NATURAL RESOURCE POLICY PLAN

Bowman Slope Soil Conservation District

March 4, 2019

Prepared by:

Y2 CONSULTANTS
y2consultants.com
307 733 2999
ENGINEERING, SURVEYING & PLANNING
LANDSCAPE ARCHITECTURE, GIS
NATURAL RESOURCE SERVICES

THE FALEN LAW OFFICES
L.L.C.
ATTORNEYS FOR THE WEST

(Intentionally Left Blank)

1 INTRODUCTION 1

1.1 Natural Resource Policy Plans and Legal Framework 1

1.1 The National Environmental Policy Act 3

1.2 The National Forest Management Act 4

1.3 The Federal Land Policy and Management Act 4

1.4 National Park Service Legislation 5

1.5 Governor's Consistency Review Process 5

1.6 State Authority for a NRPP 5

2 EXPECTATIONS FOR THE NATURAL RESOURCE AND LAND USE PLAN 8

2.1 Coordination, Consistency Review and Cooperating Agency Status 8

2.2 Demand for Credible Data to be Used and Shared with Local Governments 8

2.2.1 Policy Statements 9

3 DESCRIPTION AND OVERVIEW OF GEOGRAPHIC AREA 10

3.1 HISTORY, CUSTOM & CULTURE 13

Custom and Culture 13
History 14
Demographics and Statistics 17

4 SOCIOECONOMICS AND ECONOMIC VIABILITY 19

Bowman and Slope Counties - Long Term Trends 19
Bowman and Slope Counties - Employment by Industry from 1970 to 2000 21
Bowman and Slope Counties - Earnings by Industry from 1970 to 2000 22
Bowman and Slope Counties - Employment by Industry since 2000 23
Bowman and Slope Counties – Earnings by Industry since 2000 24
Bowman and Slope Counties – Earnings per Job and Per Capita Income 25
Bowman and Slope County - Wages by Industry 26
Bowman and Slope Counties - Wages/Salaries and Proprietors 27
Bowman and Slope Counties – Wages/Salaries and Proprietors' Income 28
Bowman and Slope Counties - Unemployment 29
Recessions 29

4.1.1 Policy Statements 30

5 FEDERAL AGENCIES IN BOWMAN AND SLOPE COUNTIES 31

5.1 United States Forest Service 31

National Grasslands 32

Bankhead-Jones Farm Tenant Farmers Act 33
Land and Resource Management Plans 34
Dakota Prairie Grasslands Management 36
Little Missouri National Grasslands 38
Roadless Areas 40
Noxious Weeds 40
North Dakota Ex. Rel. Stenehjem v. U.S. (257 F. Supp.3d 1039 (2017)) 42

5.1.1 Policy Statements 43

5.2 BUREAU OF LAND MANAGEMENT 44
Grazing 45
Oil and Gas 46
BLM in North Dakota 46
Resource Management Plans 46

5.2.1 Policy Statements 47

5.3 US Fish and Wildlife Service 48
Wildlife Refuges in Bowman and Slope Counties 48
Endangered Species Act 49

5.3.1 Policy Statements 53

5.4 US Army Corps of Engineers 55

5.4.1 Policy Statements 57

5.5 Natural Resources Conservation Service 57

5.6 Farm Service Agency 58

5.7 US Air Force 58

5.7.1 Policy Statements 59

6 AIR QUALITY 61

6.1 Policy Statements 62

7 CLIMATE CHANGE 63

7.1 Policy Statements 63

8 GEOLOGY 64

8.1 Geology of Slope and Bowman Counties 64

9 WATER RESOURCES 67

9.1 Water Quantity and Appropriation 67

9.2 Water Quality 68

Groundwater Quality 68
Surface Water Quality 69
Cloud Seeding 70
Flooding 71
Drought 73
Drought Response Resources 74

9.3 Riparian Lands 76
Wetlands 77

9.4 WATER PIPELINES 78
Southwest Pipeline Project 78

9.4.1 Policy Statements 79

10 SOILS AND VEGETATION 81

10.1 Major Land Resource Areas and Ecological Site Descriptions 81

10.2 Soil Surveys 82

10.3 Noxious Weeds and Invasive Species 83
Federal 83
State 83
Counties and Municipalities 83
Commissioner of Agriculture 84
State and Federal Agencies 84
Bowman and Slope County Weed Control Boards 85

