoming, the over 18 million acres of public lands administered by the BLM account for 23% of Wyoming’s land base of over 62 million acres (Gorte, Vincent, Hanson, & Rosenblum, 2014). Additionally, over 40 million acres of mineral estate administered by the BLM are scattered across the state.



BLM's mission is to sustain the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations. FLPMA charged BLM with managing public lands for "multiple uses and sustained yield" sometimes referred to as MUSY. Uses include energy development, livestock grazing, recreation, and timber harvesting among other things. At the same time, BLM works to conserve wildlife and their habitat as well as to preserve scenic, natural, cultural, and historic resources. Twenty-seven million acres of BLM administered public lands are included in the National Landscape Conservation System (NLCS) but there are none in Wyoming. Unlike National Parks and other public lands that much of the general public is most familiar with—lands administered by the BLM are, and have historically been, managed for resource development—livestock grazing, mineral, oil and gas extraction, and logging. BLM is one of the few federal agencies that generate more revenue for the United States than it spends. For example, in Fiscal Year 2012, nearly \$5 billion was generated by activities on BLM-managed lands, including an estimated \$4.3 billion from onshore oil and gas development. About half of those revenues go to the states where the mineral leasing occurred. The resource development that takes place on BLM lands ties these lands very closely with local rural economies.

BLM manages public lands through twelve state offices. The BLM in Wyoming administers approximately 18.3 million surface acres and 41.6 million subsurface acres. The public lands in Wyoming administered by the BLM are organized into three districts with ten Field Offices - the Wind River/Bighorn District with Field Offices in Cody, Lander, and Worland*; the Wyoming High Desert District with Field Offices in Kemmerer, Pinedale, Rawlins, and Rock Springs*, and the Wyoming High Plains District with Field Offices in Buffalo, Casper*, and Newcastle (*District office headquarters). There is also a State Office in Cheyenne.

There were several areas where costs to manage lands that are not contemplated for transfer are included in the management costs presented in this study because data could not be meaningfully separated or extricated. For example, the costs for the work the BLM does for oil and gas leases on tribal lands in Wyoming and for the relatively modest amount of lands in Nebraska that are managed by BLM Wyoming (about 6,600 federal surface and subsurface acres with an additional 240,000 split-estate mineral acres) are included because they could not be separated out and removed.

Areas of significant costs related to management not included in this report would include technical and operational support for human resources, information technology, geospatial services, and finance provided by the BLM's National Operations Center (NOC) in Denver, Colorado and the costs associated with the Office of Natural Resource Revenue (ONRR) which handles the collection, verification, auditing and disbursement of most mineral revenue generated on public lands in Wyoming.

There are additional reasons why the data used to estimate the costs of management done by the BLM in Wyoming is limited. More detail is provided in Appendix A.



3.2 U.S. Forest Service (USFS)

Forest management in the United States was formalized when Congress created the office of Special Agent in 1876 in the Department of Agriculture to assess the quality and condition of forests in the United States. Reports produced by the special agent on timber production and supply in the U.S. encouraged Congressional support for the expansion of that office with the creation of the Division of Forestry in 1881. Initially there was no land to manage. The Division merely studied and gathered data on the nation's forests and advised the government and private land owners (Wilson, 2014). In 1891 Congress passed the Forest Reserve Act (also called the Creative Act) allowing the President to designate western lands as "forest reserves." The first reserve created pursuant to this unprecedented Presidential authority was the Yellowstone Timberland Reserve along the south border of Yellowstone National Park. Today these lands are a part of Shoshone and Bridger-Teton National Forests. Western communities strongly opposed forest reserves under the Creative Act because development and use of "reserved lands" was prohibited.

The Organic Administration Act of 1897 declared that forest reserves would be created for two purposes (1) to protect water resources for local communities and agriculture and (2) to provide a continuous supply of timber. Thus, the purposes for which forests were to be used changed from the land being reserved from local communities to the land being used for economic development by local communities. The Supreme Court upheld the original purposes of Organic Administration Act in 1976 in *U.S. v. New Mexico*. Responsibility for management of the early forest reserves was initially given not to the Division of Forestry that already existed in the Department of Agriculture but to the Department of the Interior. In 1905, President Roosevelt transferred responsibility from Interior to the Department of Agriculture and the Division of Forestry—soon renamed the United States Forest Service (USFS). The Forest Reserves were renamed "National Forests" to emphasize that they were to be used and not merely "reserved" and preserved like a national park (Wilson, 2014). The Forest Service's mandate of 1905 was to provide quality water and timber for the nation's benefit. Congress later directed the Forest Service to broaden its management scope for additional multiple uses and benefits and for the sustained yield of renewable resources such as water, forage, wildlife, wood, and recreation.

Today the USFS manages the 193 million acres of public land that comprise the National Forest System found in 44 states, Puerto Rico, and the Virgin Islands. These lands make up 8.5 percent of the total land area in the nation, an area roughly the size of Texas. It is the only major land management agency outside of the Department of the Interior. In addition, the Forest Service's mandate includes providing a variety of support, including technical advice and financial assistance, towards the sustainable management of approximately 500 million acres of private, state, and tribal forest in the United States. USFS is the largest forestry research organization in the world.

The work of the Forest Service currently mandated by Congress is comprised of three central tasks - managing the 193 million acres of the National Forest System, research to gather information and develop new technologies to support sustainable forests, and providing assistance to state, local,



private, and international forest owners. USFS generally has four levels that coordinate that work: (1) the Washington office (2) the nine forest regions and seven research stations, (3) individual national forests and grasslands, and (4) ranger districts.

The mission of the Forest Service is to sustain the health, diversity, and productivity of all of the nation's forests and grasslands in order to meet the needs of present and future generations. The workforce is comprised of approximately 34,500 employees. Their work is supplemented by approximately 59,000 volunteers who contribute to the work of the USFS. In the Bridger-Teton NFS, over 600 volunteers contributed over \$500,000 of work in 2015.

There are nine geographic regions with offices that oversee and coordinate the management of the respective National Forests. Regions are numbered 1 through 10 (region 7 was absorbed into other regions). A regional forester oversees the supervisors for each national forest and grassland. Regional office staff coordinates activities between national forests and grasslands, monitors activities on those lands to ensure quality operations, provides guidance for forest plans, and allocates budgets to the forests. There are five regional research stations and two labs that oversee research and development.

There are 154 national forests and 20 grasslands. Each National Forest has multiple ranger districts. The Forest supervisors direct the work of the district rangers, coordinates activities between districts, allocates the budget, and provides technical support to each district.

There are more than 600 ranger districts, each with a District Ranger and a staff of 10 to 100 people. Districts vary in size from 50,000 acres to more than 1 million acres. Most on-the-ground activities occur within ranger districts, including trail construction and maintenance, operation of campgrounds, and management of vegetation and wildlife habitat.

There are eight National Forests and Grasslands managed by the USFS in Wyoming. Bridger-Teton National Forest, Shoshone National Forest, and Bighorn National Forest are the only ones that are entirely within Wyoming.

The Bridger Teton National Forest is 3,340,148 acres, Shoshone National Forest is 2,469,519 acres, and Bighorn National Forest is 1,105,087 acres.

The Medicine Bow-Routt National Forests and Thunder Basin National Grassland covers over 3 million non-contiguous acres from northcentral Colorado to central and northeastern Wyoming. The three areas are managed as one unit and together approximately 38% is in Colorado and 62% is in Wyoming. Medicine Bow is 1,388,499 acres and is entirely within Wyoming as is Thunder Basin National Grassland which is 626,217 acres. The Routt National Forest is 1,249,558 acres entirely within Colorado.

The Black Hills National Forest is 1,537,579 acres approximately 87% of which is in western South Dakota (1,334,692) and 13% (202,887) in northeastern Wyoming in Crook and Weston Counties.

Ashley National Forest is located in both Utah and Wyoming. It encompasses 1,401,306 acres of which 104,537 acres are within Wyoming. The Flaming Gorge National Recreation Area (RA) is



located in the northeast corner of Utah and the southwest corner of Wyoming in Sweetwater County and is managed by the Ashley National Forest.

The Caribou-Targhee National Forest occupies over 3 million acres and stretches across southeastern Idaho, from the Montana, Utah, and Wyoming borders. Caribou is 1, 84,065 acres of which 7,661 is within Wyoming and Targhee is 1,639,268 acres of which 332,324 is within Wyoming.

The Uinta-Wasatch-Cache National Forest covers an area of approximately 2,169,596 acres that is almost entirely in northern and north-central Utah. There are 37,531 acres in southwestern Wyoming.

The Bridger Teton National Forest is in Region 4, the Intermountain administrative area, as are Ashley National Forest, Caribou-Targhee National Forest, and Uinta-Wasatch-Cache National Forest. Bighorn National Forest, Shoshone National Forest, Black Hills National Forest, and Medicine Bow-Routt National Forest and Thunder Basin Grassland are in Region 2 – the Rocky Mountain Region.

According to the Forest Service there is no reliable method to allocate costs of management to specific states. Black Hills and Medicine Bow administer the majority of their lands in states adjacent to Wyoming, so much of the spending reflected in their budgets is not necessarily relevant to work done to manage land in Wyoming, and there is no real systematic way to split that out. The Forest Service says that using land mass is the only method and that would be just a rough estimate (Hoover, Forest Service Appropriations: Five-Year Trends and FY 2016 Budget Request, 2015).

Therefore, this report will include an examination of costs for the three National Forests that are entirely within the state of Wyoming—Bridger-Teton, Shoshone, and Bighorn as well as Medicine Bow-Routt National Forests and Thunder Basin National Grassland (MBRTB). Forty percent of the costs for the entire MBRTB are used in this report to reflect costs to administer land only in Wyoming. This was based on the advice of the Region 2 budget officers who say that is their best estimate based on the opinion of multiple staff familiar with the data over the long-term and because there is no other way to meaningfully calculate the split except by acreage. USFS staff felt this split while only an estimate would be more meaningful than splitting by acreage. While Wyoming contains about 62% of the combined acreage of MBRTB, grass lands costs less per acre to manage and Routt National Forest in Colorado has more intense usage and management costs due to its proximity to more people and urban areas.

Costs for work done by the Regional Forest Headquarters and the Albuquerque Service Center that support, sometimes substantially, the work of the individual forests are not included in this report. The Forest Service does not believe there is reliable way to identify or allocate these costs affiliated with a particular forest let alone a particular state.

There are additional reasons why the data used from the USFS budgets to estimate the costs of management done in Wyoming is limited including a pilot budget program that only Bridger-Teton in Region 4 is a part of and the affect Bark Beetle Theatre Funding had on the budgets of the Region 2 National Forests for several years. More detail is provided in Appendix B.



The discretionary spending, which typically accounts for 88% of the USFS budget, is divided into seven primary accounts which provides a framework of the primary work done by USFS (Hoover, Forest Service Appropriations; Five -Year Data and Trends and FY 2017 Budget Request, 2016). They are:

1. Forest and Rangeland Research (FRR). The FRR account funds research and development efforts to provide scientific information and new technologies to support sustainable forest and rangeland management. This account has averaged approximately 6% of USFS discretionary appropriations (which comprises about 88% of total spending) in recent years.
2. State and Private Forestry (S&PF). The S&PF account funds programs to provide financial and technical assistance to nonfederal forest owners and managers, and to protect communities and the environment from insects, diseases, and invasive plants. S&PF has averaged approximately 5% of USFS discretionary appropriations.
3. Land Acquisition (LA). LA activities allow the USFS to acquire lands for conservation or ownership consolidation purposes. LA activities are funded primarily through the Land and Water Conservation Fund although there are two smaller land acquisition accounts which Congress funds – one for special act land acquisitions and one to complete land exchanges. In total, LA account and those related accounts received approximately 1% of USFS discretionary appropriations on average.
4. Capital Improvement and Maintenance (CI&M). CI&M activities help the USFS provide and maintain facilities, roads, trails, and other infrastructure needs. The CI&M account received approximately 7% of USFS discretionary appropriations in recent years.
5. National Forest System (NFS). NFS appropriations fund management of the 193 million acres of national forests and grasslands. This account includes several subaccounts, the largest of which is the Forest Products subaccount, which generally receives just over 20% of the NFS appropriation, and funds the Timber Sales program. The NFS account averaged approximately 30% of the USFS discretionary appropriations.
6. Wildland Fire Management (WFM) and FLAME Wildfire Suppression Reserve Fund (FLAME). The WFM account funds activities related to the management of unplanned and unwanted fires, including planning for and suppression of wildfires. The FLAME account was established under the Federal Land Assistance, Management, and Enhancement Act of 2009 for emergency wildfire suppression activities. Funding for wildland fire management activities is sometimes provided outside of the regular Interior appropriations bills when there is a need (e.g., a severe fire season). Together, WFM and FLAME appropriations, along with supplemental appropriations (usually for wildfire), averaged 54% of the USFS discretionary appropriation from FY 2011 through FY 2015.
7. Other. In addition to the six larger accounts listed above, there are several relatively small accounts. They provide appropriations for the range betterment fund; the agency to give or receive gifts, donations, and bequests for research; and management of national forest lands for subsistence uses. Together, these “other” accounts received less than 0.5% of USFS discretionary appropriations.



As noted, this discretionary spending accounts for approximately 88% of agency appropriations and two of the above accounts, the National Forest System and the Wildfire Management, comprise approximately 80% of total discretionary spending of the agency.

The discretionary appropriations for these primary accounts is first allocated among the nine Forest Service Regions, five regional research stations and two service centers and laboratories, and the national headquarters of the Forest Service in Washington DC. Then, for most of the accounts, the money is further allocated to individual forests within the region. Some accounts remain managed at the national level including wildfire suppression, which is allocated based on the need of a particular fire season. Appropriations by Congress may also be allocated and directed to specific accounts or subaccounts or to specific activities and programs. The spending from all of these discretionary accounts to pay for management activities of the USFS, is supplemented by mandatory spending authorized out numerous permanent accounts and trust finds. Many accounts hold revenue generated from various activities on the National Forests. The money in these accounts is required by law to be spent on specific programs (mandatory spending) and not in any way Congress may choose (discretionary spending). This mandatory spending averages about 13% of total appropriations for the Forest Service annually. (Hoover, Forest Service Appropriations: Five-Year Trends and FY 2016 Budget Request, 2015).

Because of the organization of the budgets and because Forest Service Regions and National Forests and Grasslands cross state boundaries, analyzing spending and costs most relevant to management and costs only applicable within a particular state is exceptionally challenging.

This report focuses on the spending in the four Wyoming forests noted, and from the budget accounts that best reflect the costs most directly related and necessary to the day to day management work of the agency. In particular, this report includes the spending within the National Forest System, Capital Improvements and Maintenance, and Wildland Fire Management/FLAME, as well as spending from permanent accounts and trust funds determined to be most relevant to management.

The accounts for programs that generally are not included in this report are Forest and Rangeland Research, Land Acquisition, and State and Private Forestry (one subaccount in State and Private Forestry was determined to be relevant and included in the management costs presented in this report). That is not to suggest that these programs are not relevant to the task of management of the public lands in Wyoming by the Forest Service, for in many respects this work is critically important to day to day management. A brief overview of these accounts and the activities they fund is provided below with any information particular to Wyoming (if any).

Forest and Rangeland Research (FRR)

The Forest and Rangeland Research (FRR) account and spending will not be included in this report. The Forest Service is mandated by Congress to provide new information and technology to foster healthy watersheds and forests, forest products, wildlife protection and habitat, and improve recreational opportunities. The Forest and Rangeland Research (FRR) account funds research and



development to deliver scientific information and new technologies to support sustainable forest and rangeland management. In FY 2014 enacted appropriations for this account at a national level were just over \$292 million with 1,919 projected full time employees.

Principal areas of research and development (R&D) are conducted in the following areas:

- Wildland fire and fuels
- Invasive species
- Recreation
- Resource management and use
- Air, soil, and water
- Wildlife and fish
- Inventory and monitoring

The Forest Service works with a wide variety of partners, including federal and state agencies, Tribal groups, industry, non-governmental organizations, and universities and engages in international research cooperative efforts with other countries. The gathering and distribution of new research and new technology to forest managers and other potential end users (outside the agency) is one of the most important functions of the program. This includes states, local communities, organizations, and individuals implementing land management projects and managing forests—no matter the scale.

Research and development of new technologies is conducted in over 67 laboratories organized around five regional research stations (Northern, Southern, Rocky Mountain, Pacific Northwest, and Pacific Southwest) plus two labs—the International Institute of Tropical Forestry in Puerto Rico and the Forest Products Laboratory in Madison, Wisconsin. Research and development includes international collaborations.

As part of its R&D program, the USFS has a system of Experimental Forests and Ranges to enable long-term studies of various features (such as vegetation types) within the multitude of very diverse landscapes across the country. They serve as demonstration and training sites to study the natural features and management of particular ecosystems for cooperators, stakeholders, and scientists. These sites have been established gradually since 1908 across the United States and range from 100 acres to over 55,000 acres and often include an entire watershed for study. Many are more than 50 years old and they collectively provide a valuable source of data, records, and knowledge regarding environmental changes that occur in both natural and managed forest and rangeland ecosystems. All information is shared with stakeholders such as state agencies and private land owners. There are currently 80 Experimental Forests and Ranges nationally, including one in Wyoming.

The Glacier Lakes Ecosystem Experiments Site (GLEES) is in the Snowy Range of the Medicine Bow Mountains, 55 km west of Laramie, and 15 km northwest of Centennial. It is within the Laramie Ranger District in the Medicine Bow National Forest (MBNF). The research is managed by the Forest



Service's Rocky Mountain Research Station but there is close cooperation with MBNF and Rocky Mountain Research Station for any research dealing with management.

The area has a history of alpine vegetation research and meteorological monitoring going back to the 1950's. It is a high elevation wilderness-like site where research is being done related to its alpine and subalpine aquatic and terrestrial ecosystems. It is considered representative of a Class I wilderness area for air quality, although it is not a designated wilderness area. Work is being done on seedling germination, nitrogen deposits, riparian hydrology, disturbance changes, tree growth, and atmospheric pollutants. GLEES has an extensive data archive of air quality and meteorological data and a substantial collection of hydrological, water chemistry, snow chemistry, wet and dry deposition, geological, soils, snow cover, aquatic, floristic, and topographic and vegetative information exists for the GLEES site. GLEES has a Clean Air Status and Trends Network (CASTNET) site—a national monitoring network of more than 90 sites established by the EPA to assess trends in pollutant concentrations, atmospheric deposition, and ecological effects due to changes in air pollutant emissions (it is one of eight CASTNET sites in Wyoming). Data collected is publicly available online at www.epa.gov/castnet.

State and Private Forestry (S&PF)

The State and Private Forestry (S&PF) account and costs will not be included in this report. The S&PF account funds programs to provide financial and technical assistance to non-federal forest owners and managers, and to protect communities and the environment from insects, diseases, and invasive plants. In FY 2014, approximately \$230 million was appropriated for this account.

More than 50% of our Nation's forests are privately owned—over 420 million acres. These forests supply almost 30% of the surface drinking water to cities and rural communities and over 90 percent of domestically-produced forest products. The S&PR program helps keep these forests healthy and intact by supporting and encouraging sustainable management practices, treatments of the forests to protect against insects, disease and wildfire, and protecting key areas from development. Eleven million acres have been treated and education and related services have been provided to over two million landowners since 2008.

The State and Private Forestry account funds the following programs:

- Landscape Scale Restoration (new budget line item in FY 2014)
- Forest Stewardship
- Forest Legacy Program
- Community Forest and Open Space Conservation
- Urban and Community Forestry
- International Forestry
- State Fire Assistance (S&PF until FY 2014, when it was moved to the Wildfire Management Account)



- Volunteer Fire Assistance (S&PF until FY 2014, when it was moved to the Wildfire Management Account)
- Forest Resources Information and Analysis (moved under Forest and Rangeland Research in FY 2014)
- Forest Health Management – Federal Lands (combined in the S&PF account with Forest Health Management – Cooperative Lands in FY 2014)
- Forest Health Management – Cooperative Lands (combined in the S&PF account with Forest Health Management – Federal Lands in FY 2014)

Most of these programs support work done to sustain non-federal forest lands and the costs will therefore not be included in this report. Those include funding for Landscape Scale Restoration and all Cooperative Forestry Programs which are Forest Stewardship, Forest Legacy Program, Community Forest and Open Space Conservation, Urban and Community Forestry, and International Forestry. State Fire Assistance and Volunteer Fire Assistance will be dealt with during the discussion of Wild Fire Management Account and its costs.

While the costs from these S&PF accounts are not being considered because they generally pay for and support activities on non-federal lands, what follows is a brief discussion of some key points about these programs. These funds spent are critical for the implementation of state forest plans and managing forest health on private lands.

Funding for S&PF programs is frequently allocated based on priorities identified in State Forest Action Plans. In the 2008 Farm Bill, Congress required all states to draft Statewide Forest Resource Assessments and Strategies or “State Forest Action Plans” in order to receive federal forestry assistance. These plans provide an analysis of forest conditions, threats, and trends; develop strategies; and identify priority actions that should be taken as well delineate priority forest areas on which to focus critical conservation action within their jurisdictions. The State Forest Action Plans focus on “All Lands” (State, Private, Tribal, and Federal) and strategically assess the greatest need, highest value, or strongest innovation potential. The first required step was the development of an assessment with particular requirements set forth in the Farm Bill. Second to be developed was a long term, comprehensive coordinated strategy for investing and leveraging federal, state, and partner resources to address the management and landscape priorities identified. Annual reports and updates must be provided by states to demonstrate how the funds were used to address the priorities and to show how the funds were leveraged with other sources.

For example, the Landscape Scale Restoration program provides competitive grants awarded based on the priorities set forth in State Forest Action Plans. The projects selected focus on complex issues that can only be meaningfully addressed at a landscape level, working across jurisdictional boundaries, and with local communities. The funding is intended to be leveraged with the work and funding of others—states, local communities, and non-governmental organizations to tackle critical projects.



The Wyoming Forest Action Plan—Statewide Assessment, Wyoming Statewide Assessment of Forest Resource, was completed in 2009 by the Wyoming State Forestry Division and the OSFI along with a multitude of internal and external partners including the BLM, USFS, state legislators, Department of Environmental Quality, the Governor’s Office, NGOs like the Nature Conservancy, academics, and the Wyoming Association of Conservation Districts among many others. The report noted that while the assessment was necessary in order to receive federal funds used for a portion of the State’s Assistance Forestry program, the analysis “has value to the agency for evaluating where to invest state resources.”

The Wyoming Forest Action Plan—Resource Strategy, Wyoming Statewide Forest Resource Strategy: Providing Long-Term Strategies to Manage Priority Landscapes was completed in April 2010.

Forest Legacy Program

The Forest Legacy Program within S&PF funded a conservation project in Wyoming in 2014. Fifty percent of the nation’s forests are on private land and families and timber companies with forest land are increasingly under pressure to sell, subdivide, or develop their property. The Forest Legacy Program works with State and private landowners and conservation organizations to protect critical forests from land conversion and development either through purchase or conservation easements in order to protect water quality, fish and wildlife habitat, and even recreational use. Proposed projects are ranked and evaluated by a panel and funds are provided through the Land and Water Conservation Fund. The program is not regulatory—it is an incentive based conservation program that only works with a “willing-buyer” and “willing-seller.” The program requires a 25% match of non-federal dollars but averages a 50% match of non-federal money.

In Wyoming, the Munger Mountain Corridor was protected through a \$3 million grant through the Forest Legacy Program, the first project in Wyoming to receive Forest Legacy funds. A partnership between the USFS, Wyoming State Forestry Division, Wyoming Game and Fish Department (WGFD), the Jackson Hole Land Trust, Wyoming Wildlife and Natural Resource Trust, and the Snake River Ranch secured permanent protection in the form of a conservation easement and management plan for an important northwestern Wyoming elk migration corridor, as well as bald eagle nesting areas, and other important wildlife habitat.

S&PF - Forest Health Management (FHM) - Federal Lands

The Forest Health Management—Federal Lands funds are the only costs within the S&PF account that are included in this report. The FHM program provides insect, disease, and invasive plant survey and monitoring information on forest health conditions on Federal and non-Federal (FHM-Cooperative) lands and provides technical and financial assistance to prevent, suppress, and control outbreaks threatening forest resources and watershed conditions and utilizes science, active land management, and technology transfer expertise to restore forest health. This report will only include the costs and funds expended within the FHM—Federal Lands program and not from FHM—Cooperative Lands, which organizes the same general work but on lands owned by state and local governments, private organizations, and individuals.



The FHM funds support three activities: conducting pest surveys and providing technical assistance; conducting prevention, suppression, restoration, and eradication projects; and monitoring the long-term and short term health of the Nation's forests. Since pests do not obey boundaries, FHM uses an "All Lands" approach involving partners in the development of integrated management strategies to address each important pest.

The FHM – Federal Lands funds are used to conduct forest insect and disease surveys on over 400 million acres of forestlands; conduct forest insect and disease prevention, suppression, restoration, and eradication projects; provide technical assistance; and to monitor forest health on all Federal lands including those of the Departments of Defense and the Interior and the Army Corps of Engineers. Work and funding is leveraged in partnerships with the USDA Animal and Plant Health Inspection Service (APHIS) to combat several damaging invasive pests. So this money spent can reflect costs for work done on federal lands outside of the forest service acreage.

In FY 2012 the USFS, in partnership with other Federal agencies, treated invasive species on 106,920 acres and treated for native pest species (including Western Bark Beetle) on 244,726 acres. Treatments are designed to protect priority areas from damaging insects and disease, reduce the risks of mortality from wildland fire, and prevent future outbreaks by increasing the resilience of treated areas. Annual priorities for mitigating the risk of future and current outbreaks are based, in large part, on the findings from the National Insect and Disease Risk Map as well as knowledge of current pest conditions and locations. Some of the techniques used to determine optimal areas for treatment include overlaying national map layers using Geographic Information Systems (GIS) for insect and disease, fire, watershed condition, and Wildland Urban Interface. The spatial placement and sequencing of treatments on NFS lands are planned and coordinated with other Forest Service vegetation management program areas, such as hazardous fuels reduction and forest management. Other Federal agencies, such as the Department of the Interior and the Department of Defense, submit their project requests to the Forest Service regional or national office and the projects are evaluated in a competitive process.

For FY 2012 and FY 2013, treatments done for Western bark beetle, particularly suppression treatments (paid for through the WFM account before the budgets were consolidated), had a higher unit cost per acre than other pests and treatment types. It required mechanical treatments that are much more labor-intensive, and therefore expensive, than other kinds of treatment for other pests (i.e., gypsy moths) that focus on insecticide use, such as spraying and soil injections. Some insecticide treatment was also done on the Western bark beetle using SP&F account funds.

Western bark beetle is considered a high priority pest by the USFS. It is causing severe mortality across many western states, increasing risks for catastrophic fire, and health and safety of the people who use America's forests. FHM resources are focusing on prevention and suppression, especially in high value sites such as campgrounds in coordination with NFS and other Federal land managers.



Land Acquisition (LA)

Land Acquisition accounts were excluded from this study. Land Acquisition activities allow the USFS to acquire lands for conservation or ownership consolidation purposes. LA activities are funded primarily through the Land and Water Conservation Fund, although there are two smaller land acquisition accounts which Congress funds—one for special act land acquisitions and one to complete land exchanges.

National Forest System (NFS)

All NFS accounts were included in this study. Most of the day to day land management activities of the USFS are paid for out of the NFS account. NFS appropriations fund management of the 193 million acres of national forests and grasslands. This account includes several subaccounts, the largest of which nationally is the Forest Products subaccount, which generally receives just over 20% of the NFS appropriation and funds the Timber Sales program. The NFS account averaged approximately 28% to 30% of the USFS discretionary appropriations nationally over the last five years.

The NFS subaccounts generally include the following activities and programs; funding levels provided are national commitments: (listed in the order they generally appear in congressional appropriations documents):

- Land Management Planning funds the development, maintenance, and revision of the forest plan. (FY 2016: appropriations were \$37.0 million, 2% of NFS).
- Inventory and Monitoring funds the acquisition, analysis, and storage of data that support planning and other programs, such as restoration activities, climate change impact evaluations, and watershed condition assessments (FY 2016: \$148.0 million, 10% of NFS).
- Recreation, Heritage, and Wilderness funds activities related to the management of recreation opportunities on the NFS, administering recreation special use authorizations, supporting the protection of heritage resources, and protection of designated wilderness areas, and wild and scenic rivers (FY 2016: \$261.7 million, 17% of NFS).
- Grazing Management funds the administration of livestock grazing use permits on the NFS and implementing environmental reviews of all USFS grazing allotments as statutorily mandated (FY 2016: 56.9 million, 4% of NFS).
- Forest Products funds activities to analyze, prepare, offer, award, and administer timber sales, stewardship contracts, and special forest products permits on NFS lands (FY 2016: \$359.8 million, 24% of NFS).
- Vegetation and Watershed Management funds restoration-related management activities to improve forest and rangeland conditions, fish and wildlife habitat, water quality, quantity, and timing of stream flows, among others (FY 2016: \$184.7 million, 12% of NFS).
- Wildlife and Fish Habitat Management funds activities to restore, recover, and maintain wildlife and fish—particularly rare animal and plant species—and their habitats on NFS lands (FY 2016: \$140.5 million, 9% of NFS).



- Collaborative Forest Landscape Restoration Program Fund (CFLRP), authorized in 2009 for 10 years, funds 23 landscape-scale restoration projects in priority landscapes (FY 2016: \$40.0 million, 3% of NFS).
- Minerals and Geology Management funds the administration of mineral operations on NFS lands, management and mitigation of abandoned mine lands, management of geologic resources and hazards, and management of environmental compliance and restoration related to mineral activities (FY 2016: \$76.4 million, 5% of NFS).
- Landownership Management provides funds for the basic land management or real estate activities necessary to support all NFS programs, such as granting special use authorizations for energy transmission corridors and processing land exchanges (FY 2016: \$77.7 million, 5% of NFS).
- Law Enforcement Operations responds to emergencies, investigates illegal activities (such as illegal drug activities), and conducts crime prevention activities on NFS lands (FY 2016: \$126.7 million, 8% of NFS). (Hoover, Forest Service Appropriations; Five -Year Data and Trends and FY 2017 Budget Request, 2016)

3.3 Bureau of Reclamation

The BOR is a water management agency responsible for the construction and maintenance of dams, power plants, and canals in the western states. Originally part of the Reclamation Act of 1902 and designed as a means to help settle the West by providing infrastructure for agricultural development, BOR historically focused on the construction of dams and facilities to store and convey water. BOR operates under specific legislative authority for each project. As the potential for additional projects were identified by states and local entities, Congress supplemented the Reclamation Act to add hydropower production, flood control, municipal and industrial water, recreation, and fish and wildlife enhancement to the list of authorized project purposes. BOR is the largest wholesaler of water in the U.S. providing water to more than 31 million people and water for irrigation of over 10 million acres of farmland. It is the second largest producer of hydroelectric power in the country. Their mission is to assist in meeting new water needs and balance competing water demands. The Wyoming Area Office (WYAO) is included in the Pacific Northwest Region.

The WYAO is based out of Mills, Wyoming and facilities include 20 reservoirs and 19 dams with a collective storage capacity of more than 4.5 million acre-feet, and 11 hydro-electric power plants. The WYAO operates Federal dams and power plants on the North Platte, Wind, Bighorn, and Shoshone Rivers in Wyoming, and also provides supervisory control for Yellowtail and Canyon Ferry Power plants in Montana and six power plants in Colorado. WYAO administers several multipurpose projects that supply water to 43 irrigation entities which collectively serve more than 680,000 acres of land, and 8 municipal and industrial contractors, as well as providing hydroelectric power, flood control, fish and wildlife enhancement and recreation. Recreation sites are managed either by WYAO directly or on their behalf by several Wyoming state parks and local agencies such as the Natrona County Roads, Bridges, and Parks Department.



3.4 State of Wyoming

Legislation directed the OSLI to commission this study. However, the legislation did not require that only OSLI be responsible for the potential management of federal lands identified in this study. Several agencies currently exist within the State of Wyoming structure that could potentially take a role in the management of federal lands. These agencies and their current roles are described in the appropriate program area throughout the report. Agencies included in this discussion are:

- Office of the Governor
- Office of State Lands and Investments
- Wyoming Game and Fish Department
- Wyoming Department of Agriculture
- Wyoming Department of Environmental Quality
- Wyoming Department of State Parks and Cultural Resources
- Wyoming State Engineer's Office
- Oil and Gas Conservation Commission
- Wyoming Department of Transportation

3.4.1 Office of the Governor

The Governor formulates and administers executive policy and provides supervision, direction, and control over the executive branch of state government. The Governor is the Commander-in-Chief of the state's military forces and upholds all laws. The Governor can veto or sign proposed laws and appropriations, subject to a majority override of the legislature. The Governor presents the state budget recommendation to the legislature. Finally, the Governor appoints the directors of many State agencies, commissions and boards, including the agencies discussed in this report.

3.4.2 The Office of State Lands and Investments (OSLI)

When Wyoming became a state in 1890, the federal government granted approximately 4.2 million acres of land to the State of Wyoming. The law requires state land to be held in trust to produce income to support public schools and other state institutions named in the original grants.

The OSLI consists of the Office of the Director and four divisions: Financial Programs and Management Services, Trust Land Management, Field Services, and Wyoming State Forestry. The Field Services Division has offices in Lander, Buffalo, and Meeteetse. The Wyoming State Forestry Division (WSFD) has district offices in seven locations: Newcastle, Buffalo, Riverton, Lyman, Pinedale, Casper, and Laramie. The agency is supported by 96 full-time employees; half of which are in the WSFD.

3.4.3 Wyoming Game and Fish Department (WGFD)

In 1899 the Wyoming legislature created the office of the State Game Warden. The first State Game Wardens and Fish Wardens worked to create wildlife management policy and procedure that would become the beginning of modern management, benefiting wildlife and people alike.



In 1921, the Game and Fish Commission was established to provide citizen oversight to the WGFD. Hunters and anglers have traditionally provided nearly all the financial resources to support wildlife management, with 80% of Game and Fish funds coming from license fees and excise taxes on hunting and fishing equipment. Only about 6% of Game and Fish funding comes from the State's General fund which is used for specific programs; Aquatic Invasive Species, Sage Grouse, Veterinary Services, and wolf management. The additional funds come from a variety of sources including stamps, fees and various grants.

The WGFD was created in 1973. Before this, all Game and Fish personnel were employees of the Commission. The Commission became the decision making body appointed by the Governor to oversee the policies and decisions of the Game and Fish Department. This relationship between the Commission and Department still exists today, with seven Commissioners serving for six-year terms. Currently the Game and Fish Department employs over 350 personnel and are statutorily required to manage over 800 species of wildlife across Wyoming. In 1930, there were 86 moose taken in Wyoming, in 1961, there were 776. Though declines have occurred hunters continue to harvest just over 460. The same trend is followed for antelope, deer and elk.

The Commission serves as the policy making board responsible for the direction and supervision of the Director of the WGFD and through the Department provides an adequate and flexible system of control, propagation, management and protection and regulation of all wildlife in Wyoming (W.S. 23-1-301-303, W.S. 23-1-401). Seven members are appointed by the Governor for six-year terms with Senate confirmation. Not more than four members can be of the same party (W.S. 23-1-201).

The WGFD works with federal agencies on the management of all wildlife species. Their primary functions include: 1) conserving and advocating for wildlife by providing wildlife and wildlife habitat management, including scientific data collection, law enforcement, wildlife/human conflict management, research, habitat conservation and wildlife health services; 2) serving people by managing wildlife populations, providing access for wildlife-associated recreation and providing information and education about wildlife and wildlife-related issues and 3) managing the human, fiscal, physical and other resources necessary to carry out our mission, including people, money, lands, information, buildings and other facilities needed to support wildlife conservation in Wyoming.

The WGFD operates and manages facilities around the state, to include the headquarters office located in Cheyenne, eight regional offices (Jackson, Pinedale, Cody, Sheridan, Green River, Laramie, Lander and Casper), ten hatcheries, two bird farms, 51 warden stations, 20 feed-grounds, 15 patrol cabins, one research station and numerous wildlife management and public access areas.

Their operations include twenty-three programs which function in five divisional areas: Wildlife, Fish, Services, Fiscal and the Office of the Director. The Veterinary Services budget is located within the Wildlife Health program, the Sage Grouse Management and Wolf Management budget in the Terrestrial Wildlife Program, the Comprehensive Wildlife Management Strategy (CWCS) program in



the State Wildlife Action Plan Program and the Aquatic Invasive Species Program as a standalone program in the Fish Division.

3.4.4 Wyoming Department of Agriculture (WDA)

The WDA assists the citizens of Wyoming in living safe and healthy lives, promotes and preserves Wyoming's agricultural community, serves as a responsible steward of Wyoming's natural resources, and achieves integrity in the marketplace.

The WDA is comprised of six sections: Administrative Services, Analytical Services (Chemistry & Microbiology Laboratories), Consumer Health Services, Natural Resources, Technical Services, and Wyoming State Fair. The Natural Resources and Technical Services sections are discussed in more detail later in this document.

3.4.5 Wyoming Department of Environmental Quality (WDEQ)

The WDEQ was established by the Wyoming Environmental Quality Act and Industrial Development Information and Siting Act pursuant to W.S. §§ 35-11-101 through 1904 and W.S. § 35-12-101 through 119 respectively. As Wyoming's environmental regulatory agency, WDEQ is responsible for the implementation and enforcement of delegated federal programs under the Clean Air Act, Clean Water Act, Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), and Surface Mining Control and Reclamation Act (SMCRA), as well as other state environmental regulatory programs. DEQ consists of seven divisions; Air Quality, Water Quality, Solid and Hazardous Waste, Land Quality, Industrial Siting, Abandoned Mine Lands, and Administrative. WDEQ has 267 employees located in Sheridan, Lander, Casper, Rock Springs, Pinedale, and headquartered in Cheyenne. WDEQ ensures that Wyoming's natural resources are managed to maximize the economic, environmental and social prosperity of current and future generations. WDEQ does this through a combination of monitoring, permitting, enforcement, remediation, and restoration activities which protect conserve and enhance the environment while supporting responsible stewardship of Wyoming's resources.

3.4.6 Wyoming Department of State Parks and Cultural Resources

The Wyoming Department of State Parks and Cultural Resources provides opportunities to enjoy Wyoming's arts, parks and history. Wyoming's state parks, historic sites and state trails program offer recreational and educational opportunities. Additionally, through the efforts of the Division of Cultural Resources, Wyoming's history and pre-history is studied and preserved, and artistic opportunities for both the artist and the patron are promoted and enhanced.

The Department consists of approximately 167 full time, 14 permanent part-time, and 130-150 seasonal personnel. The department consists of two divisions: the Division of State Parks, Historic Sites and Trails; and the Division of Cultural Resources. In addition, the department includes an administrative services section (Director's Office, Human Resources, Accounting, Information Technology and Public Information/Education) serving both divisions. The department's headquarters, Wyoming Arts Council, and Wyoming Cultural Trust Fund offices are located in



Cheyenne, with State Historic Preservation (SHPO) and State Archaeologist field offices in Laramie, Trails Program offices in Lander, and State Parks and Historic Sites located statewide.

3.4.7 Wyoming State Engineer's Office (WSEO)

The Wyoming Constitution defines that all natural waters within state boundaries are declared to be property of the state. The WSEO is charged with the regulation and administration of ground and surface water resources in Wyoming. The mission of the WSEO and Board of Control is to provide general supervision and protection of inter- and intra-state waters of Wyoming. The WSEO collects, analyzes, maintains and provides water related information for management and regulation of the state's water resources.

The WSEO has four Division Superintendents located in Torrington, Sheridan, Riverton, and Cokeville. Each Superintendent has a staff of Hydrographer/Water Commissioners that are located in 24 offices across the state. Staff allocate water by field regulating headgates, pumps, and diversions. Wyoming is a signatory to seven interstate compacts and three interstate court degrees. These documents define the amounts of water that Wyoming must provide to downstream sites. Five staff are housed in Cheyenne and maintain contact with adjoining states and federal agencies to ensure compliance, and monitoring federal actions that might limit Wyoming's ability to use its water.

3.4.8 Oil and Gas Conservation Commission (OGCC)

The Wyoming OGCC was established by the Wyoming State legislature in 1951 under Wyoming Statute §30-5-101 through §30-5-126. The OGCC is responsible for appointing the State Oil and Gas Supervisor and other staff as needed. The agency encourages the beneficial and environmentally responsible development of Wyoming's oil and gas resources to generate revenue for the State. Their goals include protecting human health and the environment by avoiding soil and water contamination at drilling and producing locations and insuring locations are properly reclaimed at the end of production. The OGCC is charged with preventing the waste of subsurface hydrocarbons and protecting rights to maximize the State's resources.

During the 2013-2014 biennium, OGCC had 41 employees, an Assistant Attorney General and a contracted hydrogeologist. Their revenue was derived from a conservation tax, which was a tax on all oil and gas sales paid by oil and gas operators. Their primary functions include approving permits and maintaining well records; field inspections; managing the underground injection control program; hearings; and orphan well plugging. In 2010 they received 5,383 permits; in 2011 they received 2,643 permits.

3.4.9 Wyoming Department of Transportation (WYDOT)

WYDOT is charge with planning, building and maintaining the nearly 7,000 miles of highways that span the state. WYDOT also coordinates airport improvements, collects fuel taxes and user fees to fund transportation projects, oversees license plate production, tests drivers and issues drivers' licenses, enforces traffic laws and regulates commercial vehicle operations. For the sake of



management of federal lands, the most direct application would be the use of State Patrol troopers to assist with law enforcement.

3.5 Budget Summaries

The following tables provide our best estimated costs to manage federal lands, based on (relatively) readily available budget information. We know the budget information is flawed to some degree—the accuracy is highly variable due to reporting practices, coding practices, and time to gather the necessary budget information. This summary provides an overview of the order of magnitude of costs to manage federal lands.

Currently, revenues from federal lands are not held in the Wyoming BLM or USFS budgets. There are a few exceptions, but generally speaking all revenues are returned to the U.S. Treasury or various agency permanent accounts or trust funds. The funds are redistributed to the agencies based on annual agency budget requests and justifications and revised and approved through appropriation and other laws by Congress.

The following tables represent our understanding of the revenue generated through federal programs on these Wyoming public lands and the expenditures to manage on federal lands in Wyoming.

For more detail on the budget analysis, see Appendix A and Appendix B.

3.5.1 BLM Revenue and Costs

BLM Revenue

Revenue from activities on BLM administered lands in Wyoming is collected by both BLM and the ONRR. BLM collects permits and fee revenue while payments for most energy and mineral production is remitted directly to ONRR.

Table 3. Revenue generated in Wyoming from BLM-administered programs, FY 2010–2014.

Wyoming BLM Revenue Generated					
Program	2010	2011	2012	2013	2014
Wyoming BLM Revenue Total	\$1,883,074,472	\$1,978,145,452	\$2,169,013,120	\$2,029,150,589	\$2,107,895,048
Recreation Fees	\$189,618	\$100,881	\$111,470	\$172,817	\$205,028
Land & Realty	\$12,742,748	\$5,780,803	\$6,369,433	\$6,800,697	\$6,269,462
Timber	\$87,585	\$21,000	\$30,862	\$19,967	\$94,270
Grazing	\$1,938,099	\$2,145,312	\$2,053,262	\$2,053,262	\$1,839,363
Mining Claim Location/Maintenance	\$6,682,682	\$6,412,088	\$7,122,787	\$7,877,403	\$6,839,150
Mineral Materials	\$2,219,300	\$1,167,122	\$1,851,133	\$1,144,743	\$1,350,321
ONRR Revenue	\$1,859,214,440	\$1,962,518,246	\$2,151,474,173	\$2,011,081,700	\$2,091,297,454



Table 4. Total expenses incurred in Wyoming from BLM-administered programs, FY 2010–2014.

Management of Land and Resources					
Wyoming BLM Management Total	2010	2011	2012	2013	2014
	\$105,451,205	\$110,708,549	\$110,390,727	\$101,139,837	\$98,580,918
Activities					
Resource Protection and Maintenance	\$5,802,153	\$2,697,867	\$4,553,657	\$3,618,014	\$3,745,618
Land and Range Resource Management	\$20,320,994	\$23,368,652	\$22,621,829	\$19,533,014	\$20,242,307
Wildlife & Fisheries and Threatened & Endangered Species	\$5,843,530	\$5,050,853	\$5,195,692	\$7,296,354	\$6,638,478
Recreation Management	\$3,554,640	\$3,525,840	\$3,435,220	\$3,496,655	\$3,637,056
Energy & Mineral Management	\$40,508,181	\$39,683,230	\$40,763,318	\$36,145,064	\$38,561,289
Realty & Ownership Management	\$7,668,763	\$10,642,272	\$5,644,737	\$5,720,481	\$6,226,496
Communication Site Management	\$82,595	\$74,989	\$141,723	\$63,995	\$52,056
Challenge Cost Share (CCS)	\$509,276	\$451,568	\$725,389	\$243,503	\$261,332
Other Reimbursables	\$119,174	\$155,794	\$377,987	\$136,351	\$224,295
Wildfire Management	\$10,261,097	\$12,858,235	\$16,097,247	\$11,974,671	\$11,020,130
Transportation & Facilities Management and Construction	\$10,060,212	\$11,517,090	\$10,153,622	\$12,306,634	\$7,376,167
Workforce & Organization Support	\$720,591	\$682,158	\$680,305	\$605,102	\$595,694

Includes costs for administration of mineral operations on Tribal lands and administration of lands in Nebraska. Excludes costs for certain activities, such as land acquisition.

3.5.2 USFS Revenues and Costs

USFS Revenue

The USFS collects revenue from a variety of activities and uses that occur within the National Forests including recreation, grazing, sale of certain mineral resources and forests products, ski operations, and other activities. Receipts from commercial activities are first deposited into the National Forest Fund (NFF) and then transferred to the US Treasury. NFF receipts are used to make mandated payments to counties of a share of USFS revenue generated within their jurisdiction such as Secure Rural Schools (SRS) payments. The table below shows NFF revenue generated in all of the National Forests in Wyoming. Most mineral revenue generated on USFS lands is handled by the ONRR and is reflected in Table 3.



Table 5. Revenue Generated in Wyoming From USFS-Administered Programs, FY 2010–2014.

Wyoming USFS Revenue Generated					
	2010	2011	2012	2013	2014
Wyoming USFS Revenue Total	\$3,739,981	\$4,125,370	\$5,994,573	\$7,026,019	\$8,279,691
Timber	\$75,794	\$91,001	\$112,466	\$55,705	\$71,581
Land Use	\$243,899	\$239,112	\$232,512	\$230,428	\$364,050
Recreation Special Uses	\$1,944,039	\$2,270,031	\$3,671,101	\$4,168,416	\$5,155,146
Power	\$80,893	\$78,499	\$98,287	\$74,002	\$106,357
Minerals	\$8,015	\$17,205	\$432,250	\$1,013,126	\$1,213,422
Grazing West	\$347,148	\$332,783	\$344,397	\$315,379	\$335,974
Sub-total NFF Receipts	\$2,699,787	\$3,028,631	\$4,891,012	\$5,857,055	\$7,246,529
KV	\$595,784	\$688,491	\$569,636	\$637,932	\$696,680
Specified Road Credits	\$133,342	\$142,845	\$118,320	\$83,213	\$44,663
Salvage Sales	\$310,449	\$264,604	\$413,263	\$444,637	\$290,735
TPTP Revenue	\$618	\$800	\$2,342	\$3,181	\$1,083
Sub-total	\$1,040,194	\$1,096,739	\$1,103,561	\$1,168,964	\$1,033,161

Does not include receipts into special accounts and trust funds. (U.S. Department of Agriculture, 2015).

Table 6. Expenses Created In Wyoming From USFS-Managed Programs, FY 2010–2014.

Management of Land and Resources					
	2010	2011	2012	2013	2014
Wyoming USFS Management Total	\$49,362,130	\$49,587,466	\$44,984,411	\$46,373,111	\$44,106,052
Category of Work					
Land Management Planning	\$450,504	\$581,166	\$584,356	\$531,552	\$262,147
Inventory and Monitoring	\$1,653,767	\$1,841,311	\$1,748,290	\$1,377,469	\$1,280,905
Vegetation & Watershed Management	\$2,794,846	\$2,365,494	\$1,577,501	\$1,597,240	\$1,789,180
Wildlife and Fish Habitat Management	\$1,923,658	\$1,866,098	\$1,442,795	\$1,208,765	\$1,356,480
Recreation, Heritage, and Wilderness	\$4,619,571	\$4,782,773	\$4,481,267	\$4,329,361	\$4,122,657
IRR (Bridger Teton Only)	N/A	N/A	\$2,592,246	\$2,540,897	\$3,208,245
Other	\$3,964,136	\$5,902,123	\$4,269,866	\$4,956,755	\$3,591,205
Forest Products	\$2,505,242	\$2,482,769	\$1,449,997	\$1,990,840	\$2,588,220
Grazing Management	\$1,642,840	\$1,808,645	\$2,043,111	\$2,086,683	\$1,979,613
Minerals and Geology Management	\$768,069	\$1,125,470	\$881,615	\$814,293	\$944,636
Landownership Management	\$541,801	\$511,665	\$469,003	\$527,512	\$588,863
Wildland Fire Management	\$10,309,928	\$9,741,694	\$8,771,026	\$8,430,368	\$8,478,229
Administrative Expenses	\$8,655,070	\$8,150,085	\$8,211,512	\$8,157,854	\$7,476,838
Capital Improvement and Maintenance	\$9,532,699	\$8,428,173	\$6,461,826	\$7,823,522	\$6,438,834

Includes costs only for Forests wholly or substantially in Wyoming. Excludes costs for acquisition, forestry assistance, and research.



3.5.3 State of Wyoming Budget Summaries

The State of Wyoming operates on a biennial budget for all executive and judicial branch agencies. Budgets are built for two fiscal years of operations. The fiscal year begins on July 1 and ends on the following June 30. Budget requests are prepared by agency fiscal personnel in conjunction with the Budget Division of the Department of Administration and Information. The Budget Division is the central budget office for all state government and is often referred to as the "Governor's budget office".

The biennial budget process begins during the summer months prior to a budget session of the Legislature. The Budget Division prepares a "standard" budget request for each agency and submits it to each agency in July. The standard budget is roughly equivalent to what the agency had received for the prior biennium with adjustments made for legislatively or executive approved transfers of funds.

The agency then may develop an "exception/expanded" budget request. An exception/expanded request asks for increased funding necessary to maintain current levels of service, to transfer funds and positions from one program within an agency to another, or for increased funding for expanding services to a new group of recipients or for expanding a new service to existing recipients. Any exception/expanded request is for the next biennium.

The information provided in the following table is summarized from the 2013-2014 Biennium Executive Recommendation (Mead, 2012). Budget information is presented for those departments that currently have management functions on federal lands, or could possibly be expanded to assist with management of federal lands.

Table 7. Summary Budgets from the 2013-2014 Biennium from Wyoming State Agencies.

2013-2014 Biennium Executive Recommendation				
Department	General Fund	Federal Fund(s)	Other Fund	Department Total
Office of the Governor	\$22,669,549	\$0	\$0	\$22,669,549
Department of Agriculture	\$34,542,571	\$1,521,674	\$5,906,083	\$41,970,328
Department of Environmental Quality	\$51,573,033	\$156,860,554	\$16,383,775	\$224,817,362
State Parks and Cultural Resources	\$36,213,279	\$6,554,769	\$15,109,606	\$57,877,654
State Engineer's Office	\$28,722,040	\$0	\$1,128,734	\$29,850,774
Game and Fish Commission	\$9,039,071	\$0	\$800,000	\$9,839,071
Department of Transportation	\$68,888,298	\$94,830,260	\$133,547,683	\$297,266,241
Oil and Gas Conservation Commission	\$0	\$350,136	\$10,380,259	\$10,730,395
Office of State Lands and Investments	\$165,448,972	\$58,469,245	\$45,210,519	\$269,128,736
Total	\$417,096,813	\$318,586,638	\$228,466,659	\$964,150,110





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4. LAND USE
PLANNING



4. Land Use Planning

4.1 BLM

RMPs are the foundation of BLM land management programs. Planning and plan implementation decisions describe desired resource conditions on the ground and methods to achieve desired conditions across the millions of acres of public lands managed by the BLM. The planning process encourages collaboration and partnerships which help the BLM determine how to manage public lands to balance the needs of adjacent communities with the needs of the nation as a whole.

The RMP Program uses interdisciplinary analyses to complete a management framework and decision-making process through a cycle described in more detail below. The NEPA review process is used to inform its land use planning decisions throughout the cycle. Through the NEPA process, the BLM analyzes the potential environmental impacts of a proposed action and a range of alternatives, seeks input from stakeholders and the public, and collaborates with partners in federal, state, local, and tribal government to inform its decisions.

FLPMA directs the United States Department of the Interior and the BLM to develop and periodically revise or amend RMPs for all lands administered by BLM. The CFR outlines the process for the development, approval, maintenance, amendment and revision of RMPs and the use of those plans. Enacted in 1983, 43 CFR 1600 contains the regulations governing the process for the development and use of land use plans and were issued under the authority of sections 201 and 202 of the FLPMA of 1976 (43 USC 1711-1712); the Public Rangelands Improvement Act of 1978 (43 USC 1901); section 3 of the Federal Coal Leasing Amendments Act of 1976 (30 USC 201(a)); sections 522, 601, and 714 of the SMCRA of 1977 (30 USC 1201 et seq.); and the NEPA of 1969 (42 USC 4321 et seq.).

The aim of these plans is to ensure that public lands are managed “to maximize resource values for the public through a rational, consistently applied set of regulations and procedures which promote the concept of multiple use management and ensure participation by the public, state and local governments, Indian tribes and appropriate Federal agencies under the principals of multiple use and sustained yield.” The plans are the basis for every management decision regarding every action and allowed activity within the planning area. They are prepared by the District or Field Offices. FLPMA requires the BLM to revise its RMPs periodically always with the FLPMA goal of managing for multiple uses and sustained yield. They are typically revisited—revised, amended, or replaced—every ten to fifteen years as changing conditions warrant.

RMPs are drafted to determine the appropriate mix of uses for the public lands in the designated management area, develop a strategy to manage and protect the area’s resources, and establish systems to monitor and evaluate the status of resources and effectiveness of management practices over time. RMPs identify lands within the management area that are open or available for particular uses, lands that are closed to certain uses, and establish restrictions on those allowed uses. For example, one area may warrant a stronger emphasis on grazing and/or oil and gas extraction while another may emphasize conservation and/or recreational uses. Certain lands may be closed to



specific uses based on legislative, regulatory, or policy requirements or to protect sensitive resource values. If land use plan decisions close an area of 100,000 acres or greater to a major use for 2 years or more, Congress must be notified of the closure. [CFR 1610.6.]

RMPs establish measurable goals and objectives related to the various allowable uses and provide comprehensive management direction on a broad scale for all the resources and uses in the area. All future site-specific decisions are made based on the RMP. Land Use plan decisions consist of (1) desired outcomes (goals and objectives) and (2) allowable uses and management actions.

RMPs generally establish the following:

1. Land areas for limited, restricted, or exclusive use; designations, such as Areas of Critical Environmental Concern (ACEC); and transfers from BLM administration
2. Allowable resource uses and related levels of production or use to be maintained
3. Resource condition goals and objectives to be attained
4. Program constraints and general management practices needed to achieve the above items
5. Need for an area to be covered by more detailed and specific plans
6. Support actions, including such measures as resource protection, access development, realty action, cadastral survey, etc. as necessary to achieve the above
7. General implementation sequences, where carrying out a planned action is dependent upon prior accomplishment of another planned action
8. Intervals and standards for monitoring and evaluating the plan to determine the effectiveness of the plan and the need for amendment or revision

Section 202(c) of FLPMA (43 USC1712) requires that in developing land use plans, the BLM:

1. Use and observe the principles of MUSY
2. Use a systematic interdisciplinary approach to integrate physical, biological, economic, and other sciences
3. Give priority to designating and protecting areas of critical environmental concern (ACECs)
4. Rely, to the extent available, on an inventory of public lands, their resources, and other values
5. Consider present and potential uses of public lands
6. Consider the relative scarcity of the values involved and the availability of alternative means and sites for realizing those values
7. Weigh long-term benefits to the public against short-term benefits
8. Provide for compliance with applicable tribal, federal, and state pollution control laws, standards, and implementation plans
9. To the extent consistent with the laws governing the administration of public lands, coordinate the land use inventory, planning, and management activities of public lands with land use planning and management programs of other federal departments/agencies and state/local governments, as well as the policies of approved tribal and state land resource management programs. The BLM must, to the extent practical, assure that consideration is given to those Tribal, State, and local plans that are germane in the development of land use



plans for public lands. Land use plans must be consistent with State and local plans to the maximum extent consistent with Federal law.

Refer to FLPMA for the full text of Federal responsibilities detailed under Section 202(c)(9).

Protests

Before land use plan decisions are finalized and selected, they must be presented to the public as proposed decisions and can be protested by the public through the process described in the RMP.

Monitoring and Evaluating RMPs

Agency regulations require that land use plans establish intervals and standards for monitoring and evaluations, based on the sensitivity of the resource decisions involved. Land use plan monitoring is the process of (1) tracking the implementation of land use planning decisions (implementation monitoring) and (2) collecting data/information necessary to evaluate the effectiveness of land use planning decisions (effectiveness monitoring).

4.2 USFS

The NFMA requires that every national forest or grassland management by the USFS develop and maintain a Land Management Plan or Forest Plan. The process for development and revision of plans, along with the required components of the plan, is outlined in the 2015 planning directives.

The plan development or revision process may be conducted in many different ways depending on the circumstances. The Responsible Official establishes an Interdisciplinary Team. This team is responsible for designing the process to be transparent and efficient, reflecting principles of adaptive management, and engaging the public through meaningful opportunities for participation early and throughout the process.

The Responsible Official has the discretion to determine the scope, methods, forum, and timing of the process, subject to public notification requirements listed in 36 CFR 219.16 (see FSH 1909.12, ch. 40, sec. 42). The Responsible Official establishes an Interdisciplinary Team to carry out the planning process (36 CFR 219.5(b)) and provide the Team direction regarding the scope and nature of the new plan or plan revision. FSH 1909.15, chapter 10, section 12.2 gives guidance on Interdisciplinary Team selection. After the assessment phase and during planning phase, the Interdisciplinary Team develops potential plan components, and constantly reviews, evaluates, and adjusts them throughout planning phase to assure that they make a coherent whole.

Outreach to the public continues at all steps of the plan development or revision process (FSH 1909.12, ch. 40). While the Agency does not specify a sequence of steps for developing or revising plans, general steps for conducting the planning process include:

1. Identifying the need to change the plan (36 CFR 219.7(c)(2)(i), sec. 21.21 of this Handbook)
2. Describing the plan area's distinctive roles and contributions in the broader landscape (36 CFR 219.7(f)(1)(ii), sec. 22.32 of this Handbook)



3. Identifying the species of conservation concern (36 CFR 219.9(c); FSH 1909.12, ch. 10, sec. 12.52 and sec. 21.22 of this Handbook)
4. Developing a proposed new plan or revised plan with public participation (36 CFR 219.4 and 219.16 (FSH 1909.12, ch. 40))
5. Analyzing and documenting the environmental and social effects of the proposed plan components and alternatives in an EIS following the appropriate NEPA Procedures (36 CFR 220, FSM 1950, and FSH 1909.15)
6. Reviewing the land use policies of federally recognized Indian Tribes, Alaska Native Corporations, other federal agencies, and state and local governments required by 36 CFR 219.4(b)(2) and document the review in the EIS
7. Providing an opportunity for the public to comment on the proposed new plan or revised plan and the draft EIS (36 CFR 219.16(a)(2)). The required comment period is at least 90 days for a new plan or plan revision
8. Considering public comments and preparing a pre-decisional new plan or revised plan
9. Consulting with National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS), a division of the Department of Commerce, or the USFWS, a bureau of the Department of the Interior, or both; if the approval of a plan, or plan revision, or plan amendment may affect listed species or critical habitat or may adversely affect essential fish habitat of managed fisheries
10. Providing an opportunity to object to a plan, before approval (36 CFR 219.52; FSH 1909.12, ch. 50)
11. Approving the final plan or plan revision with in a decision document that also serves as a ROD, and notifying the public (36 CFR 219.14(a) and 219.16(a)(4))

4.3 State of Wyoming

There are no statutory requirements for the State of Wyoming to complete comparable land management plans.



4.4 Budget Summaries

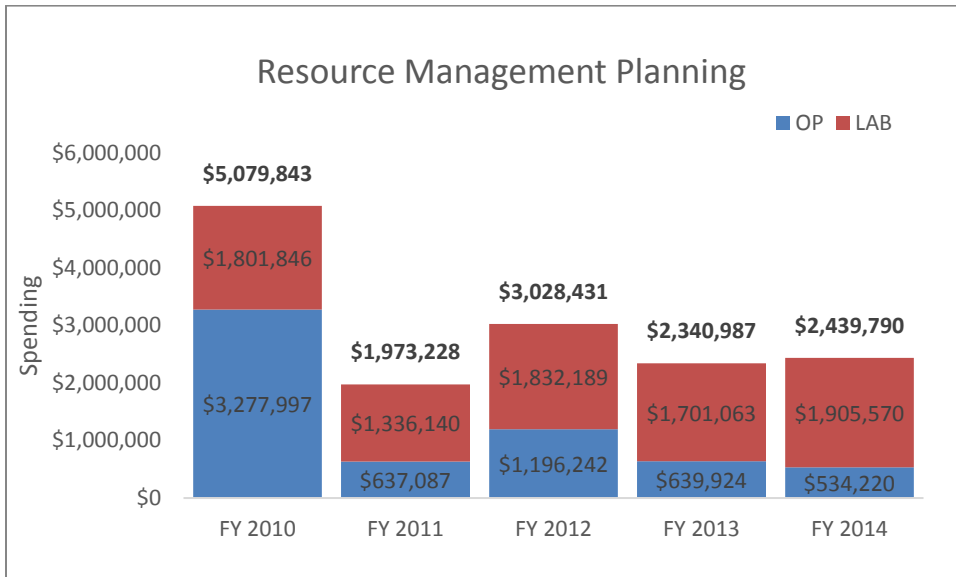


Figure 14. Wyoming BLM Resource Management Planning, FY 2010-2014.



Figure 15. Wyoming USFS Land Management Planning Expenses, FY 2010-2014.





5. ENERGY AND MINERALS



5. Energy and Minerals

5.1 Overview

Energy and mineral resources generate the highest revenue values of any public land use from royalties, rents, bonuses, sales, and fees. In 2014, onshore federal lands produced 41 percent of the nation's coal, 40 percent of the nation's geothermal capacity, 11 percent of domestic natural gas, and five percent of domestically-produced oil. Coal was used to generate approximately 46 percent of the Nation's electricity. The electric power sector (electric utilities and independent power producers) account for about 90 percent of all coal consumed in the U.S. and is the driving force for the Nation's coal consumption. There is increasing global demand for non-energy solid minerals found on federal public lands such as potassium, phosphate, sodium, and potash and mineral materials such as sand, gravel, stone, and clay are essential to maintenance and construction of roads and buildings.

The BLM generally administers programs for energy and non-energy mineral exploration and production on all federal lands. The BLM issues the lease and manages the sub-surface operations, but the Forest Service and other land management agencies manage the surface operations throughout the drilling process on their lands. The BLM and USFS are both responsible for processing ROW applications for wind and solar energy and transmission development associated with renewable energy production.

The BLM also oversees geothermal energy leasing and development and has the delegated authority for leasing 249 million acres of federal land (including just over 100 million acres of National Forest land) with geothermal potential.

In Wyoming in 2014, BLM administered 41.6 million acres of federal minerals which includes 30 million acres of Federal surface acres and 11.6 million acres of split estate federal mineral. The federal government owns both the surface and mineral estate on about 18.3 million acres. It also administers 1.9 million acres of Indian Trust Minerals.

History

Energy and mineral development from federal public lands has been economically significant since 1848, however, Congress did not enact any laws governing the general disposition of mineral resources until 1866. In the 19th century settlement was encouraged by laws providing for free or almost free disposal of public domain land including the national mineral resources. Private entities could explore, develop, purchase, and otherwise acquire minerals and the surface of federal lands with ease under early mineral laws. As concern grew over proper management, conservation, and national defense, new laws were passed removing specific mineral types from disposal under the mineral law and making them subject to disposal by lease or sale.



Mineral resources are generally extracted according to a legal regime that evolved over time that distinguishes between the minerals that are “leasable” (oil, gas, coal, and hydrocarbons), “locatable” (certain hard rock minerals like copper) or “saleable” (common minerals like gravel).

The General Mining Act (GMA) of 1872 was the seminal law regarding mineral management on federal lands in the United States and originally generally governed disposal of all minerals. Under the law, essentially, the party who discovers and develops a mineral deposit on unwithdrawn public lands is entitled to mine the deposit without paying the federal government any charges. The miner of a valuable deposit could also obtain title and ownership to the surface of the land through the patenting process for a nominal fee. Under the law a claim holder could acquire a patent (title) to the land upon which a mining claim has been filed as opposed to merely the subsurface minerals claimed—transferring the land—both surface and subsurface rights—from federal to private ownership. It set the price of the land claim to range \$2.50 to \$5.00 per acre. This price set by law has remained the same since 1872. Congress imposed a moratorium on mineral patent claims in 1994 and transfers of land ownership are prohibited until Congress determines whether the law should be changed.

The GMA today, as amended, still provides for locating and patenting mining claims of locatable minerals where a discovery has been made on public lands in specified states, mostly in the western U.S. FLPMA required mining claimants to record their claims with the BLM by October of 1979 and it mandated that all new claims be recorded with BLM in order to provide BLM with information on the location and number of unpatented mining claims, mill sites and tunnel sites, to determine the names and addresses of current owners, and to remove any cloud of title on abandoned mining claims. Recording that claim in the local courthouse as well as with the appropriate BLM State Office affords protection for claimants from subsequent locators.

The GMA was implemented primarily to deal with hard-rock mining and it was not until the enactment of the Mineral Leasing Act of 1920 (MLA) that a comprehensive system was developed for managing oil and gas development on federal lands. Congress determined that oil and natural gas should remain under federal ownership and removed oil, gas and coal from purview of the General Mining Law—in part over concerns over the importance of these resources to the nation’s defense.

The MLA as amended, authorizes and governs the leasing of public lands for developing deposits of coal, petroleum, natural gas and other hydrocarbons on federal lands rather than as mining claims under the General Mining Act of 1872. The MLA established the authority of the Secretary of the Interior to oversee oil and gas operations on federal land by issuing permits for exploration and leasing of lands with oil, coal, natural gas and other fossil fuel related resources. Provisions in the act permit entrance onto public lands to explore for minerals with permission of the government, provides for drilling and extraction of minerals with authority granted by the government, authorizes the government to manage the exploitation of leasable minerals, and authorizes the government to receive compensation from the lessee for the privilege of extracting minerals on federal public lands.



Under the Multiple Surface Use Act of 1955 common varieties of sand, gravel, stone, pumice, and such were also no longer locatable under the General Mining Law but to be disposed of by sale under the Materials Act of 1947, as amended.

Renewable energy projects on federal lands, such as solar and wind, are generally undertaken pursuant to a Right- of-Way under FLPMA. However, geothermal projects are considered mineral projects and are leased under a separate set of laws similar to oil and natural gas leasing.

While BLM is responsible for onshore leasing, and related operational functions such as issuing drilling permits, production verification, diligence, onsite inspections, and enforcement, the ONRR is responsible for collecting and verifying revenue from energy and other natural resource sources originating from all federal and American Indian lands (onshore and offshore) and manages the disbursement of those revenues.

Companies pay for development of public energy resources. Total mineral revenue collected varies from year to year due to fluctuations in commodity prices. Royalty payments are calculated as a percentage of the amount or value of production saved, sold or removed from the lease and is due monthly. Rent is paid to the federal government by a lease holder annually until a lease becomes producing. A bonus is a cash payment made to the U.S. government by the successful bidder of a lease. It is paid prior to obtaining a lease.

Money received from royalties, rental fees, bonuses, sales, penalties and other revenue generated by mineral exploration and development is initially paid into the U.S. Treasury. The MLA provides that 48% of the funds received are allocated to the state where the land or mineral deposit is located, 40% is allocated to the Reclamation Fund under the Reclamation Act of 1902 for projects that provide water to arid western states (excluding Alaska), and the remaining money is left in the Treasury. Distribution of revenue from renewable energy varies depending on the authority used.

Table 8. Mineral Revenue Generated in Wyoming, FY 2010-2014.

Fiscal Year	Revenue Generated
2010	\$1,859,214,440
2011	\$1,962,518,246
2012	\$2,151,474,173
2013	\$2,011,081,700
2014	\$2,091,297,454

5.2 BLM

Energy exploration and production for oil, natural gas, coal, and fossil fuels on all federal lands under the MLA is administered by the BLM. This includes subsurface mineral claims not just for the land administered by the BLM but for lands controlled by other federal agencies including the USFS and



the federal split mineral estate—mineral subsurface rights owned by the federal government which lie under privately or state-held land.

Responsibility for management of mineral leasing on federal and tribal lands is divided amongst six Interior Department agencies. In addition to ONRR they are the Bureau of Offshore Energy Management (BOEM), the Bureau of Safety and Environmental Enforcement (BSEE), the BLM, the Bureau of Indian Affairs (BIA), and the Office of the Special Trustee (OST).

The BLM provides technical assistance to Indian Tribes and Indian mineral owners but does not lease Indian minerals. The Bureau of Indian Affairs issues mineral leases on Indian lands while the BLM approves and supervises mineral operations on these lands after they have been leased. A significant portion of funding in the BLM Oil and Gas program nationally is used to fulfill these trust responsibilities of the Federal government to American Indian Tribes and individual Indian mineral owners. The BLM supervises operational activities on approximately 3,700 Indian oil and gas leases, while providing advice on leasing as well as operational matters to the Bureau of Indian Affairs, Indian Tribes, and Indian mineral owners. In Wyoming most activity on tribal lands takes place in the Lander Field Office of the BLM. The BLM work largely mirrors the work done for non-Tribal lands with the exception of leasing process. The BLM approves the Application to Drill and performs production, drilling, and other inspections and oversees activities related to the devolvement and operations of sites.

The BLM reviews and approves permits and licenses from companies to explore, develop, and produce both renewable and non-renewable energy on Federal lands. The BLM ensures that proposed projects meet all applicable environmental laws and regulations and develops processes to solicit input from local communities, the states, industry, and other federal agencies in this approval process.

Once projects are approved, the BLM is responsible for ensuring that developers and operators comply with use authorization requirements and regulations.

For the BLM administered federal land, RMPs serve as the initial determinant of which lands may be subject to leasing and all subsequent activities must be consistent with the RMPs. The BLM is required to develop and revise RMPs for the lands it administers that consider the present and potential future uses under the principles of “multiple use” and “sustained yield”. When producing an RMP all mandated procedures must be followed to provide opportunities for the public and various levels of governments to participate as well as the preparation of an EIS or an EA in accordance with NEPA.

Under the Federal Onshore Oil and Gas Leasing Reform Act of 1987 (FOOGLRA) Congress granted the USFS the authority to make decisions and implement regulations concerning the leasing of public domain minerals on National Forest System lands containing oil and gas. Prior to enactment, companies applied for a lease which was followed by an analysis of the land at issue. The Act forced the USFS to analyze lands and then offer appropriate sites for leasing. The USFS must comply with NEPA during the analysis of which lands will be available. Once this is done, USFS notifies the BLM of



its conclusions and may authorize the BLM to lease the lands determined to be appropriate and the BLM is responsible for leasing the land.

When analyzing USFS lands for potential leasing, the USFS classifies lands into three categories:

1. lands that will be “[o]pen to development subject to the terms and conditions of the standard oil and gas lease form”
2. lands that will be “[o]pen to development but subject to constraints that will require the use of lease stipulations”
3. lands that will be “[c]losed to leasing, distinguishing between those areas that are being closed through exercise of management direction, and those closed by law, regulation, etc.

The BLM management of energy and mineral activities encompasses the Oil and Gas Management Program, the Coal Management Program, Other Minerals Management program and its Renewable Energy Management Program.

5.2.1 Oil and Gas

The BLM’s Oil and Gas Management program is one of the most important mineral leasing programs in the federal government. Domestic production from over 48,000 federal onshore oil and gas wells generates \$ 3 billion in revenue a year. The overarching goal is to provide access to oil and gas where appropriate, and to manage exploration and development activities in an environmentally sound way consistent with MUSY principles. Development of oil and natural gas resources on federal land occur over five phases overseen by the BLM including, Land Use Planning, Parcel Nominations and Lease Sales, Well Permitting and Development, Operations and Production, and Plugging and Reclamation. Another important function is the agency’s Fiduciary Trust Responsibility to Indian Tribes. Public involvement is mandated at virtually every level and the BLM has to ensure that development of oil and gas proceeds in compliance with multitude of federal laws including environmental laws.

Under the Mineral Leasing Act and later amendments, the right to produce federally owned petroleum (oil and natural gas) is secured for ten-year periods by competitive bidding, and goes to the party paying the highest bonus. There are three forms of payment to the government: bonus (an initial payment to the government), rental (an annual payment), and royalty (a percentage of the gross value of the oil and gas produced).

As part of the Land Use Planning Process, the BLM must review and analyze environmental documents which include environmental issues and field operations, impacts, mitigation plans, lease sales, APDs, and subsequent production operations.

The Nomination Process follows the identification of lands available for oil and gas leasing through the land use planning process. BLM may produce a list of specific lands available for competitive



leasing or private entities may nominate parcels to be auctioned. Parcels may not exceed 2,560 acres (except in Alaska). Primary responsibilities during nominations and leasing include:

- Conduct oil and gas lease sales consistent with land use plans and requirements for public participation
- Administer existing oil and gas leases and process post-lease actions such as assignments, operating rights, mergers, bonds, unit and communitization agreements, and terminations of leases

The MLA authorizes both competitive and non-competitive leases for oil and gas exploration and productions. Land may be offered for non-competitive leasing after it was offered for a competitive bid but no bids were received or if all bids were below the minimum requirement. The primary term for competitive and noncompetitive leases is 10 years. Leases can be extended to allow for the continuation of exploration operations or oil or gas production.

Leases are conditioned upon payment to the government of a royalty of at least 12.5% in amount or value of oil or gas production that is removed or sold from the leased land. In addition to royalties, leases are conditioned upon payment of annual rental fees. Generally, the rate for the first five years of a lease is \$1.50 per acre per year, with the rate increasing to \$2 per acre for each additional year of the lease. However, there is some variation in rental fee amounts for certain categories of lands.

Primary responsibilities during permitting include:

- Process oil and gas APDs and subsequent modifications of the permits, by evaluating and prescribing conditions for both the subsurface and surface operations
- Maintain an inventory of 5,900 valid approved APDs ready for industry to drill

Operators must submit an Application for Permit to Drill (APD) for each oil or gas well. Without an approved APD, operators cannot begin drilling operations or cause surface disturbances that are preliminary to drilling. A complete APD must include a drilling plan; a surface use plan of operations, including drill pad locations and plans for reclaiming the surface; evidence of bond coverage; relevant BLM forms and any other information that may be required.

An APD must be made available to the public for at least 30 days before it may be acted on. The BLM must prepare an environmental record of review or an EA. Based on these documents, BLM determines whether an EIS is required. Within five working days of the end of the public notice period, BLM must choose one of four options: approve the application as submitted; approve the application with modifications and/or conditions; disapprove the application; or delay final action.

BLM must also approve a surface use plan of operations addressing proposed surface-disturbing activities before a permit to drill on lands BLM manages may be granted. An approved surface use plan of operations addressing proposed surface-disturbing activities is also required before a permit to drill on USFS lands may be granted and before any surface-disturbing operations may begin. The operator must submit its proposed surface use plan of operations to BLM as part of its APD. When



the proposal concerns USFS lands, BLM forwards the proposed surface use plan of operations to the USFS for evaluation. When evaluating a proposed surface use plan of operations, the USFS must ensure that the proposal is consistent with the approved forest land and resource management plan for that area of land. During the evaluation process, the USFS must also comply with NEPA, as well as appropriate USFS regulations and policies. In addition, the USFS can require that the operator increase the amount of its bond if it determines that it is inadequate to ensure complete and timely reclamation and restoration of the NFS lands. The USFS must decide to approve the plan; approve the plan subject to conditions; reject the plan; or delay the plan because additional time is needed to reach a decision. After it has made its decision regarding the proposed surface use plan of operations, the USFS forwards the decision to BLM, which proceeds with the leasing.

Primary responsibilities during inspection activities include:

- Inspect existing oil and gas authorizations (roughly 32,000 annually), determine the adequacy of operators' financial bonding with a review of risk factors to weigh potential liability, and evaluating well inventories in the field to address inactive wells. The BLM uses a risk-based inspection strategy and is focused on inspecting 100 percent of the "high priority" wells, as designated by BLM's risk-based inspection strategy
- Inspect producing oil and gas wells and ensure proper reporting of production
- Take enforcement actions to ensure compliance with terms and conditions of leases, APDs, and other authorizations. This includes compliance with environmental conditions and identifying Drilling Without Approval or trespass wellbores
- Approve reservoir management agreements to provide for the orderly development of oil and gas fields
- Evaluate oil and gas fields for drainage (fluid minerals on federal land removed through a well on adjacent private land), and taking administrative actions, if necessary, to protect federal mineral interests
- Protect the environment by plugging and reclaiming orphan oil and gas wells drilled by previously existing oil and gas companies, remediating the Alaska Legacy Wells originally drilled by the U.S. Navy and U.S. Geological Survey (USGS), and ensuring plugging of the shallow coalbed methane wells in the Powder River Basin of Wyoming

Specific inspections that must be done include production inspections of high risk cases, drilling inspections, abandonment inspections, workover inspections, environmental inspections, record verification inspections, and undesirable event inspections. In FY 2014, 31,802 inspections were conducted.

The numbers of inspections, inspectors, and total annual costs have risen over the years. The number of inspections has increased and the average cost per inspection has stayed about the same at \$1,700. A single case may have multiple inspections performed upon it and therefore the costs of inspections per case are, on average, approximately \$3,849.



Primary duties to comply with Fiduciary Tribal Trust Responsibilities include:

- Carry out trust responsibilities by managing operational activities on approximately 3,700 oil and gas leases for Indian Tribes and individual Indian allottees
- Provide technical advice on leasing and operational matters to the Bureau of Indian Affairs, Indian Tribes, and individual Indian mineral owners

Wyoming Oil and Gas Statistics (Source: (Bureau of Land Management, 2015))

Table 9. Wyoming Leases in Effect, FY 2010-2014.

Fiscal Year	Wyoming	US Total
FY 2010	16,798	50,554
FY 2011	16,622	49,174
FY 2012	16,489	48,699
FY 2013	16,209	47,427
FY 2014	15,535	46,183

Table 10. Wyoming Acres Under Lease, FY 2010-2014.

Fiscal Year	Wyoming	US Total
FY 2010	11,657,090	41,186,158
FY 2011	11,616,906	38,463,552
FY 2012	11,527,320	34,792,212
FY 2013	11,232,643	36,092,482
FY 2014	10,608,506	34,592,450

Table 11. Wyoming New Leases and Acreage, FY 2010-2014.

Fiscal Year	WY Leases	US Total Leases	WY Acreage	US Total Acreage
FY 2010	309	1,308	294,344	1,353,663
FY 2011	1,308	2,188	1,034,741	2,016,176
FY 2012	477	1,729	491,232	1,752,060
FY 2013	437	1,468	351,267	1,172,808
FY 2014	335	1,157	299,021	1,197,852



Table 12. Wyoming Producing Leases and Acres, FY 2010-2014.

Fiscal Year	WY Leases	US Total Leases	WY Acreage	US Total Acreage
FY 2010	7,299	22,676	3,829,709	12,205,416
FY 2011	7,042	22,682	3,823,996	12,316,233
FY 2012	7,503	23,306	3,973,732	12,215,974
FY 2013	7,546	23,507	4,011,606	12,614,743
FY 2014	7,551	23,567	4,033,994	12,690,806

Table 13. Wyoming Drilling Permits Approved (APD), FY 2010-2014.

Fiscal Year	Wyoming	US Total
FY 2010	1,538	4,090
FY 2011	1,660	4,244
FY 2012	1,229	4,256
FY 2013	1,001	3,770
FY 2014	997	3769

Table 14. Wyoming Well Bores Started (spud), FY 2010-2014.

Fiscal Year	Wyoming	US Total
FY 2010	1,290	3,166
FY 2011	1,049	3,260
FY 2012	776	3,002
FY 2013	620	2,413
FY 2014	665	2,544



Table 15. Wyoming Producing Well Bores, FY 2010-2014.

Fiscal Year	Wyoming	US Total
FY 2010	31,339	89,637
FY 2011	31,691	90,452
FY 2012	31,790	92,583
FY 2013	31,641	93,593
FY 2014	31,647	94,778

Table 16. Wyoming Producing and Service Completions, FY 2010-2014.

Fiscal Year	Wyoming	US Total
FY 2010	32,355	95,979
FY 2011	32,711	96,606
FY 2012	32,797	99,015
FY 2013	32,580	99,975
FY 2014	32,603	101,145

5.2.2 Coal

The BLM is responsible for leasing the federal coal estate on approximately 700 million acres. From 2004 through 2013, 46 percent of the Nation's electricity was generated using coal. During this same period, more than 41 percent of that coal was produced on Federal lands. The coal program oversees approximately 309 Federal coal leases and 474,025 acres under lease. Over the last decade over 4.54 billion tons of coal were produced from federal leases with a total value of \$58.6 billion; over \$3.5 billion in bonus payments and over \$6.3 billion in royalties, rents, and other revenues were collected on BLM administered coal leases. There were 46 successful coal lease sales, and accepted bonus bids of over \$4.5 billion (deferred bonus bid payments occur over five years) for over 89,430 acres containing 5.3 billion tons of mineable coal during this time.

All BLM coal leasing is done competitively except in cases where a party holds a "prospecting permit" issued prior to the Federal Coal Leasing Amendments Act of 1976 or where contiguous lands are added to existing leases. Coal leasing on federal lands may not commence until the land to be leased has been included in a comprehensive land use analysis. The coal screening aspect of this analysis consists of several determinations: (1) the identification of coal-rich areas with potential for development; (2) evaluation of the land in question to determine whether there are any factors that would make it unsuitable for development; (3) consideration of potential multiple use conflicts; and



(4) in cases where the federal government does not control the surface estate, consultation with the surface estate owner regarding development of coal resources.

There are two processes by which federal lands may be leased for coal production. The first is “regional coal leasing,” in which BLM selects tracts for leasing as needed to meet regional requirements as outlined by “regional coal teams” composed of BLM officials and interested state and local parties. The second is leasing by application.

BLM-issued coal leases are for initial terms of 20 years, with automatic extension “for so long thereafter as coal is produced annually in commercial quantities from that lease.” In addition to rental payments of not less than \$3 per acre, lessees are required to make payment to the government of a royalty of at least 12.5% in amount or value of coal that is recovered from the leased land. All leases are subject to the condition of diligent development and continued operation. Lessees must also furnish bonds sufficient to ensure compliance with the terms and conditions of the lease.

The BLM is responsible for the following in the Coal Management program:

- Conducting competitive coal lease sales and ensuring the public receives fair market value for the coal
- Determining the pre-sale estimate of the value of the coal by considering both domestic and export markets, among other factors, and obtaining an independent review of the value
- Conducting sales to modify existing coal leases and ensuring the public receives fair market value for the coal
- Administering existing coal leases and providing additional approvals to ensure the lessee’s compliance with the terms and conditions of the lease
- Processing and approving coal exploration licenses and monitoring operations for compliance with the terms of the exploration licenses
- Processing and approving coal resource recovery and protection plans and modifications to protect the public’s resources from waste and to ensure maximum economic recovery
- Inspecting operations at Federal and Indian coal use authorizations to ensure compliance with the authorization’s terms and conditions and to ensure the greatest ultimate recovery
- Independently verifying the coal production reported by lessees from Federal and Indian coal leases
- Taking appropriate action when Federal coal has been mined without approval (coal trespass actions)
- Taking enforcement actions to ensure compliance with terms and conditions of licenses, leases, and other BLM coal authorizations
- Providing pre-lease evaluations of mineral tracts when requested by the Bureau of Indian Affairs for Indian Tribes and Indian mineral owners



Additional funding for some activities is secured through cost recovery—the service charges the BLM collects from applicants to process coal lease applications, lease modification requests, royalty rate reduction requests, and logical mining unit applications. Amounts that the BLM collects each year vary as the workload varies between applications filed prior to or after the cost recovery regulation became effective in 2005. As older projects and activities related to them and which predate cost recovery are completed and the workload focuses more on newer activities that are subject to cost recovery, the receipts from cost recovery are increasing. Receipts from cost recovery were approximately \$125,000 in 2008 and increased more than threefold to \$436,000 in 2012.

The BLM completes approximately 2,700 inspection, enforcement, and production verification actions each year. Inspections are performed to ensure compliance with the lease terms and conditions and mining plan approvals. Enforcement actions are necessary where the lessee fails to conform to the established lease requirements. During the inspection process, the BLM inspector will collect production data to independently determine if the coal production being reported by the lessee is reasonable. The BLM must also complete post lease administrative actions while managing leases—approximately 335 a year. These post lease actions vary from lease readjustments, lease modifications, to resource recovery and protection plan approvals. Normally, post lease actions are market dependent.

The Office of Surface Mining, Reclamation and Enforcement (OSMRE) is a bureau within the Department of the Interior responsible for establishing a nationwide program to protect society and the environment from the adverse effects of surface coal mining operations. OSMRE is charged with balancing the need for domestic coal production with environmental protection. It was created in 1977 when Congress enacted the Surface Mining Control Act.

Table 17. Wyoming Coal Leases, Licenses, and Logical Mining Units, FY 2014.

Wyoming Coal Leases, Licenses, and Logical Mining Units		
Type of Authorization	Total as of September 30th	
	Number	Acres
Total Leases	102	200559
Exploration Licenses	9	56315
Logical Mining Unit	13	132238

Source: (Bureau of Land Management, 2015).

5.2.3 Other Minerals

Other minerals managed on federal public lands that are not energy related are generally classified as “Mineral Materials” and “Non-Energy Solid Leasable.” They are either locatable, leasable, or saleable depending on how they can be disposed of under federal law.



Non-Energy Solid Leasables includes more valuable minerals that are not energy related such as sodium, phosphate, potassium, and trona as well as metallic minerals (lead, zinc, copper, nickel, etc.). These minerals are used for fertilizers, glass and papermaking, flue-gas desulfurization, lead-acid batteries, oil well drilling, water treatment, detergents, and many chemicals. Mineral Materials includes sand, gravel, dirt, and rock which are all used for a wide variety of building and construction purposes and have a relatively low market sale price.

The General Mining Law (Act) of 1872 declared all valuable mineral deposits in land belonging to the United States to be free and open to exploration and purchase. This law provides citizens of the United States the opportunity to explore for, discover, and acquire certain valuable mineral deposits on the public lands. All citizens 18 years or older have the right to “locate” a mining claim on federal lands open to mineral entry. A mining claim is the right to explore for and extract minerals from a tract of land. Claim staking is the required procedure of marking the boundaries of the mining claim. Once the claim is staked, the prospector documents the claim by filing required forms with the Clerk of the County in which the claim is located, and with the BLM. The discovery of a valuable mineral deposit within the limits of a mining claim located on public lands in conformance with state and federal statutes validates the claim; and the locator acquires an exclusive possessory interest in the mineral deposits within the claim. The claim is property and the owner is entitled to mine, remove and sell all minerals pursuant to applicable law. A mining claim may be “located” once discovery of a locatable mineral is made. Therefore, mineral deposits subject to acquisition under the General Mining Law of 1872 are “locatable minerals.” The easiest way to define a “locatable” mineral is those minerals which are still subject to the General Mining Law and therefore are still able to be “located.” They must not have been removed through the General Mining Law of 1872 and subject to acquisition through sales or leases, which generally happens through federal legislation.

In 1873, the Department of the Interior began defining “locatable” minerals as those minerals recognized as a mineral by experts, not subject to disposal under some other law, and which make the land more valuable for mining purposes than for agriculture. The history of the law has resulted in a definition of “locatable” mineral that includes examining economic factors like value and other features of the mineral. For example, “Under the Surface Resources Act, certain varieties of “saleable” mineral materials (disposed of by sale) are in fact “locatable” if they are “uncommon”—defined as possessing a “distinct and special value.” So certain “uncommon” varieties of mineral materials that would otherwise be saleable such as pumice, rock, and cinders are regulated as locatable minerals. A determination that a material variety is distinct, has special value, and is therefore “uncommon” and subject to the General Mining Law is made by BLM on a case-by-case basis.

Subsequent legislation removed certain liquid minerals and hard rock minerals from under the authority of the General Mineral Act and mandated that disposal instead be through lease or sale. Minerals normally locatable on lands acquired (purchased or received) under the Acquired Lands Act of 1947 by the United States or found on American Indian reservations are subject to lease only.



Generally, locatable minerals include metallic minerals (gold, silver, lead, copper, zinc, nickel, etc.), nonmetallic minerals (fluorspar, mica, certain limestones and gypsum, tantalum, gemstones, and certain hard rock minerals found in loose gravel rather than a vein or lode (usually gold) and certain uncommon variety minerals (those determined to be distinct and possessing special value). Because of the complexities it is generally easier to identify the minerals that are not locatable than list the ones that are. Of the approximately 5,000 known minerals about 99% are locatable.

There are currently roughly 50,000 mining claims in Wyoming covering approximately 900,000 acres. The Wyoming BLM currently processes between 1,000 to 2,000 new claims annually (Bureau of Land Management, 2015). The numbers can change dramatically with commodity prices which currently are low. If commodity prices increase the number of claims to be processed can jump to 10,000 a year. In addition to processing the new claims they must maintain the paperwork for all the claims in Wyoming, including required annual claim maintenance (Varhalmi, 2016).

The WDEQ, in conjunction with BLM, maintains mining reclamation bonds for the locatable minerals program. BLM regularly reviews and updates bonds and financial guarantees for notices and plans.

“Mineral Materials” are everyday materials that BLM sells and leases such as ordinary clay, sand, gravel, and building stone are all used for a wide variety of building and construction purposes and have a relatively low market sale price. These materials are used for construction of roads, foundations, and buildings. Mineral Material like sand, dirt and rock are generally used locally due to their high transportation costs (due to weight) and low price. They are given free to state, counties, and other government agencies for public projects but are sold at fair market value to the public. Local access to mineral material is vital to local economies because of the universal need for them for road and building construction and because it is not economic to transport long distances. Therefore, the BLM makes these materials available as much as possible - “whenever and wherever” it can be accessed in an environmentally acceptable manner. Mineral material extraction is dictated by area RMPs.

The Mineral Materials program of BLM is responsible for:

- Performing NEPA analyses of disposal applications
- Performing appraisals to determine the value of disposals
- Conducting sales
- Administering existing contracts and collecting revenue
- Processing free use permits for State and local governments and non-profit organizations
- Processing exploration permits and mining authorizations
- Inspecting existing mineral materials authorizations
- Inspecting sites to ensure proper reporting of and payment for production
- Taking enforcement actions to ensure compliance with terms and conditions of contracts and authorizations



- Investigating and taking enforcement actions on unauthorized removal of mineral materials from Federal mineral estate

The Non-Energy Solid Leasable Minerals Program is responsible for:

- Processing permit, license and lease applications
- Administering existing permits, licenses, and leases
- Approving exploration and mining plans
- Conducting NEPA analyses
- Inspecting and monitoring existing authorizations
- Inspecting producing operations to ensure proper reporting of production
- Taking enforcement actions to ensure compliance with terms and conditions of permits, licenses, and leases
- Administering trust responsibilities by managing post-leasing and production activities for Indian Tribes and individual Indian mineral owners.

The dominant lease in Wyoming is for sodium leases for trona. As of September 30, 2014 there were 55 sodium leases in Wyoming covering 61,305 acres with one new action in FY 2014 for a Sodium Exploration License covering 1,921 acres. Trona is processed into soda ash, which is used primarily in glass, detergents, paper, water softeners, drugs, cleaning compounds, and baking soda. Ninety percent of the nation's trona production, and thirty percent of the world's trona production, comes from Wyoming. In 1999, about 17,000,000 tons of trona were mined in Wyoming. Trona is mined by five producers in the United States, four of which operate underground mines in the Green River Basin in southwest Wyoming. Reserves of trona total over 100 billion tons in the Green River Basin and nearly 50% of Wyoming's trona is federally owned.

The Other Mineral Resources Program is primarily funded through appropriations. Other funding sources include cost recovery fees, averaging \$284,000 per year, for processing mineral disposal actions such as mineral material competitive sales. There are also cost recovery fees for processing new applications for non-energy leases, licenses and permits.



Table 18. Wyoming Sales of Mineral Materials, FY 2014.

Type of Disposal	New Contract Sales/Use Permits			All Existing Contracts/Permits		
	Number	Quantity	Value	Number	Quantity	Value
Wyoming Non-Exclusive Sales	68	7,666	\$32,900	74	7,672	\$33,013
Wyoming Exclusive Sales	21	13,164,803	\$9,724,366	178	2,167,456	\$1,300,421
Wyoming Free Use Permits	22	757,979	\$571,473	31	116,152	\$103,361

Source: (Bureau of Land Management, 2015).

Table 19. Wyoming Sodium Leases and Licenses, FY 2014.

Type of Authorization	Number	Acres
Sodium Leases	55	61,305
Sodium Exploration Licenses	0	0

Source: (Bureau of Land Management, 2015).

Table 20. Wyoming Notices and Plans of Mining Operations Reviewed by BLM, FY 2010-2014.

2010	2011	2012	2013	2014
33	39	43	48	24

Source: (Bureau of Land Management, 2015).

5.2.4 Office of Natural Resource Revenue (ONRR)

The ONRR was established in October of 2010 within the Office of the Secretary of the Department of the Interior. The Interior Department has administered the mineral leasing program for federal and Native American lands for over ninety years. The former Minerals Management Service (MMS) collected revenues from offshore and onshore lands and disbursed those funds to the US Treasury, various special use accounts set up by Congress, states, and American Indians. From 1982 until 2014 approximately \$270.8 billion in revenue has been distributed from on- and offshore leases, \$163.96 billion of which went to the U.S. Treasury, making mineral lease revenue one of the greatest non-tax sources of income to the federal government. In this same timeframe, approximately \$26 billion was distributed to the Reclamation Fund, \$28.8 billion to the Land & Water Conservation Fund and \$4.5 billion to the Historic Preservation fund.

This regulatory framework was established in 2010 to replace the former Minerals Revenue Management (MRM) Program and separates the responsibilities previously performed by the Minerals Management Service by re-assigning those duties to three separate organizations. This was



intended to create a meaningful separation of the revenue collection activities from the mineral leasing and regulatory functions to eliminate both real and perceived conflicts that existed in the previous organization.

BLM is responsible for onshore leasing, and related operational functions such as issuing drilling permits, production verification, diligence, onsite inspections, and enforcement. As of early 2015, BLM administered 47,600 total onshore leases, 26,096 of which are producing. The ONRR is responsible for collecting, verifying, and disbursing the revenue from energy and other natural resource sources originating from all federal and American Indian lands (both onshore and offshore) on behalf of all Americans.

ONRR handles an average of \$11 billion in annual revenues from energy and mineral leases. In 2014 ONRR collected \$13.4 billion in revenue for royalty payment, rents, bonuses, penalties, and other revenues from over 2,000 payors from 60,694 total leases. ONRR then manages the disbursement of those revenues. In FY 2014 revenue was distributed as follows:

- \$7.3 billion to the U.S. Treasury
- \$1.77 billion to the Reclamation Fund
- \$895 million to the Land & Water Conservation Fund
- \$150 million to the Historic Preservation Fund
- \$2.2 billion to 35 states
- \$1.1 billion to American Indian tribes and individuals

In FY 2014 approximately ninety percent (90%) of all revenue collected was from oil and gas, eight percent (8%) was from coal, and the remaining two percent (2%) was from other products (carbon dioxide, copper, geothermal, hot water, lead, limestone, phosphate, potash, renewables, sand and gravel, sodium, sulfur, and other products).

Producers and lease holders file mineral reports with ONRR periodically but send the money to the Federal Reserve, which notifies the ONRR of the deposit. ONRR receives, processes and verifies the submitted production reports, verifies the royalty and other amounts due (ONRR receivables), matches the payments made to the Federal Reserve against those receivables, distributes the revenues to leasees, and schedules disbursements. ONRR sends the schedule of disbursements to the Federal Reserve which then transfers the appropriate amounts to the various states and applicable federal accounts. ONRR provides production data submitted back to the Production Verification Agency, which for onshore federal leases is the BLM.

Onshore federal revenue is divided in the lower 48 states between the state where the production occurs (48%), the Reclamation Fund of the U.S. Treasury (40%), and the General Fund of the US Treasury (10%).

ONRR's legislative authority to collect royalties onshore comes from: the Leasing of Allotted Lands for Mining Purposes, Act of 1909; the Indian Mineral Leasing Act of 1938; the Indian Mineral Development Act of 1982, Mineral Leasing Act of 1920; the Geothermal Steam Act of 1979; the



Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA); the Federal Oil and Gas Royalty Simplification Fairness Act of 1996 (RSFA).

Rent is paid to the federal government by a lease holder annually until a lease becomes producing. Annual rents for onshore leases range from \$1.50 to \$44.00 per acre. Once a lease becomes producing, rent ceases and a royalty is paid to the federal government. Royalty payments are calculated as a percentage of the amount or value of production saved, sold, or removed from the lease. They are due monthly. The standard royalty rate for onshore federal leases is 12.5%.

ONRR completes the following actions:

- Receives, processes, and verifies royalty reports submitted by industry
- Collects, verifies and distributes all rent, bonuses, and royalties
- Oversees inspections to ensure production verification
- Drafts and publishes valuation rules
- Issues valuation guidance and determinations
- Reviews and responds to transportation and allowance requests
- Coordinates with American Indian Tribes and states on enforcement and management
- Develops enforcement strategies including sanctions and civil penalties, provides training and information to companies to improve staff expertise, and facilitates accurate communication and collaborative partnerships
- Engages in alternative dispute resolution and provides litigation support

A major goal of the ONRR is to ensure that mineral revenue is accurately reported and paid. To verify data and ensure its accuracy ONRR utilizes various mechanisms including up-front system edits, data mining, compliance reviews, and audits. There is a three-year cycle of review and/or audit and properties and companies are selected using a risk assessment process across the entire scope of payors. Compliance reviews analyze the reasonableness of reported revenues. Data mining includes analyzing volumes in production and revenue reports. Audits are conducted according to generally accepted government auditing standards.

In the fall of 2011 the United States announced the United States Extractive Industries Transparency Initiative (USEITI)—to initiate the process of becoming an Extractive Industries Transparency Initiative (EITI) compliant country. EITI is an international standard, which countries undertake voluntarily, that is designed to strengthen revenue transparency, accountability, and the public's trust in the revenue paid and received for countries' natural resources. To accomplish this, companies publish the amount paid and governments disclose the amount of revenue received and the information is independently assessed and released in EITI Reports.

The ONRR operates within in the Office of the Assistant Secretary for Policy, Management, and Budget and is headquartered in Washington, DC. Main operations are based at the Denver Federal Center in Lakewood, Colorado with field offices in Texas, Oklahoma, and New Mexico. ONRR has approximately 600 employees.



In FY 2014 mineral revenue generated from federal land in Wyoming was approximately \$2.1 billion. Table 21 shows the total amount disbursed to the state of Wyoming, which is 48% of total revenues generated in the state.

Table 21. Disbursements of Mineral Revenue to Wyoming, FY 2010-2014.

2010	2011	2012	2013	2014
\$886,871,352	\$971,498,012	\$995,169,510	\$932,475,424	\$1,007,269,375

Source: (Department of Interior, 2015).

Sequestration

In FY 2013 disbursements from federal revenue to the states and counties was sequestered by the ONRR pursuant to the Balanced Budget and Emergency Deficit Control Act of 1985 (BBEDCA), as amended by the Budget Control Act of 2011. In FY 2014 the sequestered FY 2013 funds were released to states and counties, however, the mandatory sequester continued and ONRR held back 7.2% of the FY 2014 disbursements. In October of 2015 ONRR returned \$158.7 million of the \$162.2 million sequestered in 2014. In FY 2015 ONRR again sequestered 7.3% of revenue disbursements.

5.2.5 Renewable Energy Development

Geothermal

The Geothermal Steam Act of 1970 (30 USC 1001) authorizes the Secretary to issue leases for the development of geothermal resources. The BLM has the delegated authority for leasing on more than 245 million acres of public lands (including 104 million acres of National Forest managed by the USFS) with geothermal potential in 11 western states and Alaska. There are no geothermal activities in Wyoming.

Wind and Solar

While oil, gas, and geothermal projects are permitted by BLM under leasing processes, those interested in producing wind or solar energy on federal lands do not seek leases. Instead, they seek more limited authorizations for development of their energy projects pursuant to Title V of the FLPMA which authorizes the grant of Rights-Of-Ways (ROW) for both BLM managed land and USFS lands. Wind and solar projects on federal lands are conducted via rights-of-way even though neither Title V of FLPMA nor the accompanying regulations address wind or solar energy projects specifically. Title V of FLPMA authorizes BLM and the Secretary of Agriculture (managing USFS lands) to “grant, issue or renew rights-of-way over, upon, under or through” their administered lands for “systems for generation, transmission and distribution of electric energy.” The USFS also does not have regulations that specifically address wind and solar energy. ROW, however, such as solar and wind projects—are allowed on NFS lands, generally through a ROW Special Use Authorization.

The agencies may exercise their discretion to grant rights-of-way on any lands under their jurisdiction, unless (1) prohibited by a statute, regulation or order that specifically excludes rights-



of-way; (2) the lands are specifically segregated or withdrawn from the use contemplated by the ROW; or (3) the agency has identified the area in land use plans as inappropriate for ROW uses.

The Renewable Energy Management Program within the BLM is responsible for processing ROW applications for wind energy, solar energy, geothermal energy and renewable energy transmission development. Rights-of-way granted by BLM operate differently from leases. The most significant difference between leases and rights-of-way are the extensive rights to use of the land that are retained by the lessor, the United States. This includes access to the lands covered by the ROW, including any facilities constructed on the ROW. ROWs require common use of the land (including subsurface and air space) and the government may authorize others to use the ROW for compatible uses. The federal government retains ownership of the resources of the land. The government may determine whether or not the grant is renewable; and may change the terms and conditions of the ROW due to changes in legislation or regulation or as otherwise necessary to protect public health or safety or the environment.

BLM may impose any terms, conditions, or stipulations that it determines to be in the public interest, including modifications of proposed routes or changes to the location of facilities. The terms of rights-of-way vary, but those with terms longer than 20 years must include periodic reviews at the end of the 20th year and at 10-year intervals thereafter.

Holders of BLM rights-of-way are also required to make rent payments as set forth by BLM. Rent is payable on a monthly basis and waivers or reductions can be obtained. BLM regulations provide that rent for non-linear rights-of-way for purposes other than communications uses will be determined through a process based on comparable commercial practices, appraisals, competitive bidding, or other reasonable methods. Applications for rights-of-way on BLM lands are also subject to processing fees.

Parties applying for BLM rights-of-way for development of wind or solar energy projects must satisfy a number of requirements in their application including disclosures regarding the use of the ROW, information regarding the identification of business partners and other affiliated entities, and other information regarding plans for use of the ROW.

All renewable energy projects proposed for BLM-managed lands receive full environmental reviews under the NEPA, including the same opportunities for public involvement as other BLM land-use decisions.

Wyoming

An estimated 43% of public lands in Wyoming have wind energy development potential. Much of Wyoming has fair to excellent wind energy potential, with some areas having outstanding to superb potential as identified by the Department of Energy's National Renewable Energy Laboratory. Currently, most of the interest has been focused on southern Wyoming. The public lands in the southern half of Wyoming have the highest potential for wind energy development and consequently, most of the project and site testing ROW applications currently being processed by BLM Wyoming are located in the Casper, Kemmerer, Lander, Rawlins, and Rock Springs Field Offices.



Generating energy from wind is only one aspect of developing renewable energy resources on the public lands in Wyoming; the energy must be delivered to the marketplace. The lack of power transmission infrastructure in the relatively remote and unpopulated areas of Wyoming with high wind potential requires the construction of new power transmission lines.

Meteorological site testing is used to determine whether a site's wind energy potential meets the criteria for full field development. These "met site" or "met tower" rights-of-way are granted for an initial period of three years to allow for a temporary wind tower to be erected on the site. If the data gathered at "met sites" indicates that the wind resource is sufficient, a full-field development proposal is submitted to BLM for analysis. All projects must be bonded. BLM Wyoming has processed, and is currently processing, a large number of "met site" applications and a number of full-field development applications.

The Foote Creek Rim wind project is Wyoming's first and only completed commercial facility to generate electricity from wind and is partially located on public lands managed by the BLM Rawlins Field Office. Located between Laramie and Rawlins in southeastern Wyoming near Arlington, it began commercial operations in 1999. Since development of the original 69-turbine project, several subsequent phases have been constructed, and the project now totals 183 turbines with a generating capacity of 134.7 megawatts.

5.2.6 Abandoned Mine Lands

BLM

The BLM's Abandoned Mine Lands Program (AMLPL) works to restore abandoned hardrock mine lands and waters with the aim of protecting the public and the environment while preserving the land's historically significant mining heritage. The AML program works to remediate abandoned mine lands supports other core programs by restoring degraded water quality, cleaning up mine waste that has been contaminated by acid mine drainage and heavy metals (such as zinc, lead, arsenic, mercury and cadmium), remediating other environmental impacts on or affecting public lands, and mitigating physical safety issues. The BLM maintains an inventory of known abandoned mines located on BLM-managed lands and continues to search for currently unidentified abandoned hardrock mines.

The AMLP differs from the Hazardous Materials Management Program in that the Hazardous Materials Management Program addresses environmental issues but not physical safety issues. The Hazardous Materials Management Program addresses environmental issues across all BLM-managed lands, and may help address environmental issues at high-priority AMLP sites as well.

USFS

The USFS Minerals and Geology Management Program works to mitigate the risks from abandoned mine lands by providing for the inventory, assessment, and mitigation of abandoned mine safety hazards and associated environmental damage. This work includes closing underground mine openings and vertical shafts; re-contouring open pits, trenches, and associated roads; and removing or stabilizing abandoned buildings, and equipment. Wherever feasible, work in this activity minimizes



or mitigates adverse effects on dependent wildlife and abandoned mine lands-associated cultural and historic resources.

According to the USFS, available data indicates there may be 27,000 to 39,000 abandoned mines on NFS lands, of which approximately 18,000 to 26,000 are abandoned hard-rock mines. Of these hard-rock mines, an estimated 9,000 to 13,000 are past producers of valuable minerals and are therefore more likely to require environmental cleanup or safety mitigation work. Since 1998, the agency has mitigated more than 5,000 safety hazards at abandoned mines and cleaned up hazardous substances at more than 450 sites, with more than 100 cleanups in progress. Additionally, the agency conducts environmental compliance audits of approximately 20 percent of its administrative units annually.

Forest Service costs for addressing abandoned land mines are in its Minerals and Geology Management Program budget.

5.2.7 Hazardous Materials

The Hazardous Materials Management Program provides for the prevention, mitigation, and remediation of the effects of hazardous material releases and other dangers on the public lands.

The Hazardous Materials Management (HMM) Program ensures BLM compliance with federal and state environmental regulations. The Program also exercises the legal authorities granted to the BLM to protect human health and the environment by cleaning up hazardous waste sites. Additionally, the HMM Program implements Federal initiatives directed at improving environmental management and sustainability. HMM activities include:

- Minimizing environmental contamination on public lands
- Reducing risks associated with environmental hazards
- Restoring natural and cultural resources adversely impacted by oil discharges and hazardous substance releases
- Correcting environmental compliance problems in a timely fashion
- Identifying and managing significant environmental aspects of BLM operations
- Reducing the generation of wastes or contaminants at the source, thereby reducing the level of hazards to public health or the environment
- Partnering with the BLM Law Enforcement Program to remove illegally dumped material such as trash, hazardous materials, and abandoned vehicles

The HMM Program differs from the AMLP. While the AMLP focuses on issues at hardrock mines abandoned prior to 1981, the HMM Program has a broader focus on all public lands. Additionally, while the AMLP addresses both physical and environmental safety hazards at AMLP sites, the HMM Program addresses environmental hazards only, and may support environmental hazards at high-priority AMLP sites as well.



In addition to HMM Program funding, the BLM utilizes, in the appropriate circumstances, funding from the Department of Interior's Natural Resource Damage Assessment Restoration Fund (NRDAR), and the Department of Interior' Central Hazardous Materials Fund (CHF).

5.3 USFS

The Minerals and Geology Management Program of the USFS guides the administration of mineral operations on NFS lands in collaboration with BLM and oversees the management and mitigation of abandoned mine lands, management of geologic resources and hazards, and management of environmental compliance and restoration related to mineral activities. This program also performs the necessary work to make lands available for leasing before being turned over to the BLM.

Approximately five million acres underlying NFS lands are currently leased for oil, gas, coal, and geothermal operations. There are an estimated 19,000 federal and private oil and gas wells on NFS lands, and coal produced from NFS land accounted for 25% of nation's coal production. USFS also administers approximately 160,000 mining claims. Receipts and royalties generated for energy and other mineral activities are collected by the ONRR.

Of the total receipts received through energy and minerals production on NFS lands, 75 percent or 50 percent (depending on whether production is from Acquired or original Public Domain lands are returned to the Treasury). Public domain lands are lands ceded by the original states or obtained from a foreign sovereign through purchase, treaty, or other means (e.g., the Louisiana Purchase in 1803). Public domain lands may be governed by different laws than "acquired" federal lands, which were obtained from individuals or states. The other balance of receipts is returned to the states or counties where production occurred.

While the BLM has management responsibilities for the federal mineral estate, including federal minerals that underlie NFS lands, the USFS is still responsible for the management of surface on mineral, oil, and gas projects proposed or operating on NFS lands. It examines all surface and operation plans and performs its own NEPA analysis. USFS administers mineral operations by providing inspection, oversight, and monitoring of approved mineral operations on NFS lands. Administration by USFS also ensures compliance with approved forest land use plans, and with state and federal environmental laws and regulations.

USFS participates in processing mineral applications by reviewing and approving plans for proposed mineral activities. This includes including exploration and development of hardrock minerals under the authority of the Mining Act of 1872; exploration and production of coal, oil, gas, and geothermal under the various mineral and geothermal leasing acts; as well as contracts for the extraction of mineral materials such as sand and gravel, by the public and local, state, and federal agencies under the Materials Act of 1947.

USFS manages environmental restoration through the inventory, assessment, cleanup, long-term operation and maintenance, and monitoring of sites where there is a release, or threat of release, of a hazardous substance, pollutant, or contaminant on NFS lands. Restoration occurs at both



abandoned mine lands and non-abandoned mine lands sites and involves Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and non-CERCLA authorities. Cleanup projects are typically initiated under requirements of CERCLA, the RCRA, or the Clean Water Act.

5.4 OSLI

The Trust Land Management Division provides management and protection of approximately 3.6 million acres of state trust land surface assets and 3.96 million acres of state trust land sub-surface assets. They are charged with optimizing the economic return from state trust land assets and providing monetary benefits to the state's trust beneficiaries and public benefits to the citizens of Wyoming. The Division administers the State Board of Land Commissioners Rules and Regulations and statutes governing special use leasing; temporary use permits; land sale, exchange, and acquisition transactions; sub-surface leasing of all state trust land minerals, bonding, and mineral lease auctions. The Division is also responsible for assuring proper and timely collection of rentals and other payments for leases and use rights. The Royalty Compliance Section has eight staff and monitors and verifies the accuracy and timeliness of all mineral royalties owed to the state trust and assuring proper payments pursuant to state statutes, leases and leasing rules and regulations (Child, Crapser, Sewell, Crowder, & Bump, 2014).

Wind power leases represent a relatively small percentage of the total lease portfolio, yet they require an extensive knowledge of the ever-changing market. Key components of a wind power lease include lease phases, performance benchmarks, rental rates, reclamation, bonding and noninterference with oil and gas development. The wind market in Wyoming is variable due to lack of transmission capacity, delays, and downgrading of transmission projects and continuing challenges in export marketing to California and the west coast. In FY 2013, the total number of acres leased for wind development was 44,873 acres with an additional 19,945 acres under active negotiation. This is a decrease from FY 2011 of 11,698 acres due to lease terminations or cancellations. The cumulative land in an Operational Phase of a Wind Energy Lease is unchanged from FY 2011 at 10,559 acres.

The Easement Program provides legal authority and recordable easements across state trust lands for public access, utilities, oil and gas development, railroads, water lines and ditches, watershed and livestock reservoirs, roads to private land and residences, public highways and any other appropriate use. During FY 2013, 153 easement applications were processed.

The Temporary Use Permit Program manages permits issued for activities of a temporary duration on state trust lands that are not more appropriately authorized under other leases. Temporary use permits are issued for projects including roadways for off-lease oil and gas development, construction activities, hot mix facilities, organized recreation activities, sign boards, and outfitting/guiding activities. Temporary use permits are issued for a limited term that is specific to a particular use. Consideration for temporary use permits are negotiated on a case-by-case basis, and subject to a minimum consideration specific to each use. Upon completion of the permitted use, all



state trust land disturbed by the permittee must be restored to a condition similar to its original condition and forage density. During FY 2013, 233 temporary use permits were processed.

The majority of temporary use permits are issued for oil and gas related activities that are not authorized by the oil and gas lease. In FY 2013, a large percentage of the temporary use permits were issued for access roads for off-lease oil and gas development needing to cross state trust land to get to private or federal land leases. Over the previous five fiscal years, a very low percentage of these access roads have been inspected when the permit terminates to determine if the road has been reclaimed or if it should be allowed to remain. Prior to approval of the permit, the maps which accompany the application are reviewed to ensure that it is necessary for the oil and gas company to cross state trust land to access private or federal land. When an application is filed, if there is reason to believe that the road is not well placed, OSLI performs an inspection and provide guidance to ensure proper road placement (Child, et al., 2012).

The Mineral Leasing Section maintains an inventory of State trust mineral lands available for lease, as well as all those State trust mineral lands currently leased, by specific mineral or minerals. The section spends a substantial amount of its time providing information retrieval and dissemination to the public at large, and to private industry regarding subsurface leasing rules and requirements, mineral land and lease status and other records of information as pertains specifically to State trust minerals. This section reviews and records mineral lease assignments, company and ownership name changes of record, bonds related to producing leases, letters of credit, powers of attorney and the filing of various documents legally affecting State trust land mineral leases. The section also plans, organizes and controls the verbal competitive oil and gas lease auction program. They prepare and issue subsurface mineral leases, as well as expiring, terminating and returning to inventory, mineral leases at term or for nonproduction or other causes. This section monitors and controls the approved process for State oil and gas lease inclusion in unitized areas and in pooled production agreements. Under the section's bonding responsibilities, staff monitors bonding and operating leases for adequacy based on wells for bonding increases and off-channel water storage pits for bonding initiation and inflation increase requirements. Finally, this section, in concert with the Royalty Compliance Section of the Administration and Support Division, deals with both the operating and delay mineral lease rentals for State trust land.

For FY 2013, the section issued 431 new oil and gas leases on 176,108 acres for total revenue in excess of \$13,200,000 in first year rentals, leased auction bonus payments and leased extension bonus payments; and issued 97 new mineral leases including metallic and non-metallic rocks, coal, uranium, bentonite, silica and sand and gravel covering 8,645 acres. The section also managed 1,846 mineral lease assignments for revenue of \$46,150 to the general fund, and reviewed, joined and processed the documentation for 8 new major oil and gas units and 31 oil and gas pooling arrangements (communitizations). The section worked with the WGFD and the Department of State Parks and Cultural Resources to review and place appropriate restrictive/protective stipulations on 168,591 acres of State trust lands prior to offer at oil and gas auction.



There are 4 positions within the mineral leasing section including: one supervisor classified as a Natural Resources Program Supervisor who is responsible for the section's overall program delivery, one Senior Lands Management Specialist, one Lands Management Specialist and one Office Support Specialist, all charged with accounting for leasehold conveyances, unitizations, lease issuance and lease inventory file status, and all records retention activities (Child, et al., 2012).

5.5 OGCC

The OGCC receives permits to drill coalbed methane and conventional oil and gas wells. The agency requires a bond to ensure that wells are operated to minimize waste and environmental damage. The OGCC provides field inspectors to ensure reclamation is completed to a satisfactory level. Field inspectors also witness mechanical integrity tests of injection and disposal wells. OGCC also manages the plugging, abandonment and reclamation of any orphaned wells. As of March 2011 there were 9,358 fee wells under OGCC jurisdiction—approximately half of all idle wells in Wyoming at the time.

5.6 WDEQ

In 2015 Wyoming Abandoned Mine Land reclaimed multiple coal and non-coal sites throughout the state, including work on 38 different abandoned mine sites. Approximately 374 acres were revegetated as a result of those efforts. The program continued subsidence mitigation efforts in Rock Springs and Sweetwater County with three large grouting projects.

The Land Quality Division (LQD) evaluates mining and reclamation to ensure that the operators are contemporaneously reclaiming the disturbed sites and placing completed reclamation back into agricultural production, wildlife habitat, and recreational use. Annual Report reviews, inspections, permit revision reviews and GIS capabilities are all avenues utilized by LQD's permit coordinators to evaluate reclamation progress and success, and disturbed areas. The LQD investigates, remediates and restores contaminated and disturbed sites by coordinating with the Water Quality Division (WQD) on spill inspections and managing surface discharges at in situ uranium mines, and managing soil salvage on well fields to enhance vegetation reestablishment prevent soil loss.

The Air Quality Division implements the Clean Air Act Amendments of 1990 (permit major emission sources) and monitoring and maintains an inventory of air emissions in the state. The Water Quality Division permits and enforces activities that may impact surface and groundwater from pollution, including non-point source pollution.



5.7 Budget Summaries

Table 22. BLM Oil and Gas Revenue Generated in Wyoming, FY 2010-2014.

Fiscal Year	Revenue Generated
2010	\$1,145,573,038
2011	\$1,140,035,281
2012	\$924,837,022
2013	\$933,009,244
2014	\$1,045,017,769

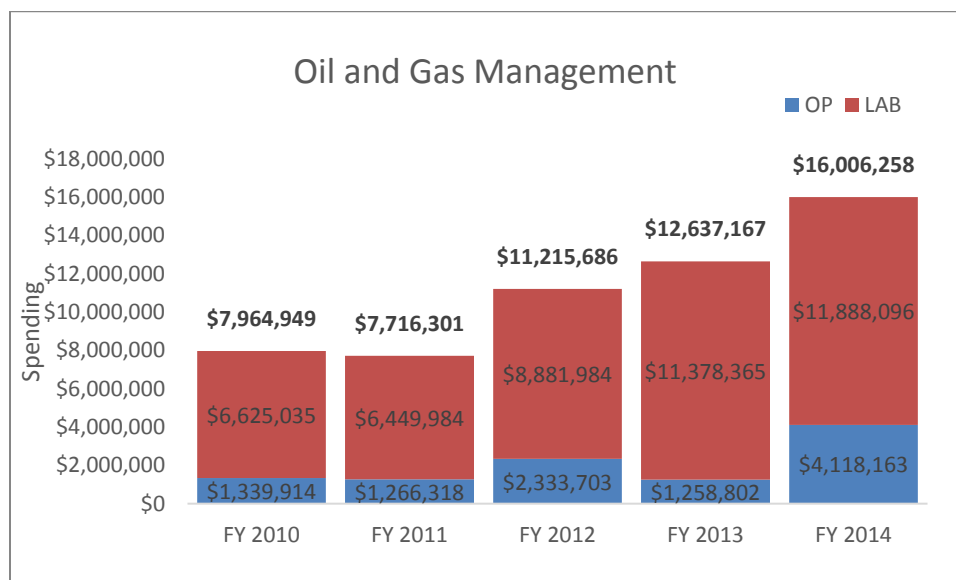


Figure 16. Wyoming BLM Oil and Gas Management, FY 2010-2014.



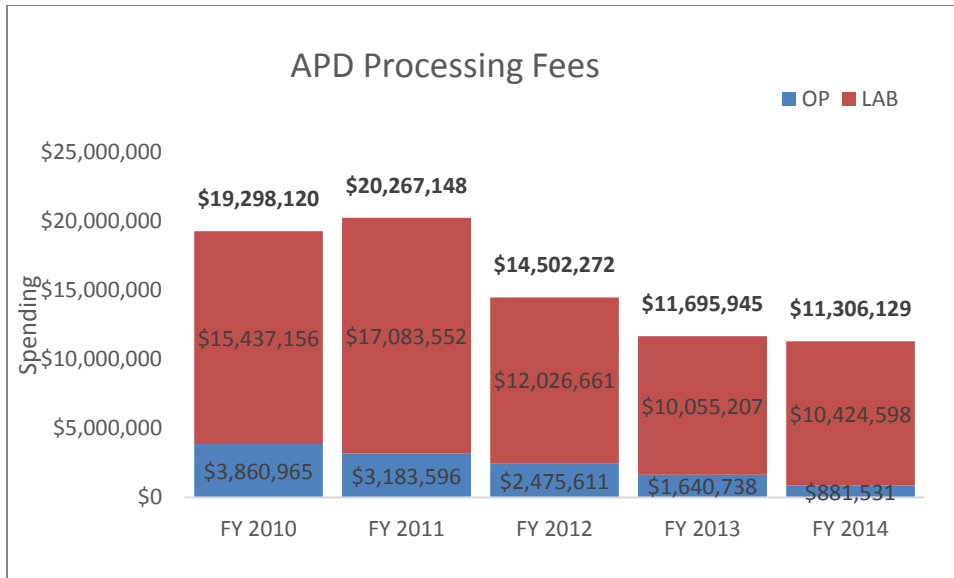


Figure 17. Wyoming BLM APD Processing Fees, FY 2010-2014.

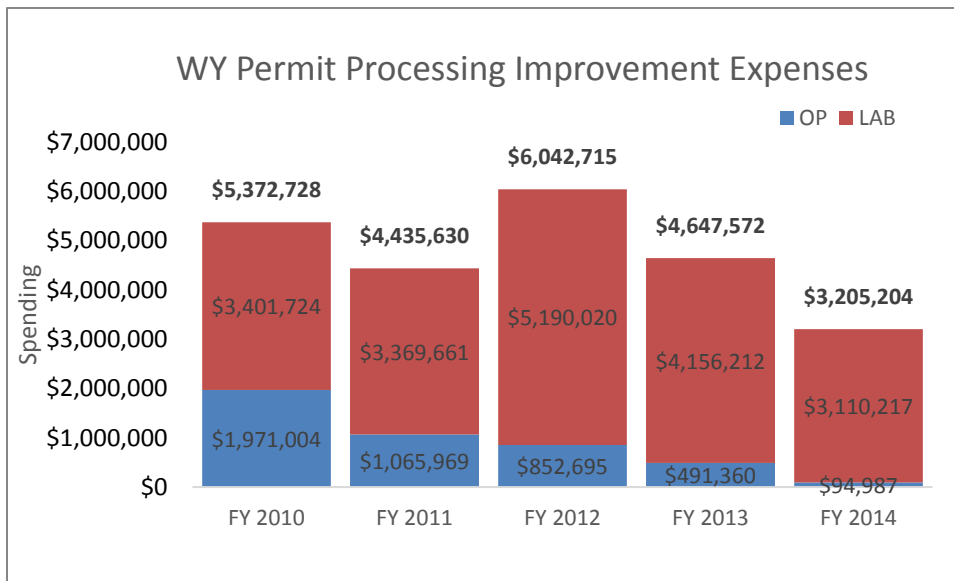


Figure 18. Wyoming BLM Permit Processing Improvement Expenses, FY 2010-2014.

Table 23. Wyoming BLM Coal Revenue Generated in Wyoming, FY 2010-2014.

Fiscal Year	Revenue Generated
2010	\$697,944,676
2011	\$802,910,470
2012	\$1,185,590,999
2013	\$1,029,558,647
2014	\$1,013,159,785



Table 24. Other BLM Minerals Revenue Generated in Wyoming, FY 2010-2014.

Fiscal Year	Revenue Generated including Sodium
2010	\$15,696,726
2011	\$19,572,495
2012	\$41,046,152
2013	\$48,513,809
2014	\$33,119,900

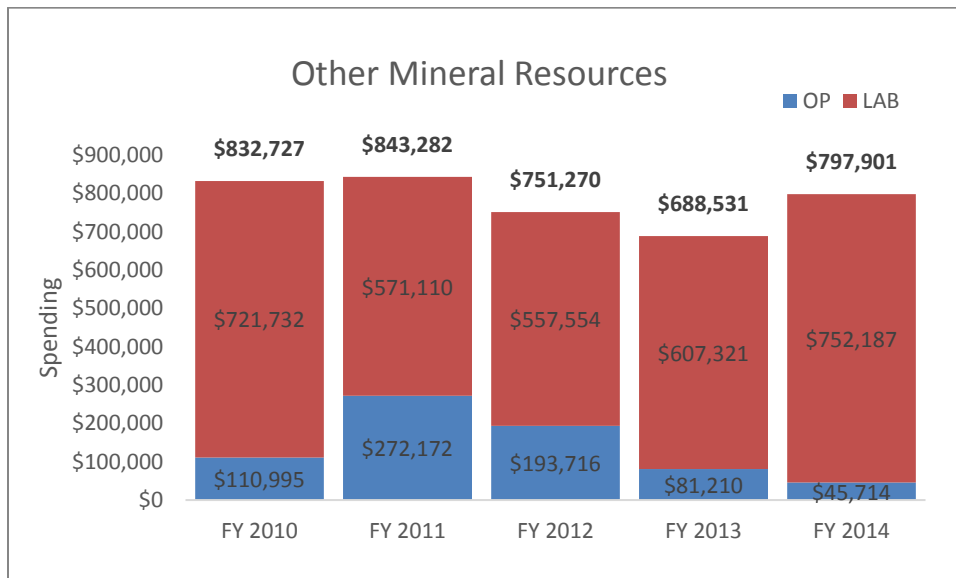


Figure 19. Wyoming BLM Other Mineral Resources Expenses, FY 2010-2014.

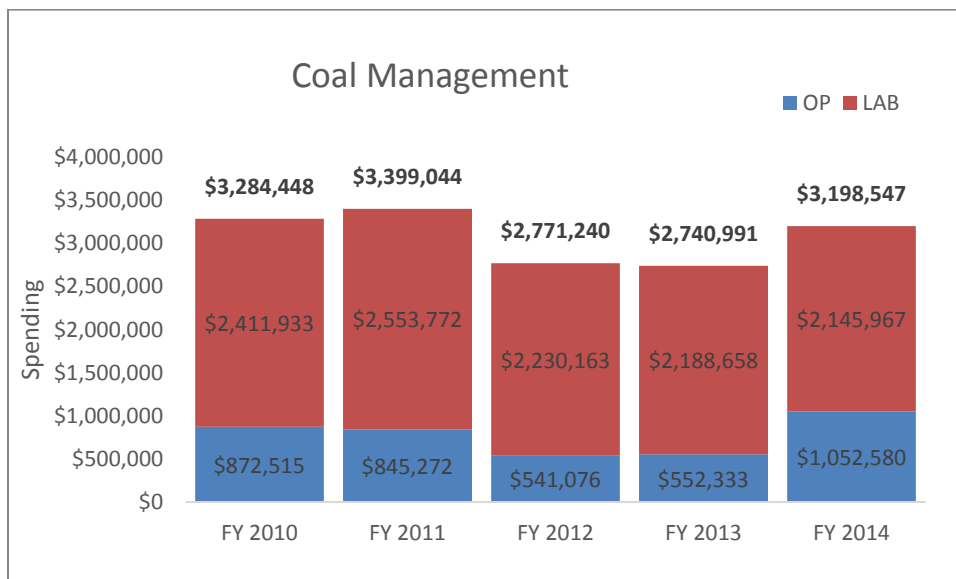


Figure 20. Wyoming BLM Coal Management Expenses, FY 2010-2014.



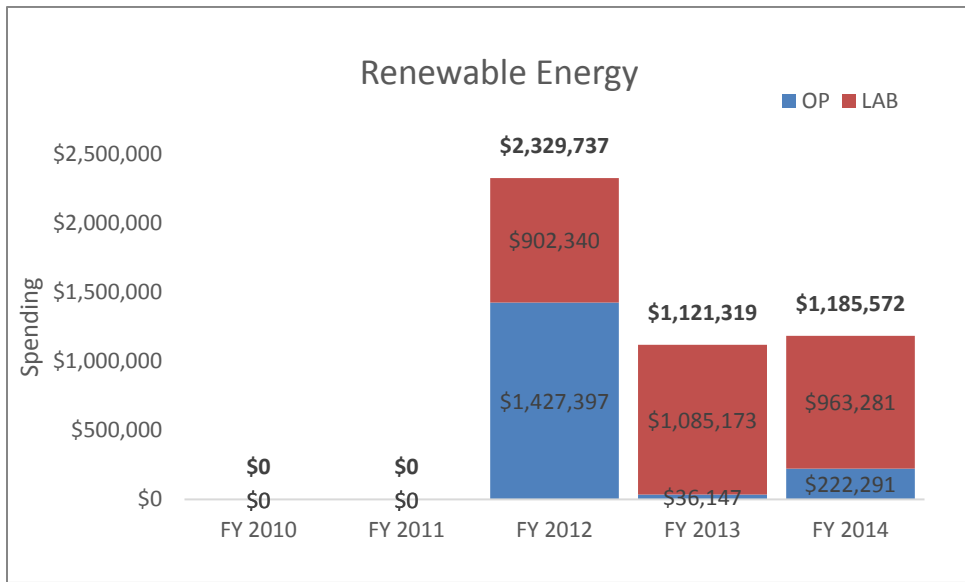


Figure 21. Wyoming BLM Renewable Energy Expenses, FY 2010-2014.

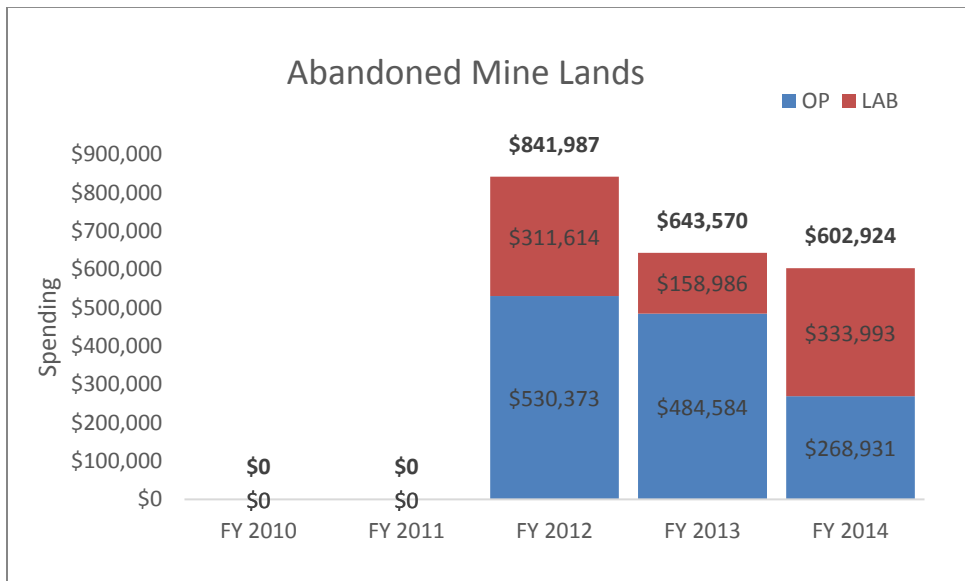


Figure 22. Wyoming BLM Abandoned Mine Lands Expenses, FY 2010-2014.





Figure 23. Wyoming BLM Hazardous Material Management Expenses, FY 2010-2014.

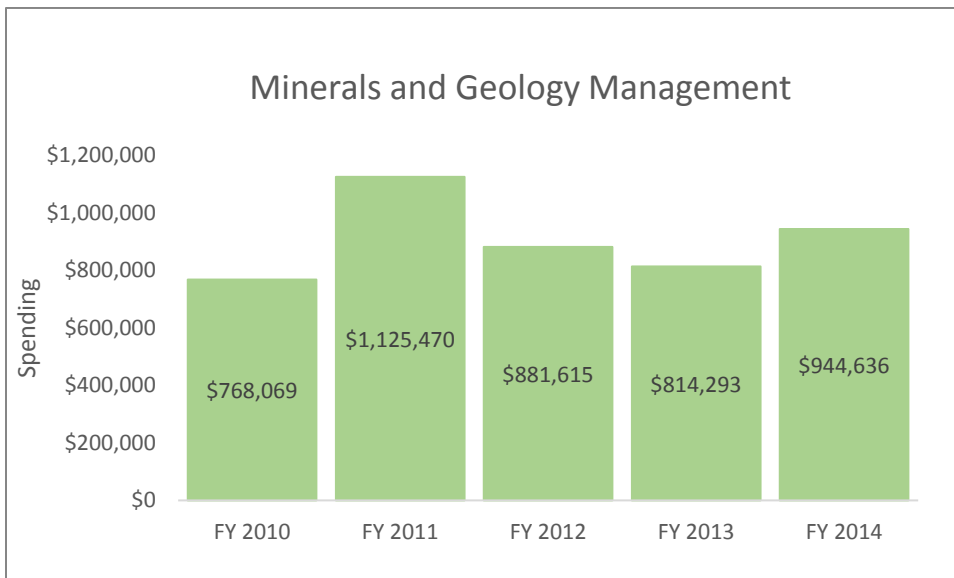


Figure 24. Wyoming USFS Minerals and Geology Management Expenses, FY 2010-2014.

Table 25. OSLI Trust Land Management Actual Revenue, FY 2013-2014.

State Lands and Investments Trust Actual Revenue	Total
Mineral Revenue	\$419,635,171
Other Trust Land Revenue	\$42,731,229
Timber Revenue	\$483,925
Miscellaneous Revenue	\$3,715
Total	\$462,854,040

Source: (Office of State Lands and Investment, 2014).



Table 26. OSLI Trust Land Management 2013-2014 Biennium Budget Expense Request.

State Lands and Investments Trust Land Management Expense Request	
Expense Category	
Salaries and Benefits	\$3,051,417
Support Services	\$234,705
Central/Data Services	\$27,290
Grants and Aid Payments	\$712,500
Contractual Services	\$983,722
Total	\$5,009,634

Source: (Child, et al., 2012).

Table 27. Wyoming OGCC Actual Revenue, 2013-2014 Biennium.

Oil and Gas Conservation Commission Actual Revenue	
Revenue Source	2013-2014
Oil and Gas Conservation Tax	\$7,520,491
Oil and Gas Well Permit Fees	\$369,100
Rent Receivable	\$7,200
Application for Hearing Fees	\$228,000
Copy Charges	\$10,000
Total Revenue	\$8,134,791

Source: (Hutton, Watson, & Kropatsch, 2016).

Table 28. Wyoming OGCC 2014-2014 Biennium Budget Request.

Oil and Gas Conservation Commission Budget	
Administration	\$8,730,395
Orphan Wells	\$2,000,000
Total	\$10,730,395

Source: (Doll & Hutton, 2012).

Budget information is only provided for the WDEQ AMLP and Land Quality Division although other programs may in part assist with energy and mineral development management. It is not feasible to separate functions specific to energy development.

Table 29. Wyoming DEQ FY 2013-2014 Estimated Revenues for the AMLP and LQD Programs.

Wyoming DEQ 2013-2014 Estimated Revenues	
AMLP funding	\$133,575,876
Land Quality	\$10,201,095
Total	\$143,776,971

Source: (Child, et al., 2012).



Table 30. Wyoming DEQ FY 2013-2014 Estimated Expenses for AMLP.

Wyoming DEQ 2013-2014 Estimated Expenses -AMLP	
Salaries and Benefits	\$2,525,876
Support Services	\$297,163
Restrictive Services	\$376,053
Central/Data Services	\$35,684
Space Rental	\$38,235
Grants and Aid Payments	\$60,000
Contract Services	\$130,242,865
Total	\$133,575,876

Source: (Child, et al., 2012).

Table 31. Wyoming DEQ FY 2013-2014 Estimated Expenses for the Land Quality Division.

Wyoming DEQ 2013-2014 Estimated Expenses - LQD	
Salaries and Benefits	\$8,726,294
Support Services	\$641,032
Restrictive Services	\$530,000
Central/Data Services	\$58,989
Space Rental	\$37,108
Contract Services	\$307,672
Total	\$10,301,095

Source: (Child, et al., 2012).





6. RANGELAND
AND GRAZING



6. Rangeland and Grazing

6.1 Overview

Livestock grazing is a use permitted by the BLM and USFS, and is used as a tool to manage rangeland ecosystems, including riparian areas. Grazing continues to be a critically important use of public lands. Livestock use is permitted on an Animal Unit Month (AUM) of Head Month (HM) basis. An AUM is the amount of air-dried forage needed to sustain one cow and her calf, one horse, or five sheep or goats for a month.

6.2 BLM

The BLM nationally administers about 245 million acres of public lands and manages livestock grazing on 155 million acres (63%) of those lands. Grazing permits issued by the BLM include terms and conditions for grazing on BLM-managed lands and describe the season of use, number and class of livestock, and additional restrictions or requirements for grazing such as maximum utilization levels. Nearly 18,000 permits and leases are issued to ranchers who graze their livestock, mostly cattle and sheep, on more than 21,000 allotments. Term permits generally cover a 10-year period and are renewable if the BLM determines that the terms and conditions of the expiring permit or lease are being met. The Rangeland Reform Act (1997) required the completion of Standards for Healthy Rangeland and Guidelines for Livestock Grazing Management for Public Lands. Furthermore, the BLM was given 10 years to complete NEPA analysis on all term grazing permit renewals. Starting in 1999 Congress gave BLM authority to renew expiring grazing permits for ten years until such time as they could be “fully processed” (renewed after NEPA analysis). The Appropriation bill has allowed this practice to continue to-date.

BLM Program Description

Congress passed the Taylor Grazing Act of 1934, which led to the creation of grazing districts and began regulating grazing. Under the Taylor Grazing Act, the first grazing district to be established was Wyoming Grazing District Number 1 on March 23, 1935. Secretary of the Interior Harold Ickes created a Division of Grazing within the Department to administer the grazing districts; this division later became the U.S. Grazing Service and was headquartered in Salt Lake City. In 1946 the Grazing Service was merged with the General Land Office to become the BLM.

BLM was tasked with designing grazing systems to increase grass productivity and reduce soil erosion by controlling grazing through fencing and water projects and by conducting forage surveys to balance forage demands with the land’s productivity (carrying capacity).

The BLM created rangeland health standards and guidelines in 1997. Standards describe specific conditions needed for public land health, such as the presence of streambank vegetation and adequate canopy and ground cover. Guidelines are the management techniques designed to achieve or maintain healthy public lands, as defined by the standards. These techniques include such methods as seeding and rest or deferment from grazing in specific allotments during critical growth



periods. Wyoming's Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management were approved in 1997.

The BLM does not make an annual national "count" of the livestock that graze on BLM-managed lands because the actual number of livestock grazing on public lands on any single day varies throughout the year. Instead, the BLM compiles the number of AUMs used each year, which takes into account both the number of livestock and the amount of time they spend on public lands. (For the definition of an AUM, see previous section.) Over time, there has been a gradual decrease in the amount of grazing that takes place on BLM-managed land because of factors such as changes in land-use plans and wildlife habitat protection. Grazing use on public lands has declined from 18.2 million AUMs in 1954 to 8.3 million AUMs in 2014 (a 54 percent decrease). In most years, the actual use of forage is less than the amount authorized because forage amounts and demands vary. Approximately 8,800 grazing allotments are administered in the State of Wyoming including approximately 900,000 AUMs.

Any U.S. citizen or validly licensed business can apply for a BLM grazing permit or lease as long as the person or entity either:

- Buys or controls private property (known as "base property") that has been legally recognized by the Bureau as having preference for the use of public land grazing privileges
- Acquires property that has the capability to serve as base property and then apply to the BLM to transfer the preference for grazing privileges from an existing base property to the acquired property (which would become the new "base property")

The first alternative happens when base property (a private ranch) is sold or leased to a new individual or business; the buyer or lessee then applies to the BLM for the use of grazing privileges associated with that property. The second alternative would happen when a rancher wants to transfer existing public land grazing privileges to another party while keeping the private ranch property. All applicants for grazing permits or leases must meet the qualifications for public land grazing privileges that are specified in the BLM's grazing regulations.

6.3 USFS

The USFS allows livestock grazing on National Forests and Grasslands. In 1897, the newly formed Forest Service was authorized by Congress to regulate and permit grazing as long as it did not injure forest growth. Livestock grazing is permitted on over 95 million areas of USFS lands in 29 states. In 2015, the USFS administered permits for 5,897 permittees for approximately 6.9 million head months of grazing by sheep, cattle, horses, and goats.

USFS Program Description

The Forest Service has supported controlled livestock grazing since the very early days of the agency. The earliest version of published policy of the Forest Service (USDA Forest Service 1905), stated:



The Forest Service will allow the use of the forage crop of the reserves as fully as the proper care and protection of the forests and the water supply permits. In new forest reserves where the livestock industry is of special importance, full grazing privileges will be given at first, and if reduction in number is afterwards found necessary, stockmen will be given ample opportunity to adjust their business to the new conditions. Every effort will be made to assist the stock owners to a satisfactory distribution of stock on the range in order to secure greater harmony among citizens, to reduce the waste of forage by tramping in unnecessary movement of stock, and to obtain a more permanent, judicious, and profitable use of the range.

According to the Multiple Use Sustained-Yield Act of 1960, "It is the policy of the Congress that the National Forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes." Current Forest Service objectives for the range management program are:

1. To manage range vegetation to protect basic soil and water resources, provide for ecological diversity, improve or maintain environmental quality, and meet public needs for interrelated resource uses
2. To integrate management of range vegetation with other resource programs to achieve multiple use objectives contained in Forest land and resource management plans
3. To provide for livestock forage, wildlife food and habitat, outdoor recreation, and other resource values dependent on range vegetation
4. To contribute to the economic and social well-being of people by providing opportunities for economic diversity and by promoting stability for communities that depends on range resources for their livelihood
5. To provide expertise on range ecology, botany, and management of grazing animals

Each forest determines what uses are feasible through the development and revision of the Land and Resource Management Plans. Once a determination has been made that grazing is feasible and appropriate for an area, grazing is planned and managed taking into consideration all the other uses of the area.

In 2015, USFS authorized 428 permittees in Wyoming to utilize 536,437 AUMs on National Forests and Grasslands. A majority of AUMs are grazed by cattle (78% of AUMs), although sheep grazing is an important use in Wyoming forests (11% of AUMs) (U.S. Department of Agriculture, 2016).

6.4 OSLI

The Grazing and Agricultural Leasing Program is in the Surface Leasing Section. Economic, market and environmental conditions are a driving force in the volume of grazing applications received. During severe drought conditions, the number of subleases applied for and approved dropped due to the unavailability of grass.

OSLI currently maintains 3,984 grazing leases, of which approximately 10% are due for renewal each year. During FY 13, the Division processed 431 grazing lease applications, 285 lease assignments and



341 subleases, pasture and crop-share agreements. The State Grazing and Agricultural Lease allow lessees to construct lease-related improvements on state trust land, subject to Board approval.

6.5 WDA

The Natural Resource and Policy Section staff currently includes six full time positions. Positions include a manager, office specialist, mediation coordinator, two policy analysts and one agriculture program coordinator. This staff leads and supports the agriculture industry in the wise management of natural resources to further the interests of the agriculture communities and to enhance and sustain Wyoming's natural resources, and increase the visibility of the agricultural industry and WDA programs and employees. Primary goals include the following:

- Review, analyze, negotiate and comment on federal land management plans, EISs, EAs, and proposed state and federal regulations to ensure that the Wyoming agricultural industry and local communities have a strong voice in the wise management of our natural resources
- Collaborate with a variety of agricultural entities to enhance Wyoming's natural resources and sustain Wyoming's agricultural interests, respond to the dynamic nature of the demands on Wyoming's natural resources, facilitate partnerships, and protect the quality of surface and ground water through rangeland management practices and monitoring
- Support and strengthen Wyoming's 34 Conservation Districts to protect surface and groundwater quality; enhance training for District officials; provide administrative assistance as well as funding
- Provide leadership for the promotion of quality natural resource management through collaborative efforts of the Coordinated Resource Management process. Offer training and facilitation services to enhance natural resource solutions and provide educational materials and training to Wyoming producers
- Offer USDA certified mediation program to resolve natural resource conflicts and foster local participation in regional and federal management decisions
- Manage existing grant programs created to enhance and maintain Wyoming's agricultural industry and its natural resources throughout the state

The Department of Agriculture also manages the Rangeland Health Assessment Program (RHAP), which provides cooperation between the University of Wyoming, state agencies, local governments, federal land management agencies, and landowners in the assessment of rangeland health throughout Wyoming. Due to the general lack of data held by federal agencies, the program has found success in helping federal grazing permittees collect monitoring data as part of a cooperative process.

6.6 Budget Summaries

The federal grazing fee applies to public lands in 16 western states and is adjusted annually. It is calculated using a formula originally set by Congress in the Public Rangelands Improvement Act of 1978 and modified by Executive Order in 1986, the grazing fee cannot fall below \$1.35 per AUM. Any



fee increase or decrease cannot exceed 25 percent of the previous year's level. The grazing fee for 2016 is \$2.11 per AUM, as compared to the 2015 fee of \$1.69 and 2014 fee of \$1.35.

BLM Expenditures and Collections

In FY 2014, the BLM was allocated \$79 million for its rangeland management program. BLM spent \$36.2 million (46 percent) on livestock grazing administration. The other funds covered such activities as weed management, rangeland monitoring (not related to grazing administration), planning, water development, vegetation restoration, and habitat improvement. In 2015, the BLM collected \$14.5 million in grazing fees. The receipts from these annual fees, in accordance with legislative requirements, are shared with state and local governments. In 2014, the BLM proposed an administrative fee to permit processing of \$1 per AUM; while not implemented in 2014 it was proposed again in 2015. The 2016 and 2017 budgets propose an administrative fee of \$2.50.

The primary source of revenue for rangeland management is grazing fees. Grazing fees in Wyoming amounted to approximately \$1.215 million in 2014.

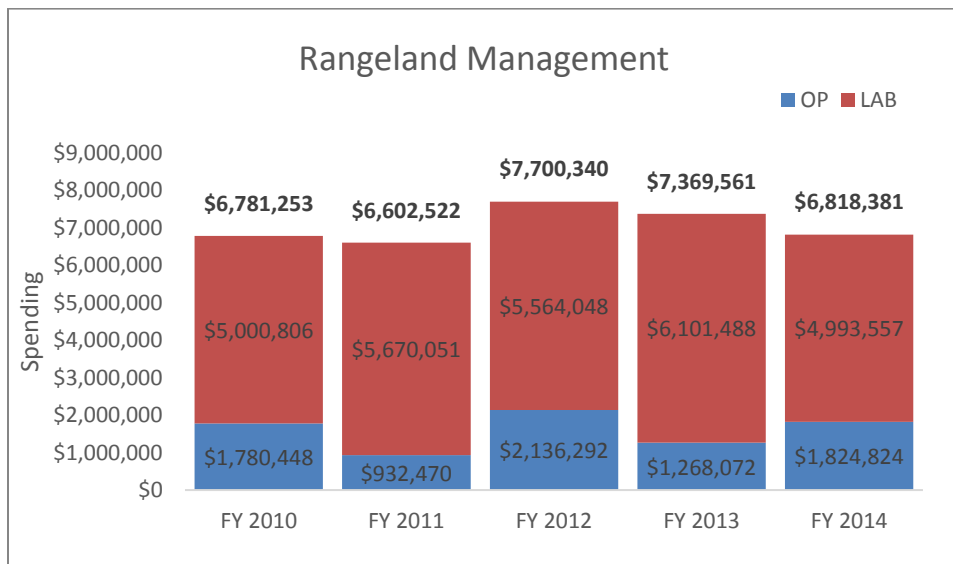


Figure 25. Wyoming BLM Rangeland Management Expenses, FY 2010-2014.

USFS Expenditures and Collections

In FY 2014, the USFS was allocated \$55 million for its grazing program. Approximately 44% of the budget (\$24 million) was used to manage grazing allotments; the balance was allocated to preparing grazing allotment NEPA documents. The USFS collected approximately \$5.1 million in grazing fees.





Figure 26. Wyoming USFS Grazing Management Expenses, FY 2010-2014.

OSLI Expenditures and Collections

Approximately 20% of Field Services Division staff time was spent on grazing and agricultural leasing. The costs to manage grazing leases are not a line item in the budget. Instead, the costs are included in the overall Field Services Division budget. Table 32 contains the grazing lease revenue from FY 2010–2014.

Table 32. State of Wyoming Grazing Leases Revenue, FY 2010-2014.

2010	2011	2012	2013	2014
\$5,320,233	\$5,000,301	\$4,825,262	\$5,098,013	\$7,621,881

WDA Expenditures and Collections

RHAP and other rangeland programs are not a separate line item in the WDA budget; these expenses are included in the Natural Resources Division budget.





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7. CULTURAL RESOURCES



7. Cultural Resources

7.1 Overview

The BLM and USFS are charged with the preservation and protection of cultural resources on federal lands. While BLM and USFS have agency-specific handbooks for dealing with cultural resources, the overall intent of their programs as impacted by federal laws are the same and so will be discussed jointly here. Budgets are provided for each agency in the budget section.

Cultural Resources Management Programs are responsible for overseeing the management of the cultural, historical, and paleontological resources on the public lands. Ranging from prehistoric cliff dwellings, rock art and sacred places of continuing significance to Native Americans, to historic mining structures and ranches, cultural resources managed represent the remains of over 13,000 years of human adaptation on the North American continent.

These resources are managed to ensure the cultural, educational, aesthetic, inspirational, scientific, recreational, and economic benefits are maintained and available for today's communities as well as future generations. BLM has law enforcement responsibilities including investigation of theft and vandalism of archeological and paleontological sites.

The Program consists of the following elements:

- Managing and protecting archaeological sites and historic properties in support of the Archaeological Resources Protection Act (ARPA) and the NHPA, including inventory, stabilizing, monitoring, and digitizing the inventory
- Managing and protecting paleontological localities and implementing the Paleontological Resources Preservation subtitle of the Omnibus Public Lands Act of 2009, including inventory, stabilizing, and monitoring
- Accounting for the millions of artifacts and specimens recovered from the public lands, as well as their associated records. Activities include documentation, preservation, and use in the agency museum facilities

Duties:

- Conducting inventory of the highest-priority public lands for cultural and paleontological resources
- Developing Bureau policy and revising manual guidance to facilitate cultural resource compliance and Government-to-Government consultation, and also to integrate the Cultural Resource Program with the BLM's landscape management approach
- Reviewing and revising state protocols to implement the national programmatic agreement among the USFS, BLM, the ACHP, and the Wyoming SHPO
- Revising the manual and developing the handbook Paleontological Resource Management, in order to manage paleontological resources using scientific principles and expertise



- Stabilizing existing and implementing additional physical protection measures at the highest-priority heritage properties that carry scientific, cultural, or educational importance or are critically threatened
- Continuing to develop tribal consultation programs
- Repatriating recovered stolen artifacts to Indian Tribes under the Native American Graves Protection Act
- Supervising curation and developing educational materials for recovered artifacts in Archaeological Resource Protection Act collections
- Maintaining an agency liaison at the Advisory Council on Historic Preservation in order to expedite review of compliance cases, especially pertaining to renewable energy and tribal consultation
- Continuing to develop and implement low-cost solutions for providing support and coordination with the museums and universities that curate the federal agency museum collections
- Implementing public education programs to promote public stewardship and enjoyment of America's cultural and paleontological resources, and developing public outreach projects to sustain and facilitate existing volunteerism and youth opportunities
- Providing cultural expertise to the Office of Law Enforcement and Security during investigations into the looting of archaeological sites and trafficking in antiquities
- Support NHPA Section 106 casework in support of project management activities associated with energy development, recreation, grazing, and other planned activities on BLM-managed lands
- Managing and protecting archaeological sites and historic properties in support of the ARPA and the NHPA, including inventory, stabilizing, monitoring, and digitizing the inventory
- Managing and protecting paleontological localities and implementing the Paleontological Resources Preservation subtitle of the Omnibus Public Lands Act of 2009, including inventory, stabilizing, and monitoring
- Facilitating Government-to-Government consultation with Indian Tribes and Alaska Native Governments on a regular basis concerning traditional tribal activities and places of special meaning on the public lands, such as sites of religious significance
- Complying with the Native American Graves Protection and Repatriation Act (NAGPRA) and honoring Federal commitments to inventory and repatriate Native American human remains and cultural items held in collections and to respond to new discoveries on the public lands
- Developing and implementing education and interpretation opportunities for the public to engage with cultural and paleontological resources



- Supporting research on cultural and paleontological resources to enhance scientific understanding and support sound decision-making

7.2 Wyoming Department of State Parks and Cultural Resources

The Wyoming Department of State Parks and Cultural Resources is responsible for management of cultural resources in the state. The Division of Cultural Resources already coordinates extensively with federal programs through the Wyoming SHPO. SHPO documents, preserves and promotes Wyoming's heritage with our preservation partners. The Wyoming SHPO Review and Consultation Program provides professional review and management services to the State of Wyoming by balancing the needs of development against the need to retain significant pieces of our past. Any project taking place on federal lands, utilizing federal funds or requiring federal permitting must be preceded by a cultural resource inventory and project review in compliance with Section 106 of the NHPA of 1966 (as amended), as well as the Wyoming Antiquities Act of 1935, the Wyoming Environmental Quality Act of 1973 and other federal and state statutes. SHPO provides comments on archaeological and historic reports submitted by approximately 50 private consulting firms, over 32 federal agencies, and 10 state agencies.

This Department also includes the Office of the Wyoming State Archeologist (OWSA). The OWSA investigates archaeological discoveries, carries out archaeological surveys, publishes reports of findings, and cooperates with communities and agencies in efforts to promote and preserve the archaeological heritage of the state. The office also works to maintain and improve interagency cooperation between state and federal agencies that are involved in archaeological research and regulatory compliance. Public outreach and education enrichment is a primary and important function of the office. Cooperative efforts exist between OWSA and numerous state and federal agencies including a formal, long-term relationship with the University of Wyoming Department of Anthropology. OWSA also manages one of two federally recognized repositories in the state for archaeological collections containing in excess of 2 million items from more than 18,000 sites collected from federal, state, and private lands. OWSA consists of two related sections, each of which is supported by a different funding source. These two sections are Research/Collections and Archaeological Survey.



7.3 Budget Summaries



Figure 27. Wyoming BLM Cultural Resources Management Expenses, FY 2010-2014.

Cultural Resources Management in the USFS is included in Recreation, Heritage, and Wilderness budget.

Table 33. Wyoming State Parks and Cultural Resources FY 2013-2014 Biennium Budget.

State Parks and Cultural Resources Unit	
Expense Category	
Cultural Resources	\$1,465,803
Cultural Trust Fund	\$2,000,000
State Museum	\$1,643,006
State Archeologist	\$671,251
Archeology Contracting*	\$2,467,454
Cultural Trust Fund Administration	\$20,000
SHPO Administration	\$3,047,371
Wyoming Arts Council	\$3,751,303
Archives and Records Management	\$3,183,626
Total	\$18,249,814

**This cost is recovered but goes to the General Fund rather than back to the program.*

Source: (Needles, Bravo, & Sandlian, 2012)



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8. RECREATION



8. Recreation

8.1 Overview

The Federal Lands Recreation Enhancement Act (REA) allows federal land management agencies to provide quality recreation experiences for hundreds of millions of visitors annually. REA authorizes five agencies to collect and expend recreation fees on lands they manage: the BLM, BOR, NPS, and USFWS, and the USFS. These agencies use and leverage recreation fees to implement thousands of projects to enhance public safety, maintain recreation sites, provide educational experiences, build informational wayside exhibits, fund interpretive programs, and offer a wide range of recreational and cultural opportunities.