10.3.1 Policy Statements 85

11 WILDLAND FIRE 86
USFS 86
BLM 86

11.1 Policy Statements 88

12 SPECIAL DESIGNATION AREAS 89

12.1 Scenic Vistas and Viewsheds 89

12.2 Policy Statements 89

13 WILDLIFE 91
US Forest Service 93
Bureau of Land Management 94

13.1 Policy Statements 94

14 LIVESTOCK GRAZING 96
Little Missouri National Grasslands Grazing and Range Improvements 96
National Wildlife Refuges 97

Bureau of Land Management and Range Improvements 97

14.1 Estray Livestock 98

14.1.1 Policy Statements 98

15 ENERGY PRODUCTION 100
Federal Oil and Gas Regulation and Framework 100
Oil and Gas Bearing Formations 100
Statistics 101
Office of Natural Resources Revenue 101
Gas Plants 102
Pipelines 102
Coal 104
Abandoned Mine Lands 104
Special Waste Disposal Facilities 105

15.1 RENEWABLE ENERGY 106
Wind Energy 106
Nuclear Energy 106

15.1.1 Policy Statements 107

16 TRAVEL MANAGEMENT AND TRANSPORTATION INFRASTRUCTURE 108
Federal Highway Administration 108
Federal Lands 108
State Lands 108
Bowman and Slope Counties 109

16.1 Travel Management 110

16.1.1 Policy Statements 112

17 REFERENCES 113

18 ACRONYMS 127

APPENDIX A. . FALEN LAW OFFICE MEMOS .....

APPENDIX B. : PUBLIC COMMENT SPREADSHEET .....

APPENDIX C: PUBLIC MEETING POWERPOINT PRESENTATION .....

LIST OF FIGURES

Figure 1. Wheat Harvest in Slope County. 7
Figure 2. Land ownership in Bowman and Slope Counties. 12
Figure 3. Population and trend for Bowman and Slope Counties. (25) 19
Figure 4. Employment Trend for Bowman and Slope Counties. (25) 19
Figure 5. Personal income trends for Bowman and Slope Counties. (25) 20
Figure 6. Employment by industry from 1970 to 2000 for Bowman and Slope Counties. (25) 21
Figure 7. Earnings by industry from 1970 to 2000 for Bowman and Slope Counties. (25) 22
Figure 8. Employment by industry since 2000 for Bowman and Slope Counties. (25) 23
Figure 9. Earnings by industry since 2000 for Bowman and Slope Counties. (25) 24
Figure 10. Average earnings per job and per capita income from 1970 to 2016 for Bowman and Slope Counties. (25) 25
Figure 11. Wages and Employment by industry in 2016 for Bowman and Slope Counties. (25) 26
Figure 12. Wages, salaries and number of proprietors from 1970 to 2016 in Bowman and Slope Counties. (25) 27
Figure 13. Proprietors' share of employment and income from 1970 to 2016 for Bowman and Slope Counties. (25) 28
Figure 14. Average annual unemployment rate from 1990 to 2017 for Bowman and Slope Counties. (25) 29
Figure 15. Employment and national recessions from 1976 to 2015 and their relationship to Bowman and Slope Counties. (25) 29
Figure 16. A ranch branding in Slope County. Multiple generations of family members and neighbors gather to brand the ranch's calf crop each year. 30
Figure 17. Grass strips on the Herb Pittsley farm. 32
Figure 18. Russian wildrye seeding 8 miles north of Bowman. February 1924. 34
Figure 19. Little Missouri National Grasslands. 39
Figure 20. Roadless areas in Bowman and Slope Counties. 41
Figure 21. Private buffalo ranch in Southwest Bowman County. 45
Figure 22. Northern Long-eared Bat range map (71) 53
Figure 23. 16-foot concrete principal spillway at the Bowman-Haley Dam. July 1966. 57
Figure 24. Burning coal mine near Amidon. July 1967 60
Figure 25. North Dakota Ambient Air Quality Monitoring Sites (white labels). (88) 62
Figure 26. Generalized Geologic Map of North Dakota (91). 64
Figure 27. Dinosaur leg found near Marmarth. 65
Figure 28. Geologic Map of Bowman and Slope Counties 66
Figure 29. Major watershed basins of North Dakota (100) 68
Figure 30. Davis Dam beginning to fill after construction in 1963. 70
Figure 31. Construction of the north side of the spillway of the Bowman-Haley Dam. 75
Figure 32. Counties approved for emergency CRP grazing in 2017 (134). 76
Figure 33. Riparian area along the Little Missouri River in Slope County in 2017. 77
Figure 34. Southwest Pipeline Project location (144). 79
Figure 35. Dynamited stock pond west of Bowman. 80
Figure 36. Major Land Resources Areas in North Dakota. (149). 82
Figure 37. Wildland fires in Bowman and Slope Counties since 2002 87
Figure 38. Little Missouri River in Slope County. 90
Figure 39. Cattle grazing the Little Missouri Grasslands. 97
Figure 40. Major oil pipelines in North Dakota, June 2017 (190). 103
Figure 41. Maah Daah Hey Trail location 111