Between 80% and 100% of the recreation fees collected get used at the site from which the fees were collected.

8.2 BLM

Nationally, BLM manages more than 65,700 recreation sites. Approximately 3,600 of the sites are developed and about 430 charge recreation fees.

The Recreation Management program supports efforts to:

- Provide resource-related recreational opportunities for a wide range of activities
- Furnish quality visitor services
- Provide a diversity of recreation facilities, visitor centers, and competitive activities
- Identify and protect wilderness values
- Assure that the public receives fair market value for any commercial ventures conducted on public lands
- Collect recreation use and entrance fees in the best interest of the general public

These responsibilities are encompassed by the Bureau's strategic goal to provide opportunities for environmentally responsible recreation.

The Recreation Management Activity program provides:

- Recreation planning and visitor use monitoring
- Trails, access, and rivers management including off-highway vehicle, public access, and comprehensive travel and transportation management
- Visitor services, information, interpretation and stewardship education
- Visitor health, safety, and accessibility for persons with disabilities
- Recreation facility design, operation, and maintenance including visitor centers
- Recreation and community support partnerships including tourism and marketing
- Wilderness management in the Nation Landscape Conservation System



- Support to partnerships, volunteers, and youth programs

The Recreation and Visitor Services Program oversees a broad and complex set of recreation related and social management activities and programs.

Specific duties or tasks completed by the BLM Recreation program nationally include:

- Recreation Planning – Evaluating and assessing a wide range of social, economic, and recreational uses of public lands through the land use planning process. Recreation Area Management Plans are prepared to implement Land Use Plan (LUP) decisions in designated recreation management areas
- Travel and Transportation Management – Determining public and resource use access needs through the LUP process. Travel and transportation management planning process establishes designations and restrictions for all modes of transportation including motorized and non-motorized uses
- Visitor Safety – Providing opportunities for safe recreational activities for the public, as well as to educate and encourage safe behavior
- Facility Management and Accessibility – Providing daily operation and routine maintenance of over 3,650 recreation sites and 380 Special Recreation Management Areas in Wyoming including campgrounds, picnic and day use areas, visitor centers, waysides and kiosks, watchable wildlife sites, historic buildings and lighthouses, trailhead access points, and thousands of miles of rivers and trails. As communities near public lands grow in the West, visitation and demands for new trails and visitor service facilities increase each year. In addition to operating facilities, the BLM is responsible for ensuring facilities and programs meet accessibility standards for persons with disabilities
- River Management – Managing floatable/boatable rivers and lakes along with associated issues related to water quality, permitting, education and interpretation, visitor safety, enforcement patrols, and resource management. Of these floatable/boatable rivers and lakes, 320 segments and 6,600 miles have significant recreational value. A portion of the funds for river management also serves the needs of Wild and Scenic Rivers, managed by the NLCS
- National Scenic & Historic Trails – Monitoring National Historic Trails (NHT) and is responsible for over 600 miles of three National Scenic Trails
- Hunting, Fishing, and Shooting Sports – Implement important provisions of Executive Order 13443, Facilitation of Hunting Heritage and Wildlife Conservation, which directs agencies to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat
- Visual Resources – Analyzing, managing, and ensuring protection of visual resources to maintain valued landscape aesthetic character



- Recreation Permits, Fees, and Concessions – Reviewing, implementing, and monitoring over 3,200 special commercial and competitive recreation permits and over 800,000 individual use authorizations for special areas each year. The agencies also provide oversight and accountability for the recreation, commercial, and concession fee programs
- Public Outreach, Stewardship, and Partnerships – Promoting and supporting partnerships, volunteerism, and stewardship to enhance recreational and educational experiences for visitors and public land users. The agencies work with community leaders and networks of service providers to manage recreation opportunities that the public wants and that will bring economic benefits to local communities. Agencies also partner with veterans and disabled sportsmen’s groups to ensure access to recreational opportunities
- Visitor Information – Providing visitor information and services including maps, websites, interpretation and environmental education. Enhance the quality and consistency of baseline visitor and resource data by conducting inventories and implementing visitor use monitoring systems to improve understanding of the full range of social, economic, and community resource values and enhance decision making capabilities
- Cave Management – Overseeing cave and karst (an irregular limestone region with sinkholes, underground streams, and caverns) resource management policies and program.
- Customer/Visitor Service Satisfaction Surveys –Measuring success in providing quality visitor services through an annual survey

8.3 USFS

The USFS Recreation program is very similar to the BLM’s in scope and direction. It has six USFS-specific guiding principles for their mission and vision:

- Connecting people with their natural and cultural heritage
- Recreation activity in the great outdoors promotes healthy lifestyles
- Sustainability underlies all program decision
- Community engagement is essential
- National forests and grasslands are part of a larger landscape
- The recreation program is integrated into the larger agency mission

The USFS Recreation Program in Wyoming manages Wilderness Areas (discussed elsewhere in this document), maintains trails, creates informational exhibits, manages youth and volunteer partnerships, provides interpretive programming, manages guard stations, manages river recreation and Christmas tree permits.

Nationally, USFS manages over 20,800 recreation sites; approximately 4,000 sites have fees collected under REA and about 2,300 have other types of fees.



8.4 Wyoming Department of State Parks and Cultural Resources

The Division of State Parks, Historic Sites and Trails includes all Wyoming State Parks, Historic Sites and the State Trails Program, and associated administrative functions. The division is responsible for providing outdoor recreation opportunities for citizens and visitors throughout the state. Recreational opportunities include camping, hiking, boating, snowmobiling, swimming, fishing, bicycling, off-road vehicle recreation, sightseeing, and wildlife and nature viewing. The Division is also charged with the preservation, interpretation, and maintenance of the state's historic and archeological sites and more than 400 historical monuments and roadside markers.

The State Trails Program administers the Snowmobile Program, the Recreational Trails Program (RTP) Grant funds, the Off-Road Recreational Vehicle (ORV) Program, and works with the Wyoming State Trails Advisory Council to facilitate the management and development of other recreational trails throughout the state. With over 98% of the 8,500 miles of recreational trails in Wyoming being located on federal lands, the Trails Program does not directly manage the lands involved, but rather serves as a coordinator and facilitator for partnerships that provide trail maintenance, trail development and public information, including safety and educational documents and classes. The Snowmobile Program directly manages over 2,000 miles of snowmobile trails consisting of approximately 18 trail systems across the state.

8.5 Budget Summaries

Recreation use fee revenues are derived from collecting fees on public lands at recreation sites, issuing recreation use permits, and selling Federal recreation passports such as the Golden Eagle and Golden Age passes. These funds are used to improve recreation facility conditions and user services at recreation sites where the fees were generated. In 2012, recreation fee collections were \$17.1 million. The Wyoming BLM collected approximately \$205,000 in 2014 under its recreation fee collection authorities.





Figure 28. BLM Wyoming Wilderness Management Expenses, FY 2010-2014.

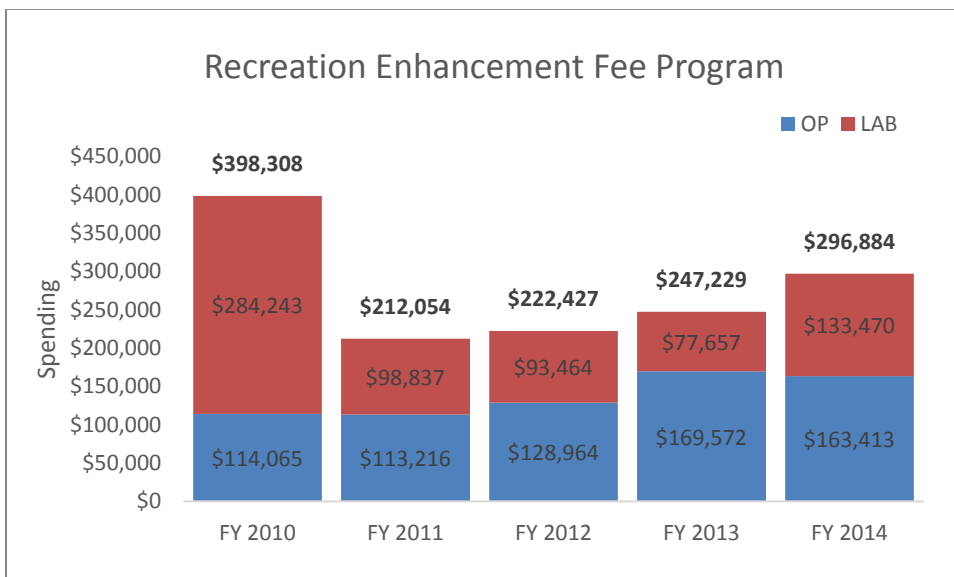


Figure 29. Wyoming BLM Recreation Enhancement Fee Program Expenses, FY 2010-2014.





Figure 30. Wyoming BLM Recreation Resources Management Expenses, FY 2010-2014.

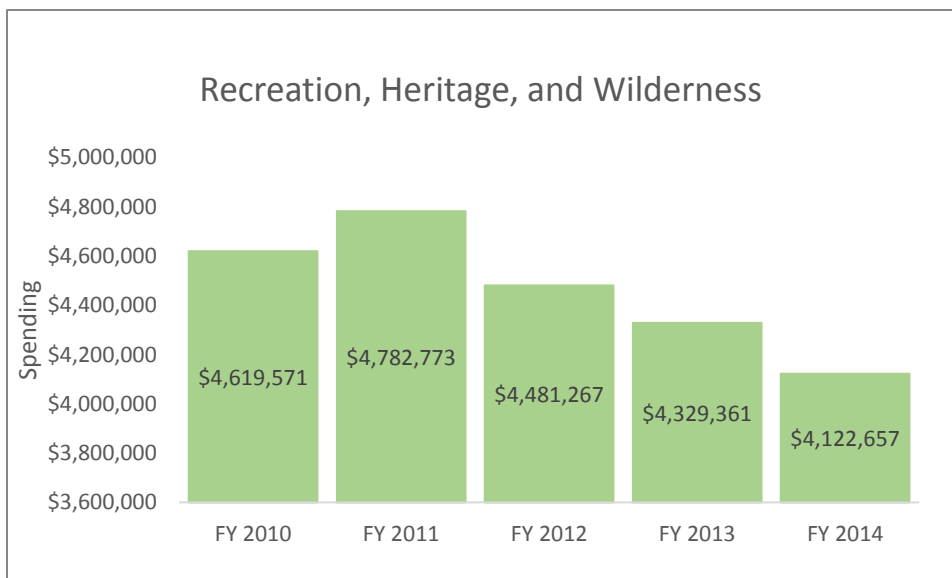


Figure 31. Wyoming USFS Recreation, Heritage and Wilderness Budget, FY 2010-2014.

Table 34. Wyoming State Parks FY 2013 2014 Biennium Budget Estimated Revenue.

Wyoming State Parks 2013-2014 Estimated Revenue	
General Fund	\$433,653
Special Revenue	\$5,810,899
Federal Funds	\$2,558,881
Total	\$8,803,433

Source: (Needles, Bravo, & Sandlian, 2012).



Table 35. Wyoming State Parks FY 2013-2014 Biennium Budget Expense Request.

Wyoming State Parks 2013-2014 Estimated Expenses	
Expense Category	
Salaries and Benefits	\$1,937,607
Support Services	\$1,664,000
Grants and Aid Payments	\$2,660,973
Central/Data Services	\$43,430
Space Rental	\$365,228
Contract Services	\$2,132,195
Total	\$8,803,433

Source: (Needles, Bravo, & Sandlian, 2012).





9. SPECIAL LAND DESIGNATIONS



9. Special Land Designations

9.1 Overview

The Wilderness Management Program is a part of the BLM NLCS. The BLM is required to meet legal requirements for administering the Wilderness Management Program while also conserving, protecting, and restoring NLCS values in the 221 Wilderness Areas and 545 WSAs under federal management as defined below.

Wilderness Areas are undeveloped Federal lands designated by law to be managed to protect their wilderness character as defined by the Wilderness Act of 1964. These designated areas are generally large, natural and undeveloped landscapes that offer outstanding opportunities for solitude or primitive and unconfined types of recreation.

WSAs are roadless areas that contain wilderness characteristics and are protected to maintain those characteristics until law designates them as Wilderness Areas or releases them for non-wilderness uses.

Duties:

1. Monitoring and preserving wilderness character
2. Managing use and encouraging appropriate wilderness uses
3. Monitoring and managing for noxious weed infestations, trespass activities, and recreation
4. Restoring impacted areas such as trampled vegetation and eroded soil caused by unauthorized off-highway vehicles (OHV) travelling cross-country

National Landscape Conservation System

The NLCS, also known as National Conservation Lands, was first established by the BLM in 2000 to “conserve, protect, and restore nationally significant landscapes that have cultural, ecological, and scientific values for the benefit of current and future generations (Bureau of Land Management, 2016). Congress affirmed the program making it permanent with passage of the NLCS Act (part of the Omnibus Public Land Management Act of 2009). The Omnibus Public Land Management Act of 2009 also added 1,200,000 acres of new designations to the System, including a National Monument, three NCAs, Wilderness, Wild and Scenic Rivers and National Scenic Trails. The program provides protection of special areas where conservation and restoration of the landscape and its biological or cultural resources (non-extractive uses) is deemed the overriding objective. Extractive uses (mining, logging, grazing, oil and gas production) are limited (typically existing rights are honored) and certain other uses such as recreation and use of mechanized vehicles may be curtailed (Alexander & Vincent, 2010).

BLM's National Conservation Lands program includes 873 federally recognized areas of National Monuments, NCAs, Wilderness Areas, WSAs, Wild and Scenic Rivers, National Scenic and Historic Trails, and Conservation on Lands of the California Desert comprising over approximately 32 million acres (Bureau of Land Management, 2016). Only WSAs are discussed in this study.



Wilderness Study Areas (WSA)

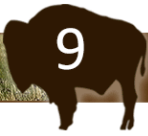
WSAs are included in this report. Section 603 of the FLMPA directed the BLM to inventory and study its roadless areas for “wilderness” characteristics—undeveloped land that have retained their primeval character without permanent improvements or human habitation and therefore potentially suitable for designation by Congress as a Wilderness Area. To be designated as a Wilderness Study Area, an area must have certain characteristics: it must be a roadless area of at least 5,000 acres of public lands or of a manageable size; appears to have been affected primarily by the forces of nature; and provide outstanding opportunities for solitude or primitive and unconfined types of recreation.

WSAs are established three different ways: (1) WSAs were identified by the wilderness review conducted as required by of FLPMA; (2) they may be identified during the land use planning process under Section 202 of FLPMA; and (3) they may be established by Congress. The USFS received guidance through a series of wilderness acts passed between 1972 and 1984 wherein Congress designated certain study areas. The USFS may also identify and recommend additional areas through its planning process.

WSAs are not included in the National Wilderness Preservation System unless and until the United States Congress passes wilderness legislation designating the study area as “wilderness.” However, until Congress makes a final determination on a WSA, the BLM manages these areas to preserve their suitability for designation as wilderness and they are managed to preserve their natural conditions with heavy restrictions as if they were Wilderness Areas. Section 603(c) of the FLMPA requires that WSAs be managed in a manner that does not impair the suitability of such areas for preservation as wilderness. However, the Act also requires that mining, livestock grazing and mineral leasing (i.e., grandfathered uses) continue in the manner and degree as they were being conducted in 1976. Grandfathered uses are protected and must be maintained in the same manner and degree as they were being conducted on October 21, 1976, even if they impair wilderness characteristics. Where grazing was allowed in the wilderness prior to 1976, its use, specifically including allowing the same number of livestock as existed in 1976, should be continued. This requirement includes the authority to develop livestock related improvements (*Utah v. Andrus*, 1979), (*Rocky Mountain Oil and Gas Association v. Watt*, 1982).

By November 1980, the BLM had completed field inventories and designated about 25 million acres of WSAs. Congress has reviewed some of these WSAs and designated some as wilderness and released others for non-wilderness uses. However, it has been over 30 years since most of these lands were designated for “study” and there are still 517 WSAs containing about 12.6 million acres located in the western states and Alaska including approximately 40 WSAs in Wyoming encompassing approximately 574,401 acres that are managed by BLM. These WSAs are considered for this study. There are currently 20 WSAs in the High Desert District (Figure 32), 3 in the High Plains District (Figure 33), 20 in the Wind River/Bighorn Basin District (Figure 34) and 3 USFS WSAs (Figure 35).





In its report to Congress in 1992, BLM Wyoming recommended that 240,364 acres within 21 study areas should be designated as part of the National Wilderness Preservation System and recommended that 337,140 acres within 30 study areas should be released for uses other than wilderness.



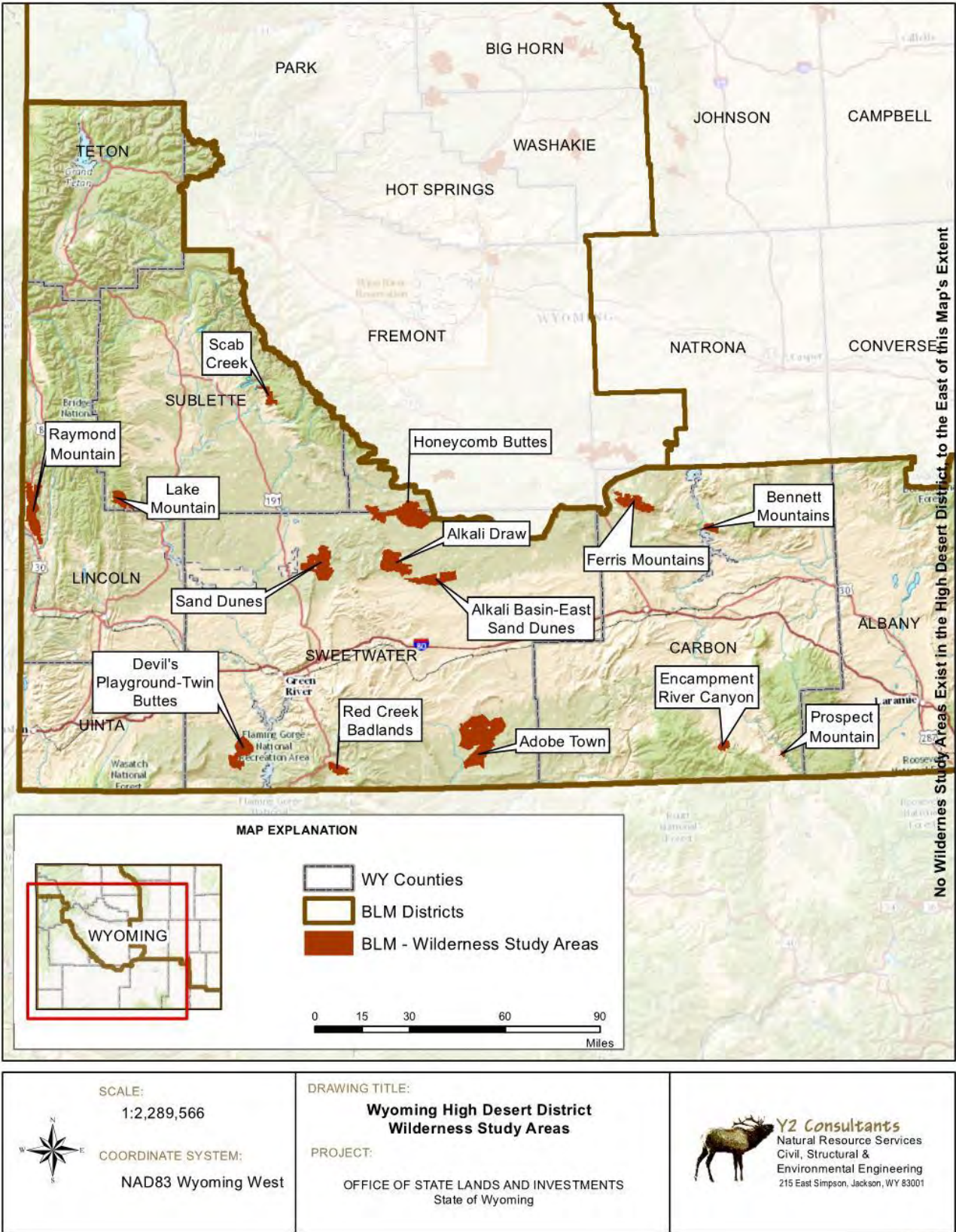
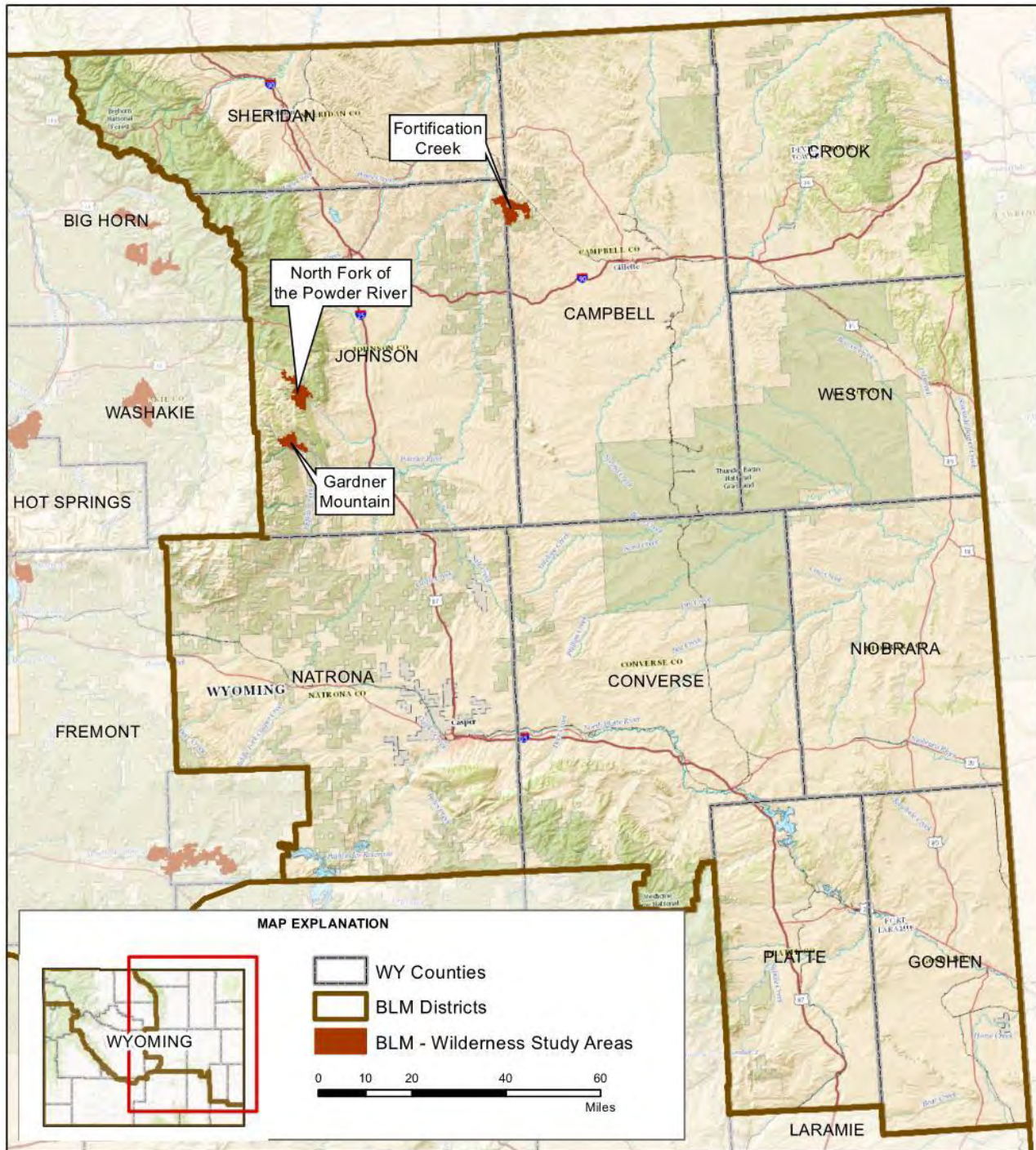


Figure 32. High Desert BLM District Wilderness Study Areas.

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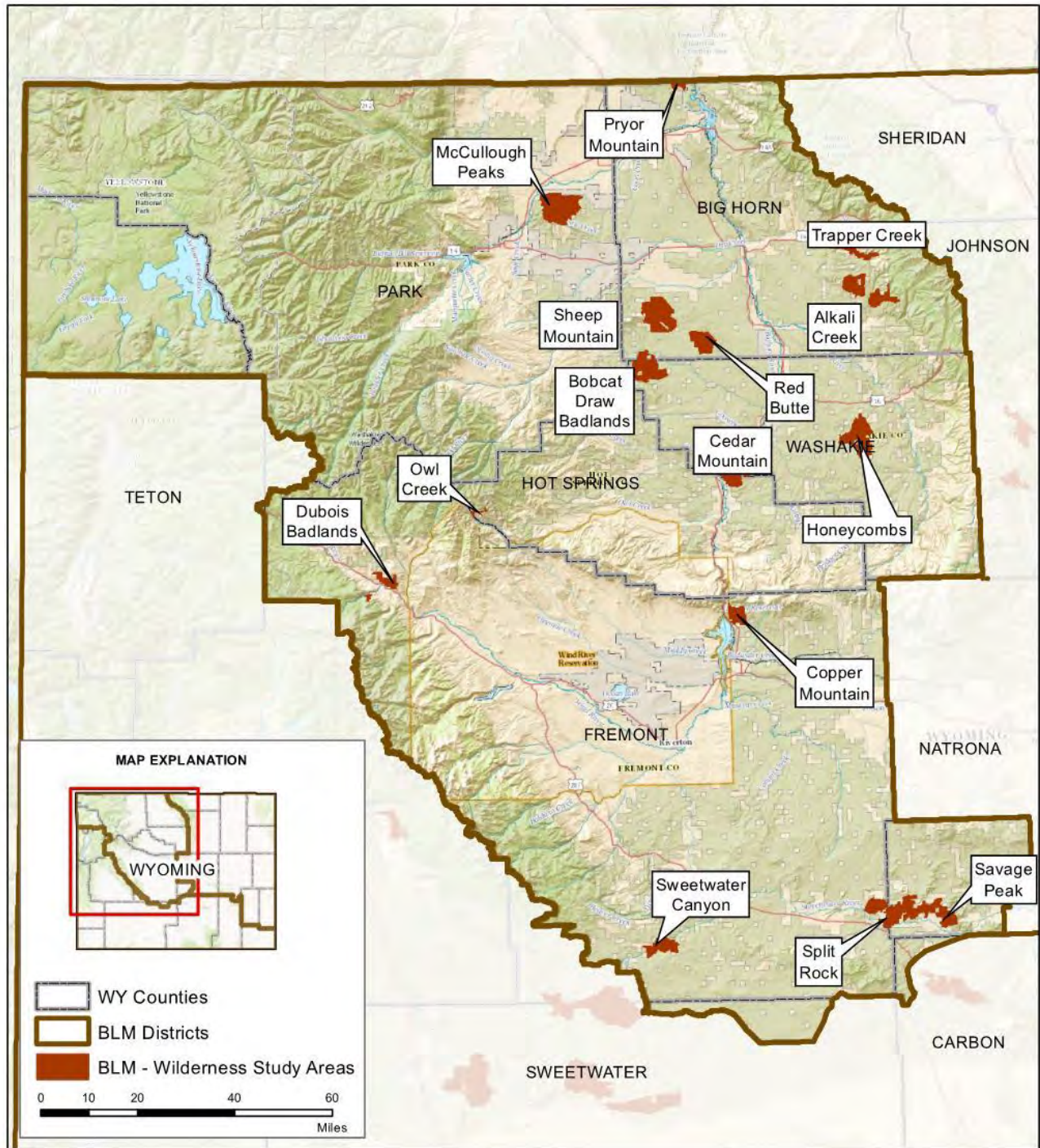


<p>SCALE: 1:1,679,239</p> <p>COORDINATE SYSTEM: NAD83 Wyoming West</p> 	<p>DRAWING TITLE: Wyoming High Plains District Wilderness Study Areas</p> <p>PROJECT: OFFICE OF STATE LANDS AND INVESTMENTS State of Wyoming</p>	 <p>Y2 Consultants Natural Resource Services Civil, Structural & Environmental Engineering 215 East Simpson, Jackson, WY 83001</p>
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Figure 33. High Plains BLM District Wilderness Study Areas.



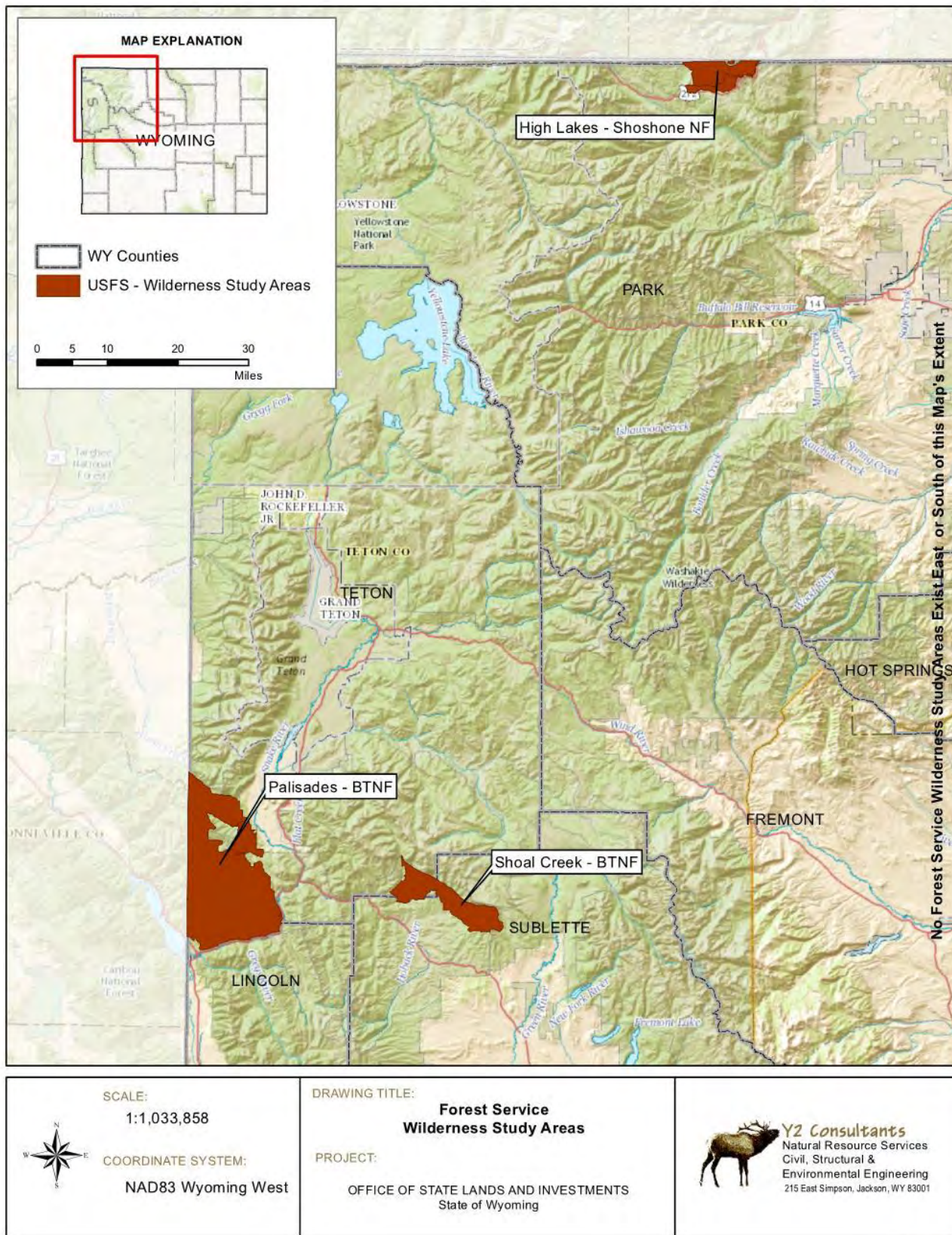


<p>SCALE: 1:1,620,485</p> <p>COORDINATE SYSTEM: NAD83 Wyoming West</p> 	<p>DRAWING TITLE: Wind River/Bighorn Basin District Wilderness Study Areas</p> <p>PROJECT: OFFICE OF STATE LANDS AND INVESTMENTS State of Wyoming</p>	 <p>Y2 Consultants Natural Resource Services Civil, Structural & Environmental Engineering 215 East Simpson, Jackson, WY 83001</p>
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Figure 34. Wind River/Bighorn Basin BLM District Wilderness Study Areas.





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Figure 35. USFS Wyoming Wilderness Study Areas.



Lands with Wilderness Characteristics (LWC)

Section 201 of FLPMA requires the BLM to maintain an inventory of all public lands and their resources and other values, including LWCs. FLPMA also provides that the preparation and maintenance of the inventory shall not change or prevent change of the management or use of public lands.

BLM Wyoming maintains LWC inventories in each of its field offices throughout the state. Each inventory is a snapshot of the existing character of the landscape at a particular time; thus, the BLM should continue to update the inventories as inventoried conditions on the ground change over time in response to both human activities and natural environmental changes. Inventoried lands may be subject to further inventory if the BLM receives new information from the public meeting criteria detailed in BLM Manual 6310 – Conducting Wilderness Characteristics Inventory on BLM Lands.

In order for an area to qualify as an LWC, it must possess sufficient size, naturalness, and outstanding opportunities for either solitude or primitive and unconfined recreation. The area must be over 5,000 acres of roadless, contiguous BLM-managed lands. Areas smaller than 5,000 acres may qualify if it is practical to preserve and use them without damaging their current condition. In addition, roadless areas less than 5,000 acres that are contiguous with lands that have been formally determined to have wilderness or potential wilderness values, or any federal lands already managed for the protection of wilderness characteristics (e.g. Wilderness Areas or WSAs) may also qualify.

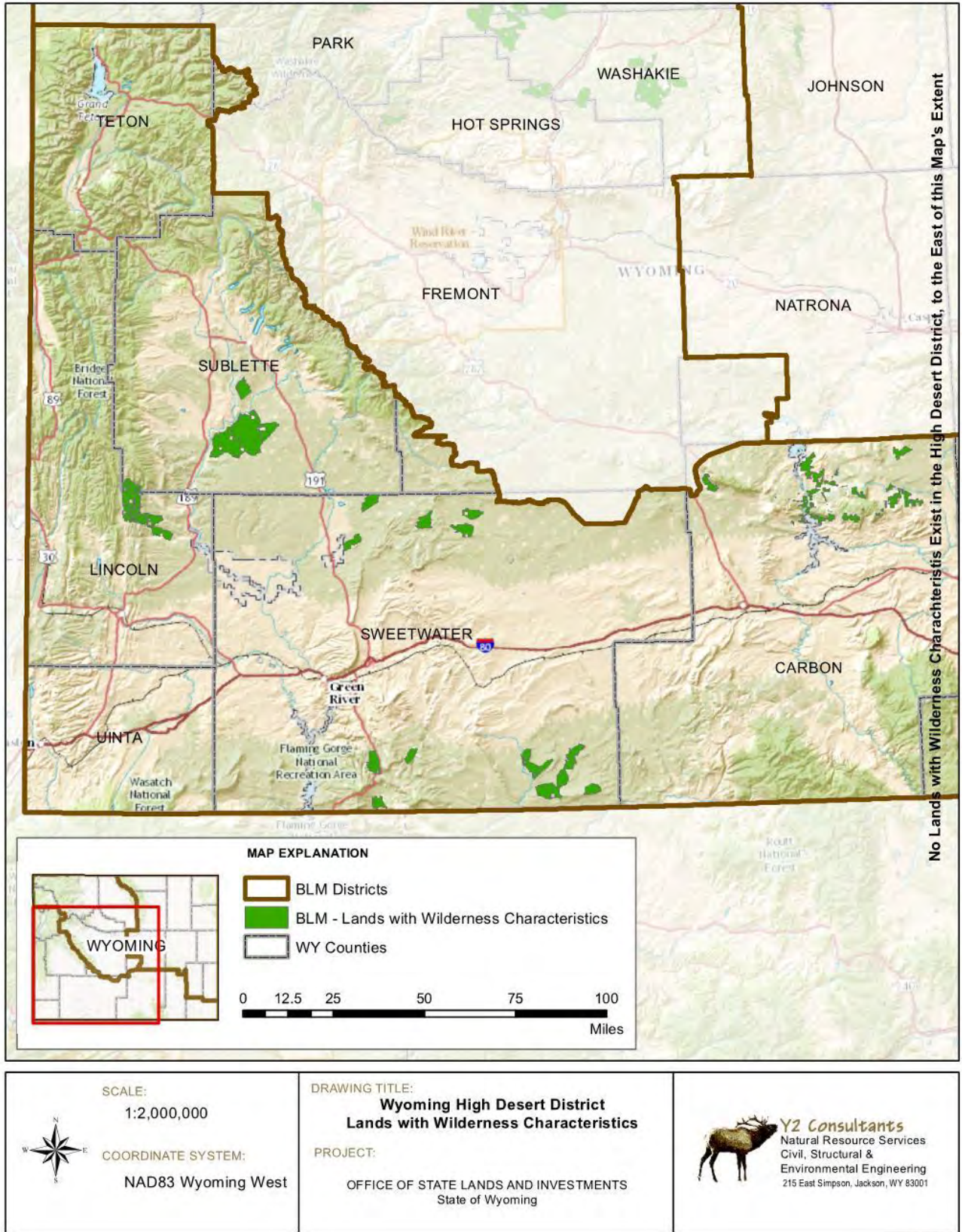
The area must appear to have been affected primarily by the forces of nature and human influence in the area must be largely unnoticeable. Minor human impacts such as installation of a water trough or fences may be considered “unnoticeable”.

The area must offer the chance to avoid evidence of humans or provide for outstanding opportunities for primitive and unconfined types of recreation such as hiking or fishing. Solitude or outstanding primitive recreation opportunities do not have to be available in all portions of the area. If the size, naturalness, and outstanding opportunities criteria are met, then ecological, geological, or other features of scientific, educational, scenic, or historical values may be noted, but are not required to qualify as a LWC.

After an area is inventoried and found to possess wilderness characteristics, the BLM must then make a decision as to whether the area will be managed for those characteristics or for other priority multiple uses. This analysis and management decision is made through a public land use planning (LUP) process.

A 2011 inventory of LWCs in Wyoming identified areas in the Cody and Worland Field Offices as LWCs (Figure 36, Figure 37, Figure 38).

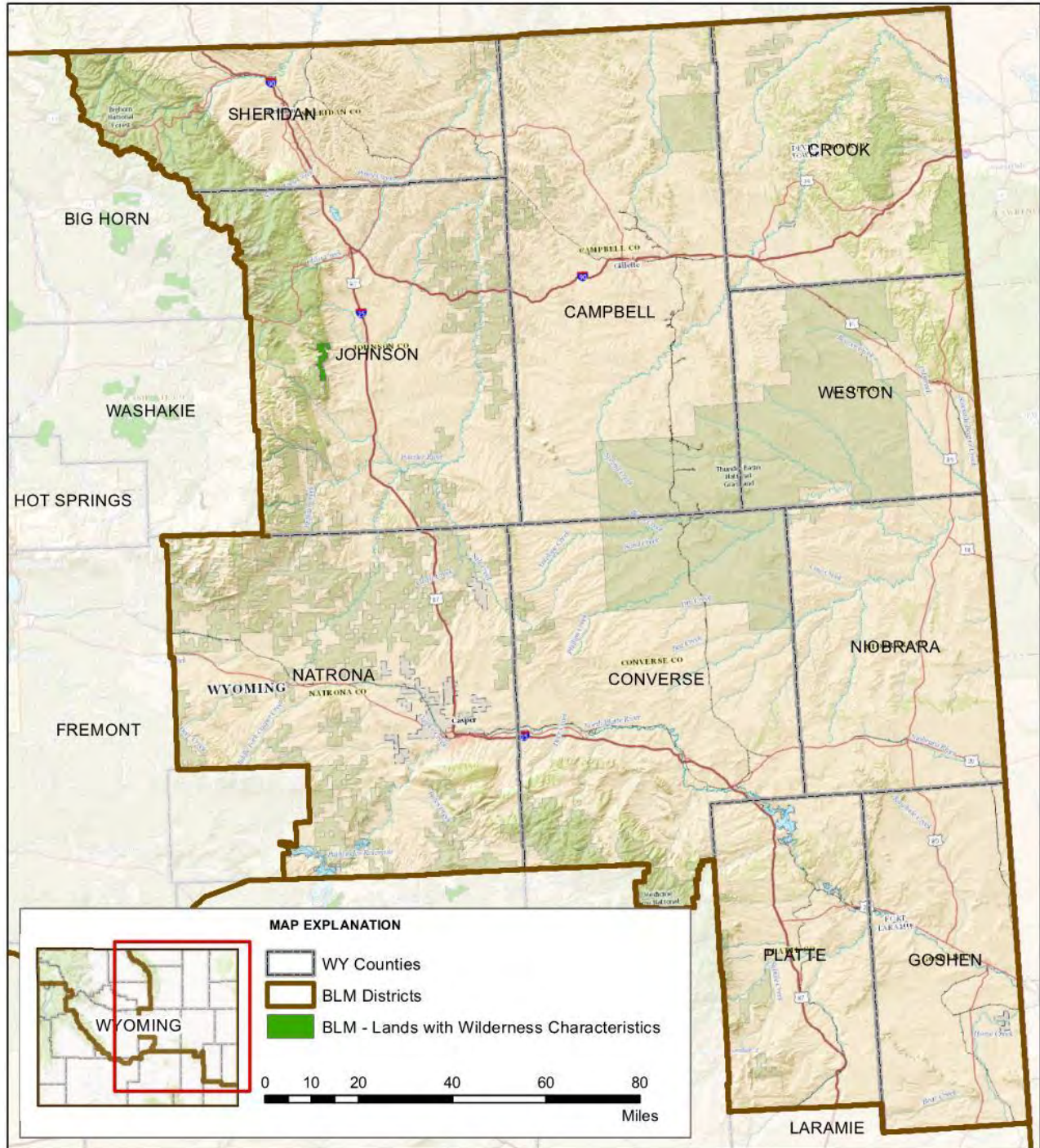




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Figure 36. High Desert BLM District Lands with Wilderness Characteristics.



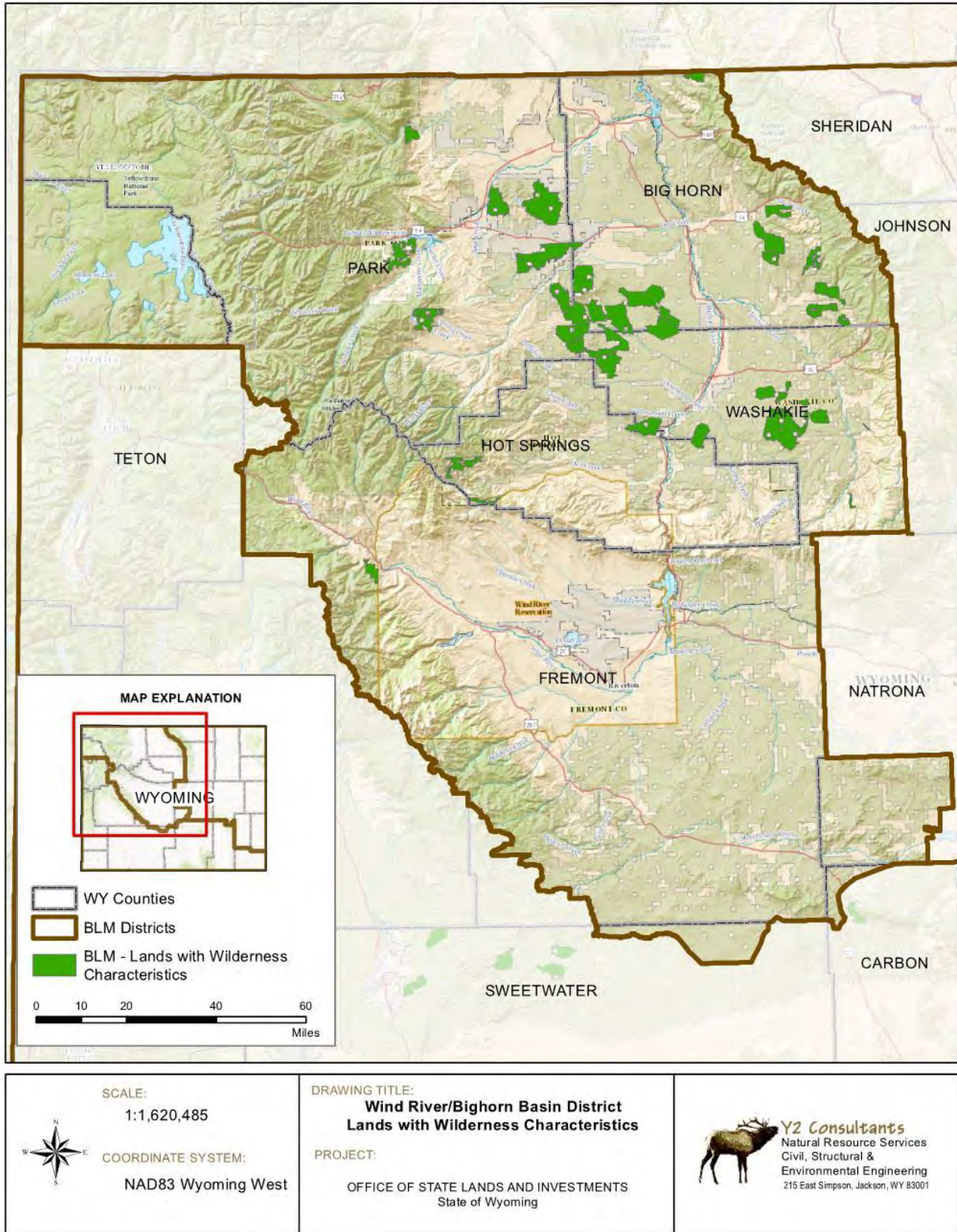
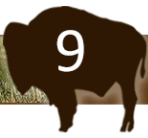


<p>SCALE: 1:1,679,239</p> <p>COORDINATE SYSTEM: NAD83 Wyoming West</p> 	<p>DRAWING TITLE: Wyoming High Plains District Lands with Wilderness Characteristics</p> <p>PROJECT: OFFICE OF STATE LANDS AND INVESTMENTS State of Wyoming</p>	 <p>Y2 Consultants Natural Resource Services Civil, Structural & Environmental Engineering 215 East Simpson, Jackson, WY 83001</p>
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7/5/2016

Figure 37. High Plains BLM District Lands with Wilderness Characteristics.





7/5/2016

Figure 38. Wind River/Bighorn BLM Basin District Lands with Wilderness Characteristics.



Areas of Critical Environmental Concern (ACEC)

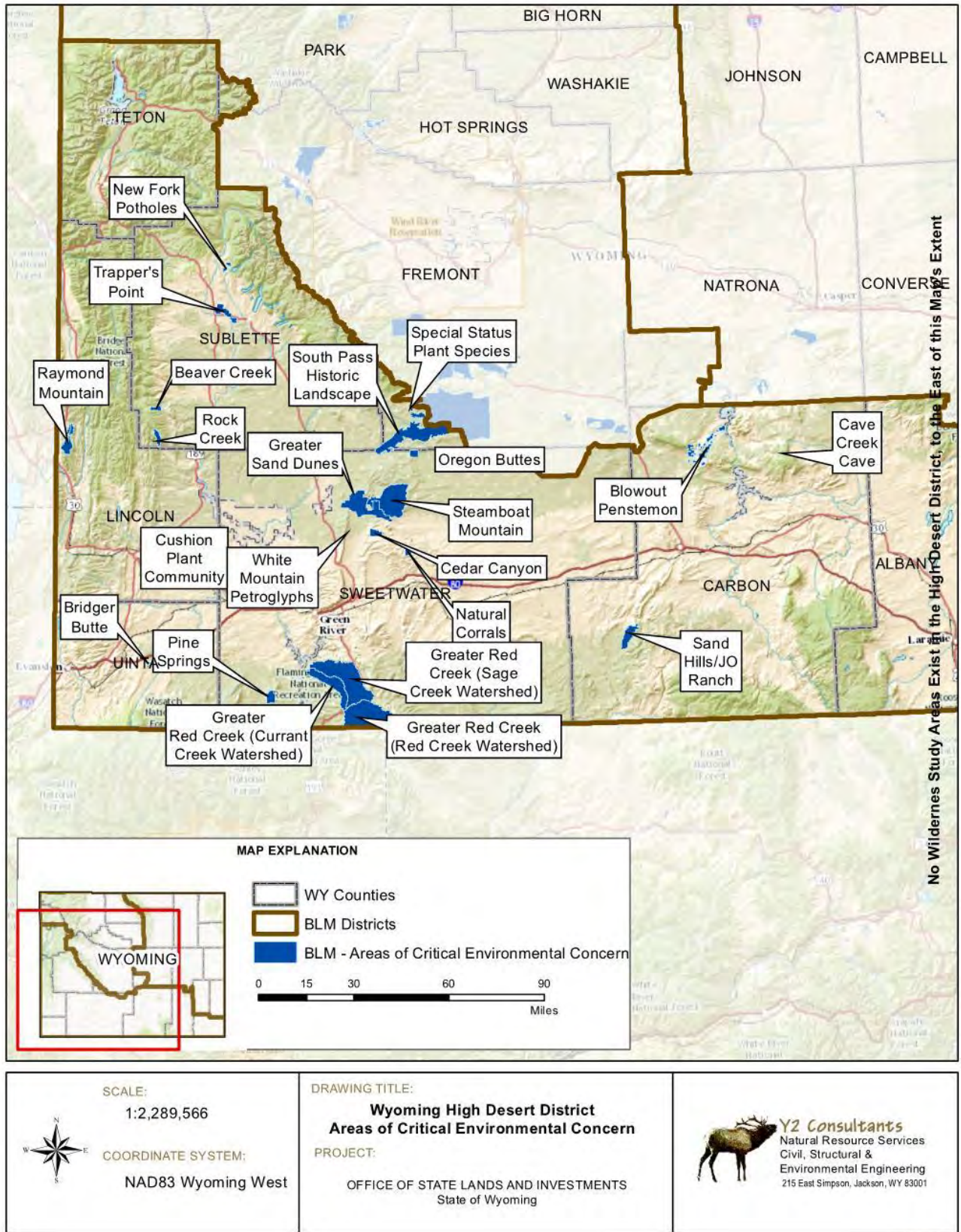
Congress mandated the designation of Areas of Critical Environmental Concern (ACEC) through the FLPMA to manage areas containing truly unique and significant resource values. Sec. 202(c)(3) requires BLM to give priority to the designation and protection of areas of critical environmental concern (ACEC) as part of the land use planning process. FLPMA defines ACEC as areas within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems and processes, or to protect life and safety from natural hazards (Section 103(a) [43 USC 1702] and in 43 CFR 1601.0-5(a)).

ACECs are an administrative designation made by the BLM through a LUP. When the BLM initiates development or update of a RMP it solicits ACEC nominations. Nominations may come from BLM staff, other agencies, or members of the public. To be designated as an ACEC, an area must meet the relevance and importance criteria.

ACECs differ from other special designations, such as WSAs, in that designation by itself does not automatically prohibit or restrict other uses in the area. While WSAs are managed to a “non-impairment” standard that excludes surface disturbing activities and permanent structures that would diminish the areas’ natural character, the management of ACECs is focused on the resource or natural hazard of concern. This varies from area to area, and in some cases may involve surface disturbing actions.

In Wyoming, ACECs have been designated in all three districts (Figure 39, Figure 40, Figure 41).

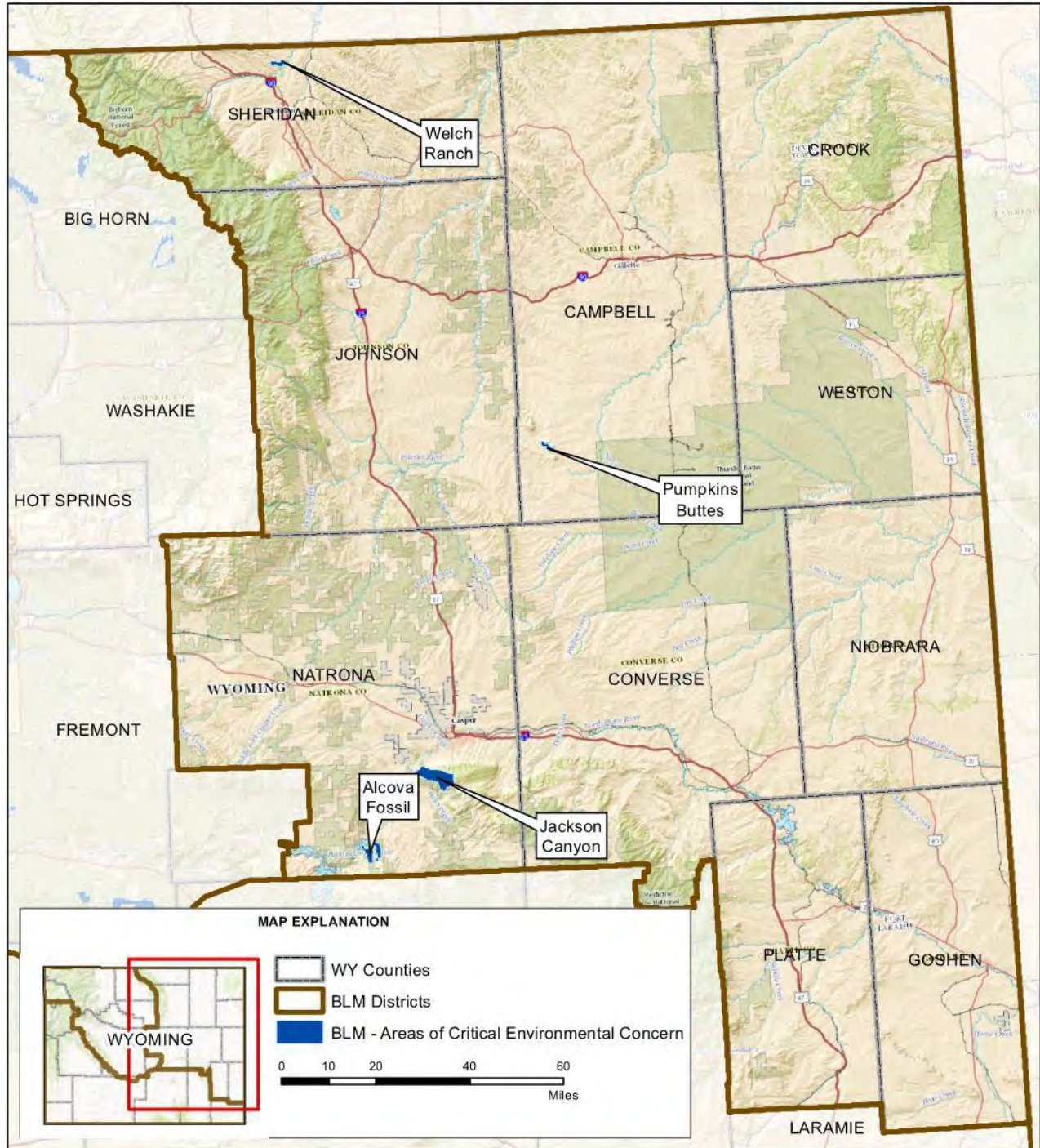




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Figure 39. High Desert BLM District Areas of Critical Concern.



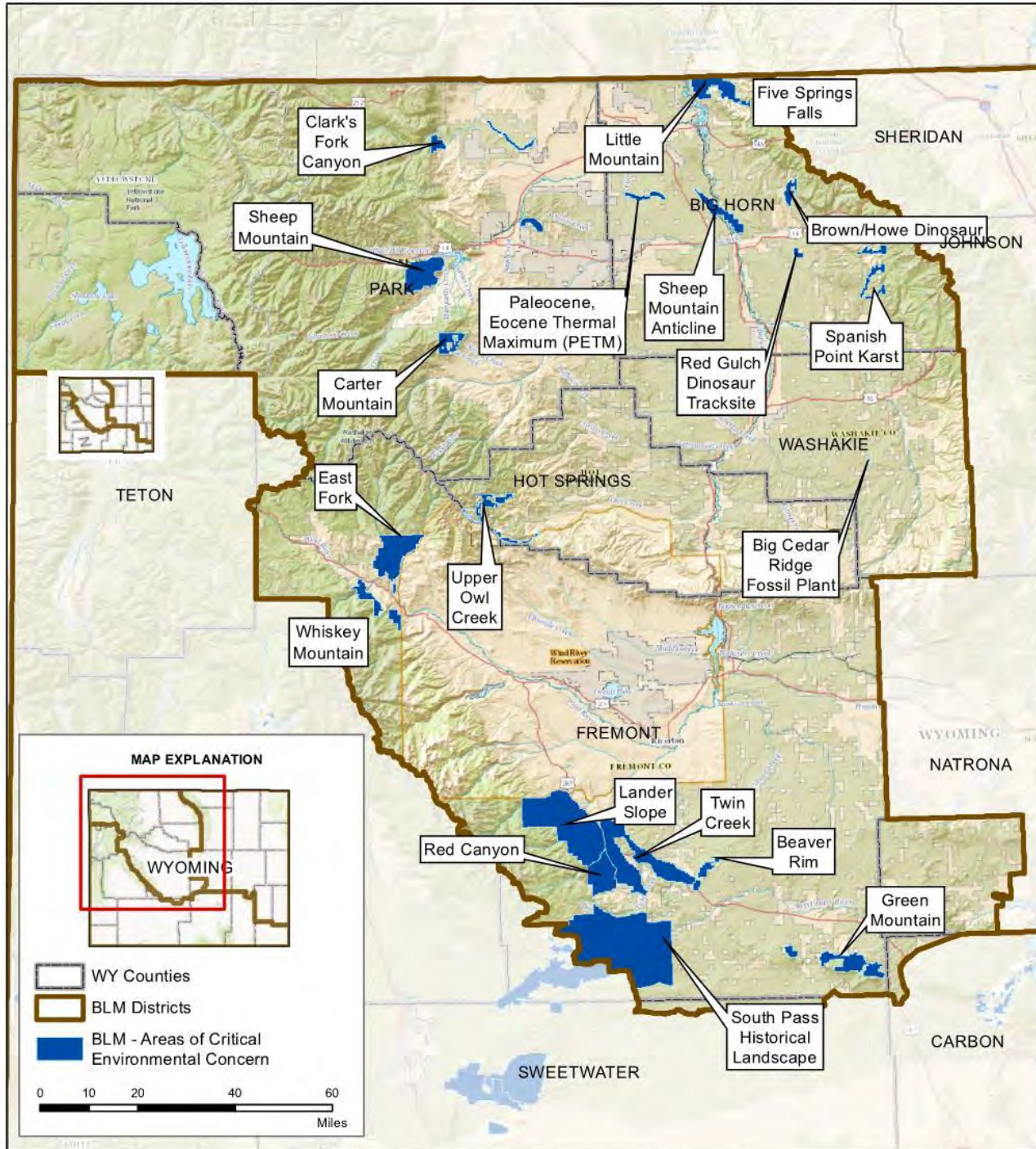
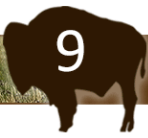


<p>SCALE: 1:1,679,239</p> <p>COORDINATE SYSTEM: NAD83 Wyoming West</p> 	<p>DRAWING TITLE: Wyoming High Plains District Areas of Critical Environmental Concern</p> <p>PROJECT: OFFICE OF STATE LANDS AND INVESTMENTS State of Wyoming</p>	 <p>Y2 Consultants Natural Resource Services Civil, Structural & Environmental Engineering 215 East Simpson, Jackson, WY 83001</p>
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7/5/2016

Figure 40. High Plains BLM District Wilderness Study Areas.





<p>SCALE: 1:1,620,485</p> <p>COORDINATE SYSTEM: NAD83 Wyoming West</p> 	<p>DRAWING TITLE: Wind River/Big Horn Basin District Areas of Critical Environmental Concern</p> <p>PROJECT: OFFICE OF STATE LANDS AND INVESTMENTS State of Wyoming</p>	 <p>Y2 Consultants Natural Resource Services Civil, Structural & Environmental Engineering 215 East Simpson, Jackson, WY 83001</p>
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Figure 41. Wind River/Big Horn BLM Basin District Areas of Critical Environmental Concern.



Wyoming Resource Conservation Initiative Resource Advisory Council (RAC)

Section 309 of FLPMA (43 USC 1739) requires that resource advisory councils (RACs) or their functional equivalent be involved in the land use planning process. RACs, which are advisory groups chartered under the Federal Advisory Committee Act (FACA) (86 Stat. 770, 5 USCA., Appendix 2) may advise the BLM regarding the preparation, amendment, and implementation of LUPs for public lands and resources within a jurisdictional area. FACA became law in 1972 and is the legal foundation defining how federal advisory committees operate. The law has special emphasis on open meetings, chartering, public involvement, and reporting. In addition, Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (Environmental Justice), February 11, 1994, requires the BLM to find ways to communicate with the public that are important to community-specific needs in areas with low income or minority populations or Tribes.

The Department of the Interior (DOI) established the RACs in 1995 as a forum for local citizens to provide advice and recommendations to DOI on management of the public lands. Each RAC is comprised of local residents who represent a variety of backgrounds but who share an interest in the public lands. Each Council must include representatives of three broad categories:

1. Commercial/commodity interests
2. Environmental/historical groups (including wild horse and burro and dispersed recreation);
and
3. State and local government, Indian tribes, and the public at large

The Wyoming BLM RAC is the only active advisory group in Wyoming. The Pinedale Anticline Committee was chartered to develop recommendations and provide advice to the BLM on matters pertaining to oil and gas development in the Pinedale Anticline Project Area. At its October 25, 2012 meeting, a majority of the PAWG voted to allow its charter to expire. The motion passed after extensive discussion regarding declining public involvement, the lack of nominations for vacancies, the depth and frequency of information presented at other meetings, the diminishing need for advice given the status of the ROD's implementation as well as PAPA activity, non-local membership, and the establishment of the Wyoming RAC. On January 29, 2013, the BLM Director concurred with the decision to inactivate the group.

The Wyoming RAC has ten members which provide advice and recommendations to the BLM and USFS on resource and land management issues for all federally-administered lands in Wyoming. The purpose of the RAC is to enable Wyoming citizens to have a meaningful say in how public lands are managed. RAC members are selected for their ability to provide informed, objective advice on a variety of public land issues, and their commitment to collaboration in seeking solutions to those issues.

Council members are appointed to serve 3-year terms on a staggered basis. This means that one-third of the Council is subject to appointment or reappointment each year. The Wyoming RACs began meeting in 2011 and traditionally meet four times a year. These citizen-based groups provide an opportunity for individuals from all backgrounds and interests to have a voice in the management of



America's public lands, and to help improve their health and productivity. RAC recommendations address all public land issues, including: land use planning, recreation, noxious weeds, and wild horse and burro herd management areas (HMAs), to name just a few. The USFS participates in the RAC in Wyoming.

9.2 State of Wyoming

The State of Wyoming does not have an entity that manages similar issues, although agencies may participate in the RAC program.

9.3 Budget Summaries

Funds for management of these lands are included in the Recreation programs (Section 8.5).





10. WILDLIFE AND FISHERIES (NON-ESA)



10. Wildlife and Fisheries (Non-ESA)

10.1 Overview

Wildlife and Fisheries Management programs maintain and restore fish, wildlife, and their habitats by conserving and monitoring habitat conditions, conducting inventories of fish and wildlife resources, and developing cooperative management plans, while providing for environmentally responsible recreation and commercial uses.

10.2 BLM

The overall goal of the Fisheries Management and Wildlife Management programs is to restore and maintain proper functioning conditions in aquatic, riparian, wetland and upland systems managed by BLM, with the goal of providing suitable conditions for biological communities.

Habitat assessment and monitoring is done to provide an understanding of range and distribution of priority species to describe existing conditions and monitor to determine if management decisions have been implemented and objectives are being met.

The BLM Wildlife Management Program is responsible for:

- Implementing and maintaining habitat improvement projects
- Implementing conservation actions in support of sensitive species and their habitats
- Monitoring to ensure the effectiveness of habitat management actions
- Collecting inventory data to provide a solid foundation to support Land Use Planning and ensure LUP implementation
- Implementing on-the-ground habitat conservation and restoration treatments on a landscape scale in priority focal areas

The majority of species and habitats present on BLM lands do not occur exclusively on lands administered by the BLM. BLM land ownership is not spatially contiguous so the BLM has to work with its partners across jurisdictional boundaries so that wildlife conservation measures applied on BLM lands are effective. The BLM currently has Memorandum of Understanding (MOU) in place with the Western Association of Fish and Wildlife Agencies for sagebrush habitat management, the Association of Fish and Wildlife Agencies for coordination of energy and wildlife issues, as well as MOUs pledging BLM support in the North American Bird Conservation Initiative, Partners in Amphibian and Reptile Conservation and the North American Pollinator Protection Campaign.

BLM policy requires the BLM to work closely with state fish and wildlife agencies on wildlife resource issues, and to support the implementation of State Wildlife Action Plans, which establish broad-scale wildlife priorities and identify the species of greatest conservation need as well as the habitats necessary for their protection.



Fisheries

The BLM Fisheries Program provides the framework for assessing, managing, and monitoring over 117,000 miles of fish-bearing streams and almost three million acres of reservoirs and natural lakes. These fish-bearing waters support diverse habitat for hundreds of native fish species, support subsistence fisheries that sustain traditional Native American cultural practices, and provide exceptional recreational opportunities for the public. The BLM Fisheries Management Program is responsible for:

- Maintaining, restoring, and conserving aquatic-related species and habitats consistent with the BLM multiple use mission and priorities
- Implementing lake, wetland, stream, and riparian treatments and projects
- Assisting in the design of other BLM program activities to ensure mitigation of actions affecting fish and other aquatic species, and their habitat as appropriate
- Monitoring to ensure the effectiveness of management actions, including subsistence actions on BLM land in Alaska through the Federal Subsistence Management Program
- Participating in angler activities with state fish and game agencies through various Memoranda of Understanding and Memoranda of Agreement
- Implementing stream and wetland conservation and restoration treatments in focused areas (under the BLM Healthy Landscapes Program)

10.3 USFS

The USFS Watershed, Fish, Wildlife, Air & Rare Plants program (WFW) provides support and coordination to the public and the agency regions, forests and districts.

The WFW role is sharing leadership with other programs when meeting USFS land and service ethics, and carrying out their mission to be conservation leaders. Specifically, WFW creates programs that are supposed to:

- Protect, sustain, and improve the water and watershed resources and services
- Protect ecosystems by ensuring that proposed management activities promote conservation of biological diversity
- Restore deteriorated ecosystems by ensuring their biological health, diversity, and productivity
- Provide multiple benefits to people within the capabilities of ecosystems by enhancing ecosystem productivity, managing public access, and increasing environmental education

The USFS expects wildlife and fish programs to be developed within the context of ecosystem management that clearly demonstrates conservation leadership and to promote the sustainability of ecosystems.



10.4 WGFD

Wyoming Game and Fish Department works with federal agencies on the management of all wildlife species. The WGFD primary functions include: conserving and advocating for wildlife by providing wildlife and wildlife habitat management, including scientific data collection, law enforcement, wildlife/human conflict management, research, habitat conservation and wildlife health services; serving people by managing wildlife populations, providing access for wildlife-associated recreation and providing information and education about wildlife and wildlife-related issues; and managing the human, fiscal, physical and other resources necessary to carry out its mission, including people, money, lands, information, buildings, and other facilities needed to support wildlife conservation in Wyoming. The WGFD has 23 programs in five divisional areas (Wildlife, Fish, Services, Fiscal, and Office of the Director). They manage aquatic invasive species, the Veterinary Services program including the State Veterinary lab, the Wyoming Comprehensive Wildlife Management Strategy and State Wildlife Action Plan, and numerous fish hatcheries and elk feed grounds around the state. Greater Sage-grouse and wolves are two non-ESA listed species with specific management programs within the WGFD.

10.5 Budget Summaries

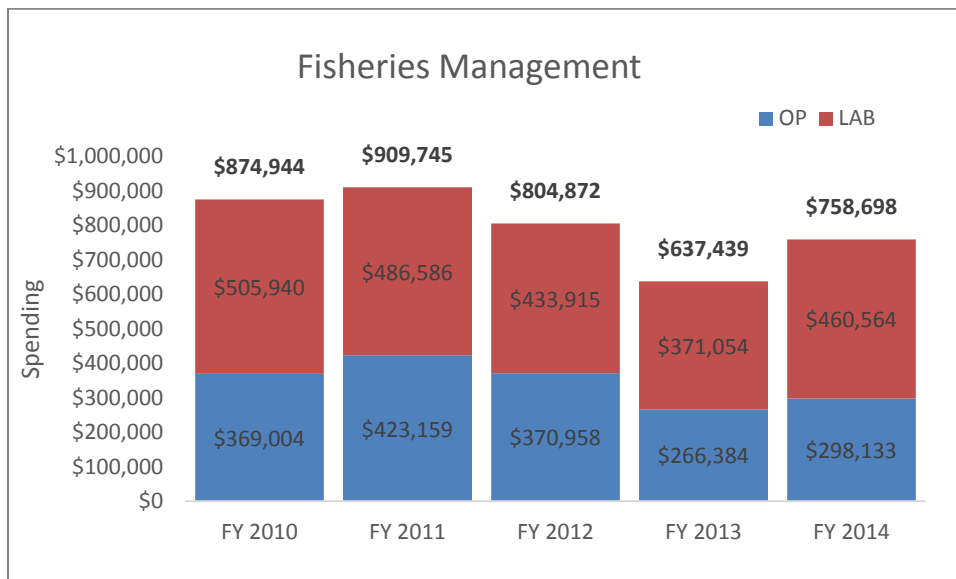


Figure 42. Wyoming BLM Fisheries Management Expenses, FY 2010-2014.



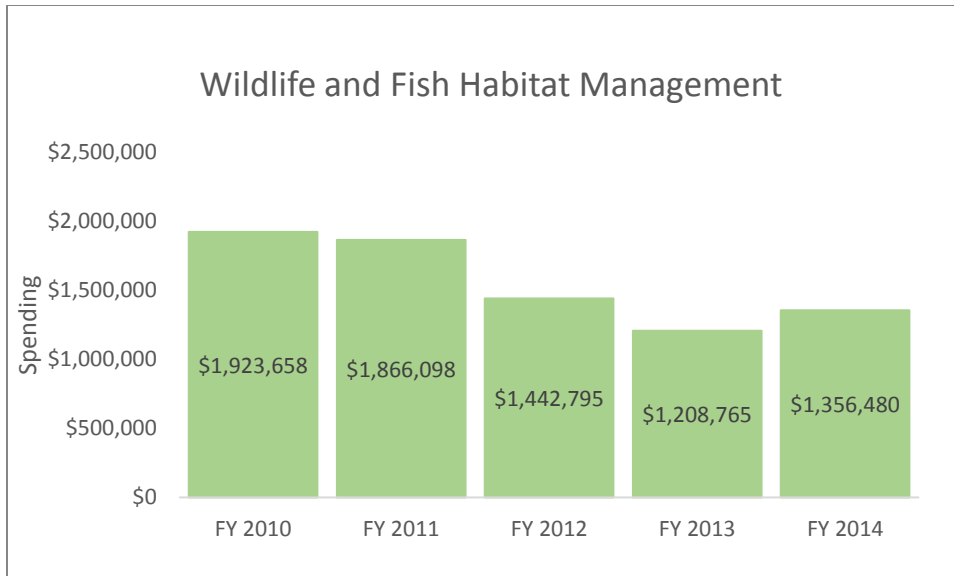


Figure 43. Wyoming USFS Wildlife and Fish Habitat Management, FY 2010-2014.

Table 36. Wyoming Game and Fish FY 2013-2014 Biennium Budget Estimated Revenue.

Funding Source	Revenue
General Fund	\$9,039,071
Other	\$800,000
Total	\$9,839,071

Source: (Talbot, Fowden, Doering, & Frank, 2012).

Table 37. Wyoming Game and Fish FY 2013-2014 Biennium Budget.

Office of the Director	\$6,399,080
Fiscal and Admin Services	\$14,250,789
Services	\$27,571,522
Fish Division	\$29,010,182
Wildlife Division	\$53,407,351
Total	\$130,638,924

Source: (Wyoming Game and Fish Department, ND).



Table 38. Wyoming Game and Fish FY 2013-2014 Biennium Budget Request.

Wyoming Game and Fish Commission Expenses	
Expense Account	
Aquatic Invasive Species	\$2,095,117
Veterinary Services Program	\$3,748,350
Sage Grouse Planning and Protection	\$1,724,828
Wolf Management	\$608,099
CWCS	\$1,492,677
Special Projects (one-time expenditures)	\$170,000
Total	\$9,839,071

Source: (Talbot, Fowden, Doering, & Frank, 2012).





11. THREATENED
AND ENDANGERED
SPECIES



11. Threatened and Endangered Species

11.1 Overview

Congress passed the Endangered Species Preservation Act in 1966, which provided limited protection for species listed as endangered. The Departments of Interior, Agriculture, and Defense were to seek to protect listed species and to the extent possible preserve the habitats of listed species. In 1969, Congress amended the Act to provide additional protection for species at risk of “worldwide extinction” by prohibiting the import and sale in the United States. This amendment called for an international meeting to discuss conservation of endangered species and changed the title of the act to the Endangered Species Conservation Act. In 1973, 80 nations met to sign the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). As a follow-up, Congress passed the Endangered Species Act (ESA) of 1973. The ESA:

- Defines “endangered” and “threatened”
- Made plants and all invertebrates eligible for protection
- Applied “take” prohibitions to all endangered animal species, and allowed the prohibitions to apply to threatened animal species by special regulation
- Required federal agencies to use their authorities to conserve listed species and consult on “may affect” actions
- Prohibited federal agencies from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its “critical habitat”
- Made matching funds available to states with cooperative agreements
- Provided funding authority for land acquisition for foreign species
- Implement CITES protection in the United States

The ESA was amended in 1978, 1982, and 1988. Funds are annually appropriated for the implementation of the ESA and have been since 1993. Candidate species are “any species being considered...for listed as an endangered or threatened species, but not yet the subject of a proposed rule” (50 CFR § 424.02(b)). The listing process is illustrated in Figure 44.



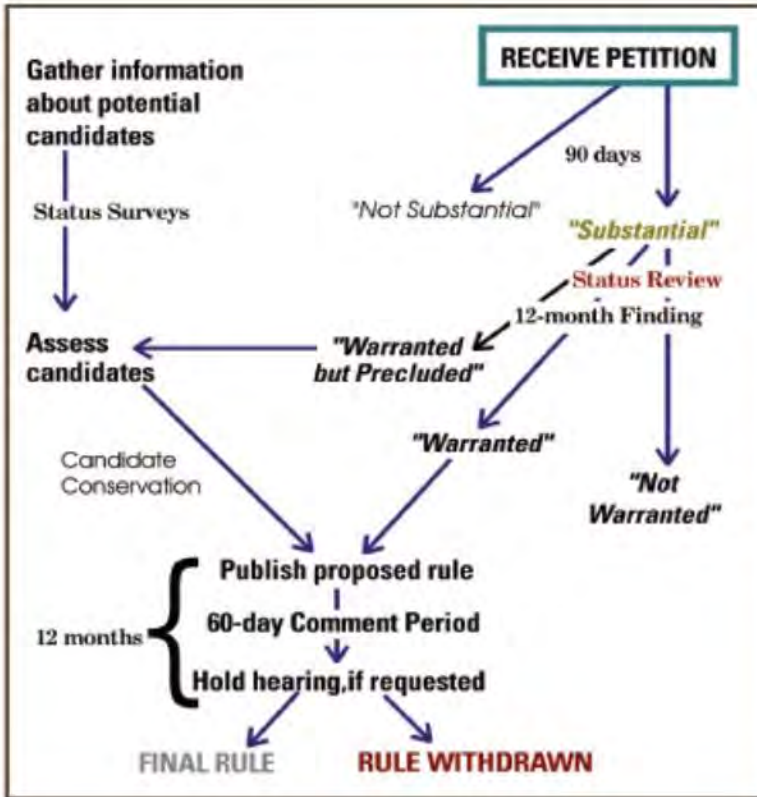


Figure 44. ESA Listing process.

Source: Illustration taken from www.fws.gov/endangered January 2015.

Critical habitat is a specific geographic area that contains features essential to the conservation of a listed species and may require special management or protection. Critical habitat can include areas that are not currently occupied by a listed species but may be needed for its recovery. The economic impacts must be considered in the process of designating critical habitat. The ESA also created several additional planning tools, including:

- Recovery plans (population and viability goals; define when delisting may be possible; what is required for delisting to begin)
- Reintroduction plans
- Habitat conservation plans (define when “take” may occur, defines mitigation options)
- Conservation plans or agreements
- Candidate Conservation Agreements (CCA) and CCAs with Assurances (CCAAs, private landowner arrangements for the protection of Candidate species that provides the landowner with protection if the species is listed)



11.2 BLM

Over 250 species listed under the ESA have been found to occur on BLM-administered lands. At least 31 species found on BLM-administered lands have been identified as candidates for Federal protection. BLM-administered lands are prime habitat for over 800 rare plant species and provide the only known habitat for more than 450 species of rare or listed plants and animals.

The Threatened and Endangered Program completes the following actions:

- Cooperative planning with other stakeholders in the preparation of recovery plans or conservation strategies for targeted species
- Implementing actions identified in species conservation and recovery plans
- Monitoring species populations to determine if objectives identified in species conservation and recovery plans are being met
- Inventory and monitor habitat on the millions of BLM acres where federally listed species are known or suspected to occur

The range of most of the listed species found on BLM lands includes lands and waters not administered by the agency. The recovery of listed species requires management at the population or meta-population scale, regardless of jurisdiction lines. Extensive collaboration and cooperation with a number of partners, including other agencies and organizations, is therefore an integral element of the T&E Program. Conservation collaborations typically begin with the development of recovery plans, written under the leadership of the FWS or the National Marine Fisheries Service (NMFS). Implementation of recovery actions identified in these plans typically involves collaboration with such partners as state fish and game, other Federal, and non-governmental organizations (NGOs).

In addition to recovery planning and implementation, consultation under Section 7 of the ESA is a significant BLM endangered species management responsibility. Under the ESA, the BLM must consult with the FWS or the NMFS whenever it determines that an action it authorizes, funds, or carries out may affect a listed species. In 2012, the BLM held about 600 consultations. Personnel from the T&E Program are integral in providing guidance and expertise to assure compliance with existing policies, laws and regulations.

11.3 USFS

The Threatened, Endangered, & Sensitive (TES) Species Program is dedicated to conserve and recover plant and animal species that need special management attention and to restore National Forest and Grassland ecosystems and habitats. From 1980 to 2012, the number of species endangered or threatened with extinction and listed under the ESA rose from 281 to 1,381. In 2012, 429 (32%) of those species were known to either use National Forest/Grassland habitats, or potentially be affected by USFS management activities. 251 other species are candidates for listing (i.e., meet listing



criteria, but have not yet been formally proposed), and over 50 of those occur on National Forest or Grasslands.

In addition to contributing to the recovery threatened and endangered species, the USFS also conserves habitat for some 3,500 “sensitive” species—species that need special management to maintain and improve their status on National Forests and Grasslands, and prevent a need to list them under the ESA.

The TES program involves a variety of activities conducted by the USFS and partners, including inventory and monitoring, habitat assessments, habitat improvements through vegetation treatments and structure installation, species reintroductions, development of conservation strategies, research, and conservation education.

In FY 2011, the USFS invested \$30.3 million of wildlife and fish funds and \$12.3 million of other agency funds in TES species recovery and conservation through 1,451 programs and projects. 605 of these projects were partnerships, made possible with partner contributions of \$16.1 million. Over 700,000 acres and 620 miles of stream were improved for TES species.

11.4 WGFD

As described in Section 3.4.3 WGFD works with federal agencies on the management of all wildlife species, including listed and candidate species.

11.5 Budget Summaries

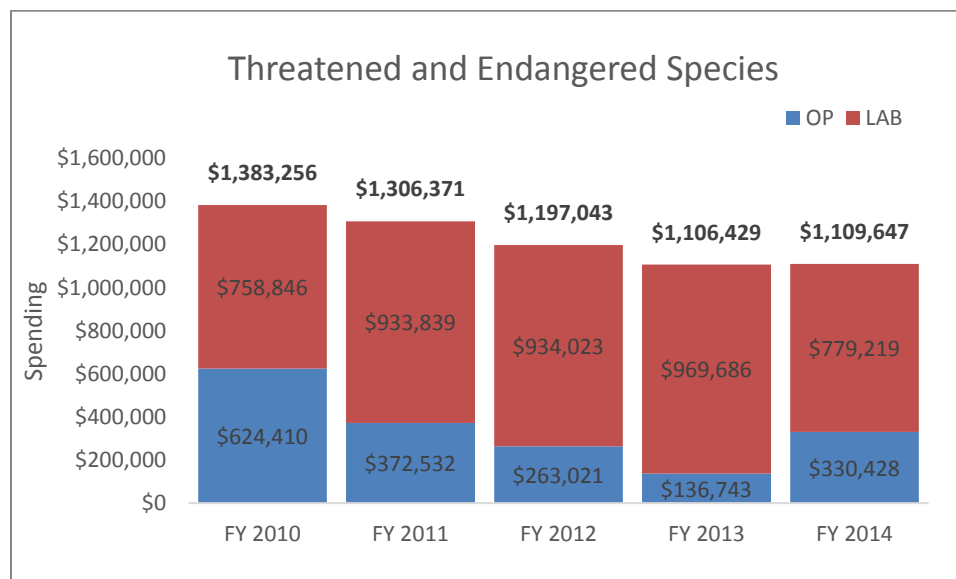


Figure 45. Wyoming BLM Threatened and Endangered Species, FY 2010-2014.

The USFS does not separate management of listed from non-ESA species; their budget information is provided in Section 10.



The WGFD does not separate ESA-species management in its budget; budget information is provided in the Wildlife and Fisheries Management section.





12. WILD HORSES



12. Wild Horses

12.1 Overview

The Wild Free-Roaming Horse and Burro Act of 1971 is a unique niche of law and policy regarding our public lands. In the Act, Congress declared wild horses and burros to be living symbols of the historic and pioneer spirit of the West. USFS does not manage wild horses in Wyoming, so this section pertains only to BLM lands.

Wild horses existed in North America in prehistoric times but became extinct over 10,000 years ago. Today's "wild" horses and burros are believed to descend from domestic animals brought over by European explorers in the late 15th and 16th centuries and horses and burros which were released or escaped from mining and ranching operations over the course of the 19th and 20th centuries. In the mid-20th century, public concerns over dropping populations, inhumane treatment, and harvesting of wild horses for commercial purposes lead to a protection movement which culminated in the enactment of the Wild Free-Roaming Horses and Burros Act of 1971.

Many hold the position, and scientists generally agree, that while the animals have largely adapted to the lands of the American West, they should not be considered a "native" species and are feral animals. A large and vocal segment of citizens believe they are integral to the landscape and should be left largely alone to roam and reproduce without interference. However, their vulnerability to predators is limited and with a fertility rate of almost 20%, herd sizes can double in four years – one of the major management challenges. In 1971, there were approximately 25,000 horses and burros on public lands. In April 2016, the BLM announced that over 67,000 horses and burros roamed on public lands—a 15% increase over 2015 (on top of an increase of 18% in 2014) and a population size more than double the number BLM estimates is appropriate. Approximately 10% of this total are in Wyoming.

The difficulties in adopting out or selling sufficient numbers to keep up with removals has resulted in short term and long term facilities that are at capacity and increasing management costs. Adoptions, which have been falling for years, cannot keep up and there is not enough money or space in the holding facilities to accommodate the necessary gathers. Forty-six thousand additional horses have been removed from the management areas to protect the range and are in holding facilities at tremendous cost because there is no other place for them. The BLM estimates the cost for caring for these animals already in holding over the course of their lives will exceed \$1 billion. The conflict and the debate over what to do with "excess" animals due to very divergent values have created a tremendous conundrum for the management agencies. At the heart of the debate and contributing to the problem is the discomfort and objection many Americans have over the idea of slaughtering healthy horses—in particular for commercial products or food consumption. Horse meat is considered a delicacy by many cultures.



Basic Duties of Wild Horse Management:

- Maintaining inventory on prescribed Herd Management Areas (HMA)
- Establishing Appropriate Management Levels (AML) in relation to ecosystem and other uses without damaging rangelands and sustainable numbers through land use planning process
- Surveying population numbers and developing more accurate survey methods
- Modeling projected growth
- Determining how to achieve AML whether by removal or controlling population growth or both
- NEPA documents for activities in particular for gathers
- Gathers and Removals of excess horses
- Control population growth by adjusting sex ratios and/or applying fertility control in herds
- Monitoring genetics of herds
- Adoption and sale program

Herd Management Areas (HMAs)

Under the law, the BLM manages herds in their respective jurisdictions within areas where wild horses and burros were found roaming in 1971.

No specific amount of acreage was “set aside” for the exclusive or principal use by wild horses and burros under the 1971 Act, but the Act directed the BLM to determine the areas where horses and burros were found roaming at the time. Areas where the horses were found and documented when the Act was passed are called Herd Areas (HA). The law also specifically stipulated that “[n]othing in this Act shall be construed to authorize the [Interior] Secretary to relocate wild free-roaming horses or burros to areas of the public lands where they do not presently exist.” Horses cannot be relocated to public lands outside of those original Herd Areas.

In 1971, before they were protected, wild horses roamed on about 53 million acres of public land – most of which was administered by the BLM. There are currently managed on 31.6 million acres (26.9 million acres are BLM administered land) in 179 Herd Management Areas (HMA). They are locations where the horses were found in 1971 and where it has been determined there is enough food, water, cover, and space to sustain a horse/burro herd over time. These HMAs have been set aside for the “primary” but not exclusive use of wild horse and burros. The animals are to be managed “in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands” while consistent with the multiple use mandate under FLPMA. That balance takes into consideration all the resources and uses in a HMA such as wildlife, livestock, vegetation, water, and soil in addition to the horses and burros. There are a few HMAs in the United States dedicated solely to the protection of feral horses or burros but not in Wyoming.

Wyoming has 16 HMAs scattered across the state that encompass approximately 4,768,682 acres of which 3,633,879 acres are federal lands administered by the BLM. Other acres within the HMAs are generally owned by private parties, the state, and other federal agencies. HMAs that are adjoined



and through which the horses move freely are referred to as “Complexes” and are generally managed together.

There are four complexes in Wyoming. The Red Desert complex includes the Antelope Hills, Crooks Mountain, Green Mountain, Lost Creek, and Stewart Creek HMAs and collectively located in Sweetwater, Carbon, Fremont, and Natrona counties. The North Lander Complex includes Muskrat Basin, Rock Creek Mountain, Dishpan Butte, and Conant Creek. Adobe Town/Salt Wells is treated as a complex as is White Mountain/Little Colorado.

The Pryor Mountain Wild Horse Range lies along the border of Montana and Wyoming and is managed by the BLM Billings Field Office in Montana. The BLM partners with the Pryor Mountain Wild Mustang Center located in Lovell, Wyoming. The Secretary of the Interior first set aside 31,000 acres as a public range for the wild horses living in this area in 1968, well before enactment of the Wild Horse Act in 1976. It was the second horse refuge in the United States.

HMAs only change during the LUP process. Rock Springs Field Office is currently in the process of revising its RMP and examining the boundaries of their HMAs as part of that process. Minor changes can occur to HMA boundaries outside of the RMP process as GIS technology for mapping improves and more data is available.

Appropriate Management Level (AML)

The Wild Horse Act also requires that the Secretary and BLM inventory wild horses and burros and determine AMLs for the herd, with consideration given to other uses and adjacent private lands. 16 USC § 1333.

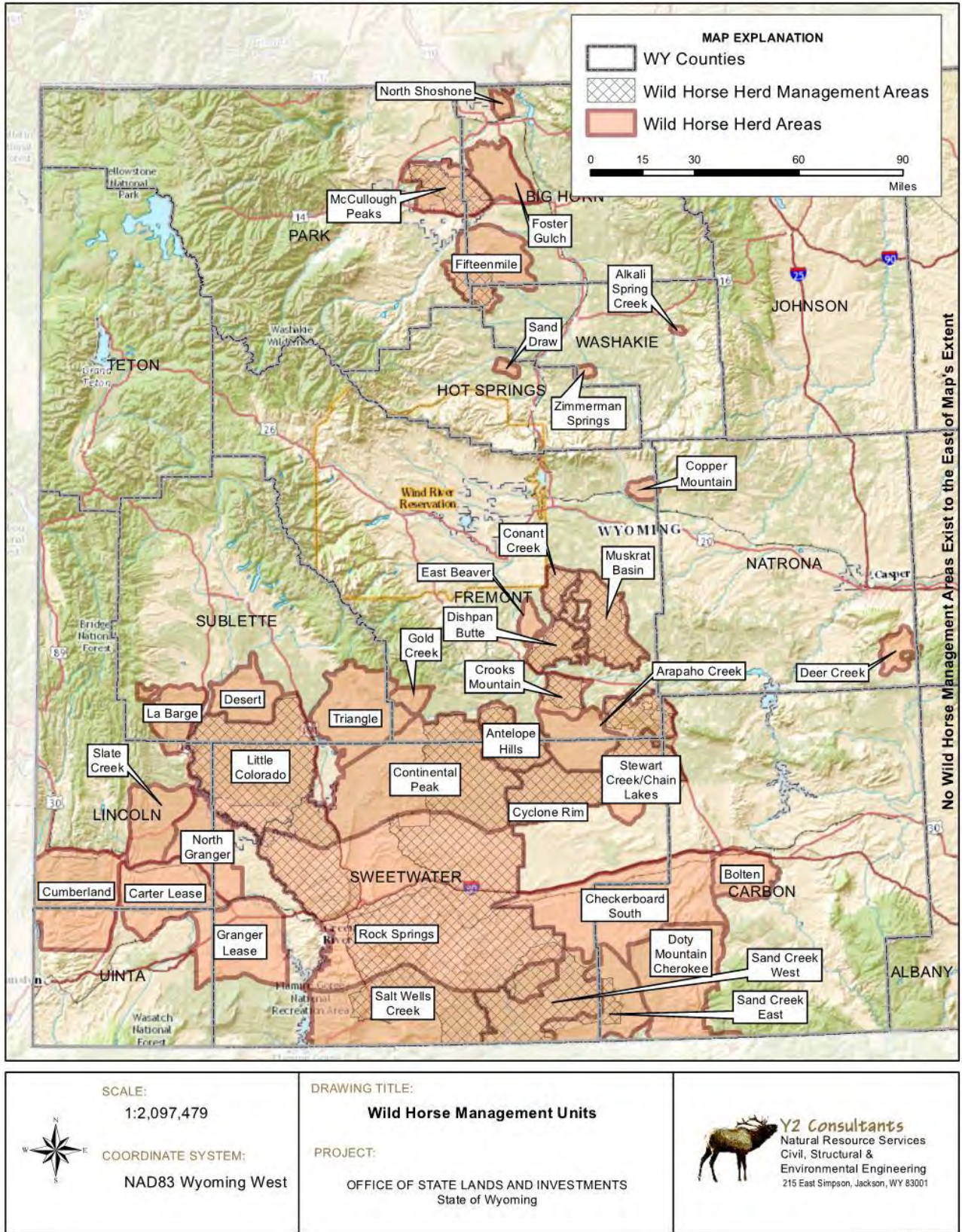
AML is the point at which wild horse and burro herd populations are consistent with the land’s capacity to support them. In the context of its multiple-use mission, AML is the level at which wild horses and burros can thrive in balance with other public land uses and resources, including vegetation and wildlife. AMLs are developed by on-going monitoring and evaluation of rangeland resource data—vegetation, soils, weather, and water as well as population data. There are on-going programs of intensive monitoring and studies on grazing utilization, range condition and trends, actual use, precipitation, and other factors that examine the long term ability of the land to provide habitat for the animals (water, vegetation, space, cover).

AMLs are generally developed in conjunction with RMPs. Every HMA has a unique AML. The AML is a range of low to high that accounts for population growth over a four- to five-year period. When an AML high is exceeded, the excess animals are to be removed under the Wild Horse Act. The BLM reports that the HMAs on public lands in the United States can only support approximately 27,000 in total. As of March 1, 2015 BLM estimated approximately 58,150 wild horses and burros on public lands across ten states—an 18 percent increase over the 2014 estimate of 49,209 and more than double the appropriate management level of 26,715. As of April 2016, population levels rose to over 67,000 animals—an increase of 15% over 2015—40,000 animals over the national AML number.



The AML range for all HMAs in Wyoming is currently a low of 2,490 and a high of 3,725. As of April 2016, there are about 6,535 horses in Wyoming—up from 3,771 animals in FY 2014. Wyoming has no wild burros.





7/1/2016

Figure 46. Wyoming HMAs.



All of the AMLs in Wyoming were subject to a 2003 Court Order/Consent Decree that expired in 2013. It mandated that once it was determined that populations exceeded the high AML in a HMA, BLM would have one year to request additional funds needed before being required under the court order to gather (Bureau of Land Management, 2013). Since the Decree expired in 2013, the horse population has jumped in Wyoming and currently almost every HMA is over its AML.

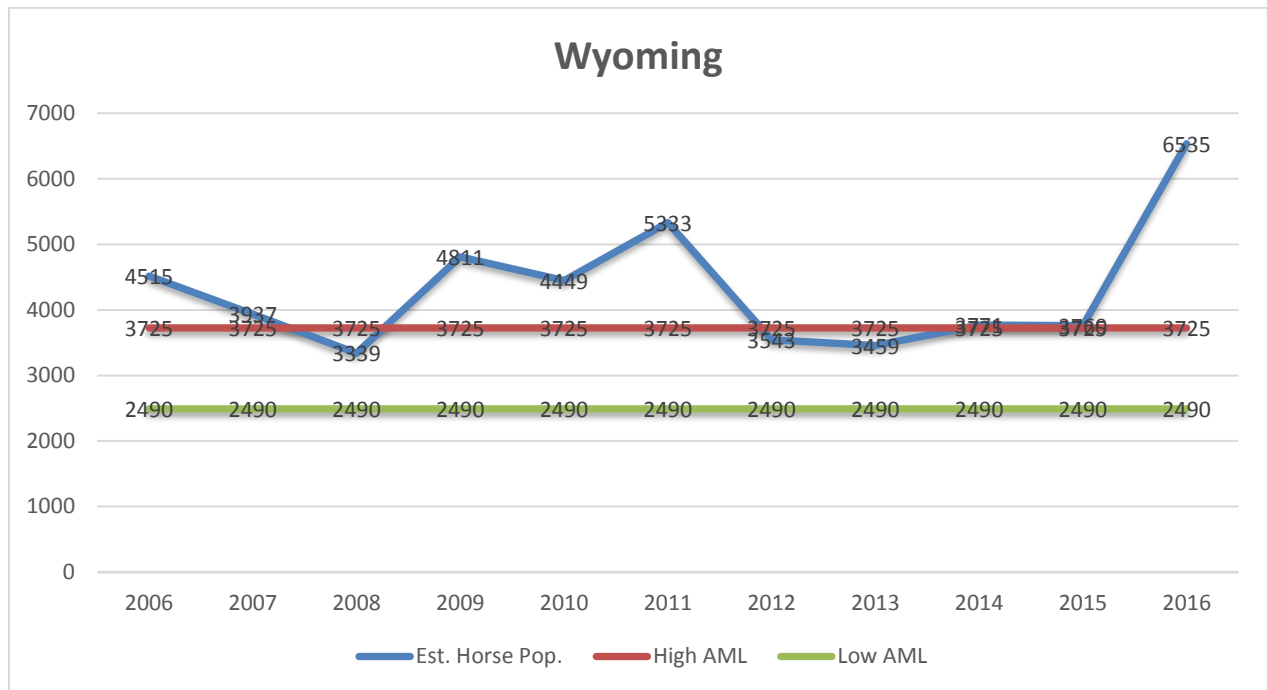


Figure 47. Wyoming AML and 2006 - 2016 Estimated Horse Population.

Estimating Populations

To comply with the law, the BLM must conduct surveys to secure accurate population numbers to know when the maximum AML has been exceeded and how many horses should be removed. The estimates and counts are also used to determine how many mares to treat with fertility control measures and how to adjust a herd's sex ratio—retuning more stallions and geldings to the range than mares after a gather—both of which are done to reduce the population growth of upwards of 20% a year.

Surveys are typically conducted every two to three years and are rotated between the HMAs in the state. In smaller HMAs, such as McCullough Peak, horses can actually be counted. Most of the estimating is conducted through aerial surveys in helicopter flights. Previously the surveys employed what is referred to a direct count method—actually counting animals seen on the ground during the flights. However, this method was not considered scientifically rigorous and the Government Accountability Office (GAO) concluded in an October 2008 report that research showed it consistently resulted in undercounts and did not provide for a statistical range of population estimates.



The BLM partnered with the USGS to develop methods to achieve greater accuracy in the population surveys and the BLM implemented new techniques to count and estimate populations which use statistical corrections to account for animals not actually seen during surveys.

The survey flights are currently all coordinated, and all of flight transects are set, by the USGS. The two agencies also work together to continually improve survey methods to increase accuracy. All of the statistical modeling for estimating populations is done at the national level by an outside contractor. Therefore, a significant portion of the Wyoming budget for estimating and surveying within the Wild Horse and Burro program does not reflect necessary work— that of the USGS and the modeling. The Wyoming budget reflects only staff time and the helicopter time for the aerial surveys.

In addition to the aerial surveys using USGS methods, the BLM is researching other ways to accurately estimate population size to determine if the animals are within appropriate management levels.

Removals

Due to their fertility rates and the lack of predators, the BLM must remove thousands of animals from the range each year as part of its efforts to maintain herd sizes within the AML levels. Wild horse and burro populations in excess of AML numbers harm habitat and riparian resources for wildlife as well as harm legally permitted domestic livestock grazing.

The Wild Horse Act requires that if it is determined “on the basis of all information currently available, [...] that an overpopulation exists on a given area of the public lands and that action is necessary to remove excess animals” land managers will “immediately remove excess animals from the range so as to achieve appropriate management levels.” Additionally, while there is not a federal law requiring private land owners to allow wild horses to graze on their private lands, private landowners cannot remove the horses. Therefore, the Wild Horse Act mandates that land managers must remove excess wild horses from state and private land after they have been notified. BLM struggles to find the resources to do so unless it is an emergency situation.

Under the Act, excess animals removed from public lands are offered to the general public for adoption. More than 235,000 wild horses and burros have been adopted into private care since 1971. There is a trial period and after demonstrating they can properly care for an animal for one year, an adopter is eligible to receive title, or ownership, from the federal government.

Adoptions have dropped substantially—from 9,700 a year in 1995 to 5,701 in 2005 to 2,600 in 2015. The number of animals removed from the range now far exceeds the number adopted, and BLM has limited options for dealing with unadoptable animals. The Wild Horse Act provides that un-adopted excess animals shall be humanely destroyed or, under certain circumstances, sold without limitation. However, BLM currently only manages the thousands of unadoptable animals through sales. Sales are heavily regulated and restricted due to strong public sentiment against healthy wild horses ending up in slaughterhouses as well as periodic Congressional action restricting the action the BLM may take as land managers.



Animals that are not adopted are taken to a variety of off-range holding spaces, but they are reaching capacity and the off-the-range holding costs will continue to overwhelm the program. The amount and percentage of the wild horse and burro program's budget that goes to direct costs for holding removed unadoptable animals off range has increased from \$7 million in 2000 (46% of program budget) to \$21 million in 2007 (67% of program budget) and in 2015 costs rose to \$49 million (about 65% of program budget due to budget increases) (Bureau of Land Management, 2008).

The enormous expense of caring for all the animals in off range holding and capacity limits of the holding facilities has resulted in fewer animals being removed from the range than in previous years. BLM now only removes only as many animals from the range that will be adopted (Bureau of Land Management, 2016).

The total capacity of all BLM off-range holding facilities is 58,519 animals and they currently hold over 46,000 horses and burros. Costs to feed and care for the animals in either short-term corrals or long-term pastures were more than \$49 million a year in 2015 and now consume more than 65% of the BLM Wild Horse and Burro Program budget.

Where the removals occur is based on a variety of factors including budget and priority is set by the national office. There are emergency gathers when there a herd is in peril due to drought, wildfire, and/or reduced forage. Priority may be given where animals have moved from public land to private property; where there is a public health and safety concern such as animals on a highway, in residential areas, or damaging crops; where there is an adverse impact on rangeland health; and more recently, in areas to prioritize the conservation of Greater Sage-grouse habitat. There are also gathers for research but they are generally of low priority. Priority for gathers is also driven by litigation such as where the BLM is under court order to remove animals.

All of the Wyoming HMAs were subject to a 2003 Court Order/Consent Decree that required removals for a HMA within a year of a determination that AMLs were exceeded but it expired in 2013. This also accounts for the jump in recent years of the population in Wyoming, which had been consistently around the max AML for the state.

A NEPA review, analysis, and final decision is necessary before all wild horse removals. Animals are declared excess after a review of not just the current population inventory but also current information regarding grazing utilization and distribution, trend in range ecological condition, actual use, climate (weather), presence of wild horses and burros located outside the HMAs or HAs, and/or other land health assessments that demonstrate a removal is needed to restore or maintain range health.

There is litigation over many of the removals instituted both by ranching interests to force removal of excess animals and from wild horse advocates to prevent them. In December 2014, not long after the previous Court Order/Consent Decree requiring BLM removals expired, the State of Wyoming found it necessary to again sue the Department of Interior and BLM in an effort to get excess horses removed. Wild horse advocate groups had that case dismissed but the State of Wyoming has appealed the dismissal and the case is currently pending in the courts.



Gathers in Wyoming have shifted south due to the expiration in 2013 of the Court Order/Consent Decree for the entire state followed by the new Court Order/Consent Decree requiring removals from private lands in the Checkerboard around Rock Springs. As a result, horse numbers in other HMAs have increased – particularly in the Red Desert Complex.

Population Growth Measures and Genetic Testing

The gathers offer an opportunity to rein in pollution growth and to gather data for genetic testing. Samples pulled for genetic testing and collection are sent pursuant to an assistance agreement to a university in Texas. Assistance Agreements are agreements that establish an affiliation and partnership between federal agencies and special interest groups to address specific tasks or problems for the benefit of public resources. They may be grants or a cooperative agreement so they may involve the exchange of money or provide for the mutual acceptance of services without the exchange of money. After a gather, analysis recommendations are sent back to BLM for specific herds.

BLM personnel monitor the results and effects of adjusting sex ratios. Older horses are returned to the land more than younger horses (who also will be more adoptable).

Measures include temporary or permanent sterilization to decrease growth rates. Different medical approaches have been attempted and abandoned as ineffective or impractical over the years. Castration (gelding) is a safe, effective, humane, and efficient method of sterilizing stallions and geldings are returned to the range after a gather. However, this is highly controversial for many wild horse advocates.

It remains to be seen whether spaying wild mares can be done in a similarly safe, effective, humane, and efficient manner so land managers currently use fertility control vaccines. Porcine zona pellucida (PZP) is a one-year liquid vaccine that must be re-administered annually. A pelleted vaccine (PZP-22) is longer-lasting, approximately 22 months, and is typically hand-injected. This method of fertility control, done during gathers in Wyoming, requires that more mares need to be captured (for treatment and release) than would actually be removed from the range. It can be difficult to capture a large enough fraction of a herd's population to treat enough mares to be effective and horses gathered and released become evasive and more difficult to capture.

While programs to reduce the horses' reproduction rate have an effect and continue to be studied, their potential and impact may not be fully realized until more effective methods are available or more resources allocated. Land managers are pursuing the development of new wild horse fertility control agents and methods to fulfill their obligation to maintain healthy wild horse populations and healthy ranges. In a June 2013 report, the National Academy of Sciences (NAS) found that no highly effective, easily delivered, and affordable fertility-control methods were currently available to manage wild horse and burro population growth; the NAS also urged the BLM to use better research tools.



Another effect of not gathering for removal then (for example with the expiration in 2013 of the 2003 Court Order/Consent Decree between BLM and Wyoming) is that most of the methods used to reduce fertility rates are not able to be utilized and herd size is increasing as a result.

The Gathers

Excess Wild Horses and Burros are removed from public lands through gathers. Methods of gathering include Bait Trapping which is luring horses into temporary sites using water, salt, or feed; Helicopter Gathering which uses helicopters to herd wild horses to a gather site and Helicopter Assisted Roping which uses helicopters to herd the horses to ropers (Bureau of Land Management, NA).

The gathers are another controversial aspect of the land managers work on wild horses as wild horse advocates consider gathers cruel and dangerous and a very small percentage of horses are killed during gathers. The program is heavily influenced by litigation and FOIA requests. There are public protests and security is required at each gather.

The Work of a Gather

Gathers are done in Wyoming annually and rotated among the HMAS. Each one is generally subject to gather every two to three years. It is an intensive time for the wild horse specialists—described as “24/7.” Small gathers may take as little as three days while larger gathers, for example the Red Desert Complex or North Lander, can involve as many as a thousand horses, and take a month for the gather itself.

Leading up to a gather the BLM must have a current survey of the actual population. To comply with NEPA BLM sends out a scoping notice and gather public comment on the proposed gather for 30 days. The comments must be reviewed and assessed and then a draft EA is written and published for public review and further 30 days of public comment on the draft EA. Any relevant legally appropriate comments are incorporated into the EA. They publish a final ROD and wait for the period of time to appeal to pass and for any litigation to take its course.

While BLM land managers are heavily involved, private contractors are hired for the physical work of handling the horses. Potential contractors undergo a rigorous technical program review by a team of experts must meet all the terms and must demonstrate the requisite knowledge, skill, ability, expertise, labor and equipment needed to humanely capture, handle and transport wild horses and burros. BLM staff is on site at all times, including a Wild Horse and Burro Specialists to oversee everything. In addition to the WHB specialist, a public affairs specialist and law enforcement are always present. There are usually protesters on site or at the Rock Springs Holding Facility – the only short-term holding facility in Wyoming. In addition, representatives and specialists from the District and State Office are present. If they are shorthanded, staff from the national office is sent to help.

The high profile and controversial nature of the gathers has resulted in an increased need for additional transparency. The costs of gathers have therefore been increasing due to increased staffing that has become necessary for the internal and external reporting done. Detailed data is compiled for entry into the Wild Horse and Burro Program System (WHBPS) which tracks information



on all animals removed, treated, gelded, and/or released, as well as a mortality log. The increased public interest and media attention has also made gathers increasingly complex due to the desire of large numbers of people and media to observe the gathers, which requires advance planning to ensure everyone's safety (Bureau of Land Management, 2013).

During the gathers the animals are sorted (foals reunited with mares) and evaluated by the Wild Horse Specialist to determine which will be removed and which returned unless they are all being removed (for example from the checkerboard or from an HA). They will evaluate which are good candidates for adoption (disposition, age, coloring), and what sex ratios and which specific horse should be returned to the range to ensure a healthy herd with what additional fertility control measures. Deaths are documented from both natural causes as well as those that result from the gather. Fertility treatment is applied to mares and some males are gelded. Genetic defects are documented, hair samples are pulled, documented, and shipped out for genetic testing (done in Texas) which is part of the work completed to ensure healthy herds. Finally, the removed horses are transported to short-term holding.

A great deal of detailed information on the gathers is available online and available to the public through the daily and final reports. A Gather Report is compiled and posted online each day as well as a final Gather Report prepared by the Wild Horse and Burro Specialist and the Public Affairs Specialist. Despite this transparency, the BLM still receives numerous FOIA requests about gathers.

There is frequently litigation by wild horse advocates to stop gathers for a wide variety of reasons from alleged procedural deficiencies to concerns that helicopter roundups are harmful and traumatic to the animals. For example, despite the 2013 Court Order for gathers in the Checkerboard around Rock Springs, there was still litigation from several horse advocate groups which delayed the required roundups. While the gather ultimately took place, the case moved forward on a variety of legal theories including alleged violations of the Wild Horse Act, FLPMA, and NEPA. That case is still currently proceeding through the courts.

After the horses are gathered to be removed, under the Wild Horse Act there is an order and priority of action to be taken regarding the disposal of removed animals. First is the destruction of old, sick, and lame horses in the most humane manner possible. Second is adoption of animals into private care. Finally, excess animals that cannot be adopted are to be destroyed in the most humane and cost efficient manner possible. Despite the technical mandate in the law, due to the extremely controversial nature of euthanizing healthy horses and the advocacy of horse advocates, Congress has imposed restrictions on euthanizing horses through their appropriations legislation.

Adoption Program

The Adopt a Wild Horse or Burro Program is the primary tool to place wild horses and burros into private care. Excess animals removed from the range have been available for adoption since 1971. The Wild Horse Act specifically contemplates the adoption of removed horses and burros and imposes certain responsibilities and restrictions regarding the care of the animals and the number of animals (U.S. Government Publishing Office, 1971):



The Secretary shall cause such number of additional excess wild free roaming horses and burros to be humanely captured and removed for private maintenance and care for which he determines an adoption demand exists by qualified individuals, and for which he determines he can assure humane treatment and care (including proper transportation, feeding, and handling).

Where excess animals have been transferred to a qualified individual for adoption and private maintenance ...and the Secretary determines that such individual has provided humane conditions, treatment and care for such animal for a period of one year, the Secretary is authorized ... to grant title to not more than four animals to the transferee.

Over 235,000 animals have been adopted through the program. People receive title (ownership) to the animals from the Federal government after a trial period of one year demonstrating they can and will properly care for the animal.

There is an adoption review process during which a BLM Horse specialist must verify that the applicant's facilities, location, trailer, transport plans, and experience meet certain minimum requirements. Adopters are required to sign a Private Maintenance and Care Agreement as a part of the terms of adoption that includes the following provisions: animals can't be transferred to another location (for more than 30 days) or to the care of another person without BLM approval; animals must be made available for inspection within 7 days of a written request from BLM; BLM must be notified within 7 days of escape, theft, or death; adopters must notify BLM of change of address. The Private Maintenance and Care Agreement also includes the following statement:

Under penalty of prosecution for violating 18 USC 1001, which makes it a Federal crime to make false statements to any agency of the United States, I hereby state that I have no intent to sell this wild horse or burro for slaughter or bucking stock, or for processing into commercial products, within the meaning of the Wild and Free-Roaming Horses and Burros Act, 16 USC 1331 et seq., and regulations 43 CFR 4700.0-5(c).

Adopters also must not engage in any "prohibited acts" which are itemized in the Agreement and which includes "inhumane treatment; maliciously or negligently injuring or harassing adopted animals; destroying wild horses without BLM authorization unless an act of mercy; selling or attempting to sell a wild horse or its remains; branding, removing their freeze mark (a permanent brand), or commercially exploiting the animals.

The minimum adoption fee for each wild horse or burro is \$125. Mares and jennies (female burros) adopted with their un-weaned foal are \$250. Adoptions can be first-come, first-serve, through a lottery, or can be through competitive bidding. Some animals, particularly those trained or gentled, adopt for a higher amount during a competitive bidding process.

Wild horse adoption can be initiated at various holding facilities throughout the country, at adoption events (satellite adoptions), or through the internet adoption program. In Wyoming, wild horses can be adopted at the Rock Spring Holding Facility, the Mantle Adoption and Training Facility in Wheatland, and the Wyoming Honor Farm in Riverton. Wild horses are also available at Cheyenne Frontier Days and at the Wyoming State Fair. For satellite adoption events, BLM staff in Wyoming



handle the marketing, booking the facility for the horses at the site, transportation of the horses, and their care during the event. Internet adoptions are run through the national office so most of the cost is not reflected in the state budget.

The Wyoming Wild Horse Specialists must review and approve the adoption applications, the Private Maintenance and Care Agreement, and perform welfare and compliance checks during the first year trial period when the animals are still federal property. This includes telephone calls as well as actual inspections and site visits.

Nebraska is a part of the administrative responsibility for BLM Wyoming's State office so Wyoming's BLM Horse Specialists processes the applications and does compliance checks for adoptions in Nebraska. There is also a large short term holding facility for wild horses in Nebraska. While the facility is run by the national office and so its operations are not included in the Wyoming budget, the Wild Horse and Burro Program Lead in Cheyenne periodically checks on those facilities and coordinates with the national office regarding them due to the proximity to the State Office and their expertise.

Sales

The sale of wild horses is extremely controversial due to the history of healthy excess wild horses removed from the range and sold or adopted out ultimately ending up re-sold commercially or sent to slaughterhouses for commercial products. Slaughter has become highly controversial in the US over the years not just for wild horses but domesticated horses. Despite numerous attempts to pass legislation prohibiting horse slaughter for commercial purposes it is not technically illegal in the United States. However, since 2006 Congress has prohibited the use of federal funds for the inspection of horses destined for food by the USDA, which effectively shut down all the horse meat processing plants and slaughterhouses in 2007. There have also been bans of these facilities by local governments. In 2008, BLM estimates that closing the slaughterhouses in the US in 2007 put an additional 90,000 domestic horses into the adoption and sale market annually. It has also caused problems because private individuals or businesses with old or sick horses cannot sell them anymore and must euthanize the animals on their own or pay a veterinarian, which can be costly (Government Accounting Office, 2011). This also accounts for the restrictions and high level of oversight in the adoption and sale program.

Until 2004, under the Wild Horse Act, wild horses or their remains could not be sold for commercial slaughter or processed into commercial product. Despite the Act's authority (and in fact its mandate) to euthanize excess horses, Congress prohibited BLM from using its appropriations to destroy excess healthy, un-adopted wild horses and burros from fiscal year 1988 through fiscal year 2004.

An attempt at change due to the excessive numbers of animals on the range and in holding occurred in December 2004 with the passage of a new amendment to the Wild Horse Act. The Burns Amendment required the sale of horses or burros over ten years old or that had been unsuccessfully offered for adoption three times to any willing buyer "without limitation." Once sold, they were not to be considered "wild horses and burros" for the purposes of the Wild Horse Act effectively



exempting them from the general prohibition under the 1971 Act of selling wild horses and burros or their remains for processing into commercial products. The policy of including a prohibition against euthanizing healthy horses was abandoned by Congress in the 2005 Appropriations Act for the Interior Department.

Immediate push back from wild horse advocates resulted in "Rahall Amendment" in May 2005 which was passed to limit implementation of the Burns amendment by once again preventing federal money to be used to euthanize healthy horses or to sell horses to parties who intend to send them to slaughter. While, that restriction was not renewed in fiscal years 2006 through 2009, the prohibition language was successfully added back into the appropriation bills for fiscal year 2010 and each year since and remains in effect today.

The BLM has adopted a policy "not to sell or send any wild horses or burros to slaughterhouses or to 'kill buyers'" "despite the unrestricted sales authority of the Burns Amendment." This was their policy even in the few years where the restriction was not included in the appropriations acts. A Government Accountability Office (GAO) report issued in October 2008 found that the BLM was not in compliance with the Burns Amendment but it also specifically noted that BLM was very concerned about the possible public outcry over the destruction of healthy animals as well as Congress' reaction to such an event.

Current BLM practice on sales requires buyers to sign an affirmative statement agreeing not to process any of the sold horses or burros into commercial products, or to knowingly sell or transfer ownership to any person or organization whose intent is to commercially process the animals. BLM also does not allow more than four wild horses or burros to be bought or adopted by an individual or group within a six-month period without prior approval of the agency's Assistant Director for Renewable Resources and Planning.

Since 2005, the BLM has sold about 5,900 horses and burros. Proceeds from the sale of eligible animals are used for the BLM's wild horse and burro adoption program, as directed by Congress under the sale-authority amendment.

The numbers of animals sold nationally in recent years is negligible—a mere 267 in FY 2014 (Bureau of Land Management, 2008).

Holding Facilities

The tens of thousands of excess horses removed from public lands are transferred first to short-term holding corrals and then if not adopted, to long-term holding pastures—large ranches located mainly in Kansas and Oklahoma where they roam freely on approximately 289,000 acres of grassland. Long-term pastures provide a free-roaming environment for the animals and it costs less than at short-term holding facilities. The first wild horse long term pasture was opened in 1988. In 2000, there was one long term facility holding 1,500 horses.

The BLM has one short-term holding and preparation facility in Wyoming—the Rock Springs Wild Horse Holding Facility. It houses approximately 700 to 800 wild horses and four staff members,



primarily gathered from Wyoming HMAs. The facility also serves as a rest stop location for wild horses being transported eastbound from western states. Animals may be adopted from the Rock Springs facility. In the spring of 2016 it only held about 300 horses due in part to the lack of gathers in Wyoming.

There are approximately 150-200 horses at the Wyoming Honor Farm which after training adopts out about 160 horses a year on average. A comparable number, about 200 at a time, are held for training and adopted out through the Mantle Training Facility. Both operate through contracts with the national office. The Wyoming Honor Farm work was conducted through a partnership with the Wyoming State Office but now it is for a longer term which puts the value above a certain monetary threshold and so it is handled as a formal contract with the national office.

The Cheyenne Cattle Company recently became a part of long term holding facility network—the only one in Wyoming. They have taken approximate 500 wild horses under a contract also through the national office.

Wyoming has two eco-sanctuaries designated by the Secretary of the Interior—Deerwood Ranch Eco Sanctuary in Centennial and the DD Ranch in Lander. The concept of the eco sanctuary is to offer long-term, humane care for gathered horses where they are more publicly accessible and to provide ecotourism opportunities in addition to adoption and training opportunities. The partnerships contain a fundraising component which could defray costs for operating the sanctuary and save taxpayer dollars. The owners are paid rates comparable to what is paid to pasture excess horses elsewhere. The Deerwood Ranch Wild Horse Eco sanctuary was the first BLM supported wild horse eco sanctuary in the United States and provides for 300 wild horses gathered from Wyoming public lands on approximately 4,000 acres and was approved in 2012. The Double D Ranch Eco-sanctuary will offer sanctuary to up to 150 wild horses on approximately 900 acres and was approved in 2014. Each sanctuary had to go through NEPA review and after an EA and FONSI, a ROD was issued.

The long term facilities are all managed by the national office but staff from the State office performs welfare checks due to their proximity.

Another aspect of work necessary for the Wild Horse and Burro Program is ensuring water sources for the animals on the range— from reservoirs to large troughs with solar powered well pumps. This work, installation and maintenance, is done hand in hand in particular with the Range Management program. Wild horses, cattle, and wildlife all use these water sources. Water has to be trucked in when there are drought conditions.

Wild Horse and Burro Advisory Board

Pursuant to the Wild Horse Act the BLM, is also required to appoint and work with a joint advisory board of private individuals who possess special knowledge about protection of horses and burros, management of wildlife, animal husbandry, or natural resource management. The Wild Horse and Burro Advisory Board assists and advises the land managers on policy and management of the Wild Horse and Burro Program. Any other land management agency taking over BLM duties would also presumably be bound to work with the Board.



Research

A variety of research is being conducted regarding wild horses to improve management. A group of fertility control projects were solicited by the BLM and undertaken in recent years at universities across the country after being reviewed and recommended by an NAS panel of experts and found to be consistent with recommendations made by the Wild Horse and Burro Advisory Board. Other research being done in partnership between the USGS and BLM focuses on fertility control as well as genetic testing, herd behavior and demographics, improving survey/counting methods, and population modeling. In conjunction with the University of Wyoming, BLM is hoping to have a chance to conduct a research project soon by placing radio collars on approximately 15-40 mares from the proposed gathers in the Checkerboard (pursuant to the Court Order/Consent Decree) and return them to the HMA to study habitat selection, seasonal use, and movement between habitats, and migration patterns within and outside of the HMA. The gather and research project itself is likely to be objected to and potentially litigated by wild horse advocates who object to the use of radio collars.

Adoption is unlikely to solve the problem of wild horses. There is too big a disparity between the number of animals removed and those adopted. In the BLM report to Congress in 2004, the decline in adoptions was attributed to several factors, none of which have markedly changed today nor are they likely to. One example is the general urbanization of rural areas—less people owning horses. Other factors include hay and fuel costs, the flood of horses on the sale/adoption market due to the closure of the slaughterhouses, and a shift towards other forms of recreation (a family that once had multiple horses may now have one horse and multiple ATVs). However, increasing the number of trained animals and offering trained animals for adoption, sale, and transfer to other federal agencies could be one part of a program to alleviate the numbers and expense of long term care.

Other federal agencies use trained wild horses for their own work. The US border patrol has begun to use trained wild horses. The USFS could use trained wild horses for pack animals but the red tape to transfer the animals between agencies due to their status as “federal property” as well as due to their protections as wild horses has limited this potential. The BLM has requested legislative authority to allow for the immediate transfer of horses to other agencies that have a need for work animals to help alleviate the numbers in holding.

12.2 Budget Summary

The Wyoming BLM is the only agency with a budget for wild horse and burro management.



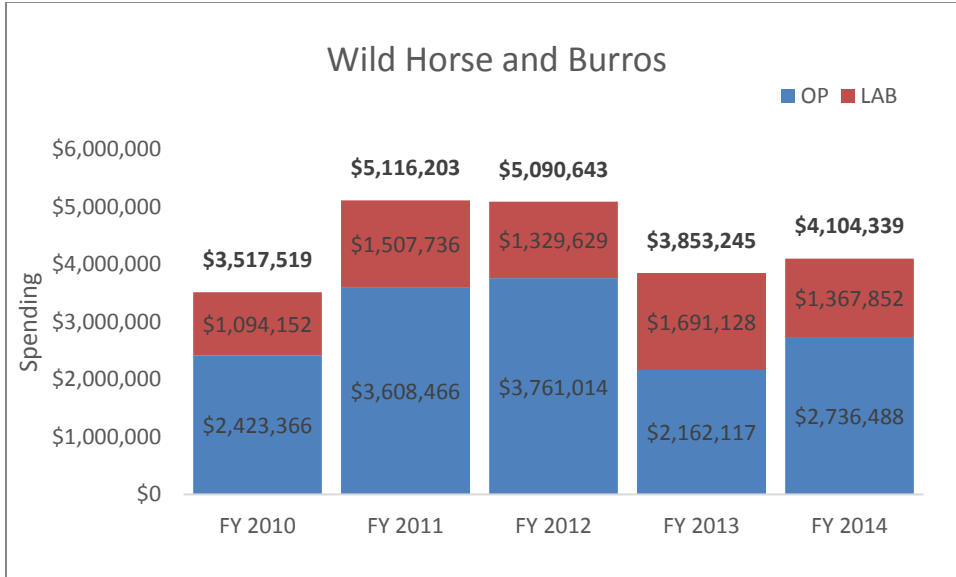


Figure 48. Wyoming BLM Wild Horse and Burro Expenses, FY 2010-FY 2014.





13. INVASIVE
SPECIES AND
PESTS



13. Invasive Species and Pests

13.1 Overview

An “invasive” species (also known as an alien, exotic, injurious, introduced or naturalized, non-native, nonindigenous, nuisance, or noxious species) refers to an animal or plant that is introduced into an environment where it is not native. The introduction of invasive species to the United States—whether deliberate or unintentional—from around the globe can pose a significant threat to native animal and plant communities, and may result in extinctions of native animals and plants, species disruptions as native and non-native species compete for limited resources, reduced biodiversity, and altered terrestrial or aquatic habitats. This can result in a range of economic, ecologic, and cultural losses, including reduced agricultural output from U.S. farms and ranches; degradation of U.S. waterways, coastal areas, national parks, and forests; and altered urban, suburban, and rural landscapes.

It is estimated that 50,000 non-native species have been introduced to the United States. The potential economic costs associated with nonindigenous plant and animal species are estimated at \$129 billion annually in the United States. As an example, leafy spurge is lowering the forage value of western grazing land, and reducing overall land values.

In the United States, numerous federal and interagency efforts share responsibilities regarding invasive species. Among the federal agencies involved are the Departments of Agriculture, Commerce, Defense, Homeland Security, Interior, Transportation, and others, including the EPA and the Executive Office of the President. Of these, three Departments—Agriculture, Commerce, and Interior—play a major role by co-chairing the National Invasive Species Council (NISC). Created by Executive Order 13112 in 1999, NISC provides high-level interdepartmental coordination of federal invasive species actions and works with other federal and nonfederal groups to address invasive species issues at the national level.

In FY 2012, the U.S. government spent an estimated \$2.2 billion across a range of federal agencies and activities in an effort to prevent, control, and eradicate invasive species domestically. Activities at the Department of Agriculture accounted for the bulk of available federal funding, nearly \$1.3 billion (58% of total available funds). Activities at the Department of Homeland Security, comprised of mostly border protection and security activities, accounted for about \$0.7 billion (31% of total funding). The remainder of federal funding, about \$0.2 billion (about 11% of total funding) covers activities across a range of agencies at the Departments of Interior, Commerce, and Defense, and also other independent agencies.

Despite efforts to achieve high-level interdepartmental coordination, comprehensive legislation on the treatment of invasive species has never been enacted, and no single law provides coordination among federal agencies. Instead, the current legal framework is largely governed by a patchwork of laws, regulations, policies, and programs. Some laws are tailored to individual species or narrowly focused on what is affected by the species. Other laws have a broader intended purpose and may



only peripherally address invasive species. Some laws, although they do not directly address invasive species control or prevention, may limit such introductions.

13.2 BLM

The BLM's primary focus for pest control is to provide adequate capability to detect and treat smaller weed infestations in high-risk areas before they have a chance to spread. BLM also participates in the control of large-scale infestations.

The BLM's Weed Management and Invasive Species Program receives support from a number of BLM programs that are affected by invasive species, including the Rangeland Management, Forestry, Fire Fuels Reduction, Soil, Water, Air, and Riparian programs.

The Weed Management and Invasive Species Program is supported by Congressional mandates for specific initiatives such as salt cedar control; Departmental Invasive Programs such as the Northern Great Plains and the Rio Grande Basin Initiatives; and BLM Initiatives such as Healthy Landscapes. The BLM's Grasshopper and Mormon Cricket Program is managed separately and coordinated with the USDA's Animal and Plant Health Inspection Service (APHIS).

BLM uses an integrated management approach for treatment that employs the method or combination of methods that will have the greatest positive effect with the minimum negative environmental impact. The BLM uses biological, mechanical and chemical control methods. It is BLM policy to use chemical pesticides only after considering alternative methods. Volunteers and partners play a significant role in helping land managers remove weeds from public lands.

The BLM implements multiple strategies in combating invasive species. These include BLM's Partners Against Weeds (PAW) Plan, the Department of the Interior's Invasive Plant Management Plan, and the National Invasive Species Management Plan. Also, as part of its implementation of the National Fire Plan, the BLM acts to reduce invasive weeds that function as fire fuels and works with partners to enhance native plant restoration.

In most cases, the BLM works with county governments, local community governments, and private landowners to detect and treat weed infestations. To leverage funding and share expertise, the BLM partners with more than 50 Coordinated Weed Management Areas (CWMA's) in the Western United States. CWMA partners include state, federal, county, and private land managers.

Four Coordinated Weed Management Areas (CWMA) exist in Wyoming. CWMA's are found in Big Horn, Washakie, and Park County.

13.3 USFS

The USFS National Strategic Framework for Invasive Species Management was created due to a 2010 USDA Office of Inspector General audit of USFS invasive programs and is supposed to provide a consistent, agency-wide approach to the prevention, detection, and control of invasive insects, pathogens, plants, wildlife, and fish.



The Framework provides strategic direction across all Forest Service Deputy Areas and agency programs. It describes how National and Regional Invasive Species Issue Teams (NISIT and RISIT) will coordinate activities with the USFS and with federal, state, and local partners. National priorities should be reviewed at least once every five years and adjusted as needed. RISITs are supposed to assess and adjust their regional invasive species priorities for their respective ecosystems at least once every 5 years.

The Framework incorporates the Invasive Species Systems Approach (ISSA) developed by the USFS to respond to threats over the next 5 to 10 years. The ISSA identifies the elements and actions of the Framework that all programs and units within the National Forest System, Research and Development and State and Private Forestry should take, as appropriate, in addressing invasive species, including:

- **Prevention:** Identify, forecast, and prioritize invasive species threats; high-risk pathways of movement and introduction; and vulnerable ecosystems. Improve cooperative efforts. Recommend, program, and implement appropriate actions to prevent introductions and establishment
- **Detection:** Survey aggressively to detect new invasive species and monitor priority species. Evaluate the extent and severity of invasive species infestations and assess their potential impacts. Report invasive species detection findings in standardized databases. Develop tools and technologies to detect and monitor invasive species
- **Control and Management:** Coordinate as needed with partners. Prioritize and implement treatments. Implement rapid response for new infestation. Monitor and report accomplishments in standardized databases. Develop tools, technologies, methods, and budgetary processes necessary to prioritize and implement effective invasive species management or eradication activities
- **Restoration and Rehabilitation:** Identify and prioritize restoration and rehabilitation needs. Take actions to restore, monitor, and maintain affected areas. Assess effectiveness of rehabilitation and restoration activities. Develop, synthesize, and evaluate effective rehabilitation and restoration methods, tools, and technologies

The mountain pine beetle, as well as other insects and disease, have been at epidemic levels throughout the western United States. The Rocky Mountain Region forests affected include those in Colorado, Wyoming, and South Dakota. By 2011 mountain pine beetles impacted more than 4 million acres in the Rocky Mountain Region and USFS declared the effects of the epidemic an emergency.

13.4 Wyoming Department of Agriculture

The Technical Services Section in the Wyoming Department of Agriculture currently includes eighteen full time positions. Those positions include the manager and one support staff. One full-time weed and pest coordinator and two full-time pesticide enforcement positions are involved with



protecting the quality of ground water through the establishment of guideline programs for the application of fertilizers and pesticides through sprinkler irrigation (chemigation), pesticide disposal, proper use guidelines for pesticides and fertilizers, and monitors agriculture related concerns and issues. The enforcement positions implement the Wyoming pesticide groundwater protection strategy.

The weed and pest coordinator administers highway weed and pest control funds received from the WYDOT which provides grant funding for local programs and Emergency Insect Management Program which provides grant funding for local programs, provides guidance to Wyoming weed and pest districts and coordinates and communicates with other state and federal agencies. The division manager, weed and pest coordinator, and the two pesticide inspectors are also responsible for program oversight involved with protecting the quality of ground water through the establishment of guideline programs for the application of fertilizers and chemigation, pesticide disposal, proper use guidelines for pesticides and fertilizers, and monitors agriculture related concerns and issues. The enforcement positions implement the Wyoming pesticide groundwater protection strategy.

Other program functions include responsible pesticide distribution and use while protecting human health and by maintaining a continuing education and certification program for pesticide applicators, conducting outreach and training programs to disseminate information concerning worker protection requirements and exercising existing enforcement authority to promote compliance with state and federal pesticide laws/regulations. They also participate with other government agencies and community groups in developing and implementing a state management plan for pesticides and groundwater.

The Department of Agriculture also provides rodent and predator control, including livestock protection collars.

The Animal Damage Management Board (ADMB) is responsible for the formulation of the damage prevention management policy of the state for management of crop, livestock and wildlife damage done by depredating animals and wildlife damage by predatory animals and predacious birds. The Board is co-chaired by the directors of the Wyoming Department of Agriculture and the WGFD.

The 2003 Legislature passed the Emergency Insect Management Program, Original House Bill 0236, Enrolled Act No. 116. This act provides for grant funding to state agencies and political subdivisions to manage outbreaks of insect pests and insect vectors that prove harmful to human health and safety, animal health including livestock and wildlife, agriculture or natural resources. The current funds these entities expend to combat insect pest and insect vector outbreaks on private, state, federal and tribal lands are complemented by the state grants, allowing an increase in management activities to be completed, and new programs to be developed. Programs are based on the Integrated Pest Management System, which uses many management techniques such as education, prevention, chemical, biological and cultural controls and relies on pest surveys and monitoring to evaluate the success of each program. The Department was provided an appropriation to provide grant funds for agency and political subdivision emergency insect management programs currently



operating or being developed within the state. The dollars are expended, upon the recommendation of the committee with the authorization of the Governor, for purposes of responding to emergencies. The Department's administrative costs are also to be paid from the account, as are the committee costs and the advisory committee costs.

The Highway Weed and Pest Control program controls infestation of weeds and pests through the increased use of the Integrated Management System; develops strong informational Weed and Pest program with special focus on urban communities to eradicate noxious weeds or manage other pests; forms logical (natural) boundaries for weed management areas to replace jurisdictional boundaries that are barriers to weed management programs; develops more economically viable forage certification programs and increases number of western states participating in the regional forage certification program; works with universities, federal and state agencies, trade associations, industry, members of congress, special interest groups, and weed and pest districts to identify research needs and implement such research; obtains increased funding for research in Integrated Pest and Weed Management programs; provides grants to local weed and pest districts; and administers highway department ROW weed control funding.

13.5 Office of State Lands and Investments

The Weed and Pest Program in OSLI implements the Wyoming Weed and Pest Control Act of 1973. It requires the control of noxious weeds and designated pests on all land by its owner. Historically, the legislature appropriated \$260,000 per biennium to be used for the control and eradication of noxious weeds and designated pests on state trust land. Beginning in FY 07, this amount was increased to \$750,000 per biennium at the request of the County Weed and Pest Districts (Districts). In FY 11 this amount was decreased by five percent (5%) to \$712,500 per biennium as a result of the Governor's recommendation of an agency-wide budget reduction. The designation of noxious weeds and pests is established by the Department of Agriculture and is defined on the Wyoming Weed and Pest Control Act Designated List. Noxious weed and pest control on state trust land is a cooperative effort between the OSLI, its surface lessee and the Weed and Pest Districts. Depending on a particular weed or pest species, and pursuant to the Board's Rules, Chapter 28, the Weed and Pest Program (Program) pays for the chemical, the surface lessee pays for the application, and the Districts distribute the chemicals and supervise the application. In addition, the Program controls leafy spurge and other designated species through either a Special Management program or an Early Detection Rapid Response program with the Districts, whereby it pays 100% of the treatment costs.

13.6 Budget Summaries

Noxious weed control is included in other budget line items for all agencies, so no program-specific budget information is provided.





14. WATERSHED
AND FORESTRY

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14. Watershed and Forestry

14.1 Overview

The BLM Soil, Water & Air Management Program collects samples and data to evaluate, monitor, protect, and improve the quality of our soil, air, and water on public lands. Important functions are the protection of watershed functions and soil stability.

The Soil, Water & Air Management Program as one would expect backs many of the land management programs in particular to those that are particularly linked to the care of soil, water, and air resource, including energy development, endangered species recovery, grazing, recreation, fire re-habilitation. The program relies heavily on collaborations with other federal, state and local, tribal and private organizations.

BLM, USFS, and National Resource Conservation Service issued an interagency manual for ecological site descriptions to promote uniformity and promote consistent management and monitoring across a landscape scale. The BLM Soil, Water & Air Management, Rangeland Management, Riparian Management, and RMP programs collaborate to develop ESDs. ESDs are geospatial repositories of information about how vegetation responds to changes in management and climate. The interagency manual ensures agencies develop consistent products that promote resource management on a landscape scale.

14.2 BLM

14.2.1 Air Resource Management

BLM must comply with all Federal and State air quality standards and abide by the requirements of the state implementation plans. There is an affirmative duty to protect air quality and to consider potential air quality impacts on the public lands under the CCA and FLPMA. The BLM develops LUPs and authorizes oil and natural gas development and production, solar and wind energy generation, solid mineral extraction, off-highway vehicle events, and many other land uses all of which have the potential to affect air resources on BLM lands and nearby communities. Within its “multiple use” and “sustained yield” mission allowing extraction and use of the nation’s energy and other resources under FLPMA, the BLM must ensure that all activities BLM conducts or which BLM authorizes comply with the Clean Air Act and other air pollution laws and regulations.

The Air Resource Management Program ensures compliance with the Clean Air Act and applicable air quality standards of all BLM activities, programs, and projects. This work is accomplished through collecting and acquiring data, modeling air quality impacts, monitoring changes in air resource conditions, performing environmental impact analyses as required by NEPA, interagency coordination, and participation in state implementation plan development.

NEPA requires an analysis of all activities on the public land that the BLM initiates or authorizes to assess potentially significant environmental impacts of the proposed actions on air resources and to



select appropriate measures to mitigate adverse impacts. Prior to authorizing an activity on public lands whether it is issuing a LUP or authorizing an oil and gas development, the potential impacts of the proposed action on air resources must be analyzed through the NEPA process. This could range from the potential impacts of energy and mineral resource development to recreational uses, smoke management, transportation management (dust from roads and construction), and a variety of other activities.

The Air Resource Program relies heavily on collaborations with other federal, state and local, tribal and private organizations and the 2011 MOU coordinating the NEPA process on air quality impacts from oil and gas use on federal lands plays an important role especially in Wyoming.

Air Resource Specialists in the BLM conduct and oversee the NEPA analyses of potential impacts on air resources and they recommend appropriate best management practices or other measures to mitigate adverse impacts to air resources. Methods for large energy projects can involve emissions inventories and air quality modeling to project the impacts and effects of emissions. Monitoring data is also used by BLM to assess the long term impacts of BLM and BLM-authorized activities on air resources and to understand trends in air quality on a regional scale.

Stricter air-quality standards and visibility regulations are increasing the workload and technical demands associated with ensuring that activities that emit dust, ozone, and other pollutants comply with the Clean Air Act.

Air specialists have a high level of technical training and experience including metrology and climatology, environmental engineering, air quality management and monitoring, air pollutant emission control methods and mitigation techniques; air quality; modeling and analysis methods, regulation, and policy developing written analyses for NEPA documents.

Air Resource Management – Basic Duties:

- Ensuring BLM activities, programs, and projects comply with all applicable air quality (including visibility) laws, statutes, regulations, standards, and state implementation plans
- Working to ensure an appropriate level of climate, air quality, and climate change information and analysis is incorporated into applicable State RMPs, NEPA documents, use authorizations, and BLM activities, programs, projects, and permits
- Producing and incorporating air quality analysis with potential control measures into planning and decision documents and associated environmental analyses
- Assuring appropriate stipulations and conditions of approval are included in use authorizations to ensure air pollution emission control, protection methods, and ambient air quality levels are addressed
- Collecting and acquiring climate, air quality data (including data on visibility and noise) to manage local activity and establish baselines



- Review use authorizations that require air quality permits regularly to verify that the authorized parties all possess the necessary permits and report violations to the appropriate enforcement agency
- Ensuring adequate technical support is available to staff and field offices
- Promoting inter-program cooperation and consultation with other State Offices, the NOC, and the Washington Office
- Collaborating with other federal, state and local regulatory agencies, tribal governments, user groups, and BLM offices to support a coordinated Air Resource Management Program within the State
- Participating in efforts to coordinate air resource management at the national and regional level with other federal, state, and tribal agencies and organizations, which can involve developing air-resource management strategies, installing monitoring equipment, collecting data through state consortiums, and regional air modeling

Air Resource Management in Wyoming

There are only 13 Air Resource Specialists in the entire BLM and two of them are in Wyoming. That constitutes the full time staff for the Air Resource Management. They work in the State Office and the program is somewhat unique in that there is no Field Office counterpart. The bulk of the work done by Wyoming's two Air Resource Specialists is NEPA reviews—managing, developing and guiding the NEPA process on air quality for large oil and gas projects which involves a highly technical review.

To ensure air quality standards are met, including the Clean Air Act and the EPA's suite of air pollution standards for the oil and natural gas industry, the majority of the work is done before the project ever goes on line through the NEPA process. Key aspects of the NEPA review include analyzing the impact of the project on air quality and air quality related values (such as visibility), analyzing potential impacts of greenhouse gas (GHG) emissions, evaluating and recommending best management practices and mitigation methods appropriate to the project to reduce negative impacts on air resources, ensure compliance with applicable law and air quality standards, coordinating with other regulatory agencies and ensuring that authorizations such as leases or permits include appropriate stipulations or conditions of approval to manage air resources. The Air Resource Specialists also participate in scoping process during NEPA—responding to questions at public meetings and giving media interviews.

The NEPA process for all the large oil and gas projects in Wyoming is documented in an EIS which provides the public with information on the current status of the air quality and potential impacts to air quality from the proposed project and alternatives under consideration. The NEPA process is driven by the 2011 MOU and there is a great deal of consulting with other federal agencies as well as the state on all aspects of a proposed project during the review. The Air Quality Specialists work closely with the Air Quality Division of WDEQ.





Emission inventories and pollution dispersal modeling are used to analyze the impacts on air resources and design best practices and mitigation measures for a particular project. The information from these tools is used in the NEPA process to summarize the existing conditions and potential environmental consequences of implementing a proposed action and its alternatives for the EIS.

Emissions inventories can be based on actual measurements, if available, as well as methods for estimating emissions from existing sources where measurements are not available as well as from new sources that have not been built. These emission factors and estimation methodologies are provided in guidelines developed by the EPA and there are different types of emissions inventories used for different purposes. For NEPA analyses, the BLM air resource specialists assist in determining when it is appropriate to prepare an emissions inventory and what that inventory should include for a specific planning or project action.

The models are used to make calculated predictions and simulate the physical and chemical processes of the air pollutants as they disperse and react in the atmosphere. Each of the large oil and gas projects in Wyoming has its own air quality modeling analysis done as part its EIS and the Air Resource Specialists ensure that the detail and analysis done is adequate and compliant with the law. No air quality modeling is done by the public land managers in Wyoming. The results of modeling done for large oil and gas projects by their contracted experts as part of preparation of their EISs and the NEPA review process is provided to the BLM and reviewed by the Air Resource Specialists and they work with those experts as part of the process as well as other federal and state agencies. There is a lot of very technical information required and it takes years for an EIS draft to be prepared.

As much as two thirds of the work of the two Air Resource Specialists in Wyoming is for the EISs for large oil and gas projects. In 2016, the Wyoming Office had six large Oil and Gas EIS being worked on and one ROD being finalized. There is generally no cost recovery on the work of the Air Resource Specialists for the bulk of their work—the EISs on large oil and gas projects in the state. Cost recovery has been done a few times on some coal and uranium projects. There is some time coded to the program budget for Field Office personnel who collect, document, and ship samples.

After a project is approved and a ROD issued, Air Resource Specialists are involved in ensuring implementation of any programs and additional requirements that were required to be phased in over years as part of the project approval such as installing new equipment or implementing new modeling. The two big projects in Pinedale have now implemented everything that was a requirement of the ROD. The other agencies the Air Resource Specialists work with after a ROD is issued is for the most part EPA and WDEQ.

The program and Air Resource Specialists are generally not involved in monitoring after a project is approved but occasionally a ROD, especially older ones, have a monitoring requirement in the ROD.

The Air Resource Specialists are involved with monitoring on a state wide level, which in Wyoming is done by the BLM voluntarily. They are not required to monitor but chose to in order to have data to provide a baseline to assess the impacts of projects. Wyoming is the only state in the BLM that has a state monitoring network—the Wyoming Air Resources Monitoring System, which is now part of



national network of monitoring. The BLM owns the monitoring equipment but private contractors service the equipment and collect the data and put it on the internet. There is some discrepancy in BLM documents regarding the number of monitoring sites.

The BLM engages in other collaborative air quality monitoring efforts with federal, state, and private partners to monitor the overall air quality within air sheds where activities such as oil and gas development are occurring or anticipated.

While the state programs ensure that BLM activities comply with FLPMA and all applicable air quality laws, regulations, and the state implementation plan, additional support is provided to the Air Resource Program through the National office and NOC.

Wyoming BLM participates in the Federal Leadership Forum's efforts to develop and operate a regional air quality data warehouse. The group includes the BLM, EPA, NPS, USFS, and the states of Wyoming, Colorado, and Utah. The data warehouse will support future air quality modeling for NEPA analyses as well the common process established in the 2011 MOU for agencies to examine the air quality effects of oil and gas development on federal lands.

Western Regional Air Partnership (WRAP) is a partnership of states, tribes, federal land managers, EPA, and local air agencies charged with developing a regional air quality model for the western United States. The model will help Federal land managers improve the quality and reduce the costs of LUP and project-level NEPA analyses. It will offer states, tribes, and local air agencies a consistent tool for use in regulatory and permitting programs as well.

WESTAR was formed to promote the exchange of information between the States, serve as a forum to discuss western regional air quality issues of common concern and share resources for the common benefit of the member states.

14.2.2 Water Resource Management

Public lands must be managed to maintain and improve water resources and to minimize the detrimental impacts to water resources from land use activities. Water of sufficient quality and quantity is essential to the successful management of the public lands. Clean and adequate water is integral to healthy watersheds, drinking water sources, safe recreational use, healthy plant communities, and fish and wildlife habitats. Activities managed on public lands such as outdoor recreation, livestock grazing, mineral development, and energy production all depend upon water and potentially affect water resources.

Water resources include surface water and groundwater. Because water crosses geographic and political boundaries, numerous laws and regulatory frameworks apply to water use and water quality. Public land managers must work with all federal, state, and local agencies and tribes, as well as various other private and non-profit groups, associations, and organizations and the general public to improve and maintain the quality and availability of water.

FLPMA requires that BLM manage public lands to maintain water quality and the natural ecosystems supported by water. FLPMA requires that water resources accommodate multiple uses. Under





FLPMA, LUPs and authorized activities must comply with all applicable water pollution standards including the Clean Water Act. Identifying water resources and the potential impact of all management decisions and use authorizations on water resources is necessary. The effect of decisions on water resources must be analyzed during the environmental review process required under NEPA. Various alternatives must be considered and mitigation measures must be incorporated into final action and use authorizations.

Water quality is a strongly regulated area. The EPA has the primary responsibility to meet the requirements of the Clean Water Act (CWA) but has delegated the responsibility to develop comprehensive water quality standards to the states as long as they meet federal standards.

Managers of public lands have to ensure compliance with the Clean Water Act and all applicable water quality standards. Land managers must conduct assessments and identify water bodies that do not meet standards. If standards are not met, the BLM, the state and others must determine the causes for non-compliance and whether the actions of the BLM or those of a public lands user are the source of the problem. Remediation measures must be established and progress back towards those standards must be monitored.

Proposed uses and activities must be analyzed to assess their potential effects on water resources and develops mitigation measures to prevent adverse impacts to water quality that could result from those uses.

Water use rights—how much water a user may take—is another heavily regulated area. Water rights are real property, and can be either federally reserved rights for specific purposes identified through executive order or federal legislation, or state appropriative rights that are administered by states.

Water is a necessary resource for human use and ecosystem sustainability on public lands but it is not always sufficient. The right to use a sufficient quantity of water is paramount in ensuring proper management of the public lands. Water is a scarce resource in the West and issues regarding water quality and in particular water quantity, are increasingly complex. Balancing the needs of multiple uses and activities is extremely challenging as is appropriately authorizing those uses and activities. There are increasing numbers of protests and litigation regarding water quality and quantity among various user groups.

The BLM authorizes actions related to energy development, mineral extraction, grazing, rights of way, dams, timber harvesting, and recreational use all of which can affect water resources—both its quality and quantity. Potential impacts on water quality and quantity from activities on public lands include any modification of surface and groundwater flow systems, water contamination resulting from chemical leaks or spills, and water quality degradation by runoff or excessive withdrawals. Any activity that disturbs the ground can alter surface runoff patterns, increase soil erosion and affect the sediment and salination (dissolved salt) levels of water downstream.

Land managers work with other agencies, applicants, and stakeholder groups to mitigate the impacts of different activities and to reclaim disturbed lands after the activity ends. Water quality



management by the BLM does not generally involve enforcement as that is the responsibility of WDEQ.

Management decisions rely on accurate information regarding water location, amounts, quality and condition and trends. Water Resources Specialists establish what is known about water quality, what data exists from various sources, evaluates existing data, and decides whether an inventory is needed. Their work includes water quality measurement, remediation projects for water bodies not meeting state water quality standards, ensuring implementation of best management practices and mitigation measures to improve water quality, contracting with laboratories for analyses, and data interpretation and analysis. They work to include water resource goals in LUPs to protect and improve water quality and ensure adequate water for all uses. Use authorizations must include best practices and mitigation measures to reduce sediment discharge as well as discharge from pollutants.

Water Specialists develop and implement the water quality, water rights, and surface water and groundwater policies and lead efforts to assess and restore water quality conditions and to manage water resources on public lands. A variety of programs and activities are used to ensure the water resources on public lands meet state water quality standards. Some programs require more specific monitoring and management actions. Examples are programs to address water quality as a part of rangeland health, watershed assessment and restoration, and wetland/riparian/aquatic restoration to support aquatic life.

Water Resource Management – Basic Duties:

- Ensure all activities, uses and projects on public lands comply with the Clean Water Act and all applicable water quality standards, laws, regulations, and implementation plans
- Collect and acquire water resource data to establish baselines and manage local activity
- Monitor and assess of water quality
- Ensure available data and appropriate analysis is incorporated into applicable State RMPs, NEPA documents, use authorizations, and BLM activities, programs, projects, and permits
- Include appropriate stipulations and conditions of approval and best management practices in use authorizations to ensure adequate use and protection of water resources
- Review use authorizations that require WDEQ permits regularly to verify that the authorized parties all possess the necessary permits and report violations to the appropriate enforcement agency
- Ensure adequate technical support regarding water resources is available to staff and field offices
- Monitor, assess, and protect water quantity trends and “protect and acquire” federal water rights to ensure enough water for public lands and management purpose
- Work to reduce salt discharge from public lands to ensure a usable water supply downstream
- Water Resource Management in Wyoming





14.2.3 Soil Resource Management Program - Overview

Healthy soils sustain plant communities, keep sediment out of streams, and dust out of the air. Land managers of public lands have the mandate to manage soils and vegetation to ensure land-health standards are maintained and to safeguard sustainable plant and animal populations. The type of soil dictates the vegetation within an area which determines the area's uses, productivity, resistance to disturbance, and scenic quality. Vegetation protects soil from erosion; provides habitat for wildlife; provides food, fuel and fiber for human use; shapes the visual aesthetic and character of a landscape; and, heavily influences an area's ability to support certain uses. Any land disturbance and wildfire can influence soil quality. Soil issues arising from both manmade and natural causes include loss of vegetation, erosion, drainage, invasive species, soil compaction, and salination.

Many authorized activities and uses on public lands affect soil and must be addressed by the land managers. Management decisions require reliable and readily accessible soils data and accompanying ecological site information. Soil quality is incorporated into all relevant programs and activities including especially energy development, recreation management, and fire management. During a soil quality assessment, there can be a variety of issues that the land managers must address or ensure they are addressed by the responsible party.

Documenting initial conditions and monitoring is done to determine potential uses for an area and the limitations of the soil and vegetative resources for land use planning. Activity on public lands can cause changes in plant communities and monitoring must be done to assist land managers in evaluating how management decisions and uses affect vegetation, including its sustainability. Soil management also frequently involves work done to manipulate vegetation with chemical/ physical treatments, seeding, planting, etc.

Soil Specialists consult and coordinate with other program specialists regarding soil type, quality, and ecological site descriptions. They assess the potential impacts of any proposed activity which may include erosion, surface dust, and soil compaction. They review the ecological effects analysis in NEPA documents to ensure that any impacts on soil are adequately addressed. They develop site specific measures to address impacts of activities to soils and vegetation to be included in permits and authorizations.

In the energy arena on public lands, the activities of every program including minerals management, oil and gas, geothermal, renewable energy electrical transmission facilities and issuance of Rights of Ways for access to energy sites have a variety of potential impacts to soil. Some can be significant, as large and potentially deep areas of soil are disturbed. The review and NEPA documents must include an examination of the impact on soils and vegetation and mitigation measures and best practices must be included in the approvals, permits, and leases. Interim and final reclamation plans must be developed to address restoration of the land after a project is concluded and includes how best to reshape, re-cover with topsoil, reseed with native plants, and speed up regrowth in an area. Inspection and verification must be done to assure compliance with the terms of the contract or permit.





In support of the recreation program, soil management specialists participate in decisions to establish parameters for the numbers, types, and duration of visitor use to limit the negative impact on soil resources

Following wildfires, emergency or long-term rehabilitation actions may be necessary to protect valuable soil resources and to reduce the potential for invasive species spread, which impacts soil. Stabilization action must be undertaken usually within one year following containment of a wildfire to stabilize and prevent unacceptable degradation to land resources. These stabilization actions may include placing structures to slow soil and water movement, stabilizing soil to prevent further degradation or loss of productivity and installing protective fences or barriers to protect treated or recovering areas.

Soil Resource Management Program - Basic Duties

Two key duties of Soil Resources Specialist are doing soil surveys and preparation of Ecological Site Descriptions (ESD). They are integral in project planning.

Soil Surveys

Soil surveys provide detailed information on soil limitations and properties necessary for project planning and implementation. Soil surveys document soil properties and distribution to monitor and understand the impacts of various uses. They are also being used and studied to understand processes such as land carbon sequestration attributable climate change.

Soil surveys are made by carefully describing and classifying soils in the field and delineating the area of their occurrence on maps. There are five levels or “Orders” of soil surveys depending on the level of detail involved and Order 3 is typical for most public lands projects which do require onsite investigations by expert soil scientists for site specific project related activities or projects.

Soil survey reports which include the soil survey maps and the names and descriptions of the soils in a report area are published by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) and are available to everyone online.

Ecological Site Descriptions

An “ecological site” is a distinctive kind of land with specific soil and physical characteristics which produce distinctive kinds and amounts of vegetation, and uniquely responds to management actions and natural disturbances. Ecological Site classification catalogues these sites according to a site’s geomorphology, climate, soil, hydrologic, as well as its plant community and their interaction.

An ESD documents the specific type and amount of vegetation and other data (soils, hydrology, ecology, climate, management, etc.) relevant to a site to document its present condition to monitor health and any future changes. They are repositories of information about how vegetation responds to changes in management and climate and are used for monitoring and assessment, analysis of resource hazards and opportunities, and to prioritize and select land management actions.



ESDs have been developed and are also housed in a national database by the USDA's Natural Resources Conservation Service (NRCS). NRCS provides access to the largest natural resource information system in the world. It has soil maps and data available online for more than 95 percent of the nation's counties and anticipates having 100 percent.

NRCS, BLM, and the USFS have an interagency manual for ecological site descriptions to promote uniformity and promote consistent management and monitoring. The BLM Soil, Water & Air Management, Rangeland Management, Riparian Management, and RMPs programs collaborate to develop ESDs. The interagency manual ensures agencies develop consistent products that promote resource management on a landscape scale.

14.3 USFS

Forested lands provide 50% of the US water supply, the Nation's highest quality trout fisheries, and the habitat for more than one hundred endangered aquatic species. The USFS provides some of the science to help resource managers understand, protect and sustain these valuable resources and made a priority of the study of watersheds.

The USFS network of Experimental Forests and Range Stations has completed research on watershed and ecosystem processes for over 100 years. Long term studies at these sites provided early information on the effects of forest management on water resources, how to grow and utilize timber without damaging the soil, providing the foundation for developing "best management practices" for protecting stream-side buffer zones, forest road design, and construction standards.

USFS uses technologies such 3D land mapping and improved watershed scale modeling approaches developed by USFS scientists to define and predict watershed conditions in a changing climate. These studies integrate with research on the response of fish population to changing habitat conditions.