LIST OF TABLES

Table 1. 2010 census data for Bowman and Slope Counties 18
Table 2 Flood Events 71
Table 3. North Dakota Species of Conservation Priority. 92
Table 4. Bowman and Slope County collected federal mineral revenue and ONNR disbursements. 102

1 INTRODUCTION

The purpose of this project is to develop a local land and natural resource use plan and policy that comply with state and federal statutes that can be used to influence federal agency decisions as required by federal statute. The local land use plan can also be used as part of the local government's response when it receives its actual notice of species listing and proposed critical habitat designations under the Endangered Species Act.

Y2 Consultants, LLC (Y2) and Falen Law Office (FLO) conducted an initial scoping meeting with Bowman-Slope Soil Conservation District (referred to hereafter as BSSCD or the District) and Board in July 2017. Y2 gathered data on Bowman and Slope County issues and FLO developed several memoranda on important issues in Bowman and Slope Counties 9Appendix A).

Y2 provided a draft plan to the District in June 2018. BSSCD provided comments to the draft through the summer of 2018. The plan was released for public review and comment from January 7, 2019 through January 30, 2019. Due to the federal government shut down that occurred between December 22, 2018 and January 25, 2019, the comment period was extended to February 15, 2019 to allow federal agencies the opportunity to comment on the plan. Public meetings were held on January 17, 2019 in Amidon and Bowman, North Dakota. Public comments were received and reviewed by the steering committee on February 26, 2019. Comments, were applicable, were incorporated into the NRPP. The final plan was provided to the BSCCD on March 4, 2019 for adoption. Public comments received, and responses to the comments is provided in Appendix B.

North Dakota Century Code § 4.1-20-24(h) grants soil conservation districts the power to develop comprehensive plans for the conservation of soil resources and for the control and prevention of soil erosion within the district. A comprehensive plan must specify in such detail as may be possible the acts, procedures, performances, and avoidances that are necessary or desirable for the effectuation of the plan. The act then allows a district to publish the plan and bring it to the attention of occupiers of lands within the district.

The act allows comprehensive land use plans that are adopted by the conservation districts to include provisions for any other means, measures, operations, and programs as may assist conservation of soil and water resources and prevent or control soil erosion in the district, having due regard to the policy behind North Dakota's soil conservation district statute set forth in NDCC § 4.1-20-01. NDCC § 4.1- 20-28(5).

In order to ensure that this Natural Resource Policy Plan continues to fulfill its purpose to ensure meaningful local participation in federal decisions that affect the community and to ensure the continued accuracy and relevance of the Natural Resource Policy Plan, it is the intent of the Bowman Slope Soil Conservation District, Bowman and Slope Counties to review the Natural Resource Policy Plan annually to determine if additions or modifications to the plan are necessary. The policy statements in this document are being adopted by each of the Bowman Slope Soil Conservation District, Bowman and Slope Counties, and therefore each of those statements refer to them as the parties making the policy statements.

1.1 NATURAL RESOURCE POLICY PLANS AND LEGAL FRAMEWORK

A Natural Resource Policy Plan (NRPP) is a document that when prepared and adopted by a local

government requires all federal agencies to review and consider its policies when making decisions that might affect the local area. Conservation districts are a unit of local government organized under the authority of the North Dakota Soil Conservation District law. Conservation districts have the authority to take measures to protect from soil erosion, preserve North Dakota's natural resources, control floods, preserve wildlife, protect the tax base, protect public lands and protect and promote the health, safety and general welfare of the people of the State. That responsibility includes specifically interacting with federal agencies on all federal issues impacting the local community and counties. To give the locally elected government the strongest voice it can have during "government-to-government" interaction, local governments can formally adopt "local land use plans" or NRPPs. These plans establish local policy regarding the use and management of federal lands in their jurisdiction and can influence the development and implementation of federal policies, programs and other types of federal decision-making that affect a local community. NRPPs are intended to help protect the local citizens' use of, and access to, federal lands and resources and to ensure the socioeconomic wellbeing, culture, and customs of a local community are adequately considered in federal decisions (1).