The Inventory, Monitoring & Analysis (IMA) research provides the resource data, analysis, and tools needed to effectively identify current status and trends, management options and impacts, and threats and impacts of fire, insects, disease, and other natural processes, enhancing the use and value of our Nation's natural resources. Issues and areas of focus include:

- Increased insect, disease, and fire incidence, combined with increased forest fragmentation, are restricting land managers and policy makers from sustainably providing forest and rangeland goods and services while maintaining biodiversity
- Rapidly changing trends in production, demand, ownership, use, and management have reduced resource availability for consumptive—lumber, mushrooms, fish and non-consumptive—wildlife viewing, recreation—uses
- Improved and increased use of new information management technologies and remote sensing will increase timeliness and spatial resolution to make sound resource management decisions and reduce the risk of unsustainable forest activities





- Failure to implement the Annual Forest Inventory nation-wide has left key states with obsolete resource data, limited planning ability, inadequate policy, and ineffective resource protections, increasing management costs and the risk of fire, insects, and disease damage
- Decreasing inventory and monitoring capacities are limiting public land managers and planners in conducting adequate resource assessments, increasing legal challenges, management costs, and forest health risks
- Declining water quality and reduced storage capacity due to forest cover loss will increase water treatment and availability cost for residential, agricultural, and industrial uses

IMA's core strengths and continued areas of focus include:

- **ACTIVITY 1: Conduct Resource Inventory** – Provide data, reports, maps, and consultation services to forest managers, land owners, policy makers, researchers, analysts, and other interest groups so they can use scientifically sound information to conduct analyses in a timely manner
- **ACTIVITY 2: Periodic Resource Assessments** – Provide resource monitoring and assessment services to international, national and local policy makers, land managers, investors, and municipalities so they can make informed decisions based on scientifically credible analyses. The Forest Service has been producing a national renewable resources assessment, known as the Resources Planning Act (RPA) Assessment, since the Forest and Rangeland Renewable Resources Planning Act (RPA) was enacted in 1974
- **ACTIVITY 3: Quantitative Analysis and Techniques** – Provide techniques, tools, and analyses services to public and private land management organizations, consultants, industry, and interest groups so they can make inventory and monitoring more effective and efficient and so they can identify risks, trends, and emerging issues to make sound decisions and land management plans.

14.3.1 Forest Products

One of the strategic goals of the USFS is to provide and sustain benefits to the nation. One of their objectives is to provide a reliable supply of forest products over time consistent with achieving the desired condition of the NFS lands and to maintain or create processing capacity and infrastructure in local communities.

Forest products include materials such as lumber and paper, and also “special forest products” such as medicinal herbs, fungi, edible fruits and nuts, and other natural products.

One of the first uses of the early forest reserves was to “furnish a continuous supply of timber.” (Organic Administration Act, Act of June 4, 1897, 1897). The first chief of the USFS, Gifford Pinchot, initially believed the agency could eventually become self-supporting through the production of timber, although he eventually abandoned the idea.





USFS timber sales and revenue generation were negligible until the 1950s, when the post-World War II housing boom, combined with declining competition from private timber sales, led to increasing NFS timber sales. For many years after, the USFS was a major provider of timber for the wood products industry, generally selling between 10 billion and 12 billion board feet of timber annually (about 20%-25% of total U.S. wood supply). Even at its height, however, revenue did not cover the cost to manage the Forests. Since the 1990s, USFS timber sales have fallen, totaling around 2 billion board feet—less than a quarter of the historic level—annually since 1999. The decline in harvest levels is likely attributable to a multitude of factors, including (but not limited to) changing legislative directives and related forest management policies and practices—such as increased planning and procedural requirements—as well as changing market dynamics for wood products, public preferences, and litigation.

The USFS is increasingly using timber harvests as a tool to achieve various land and resource management objectives or in the context of larger restoration objectives—such as enhancing ecosystem or watershed conditions—in addition to timber production. For example, the USFS has permanent authority to enter into stewardship contracts—contracts with private parties for stewardship activities (e.g., thinning to reduce potential wildfire fuels) that include commercial timber to offset some of the stewardship costs. The USFS may also harvest trees damaged or killed in fires or other disturbance events—called salvage harvesting—in part to facilitate forest restoration and recovery and also to capture some of the economic value of the federal resources and generate revenue to fund other restoration activities.

14.4 WDEQ

14.4.1 Air Quality

The Air Quality Division (AQD) conducts permitting, monitoring and inspections to manage Wyoming's air quality. AQD maintains the Wyoming Air Quality Monitoring Network and website which provides live images and current air quality conditions from locations across Wyoming. Meteorological, air quality and visibility data are provided in near real-time. AQD ensures compliance with the Wyoming Air Quality Standards and Regulations, conducts inspections and uses regulatory inspection checklists, and issues formal and information enforcement actions. AQD works with federal land managers regarding air pollution control requirements for large energy project subject to NEPA.

14.4.2 Water Quality

The Clean Water Act (33 USC § 1251 et seq. 1972) establishes the basic structure for discharge of pollutants into the waters of the United States and regulates surface water quality standards. Originally the Federal Water Pollution Act (1948) was reorganized and expanded in 1972 to become the Clean Water Act (CWA). The CWA introduced the National Pollutant Discharge Elimination System (NPDES), which is a permit system for regulating point sources of pollution. The system is managed by the EPA in partnership with state environmental agencies. WDEQ was required to create





water quality standards consisting of four basic elements: designated use(s), water quality criteria, anti-degradation policies, and general policies. Under Section 401, states and tribes can review and approve, condition, or deny all Federal permits or licenses that might result in a discharge to state or tribal waters, including wetlands. The major federal licenses and permits subject to Section 401 are Section 402 and 404 permits, Federal Energy Regulatory Commission (FERC) hydropower licenses, and Rivers and Harbors Act Section 9 and 10 permits. States and tribes may choose to waive their Section 401 certification authority. States and tribes make their decisions to deny, certify, or condition permits or licenses primarily by ensuring the activity will comply with State water quality standards. In addition, states and tribes look at whether the activity will violate effluent limitations, new source performance standards, toxic pollutants, and other water resource requirements of state/tribal law or regulation.

The Water Quality Division (WQD) implements the Clean Water Act and portions of the Safe Drinking Water Act. The program manages the quality of Wyoming’s surface and ground water resources through permitting, monitoring, enforcement, education and technology transfer. The program manages the Wyoming Pollutant Discharge Elimination System (WYPDES); permits the construction of public water distribution systems, wastewater collection and treatment systems; certifies public and municipal water and wastewater system operators; manages the non-point source pollution program; manages the Water Quality Laboratory for surface and groundwater permitting and enforcement; and data management actions. In compliance with the Clean Water Act, the State establishes and maintains measures for the prevention and control of water pollution.

14.5 Budget Summaries

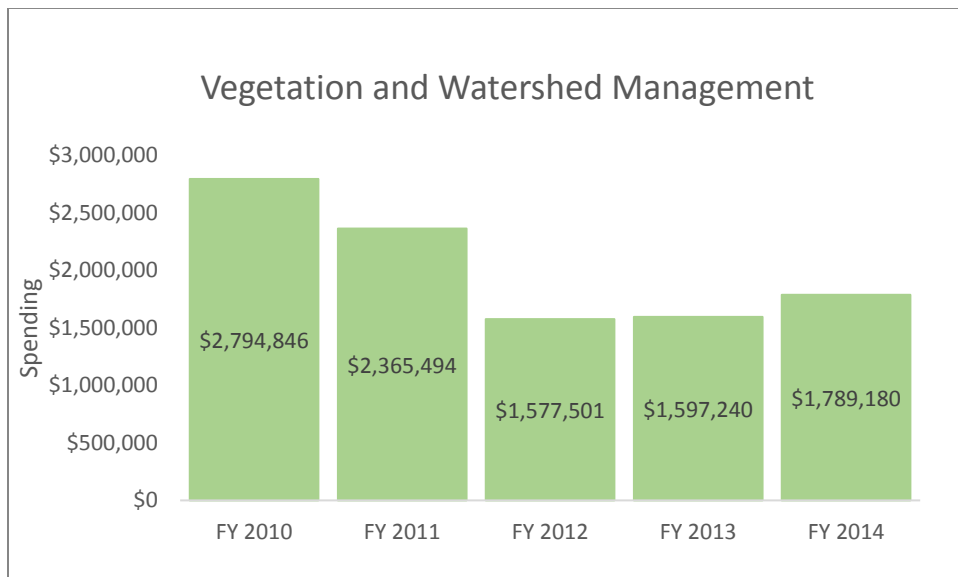


Figure 49. Wyoming USFS Vegetation and Watershed Management Expenses, FY 2010-2014.



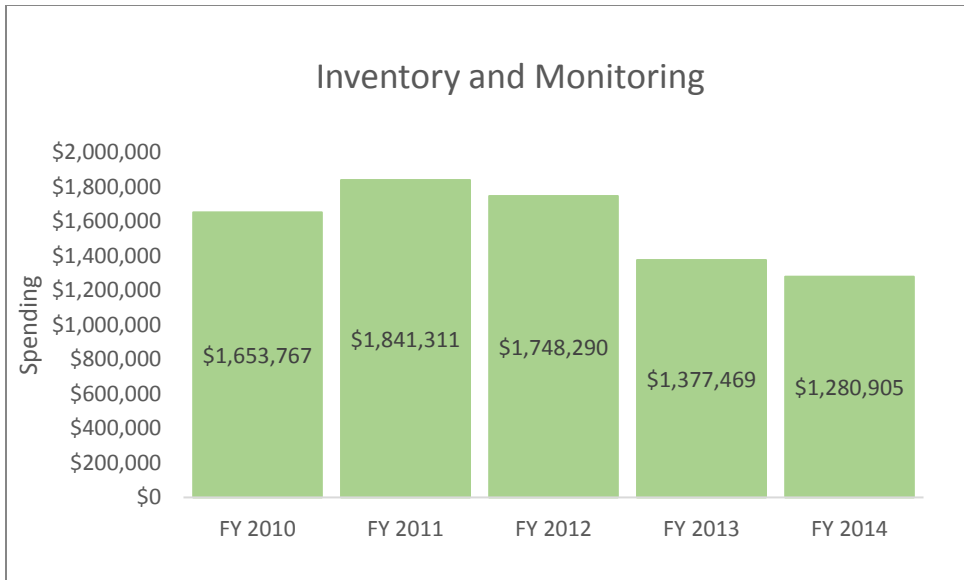


Figure 50. Wyoming USFS Inventory and Monitoring Expenses, FY 2010-2014.

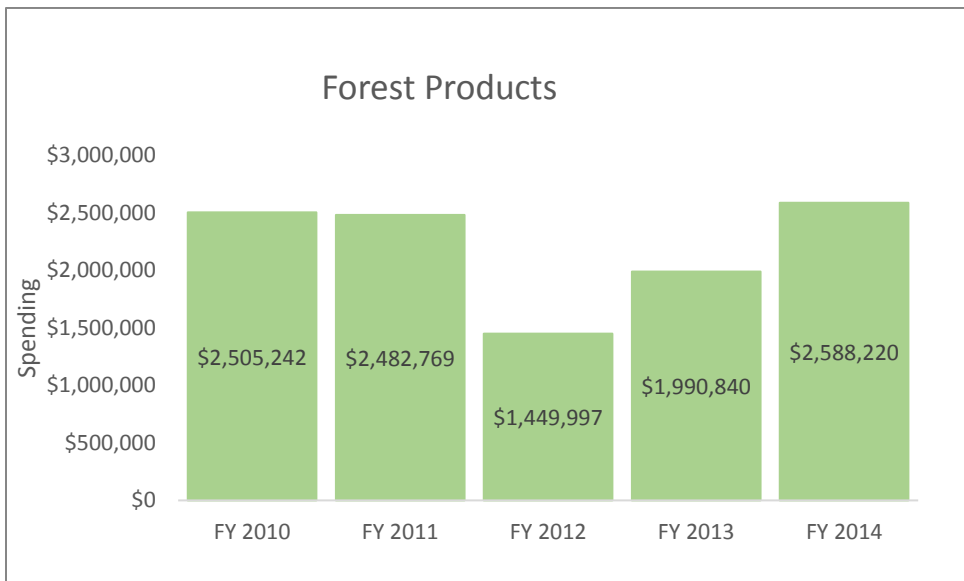


Figure 51. Wyoming USFS Forest Products Expenses, FY 2010-2014.

Table 39. Wyoming DEQ AQD Estimated Revenues FY 2013-2013 Biennium.

Wyoming DEQ 2013-2014 Estimated Revenue -AQD	
Funding Source	
General Fund	\$4,508,560
Special Revenue	\$11,716,138
Federal Funds (includes AMLP Reclamation)	\$1,449,426
Total	\$21,005,848

Please note, AMLP money also appears in the AMLP section.

Source: (Uzzell, et al., 2012).



Table 40. Wyoming DEQ AQD Estimated Expenses FY 2013-2014 Biennium.

Wyoming DEQ 2013-2014 Estimated Expenses -AQD	Total
Salaries and Benefits	\$13,273,729
Support Services	\$1,071,053
Restrictive Services	\$166,830
Central/Data Services	\$110,506
Space Rental	\$148,981
Non-Operating Expenses	\$120,000
Contract Services	\$6,114,749
Total	\$21,005,848

Source: (Uzzell, et al., 2012).

Table 41. Wyoming DEQ WQD Estimated Revenues FY 2013-2014 Biennium

Wyoming DEQ 2013-2014 Estimated Revenue -WQD	
Funding Sources	
General Fund	\$13,924,323
Special Revenue	\$1,096,775
Federal Funds	\$9,302,313
Total	\$24,323,411

Source: (Uzzell, et al., 2012).

Table 42. Wyoming DEQ WQD Estimated Expenses FY 2013-2014 Biennium

Wyoming DEQ 2013-2014 Estimated Expenses -WQD	
Expense Category	
Salaries and Benefits	\$14,006,999
Support Services	\$1,551,372
Restrictive Services	\$811,218
Central/Data Services	\$119,342
Space Rental	\$122,102
Grants and Aid Payments	\$3,360,000
Contract Services	\$4,352,378
Total	\$24,323,411

Source: (Uzzell, et al., 2012).





15. REALTY AND OWNERSHIP



15. Realty and Ownership

15.1 BLM

The Lands and Realty Management program grants ROWs and other use authorizations for public lands. Rights-of-way are granted for many purposes, including electricity transmission, roads, and water pipelines. The BLM also conducts land tenure activities including land sales, land exchanges, and withdrawals.

The BLM administers approximately 170,000 ROWs on the public lands. Many companies, non-profit organizations, and state and local governments apply to the BLM each year to obtain ROW grants to use the public lands for roads, pipelines, transmission lines, and communication sites. Energy-related ROWs play an essential part in the transportation of energy sources, from either oil or gas production areas or electricity that has been generated from a variety of sources, such as hydropower, coal or gas-fired generators, and geothermal, to areas where the energy is used, such as at large communities or in industrial sites. Rights-of-way for communication sites are required to install equipment necessary for the transmission of television broadcasts and the cellular phone network. Rights-of-way assist in providing for basic access, power, and communication infrastructure needs of cities, towns, and rural communities. The Lands and Realty Management program manages these ROWs. The program administers new and amended ROW authorizations, conducts on-the-ground inspections to ensure compliance with terms and conditions of the authorization, and conducts studies to determine the suitability of future ROW locations and uses.

Other land use authorizations are granted for commercial filming, public facilities, and similar short and long-term purposes as allowed by law. The BLM provides the terms and conditions for all of these uses and monitors users to ensure compliance with policy and regulation.

The Lands and Realty Management program also conducts land sales, exchanges, and withdrawals. Land exchanges and withdrawals can be useful land management tools under the proper circumstances. The BLM authorizes, reviews, and revokes land withdrawals to ensure the most appropriate uses and works closely with the Department of Defense to coordinate withdrawals for military purposes, resolve issues with over-flights, and coordinate management of adjacent military and public lands. The BLM also grants lands to local governments for recreation and public purposes at reduced cost using its authority under the Recreation and Public Purposes Act.

The BLM recovers costs for processing applications and monitoring ROW grants on public lands. Although the BLM is authorized to collect cost recovery in certain circumstances, some customers such as state and local governments are not subject to cost recovery.

Some of the uses and activities facilitated by the Lands and Realty Program include:

- Purchasing land to protect critical resource areas and provide increased public recreation opportunities
- Authorizing powerlines to provide electricity to a community



- Ensuring that a hydro-electric project protects riparian areas on the National Forest
- Exchanging and conveying lands to achieve a desired national forest landownership pattern that supports forest land and resource goals and objectives
- Conveying administrative sites to allow the agency to realign and enhance its asset portfolio
- Surveying national forest boundaries to identify and protect private and public lands
- Determining the market value of lands purchased, exchanged, or conveyed
- Authorizing a ROW for a road to a private home within the forest
- Accepting donations of land to protect archeological or historical sites
- Maintaining records of national forest land areas, land transactions, land status, permitted uses, and easements
- Securing public road and trail access to existing national forest system lands

The Realty and Ownership Management activity has three programs that are focused on the use of lands and transfer of BLM-managed lands in Wyoming; two are discussed here. The third program is specific to Alaska and not discussed.

1. The Cadastral Survey Program provides cadastral survey services that are an important component to managing both Federal and private lands. Cadastral surveys and other boundary services provided by this program facilitate these actions and help reduce boundary disputes, trespass, and possible litigation
2. The Lands and Realty Management Program authorizes uses of the land for rights-of-way for pipelines, transmission lines for electricity and renewable energy, and other uses. This program also authorizes uses of the public lands for commercial filming and other purposes, and implements changes to land ownership by exchanging and purchasing lands, and by selling lands no longer needed for Federal purposes

15.1.1 Cadastral Survey Program

The BLM Cadastral Survey Program conducts the official Federal Authority Surveys that are the foundation for all land title records in large sectors of the United States and provides Federal and Tribal land managers, and their adjoining non-Federal landowners, with information necessary for land management. Several statutes and delegations vest authority in the BLM to provide cadastral services for itself and the other Federal land management agencies, including the NPS, USFWS, the BOR, the USFS, and other Federal and tribal entities. This program provides direct support to the BLM's renewable energy, minerals, realty, law enforcement, forestry, recreation, National Land Conservation System and fire programs; helps to reduce unauthorized use; assists with development activities on BLM-managed lands; and, helps fulfill the Secretary's fiduciary trust responsibilities for cadastral services in Indian Country.

Conducting Federal Authority Surveys requires the determination of boundaries, the marking of corner positions with "brass cap" markers, posting and marking the boundary lines, and the filing of associated approved records in the Official United States Records System. Additional support



services provided by the Cadastral Survey program include accurately positioning legal descriptions for timber sales, rights-of way, protection of special areas, oil and gas leases, and mineral leases; providing standards for boundary evidence assessments and management of land boundary plans to reduce risks including unauthorized use; providing cadastral services and Geographic Coordinate Data Base (GCDB) services to support development of renewable energy projects; and updating and modernizing riparian boundaries where resources and land values are at a premium.

Many companies, non-profit organizations, and state and local governments apply to the BLM each year to obtain ROW grants to use the public lands for roads, pipelines, transmission lines, and communication sites. Energy-related ROWs play an essential part in the transportation of energy sources. Cadastral surveys and other boundary services provided by this program facilitate these actions and help reduce boundary disputes, trespass and possible litigation.

Approximately 45 percent of all work completed by the Cadastral Survey Program is funded by other benefitting BLM sub-activities and other benefitting agencies.

15.1.2 Communication Site Maintenance

The BLM Communication Site Management Program processes applications for communications sites from commercial, private, and governmental entities under Title V of the FLPMA and issues ROW use authorizations. The program considers requests for new sites, inspects and administers existing sites and authorizations, completes site management plans, and collects rental fees.

When granting and administering authorizations, the BLM works to protect the natural resources associated with public and adjacent lands. The BLM tries to prevent unnecessary or undue degradation to public lands by promoting the use of communication site rights-of-way and leases in common, considering engineering and technological compatibility, national security, and LUPs. The BLM also coordinates, to the fullest extent possible, all actions under the program with state and local governments, interested individuals, and appropriate quasi-public entities.

Wyoming

In FY 2014 BLM Wyoming's rights-of-way workload included a total of 2,558 actions. Five hundred twenty-eight (528) grants were issued (new grants as well as amendments to previous grants) and 2,030 other actions were processed including ROW grants assigned, cancelled, denied, relinquished, renewed, terminated or withdrawn. This includes work for communication site leases.

Revenue generated from these ROWs in Wyoming totaled \$6,209,044 in FY 2014 for 19,147 Rights of Way for communication sites, ROW granted pursuant to the Mineral Leasing Act, Solar and Wind ROWs and others ROW granted pursuant to FLPMA.

In FY 2013 five patents were issued (land sold) for BLM lands in Wyoming. Four were issued pursuant to FLMPA for a total of 213 acres for purchase money revenue of \$97,915. The fifth patent was issued pursuant to Congressional legislation.



15.2 USFS

The protection of USFS lands and resources is a fundamental responsibility. Through direct land management practices, the Lands and Realty Management program enables the agency to better manage federal lands within or adjacent to National Forest System (NFS) boundaries and deliver the necessary products and services that are essential for enhancing natural resource stewardship and providing for the public's enjoyment, future use, and access to NFS lands. The program has functions similar in nature to those described for the BLM.

Additionally, the Washington Office Lands Automated Lands Program (ALP) provides annual acreage data to the USFS Albuquerque Service Center Budget and Finance Staff for the purposes of computing All Service Receipts revenue sharing payments to states and counties. ALP also provides the Department of the Interior with an annual accounting of NFS acres subject to Payments In Lieu of Taxes (PILT).

15.3 State of Wyoming

OSLI's trust land management responsibilities involve numerous land transactions that are among the most central and most important functions of the agency. This includes land sales, land acquisitions, land exchanges, grazing and agricultural leasing, and other commercial leasing activities through easements, special use leasing, temporary use permits, and wind leasing. Efficient and effective land management practices for OSLI include the pursuit of land sale, acquisition and exchange opportunities that will provide enhanced revenue generation opportunities and access to contiguous land parcels to facilitate efficient trust land management practices; proactive commercial leasing, and lease stipulations to protect surface and subsurface resources.

Sales, acquisitions and exchanges are authorized under the Board of Land Commissioners Rules and Regulations. All sale, acquisition, exchange and long-term lease proposals of state trust land must be evaluated using defined objectives set forth in applicable Wyoming Statutes. Generally proposed land transactions must better meet the beneficiaries' short and/or long-term objectives (generate more revenue or offer a better-quality investment), improve the manageability of the land asset (consolidating ownership or leveraging management), or meet a specific school and/or community need.

The Grazing and Agricultural Leasing program of OSLI serves the state trust beneficiaries, as well as grazing and agricultural lessees, mineral exploration and production companies, state and federal agencies, recreational users, the general public and residents of Wyoming. Wyoming statutes and the rules and regulations of the Board of Land Commissioners outline a process for lease renewal, assignments, subleasing to a third party, and constructing improvements associated with ranching operations.

Easements granted on state lands may be for ditches, overhead wires, pipelines, railroads, reservoirs, public roads and highways, roadways to private land or residences, snow fences, underground cables, open spaces, and any other appropriate use.



Special Use Leases are for any use of state land other than for grazing, agriculture, the extraction of minerals, or other easements specifically authorized by law or hunting, fishing and general recreational uses authorized by law. Some examples of special use leases are communication sites, wind farms, cabin sites, water wells for commercial or municipal use, and compressor sites.

Temporary use permits are issued for activities of a temporary duration on state lands that are not more appropriately authorized under other leases. Examples of uses for which temporary use permits are issued include roadways for off-lease oil & gas development, construction activities, hot mix facilities, organized recreation activities, sign boards, and outfitting/guiding activities. Temporary use permits are issued for a limited term that is specific to a particular use. Consideration for temporary use permits are negotiated on a case by case basis, and subject to a minimum consideration specific to each use.

15.4 Budget Summaries

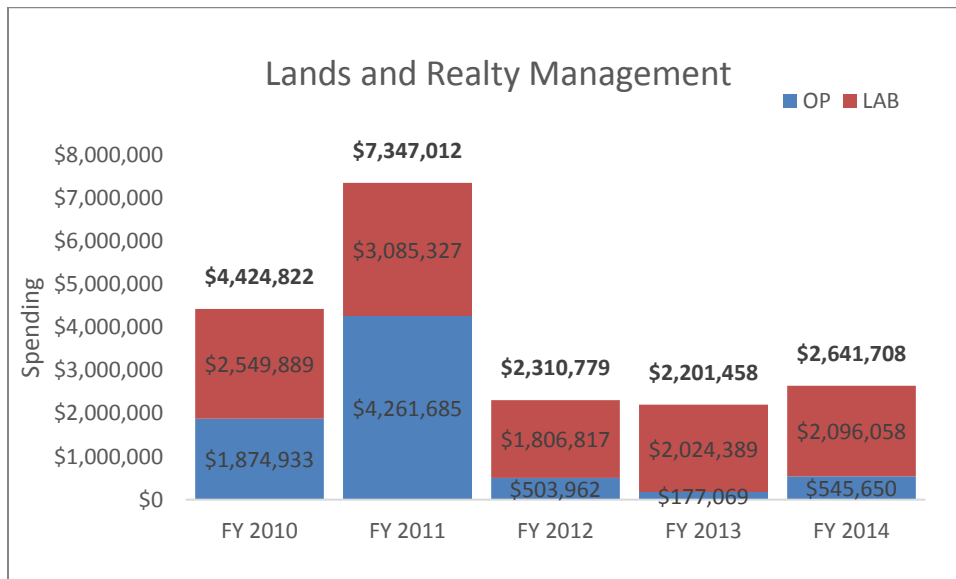


Figure 52. Wyoming BLM Lands and Realty Management Expenses, FY 2010-2014.



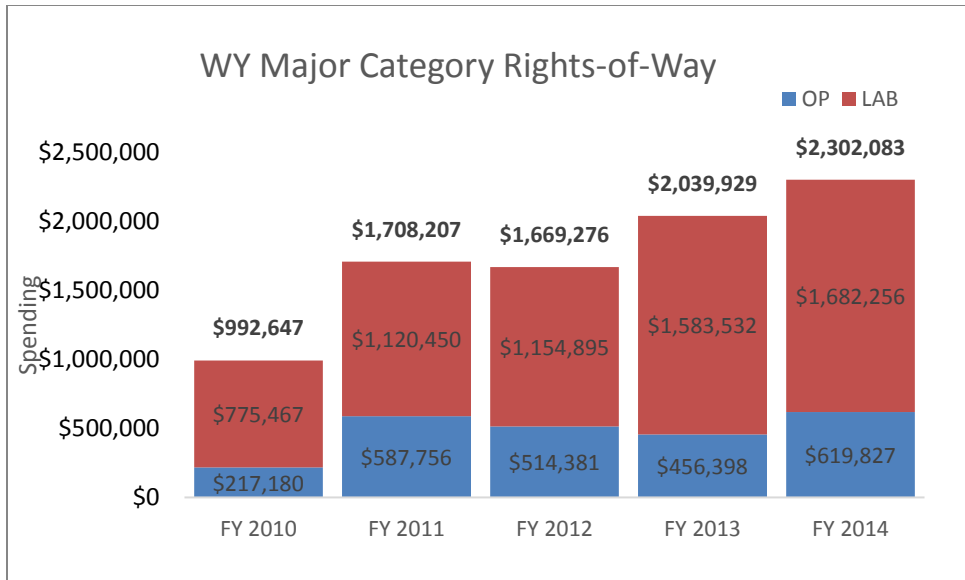


Figure 53. Wyoming BLM Major Rights of Way Expenses, FY 2010-2014.

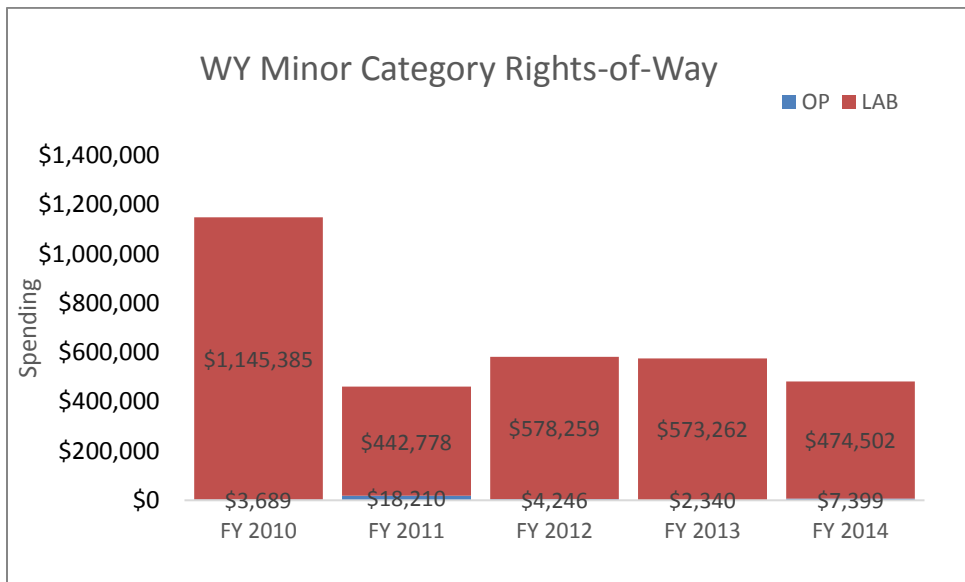


Figure 54. Wyoming BLM Minor Rights of Way Expenses, FY 2010-2014.





Figure 55. Wyoming USFS Landownership Management Expenses, FY 2010-2014.

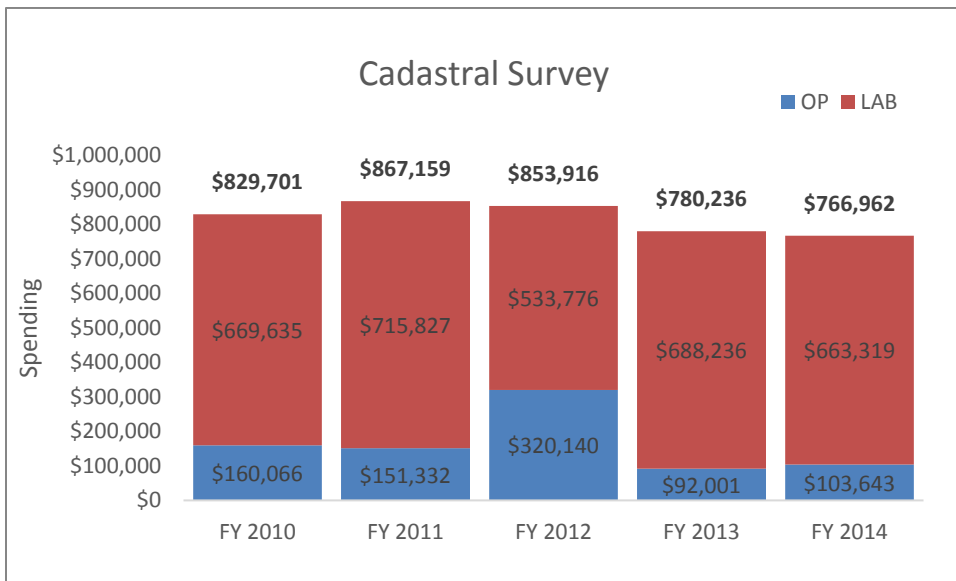


Figure 56. Wyoming BLM Cadastral Survey Expenses, FY 2010-2014.



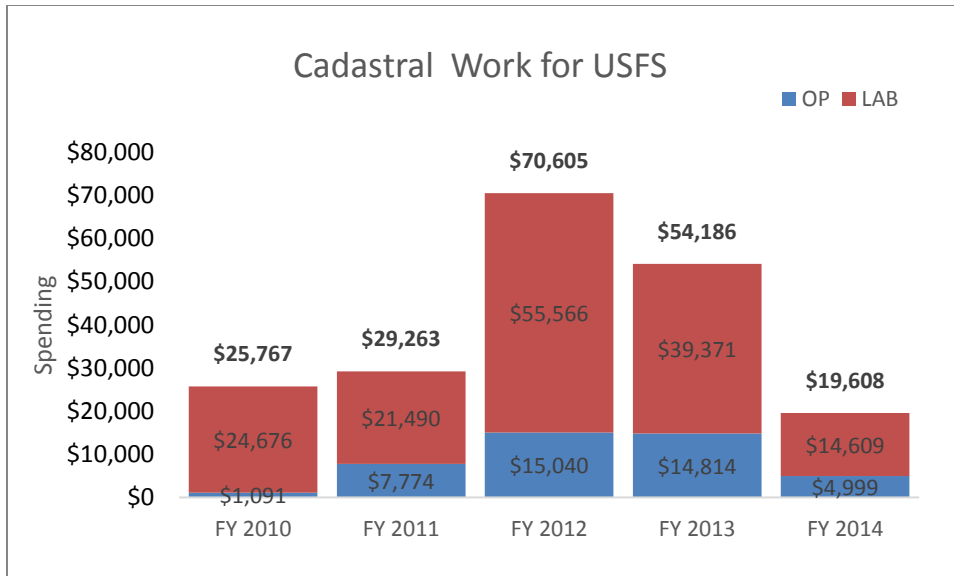


Figure 57. Wyoming BLM Cadastral Work for USFS Expenses, FY 2010-2014.

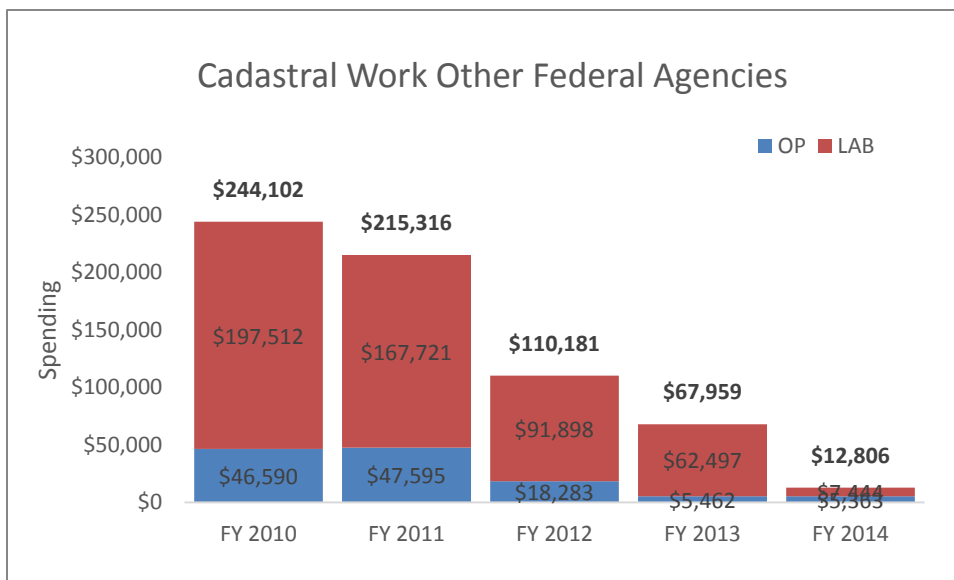


Figure 58. Wyoming BLM Cadastral Work for Other Federal Agencies Expenses, FY 2010-2014.



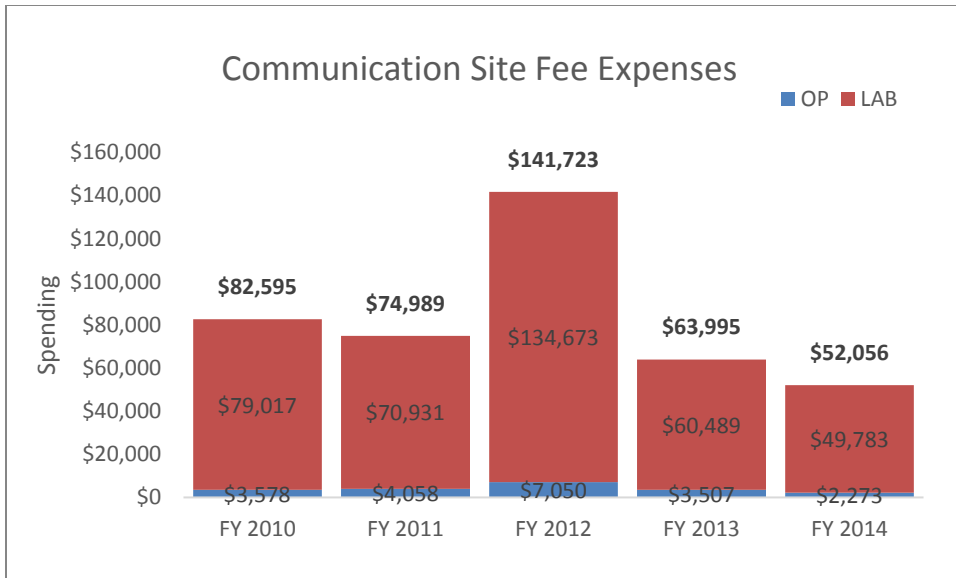


Figure 59. Wyoming BLM Communication Site Fee Expenses, FY 2010-2014.

OSLI budgets are provided in the appropriate sections.





16. TRANSPORTATION
AND FACILITIES



16. Transportation and Facilities

16.1 Overview

The goals of the Transportation and Facilities Maintenance Programs are to protect employee and visitor safety, resource values, and public investments, as well as to provide facilities management and public lands stewardship.

Duties:

- Operating clean, safe, and fully functional facilities at recreation sites
- Performing annual maintenance on all facilities
- Conducting comprehensive assessments on the physical condition and regulatory compliance for all facilities
- Implementing the Five-Year Deferred Maintenance and Capital Improvement Plans
- Improving capabilities to manage facilities maintenance through development of an automated facility asset management system
- Implementing property and asset management planning to accurately inventory and describe assets, establish appropriate levels of investment, and adopt public or commercial benchmarks and best practices

Nationally, work includes project planning, site layout, architectural and engineering design, cost estimating, value engineering, facility condition assessments, seismic evaluations, energy conservation studies, professional inspections of dams and bridges, regulatory compliance evaluations for all projects, and contract supervision. The types of facilities include:

1. Buildings and Administrative Facilities – Buildings on public lands range from complex office buildings and large visitor centers to small restrooms and well houses. Administrative facilities include but are not limited to office space, fire stations, interagency dispatch centers, internal communication sites, equipment maintenance shops, and field camps
2. Recreation Sites – The BLM is responsible for maintaining 2,815 recreation sites, with 2,930 buildings and numerous camping units, picnic units and boat ramps. In addition, the BLM is responsible for a portion of the maintenance on numerous facilities jointly held with other federal, state, local governments, or private entities
3. Transportation – Lands administered by the BLM have 57,000 lane miles of roads, 13,300 miles of trails, and 829 bridges. Management emphasis is on maintaining the roads, trails, bridges, and major culverts that receive the greatest public use, present the greatest threat to public safety, or are contributing to water quality degradation due to improper drainage
4. Dams – The BLM manages and maintains 663 dams which have been designated with a hazard classification. These dams provide recreation, salinity control, and watershed protection. The classification, and dam maintenance. Emergency Action Plans are prepared for dams



classified as “High” and “Significant” hazard dams. Plans are in the early formative stages regarding retirement of certain non-mission essential dams

Transportation and RMPs and BLM

The BLM must follow numerous federal laws regarding management of transportation and travel on public lands. FLPMA is the overarching document that pertains to all of the BLM’s management responsibilities. FLPMA directs the BLM regarding travel to balance public access and multiple use with the protection and preservation of the quality of the lands and its resources to be able to be enjoyed by the public for many years to come. Travel management and road access on BLM lands are determined through the land use management planning process. The National Trails Systems Act defines the standards and methods by which additional trails may be added to the system that includes scenic, historic, and recreational trails. Decisions related to opening and closing of roads to go through NEPA. The Wilderness Act of 1964 prohibits motor vehicles in wilderness areas except in emergency situations or when there’s a possible management need.

Commonly known as R.S. 2477, rights-of-way for roadways were recognized by Congress in 1866 with what may be the shortest statute on record: the ROW for the construction of highways across public lands not otherwise reserved for public purposes is hereby granted. Repealed in 1976 with the passage of FLPMA, the existing rights remained in place.

Annual Maintenance and Operational Costs

The Annual Maintenance and Operational Costs Program maintains the BLM infrastructure, providing for visitor and employee safety and ensuring proper facilities management. Funding provides for emergency, preventive and cyclical maintenance and baseline facility condition assessments. The goal of the program is to perform sufficient annual and operational maintenance, manage facility services and landscape upkeep, and minimize new deferred maintenance needs on BLM constructed assets.

In conducting program work, the BLM adheres to the requirements of Executive Order 13327, Federal Real Property Asset Management.

Other Funding Sources

Road Maintenance funds provide for the permanent appropriation of money collected from commercial road users in lieu of user maintenance.

Quarters Maintenance funds maintain and repair all employee-occupied quarters from which rental charges are collected.

Recreation Fee Collection funds augment the annual maintenance of the recreation sites where fees were collected.

In the lower 48 States, nearly two-thirds of BLM-managed lands are within a one-hour drive of urban areas. As population grows in the American West, public use of those lands places increasing demands on facilities and resources, particularly those located near urban centers. Additionally,



many roads on BLM-managed lands were originally built as administrative roads with much lower usage than occurs now and is expected in the future. This increased usage increases the BLM's cost to maintain roads in a safe condition for employees and the public.

Deferred Maintenance and Capital Improvements Program

The components of the BLM Deferred Maintenance and Capital Improvements Program are as follows:

- Improve the overall condition of BLM facilities for public safety
- Renew aging infrastructure
- Provide professional engineering services
- Manage environmental and structural risks of facilities
- Manage corrective actions identified through Compliance Assessment Safety, Health and the Environment (CASHE) Audits
- Manage corrective actions identified for accessibility provisions
- Manage corrective actions for improvement of energy savings
- Construct facilities for visitors and employees that comply with Federal requirements

Energy conservation and sustainability are primary considerations for all new projects. This policy is supported by the provisions of the Energy Policy Act of 2005 (EPACT 2005), Energy Independence and Security Act of 2007 (EISA) and the goals of Executive Orders 13123 and 13514. Projects incorporate the guiding principles of the Sustainable Buildings Implementation Plan to reduce total ownership cost of facilities, and improve energy efficiency and water conservation.

16.2 WYDOT

WYDOT is responsible for designing, permitting and constructing roadways and bridges across the state. It also manages ports of entry and airport construction. WYDOT is managed by the Transportation Commission of Wyoming, including adopting rules and regulations; awarding road construction and maintenance contracts; approving WYDOT equipment; and entering into contracts and agreements with the federal government as well as with cities, counties, and other agencies for road construction and maintenance and other approved projects. Wyoming's Governor appoints the seven Transportation Commissioners, by and with the consent of the Wyoming Senate (Wyoming Department of Transportation, ND).



16.3 Budget Summaries

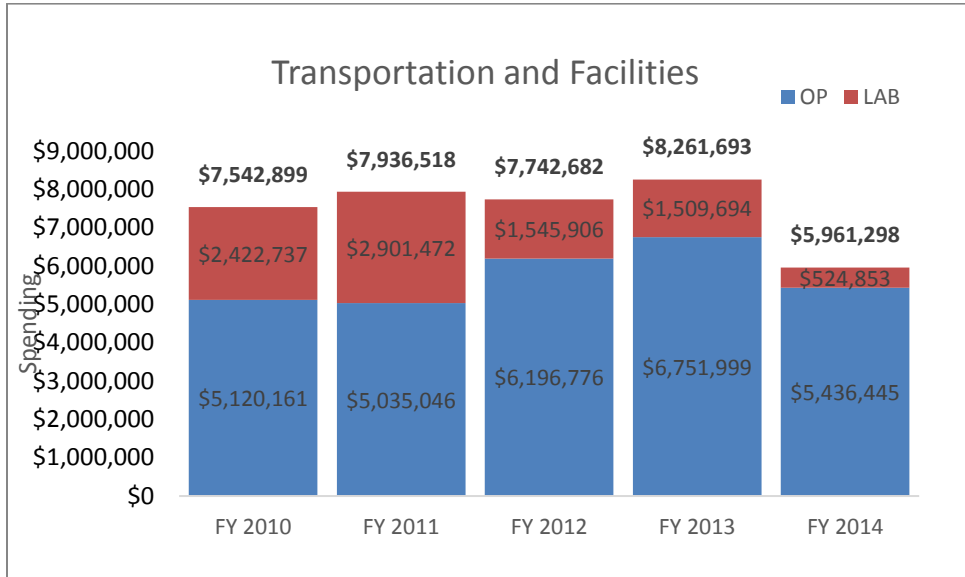


Figure 60. Wyoming BLM Transportation and Facilities Expenses, FY 2010-2014.

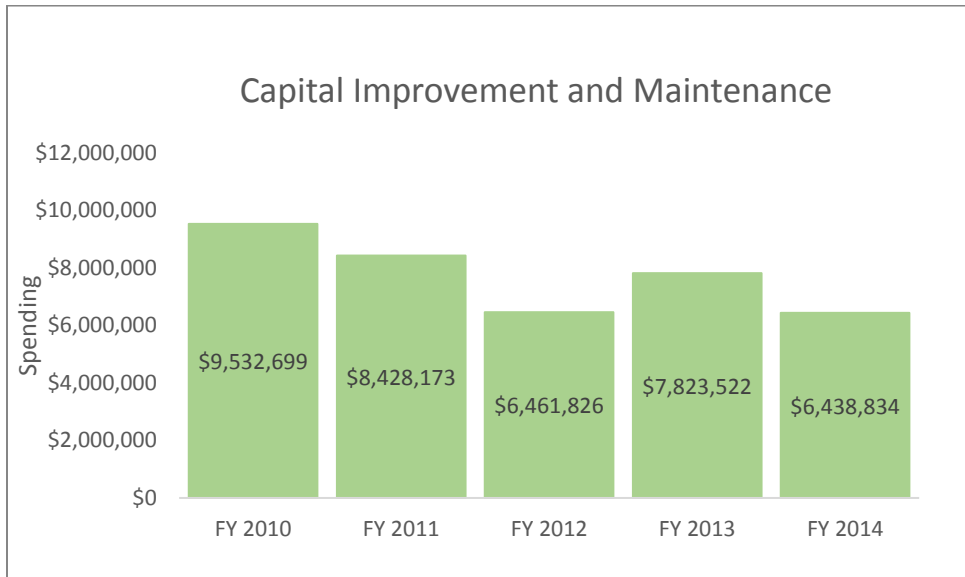


Figure 61. Wyoming USFS Capital Improvement and Maintenance Expenses, FY 2010-2014.



Table 43. WYDOT Estimated Funding Sources by Fund, Biennium FY 2013-2014.

Wyoming DOT 2013-2014 Estimated Expenses by Division	
Funding Source	
Administration	\$3,484,592
Administrative Services	\$35,437,763
Law Enforcement	\$84,817,825
WyoLink	\$4,232,274
Aeronautics Administration	\$4,256,251
Operational Services	\$2,405,010
Airport Improvements	\$62,632,526
General Fund Appropriation to Commission	\$100,000,000
Total	\$297,266,241

Source: (Wyoming Department of Transportation, 2012).

Table 44. WYDOT Estimated Expenses by Division for the Biennium FY 2013-2014.

Wyoming DOT 2013-2014 Estimated Revenue Sources	
Revenue Source	
General	\$68,888,298
Federal	\$94,830,260
Other	\$133,547,683
Total	\$297,266,241

Source: (Wyoming Department of Transportation, 2012).





17. WILDFIRE



17. Wildfire

“Wildland” fire is any non-structure fire that occurs in the wildland—defined as areas where development is essentially nonexistent, except for roads, railroads, power lines, and similar transportation facilities, and where structures, if any, are widely scattered. “Wildfire” is an unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out (Hoover & Bracmort, *Wildfire Management: Federal Funding and Related Statistics*, 2015).

Wildfire management is a series of coordinated activities undertaken by federal, state, and local authorities to resolve wildfire events when they occur. Resolution may involve immediate and aggressive measures to quickly suppress a wildfire (e.g., personnel and large air tanker response for a wildfire moving quickly toward a populated area), or may involve immediate but less intense measures such as monitoring a grassland wildfire where there is no immediate threat to humans and weather conditions are favorable for natural suppression of the fire within a short time period.

Wildfire management activities are generally categorized into four areas: (Hoover & Bracmort, *Wildfire Management: Federal Funding and Related Statistics*, 2015).

- **Preparedness** is any activity that leads to a safe, efficient, and cost-effective fire management program, and includes the range of tasks necessary to build, sustain, and improve the capability to protect against, respond to, and recover from domestic incidents.
- **Suppression** is all of the work associated with extinguishing or confining a fire.
- **Fuel reduction** is manipulation (including combustion) or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.
- **Site rehabilitation** includes efforts undertaken, generally within three years of wildfire, to repair or improve fire-damaged lands unlikely to recover to management-approved condition within a specified time frame, or actions taken to repair or replace minor facilities damaged by fire.

The USFS carries out wildfire response in national forests and grasslands. DOI manages the wildfire response in national parks, wildlife refuges and preserves, Indian reservations, and other public lands. Wildfire management funding for DOI is allocated to the Office of Wildland Fire, BLM, Bureau of Indian Affairs, NPS, and the USFWS.

Wildfire funding is affected by many factors, including the effectiveness of annual wildfire appropriations (e.g., whether the funding is allowing agencies to meet wildfire management targets), the amount of appropriations dedicated to certain wildfire management activities (e.g., whether enough funding is being provided for hazardous fuel reduction), and requests from the agencies for additional appropriations during severe fire activity (e.g., why more funding is needed, and what non-fire programs could be impacted if the agencies fail to receive the additional funding) (Hoover & Bracmort, *Wildfire Management: Federal Funding and Related Statistics*, 2015). Generally used for



wildfire suppression, Congress has added additional funding for wildfire management beyond the Interior appropriations bill for 7 of the last 10 years.

Environmental conditions including long-term drought lead to more severe fire activity with the possibility of earlier starts and longer and a later wildfire season. Wildfire and wildland fires are a concern because of the potential for loss of human life, damage to communities and timber resources, and the negative impacts on soils, watersheds, water quality, and wildlife. Wildfire can also reduce fuel loads, increase ecosystem health, and restore fire-adapted ecosystems.

Wildfire management appropriations began to increase after FY 2000 and peaked at \$4.5 billion in FY 2008. Over the last five years (FY 2011-FY 2015), wildfire management appropriations for both the USFS and DOI combined have averaged \$3.3 billion (Hoover & Bracmort, Wildfire Management: Federal Funding and Related Statistics, 2015).

An average of 76% of wildfire management appropriations went to the USFS from FY 2011 to FY 2015. USFS wildfire management appropriations constitute a large portion of the USFS overall discretionary funds.

Federal funding for wildfire management is provided in the Interior, Environment, and Related Agencies appropriations bill. The bill funds wildfire management at the USFS and the Department of the Interior, which are the two principal entities tasked with federal wildfire management. Federal wildfire response activities involve preparedness, suppression, fuel reduction, and site rehabilitation.

The USFS and DOI have two accounts for wildfire in the Interior appropriations law. The Wildland Fire Management (WFM) account funds are distributed among the programs of each agency. Preparedness and suppression receive the bulk of the WFM appropriations, followed by hazardous fuels. The Federal Land Assistance, Management, and Enhancement Act (FLAME) account is a reserve fund for wildfire suppression that requires certain conditions to be met in order to transfer funding from FLAME to the WFM account. The FLAME fund is essentially a contingency or reserve account for catastrophic fires available only after WFM funds have been used.

When the FLAME account was created in 2009 the hope was that when used in conjunction with the WFM appropriation, wildfire suppression needs would be fully funded and funds would not be “borrowed” from non-fire programs. Additional funds for WFM can be appropriated through legislation supplementing the annual Interior appropriations law. Any additional funds are generally directed for use (e.g., for wildfire suppression, for fire transfer reimbursement, for emergency rehabilitation). Sometimes additional appropriations are used to repay accounts from previous years.

The USFS and DOI are authorized to transfer funds from other programs and accounts to fund wildfire suppression, typically when wildfire suppression accounts have been depleted. Transfer authority is granted in the Interior, Environment, and Related Agencies annual appropriations bill, specifically in the general provisions Section 102 for DOI and in the administrative provisions for the USFS. The accounts from which funds were transferred have historically been reimbursed in the following fiscal year’s appropriation act (Hoover & Bracmort, Wildfire Management: Federal Funding and Related Statistics, 2015).



Fire In Wyoming

Table 45. Wyoming BLM Wildland and Prescriptive Fires 2010-2014.

Year	Wildland Fires		Prescriptive	
	# Fires	# Acres	# Fires	# Acres
2010	112	6,933	21	13,704
2011	98	20,029	8	4,173
2012	173	38,531	13	3,568
2013	86	1,069	18	1,934
2014	115	2,458	22	3,714

Source: NICC: National Reports on Wildland Fires and Acres Burned in Wyoming.

Table 46. Wyoming USFS Wildland and Prescriptive Fires 2010-2014.

Year	Wildland Fires		Prescriptive	
	# Fires	# Acres	# Fires	# Acres
2010	141	13,059	24	12,621
2011	95	48,974	14	5,966
2012	127	58,697	28	3,919
2013	125	29,852	33	3,209
2014	74	2,314	21	2,904

Source: NICC: National Reports on Wildland Fires and Acres Burned in Wyoming.

Congressional Proposals Being Discussed

Proposals to create alternative mechanisms for funding wildfire suppression have been introduced in Congress and proposed by the President and land management agencies. The proposals would fund wildfire suppression for catastrophic fires by creating an adjustment to the statutory discretionary spending limits and/or fund extreme fires out of disaster accounts. A Congressional Research Service report summarizes proposals being discussed at the federal level including (Hoover & Bracmort, *Wildfire Management: Federal Funding and Related Statistics*, 2015):

- *Using an improved formula to better estimate wildfire suppression costs (e.g., a 5-year average, a weighted 10-year average)*
- *Using regression models to better estimate WFM suppression costs and non-biophysical policy remedies that might reduce wildfire suppression expenditures (e.g., guidelines about when it is appropriate not to aggressively suppress wildfires)*
- *Increasing hazardous fuels reduction projects*



- Requiring state and local governments, and private landowners in the WUI, to improve current wildfire management strategies and bear more of the firefighting costs

17.1 OSLI

The Wyoming State Forestry Department is responsible for assisting county fire wardens and local fire departments with over 25 million acres of private lands in addition to the 3.6 million acres of State lands. The goal is to provide for firefighter and public safety with reduced loss and damage to private property and natural resources through cost effective and efficient fire management practices. WSFD including the Wyoming State Helitack Program, allowing for rapid response to wildland fires (Child, et al., 2012).

17.2 Budget Summaries



Figure 62. Wyoming BLM Wildfire Management Accounts, FY 2010-2014.





Figure 63. Wyoming USFS Wildland Fire Management Expenses, FY 2010-2014.

Table 47. OSLI Estimated Fire Revenue, FY 2013-2014 Biennium.

Funding Source	
General Fund	\$4,788,393
Special Revenue	\$0
Federal Funds	\$4,107,203
Total	\$8,895,596

Source: (Child, et al., 2012).

Table 48. OSLI Estimated Fire Expenses, FY 2013-2014 Biennium.

Expense Category	
Salaries and Benefits	\$1,808,549
Support Services	\$6,431,938
Contract Services	\$655,109
Total	\$8,895,596

Source: (Child, et al., 2012).





18. PROGRAM
ADMINISTRATION



18. Program Administration

18.1 Freedom of Information Act (FOIA)

The Freedom of Information Act (FOIA) (5 USC §552) requires that government offices make more information available to the public.

Since 1967, the FOIA has provided the public the right to request access to records from any federal agency. It is often described as the law that keeps citizens in the know about their government. Federal agencies are required to disclose any information requested under the FOIA unless it falls under one of nine exemptions which protect interests such as personal privacy, national security, and law enforcement.

The Electronic FOIA Act of 1996 (P.L. 104-231) extended the time agencies have to respond to requests to 20 business days, requires agencies to make reasonable efforts to respond in the format requested, and requires the establishment of electronic reading rooms that include agency policies, staff manuals, opinions made in adjudication of cases, and an index of records released by FOIA that may be requested again.

The BLM and USFS are subject to a large number of FOIA requests. Only one agency in the Department of Agriculture and two agencies in the Department of the Interior receive more FOIA requests nationally than the BLM and USFS. From 2010 to 2014 the BLM received between 760 to almost 1,100 FOIA requests annually and the USFS received between 1,900 to 2,771 requests annually.

In FY 2014 the BLM in Wyoming processed 56 FOIA requests from a wide variety of organizations including law firms; trade associations; ranches; business consultants; and NGO's like Western Watersheds Projects, Wild Earth Guardians, Powder River Resource Council, and several wild horse advocacy groups.

Data requests ranged across BLM programs including oil, gas and coal development, rights-of-way for pipelines and transmissions lines, communication sites, wildlife, grazing management, prescribed burns, land use planning, and wild horse management. Requests range from relatively straightforward requests for a specific document (i.e. copy of a lease and bond payment for a specific company with equipment on a particular cell tower) to "all documents" related to a particular project such as a RMP, EIS, or ROD. They may ask for all or all correspondence between the BLM and a particular party or group or requests for all documents related to a program or project during a particular time period. Documents requested frequently relate to a particular event like an oil spill or a horse gather. Requests can be quite broadly worded and intended to secure copies of all information or data in any way relevant to an event or management decision including emails, photos and video, handwritten notes from phone calls and informal meetings, manuals, meeting minutes and agendas, flight path documentation, methodologies utilized to collect data, protocols used and raw data. The work is generally coordinated by one or more FOIA coordinators but frequently affects the workload of the program managers and staff who have to gather the requested information.



18.2 BLM

The BLM labor costs in Wyoming for each program are outlined in each relevant section. Additional workforce support is provided by the BLM's Administrative Support Program. The Administrative Support Program funds services related to management and administrative support that cannot be directly tied to a specific program output. The Administrative Support Program funds the following functions:

- Executive and Management Decisions
- Legislative, Public and Regulatory Affairs and Correspondence
- Budget Formulation and Execution
- Financial Management
- Property and Acquisition Management
- Management Systems
- Personnel and Organizational Management
- Human Resources
- Program and Management Evaluations
- Service First
- Equal Employment Opportunity
- Privacy
- Safety

The Information Technology Management program is responsible for managing all aspects of information technology (IT) throughout the BLM. These responsibilities include:

- Planning, directing, coordinating, and evaluating IT programs, policies and procedures and providing guidance for the effective use of IT resources in support of BLM programs and services in accordance with the Clinger-Cohen Act of 1996 and the Government Performance and Results Act of 1993
- Infrastructure – Providing compliant and effective technology platforms and environments
- Security – Developing security-related policies, procedures, and guidance; providing technical assistance for securing major applications and general support systems; overseeing security compliance efforts; maintaining an inventory of systems
- Managing national applications and systems throughout their life cycles of investment and ensuring successful service delivery through all phases—concept, design, construction, data management, operation, support and maintenance—in order to meet business needs while ensuring system data integrity



- Information Resources Management – Providing management and oversight over implementation of the Freedom of Information Act, Open Government Initiative, Section 508 of the American Disabilities Act, IT Acquisition, IT Configuration Management, Indian Trust and the Records Act; ensuring continued compliance with applicable laws, regulations and guidance; ensuring that manual and electronic records are accessible, properly maintained, documented, scheduled and disposed of; and, ensuring that automated systems are documented and scheduled and that records preservation orders are tracked and monitored to so that records are properly secured, accessible and retrievable to respond to court orders and requesters
- Every BLM program contributes some funding for IT activities. Major investments in the BLM IT portfolio are funded by the programs supported by those investments. IT infrastructure investments are funded proportionately by all programs.

BLM's Bureau-Wide Fixed Costs Program nationally provides additional administrative support. It manages the National Land Radio program, telecommunications, the Federal Personnel Payroll System, unemployment costs, mail and postal costs, the Employee Compensation Fund, and office space leasing, which is the largest of BLM's fixed costs. However, in Wyoming this program is primarily utilized for office space leasing and costs are reflected in Section 16.

Table 49. Wyoming BLM Full Time Employees, 2010-2014.

Year	WY BLM Full Time Employees
2010	842
2011	845
2012	866
2013	793
2014	691

18.3 USFS

Most of the USFS labor costs are within their program budgets. It is not broken out as the BLM is per program. However, the labor costs per National Forest in recent years are depicted in the table below.



Table 50. National Forest Labor Costs FY 2010-2016, numbers in thousands.

National Forest	2010	2011	2012	2013	2014	2015	2016
Bighorn	\$6,754	\$7,202	\$6,813	\$6,874	\$6,882	\$6,833	\$7,032
Bridger-Teton	\$11,932	\$10,955	\$10,796	\$10,570	\$11,090	\$11,324	\$13,031
Medicine Bow-Routt							
Thunder Basin - 40%	\$5,131	\$5,371	\$5,124	\$6,341	\$6,327	\$6,157	\$6,152
Shoshone	\$7,516	\$7,969	\$7,435	\$7,637	\$7,348	\$7,904	\$8,110

Source: data provided by Budget Officers for Region 2 and Bridger-Teton.

Higher level management in each National Forest, however, is paid for from the Cost Pool account. Cost Pool expenses for Wyoming National Forests are represented in Table 6 as Administrative Expenses as well as in the Figure 64 below. Cost Pool is a funding mechanism for activities that support every program. Each program contributes to the pool in an amount based on its share of these common services. Cost Pool funds certain officer salaries and expenses, administrative support, information technology, human resources, computers, telephones, rent, utilities, and other services. For example, in the Bridger-Teton National Forest, Cost Pool covers the salary and expenses for the Forest Supervisor, the Deputy Supervisor, two budget officers, one public affairs specialist, one safety officer, six District Rangers, and six Support Services Specialists (one for each District).

To offer some insight into the staffing needs of the USFS within Wyoming a breakdown of the positions and grade levels for each the three National Forests that are wholly within Wyoming is displayed below. These numbers generally represent staffing for 2016.



Table 51. National Forests Position Categories and Full Time Employees, 2016.

Position Categories	Bighorn NF	Bridger - Teton NF	Shoshone NF
Forest Supervisor	1	1	1
Deputy Forest Supervisor	0	1	0
District Rangers	3	6	3
Executive Assistant	0	1	0
Administrative Staff	15	15	16
Budget	1	2	2
Safety	0	1	1
Engineering/Minerals/Geology	11	16	17
Fire/Fuels	18	62	25
Planning and Lands	4	10	5
Public Affairs	1	2	1
Range	10	9	12
Recreation/Trails	14	25	57
Archeologists	6	2	2
Water/Soils/Air	5	6	7
Wildlife	8	9	6
Timber	33	5	46
Law Enforcement	0	3	0
Winter Forestry/Avalanche	0	5	0
Laborer	5	0	1
Program Managers	2	1	3
Fish Biologists	0	2	0
WYDOT Liason	0	1	0
Total	137	185	205



Table 52. National Forest Grade Level and Number of Full Time Employees, 2016.

Grade Levels	Bighorn NF	Teton NF	Shoshone NF
GS-3	14	0	33
GS-4	27	0	19
GS-5	22	16	47
GS-6	6	12	14
GS-7	14	37	20
GS-8	5	15	5
GS-9	14	34	15
GS-10	1	2	0
GS-11	15	36	27
GS-12	7	17	14
GS-13	2	7	8
GS-14	1	1	1
GS-15	0	1	0
WG-3	5	0	1
WG-5	1	0	0
WG-8	1	2	0
WG-10	2	5	1
Total	137	185	205

18.4 State of Wyoming

The Governor presents a budget to the Wyoming Legislature for review and approval for each biennium. The entire budget request from each agency is presented to the Budget Division in September or October. The Budget Division then assembles all of the agency requests into a total package for the Governor's review.

The Consensus Revenue Estimating Group meets in October and develops revenue forecasts for the upcoming biennium and the Governor compares the budget request to the forecasted revenue and works with the Budget Division to prepare his budget recommendations to the Legislature. These recommendations must be provided to the Legislature by December 1 of each year.

The Department of Administration and Information provides services to all branches of government including Human Resources, General Services, Economic Analysis, Budget and the State Library. The office is a conduit between the Governor and Executive Branch, manages internal and external communications, serves as the legislative liaison and develops policies and plans for operation of the state government.

Each state agency has its own administrative support division.



18.5 Budget Summaries

BLM administrative expenses are included under each program as labor costs.

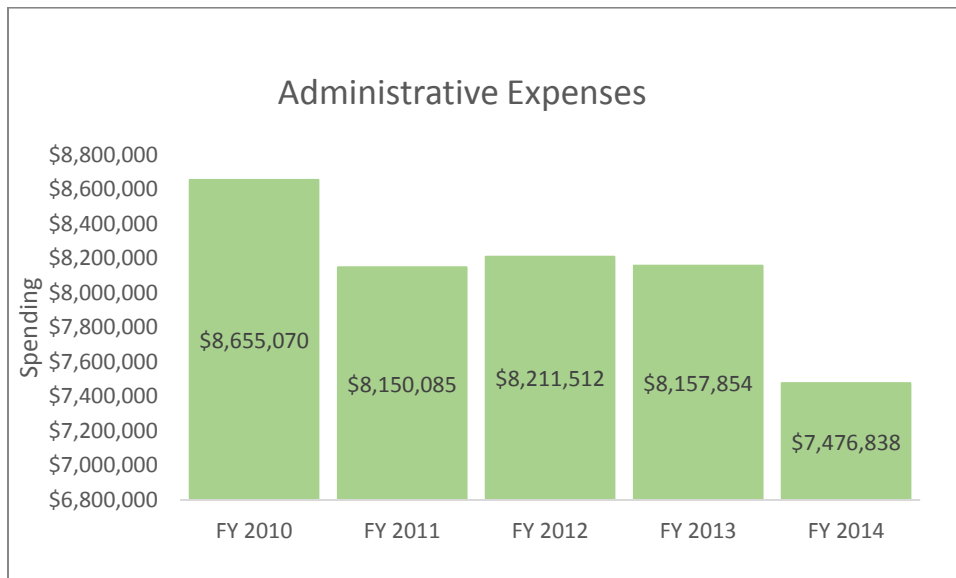


Figure 64. Wyoming USFS Administrative Expenses, FY 2010-2014.

Each state agency provides its own administrative services. However, it is not feasible to separate expenses for each agency so budget information is not provided for the State for this category.





19. RESOURCE
PROTECTION



19. Resource Protection

19.1 BLM

The Resource Protection and Law Enforcement provides for the protection from criminal and other unlawful activities on public lands.

The Resource Protection and Law Enforcement Program supports the Bureau's mission through the enforcement of Federal laws and regulations related to the use, management, and development of public lands and resources.

The objectives of the program are to:

- Provide a safe environment for public land users and employees
- Deter, detect, and investigate illegal activities, and resolve or refer such matters to appropriate officials
- Protect lands and waters from illegal dumping and pollution
- Ensure revenues owed to the government for authorized or unauthorized uses are paid

BLM work to enforce the ARPA includes patrols and conduct investigations to deter and detect incidents of theft and vandalism of cultural, historical, and paleontological resources. The BLM will prosecute suspects and provide for the proper curation, storage, and disposition of recovered artifacts.

The BLM dedicates law enforcement resources to the patrol of high-use OHV areas in order to protect sensitive resources and ensure the public is provided safe recreational opportunities on public lands.

The BLM enforces laws and investigates violations related to the harassment, unlawful removal, inhumane treatment, unauthorized destruction or sale of wild horses and burros.

The BLM through patrol, enforcement, and investigation works to reduce the theft of public land resources, including mineral materials, timber and forest products, as well as improve production accountability and reduce theft of oil and gas resources. The BLM investigates wildland fires to determine the origin and cause, identify responsible parties, and seek civil enforcement or criminal prosecution in cases involving negligence or arson.

19.2 USFS

Law enforcement personnel, line officers, and appropriate staff ensure that prevention, investigation, enforcement, and program management requirements are fully integrated into all NFS resource management programs. Law enforcement personnel uphold Federal laws and regulations that protect natural resources, agency employees, and the public.



19.3 WYDOT

The Wyoming Highway Patrol is housed within WYDOT. Dispatch provides services for the State Agency Law Enforcement Communications System (SALECS) that is also used by WGFD, State Parks, WDA Livestock Board, brand inspectors, BLM and USFS law enforcement, and Wyoming Outfitters and Professional Guides. As of 2012, 207 Highway Patrol troopers were on Wyoming's highways. Troopers deal with everything from issuing traffic citations to crash investigation, drug interdiction and helping stranded motorists.

19.4 Other State Agencies

Several other agencies provide some level of law enforcement support or function. These agencies include WGFD (game wardens), State Parks, and WDA (livestock board and brand inspectors). Law enforcement is not their primary role, or it is not a separate budget item so no additional information will be provided. The Wyoming Military Department is not discussed in this document due to its specific relationship to defense rather than land management.

19.5 Budget Summaries

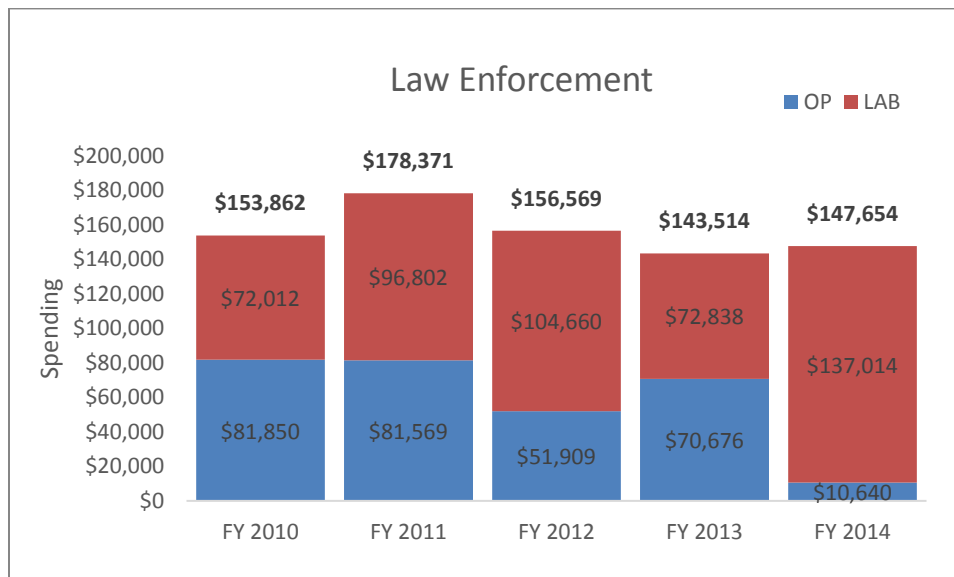


Figure 65. Wyoming BLM Law Enforcement Expenses, FY 2010-2014.

The USFS includes law enforcement expenses as part of the general cost pool.



Table 53. Wyoming Department of Transportation Revenue Sources, FY 2013-2014.

Wyoming DOT 2013-2014 Estimated Revenue Sources	
Revenue Source	
General	\$68,888,298
Federal	\$94,830,260
Other	\$133,547,683
Total	\$297,266,241

Source: Biennium (State of Wyoming, 2012).

Table 54. Wyoming Department of Transportation Expenses, FY 2013-2014 Biennium.

Wyoming DOT 2013-2014 Estimated Expenses by Division	
Expense Category	
Administration	\$3,484,592
Administrative Services	\$35,437,763
Law Enforcement	\$84,817,825
WyoLink	\$4,232,274
Aeronautics Administration	\$4,256,251
Operational Services	\$2,405,010
Airport Improvements	\$62,632,526
General Fund Appropriation to Commission	\$100,000,000
Total	\$297,266,241

Source: (Wyoming Department of Transportation, 2012).





20. FEDERAL
PAYMENT
PROGRAMS



20. Federal Payment Programs

Several programs compensate local governments for the financial impact from the presence of federal lands in their jurisdictions and federal policies regarding those lands. The two largest programs that are responsible for substantial federal payments to Wyoming counties are the PILT and the Secure Rural Schools (SRS) program. For rural counties, particularly those with extensive public land ownership, these payments often constitute an important portion of county and school budgets.

20.1 Secure Rural Schools Payment (SRS)

A key federal program which compensates local communities for the presence of federal owned forest lands that could not be taxed has its roots in the early 20th century. Local counties have traditionally received a share of the revenue generated from US Forest Service lands within their borders—predominantly from timber sales but also from all commercial receipts including recreational fees, communication site leases, special use permits (ski areas, outfitting permits, etc.). Under the Twenty-Five Percent Fund Act of 1908 (16 USC 500), twenty-five percent of each national forest’s gross receipts are transferred to the states (according to their forest service acreage) to be distributed to the counties for the benefit of roads and schools. It was enacted as a mandatory spending program. Payments made to local communities under this receipt/revenue sharing program are referred to as “USFS Payments to States” as well as “1908 Payments” or “25% Payments.”

Until 20 years ago counties in the west with public lands with extensive forests received substantial annual payments under this program largely from the sale of timber from the National Forests and BLM lands within their jurisdiction. After peaking in the late 1980’s, timber sales, which historically has always been volatile, began to fall dramatically due to changing economic conditions and new goals for public land management including the Northwest Forest Plan adopted in 1994 during the Clinton administration. New forest management policies, increased land planning and procedural requirements, efforts to preserve habitat of the spotted owl, changing preference of the general public, economic and timber industry dynamics, and other factors led to a substantial decrease in timber sales. This resulted in substantially lower payments to counties – in some cases by more than ninety percent (90%).

To compensate local governments, Congress enacted the Secure Rural Schools and Community Self Determination Act of 2000 (SRS; P.L. 106-393). Under the SRS program the federal government pays timber-dependent communities for the lost revenue from reduced timber sales due in large part to federal land management policies.

SRS was intended to be a transition program. It was initially authorized for six years to provide a temporary optional and alternative funding system to the historic 1908 twenty-five percent revenue sharing program. The original goal of the SRS program was to reduce the reliance of counties that had historically relied on revenue sharing receivables from USFS products (e.g., timber sales) to fund



county services. It was hoped that during that time communities and county budgets could become less reliant on such volatile commodity driven revenue derived from public lands and diversify their economies with more attention given to recreation, conservation, stewardship, and forest restoration.

Under the 2000 SRS Act, each county could elect to receive SRS payments instead of their share of the 25% revenue sharing payment. When first enacted in 2000, the SRS payment a county could elect to receive would equal the average of the three highest revenue sharing payments a county received between FY 1986 and FY 1999. Payments under SRS are substantially higher than they would be under the 25% receipt sharing program. In 2000, payments to the counties under the 1908 receipt sharing act totaled \$194 million. In 2001, the Forest Service SRS payment to counties totaled \$346 million. In FY 2012, the 25% payments to counties would have totaled \$58 million; under SRS the payments totaled \$274 million.

Under the Secure Rural Schools Act, the Forest Service first uses all forest receipts from the National Forest Fund receipt account to fund SRS payments. If those receipts are insufficient, a supplemental appropriation is obtained for the additional amount required. For example, in FY 2009 almost \$400 million was used from the Treasury and not from forest receipts and revenues. In FY 2012 over \$200 million of the funds was from Treasury.

Authorization for the original six year SRS payment program expired at the end of FY 2006, but it has been extended over the years since in a rather haphazard and unpredictable manner. Both programs have been legislatively modified as well. The initial six-year program was extended for one year, for FY 2007.

The 2008 Emergency Economic Stabilization Act (P.L. 110-343) extended SRS for four years to take it through FY 2011 but the formula used to calculate payments to communities was modified to factor in a community's population and per capita income. Congress also put in a declining payment level. SRS funding for FY 2008 was \$500 million ("full funding") but each year full funding would decline to 90% of the previous year's funding. SRS payments are broken into three types—Title I, II and III and the 2008 legislation also modified the way the funds allocated between the Title II and III could be spent (Title I was left largely unchanged).

The 25% revenue sharing program was also modified under the 2008 legislation. Before each state received 25% of gross forest service receipts from the forests acreage in their state (to be divided amongst the relevant counties) for each fiscal year. Now each year states would receive 25% of the average gross receipts for the previous seven years—a seven year rolling average of past forest service receipts.

Once again counties had to elect which program they would receive payments through and counties that elected to receive payments under the SRS formula were bound for four years—through 2011, while counties electing to receive payments through the modified 25% seven year rolling average were bound for two years.



Payments under this new 2008-2011 SRS program differed significantly from the original SRS program. Counties electing SRS would share in the “full funding” for each fiscal year—so the more counties that opted for the traditional revenue sharing program, the more money each county opting for SRS would potentially receive. Because of the changes, each for their own reasons, some counties opted out of SRS formula payments in 2008 and elected to receive funding under the newly modified 25% program while other counties switched from the 25% program to the SRS formula program.

The 2000 SRS Act expired again at the end of 2011, but it was once again extended for just one year for FY 2012 and the declining annual payment schedule was slowed to 95% of the previous year (instead of 90%) resulting in a payment of about \$346 million.

SRS expired again at the end of FY 2012 (October 1, 2012). It was extended for FY 2013, which started on October 1, 2012, but not until October 2013. FY 2013 was funded at 95% of the FY 2012 payment (approximately \$329 million) and the money was disbursed in early 2014. Counties were also required to again select between their funding options—by December 31, 2013.

Initially Congress did not reauthorize the SRS program for FY 2014 and it expired (after the FY 2013 payment was made in 2014). Therefore, the 1908 Act (as amended) kicked in for all counties which mandated payment to the states under the 25% seven year rolling average program for FY 2014. The amounts dropped dramatically. Revenue sharing payments for FY 2014 pursuant to the 25% program totaled \$50.4 million (before sequestration) as opposed to the approximately \$329 million in payments made in FY 2013 under SRS. Those payments were made to the states in February of 2015.

In April of 2015, SRS was re-authorized for both FY 2014 (retroactively) and FY 2015. Disbursements for 2014 were to be made to the states no later than 45 days after the legislation passed; by May 31, 2015 (after accounting for the 25% revenue sharing payment made under the 1908 Act). The 2015 reauthorization also locked in the election that each county had made for FY 2013—to receive payment based either on the SRS formula or a share of the state’s 25% rolling seven-year average revenue. The annual decrease in the payments was also maintained. Therefore, the full payment made for FY 2014 in 2015 represents 95% of the payment made for FY 2013 (made in 2014) and the full payment for FY 2015, which will be made in 2016, will represent 95% of the payment made for FY 2014. Counties received their FY 2015 SRS payments in March of 2016.

The Secure Rural Schools and Community Self-Determination Act once again expired in September 2015 and has not been reauthorized for FY 2016. This could create dramatic budgetary shortfalls for many rural communities. The availability of future SRS payments remains uncertain.

State Law and Use of SRS Funds

Unlike PILT which may be used for any government purpose, SRS funds are limited and generally must be used for roads and school but some funds are available for conservation projects, search and rescue missions, and fire prevention programs. Each state controls how local authorities may allocate the money received from forest revenue between their road and school programs but the states have no discretion to withhold or control disbursement of the funds. It must be made according to the USFS formula and is based on the national forest acreage in each county. State law



differs widely in the allocation and a few states provide for substantial local discretion including Wyoming. Wyo. Stat. §. 9-4-504 provides “[u]pon receipt by the county treasurer of the funds [...], the county commissioners of the county shall apportion the monies between the general school fund and the road fund of their county. Not less than five percent (5%) of the monies shall be credited to either one of the funds.”