These local NRPPs are not zoning and do not regulate the use of private lands. When people think of NRPPs, they typically think of the general planning document that counties use to determine zoning on private lands. A NRPP is a separate type of land use plan prepared by rural counties and conservation districts containing policies relating to the all aspects of federal decision-making that may impact the constituents within the local government's boundaries (1).

Local governments do not have jurisdiction over the federal government or public land and NRPPs cannot require federal agencies to take specific actions. However, federal agencies and departments are mandated by various federal statutes to engage local governments during the decision-making process on federal plans, policies, and programs that will impact the management of land and natural resources within a community and ultimately affect the local tax base and lives of local citizens. Federal agencies are required to coordinate and consult with local governments and to give meaningful consideration to policies asserted in written plans prepared and adopted by local governments concerning management of federal lands in their area (1).

Federal agencies are required to identify and analyze the impacts to local economies and community culture when making decisions. Therefore, NRPPs outline the present economic and cultural conditions and desired future conditions of a local community and demonstrate how those conditions are tied to activities on adjoining federal lands. The plan establishes the local government's preferred policies for the planned use, management, protection, and preservation of the natural resources on the federal lands within its jurisdiction. The goal is to protect private property, the local tax base, and local custom and culture. An adopted NRPP is a critical tool that allows a local government to have a substantive impact on federal decisions, plans, policies, and programs. In fact, a written plan can play a key role in the success of a local government engaging the federal government (1).

Required engagement between federal agencies and local governments takes the form of "consistency review" under the National Environmental Policy Act (NEPA) and the Federal Lands Policy and Management Act (FLPMA), the requirement for "coordination" under both FLPMA and the National Forest Management Act (NFMA), engaging local governments acting as a "cooperating agency" under NEPA, and a State Governor's consistency review process.

1.1 THE NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) applies to "every major Federal action significantly affecting the quality of the human environment" (42 U.S.C. § 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.

The NEPA requires that agencies undertake an environmental analysis to determine whether a federal action has the potential to cause environmental effects. These environmental effects also trigger the requirement to consider the social and economic effects as well. If a proposed major federal action is determined to significantly affect the quality of the human environment, federal agencies are required to prepare an Environmental Impact Statement (EIS). The regulatory requirements for an EIS are more detailed and rigorous than the requirements for an Environmental Assessment (EA). Other processes NEPA identifies include Determinations of NEPA Adequacy and Categorical Exclusions. 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 goals of the local government.

First, local government can use its land use policy or plan (NRPP) as part of the federal agency's "consistency review" process. Under this provision, if the federal agency receives a local plan in the course of writing an EIS, 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 C.F.R. §§ 1506.2, 1506.2(d)). For the local government to utilize the consistency review requirements, a written and adopted local plan is required. With a written plan, this analysis happens even when the local government does not know about the pending decision or action as long as the NRPP was provided in advance to the reviewing federal agency. It is not enough for the federal agency to simply read the local land use plan, the federal agency has to try to reconcile the differences between the local plan and the proposed federal action, and if those differences cannot be reconciled, the federal agency has to explain why.

NEPA requires that copies of comments from state or local governments accompany the EIS or EA throughout the review process (42 U.S.C. § 4332(c)). Written comments submitted by a local government not tied to a formally adopted NRPP receive less consideration than those tiered to an adopted NRPP.

Local governments can separately participate in the NEPA process as a "cooperating agency" (40 C.F.R. § 1508.5). "Cooperating agency status" requires federal agencies to work with local governments before any federal plan or proposal is presented to the general public. It does not require a written land use plan prepared by local governments. "Cooperating agency status" is a request made by a county or conservation district to the deciding federal agency if the local government believes that the proposed federal actions will impact the local government and the local government wants to be involved in the federal process at its inception. Should a local government request cooperating agency status for a particular agency decision (for example, the designation of critical habitat for a listed threatened or endangered species or completion of the land use plan for the national grasslands in the area), the local government can participate in drafting portions of the relevant NEPA document. They can be involved with identifying appropriate scientific data, assisting with alternative development for the proposed federal action, and ensure that the discussion of impacts to the local economy or the local citizens is accurate. A NRPP, while not required, can aide this process and analysis.

Cooperating agency status can be reserved for more significant federal decisions likely to have a larger impact on a community and is not required for every federal action.