When SRS was first established, all Wyoming counties with USFS acreage received funding through the SRS formula program. Beginning in 2008, four counties—Converse, Crook, Teton, and Weston elected to go back to receiving a share of Wyoming’s 25% revenue sharing payment instead of the SRS formula payment.

The average national payment to all eligible counties from 2000 to 2006 was \$500 million of which Wyoming counties with national forest acreage within their boundaries received approximately \$2.4 million.

In FY 2006, Wyoming received \$2.8 million in SRS funds which represented 0.49% of SRS full funding and \$0.27 per forest acre. In FY 2009, Wyoming received almost \$4.4 million, which represented 0.85% of the full funding for SRS and \$0.56 per acre.

The money distributed to Wyoming counties in 2015 for FY 2014 (after SRS was re-authorized in April of 2015) totaled about \$3.8 million (SRS formula payments and the four counties which receive 25% payments).

Legislation was introduced in the 114th Congress (2015-2016) to extend SRS through FY 2016 but was not passed.

The FY 2017 President’s Budget proposes a mandatory reauthorization and a four-year phase-out through 2019 of the SRS Act, as amended, starting in FY 2016. The President’s Budget proposes additional changes to administrative provisions of the SRS Act to enhance community involvement with title II program delivery and to strengthen economic opportunities provided by the SRS Act during the four-year phase-out period.

If not reauthorized for FY 2016 and beyond, the expiration of the SRS Act will create dramatic budgetary shortfalls for over 700 rural counties across the United States.

SRS Title II Funds

SRS Act funding also includes “Title II” funding to local communities which can be used to complete special restoration projects on federal lands proposed by resource advisory committees. Secure Rural Schools Resource Act Advisory Committees (SRS RAC) can be formed for part of a national forest or for one or more national forests. Each SRS RAC consists of approximately 15 people representing varied interests and areas of expertise, who work collaboratively with each other and national forest personnel to develop and review proposals for special projects using Title II funds and they make recommendations to the Forest Supervisor on which projects should receive funding. Funds may be used for projects on National Forests or adjoining private land to provide benefits to National Forest resources. SRS RACs in Wyoming have funded projects such as culvert replacement



to enhance fish passage, a fuel reduction project to protect a community from wildland fire, and several county weed control programs. At least 50% of funding must be road maintenance/obliteration or watershed improvement/restoration projects.

20.2 Payments in Lieu of Taxes (PILT)

State and local governments cannot tax federally owned lands. Despite contributing to demands on local governments for public services like roads they do not contribute to the local tax base. In recognition of the financial impact on local communities from loss property taxes due to the presence of these untaxable federal lands within their jurisdiction, Congress passed The Payments In Lieu of Taxes Act (PILT) in October 1976. It was enacted at a time when US policy towards public lands changed from one of disposal to retention. The lands would no longer be eligible to pass into private ownership and support the local economy and tax base. A federal commission recommended that if these lands were never to be transferred, compensation could be offered to local governments. PILT authorized payments from the federal government to local governments to offset this financial impact.

PILT is the most wide-ranging federal program to offset lost tax revenue to local communities. Since the first payments were made in 1977 through FY 2015, over \$7.1 billion in payments have been made to local governments. In FY 2015, Wyoming counties received over \$27 million in PILT payments.

Congressional Funding

During the first fifteen years of the program, PILT payments were discretionary and limited to an amount appropriated annually by Congress. With a few exceptions Congress appropriated the full amount authorized by the law—about \$100 million per year. The 1994 amendments to the PILT Act authorized annual inflationary adjustments to the payments. However, the program was still subject to annual appropriations from Congress and the automatic increases to the authorized level of funding were not matched with commensurate increases in Congressional appropriations from 1995 through 2007. There were wide gaps between the amount authorized by the PILT Act and what was being paid out to counties across the country. This caused growing frustration among local governments, increasing political pressure, and debate in Congress ultimately leading to changes in 2008.

The Emergency Economic Stabilization Act of 2008 modified PILT from a discretionary spending program, subject to annual appropriations, to a mandatory spending program providing for full payment of the authorized PILT amount for five years—from FY 2008 until FY 2012.

Since 2012, Congress has only funded it one year at a time even though it is a permanently authorized program, exposing it to political whims. Each time it expires there is no guarantee it will be funded again. That makes it challenging for counties to make long term budget plans not to mention the dramatic effect any loss of PILT funding would have on many local rural western communities with large percentages of federal lands.



The mandatory spending enacted from 2008 to 2012 was extended for one additional year by Congress—although FY 2013’s fully authorized payment of \$421 million was subject to sequestration (mandatory cuts) of 5.1% resulting in a payment of about \$400 million. Mandatory spending for PILT was extended again for just one year, with a full payment for FY 2014 of \$436.9 million to counties.

For FY 2015, full funding authorized by the PILT Act was \$451.5 million. However, Congress only approved \$372 million in discretionary PILT funding. This was paid, as PILT typically is, in June 2015 (by statute it must be paid before the end of the fiscal year on September 30th). An additional \$70 million in mandatory PILT payments was appropriated in December 2014 of which \$33 million was to be paid in FY 2015 and \$37 million paid on October 1, 2015—technically the first day of FY 2016. If you count the later October 1st payment towards FY 2015, Congress appropriated 97.8% of the full amount authorized under the statute (if it doesn’t count for FY 2015, the total appropriation of \$405 million represents 89.6% of the authorized amount.)

Administration

The Department of the Interior administers the PILT program, calculating the payments and distributing the funds to eligible local governments. There is a list of “eligible” federal land in the PILT program. In Wyoming eligible lands include those administered by the National Park System, National Forest System, BLM, certain lands administered by the National Wildlife Refuge System, and lands uses for federal water development projects administered by the BOR.

PILT payments may be used for any governmental purpose—things involving public safety, environment, housing, social services, and transportation such as police and fire protection, schools, and road maintenance. Unlike some federal revenue programs, the funds are not required to be further distributed by the recipients (usually counties) to other local government units (such as school districts or cities). Payments are made directly to the eligible local governments unless the state government chooses to enact legislation to receive the payments and then pass the money on to other smaller governmental entities within the counties. Wyoming counties receive payments directly from DOI and every county in Wyoming has eligible lands and receives PILT payments.

Today, a complex formula is used to calculate payments to each local government using several variables and ultimately dependent upon how much Congress appropriates to the program that year. Exactly how much a local government will receive cannot be known in advance. The formula is calculated based on the number of acres of eligible federal land within each county, its population, annual inflationary adjustments using the Consumer Price Index, and factoring in payments received the previous year through other federal land payment programs including the Refuge Revenue Sharing Fund, the National Forest Fund, the Taylor Grazing Act, the Mineral Leasing Act, the Federal Power Act, and the Secure Rural Schools and Community Self-Determination Act of 2000 (SRS Funds).

There is controversy over inequities in the distribution of PILT funds to various local communities but little consensus on how to address it. The sliding scale of maximum PILT payments that can be made to each county based on population can affect sparsely populated counties with large amounts of eligible land. Some counties receive PILT payments that exceed what they would receive if the land



was actually just taxed by local government based on fair market value while other counties receive far less than they would if the federal lands were taxed. Some counties who are relatively wealthy with ample sources of income receive a large PILT payment while other poor communities receive far less and counties that receive substantial payments though other federal payment programs still receive a minimum PILT payment. The formula could be changed and/or certain lands currently eligible could be removed from the program.

These inequities make the program vulnerable to criticism and support for PILT will continue to compete with proposals to modify or even eliminate the program to reduce the federal deficit. Debates continue of whether PILT should be funded though mandatory or discretionary spending and whether it should be fixed or an inflation adjusted amount. Local communities, in particular those that rely heavily on PILT funds for their budgets, push for more predictable and reliable funding model which they can rely on preferably through mandatory spending—permanent or even temporary but for more than one year.

Table 55. Payments to Wyoming in Millions, FY 2005-2014.

Program	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
WY PILT total	\$14.81	\$15.22	\$15.36	\$24.16	\$25.53	\$22.71	\$25.63	\$25.32	\$25.32	\$27.14
WY SRS Total	\$2.4	\$2.43	\$2.42	\$6.65	\$4.71	\$4.61	\$4.37	\$4.24	\$4.12	\$3.74

For a County by County summary, see Appendix D. Sources: (U.S. Department of Agriculture, 2015); (U.S. Department of Interior, 2015).





21. MANAGEMENT
ALTERNATIVES



21. Management Alternatives and Conclusions

21.1 Management Mandates, Costs, and Impediments to a Takeover

This study examines the transfer of management only of certain federal lands to the state. Identifying an appropriate and feasible outcome from this study is dependent on identifying the goal in the beginning of the study. Examining the feasibility of a transfer of management of these federally owned lands from federal agencies to the state gives rise to two overriding questions. Is the goal of the transfer to generate more revenue to financially support the state and/or to pay for the cost for the state to manage these lands, or is the goal to improve management and the condition of the lands in question? Part of the challenge with proposing solutions is that either or both goals may apply to each resource being discussed. Another challenge is that the answer to that question will be different for different individuals, interest groups, and stakeholders.

Other states have looked at transfer of title of federal lands to address concerns with the management of federal lands, the dysfunction of federal bureaucracy, the impact of federal land management decisions on local economies, lack of access to resources such as timber and recreation, and in some cases concerns for human health and safety. The goal and the need to generate more revenue from the public lands is largely seen as necessary to pay for the state to manage these lands.

The issue of management transfer is a complicated one as it will require Congressional action to be implemented. Depending on the course of action that is chosen, it could be an exceptionally drawn out process. By virtue of transferring only management of the land, management would continue to follow all federal mandates, absent substantial changes to federal law. BLM and USFS have MUSY mandates, discussed throughout this report. This mandate is significantly different than those that exist for State Trust Lands and is an important distinction between how state and federal lands are currently managed.

Unlike the fiduciary obligation to generate long-term revenue mandated for School Trust Lands, federal land agencies are not required to generate revenues sufficient to cover their costs. Congress appropriates the bulk of federal land budgets. Federal land managers have little to no incentive to generate more revenue or control costs because they don't retain the revenue. Federal budgets are also generally allocated based on a "use it or lose it" concept, which encourages spending even when not warranted or risk having reduced funds available in subsequent years. Within the complicated framework of federal public land laws from FLPMA, NFMA, and NEPA, to various environmental laws, and appropriations laws allocating spending, there is essentially little or no relationship between managing costs in relation to revenues. Again, the foremost mandate for these particular federal public lands is MUSY. They are intended to be used and preserved for future use. To a large extent the legal framework surrounding these federal public lands establishes them as a public amenity.

Conversely, the Wyoming State Constitution and the Wyoming State Legislature direct the Board of Land Commissioners, consisting of the state's five elected officials, to manage trust assets for two



key purposes: (1) long-term growth in value, and (2) optimum, sustainable revenue production. Similar principles guide the allocation of resources and management practices that will preserve and enhance the value of non-trust acquired and institutional lands. The OSLI is the administrative arm of the Board and it is the statutory responsibility of the OSLI to carry out the policy directives and decisions of the Board.

OSLI is in no way required to manage for multiple use. Their fiduciary obligation to generate sustainable revenue may be mutually exclusive of the ability to manage for multiple use and without question affects program revenues and associated costs. As an example, OSLI issues grazing leases based on market value and has the ability to exclude other uses on the property (i.e., hunting or camping) because they do not generate revenue and could have a negative impact to the livestock producer.

The heavy administrative burden of federal laws (i.e., NEPA, FLPMA, NFMA, FOIA) requires comprehensive planning, extensive public input, and environmental impact analysis, absent significant changes to federal law these would have to be complied with by the state.

To further complicate any potential transfer, Congress could refuse to permit use of funds for certain activities mandated by public land law. For example, the state may take over wild horse management. As part of the implementation of the wild horse program, the state may choose to reinstate euthanizing excess animals. Congress, through the appropriations bill language, has prohibited the use of federal funds to fulfill the excess horse mandate in the Wild Horse and Burro Act. This could be the outcome on many controversial, highly publicized public land management actions. Failure to fund mandates or the prohibition of the use of federal funds to fulfill some mandates would hamper the state's ability to successfully manage federal lands (as is currently the case with wild horses and the BLM).

21.2 Property Management Concept

A potentially useful analogy that may be helpful in understanding the idea of transferring management of federal lands to the state is to consider the owners of a condominium complex or Home Owner's Association (HOA). The owners, represented by a board of directors, generally hire a property manager. The property manager handles day to day operations within the confines of the Covenants, Conditions, and Restrictions (CC&Rs), which is the law of the community. The board and/or property manager can adopt policies, rules, and regulations but they must be within the scope of the CC&Rs and adopted pursuant to the procedures required in the CC&Rs. If the owners, represented by the board of directors, decides that the property is not being managed effectively, they can hire an alternative entity to take over. The new manager may do things differently and even do things more efficiently but the new entity still has to operate within the same legal structure, the CC&Rs.

In this scenario, the owner has not changed at all, only the company that enforces the CC&Rs and manages the property according to them. This analogy can be applied very generally to the idea of the state taking over only management of federal lands and potentially receiving a fee for its services



from the federal government. In this instance, the federal laws (FLPMA and NFMA) are comparable (for the sake of this example) to CC&Rs. The CFRs are the equivalent of the policies, rules, and regulations of the HOA in our analogy.

BLM and USFS handbooks and policies are not legally binding, and if the state were managing federal lands, the state could choose which policies to implement, particularly if the state had a LUP (see 21.3). The State could also willingly complete necessary actions on federal land, such as wild horse gathers, recognizing that there is a likelihood that they would be sued by environmental groups or others, but choosing to complete the required action anyway. Not being stymied by the threat of lawsuit would greatly enhance the impact that a managing partner or agency has on the land, especially in terms of efficiency and expediency.

The payment to the state could be arranged in a number of different ways through either a flat fee or a percent of revenue generated in exchange for services. Generally, such fees are 20% to 25% of the revenues generated. This would only be possible if the state could identify significant cost savings in every program and potentially increase revenues. Receiving payments from the federal government would require the state to comply with a myriad of federal laws (i.e., Affirmative Action Plan development and compliance with complex Procurement Rules) on spending federal monies that we anticipate will increase management costs compared to current state spending.

While study of the concept of a takeover of the public lands included in this report was the intent of the legislation authorizing this study, a number of impediments from straightforward to the extremely complicated make this the option least likely to succeed, at least in the short-term. Significant changes in legislation would be necessary to make the transfer of management a reality. The political will at all levels may block or hinder such a transition. This report recommends utilization of existing mechanisms that allow for state and local community involvement in federal land management that we feel are not currently being utilized to their fullest potential. In essence, we recommend that smaller program pieces be developed for phasing management to the state. This will allow for more timely influence of federal land management actions and ultimately give the state more of a voice in federal land management activities without inheriting the crippling bureaucracy, costs, and litigation. The phased approach will also allow the state to engage in a significant way in management areas where current strengths exist such as within OSLI (i.e., grazing administration) and other state agencies. This will allow the state to effectively use existing program management knowledge and add the additional federal mandates and requirements such as NEPA, for example.

21.3 Statewide Land Use Plan

We recommend development of a Statewide Land Use Plan (also referred to as a Natural Resource Policy Plan (NRPP)). We further recommend that the state assist local governments in the development of a local NRPP. NRPPs are a type of “land use plan” that is frequently misunderstood. They do not direct zoning or any activity on private lands. The NRPP is a document which describes citizen's and the local government’s preferred environmental conditions (e.g., stated policy on livestock grazing, timber management, road maintenance/closure, oil and gas extraction), the local



citizen's "custom and culture," and the local economic baseline and needs for a strong economy. The NRPP is based on sound data and local public input. Federal laws (NEPA, FLPMA, NFMA) require Federal agencies to give meaningful consideration to local governments' land use plans (NRPPs) during federal agency decision making processes.

The purpose of completing this type of land use plan is so local governments can take advantage of the federal statutes requiring consistency review, cooperating agency status and coordination related to federal agency decisions. If a local written NRPP is in place, the federal government must consider it when making decisions that affect the local area.

Federal agencies and departments are mandated by various federal statutes to engage local governments in federal decision-making processes related to federal plans, policies, and programs that will impact the local land use, management of natural resources, the citizens, and the local tax base. The adoption of a local land use plan or NRPP by a local government is a critical tool allowing a local government to have a more substantive impact on federal decisions, plans, policies, and programs. Federal agency consideration of a local land use plan, resource plan, or "officially adopted policy" plays a key role in the success of a local government engaging as a cooperating agency or with consistency review under the NEPA, coordination under the FLPMA, or the NFMA, and in assisting in the Governor's consistency review process (43 USC § 1601-0.5(j)).

This tool is becoming a more widely implemented alternative as counties and states seek to have more of a voice in the federal processes. Numerous Wyoming counties have completed natural resource policy plans or are in process including Sublette, Sweetwater, Crook County, and Campbell counties. Other counties are in process of reviewing and revising plans as these documents will need to be updated periodically to reflect current needs and issues.

When people think of local land use plans they typically have in mind the general planning document that counties use to determine zoning, public services and facilities, transportation, and the like. But those plans apply to land that is largely within the county's jurisdiction and are based upon specific state authorization. By contrast, many rural counties and conservation districts have also officially adopted a separate plan, a NRPP, that contains policies relating to the surrounding federal land and reflects the local government's position on federal decisions. These local plans document and describe the local economic or tax base as well as local "customs and cultures" which the federal agencies are required to consider. It is this second type of planning, the NRPP, that is being proposed. In many cases, the "custom and culture" section of RMPs have been created by a federal employee generally unfamiliar with the community using outdated or inappropriate sources and data. This leads to discussions concerning the local community's priorities so vague as to be at best useless and outdated and at worst, a complete misrepresentation of the state of the community. RMPs may not be updated for 15 to 20 years, meaning that the "current" planning documents the agency is relying on may not reflect the current makeup of the community. An updated NRPP can be influential in the development of RMPs in that it can provide current, updated and accurate information regarding the County's custom and culture drafted by the community. The NRPP may also provide the county/state with standing for changes proposed to management that may benefit the community but may



contradict the outdated RMPs direction. Keeping the NRPP updated will allow the state to influence decisions with current data and the current interests of the state and local communities.

Local governments do not have jurisdiction over the federal government, and NRPPs cannot require federal land managers to take specific actions. For example, a conservation district cannot dictate in its NRPP how many grazing AUMs will be allocated for a given grazing allotment, or that wild horse populations shall be managed below AML to provide more forage for livestock grazing. These decisions are within the authority of the federal agency. There are policy positions, however, that local communities can take that can be influential on federal actions when it comes to agency policy decisions - such as a FWS decision electing not to perform categorical exclusion analysis for critical habitat designations for threatened and endangered species within a community that thinks one should be done.

Additionally, rural counties' socioeconomic well-being, health, safety, and culture are impacted, sometimes substantially so, by the management of the surrounding federal public lands. In Wyoming, the courts have clearly recognized that county governments are generally required by state law to use their authority to protect the economic, social, and general well-being of the people and resources that are within their jurisdictions, while soil and water conservation districts are required to provide for the ongoing stability and health of soil and water resources (Wyo. Stat. § 18-5-208). The reason a local government would go through a process to develop a NRPP is to ensure the local socioeconomic wellbeing, the culture and customs of the constituents, and natural resource health are considered in federal decisions. The state could assist a great by providing the resources to develop both the plans as well as the hard data and facts to include in the plans to support the preferred policies of a local community.

The disconnect between the federal agencies and local communities needs to be addressed in a collaborative manner. The development of a NRPP could improve state, federal, and local collaboration in a meaningful way. Truly collaborative programs could help break down the "bunker mentality" that may exist between federal, state, and local communities and special interest groups. The process of developing and updating local plans could help establish a local infrastructure in the form of committees and regular meetings to develop and maintain relationships between federal agency staff and members of the local community even when the federal employees change regularly. It would also, importantly, document, preserve, share, and pass on the special knowledge about an area held by the local community.

There are existing funding sources and on-going projects that could assist in this undertaking. The Wyoming County Commissioners Association is currently in the process of creating socioeconomic reports for all Wyoming counties through a partnership with the University of Wyoming and the State of Wyoming. The funding for this process is provided mainly through the State's Federal Natural Resource Policy Account (FNRPA) with a small contribution of \$2,750 from each county to help offset costs. These comprehensive reports will be essential tools to help facilitate local and state-wide natural resource policy plans as socioeconomic information is critical to the report. Counties can also apply for FNRPA funding directly to the Governor's office via the Natural Resource Policy Director for



a wide range of projects, but preference will be given for requests that according to W.S.1977 § 9-4-218, “enhance the ability of a county to participate in federal natural resource policy matters.”

21.3.1 Statutory Requirements for Local Government-to-Federal Interaction and Influence

21.3.1.1 The National Environmental Policy Act (NEPA)

NEPA applies to “every major Federal action significantly affecting the quality of the human environment” (42 USC § 4332(2)(C)). The courts have interpreted this to mean that every time the federal government spends any amount of money for almost any action, NEPA compliance is required. There are several ways local governments can participate in the NEPA process, depending on the type of federal decision, the level of commitment of the local government, and the goal of the local government.

First, the local government can use its local land use or resource plan as part of the federal agency’s “consistency review” process. Under this provision, if the federal agency, in the course of writing an EIS, receives a local land use or resource plan, NEPA commands the federal agency to “discuss any inconsistency of a proposed action with any approved state or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the [environmental impact] Statement should describe the extent to which the [federal] agency would reconcile its proposed action with the [local government] plan or law.” (40 CFR §§ 1506.2, 1506.2(d)).

NEPA also requires that copies of comments by state or local governments must accompany the EIS or EA throughout the review process (42 USC § 4332(c)).

Second, local governments (defined as any political subdivision of the state) can separately participate in the NEPA process as a “cooperating agency” (40 CFR § 1508.5). Pursuant to NEPA, an applicant for cooperating agency status must both (1) be a locally elected body such as a conservation district board of supervisors or a county commission; and (2) possess “special expertise.” A local government’s special expertise is defined as the authority granted to a local governing body by state statute. Wyoming statutes specifically authorize conservation districts to:

(M)anage, as agent of the United States (or any of its agencies), and enter into agreements with the “United States or any of its agencies, or this State or any of its agencies, to effect cooperation with the United States or any of its agencies under United States Public Law 566 approved August 4, 1954, or amendments thereto, in connection with the acquisition, construction, operation or administration of any land utilization, soil conservation, erosion control, erosion prevention, flood prevention projects, conservation of water, water utilization, disposal of water in watershed areas and other water projects within its boundaries (Wyo. Stat. § 11-16-122).

Boards of county commissioners serve as both administrative and policy-making bodies for their counties. While, generally, boards have only those powers specifically conferred by the State General Assembly, courts have held that they have such implied powers as may be necessary to carry out



their specified powers. Additionally, pursuant to Wyo. Stat. §§ 18-5-202, a county is charged with protecting the health, safety, and welfare of its citizens. These statutes clearly define the local government's "special expertise" required to be a cooperating agency pursuant to NEPA.

21.3.1.2 FLPMA

FLPMA, which governs the BLM, provides detailed requirements for "coordination" and "consistency" with local land use plans. With regard to the requirements for "coordination", FLPMA States (43 USC § 1712):

To the extent consistent with laws governing the administration of the public lands, coordinate the inventory, planning and management activities for such lands with the land use planning and management programs of other Federal departments and agencies of the State and local governments within which the lands are located . . . considering the policies of approved State and tribal land resource management programs.

Such coordination is to be achieved by:

- To the extent practical, the BLM must stay apprised of local land use plans (43 USC § 1712(c)(9)).
 - The BLM must assure that local land use plans germane to the development of BLM land use plans are given consideration.
 - To the extent practical, the BLM must assist in resolving inconsistencies between local and BLM land use plans.
 - The BLM must provide for the meaningful involvement of local governments in the development of BLM land use programs, regulations, and decisions. This includes early notification of proposed decisions that may impact non-federal lands.

Additionally, FLPMA requires BLM land use plans to be consistent with local land use plans, provided that achieving consistency does not result in a violation of federal law. FLPMA States: (43 USC § 1712(c)(9)).

Land use plans of the Secretary [of the Interior, BLM] under this section shall be consistent with State and local plans to the maximum extent he finds consistent with federal law and the purposes of this Act.

In other words, FLPMA requires both "coordination" and "consistency review." Coordination should include both regularly scheduled meetings between the various local governments and BLM managers as well as inviting local BLM staff to local government meetings (Bureau of Land Management, 2012). FLPMA's consistency review requirement states that if a BLM land use plan is inconsistent with a local land use plan, the BLM owes an explanation of how achieving consistency would result in a violation of federal law.

Finally, FLPMA requires that the BLM also provide for a Governor's consistency review as part of the land use planning process (43 CFR § 1610.3-2(e)).



21.3.1.3 The National Forest Management Act (NFMA)

NFMA, which governs the USFS, requires the agency to “coordinate”. The NFMA requires:

[T]he Secretary of Agriculture shall develop, maintain, and, as appropriate, revise land and resource management plans for units of the National Forest System, coordinated with the land and resource management planning processes of State and local governments and other Federal agencies (16 USC § 1604(a)).

The fact that the USFS is directed to “coordinate” with local governments implies, by its plain meaning, that the USFS must engage in a process that involves more than simply “considering” the plans and policies of local governments; it must attempt to achieve compatibility between USFS plans and local land use plans.

21.3.1.4 Governor’s Consistency Review Process

State Governors are entitled to a separate consistency review of BLM and land use plans, revisions, and amendments. Title 43 CFR § 1610.3(c) provides an opportunity for the Governor to review all proposed plans to identify any inconsistencies with state or local plans. The section states specifically:

(c) State Directors and Field Managers shall provide other Federal agencies, State and local governments, and Indian tribes opportunity for review, advice, and suggestion on issues and topics which may affect or influence other agency or other government programs. To facilitate coordination with State governments, State Directors should seek the policy advice of the Governor(s) on the timing, scope and coordination of plan components; definition of planning areas; scheduling of public involvement activities; and the multiple use opportunities and constraints on public lands. State Directors may seek written agreements with Governors or their designated representatives on processes and procedural topics such as exchanging information, providing advice and participation, and timeframes for receiving State government participation and review in a timely fashion. If an agreement is not reached, the State Director shall provide opportunity for Governor and State agency review, advice and suggestions on issues and topics that the State Director has reason to believe could affect or influence State government programs.

(d) In developing guidance to Field Manager, in compliance with section 1611 of this title, the State Director shall:

(1) Ensure that it is as consistent as possible with existing officially adopted and approved resource related plans, policies or programs of other Federal agencies, State agencies, Indian tribes and local governments that may be affected, as prescribed by §1610.3–2 of this title;

(2) Identify areas where the proposed guidance is inconsistent with such policies, plans or programs and provide reasons why the inconsistencies exist and cannot be remedied; and

(3) Notify the other Federal agencies, State agencies, Indian tribes or local governments with whom consistency is not achieved and indicate any appropriate



methods, procedures, actions and/or programs which the State Director believes may lead to resolution of such inconsistencies.

If the Governor's comments result in changes to the plan, the public should be re-engaged in the process.

21.4 Stewardship Agreements and Stewardship Contracts

We recommend the State of Wyoming consider mechanisms such as Stewardship Agreements and Stewardship Contracts to influence the management of federal lands. We further recommend the state develop a committee or task force to identify potential projects within the state that could be accomplished through these mechanisms.

The Stewardship Contracting authority authorizes the USFS and BLM via agreement or contract, to enter into stewardship projects to perform services to achieve land management goals and meet local and rural community needs. Originally an experiment with these agencies, permanent authorization of stewardship contracting was in the 2014 Farm Bill. This authorization confirmed the need and the viability for a collaborative approach between federal and state agencies and the public and the value of giving local communities a larger role than consulting agency status under NEPA. For the purposes of this study, the focus shall be on stewardship agreements as defined as an agreement "used for the joint accomplishments of work by an agency and a partner organization for the benefit of both." (*Stitching the West Back Together*). These agreements help agencies achieve land and natural resource management goals while promoting closer public-private working relationships.

For the sake of this study, we are defining stewardship contracting as a fee-for-service action. The USFS applies the value of timber or other forest products collected from stewardship sales as an offset against the costs to accomplish land and resource management objectives. If the offset value exceeds the value of the resource improvement treatments, those receipts are retained and deposited in the Stewardship Contracting fund and are available, until expended, for other authorized stewardship projects. Stewardship contracts are awarded on a best-value basis and may be up to 10 years in duration.

Stewardship Contracting helps USFS achieve land and natural resource management goals while promoting closer public-private working relationships with local communities by using the value of forest products to offset the cost of services. USFS considers stewardship contracts as a critical tool to implement restoration projects across priority watersheds and for Collaborative Forest Landscape Restoration Projects (CFLRP). Use of this authority creates jobs in the forest products industry, helps to sustain communities, and develops and maintains forest operations infrastructure while using the value of forest products to offset the cost of services.

Currently these agreements are usually limited to watershed restoration and maintenance, restoration and maintenance of wildlife and fisheries habitat, and promotion of healthy forests through prescribed fires and reduction of fire hazards. However, there is not a restriction on the



scope of these agreements which means that the state could potentially enter into stewardship agreements with the BLM or USFS in order to achieve large scale initiatives—programmatic or geographic in focus. Use of these agreements could be extended to expand scope and opportunities for project implementation.

For example, a stewardship contract could be created in Wyoming by a federal agency contracting OSLI to complete the term permit renewal documents for a grazing allotment. The work would be paid for by an agreed-upon fee in an agreed upon timeframe. Stewardship contracting could be used to immediately address some of the programmatic challenges such as:

- Noxious weed inventories and control
- Standards and Guidelines for Rangeland Health data collection and analysis
- Term permit renewal NEPA document development
- Completion of cultural resources surveys
- Completion of botanical or special status species surveys
- Rangeland monitoring
- Timber harvests

The scope of stewardship contracts is significantly smaller than that of stewardship agreements. Stewardship contracts may be a useful tool to use while moving toward a more collaborative and larger-scale stewardship agreement. One example of a Stewardship Agreement that has been successful is the Weaverville Community Forest in northern California. However, the word “community” in the name is a bit deceptive. It is a community-managed forest but it is located on federal lands administered by BLM and USFS. The Trinity County Resource Conservation District (TCRCD) entered into two 10-year stewardship agreements—one with each agency—working cooperatively with the agencies to manage the land in accordance with the community’s priority. Cost share is a portion of this agreement and helps to fund land management projects. TCRCD develops and oversees a comprehensive management plan with management provided by the TCRCD board of directors and input from a steering committee of local citizens. The strategic plan emphasizes managing for the following:

- Watershed health
- Recreation
- Forest Health
- Education and Outreach
- Economic opportunities for the community
- Environmental monitoring

Projects have included trail construction, forest thinning projects, invasive-plant removal, environmental-education programs, and water-quality monitoring. All people involved with these projects have been residents of the county, helping to bolster the local economy. These projects are a good example of the county having a significant role in the management of federal lands.



An advantage of the stewardship agreement is that TCRCO has been able to utilize funding from grants from federal and state partners that would not be possible without their involvement. If the state were to become involved in stewardship agreements with BLM and USFS, it is possible additional funding could be secured to help enhance the agencies' funding.

21.5 Cooperative and Pilot Programs

A number of mechanisms exist that could be continued, expanded, or created to use existing Memorandums of Understanding or Agreement (MOU/MOA) to improve management of federal lands. Increased collaboration with federal agencies through these mechanisms could expand the influence of the state in land management actions.

In 1998, a MOU was executed between the USDA Forest Service, Medicine Bow-Routt National Forest, and the State of Wyoming. The purpose of the MOU was to facilitate cooperation and coordination between the Forest Service and the State through a Wyoming Capital City Coordinator position. The focus of the position was to provide a liaison between the Governor's Office, State agencies, local governments, the Forest Service, and other federal land agencies.

The term of the MOU commenced on February 1, 1998, and continues today. The MOU provides that the Forest Service shall provide salary and travel costs and vehicle expenses for one position, the Capital City Coordinator. The state provided office space, telephone, fax machine, mail services, computer hardware and software and computer support to the coordinator, and the USFS reimbursed the state for these monthly expenditures.

This type of MOU could be expanded or carried out on other federal lands.

The idea of improving management on federal lands through partnerships with other organizations or entities is not a new one. There are currently a number of non-profits that can (or already do) provide funding and volunteer support for federal lands management. A list of existing organizations in the State of Wyoming government that could assist with management of federal lands within their area of expertise is provided in Section 3.4.

There is an extensive network of collaborators and long-term partners including federal and state agencies, tribal governments, nongovernmental organizations, and local communities. Organizations include the Nature Conservancy, Trout Unlimited, the National Fish and Wildlife Foundation, the National Forest Foundation, Rocky Mountain Elk Foundation, Wildlife Forever, Ducks Unlimited, and the National Wild Turkey Federation. In FY 2011, external partners helped the agency complete over 6,000 fish and wildlife projects on national forests and grasslands. The dollar and in-kind value of these partner contributions totaled nearly \$80 million. In FY 2015, 615 volunteers in Bridger-Teton alone provided 21,758 hours of service valued at over half a million dollars. Region 2 forests also had large-scale volunteer numbers and contributions.

Additionally, non-profit organizations that currently are involved in land management on federal lands and could potentially have their role expanded include (this is not a complete list):



- Land Trusts
- Foundation for North American Wild Sheep
- Wyoming Stock Growers Association
- Wyoming Stock Growers Agricultural Land Trust
- Wyoming Wool Growers Association
- National Association of Counties

USFS relies heavily on partnerships which have increased the agency's capacity to conduct restoration through sizeable contributions of matching funds and in-kind support from external partners. Successful partnerships and collaborative efforts have improved millions of acres of terrestrial habitat, and thousands of miles of streams for imperiled, common, and economically significant species on USFS administered lands and have supported ecosystem services such as clean water and woody biomass.

USFS has enhanced its work on the Forests through partnerships and collaborations that range from simple volunteer work, to stewardship contracts to matching funds for joint private/public collaborations.

The USFS has partnership agreements with organizations such as American Forests, the National Arbor Day Foundation, the National Forest Foundation, and the National Garden Clubs as well as private businesses to increase the amount of NFS lands receiving reforestation treatments following catastrophic wildfires and other natural events.

The Collaborative Forest Landscape Restoration (CFLRP) program is a matching fund program that encourages collaboration on ecosystem restoration of priority forest landscapes and was first authorized in 2009. The legislation behind it authorizes funds for restoration of priority forest landscapes that must be at least 50,000 acres in size, with the aim of recovering resilience and adaptive capacity of ecosystems that have been degraded, damaged, or destroyed.

CFLRP funds can be matched with either USFS funds from other programs (from appropriated, permanent and trust funding sources) or matched with outside partnership funds or in-kind contributions, as well as with restoration treatments funded through timber value within a stewardship contract. The CFLRP funds may be used to pay up to 50 percent of the cost of carrying out and monitoring ecological restoration treatments that occur on NFS lands. Activities can include: reducing the risk of uncharacteristic wildfire, including the use of fire for ecological restoration and maintenance and reestablishing natural fire regimes; improving fish and wildlife habitat; maintaining or improving water quality or watershed function; preventing, remediating, or controlling invasions of exotic species; maintaining, decommissioning, and rehabilitating roads and trails; and facilitating the removal and utilization of woody biomass and small trees produced from projects. No more than \$4 million of CFLRP funds can be allocated to an individual project in any one year. Land areas for consideration must have a substantially complete restoration strategy, be primarily composed of forested NFS land, and be accessed by wood-processing infrastructure to use the woody biomass and small-diameter wood removed during ecological restoration treatments.



Rangeland Monitoring

A MOU was created between the National Cattlemen’s Beef Association Public Lands Council (PLC) and the BLM and the USFS in 2004. The MOU (2004) (Appendix B) is not used to its full potential. Often completion of term permit renewal documents can be held up by a lack of monitoring data.

Grazing Term Permit Renewal Process

Across the West, federal agencies are suffering from “analysis paralysis.” The grazing term permit renewal process has all but stopped due to continued threats of litigation, and more recently due to the signing of the Greater Sage-Grouse RMP/LRMP Amendment. There are a number of mechanisms the state could use to be assist in this process. Section 307(b) of FLPMA authorizes the Secretary of the Interior to enter into agreements involvement the management, protection, development, and sale of public lands. The PLC/BLM/USFS MOU could be expanded to include the term permit renewal process. Federal agencies could also use the Stewardship Contracting authority to authorize the state to complete the term permit renewal documents in conjunction with the agency.

These types of agreements could help with the current backlog of term permit renewals and workload, improve communication between the state and federal agencies, and give state and local communities a sense of more control over federal lands in their community.

21.5.1 Land Exchanges

Eliminating the checkerboard (or at least creating blocks of land in the same ownership) could eliminate some of the tensions that come from trying to manage a fragmented landscape. The BLM Lands and Realty Program manages their land exchange program. Land exchanges can consolidate ownership and protect environmentally sensitive areas. By exchanging public land that is isolated and difficult to manage, the BLM is able to acquire other lands with importance for recreation, wildlife, fisheries, wetlands, habitat for threatened and endangered species, wilderness, open space, scenic, cultural and other resource conservation purposes. Land exchange allows the BLM to reposition lands into more manageable units and to meet community expansion needs.

The process is lengthy but potentially worthwhile. Five phases (development of the exchange proposal, feasibility evaluation, application processing, decision analysis and approval, and title transfer) can take a minimum of 24 months to complete, and in cases the authors are aware of, a decade is not uncommon in controversial or high public value area.





22. Acronym List

ACEC:	Area of Critical Environmental Concern
AML:	Appropriate Management Levels
AMLPL:	Abandoned Mine Lands Program
AMS:	Analysis of the Management Situation
APD:	Application for Permit to Drill
AQD:	Air Quality Division
ARPA:	Archeological Resources Protection Act
AUM:	Animal Unit Month
BLM:	Bureau of Land Management
BOR:	Bureau of Reclamation
CC&Rs:	Codes, Covenants and Restrictions
CEQ:	Council on Environmental Quality
CERCLA:	Comprehensive Environmental Response, Compensation, and Liability Act
CFR:	Code of Federal Regulations
CITES:	Convention on International Trade in Endangered Species and Wild Fauna and Flora
DOI:	Department of the Interior
EA:	Environmental Assessment
EIS:	Environmental Impact Statement
EPA:	Environmental Protection Agency
ESA:	Endangered Species Act
FLPMA:	Federal Land Policy and Management Act
FOIA:	Freedom of Information Act
FY:	Fiscal Year
GIS:	Geographic Information System
HMA:	Herd Management Area
HOA:	Home Owner's Association
LRMP:	Land Resource Management Plan
LUP:	Land Use Plan



LWC:	Land with Wilderness Characteristics
MUSY:	Multiple-use and Sustained Yield
MOU:	Memorandum of Understanding
NCA:	National Conservation Areas
NEPA:	National Environmental Policy Act
NFMA:	National Forest Management Act
NHPA:	National Historic Preservation Act
NHT:	National Historic Trails
NLCS:	National Landscape Conservation System
NOC:	National Operations Center
NOI:	Notice of Intent
NPS:	National Park Service
NRCS:	National Resources Conservation Service
NSS:	Native Species Status
OGCC:	Wyoming Oil and Gas Conservation Commission
ONRR:	Office of Natural Resource Revenue
OSLI:	Office of State Lands and Investments
PFC:	Proper Functioning Condition
PILT:	Payments in Lieu of Taxes
RCRA:	Resource Conservation and Recovery Act
RMP:	Resource Management Plan
ROD:	Record of Decision
ROW:	Right-of-Way
SHPO:	State Historic Preservation Officer
SMCRA:	Surface Mining Control and Reclamation Act of 1977
SRS:	Secure Rural Schools
USDA:	U. S. Department of Agriculture
USFS:	U.S. Forest Service
USFWS:	U.S. Fish and Wildlife Service





USGS: U.S. Geological Survey
WDEQ: State of Wyoming Department of Environmental Quality
WGFD: Wyoming Game and Fish Department
WSA: Wilderness Study Area
WSEO: Wyoming State Engineer's Office
WYAO: Wyoming Area Office of the Bureau of Reclamation
WYDOT: Wyoming Department of Transportation





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Appendix A: BLM Budget Limitations

Limitations, Qualifications and Information regarding the budget data presented for the BLM

The costs presented in this report should only be considered estimates. Federal agency budgets are extremely complex. While it is easier to isolate data specific to Wyoming from BLM budgets compared to the USFS because the BLM is generally organized by State, there are nevertheless limitations to the data presented due to intertwined funding mechanisms and the organization of the agency budget.

There were several areas where costs to manage lands that are not contemplated for transfer or for inclusion in this study are included because data could not be meaningfully separated or extricated. For example, the costs for the work the BLM does for oil and gas leases on tribal lands in Wyoming and for the relatively modest amount of lands in Nebraska that are managed by BLM Wyoming (about 6,600 federal surface acres and 240,000 federal mineral acres) are included because they could not be separated out and removed.

It also important to keep in mind that there are expenses associated with the management of federally owned lands administered by the BLM in Wyoming that are not captured in this report. This would include considerable support provided by not only the national headquarters in Washington DC, but administrative and operational support provided by the Fire and Aviation program headquartered at the National Interagency Fire Center (NIFC) in Boise, Idaho, and by approximately 350 employees and 100 contractors at the NOC in Denver, Colorado who provide technical and operational support for human resources, information technology, geospatial services, finance, and acquisition. Another area of significant costs not included are the those associated with the ONRR administration of the collection, verification, auditing and disbursement of most mineral revenue generated on public lands in Wyoming.

The BLM management costs presented in this report came from budget data provided by the BLM Wyoming State office and it generally reflects how the money was spent each year, which may differ from what was budgeted in a particular year. Budget data is updated as relevant paperwork is processed and therefore the figures presented in various publicly available reports (BLM annual reports, Congressional Research Reports, Government Accountability Office Reports, ONRR data) can differ depending on when the information used in a report was accessed.

Funding amounts for BLM programs within Wyoming may be consistent from year to year but also can vary considerably for a wide variety of reasons including Presidential, Congressional, DOI and BLM priorities. Legislative mandates from Congress may introduce pilot programs for several years that are later abandoned or modified (and occasionally re-introduced). For example, beginning in 2008 an additional fee was charged for all new APD applications to offset appropriations for management expenses and this this program, which supplied as much as \$20 million in some years to the budget for oil and gas management in Wyoming, recently ended. Also, the budget codes for particular activities may change from one year to the next, merge, be split into more than one budget line or the activity may be removed from the state budget altogether. For example, in the table





detailing costs for Workforce and Administration, the costs for IT support in Wyoming are included for FY 2010 to FY 2013 (around \$90,000/ year) but they are not represented for FY 2014 because that year most of the IT support was moved to NOC.

The BLM budgets detailing the costs of management are organized both by program but also according to the funding source, which may be discretionary appropriations, mandatory appropriations, grants, offsetting collections and fees, and reimbursements. Offsetting collections and fees includes many cost recovery accounts where the BLM charges applicants for work and activities when deemed appropriate and permitted by law in order to recover expenses. This can cover a wide variety of cost recovery charges including copies of documents made for members of the public, costs associated with processing a special recreation permit, processing ROW applications and for NEPA work within the mineral programs. Other budget accounts reflect reimbursements from other federal agencies for work done by the BLM. For example, the BLM cadastral program does all the cadastral surveys for other agencies and specific reimbursement accounts reflect the costs of that work and the funding comes from other agencies budgets. Other BLM activities are paid for out of certain permanent accounts and trust funds which may contain all or a percentage of revenue granted from activities on public lands. Spending out of these accounts is mandated by the accounts authorizing legislation which dictates specifically how and/or where the money may be spent (thus “mandatory spending”). The totals provided representing the approximate costs for the BLM to manage public lands in Wyoming includes all of these costs—whether paid for by discretionary spending, mandatory spending, reimbursements or cost recovery.

The BLM, along with the USFS, receives most of its funding from Congress through Title III of the regular Interior, Environment, and Related Agencies appropriations bill. BLM budget’s discretionary appropriations for FY 2013 were approximately \$1.7 billion. Together with mandatory spending of approximately \$333 million, total appropriations for the agency were just over \$2 billion in FY 2013. As noted, the mandatory appropriations come from permanent payment accounts and trust funds that are provided for in various laws where the authority to spend the money and the direction on how to spend the money is in the law itself. Each State BLM Office receives a portion of the annual BLM appropriations. Some appropriations are not allocated to any State Office but are distributed between the BLM headquarters in Washington DC and various national programs (NOC, Fire and Aviation) or to accounts that support all land management activities by the BLM.

In Wyoming, in FY 2013 as an example, there was approximately \$96.1 million of discretionary appropriations and \$6.6 million in mandatory spending out of a total BLM appropriation for Wyoming of approximately \$102.7 million (Vincent, Coman, Corn, & Mallet, 2014).

The main accounts which fund BLM activities through discretionary appropriations are:

- Management of Land and Resources
- Wildfire and Management
- Oregon & California Land Grants
- Working Capital Fund



- Services, Charges, Deposits, and Forfeitures
- Land Acquisition

Oregon and California Land Grants does not apply to Wyoming. The Land Acquisition account funds the purchase of land (or interests in land such as mineral rights or conservation easements). This account represented 1.2% of the BLM’s total discretionary appropriations in FY 2013. Any costs associated with the acquisition of new lands in the Wyoming BLM budgets have been disregarded for the purposes of this report.

Management of Land and Resource is one of the main operating accounts for BLM and it covers the expenses for the bulk of BLM operations and activities. Of the \$1.7 billion in discretionary appropriations requested for BLM in FY 2013, just over \$1 billion was for this account, almost 60% of BLM’s discretionary appropriation. The Management of Land and Resource account funds the following activities and BLM programs:

- Resource Protection and Maintenance
- Land Resources
- Wildlife and Fisheries
- Threatened and Endangered Species
- National Landscape Conservation System
- Recreation
- Energy and Minerals
- Mining Law Administration
- Realty and Land Ownership
- Communication Sites
- Transportation and Facilities Maintenance
- Workforce and Organizational Support

There are no National Landscape Conservation System lands in Wyoming so there are no expenses associated with that program (National Monuments are sometime managed by BLM but in Wyoming they are all managed by the NPS and Wilderness Areas in Wyoming are all managed by the USFS).

The organization of the costs to manage BLM administered lands in Wyoming in Table 4 are, to the extent practicable given the complexities, grouped by major program or activity. The totals in the table reflect program costs from discretionary appropriations grouped together with other costs determined to be most applicable to a particular program from all of the various permanent accounts, trust funds, reimbursements, working capital, service charges, deposits, forfeitures, and cost recovery accounts. For example, costs paid for from funds in the Range Improvements Account are grouped with the program costs for Range Management Program. Costs for activities paid for from the Forest Ecosystem Health and Recovery Fund (FEHRF) are included in Forestry expenses which are included in the total for Land and Range Resource Management. A breakdown of specific costs for labor and operations for each major program in Wyoming are included in charts in the





relevant section of the report for that particular activity. While the costs to manage wild horses is included in Table 4. Total expenses incurred in Wyoming from BLM-administered programs, FY 2010–2014.) within the total costs presented there for “Land and Range Resource Management”, Section 12 of the report on Wild Horse Management has a chart with the labor and operations costs for the Wild Horse and Burro Program in Wyoming. Similarly, the costs for land use planning in Wyoming is included in the Resource Protection and Maintenance total in the Table and the specific costs for BLM’s Resource Management Planning in Wyoming is in the Land Use Planning Section.



Appendix B: USFS Budget Limitations

The Organization of the USFS Budgets and the challenges of Extracting Wyoming Data

The costs represented in this report should only be considered estimates. The organization of the USFS budget is particularly complex and activities overlap programs. Forest Service Regions and National Forests and Grasslands cross state boundaries. According to the USFS there is no way to allocate costs of management according to state boundaries. Identifying spending and costs that are relevant to management within a particular state, therefore, is exceptionally challenging. There are eight National Forests with acreage in Wyoming. This report used the budgets and spending in four of them: Bridger-Teton National Forest, Shoshone National Forest, Bighorn National Forest, and Medicine Bow-Routt National Forests and Thunder Basin National Grassland. The first three are entirely within Wyoming. Medicine Bow-Routt National Forests and Thunder Basin National Grassland has 62% of its acreage in Wyoming but budget officers in Region 2 estimate that only about 40% of its budget is spent for management activities in Wyoming.

This report focused on the accounts and Budget Line Items (BLI) from the budgets for those selected National Forests that best reflect the costs most directly related and necessary to the day to day management work of the agency as opposed to costs associated with activities such as forestry research, private forestry assistance or acquiring new land.

An enormous amount of administrative, technical, and other support is provided from outside of the National Forests in Wyoming. Management costs associated with support provided by the regional headquarters of Region 2 and Region 4, the Albuquerque Service Center which provides Budget and Finance services, and the national headquarters for the USFS are not reflected in these figures. These costs, while relevant, cannot be accurately and meaningful quantified for the State of Wyoming within the scope of this report.

An overview is provided below to detail some of the challenges of extricating meaningful cost data from the USFS budgets within the scope of this report.

While the USFS is part of the USDA, it receives most of its funding from Congress through Title III of the regular Interior, Environment, and Related Agencies appropriations bill. Total enacted appropriations (both discretionary and mandatory spending) for FY 2014 for the Forest Service was over \$6.11 billion. Discretionary appropriations which accounts for the bulk of the budget of the agency totaled approximately \$5.48 billion (Hoover, Forest Service Appropriations; Five -Year Data and Trends and FY 2017 Budget Request, 2016). This included \$600 million for a fire transfer repayment made in FY 2014 to essentially pay back the agency for appropriations used in previous years for wildfire suppression that were originally appropriated and budgeted for other USFS programs (United States Department of Agriculture, 2014). Average discretionary appropriations in recent years (FY 2011 to FY 2015) has been about \$5 billion which usually represents about 88% of the agency's budget (Hoover, Forest Service Appropriations: Five-Year Trends and FY 2016 Budget Request, 2015). In some years USFS receives additional discretionary funds through supplemental and





emergency appropriations bills. These are frequently related to wildfires like the additional appropriation in FY 2014 for past fire transfers.

In addition to the discretionary appropriations authorized by Congress annually, there are approximately twenty “permanent accounts” and four “trust funds” that provide money for the work of the USFS. In the USFS budget these accounts appear under “Permanent Appropriations” and spending from these accounts is commonly referred to as mandatory spending. This mandatory spending averages about 13% of total appropriations for the USFS annually. The money in these accounts is required by law to be spent on specific programs (mandatory spending) and not in any way Congress may choose (discretionary spending). These accounts hold revenue generated from various activities on the National Forests. The money in some of these accounts is considered an offsetting collection or offsetting receipts because cash inflows to a specific budget account which are used to pay for certain government activity and the inflows are offset against budget authority and spending of the collecting agency.

Some of these “permanent accounts” are truly permanent, while some have sunset dates. They may only be authorized for a fixed term, for example, ten years. Funding for most accounts is related to revenue collected for specific activities in the National Forest System such as timber sales, recreational fees, or license fees for the use of Smokey Bear. The spending authorized out of these accounts may be limited by geography and/or for specific programs or activities as dictated by its legislation. For example, fees charged to visitors at certain recreation sites are deposited in the Recreation Fees, Forest Service Fund and then spent, usually at the same facility where the fees were collected, to maintain and enhance recreational opportunities and visitor experiences and to generally ensure visitor enjoyment, access, health, and safety. This could include a wide range of activities including annual operations and maintenance of sites and facilities, signage, wildlife habitat restoration, resource protection, and law enforcement. The primary legislation authorizing this account, the Federal Lands Recreation Enhancement Act, was enacted in 2004 and it is currently authorized through September 2016. Another permanent account, the Timber Salvage Sales Fund, enacted in 1976, is permanent and has no sunset date. It collects revenue from sales of timber from dead and dying trees to cover administrative costs for future salvage timber sales including the engineering, design, and administration of necessary roads to harvest salvage timber.

One of the more critical permanent accounts for many rural communities in Wyoming is the Payments to States account (frequently referred to as SRS Payments, although SRS is only one part of this complex funding mechanism). One source of the funds that go into this important permanent account are deposits of the mandated share of forest revenue that must be made to local communities under the Payments to States Act of 1908 (also known as the 25% Fund or Act of 1908). The revenue is then dispersed from this account to communities under various formulas - either pursuant to the 1908 Act or the alternative payment a community may opt to receive under the Secure Rural Schools and Community Self Determination Act of 2000 (SRS). See Section 20.1.

Each account has their own Budget Line Item (BLI) and while they are frequently intended to be a dedicated source of funding for a particular activity such as improving facilities and trails in a





recreation area, brush disposal, reforestation, or habitat restoration; their broadly written mandates often overlap. Funding for these same activities also comes from the agency's discretionary appropriations and a separate BLI for specific programs. This makes it very difficult to track the costs for one particular activity.

The discretionary spending authorized each year, which typically accounts for 88% of the USFS budget, is divided into six main accounts. These accounts align generally with the both the organization of the appropriations law and provides a framework of the primary work done by USFS.

The work of the Forest Service is comprised of three principal tasks—managing the 193 million acres of the National Forest System, research to gather information and develop new technologies to support sustainable forests, and providing assistance to State, local, private, and international forest owners.

The seven primary accounts are (Hoover, Forest Service Appropriations: Five-Year Trends and FY 2016 Budget Request, 2015):

- Forest and Rangeland Research (FRR). The FRR account funds research and development efforts to provide scientific information and new technologies to support sustainable forest and rangeland management. This account has averaged approximately 6% of USFS discretionary appropriations (which comprises about 88% of total spending) in recent years
- State and Private Forestry (S&PF). The S&PF account funds programs to provide financial and technical assistance to nonfederal forest owners and managers, and to protect communities and the environment from insects, diseases, and invasive plants. S&PF has averaged approximately 5% of USFS discretionary appropriations
- Land Acquisition (LA). LA activities allow the USFS to acquire lands for conservation or ownership consolidation purposes. LA activities are funded primarily through the Land and Water Conservation Fund although there are two smaller land acquisition accounts which Congress funds – one for special act land acquisitions and one to complete land exchanges. In total, LA account and related accounts received approximately 1% of USFS discretionary appropriations on average
- Capital Improvement and Maintenance (CI&M). CI&M activities help the USFS provide and maintain facilities, roads, trails, and other infrastructure needs. The CI&M account received approximately 7% of USFS discretionary appropriations in recent years
- National Forest System (NFS). NFS appropriations fund management of the 193 million acres of national forests and grasslands. This account includes several subaccounts, the largest of which is the Forest Products subaccount, which generally receives just over 20% of the NFS appropriation and funds the Timber Sales program. The NFS account averaged approximately 30% of the USFS discretionary appropriations
- Wildland Fire Management (WFM) and FLAME Wildfire Suppression Reserve Fund (FLAME). The WFM account funds activities related to the management of unplanned and unwanted





fires, including planning for and suppression of wildfires. The FLAME account was established under the Federal Land Assistance, Management, and Enhancement Act of 2009 for emergency wildfire suppression activities. Funding for wildland fire management activities is sometimes provided outside of the regular Interior appropriations bills when there is a need (e.g., a severe fire season). In this report, all expenses will generally be reflected in the WFM account. Together, WFM and FLAME appropriations, along with supplemental appropriations (usually for wildfire), averaged 54% of the USFS discretionary appropriation from FY 2011 through FY 2015

- Other. In addition to the six larger accounts listed above, there are several relatively small accounts. They provide appropriations for the range betterment fund; for the agency to receive gifts, donations, and bequests for research; and management of national forest lands for subsistence uses. Together, these “other” accounts received less than 0.5% of USFS discretionary appropriations

The discretionary appropriations for these primary accounts is first allocated among the nine Forest Service Regions, five research stations and two service centers and laboratories, and the national headquarters of the Forest Service in Washington, DC. Then, for most of the accounts, the money is further allocated to individual forests within the region. Some accounts remain managed at the national level including wildfire suppression, which is allocated based on the need of a particular fire season. Appropriations by Congress may also be allocated and directed to specific accounts or subaccounts or to specific activities and programs. The discretionary appropriations to pay for the activities of the USFS through all of these accounts is supplemented by spending authorized out of the permanent accounts and trust finds.

This report focuses on the spending from the USFS accounts that best reflect the costs most directly related and necessary to the day to day management activities of the agency (as opposed to forestry research or land acquisition). In particular, this report utilized costs in the budgets for the accounts for the National Forest System, Capital Improvements and Maintenance, and Wildland Fire Management and FLAME, and the spending from the permanent accounts and trust funds determined to be most relevant to management. For example, money spent in Wyoming from the Licensee Program for Smokey Bear Account was not incorporated but money from the Brush Disposal Account was utilized.

The programs for which costs were generally not included in this report are those associated with the accounts for Forest and Rangeland Research, Land Acquisition, and State and Private Forestry. That is not to suggest that these programs are not relevant to the task of management of the public lands in Wyoming by the Forest Service. In many respects this work is critically important but they were nevertheless excluded as having no direct bearing on day to day management activities. The report includes a brief overview of the work done in these programs with any information about activities that are particular to Wyoming (for example, the GLEES research station in Wyoming) but the cost data is not included.





An additional complication for consolidating and comparing costs for various programs is that periodically the USFS has consolidated various budget line items and moved some budget line items from one to another of the six primary accounts and/or within the primary accounts. For example, Volunteer Fire Assistance and State Fires Assistance used to be under State and Private Forestry but as of FY 2014 they are in the Wildland Fire Management and FLAME Account. Some fires costs that were historically shifted to Suppression were subsequently moved to preparedness. Forest Health Management funding has been consolidated under State & Private Forestry when it formerly received funding from both State and Private Forestry and Wild Fire Management.

Bridger-Teton's budget has been part of a pilot program called Integrated Resource Restoration (IRR) which all of the Region 4 National Forests have utilized for their budgets since FY 2012. IRR merged into one the budget line items for Wildlife and Fisheries Management, Forest Products, and Vegetation & Watershed Management in the National Forest System Program along with the Legacy Roads & Trails budget line item from the Capital Improvement & Maintenance Program and select funding (non-wildland-urban interface spending) from the Hazardous Fuels budget line item of the Wildland Fire Management Program. This makes comparisons between costs for some activities between regions as well as consolidating costs to even approximate the Wyoming total for these particular activities impossible after FY 2011.

This IRR pilot program makes it impossible to get even an approximate figure for Wyoming of how much USFS budgeted to those programs that were merged into the IRR budget line. For example, in Table 1 the amount shown as the total budget for all of Wyoming for Wildlife and Fisheries Habitat Management in FY 2010 and FY 2011 is the amount budgeted for National Forests in Wyoming for that activity. However, the comparable total for Wildlife and Fisheries Habitat Management for all forests in Wyoming in FY 2012 to FY 2014 is not the same data because the costs for activities that had been budgeted to Wildlife and Fisheries Habitat Management in Bridger-Teton National Forest after 2011 are in the IRR (NFRR) BLI. It is not possible to meaningfully extract the data from the IRR BLI for costs specific to Wildlife and Fisheries Habitat Management. Likewise, the total costs listed for Wildland Fire Management in all of Wyoming after IRR was adopted in FY 2012 does not include money for work related to the subaccount for Hazardous Fuels - Non-Wildland Urban Interface in Bridger-Teton National Forest.

Another significant caveat is that the budgets for the Region 2 National Forests in Wyoming are lower in some years than they would traditionally have been due to re-allocations of their usual funding to work done to address the damage done by bark beetles across the entire Region. The budgets for the Wyoming National Forests in Region 2 were subject to Bark Beetle Theatre Funding from FY 2010 to FY 2012. Theatre funding resulted in cuts to each of the Region 2 National Forests typical budget and in some cases significantly. In FY 2010, the first year of Bark Beetle Theatre funding, USFS budget officers stated that as much as 30% of Medicine Bow-Routt Thunder Basin's customary funding was cut and reallocated to Bark Beetle projects across Region 2. Bark Beetle Theatre Funding was a mechanism used to pay for critical mitigation work to combat an unprecedented Bark Beetle epidemic and in particular to address safety concerns over dead and falling trees near roads, trails,





campgrounds, powerlines, buildings, and residences. Funding to combat Bark Beetle in those years did not have a dedicated budget line item. While some supplemental funding was given to Region 2 to fight Bark Beetle, most of the funds for this dedicated pool of money was withdrawn from existing budget line items of all of the Region 2 forests and relocated to Bark Beetle to provide a stable level of funding dedicated to prioritized work. Funding cuts for those years cut across programs including facilities and maintenance, roads, trails, recreation, forest products, inventory and monitoring, vegetation and watersheds, landownership management, and hazardous fuels. The money was spent across all of Region 2. The budget officers have said that it is not possible to meaningfully separate out how much was removed from each individual Region 2 Forest in Wyoming for Bark Beetle in those years or to determine what money was spent on Bark Beetle projects in Wyoming. Therefore, the costs to manage the National Forests in Wyoming for FY 2010 through FY 2012 reflected in this report are lower than they would have been without this issue and it is not possible to calculate an amount.





Appendix C: BLM Resource Management Plan Summary

Cody Field Office /2015 Cody Resource Management Plan

The Cody Planning Area in the Wind River/Bighorn Basin District comprises approximately 2,264,624 acres of land in portions of Big Horn and Park Counties. There are approximately 1.1 million acres of federal surface and approximately 1.5 million acres of the federal mineral estate administered by the Cody BLM Field Office.

There are two land use planning documents applicable to management decisions within the Cody Field Office; the Cody Field Office Approved Resource Management Plan which was finalized in September of 2015 and the accompanying Bighorn Basin Resource Management Plan Revision. The planning process to update the RMP for the Cody Field Office, which began in 2008, was conducted in conjunction with the development of a new RMP for the Worland Field Office. This was done at the District level through the Bighorn Basin Resource Management Plan Revision Project. The Wind River/Bighorn Basin District encompasses the Lander Field Office in addition to Worland and Cody but its RMP was developed separately. Public lands within the Cody Field Office and the Worland Field Office were previously managed according to the Cody RMP (1990) and within the Worland Field Office - the Washakie RMP (1988) and Grass Creek RMP (1998). A proposed Draft RMP and final EIS was developed for both field offices during the draft, review, and public comment process and then final approved RMPs for each of the field offices were finalized. The 2015 Cody Field Office Approved Resource Management Plan and the Worland Field Office Resource Management Plan were approved in a Record of Decision (ROD) that also contained several other approved RMPs and approved RMP amendments the covered lands in Wyoming, Montana, and Colorado. They were all developed largely simultaneously to incorporate conservation measures BLM planned for the Greater Sage Grouse (GSG) in the Rocky Mountains after the USFWS determined that listing the bird under the ESA was “warranted but precluded” in 2010. See more below on Greater Sage Grouse RMPs.

Worland Field Office /2015 Worland Resource Management Plan

The Worland Field Office planning area in the Wind River/Bighorn Basin District comprises over 3.3 million acres of land and includes portions of Big Horn, Park, and Hot Springs counties and all of Washakie County. BLM administers approximately 2.1 million acres of public surface land and 2.7 million acres of the federal mineral estate in this office. The most recent Worland Resource Management Plan was finalized in September of 2015 in a joint process with the development of the Cody RMP (see Cody RMP above).

Lander Field Office / 2014 Lander Resource Management Plan

The Lander Filed Office includes approximately 6.6 million acres located in most of Fremont County, and smaller portions of Natrona, Sweetwater, Carbon, and Hot Springs counties. Teton County is within the administrative boundary for the Lander Field Office but there are no BLM-administered lands in Teton County. The Lander Field Office Resource Management Plan provides direction for





managing 2.4 million acres of BLM managed federal surface estate lands and approximately 2.8 million acres of federal mineral estate lands.

The Lander RMP was approved and the ROD signed on June 26, 2014 after a process that began in 2007 to update the previous management plan from 1987.

The Lander RMP was the first of the BLM's resource management plans to address management of Greater Sage-grouse habitat. Ninety-nine percent of the planning area for the Lander RMP Revision is within occupied habitat for Greater Sage-grouse and seventy percent of the planning area is identified as priority habitat. The Lander RMP is consistent with the Wyoming Governor's 2011 Executive Order on the management of GRSB Core Area, which the USFWS consider to be an adequate regulatory mechanism for conserving GRSB within State boundaries.

In addition, the Lander RMP established one of the BLM's first Master Leasing Plans (MLP) intended to balance development of energy resources while protecting biologically important lands and natural areas as well as cultural resources.

The planning area contains segments of one National Scenic Trail (Continental Divide) and four NHTs (California, Mormon Pioneer, Oregon and Pony Express). They are considered to be among the most pristine and intact sections of these trails in the country. The RMP established a National Trails Management Corridor of approximately 500,000 acres to protect the setting, nature, and purpose of these five congressionally designated trails and to facilitate trail based recreation.

There are seven wild horse HMAs in the Lander Field Office.

Pinedale Field Office / 2008 Pinedale Resource Management Plan

In February 2002, the BLM published a "Notice of Intent" to revise the Pinedale Resource Management Plan (RMP). As part of the planning process, a supporting EIS was prepared. Both the RMP and EIS were developed concurrently with a full range of public participation.

The Pinedale RMP was approved and the ROD signed in November 2008. The RMP provides direction for managing over 900,000 acres of federal surface estate lands and over 1.1 million acres of federal mineral estate lands in Sublette, Lincoln, and Fremont counties, Wyoming.

The purpose of the plan is to establish guidance, objectives, policies and management actions for public lands administered by the Pinedale Field Office. The plan is comprehensive in nature and resolves or addresses a wide variety of issues, including but not limited to:

The Pinedale Anticline Natural Gas Field is located in the Upper Green River Basin of west-central Wyoming, south of Pinedale. The Anticline's 198,000 acres of rolling sagebrush are 80 percent federally owned. The area has one of the richest concentrations of natural gas in the United States, currently estimated at more than 25 trillion cubic feet. The Pinedale Anticline Project Area and Pinedale Anticline Project Office and the Jonah Interagency Mitigation and Reclamation Office are in the Pinedale Field Office.





The Snake River Resource Management Plan also operates within the boundaries of the Pinedale Field Office. It governs all decisions in the Snake River Planning Area of the Pinedale Field Office, which is comprised of 981 surface acres and 15,123 subsurface mineral acres in the Jackson Hole area. It was adopted in 2004. The 21 surface parcels and subsurface acres are varied (scattered?) and overlapping with private owners and other government agencies.

Kemmerer Filed Office / 2010 Kemmerer Resource Management Plan

The BLM Kemmerer Field Office planning area is located in southwestern Wyoming and includes approximately 3.9 million acres of land in most of Lincoln and Uinta counties and part of Sweetwater County. The approved Kemmerer RMP and ROD were signed on May 24, 2010 pursuant to a process begun in June 2003. There are 1.4 million acres of BLM administered surface land and 1.6 million acres of BLM administered mineral estate.

Rock Springs Field Office / Rock Springs Resource Management Plan Revision

The Rock Springs Field Office and Planning Area in the Wyoming High Desert District is 5.4 million acres of which 3.6 million acres are federal public lands administered by the BLM. There are an additional 3.5 million acres of federal mineral acres. The Rock Spring Field Office includes portions of five Wyoming counties; Sweetwater (5 million public surface and/or mineral acres), Sublette (1.65 million public acres), Fremont (2.4 million public acres), Lincoln (1.1 million public acres), and Uinta (0.5 million public acres).

The Planning Area is currently managed under the 1997 Green River Resource Management Plan (GRRMP). The Planning Area currently includes 13 WSAs, 10 ACECs, five special recreation management areas, five wild horse management areas, and other prescribed areas identified at the time where specific management rules could be developed in the future. However, in February 2011, the Rock Springs Filed Office began the process of revising the management plan, which will be called the Rock Springs Resource Management Plan.

The Rock Springs Field Office suspended work on the RMP in February 2014 to allow for the analysis conducted as part of the Wyoming Greater Sage-Grouse Land Use Plan Amendment and EIS to be incorporated into the RMP, permit the incoming Rock Springs Field Manager to lead the development of the preferred alternative and provide time for the BLM Rock Springs staff and cooperators to work on additional travel route designations for inclusion in the RMP. Work on the revision resumed in February 2015.

Rawlins Field Office / 2008 Rawlins Resource Management Plan

The Rawlins Field Office in the Wyoming High Desert BLM District encompasses approximately 11.2 million acres in Carbon, Albany, Laramie and Sweetwater counties. It includes approximately 3.5 million acres of public land surface and 4.5 million acres of federal mineral estate.

The Rawlins Resource Management Plan was approved and the ROD signed in December 2008 after a planning process that began in February 2002. The previous RMP was called the Great Divide Resource Management Plan.





The RMP provides direction for the management of 3.5 million acres of BLM-administered public land and 4.5 million acres of BLM-administered federal mineral estate in Albany, Carbon, Laramie, and Sweetwater counties in southwestern Wyoming.

Buffalo Resource Management Plan

The Buffalo Field Office manages 780,291 acres of public lands and 4,731,140 acres of mineral estate within Campbell, Johnson and Sheridan counties in north-central Wyoming. These three counties are part of the Northern Great Plains and are rich in old west history. On September 21, 2015, the BLM signed a ROD for the Buffalo Field Office Approved RMP.

The area contains vast deposits of oil, gas and coal, in addition to providing a variety of resources such as wildlife habitat and rangelands for livestock grazing. The public lands and adjacent Bighorn National Forest provide many opportunities for recreational activities.

Casper Resource Management Plan

The Casper Field Office Planning Area is in the Wyoming High Plains District. It includes approximately 8.5 million acres of land in most of Natrona County and all of Converse, Platte, and Goshen counties. The Casper Resource Management Plan and ROD was signed in December, 2007 after a four-year process. The RMP governs BLM administration for managing 1.4 million acres of surface land and 4.7 million acres of the federal mineral estate within the Casper Field Office. It replaced the 1985 Platte River Resource Management Plan.

Newcastle Resource Management Plan

The Newcastle RMP was finalized in August 2000. The Newcastle Field Office is responsible for the public lands, and interest in lands, administered by the BLM in Crook, Weston and Niobrara counties in northeast Wyoming, as well as the public lands that remain in Nebraska. Surface acreage administered by this office includes approximately 292,000 acres in Wyoming and 6,600 acres in Nebraska. The Office oversees approximately 1.6 million acres of split estate in the three Wyoming counties and 240,000 acres within the State of Nebraska. The Nebraska RMP superseded Newcastle RMP for surface acres and the subsurface acres in Nebraska.

Additional RMPs in Wyoming

Bighorn Basin Resource Management Plan Revision

The Bighorn Basin RMP Revision is not a RMP per se. The Revision project resulted in new RMPs for two of the three field offices in the Wind River/Bighorn Basin District—the 2015 Cody RMP and the 2015 Worland RMP (the new Lander Field Office RMP was developed in an independent process). The Bighorn Basin RMP was one of the 15 RMP revisions and amendments and EISs prepared by the BLM as part of the National Greater Sage-Grouse Planning Strategy (BLM 2011). The Bighorn Basin RMP Revision includes the Final EIS for these RMPs and all other relevant data and documents prepared as a part of the seven year planning process while the RODs were issued as attachments to the September 15, 2015 ROD and Approved Resource Management Plan Amendments for the Rocky Mountain Region including the Greater Sage-Grouse Sub-Regions of: Lewistown, North Dakota,



Northwest Colorado and Wyoming and the Approved Resource Management Plans for Billings, Buffalo, Cody, HiLine, Miles City, Pompeys Pillar National Monument, South Dakota, and Worland.

Approved Resource Management Plan Amendment for Greater Sage-Grouse (ARMPA)

In 2010, USFWS identified habitat loss, fragmentation, and inadequacy of existing regulatory mechanisms as significant threats to the GSG and factors in the determination that listing was warranted. The USFWS specifically identified the need for conservation measures in RMPs as the principal necessary regulatory mechanism for the BLM to address threats to the bird. In response, the BLM announced the National Greater Sage-Grouse Planning Strategy Charter in August of 2011 to develop and incorporate conservation measures for the GSG and its habitat into RMPs.

The Approved Resource Management Plan Amendment for Greater Sage-Grouse (ARMPA) resulted from a joint planning effort between the Wyoming BLM and the USFS that began in May of 2010 and concluded in September 2015. The Wyoming Greater Sage-Grouse RMP/Land Resource Management Plan (LRMP) Amendments was an effort initiated to prepare new or amendments to RMPs and Land and Resource Management Plans (LRMP) to address ongoing threats to the Greater Sage Grouse (GSG) and its habitat across the west. The Wyoming Greater Sage-Grouse RMP/LRMP Amendments effort involved amendments to the LRMPs for Medicine Bow National Forest, Bridger-Teton National Forest, and Thunder Basin Grassland. In March 2010, the USFWS determined that listing the GSG under the ESA as endangered or threatened was “warranted, but precluded” by higher priority listings. That made the GSG a “candidate species.” Policy is to treat candidate species as if they were listed and apply the same rules and regulations as if they were listed. The USFS committed to re-evaluating the status as resources became available (see ESA section for more on warranted but precluded findings) and a September 2015 deadline was established to make a listing determination for GSG under the ESA.

In Wyoming, the Planning Area for the GSG Amendments encompassed 11 million surface acres with 60 million mineral acres administered by BLM and 600,000 acres administered by the USFS in Albany, Campbell, Carbon, Converse, Crook, Fremont, Goshen, Laramie, Lincoln, Natron, Niobrara, Platte, Sublette, Sweetwater, Teton, Uinta, and Weston counties. The amendments applied to the existing Casper, Rock Springs/Green River, Kemmerer, Newcastle, Pinedale, and Rawlins RMPs. The Worland and Cody Field Offices, also in the GSG Planning Area, had entirely new RMPs finalized in 2015 through the Bighorn Basin RMP Revision Project that incorporated the BLM criteria for the GSG into these newly updated plans. The Buffalo RMP Revision The 2014 Lander RMP, developed separately was the first BLM RMP to address the GSG.

In 2015, the USFWS determined that protection for the Greater Sage-grouse under the Endangered Species Act was no longer warranted and they withdrew the species from the candidate species list. They determined that sage-grouse remained relatively abundant and well-distributed across the species’ 173-million acre range due to landscape-scale conservation efforts across the western United States including the collective efforts of the BLM, USFS, state agencies, private landowners





and other partners to conserve its habitat had significantly reduced threats across 90 percent of the species' breeding habitat.





Appendix D: PILT and SRS by County

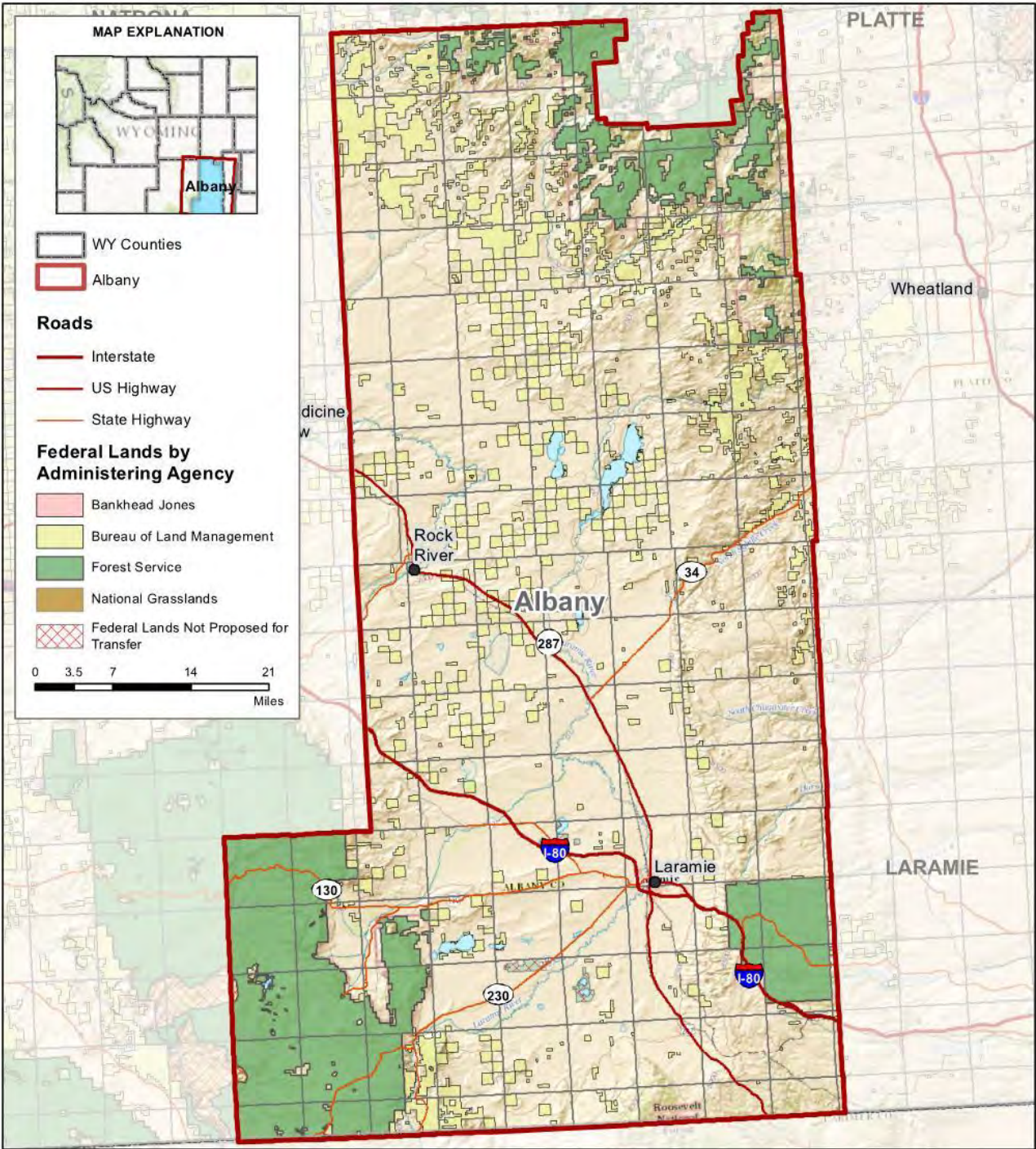
Sources: (U.S. Department of Interior, 2015); (U.S. Department of Agriculture, 2015)





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Albany County**

PROJECT:
OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming

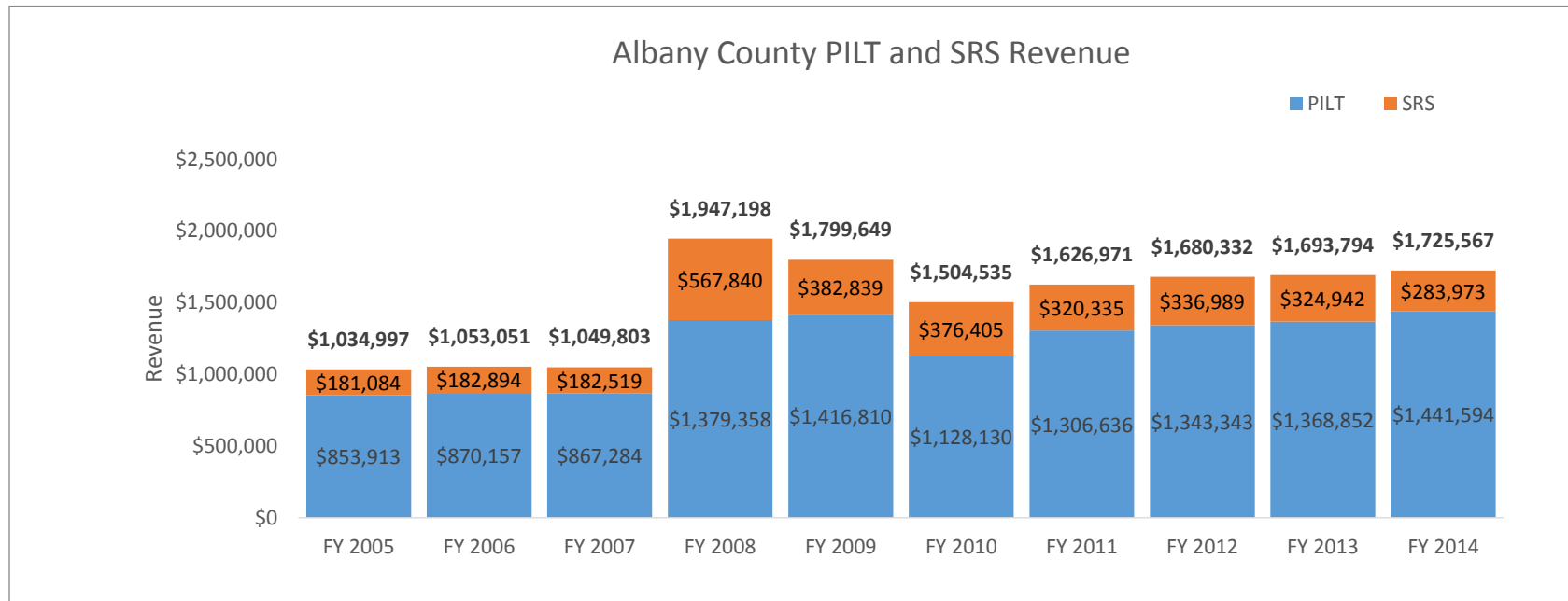
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Civil, Structural &
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215 East Simpson, Jackson, WY 83001

6/17/2016



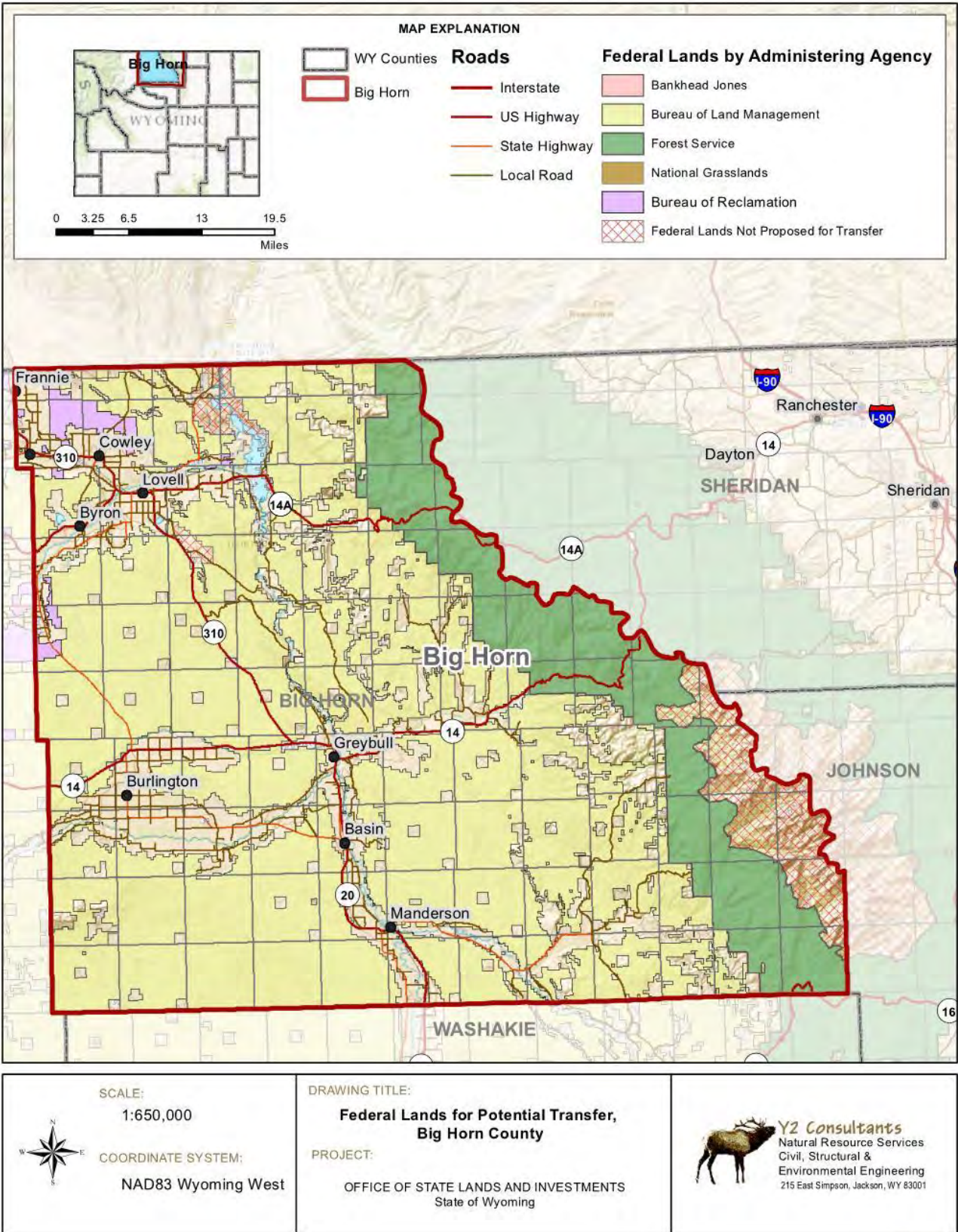


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STUDY ON MANAGEMENT OF PUBLIC LANDS IN WYOMING

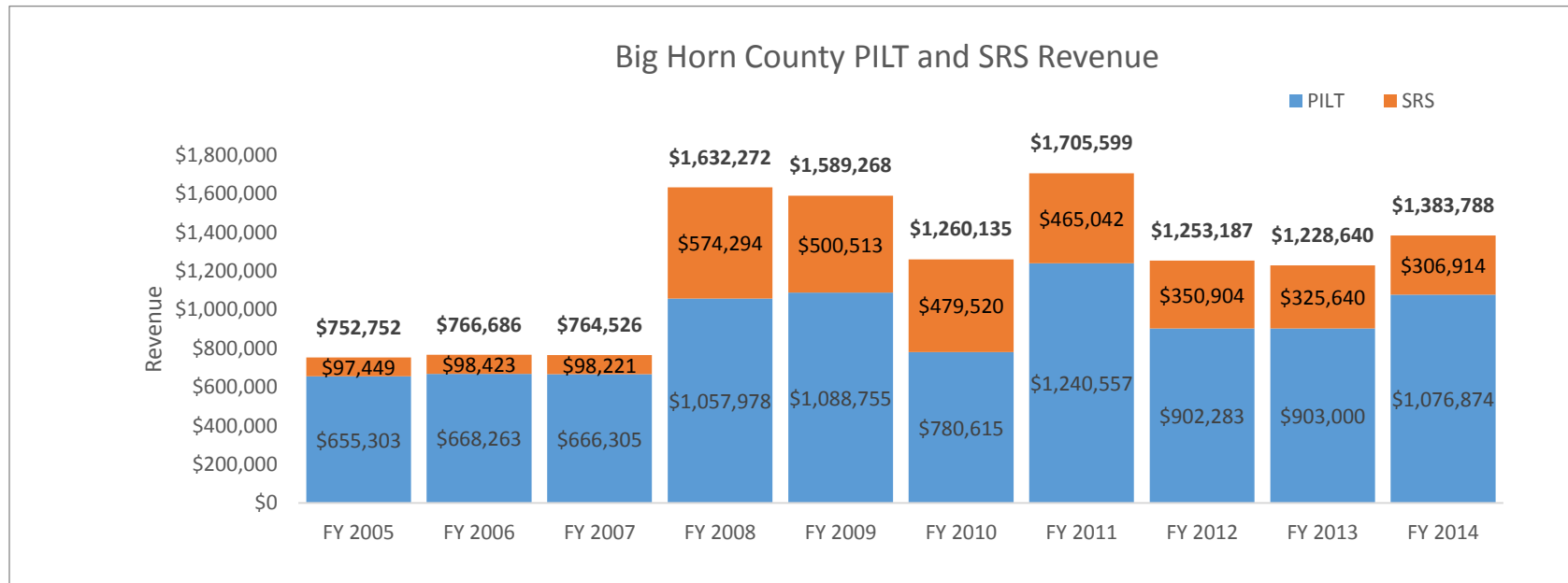


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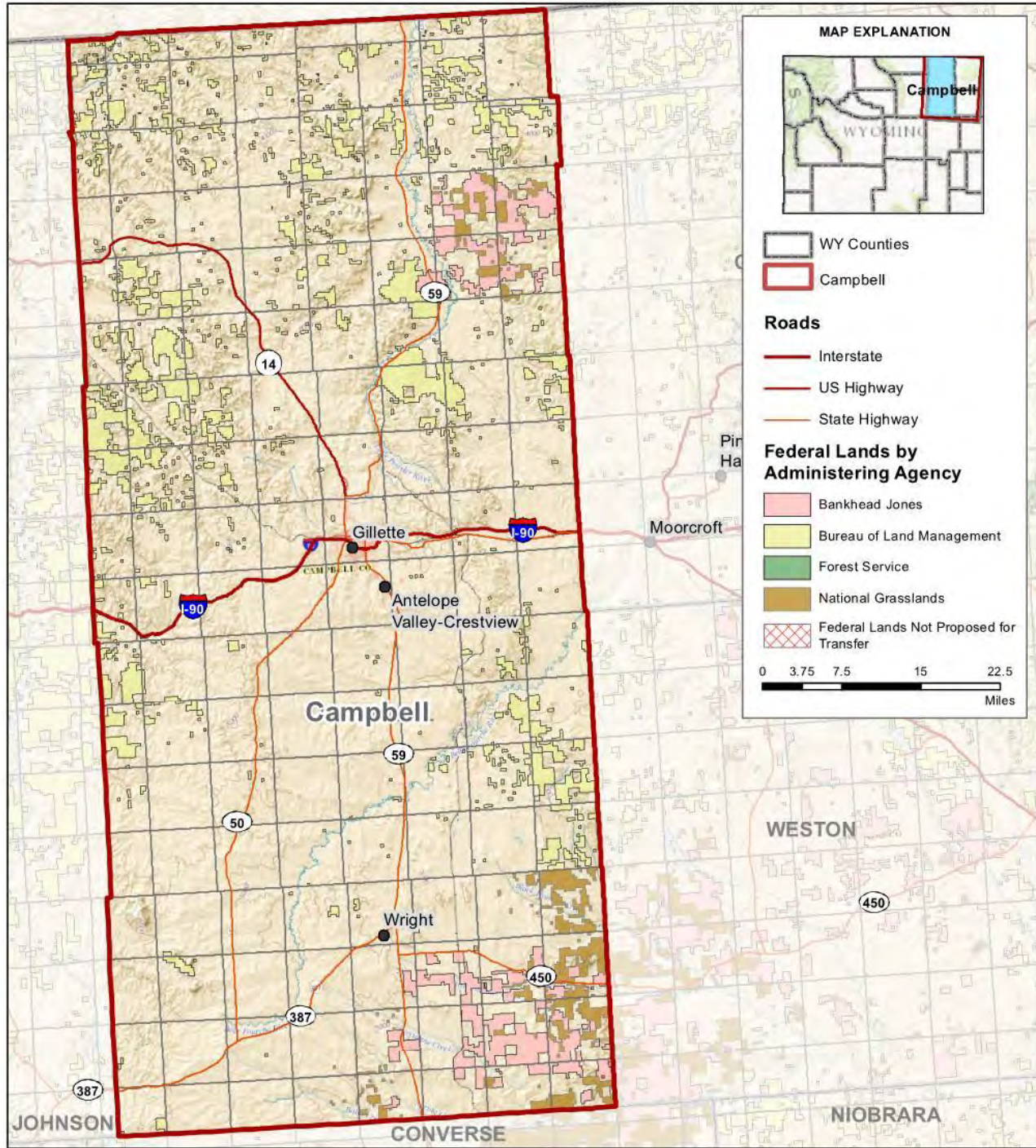


STUDY ON MANAGEMENT OF PUBLIC LANDS IN WYOMING






STUDY ON MANAGEMENT OF PUBLIC LANDS IN WYOMING



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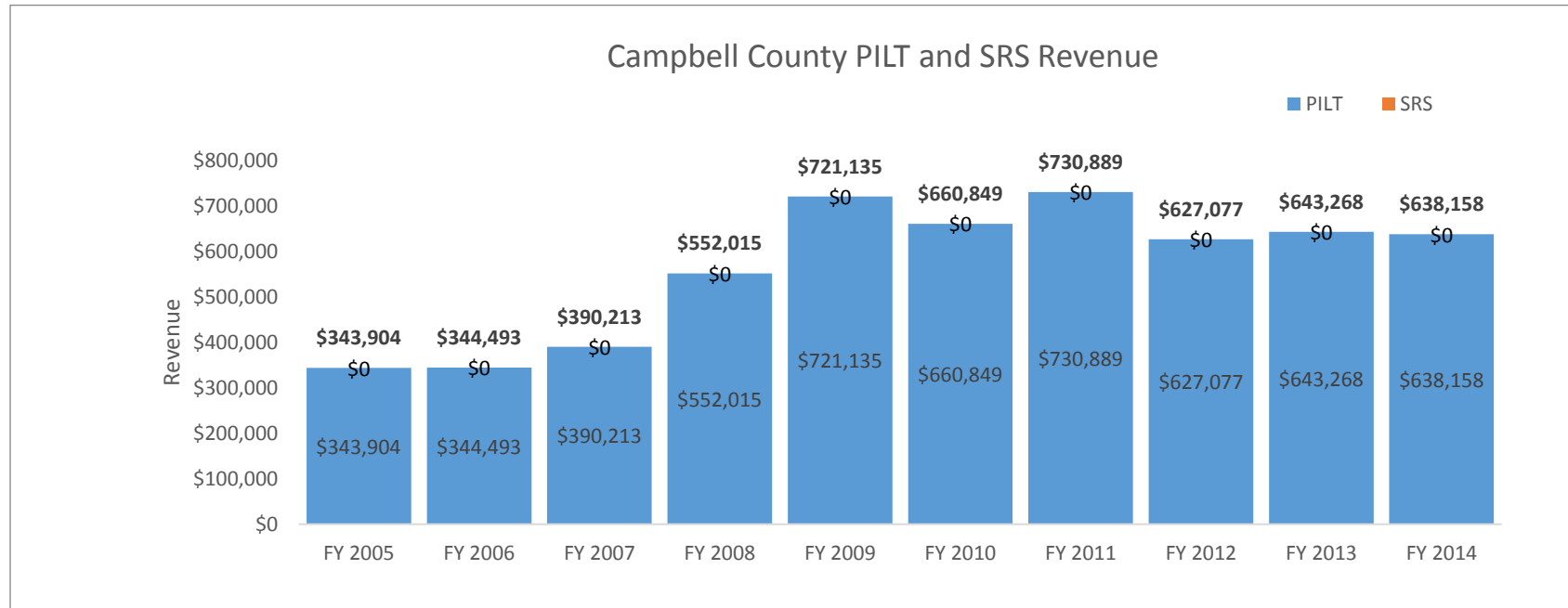
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OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming



Y2 Consultants
Natural Resource Services
Civil, Structural &
Environmental Engineering
215 East Simpson, Jackson, WY 83001

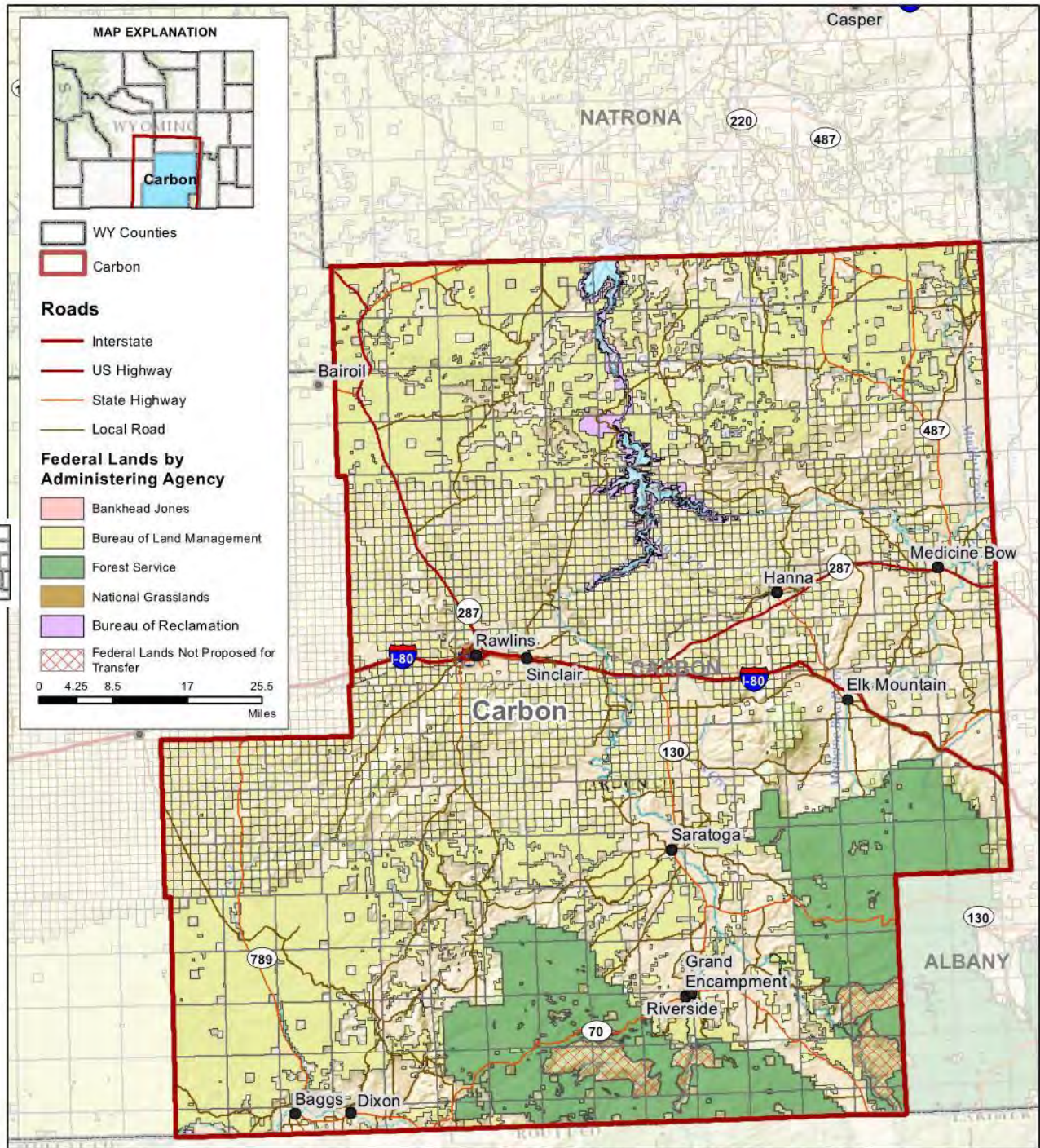
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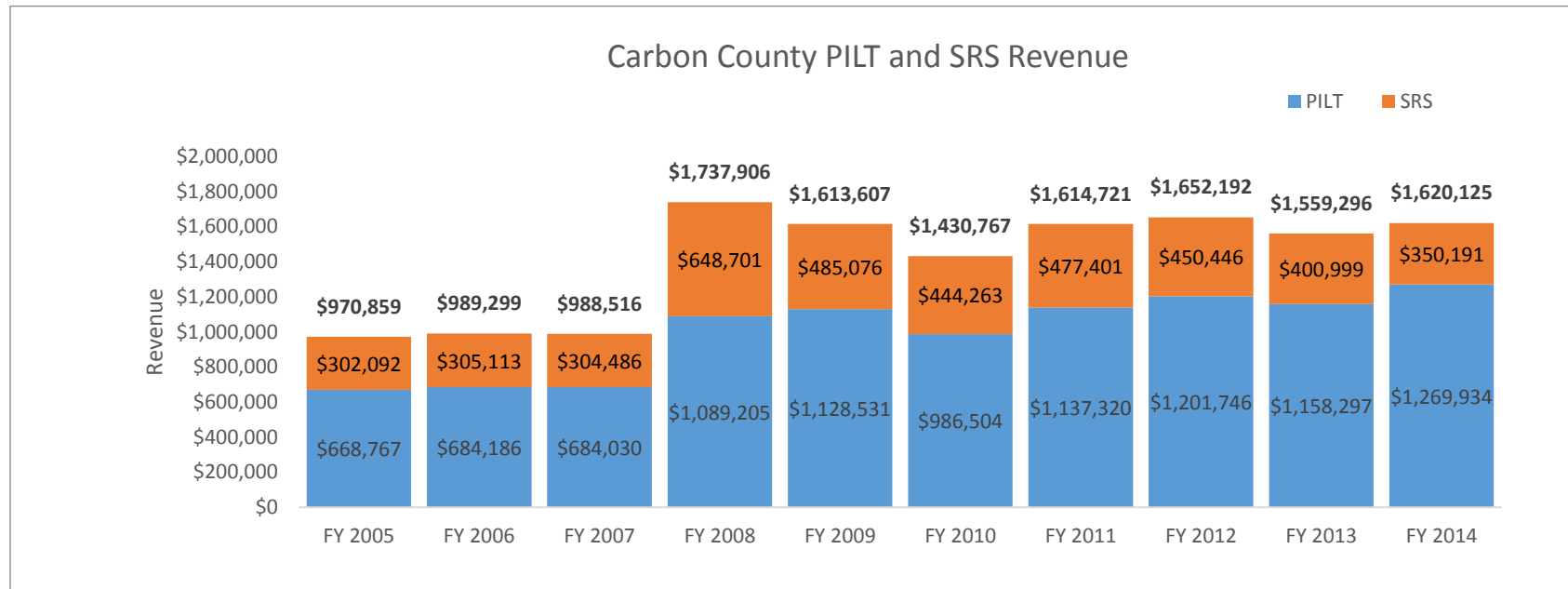
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Carbon County**

PROJECT:
OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming

Y2 Consultants
Natural Resource Services
Civil, Structural &
Environmental Engineering
215 East Simpson, Jackson, WY 83001

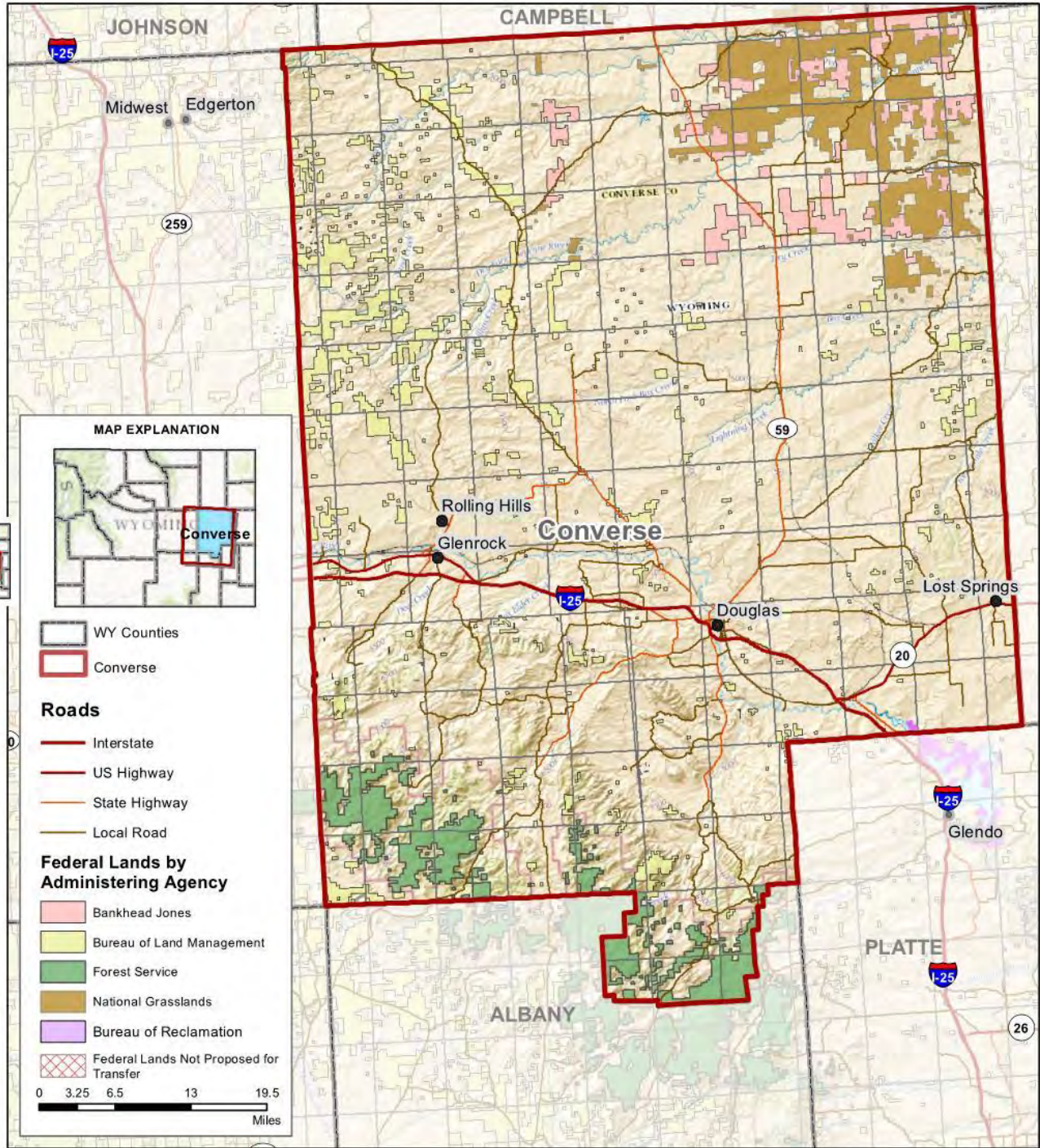
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STUDY ON MANAGEMENT OF PUBLIC LANDS IN WYOMING



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DRAWING TITLE:
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Converse County**

PROJECT:
OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming

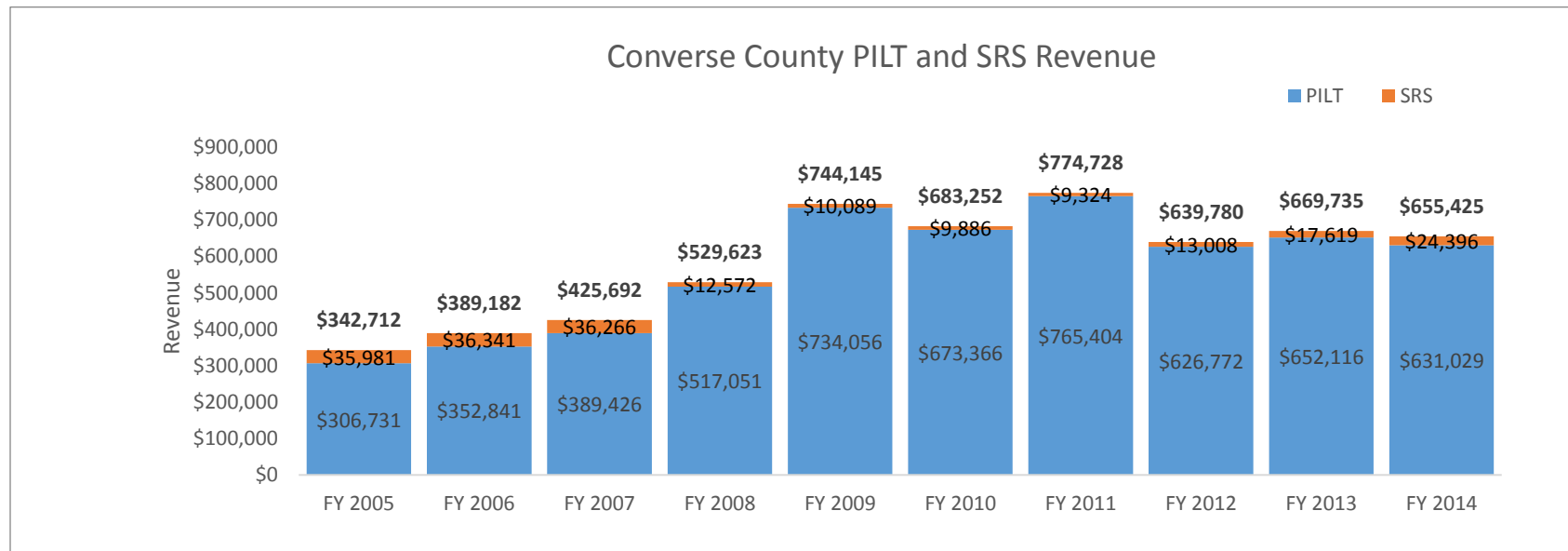
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Civil, Structural &
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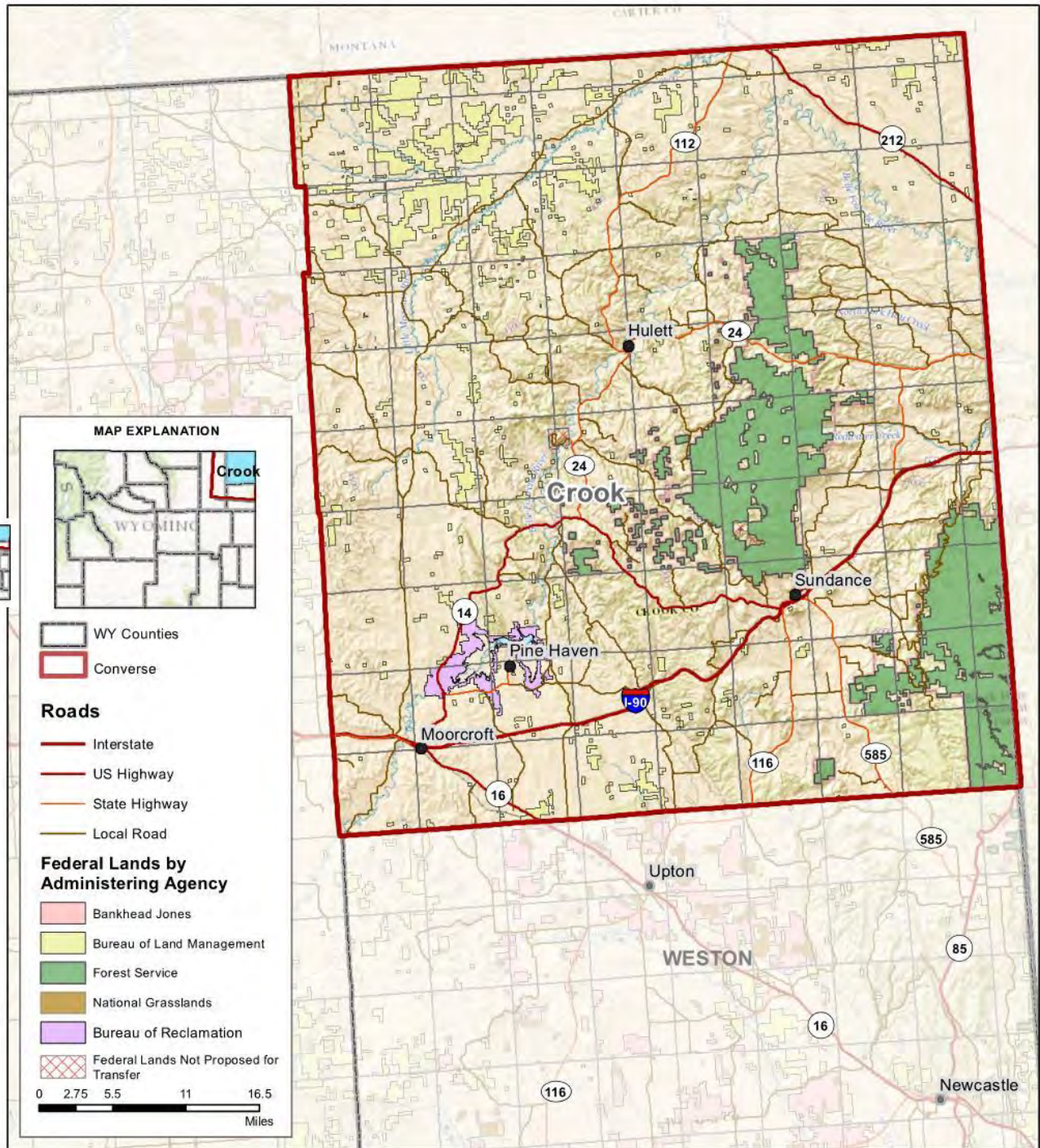
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STUDY ON MANAGEMENT OF PUBLIC LANDS IN WYOMING





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COORDINATE SYSTEM:
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DRAWING TITLE:
**Federal Lands for Potential Transfer,
Crook County**

PROJECT:
OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming

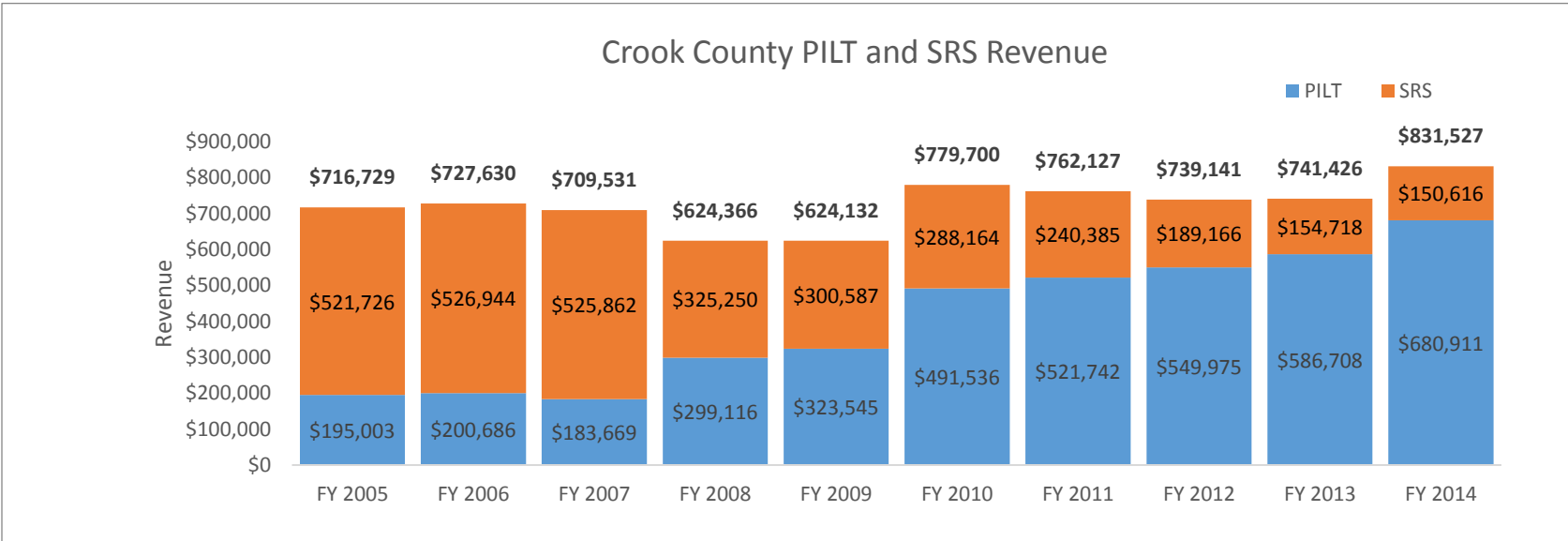
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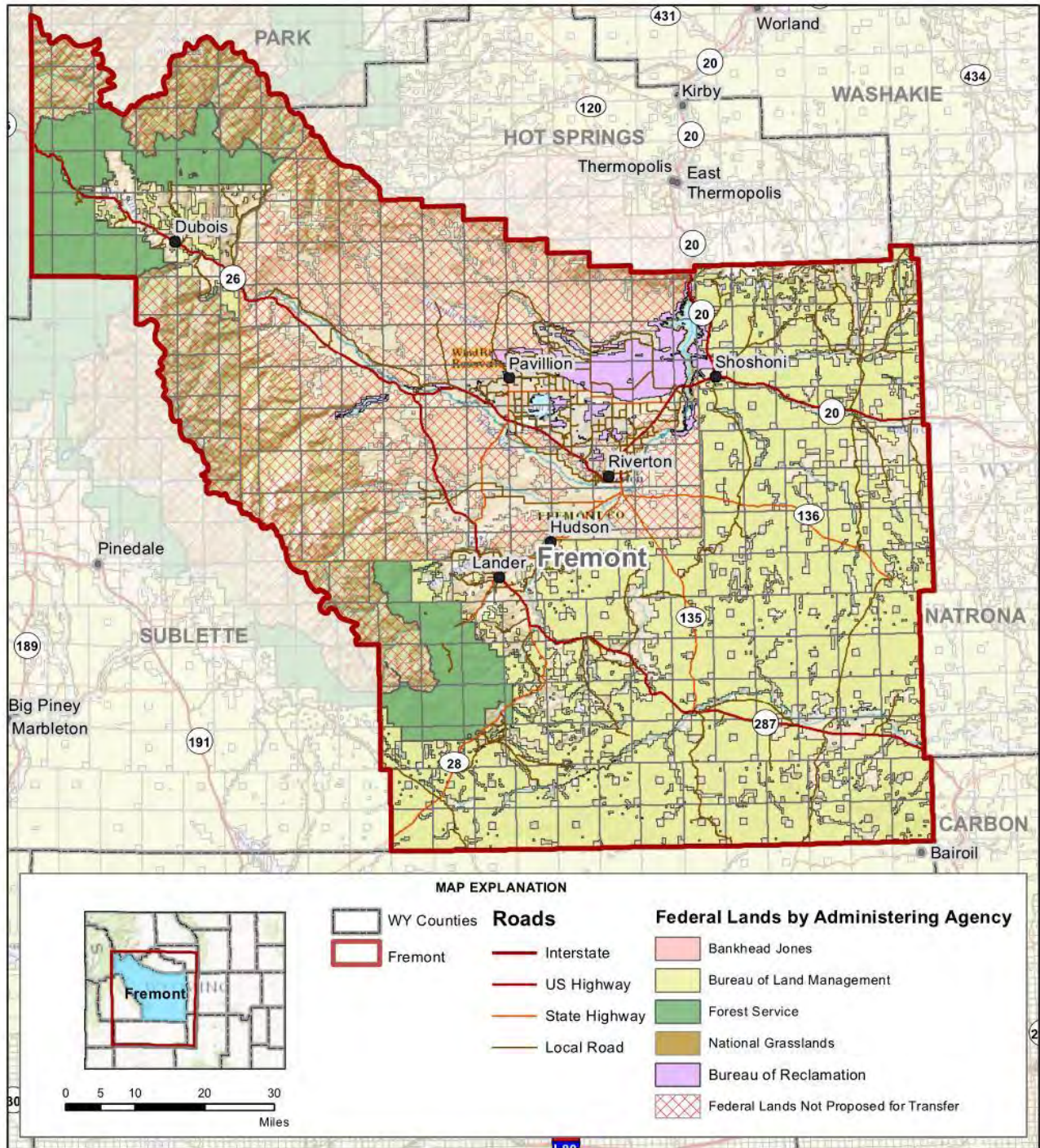
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STUDY ON MANAGEMENT OF PUBLIC LANDS IN WYOMING





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COORDINATE SYSTEM:
NAD83 Wyoming West



DRAWING TITLE:
**Federal Lands for Potential Transfer,
Fremont County**

PROJECT:
OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming



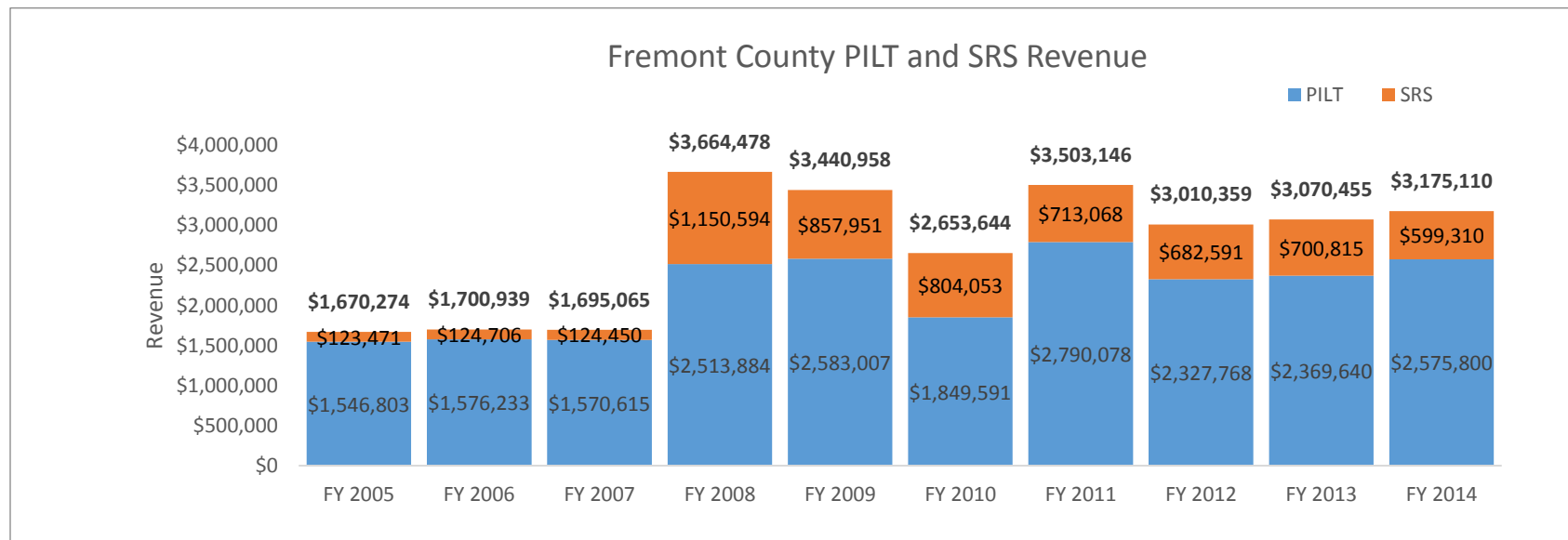
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Civil, Structural &
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215 East Simpson, Jackson, WY 83001

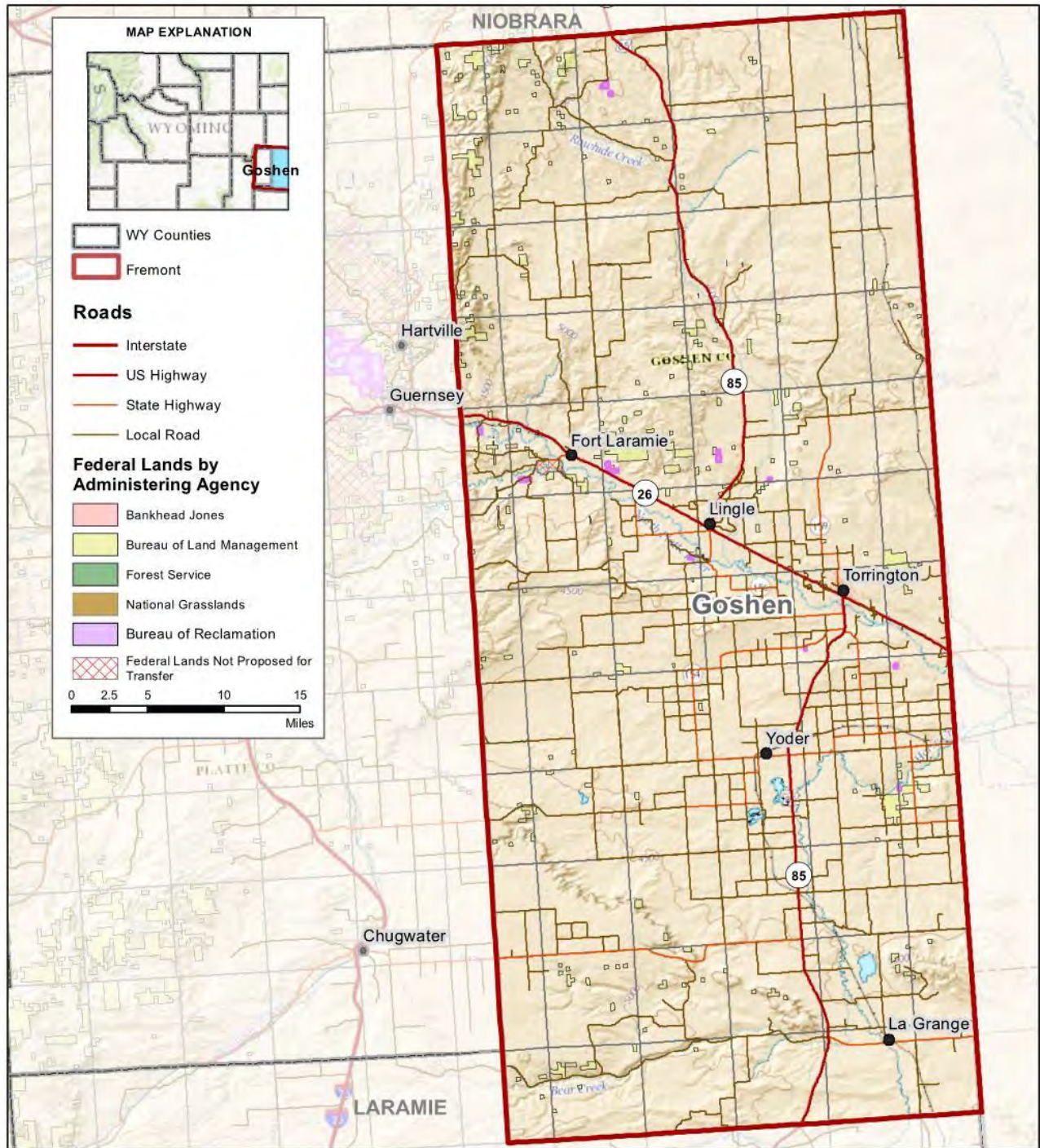
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STUDY ON MANAGEMENT OF PUBLIC LANDS IN WYOMING





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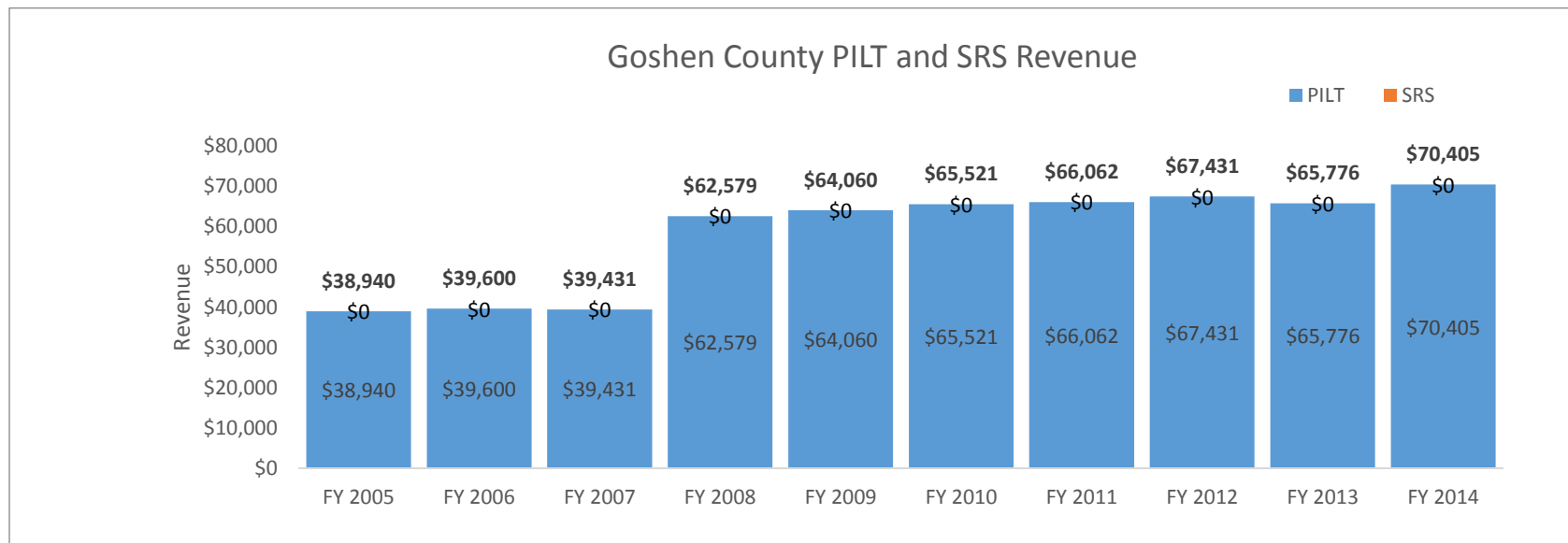
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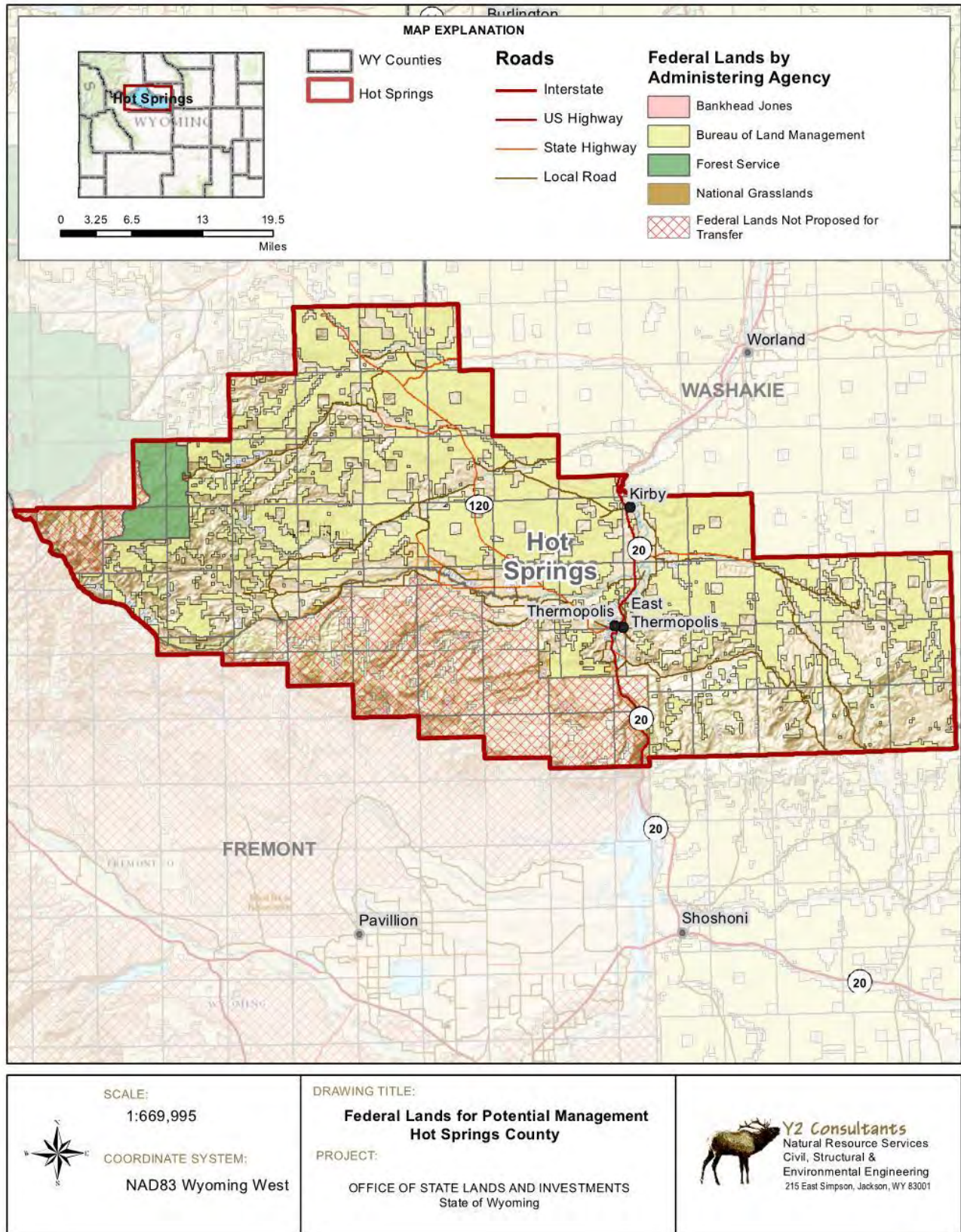
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State of Wyoming

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8/19/2016





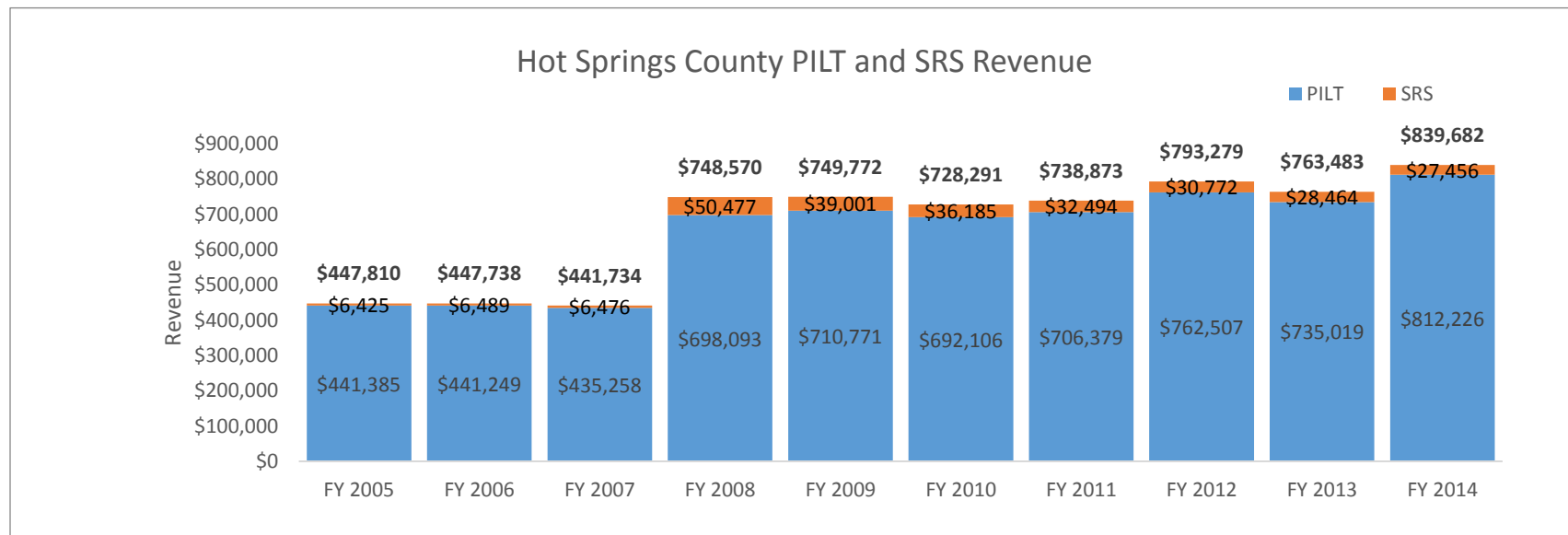


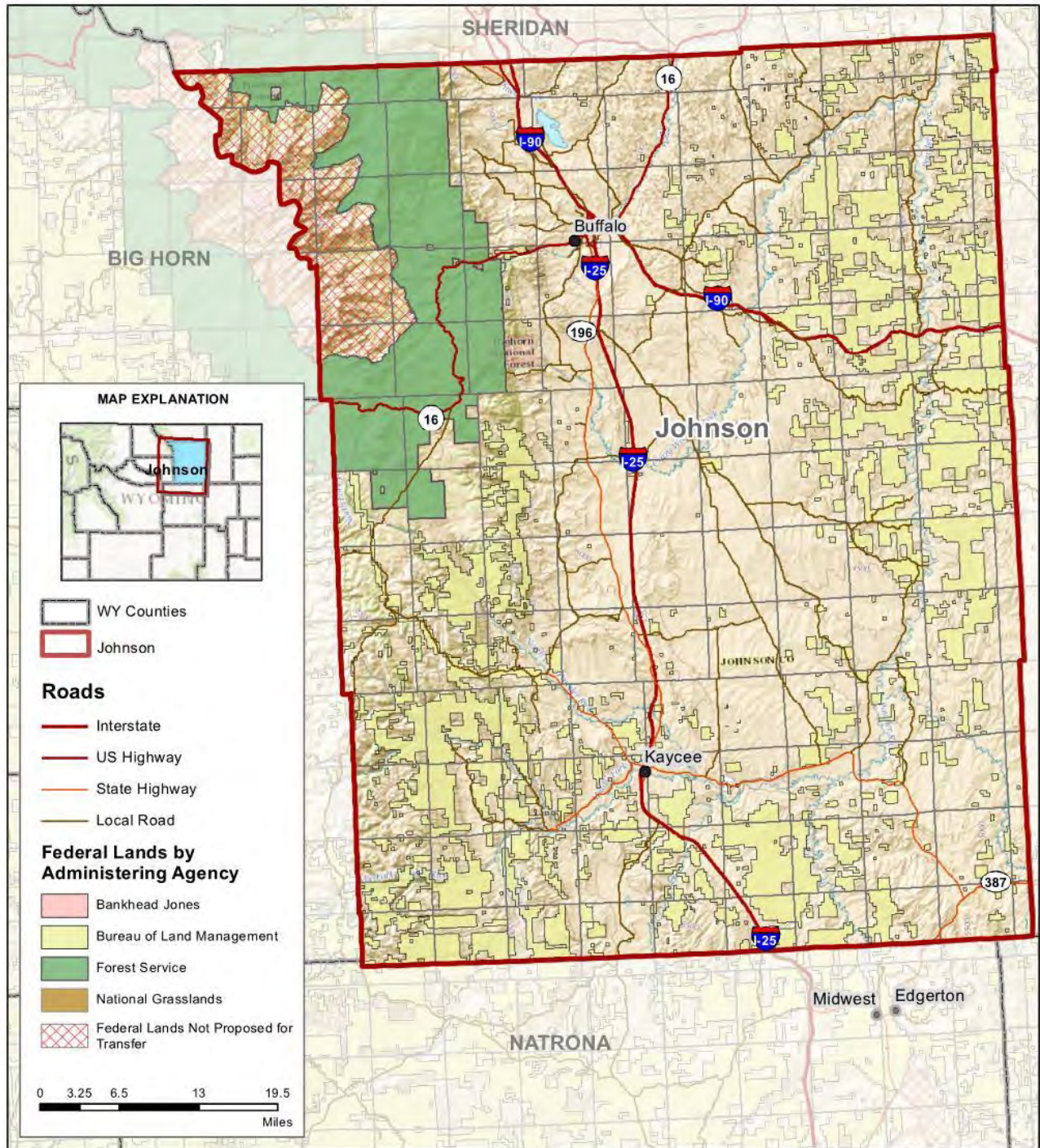
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STUDY ON MANAGEMENT OF PUBLIC LANDS IN WYOMING





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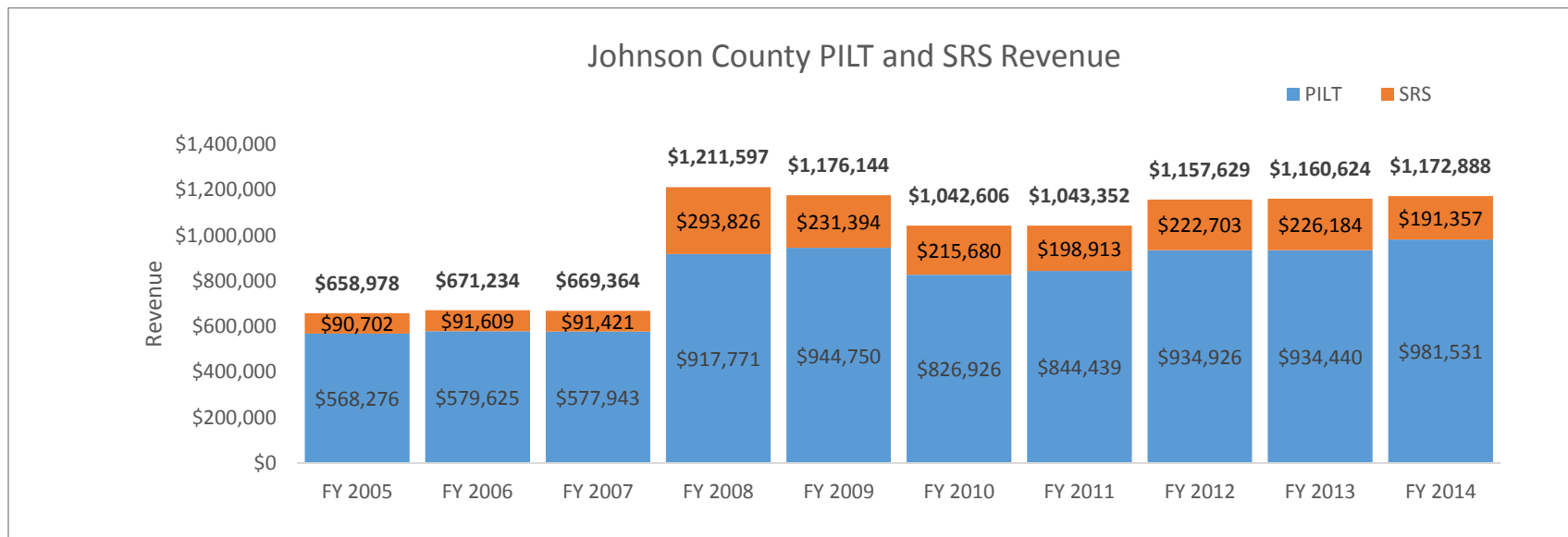
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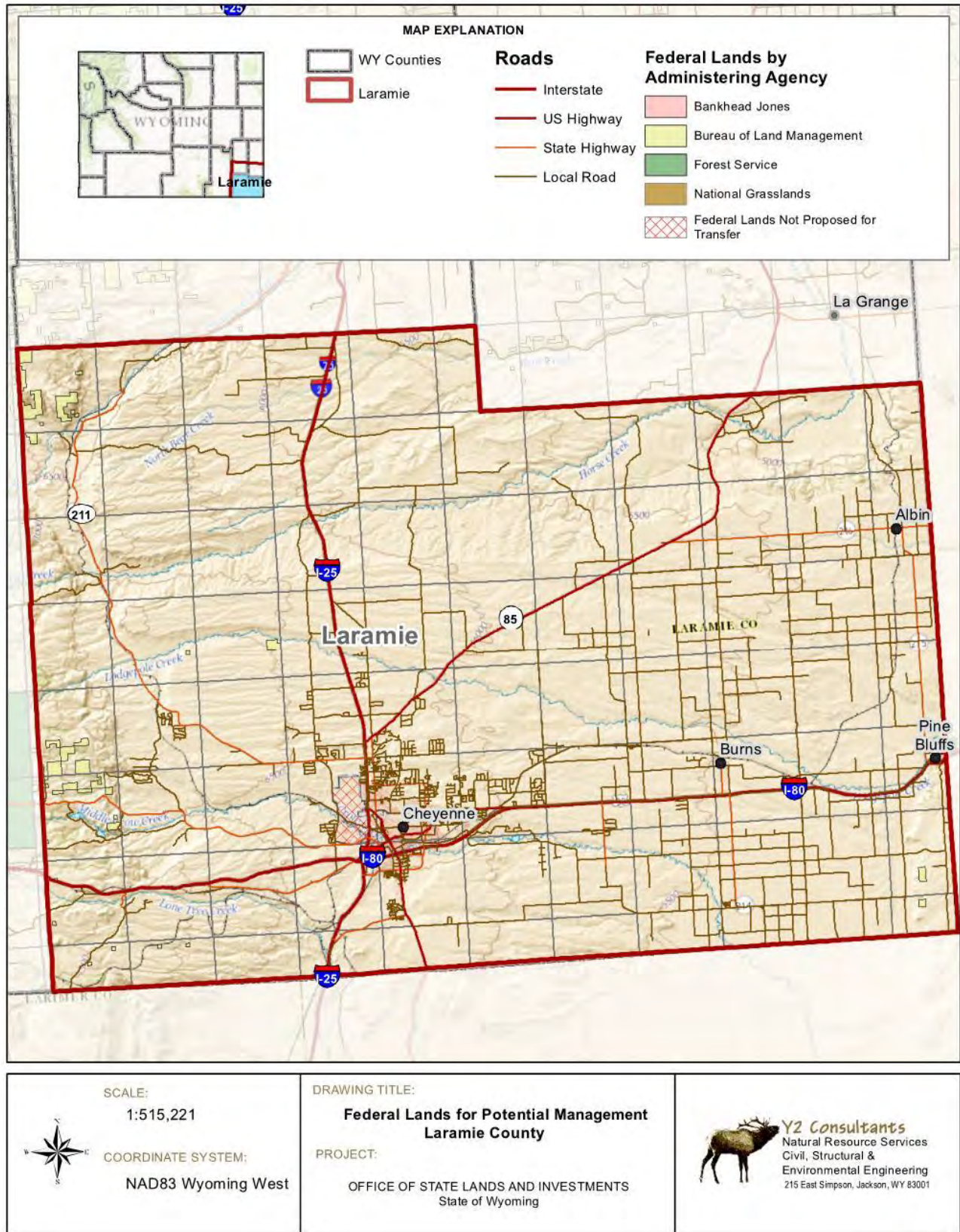
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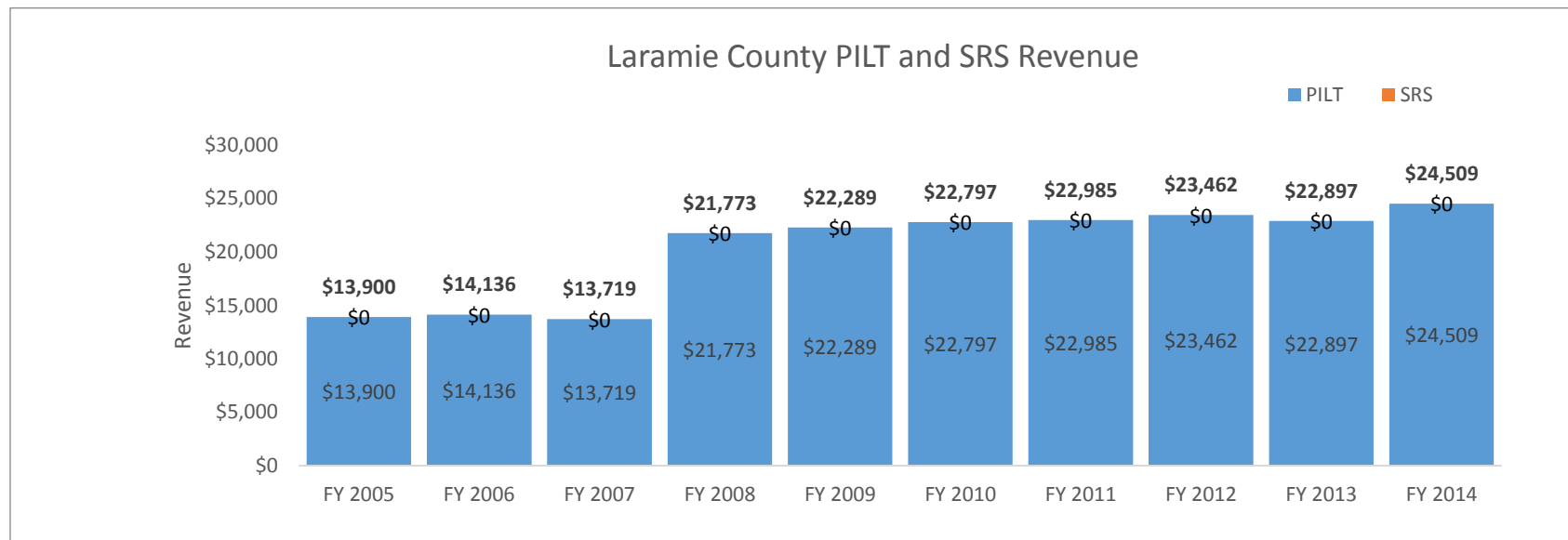


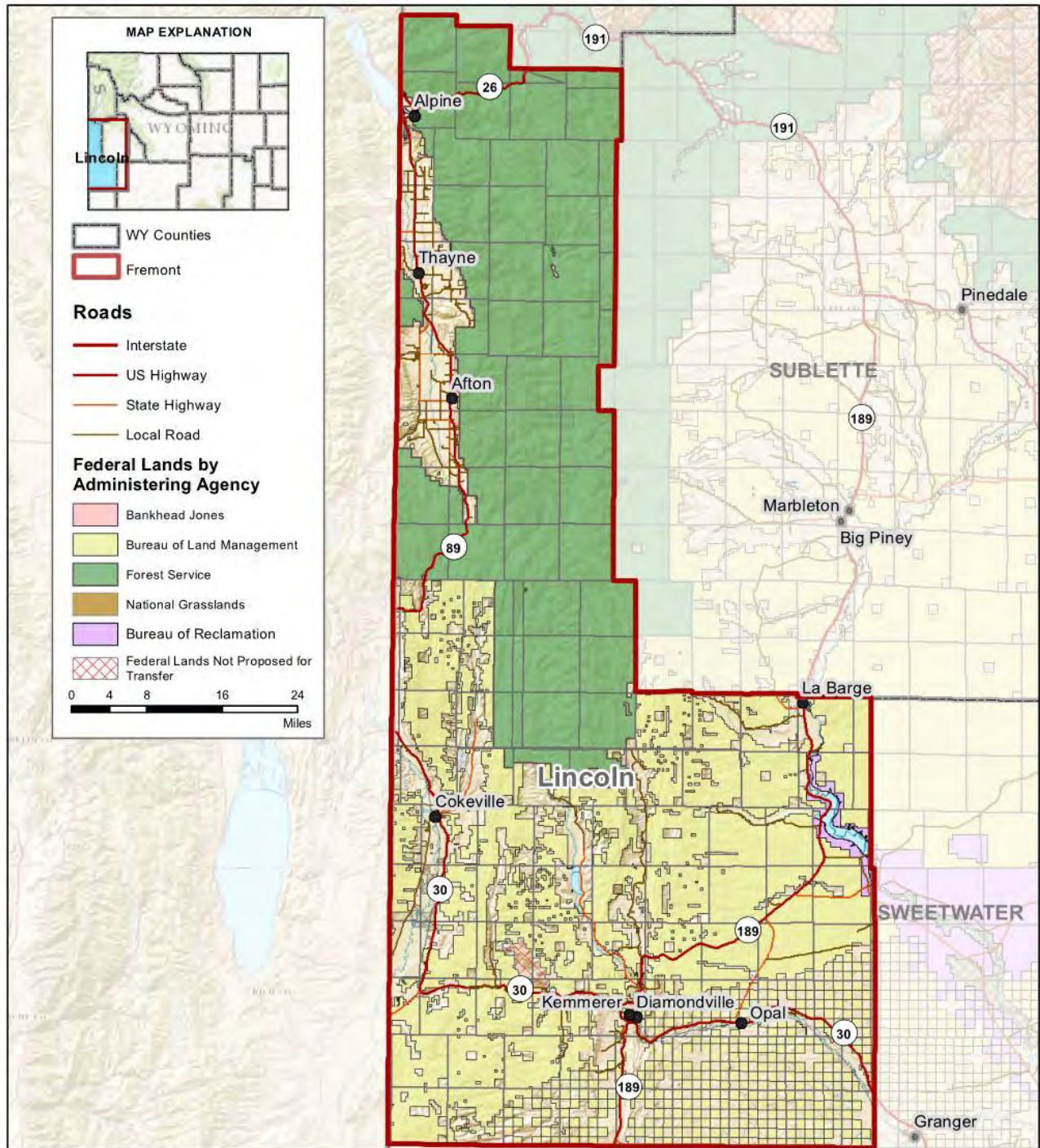




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OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming



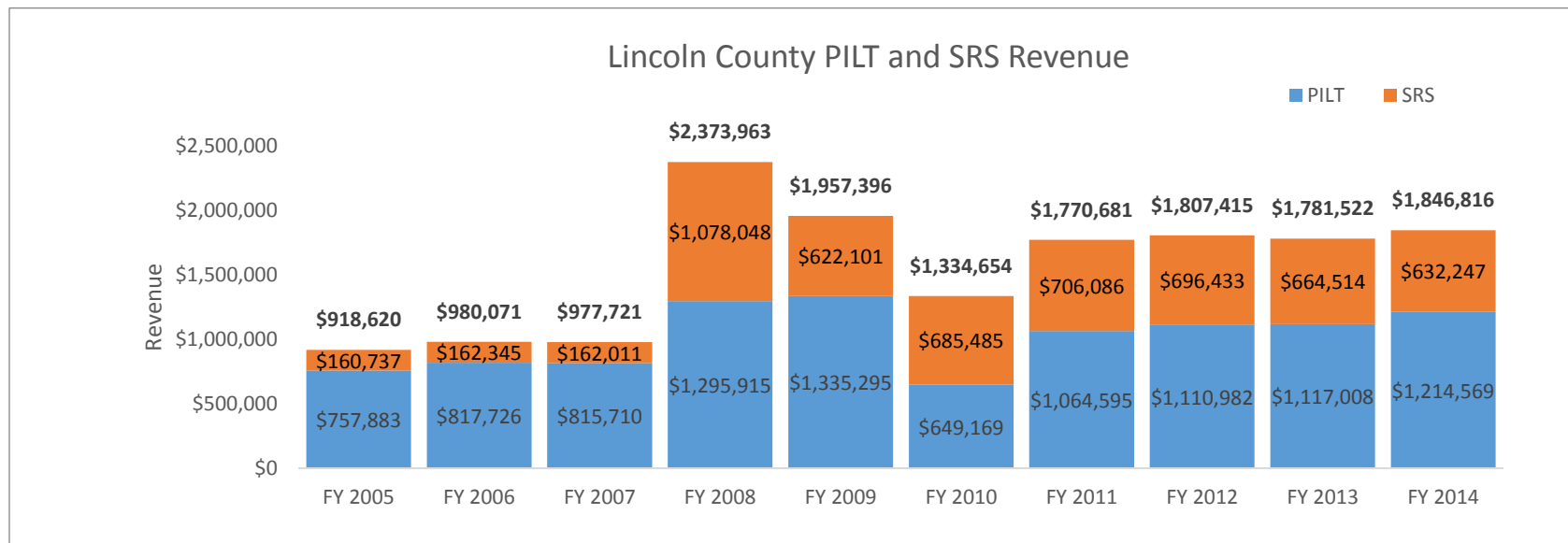
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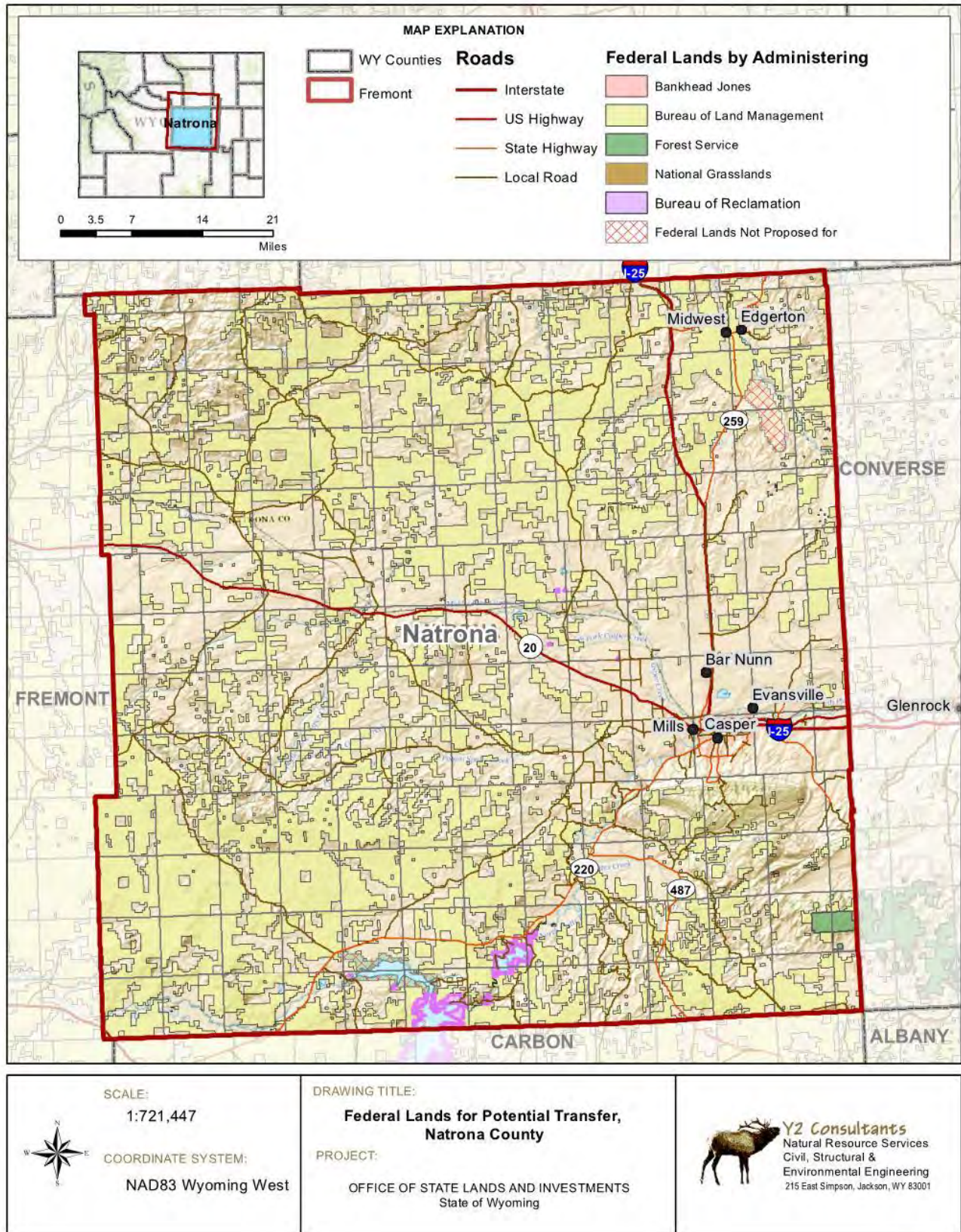
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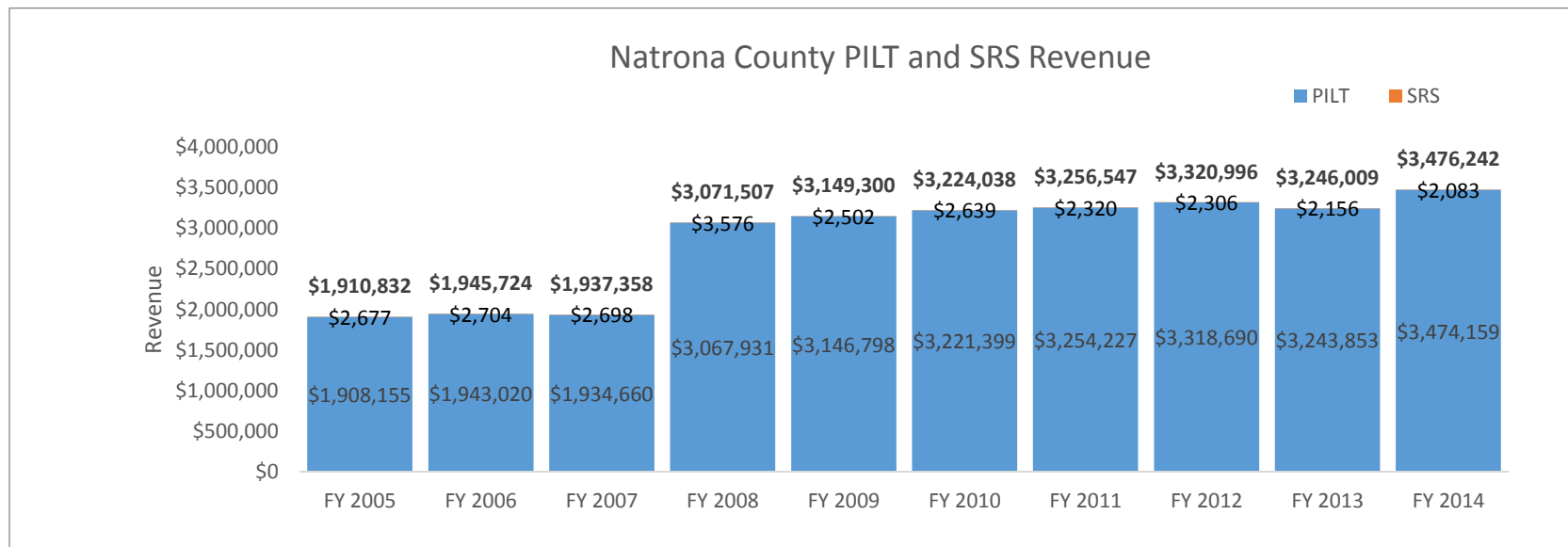
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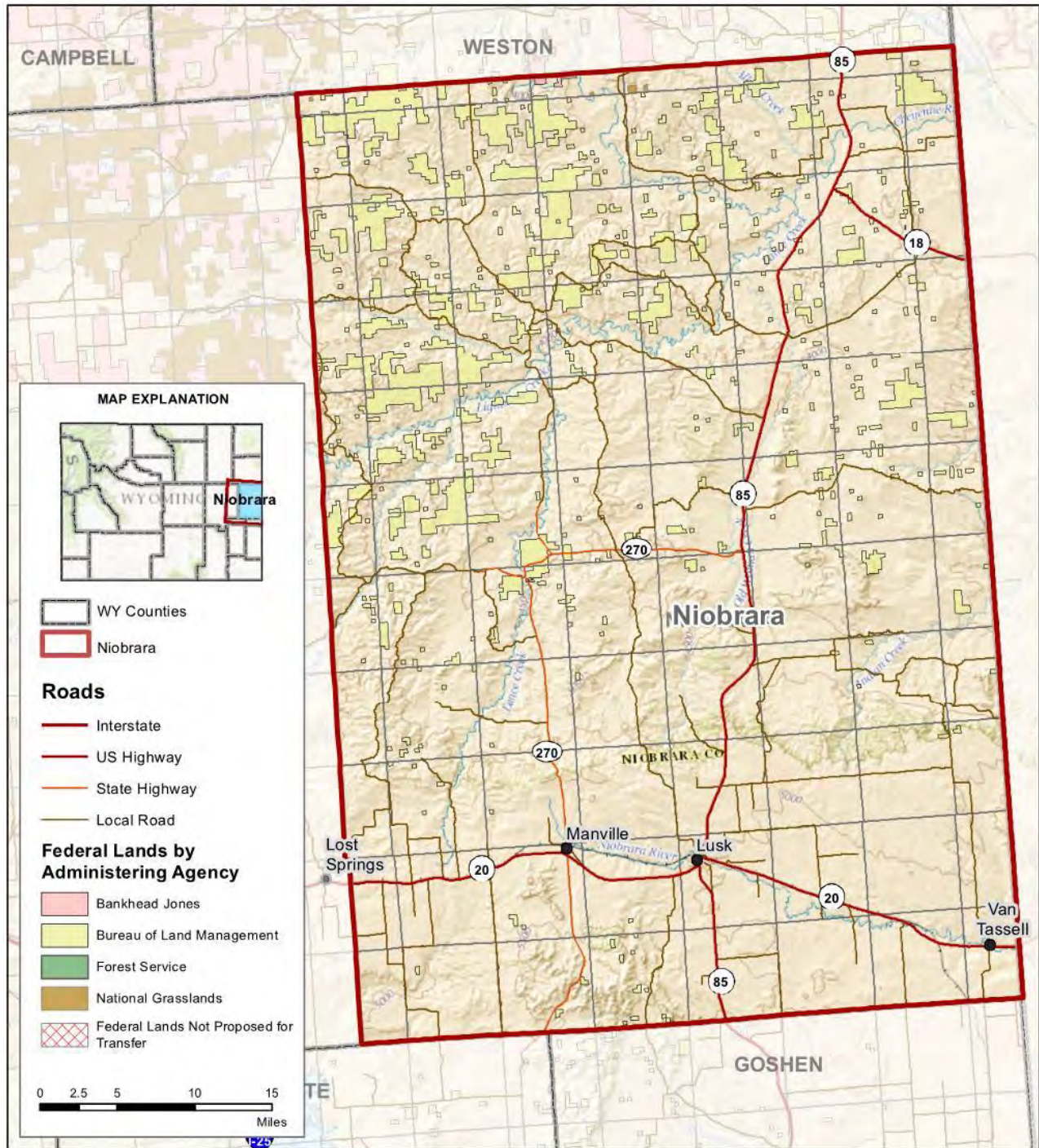




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PROJECT:
OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming

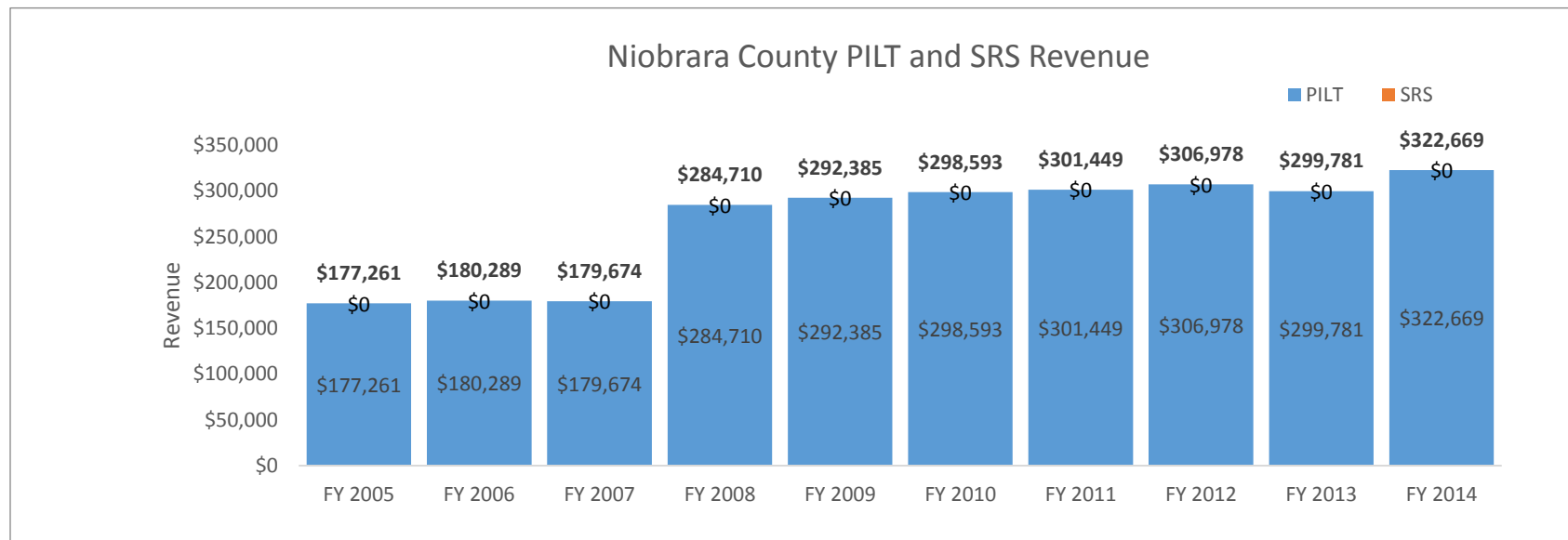
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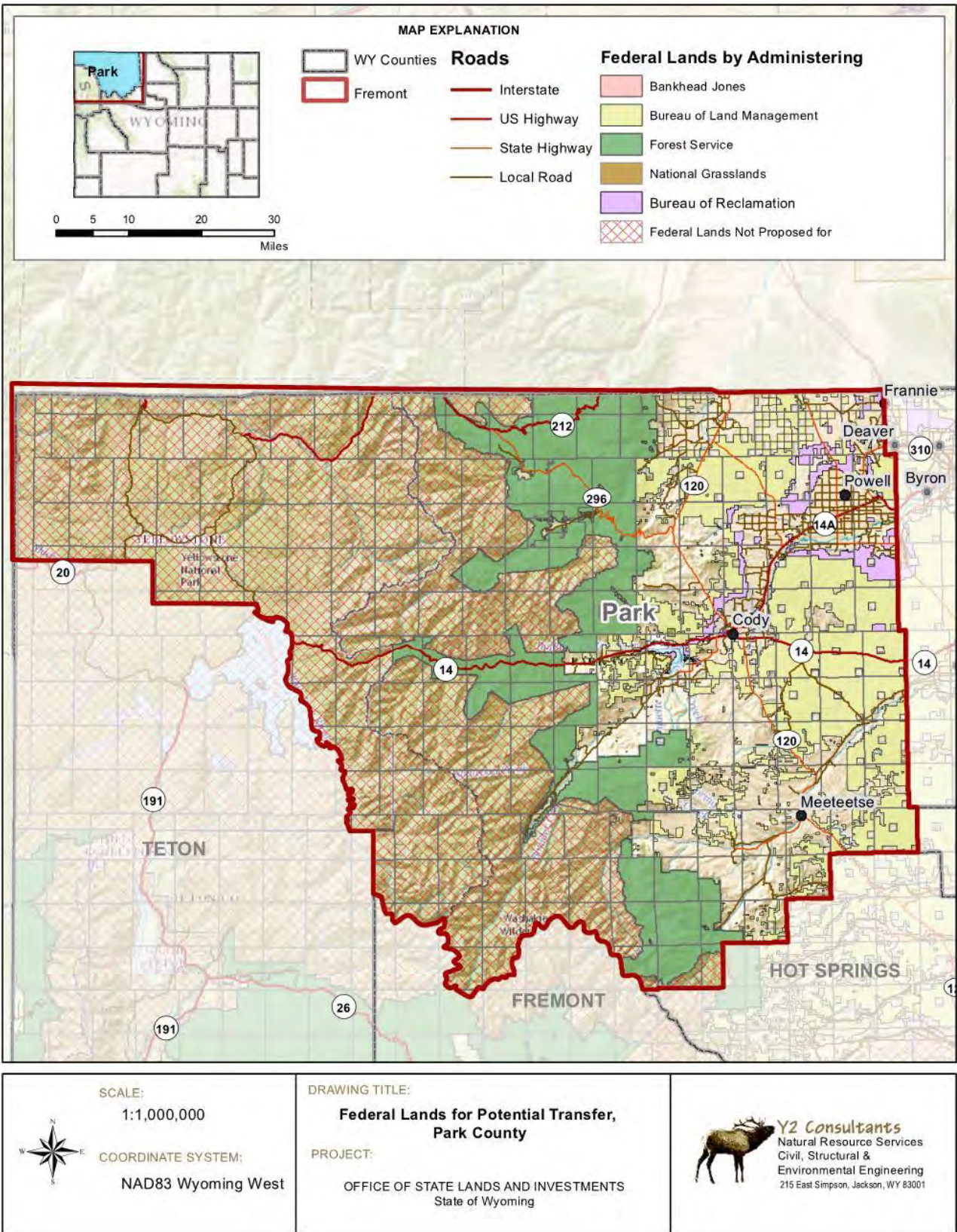
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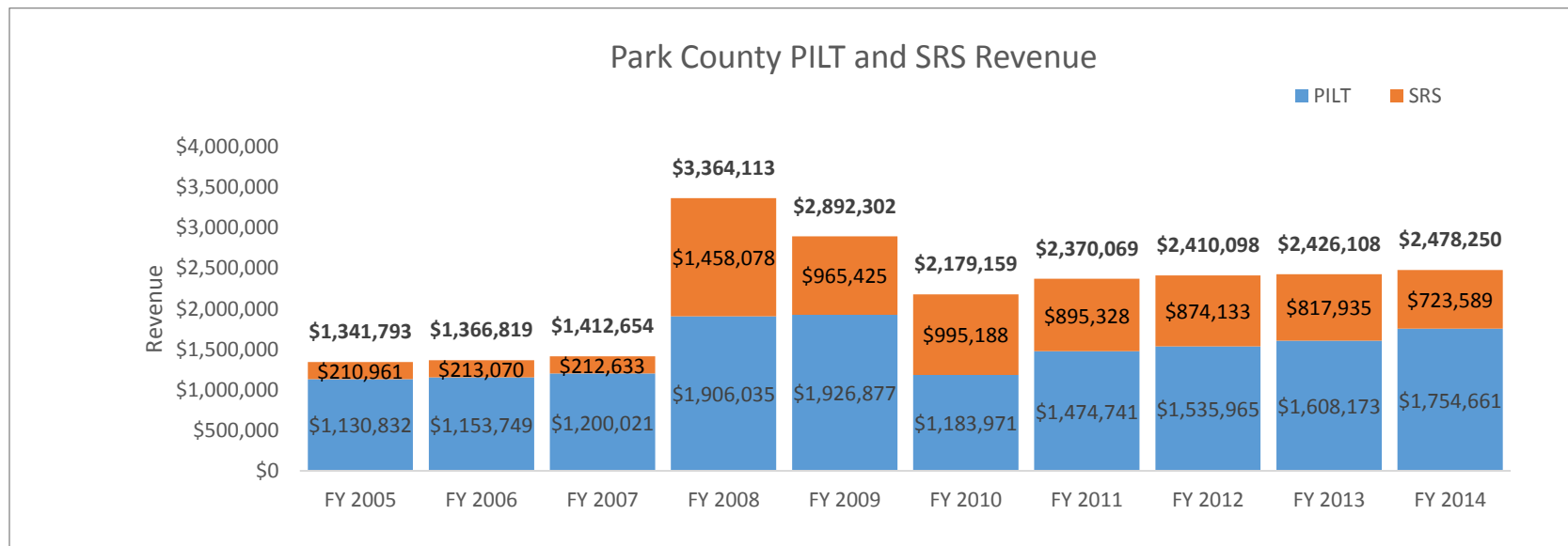


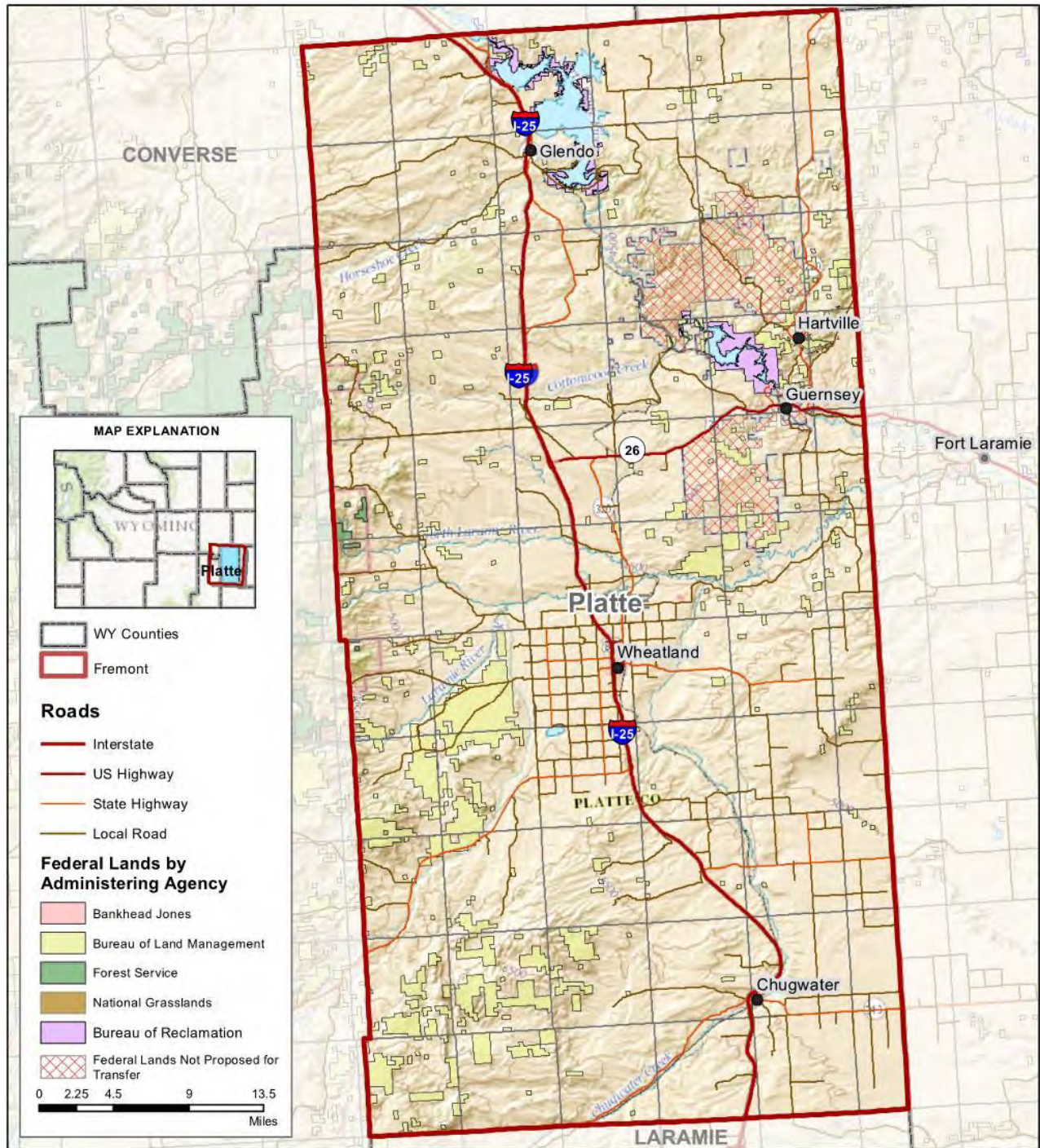
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STUDY ON MANAGEMENT OF PUBLIC LANDS IN WYOMING





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PROJECT:
OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming

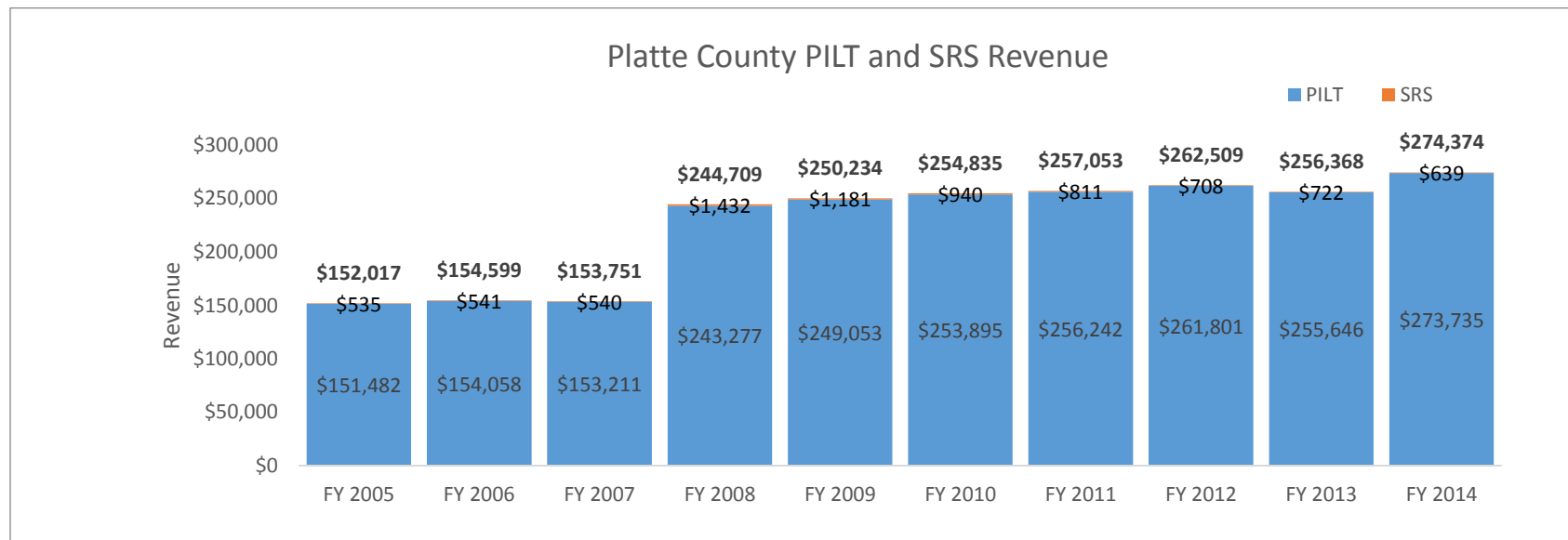
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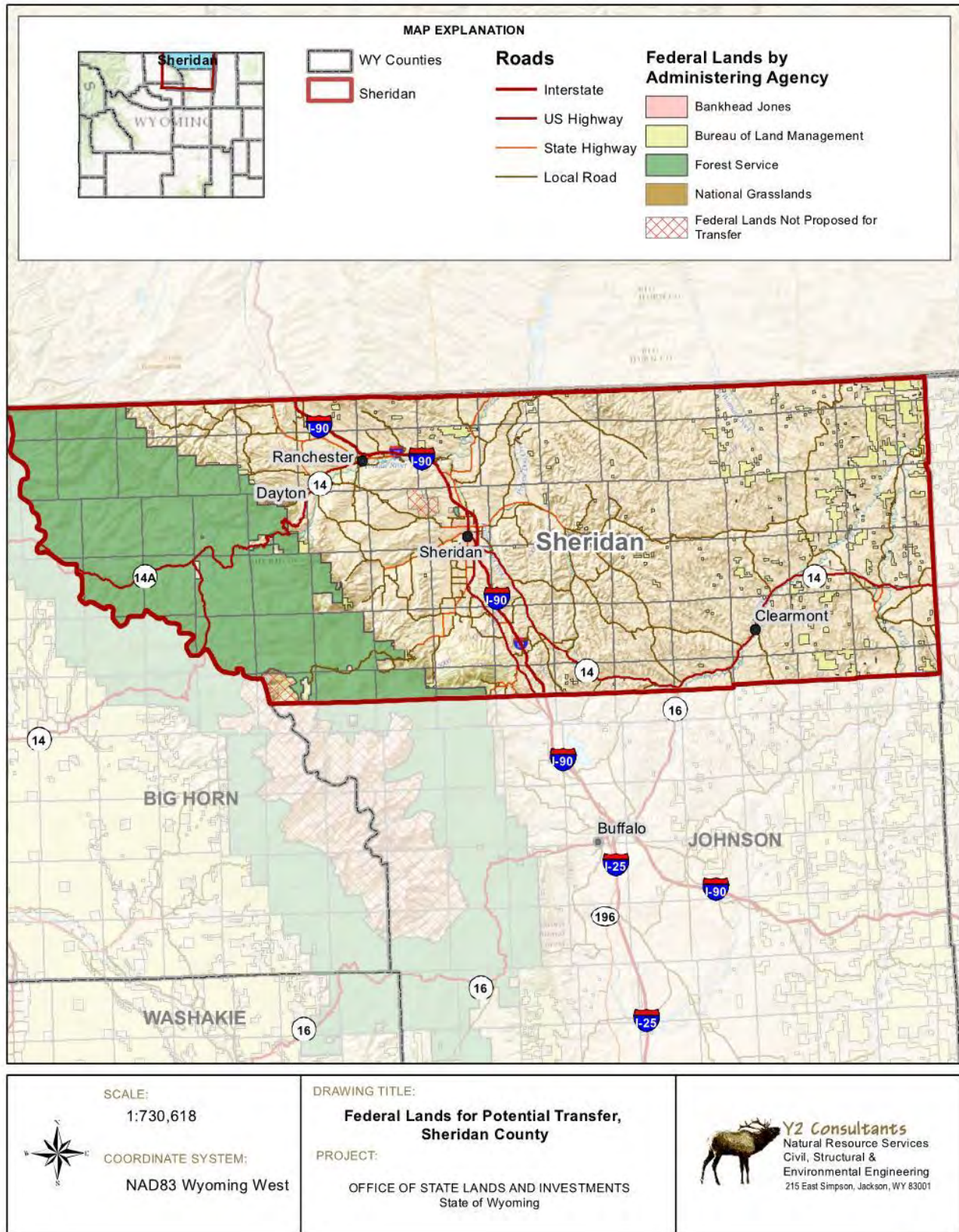
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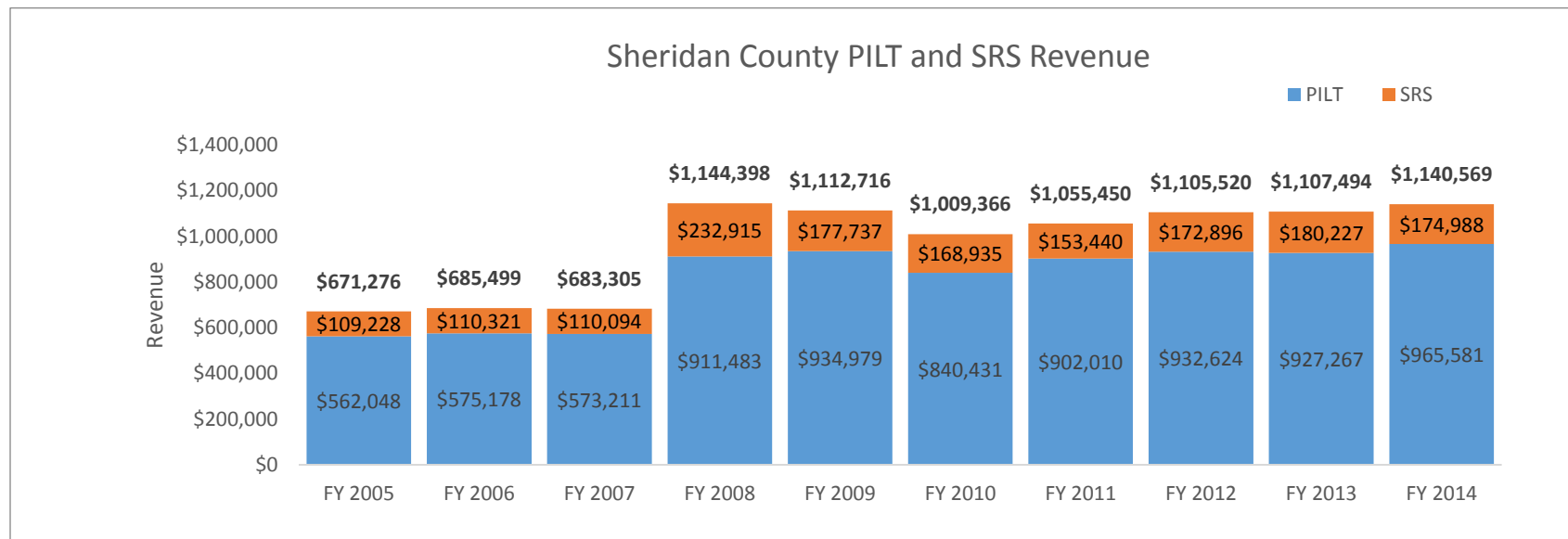


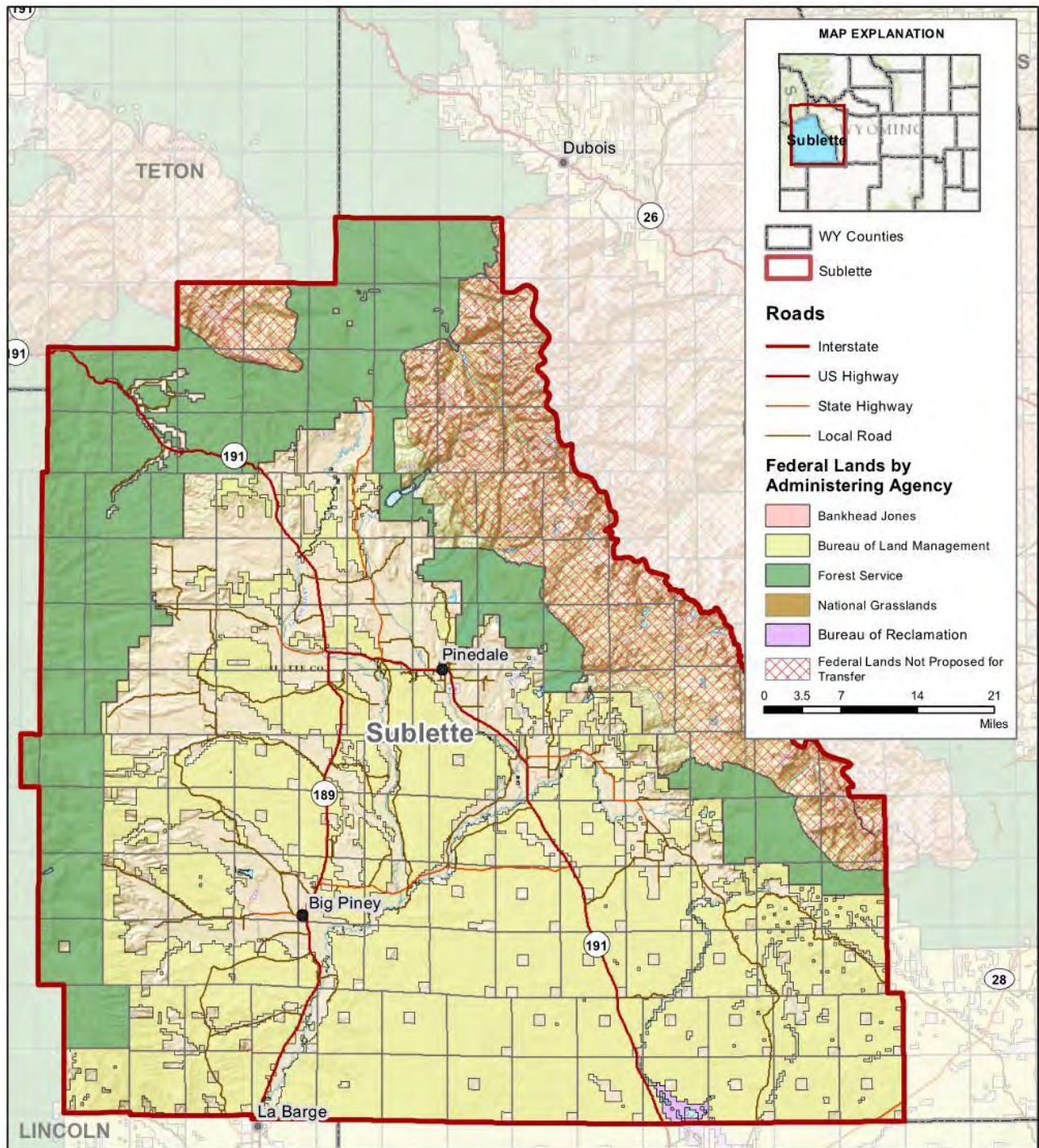
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STUDY ON MANAGEMENT OF PUBLIC LANDS IN WYOMING





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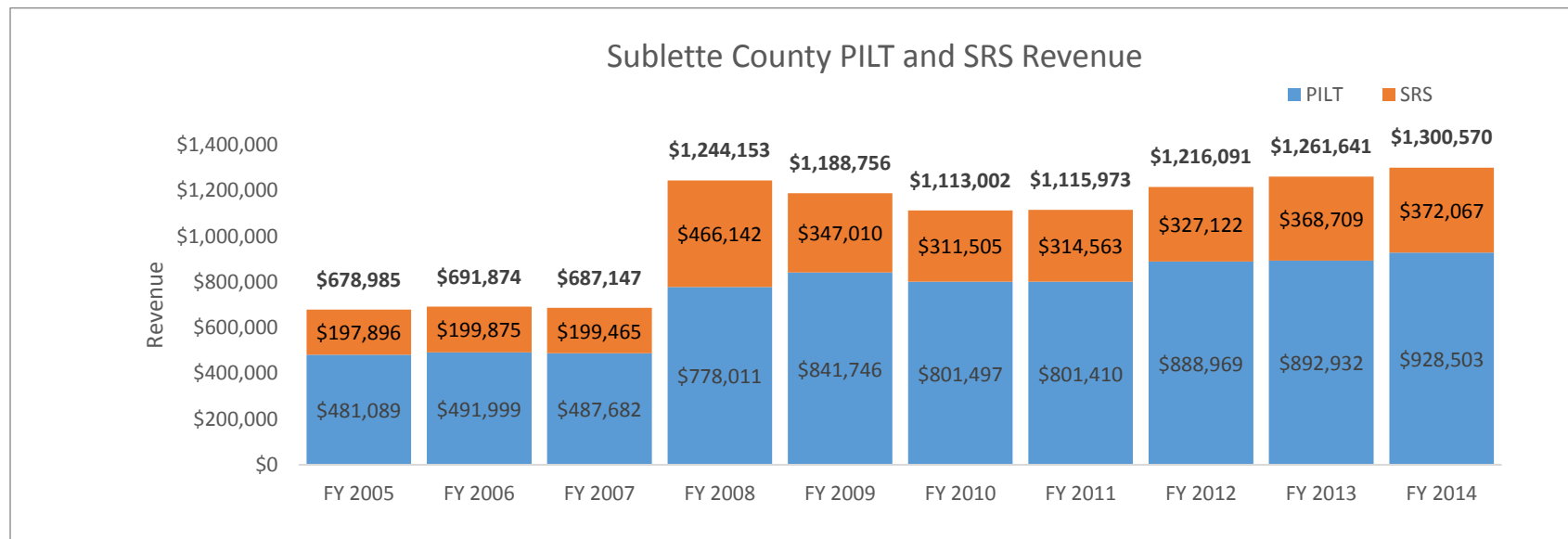
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PROJECT:
OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming

 **Y2 Consultants**
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215 East Simpson, Jackson, WY 83001

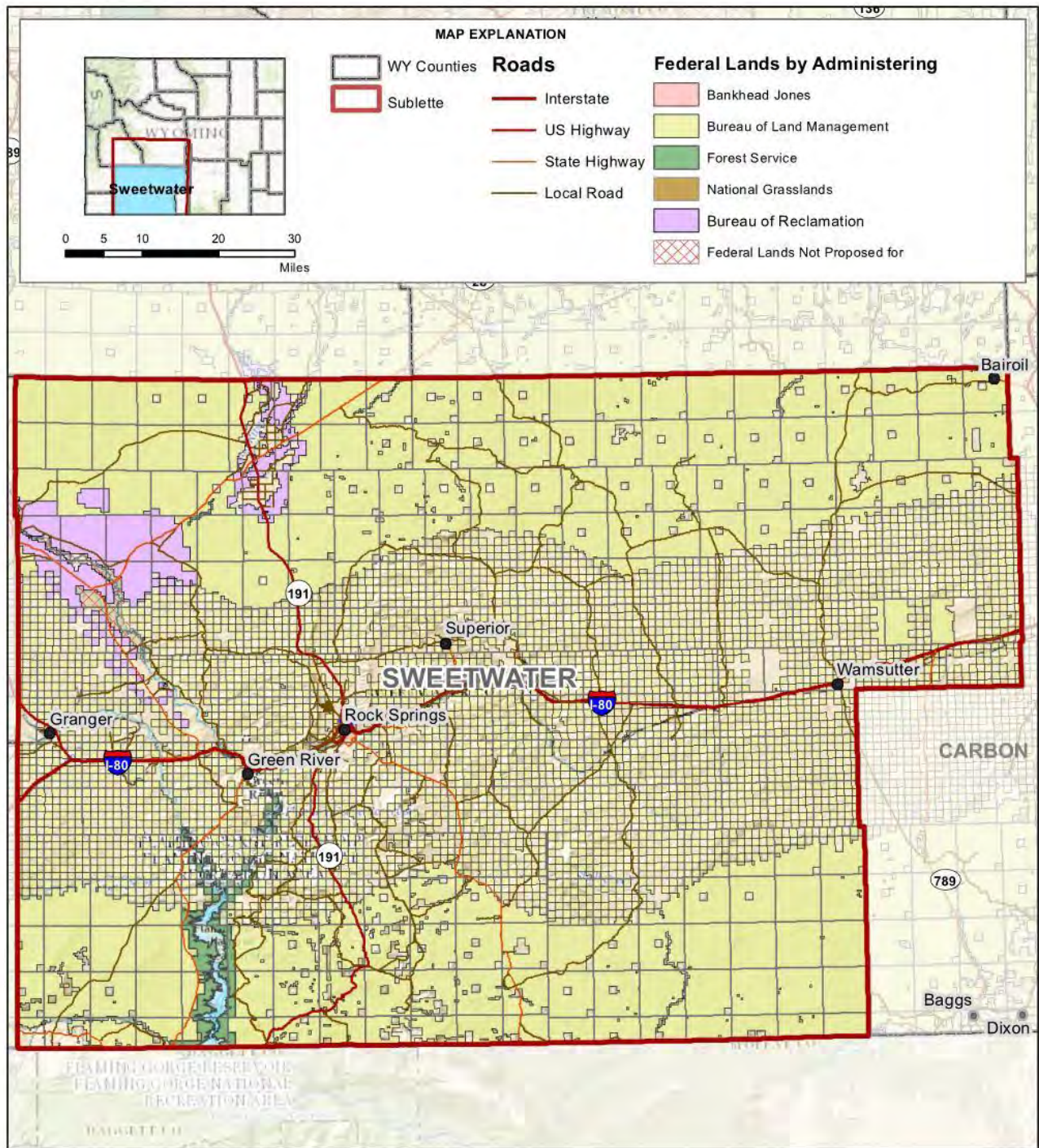
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OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming



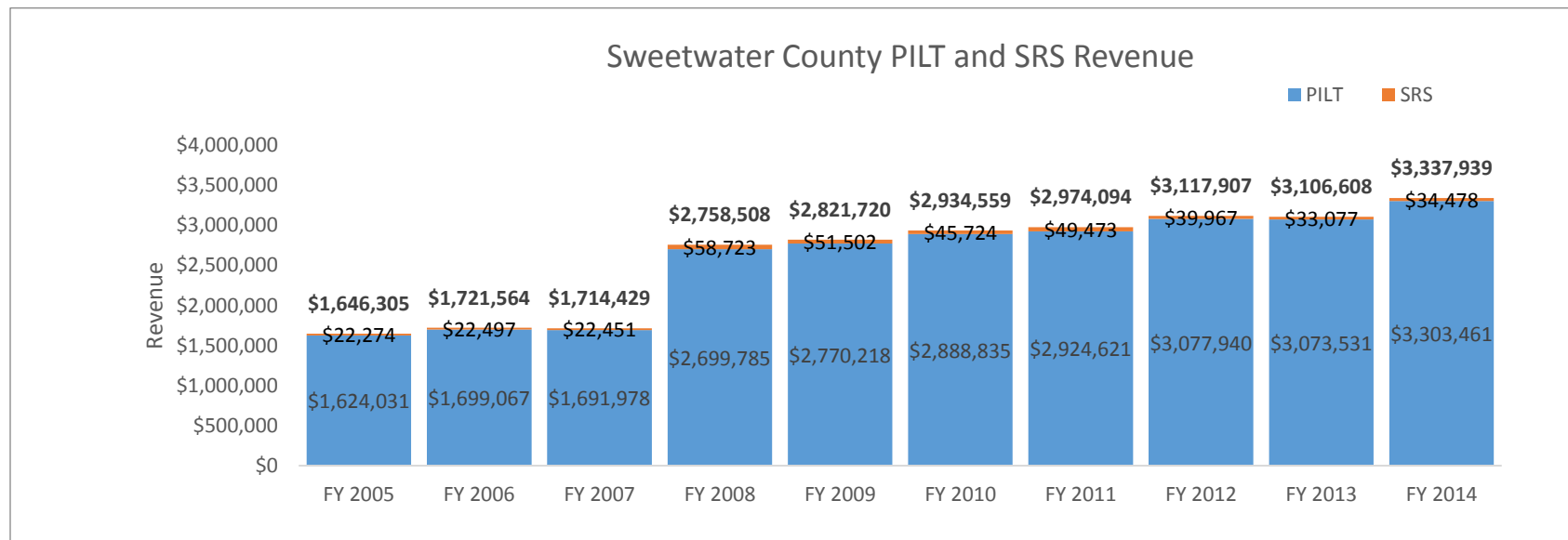
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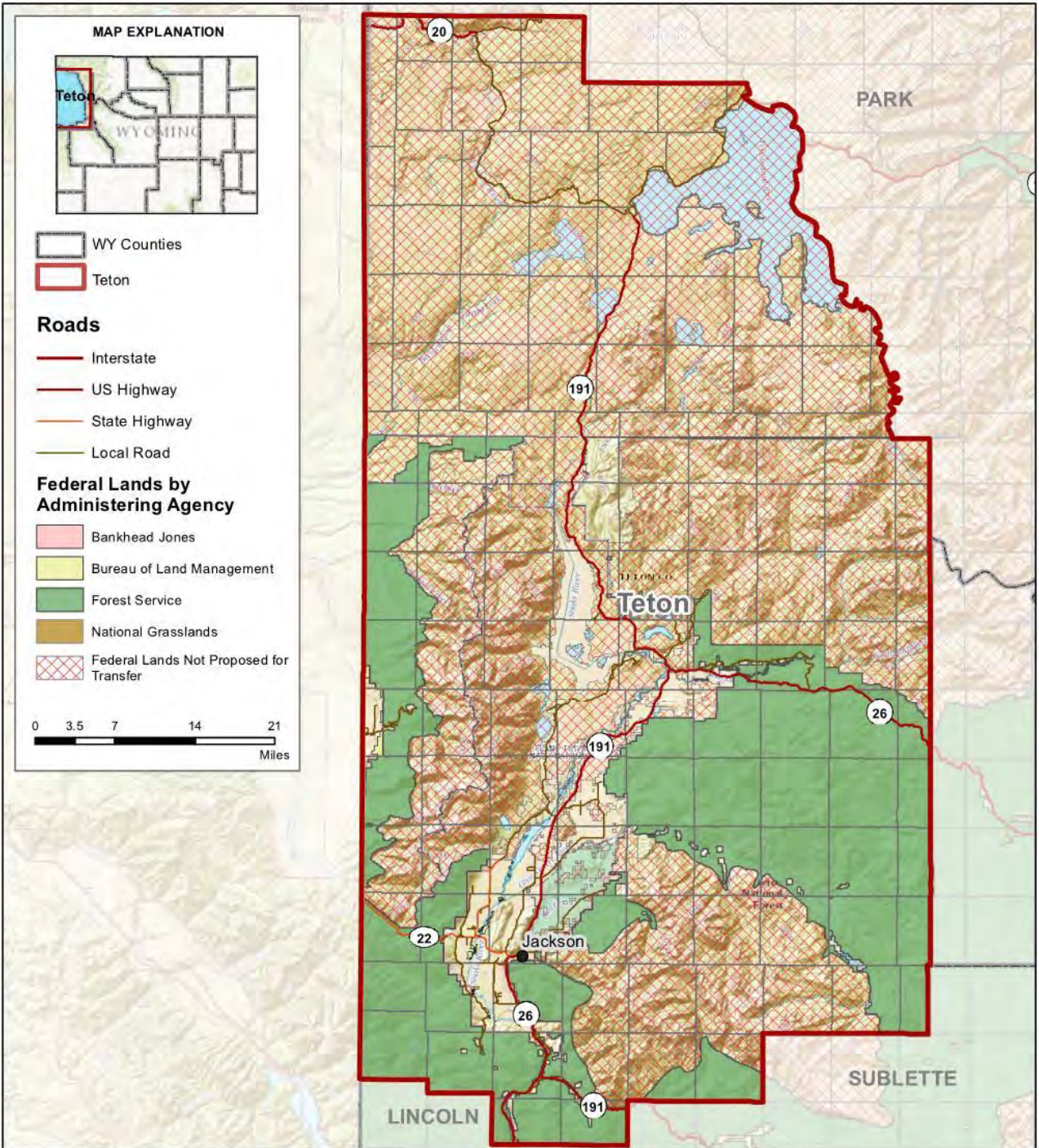
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PROJECT:
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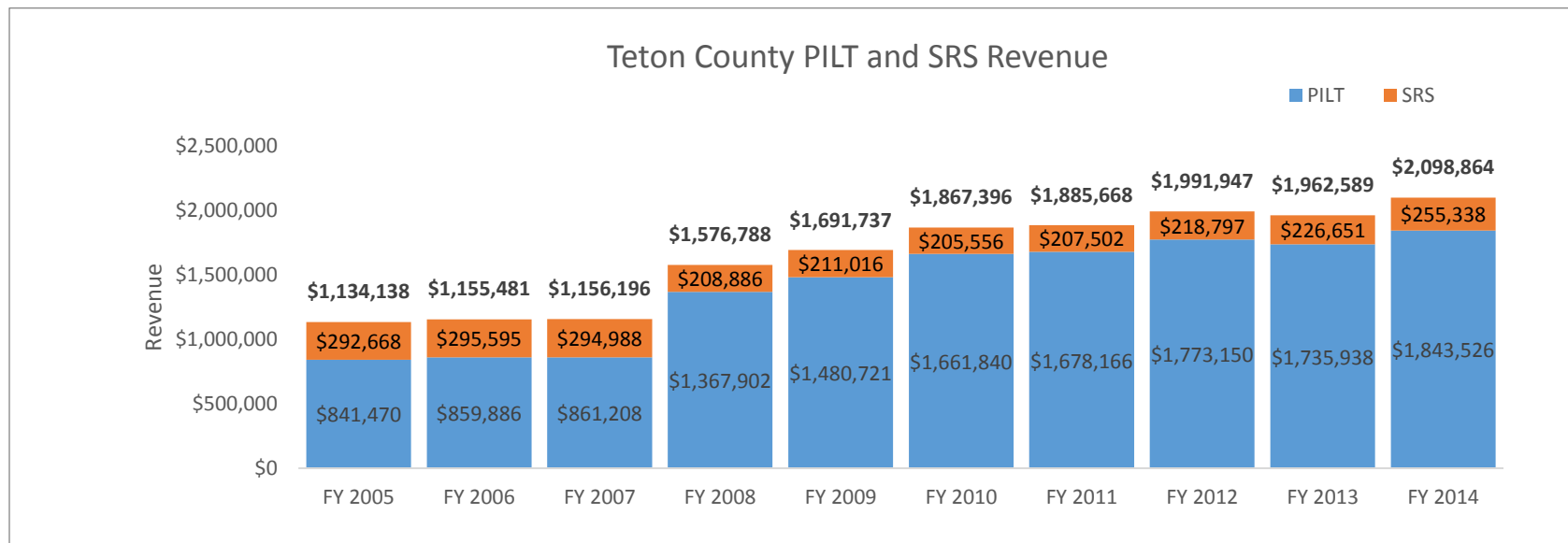
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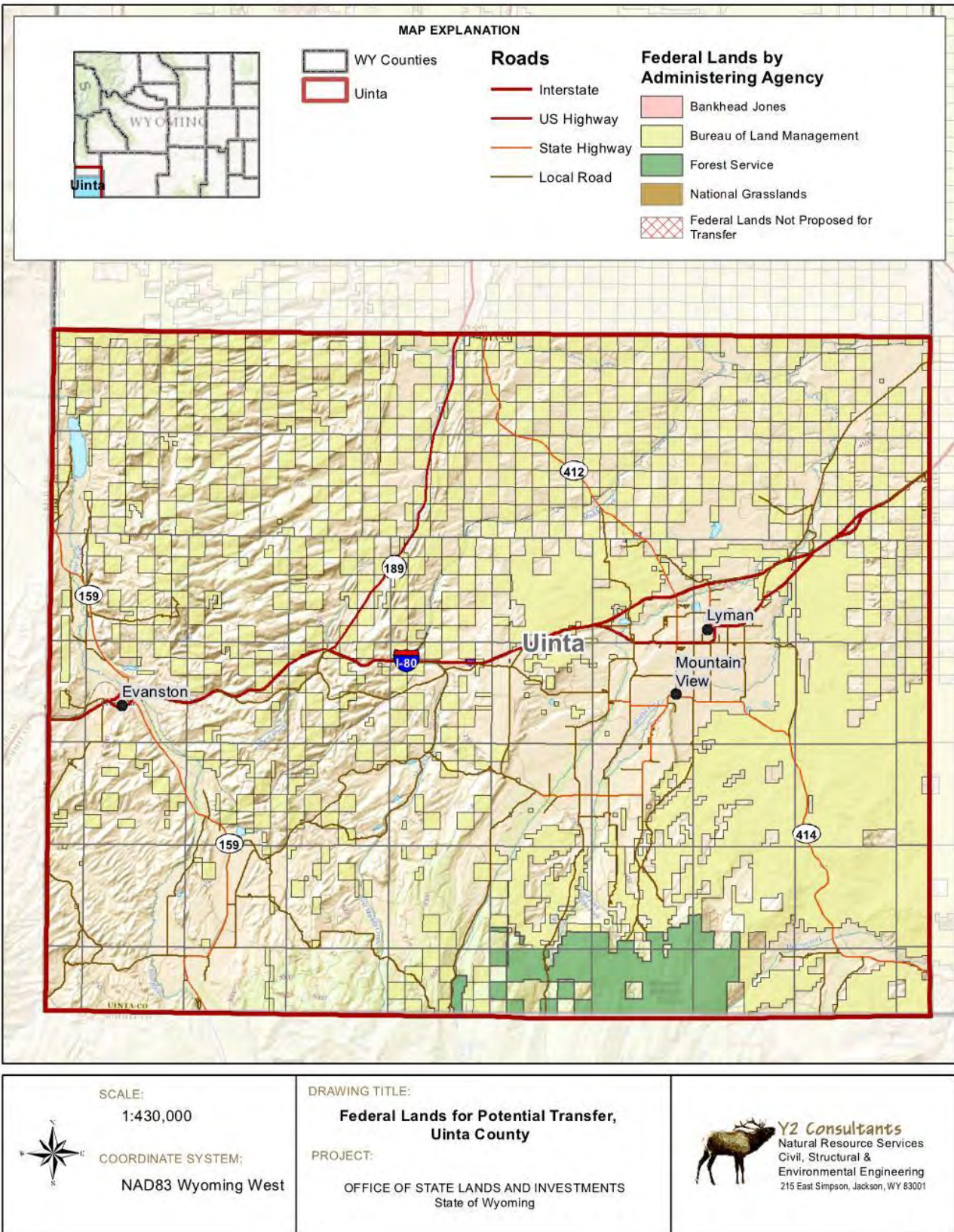
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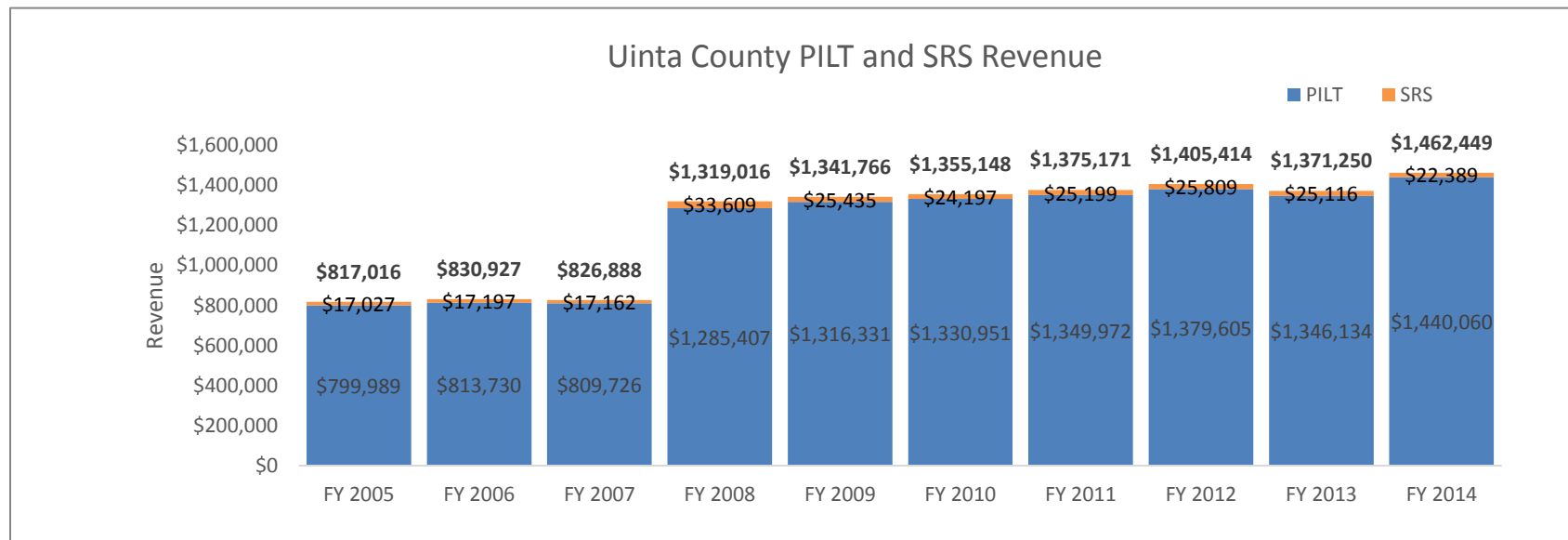
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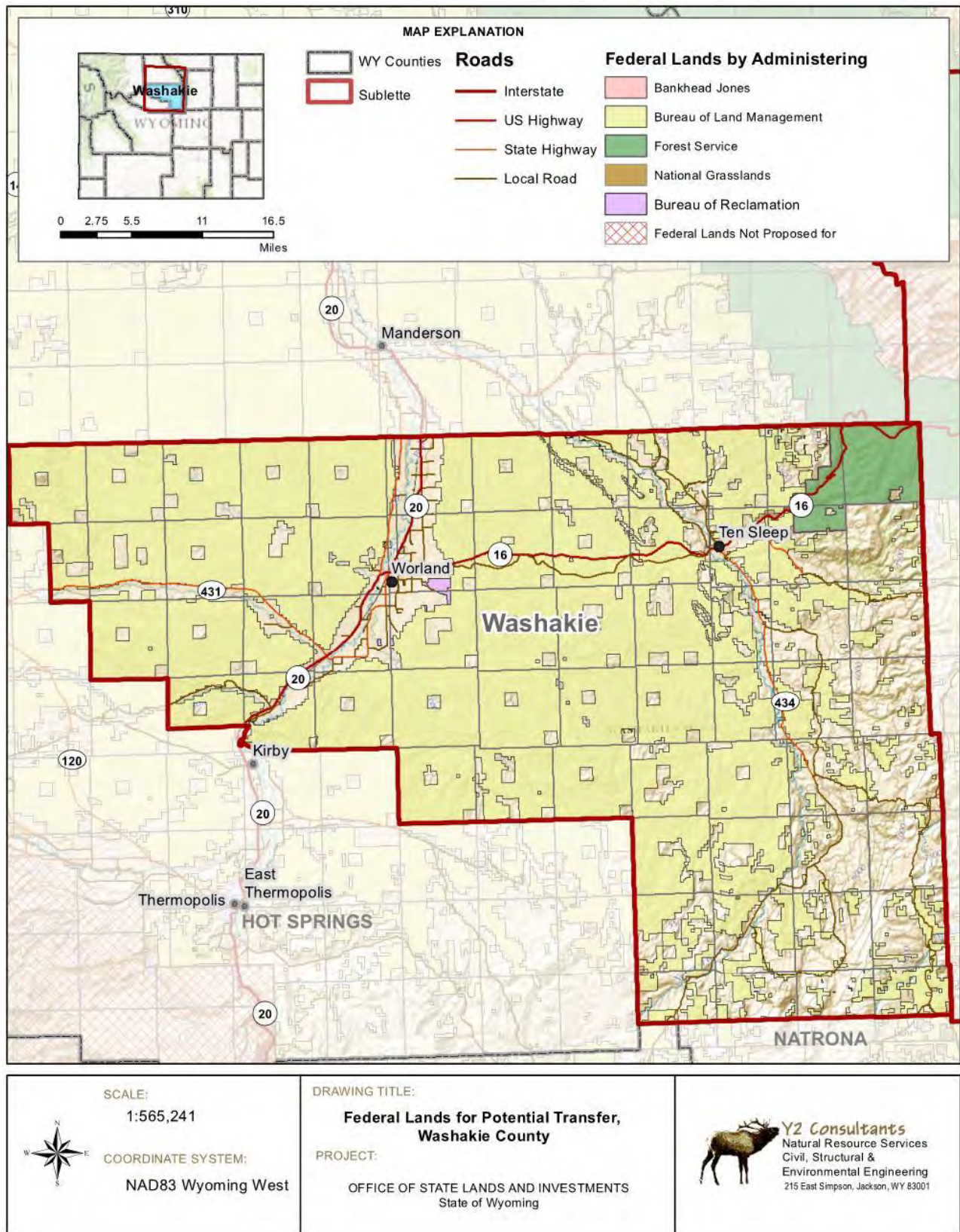
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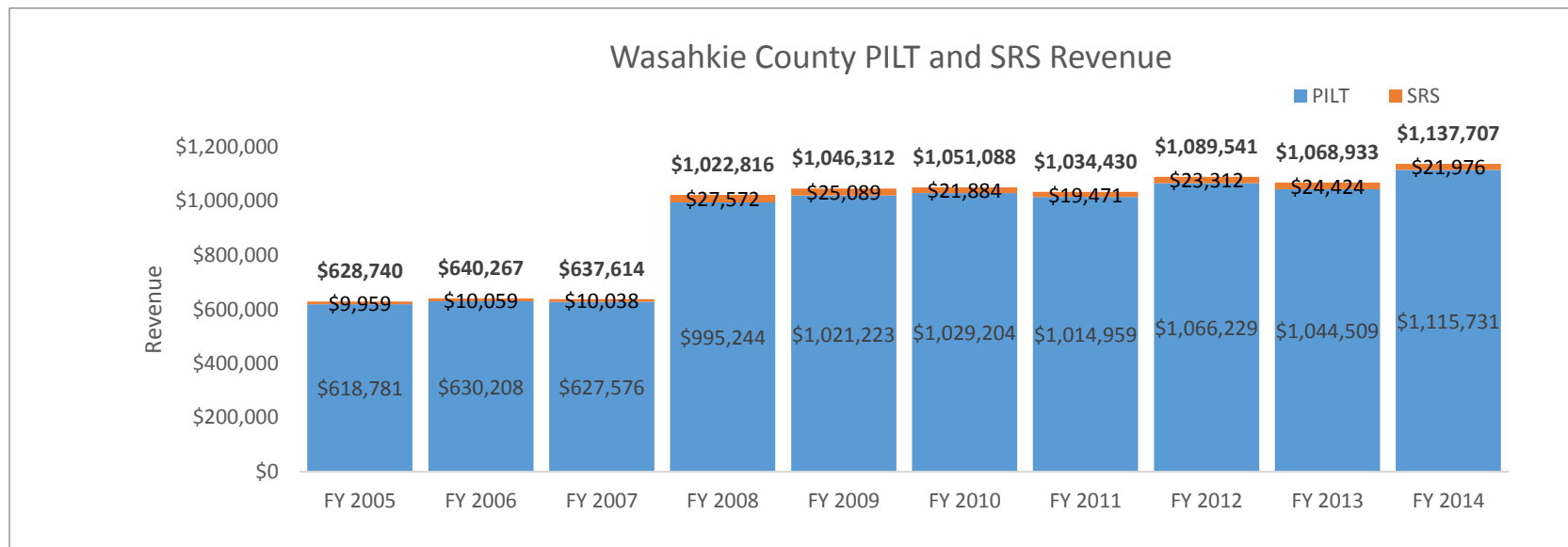


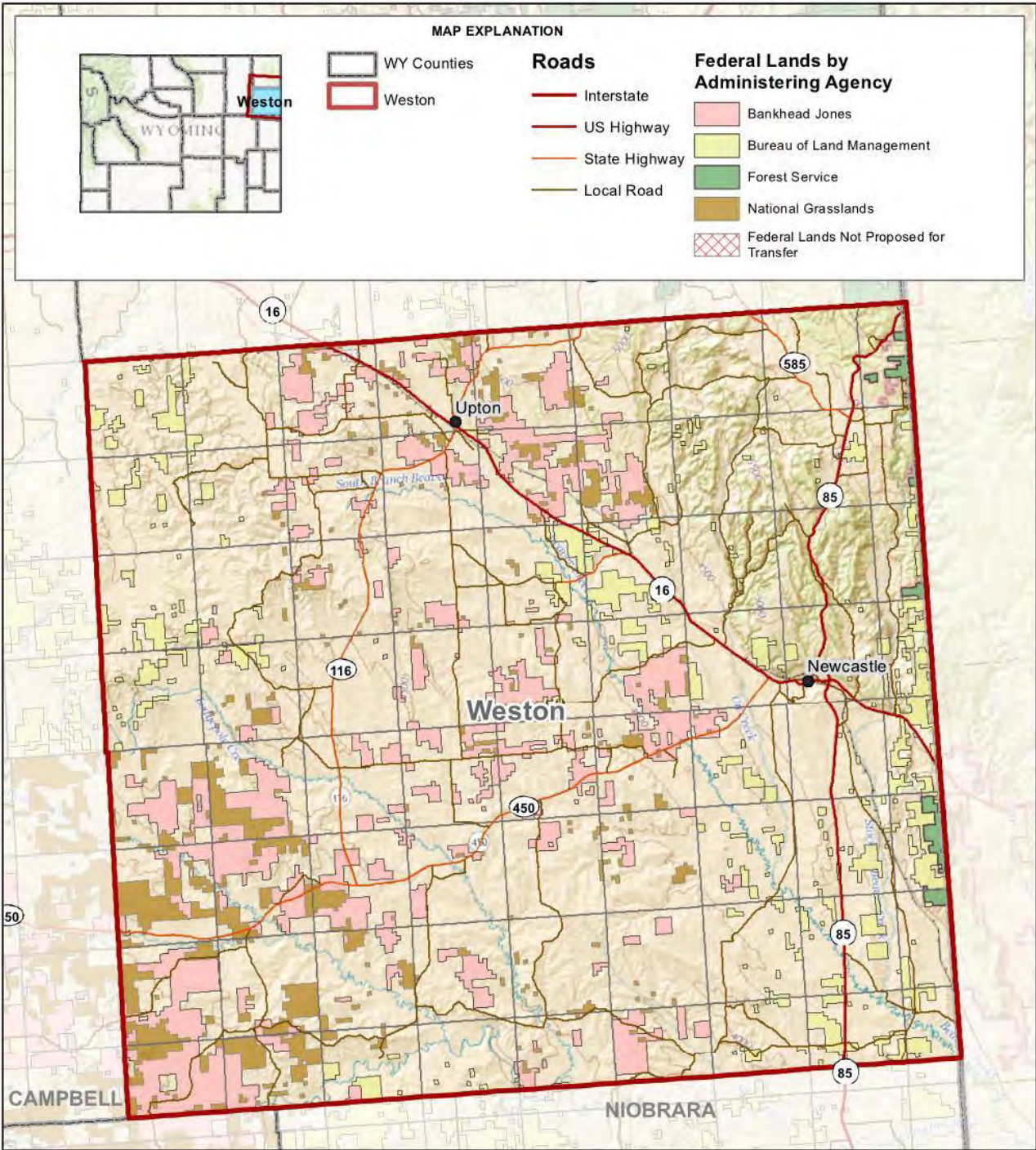
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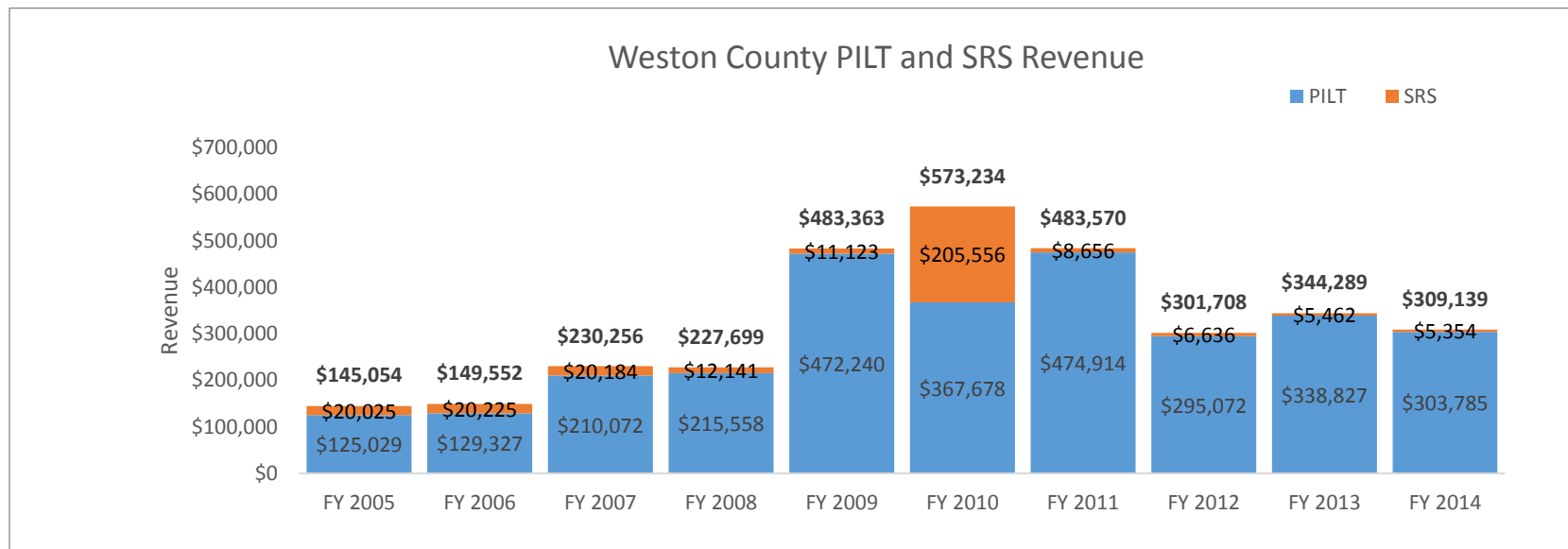
PROJECT:
OFFICE OF STATE LANDS AND INVESTMENTS
State of Wyoming



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Natural Resource Services
Civil, Structural &
Environmental Engineering
215 East Simpson, Jackson, WY 83001

6/17/2016







Appendix E: Memorandum of Understanding between the Bureau of Land Management and the Public Lands Council





BLM MOU W0220-2004-01

MEMORANDUM OF UNDERSTANDING

Between:
U. S. Department of the Interior - Bureau of Land Management
and
the Public Lands Council

This agreement is entered into between the Public Lands Council (PLC) and the Department of the Interior (DOI), Bureau of Land Management (BLM).

STATEMENT OF PURPOSE

The signatories to this Memorandum of Understanding (MOU) believe that cooperative rangeland monitoring is an important tool to help stabilize livestock grazing on lands administered by the BLM and to achieve desired range conditions in the future. Such a monitoring program involving the exchange of information benefits the collection, analysis and interpretation of monitoring information through the cooperation of public and private interests.

The signatories also believe that interpretation of data and conclusions about resource condition at the allotment level should be principally based on facts and data collected on the ground, using the latest scientific techniques. At times, there is a need to utilize the professional judgments of rangeland resource professionals. To evaluate and interpret all of the information available to accomplish allotment/lease objectives, the current and historic knowledge and practical experience of the permittees/lessees is also necessary.

This MOU is intended to provide a framework for the facts and data to be collected, analyzed, shared with the public, and used by the BLM to make land management decisions.

AUTHORITY

Section 307(b) of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1737(b), authorizes the Secretary, subject to the provisions of applicable law, to enter into contracts and cooperative agreements involving the management, protection, development, and sale of public lands.

RESPONSIBILITIES AND PROCEDURES

The PLC and the BLM will jointly:

1. Develop a letter, to be signed by national level representatives of both parties to inform public land permittees/lessees and BLM employees of the purpose of this MOU.
2. Encourage respective local members and employees to participate in joint, cooperative monitoring.





The Public Lands Council will, as appropriate:

1. Publicize and otherwise support joint, cooperative monitoring among its members, including emphasis of implementation of monitoring on a watershed basis where practical.
2. Encourage livestock permittees and lessees to work cooperatively with the BLM to develop a monitoring plan which, at a minimum, addresses those items outlined in Appendix A (attached) or public land.
3. Encourage grazing permittees and lessees to include private or leased land to the extent such inclusion is consistent with the scope of Federal jurisdiction, and only with written permission from the owner/lessee.
4. Provide a written report by February 28 of each year to the BLM's Rangeland, Soil, Water, and Air (WO 220) Group Manager on the status of activities pertinent to this MOU over the preceding year.
5. Work cooperatively with BLM to implement and stress the importance of consistent use of monitoring protocols or methodologies by Federal land management agencies.

The Bureau of Land Management will:

1. Continue working with livestock permittees and lessees who have actively participated with BLM in collecting and/or analyzing monitoring data within the past 5 years. Confirm they still have interest in conducting joint, cooperative monitoring.
2. Work with additional livestock permittees and lessees to jointly monitor to the maximum extent feasible within limits of available funds and BLM priorities.
3. Provide an annual status report to PLC at its Spring Conference on BLM's activities in the rangeland monitoring program during the preceding year. The annual report may address such matters as the number of permittee/lessee participants in the preceding year, a summary of the resources used in the previous fiscal year, and the number of participants projected for the upcoming year.
4. Work cooperatively with the livestock permittees and lessees to develop a monitoring plan. At a minimum it should address those items outlined in the attached Appendix A for the public land portion of their operation. Parties will comply with the Federal Advisory Committee Act to the extent it applies.





5. Involve permittees and lessees in data collection and evaluation processes, and provide copies of evaluation(s) to these permittees and lessees.
6. Coordinate with the Natural Resources Conservation Service to perform soil surveys and develop Ecological Site Descriptions where joint, cooperative monitoring occurs.
7. Maintain the final decision authority concerning the planning, collection and interpretation of the monitoring data collected under this MOU. The BLM retains its responsibility to make decisions relating to public land management, including livestock grazing, and compliance with public involvement requirements in the grazing regulations.

ADMINISTRATIVE PROVISIONS

- A. **Public - Private Partnership:** The planning, collection and interpretation of monitoring data will be jointly conducted between the permittee or lessee and BLM pursuant to the agency's applicable protocols. Permittees or lessees may seek assistance from other individuals or institutions (i.e., the extension service and/or consultants) when taking part in this joint venture. The BLM shall accept for consideration monitoring data collected using BLM-approved techniques when the data meets BLM standards as determined by the authorized officer. The BLM may check data and conduct random quality control reviews of data presented by the permittee/lessee or their representative prior to using the data. Monitoring data not collected as referenced above or found not to accurately reflect on-the-ground conditions may not be used.

When, at the request of the permittee/lessee, assistance is provided by consultants, institutions, other agencies or individuals, the permittee(s) or lessee(s) shall designate one individual to work with the BLM.

- B. Prior to implementing joint cooperative monitoring both parties shall agree to the methods for collecting data as specified in BLM-approved protocols. This includes but not limited to Technical Reference 1730-1, Measuring and Monitoring Plant Populations, 1734-3, Utilization Studies and Residual Measurements, 1734-4, Sampling Vegetation Attributes, 1734-7, and Ecological Site Inventory.
- C. Nothing in this agreement may be construed to obligate either the DOI or the United States to any current or future expenditure of resources in advance of the availability of appropriations from Congress. This agreement does not obligate the DOI or the United States to expend funds, property or services.
- D. While recognizing that the BLM has a responsibility to coordinate, consult, and communicate with many different entities concerning management of the public lands, this MOU addresses interaction between the BLM and PLC who represents members of the livestock industry

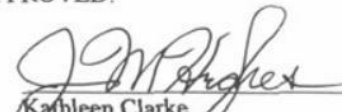





operating on public lands. This MOU in no way precludes or restricts the involvement of other public land users, interested public, or other public or private agencies, organizations or individuals from participating in this joint, cooperative monitoring.

- E. Nothing in this agreement shall be construed to conflict with any existing statutes, regulation or policy of the United States or any policy or procedures of the BLM or the DOI.
- F. This agreement shall be effective on the date of the last signature for a period of five years, at and that time it may be reaffirmed.
- G. This agreement may be re-negotiated, amended, extended, or modified by a written amendment through an exchange of correspondence between authorized officials of PLC and BLM.
- H. Either party may terminate this agreement by written notice to the other party.
- I. Each party will obtain prior approval from the other of all press releases, published advertisements, or other statements intended for the public that refer to this agreement or to the parties, the Department, the name or title of any employee of the Department, or other cooperating individuals in connection with this MOU.
- J. Nothing in this MOU may be interpreted to imply that the United States, the DOI, or the BLM endorses any product, service, or policy of PLC. The PLC will not take any action or make any statement that suggests or implies such an endorsement.

APPROVED:


 Kathleen Clarke
 Director, Bureau of Land Management

1-30-04
 Date


 K. L. Bliss
 President, Public Lands Council

1-30-04
 Date





Appendix A

Allotment Monitoring Plan

The following items should be considered when developing a monitoring plan with the grazing permittee or lessee. It is not intended for this list to be all-inclusive or absolute. Local considerations need to be factored in when jointly preparing the monitoring plan. The monitoring plan should be considered a dynamic document, which is reviewed and modified as necessary when new information becomes available. If an Allotment Management Plan (AMP) exists, it is suggested that the monitoring plan become part of the AMP after compliance with all applicable statutory and regulatory requirements.

A. Management Objectives

State clearly the land use plan and/or other management plan watershed or landscape management objectives and desired plant community objectives that will serve as the basis for selecting the attributes to be monitored and the interpretations to be made of monitoring data. Allotments may be used or aggregated if size approximates a watershed level. Objectives may be identified by reviewing and consulting relevant BLM documents.

B. Existing Monitoring Information

1. All available information from prior inventories, monitoring data, climatic records, actual stocking records, utilization surveys, photographs, or other pertinent information shall be compiled, analyzed and summarized for the public lands portion of the ranching operation.
2. Additional data needs may be identified to meet management objectives, desired plant community objectives, and other considerations (such as water quality, endangered species, etc).

C. Future Monitoring Attributes & Protocols

1. Describe and agree upon the locations, timing, attributes to be measured, and protocols to be used for both annual event monitoring and periodic long-term resource-trend assessment.
2. Where available, Ecological Site Descriptions should be the basis for interpreting and extrapolating monitoring results and for conducting rangeland inventories.
3. Monitoring data shall include the measurement or assessment of indicators or attributes appropriate for evaluating the allotment management objectives, which may include ground cover, vegetative species composition, long-term trend transects, and repeat





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photographs. Additional monitoring data, such as actual use, utilization or residual measurement (stubble height), vegetation structure (height, pattern), age class distribution of plant species, vegetation production, erosion indicators, and other relevant indicators may be included as needed on a case-by-case basis.

4. Monitoring data should be collected in a manner that is repeatable and as quantitative as practical.