Pursuant to NEPA, an applicant for cooperating agency status must be a locally elected body such as a conservation district, board of supervisors, or a county commission and possess "special expertise." A local government's special expertise is defined as the authority granted to a local governing body by state statute. See Section 2.5 for county and conservation district authority under North Dakota law.

1.2 THE NATIONAL FOREST MANAGEMENT ACT

The National Forest Management Act (NFMA) governs the U.S. Forest Service (USFS) and requires the agency to "coordinate". The NFMA requirements are as follows:

> [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 U.S.C. § 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.

1.3 THE FEDERAL LAND POLICY AND MANAGEMENT ACT

The Federal Land Policy and Management Act (FLPMA), which governs the Bureau of Land Management (BLM), provides detailed requirements for "coordination" and "consistency" with local land use plans. With regard to the requirements for "coordination", FLPMA states that the BLM must:

> To the extent consistent with laws governing the administration of the public lands, **coordinate the land use inventory, planning, and management activities of or for such lands with the land use planning and management programs** of other Federal departments and agencies and **of the State and local governments within which the lands are located […] by considering the policies of approved State and tribal land resource management programs** (emphasis added). (43 U.S.C. § 1712)

Such coordination is to be achieved by:

- To the extent practical, the BLM must stay apprised of local land use plans.
- 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. (43 U.S.C. § 1712(c)(9))

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:

> 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. (43 U.S.C. § 1712(c) (9)).

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 (2). 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.

1.4 NATIONAL PARK SERVICE LEGISLATION

The National Park Service (NPS) was established by the Organic Act in 1916. At the time there were 14 national parks and 21 national monuments the NPS was developed to manage. The Preservation of Historic Sites Act of 1935, the Wilderness Act of 1964, and the Wild and Scenic Rivers Act of 1968 all contributed to the evolution of the National Park Service and how the agency managed park land. The National Environmental Policy Act (NEPA) and Endangered Species Act (ESA) of 1969 and 1973 increased the complexity and prevalence of science in park management. Throughout this time span the NPS had grown to solely oversee all of the nation's parklands, this included parks previously held by the War Department, the national monuments previously managed by the Forest Service, and the parks which resided in Washington D.C. The National Park Omnibus Management Act of 1998 increased accountability and improved management for multiple NPS programs. This legislation required that the NPS receive authorization from Congress prior to studying potential areas for addition the National Park System. (3)

In accordance with Executive Order 13352, the National Park Service is required to carry out its natural resource management responsibilities in a cooperative manner that considers the interests of individuals "with ownership or other legally recognized interested in land and other natural resources" (4). NPS is also expected to accommodate local participation in Federal decision-making. (4)

1.5 GOVERNOR'S CONSISTENCY REVIEW PROCESS

FLPMA requires that the BLM provide for a governor's consistency review as part of their land use planning process. (43 C.F.R. § 1610.3-2(e)). State governors are entitled to an additional and entirely separate review of BLM land use plans, revisions, and amendments; this provides an opportunity to identify any inconsistencies with state or local plans. If the governor's comments result in changes to the plan, the public should be re-engaged in the process. The governor may also use policies in the NRPP in their review of the proposed federal action.

1.6 STATE AUTHORITY FOR A NRPP

As early as 1935 United States Department of Agriculture (USDA) managers began to search for ways to extend conservation assistance to more farmers. They believed the solution was to establish democratically organized soil conservation districts to lead the conservation planning effort at the local

level. To create a framework for cooperation, USDA drafted the Standard State Soil Conservation Districts Law, which President Roosevelt sent to the governors of all the states in 1937. The Bowman-Slope Soil Conservation District (SCD) is a sub-division of state government whose mission is to educate and assist the public with natural resource conservation. The Bowman-Slope SCD has a governing board made of three elected Supervisors and two appointed. The SCD is housed in the Bowman USDA service center and partnering local agency with the NRCS. The Bowman-Slope SCD administers multiple conservation programs including tree planting, watershed health projects and educational grants.

The policy behind North Dakota's soil conservation district statute is to provide for the conservation of the soil and soil resources of the state, for the control and prevention of soil erosion, and to preserve the state's natural resources, control floods, prevent impairment of dams and reservoirs, assist in maintaining the navigability of rivers, preserve wildlife, protect the tax base, protect public lands, and protect and promote the health, safety, and general welfare of the people of North Dakota (NDCC § 4.1-20-01). North Dakota Century Code § 4.1-20-24(h) grants soil conservation districts the power to develop comprehensive plans for the conservation of soil resources and for the control and prevention of soil erosion within the district. A comprehensive plan must specify in such detail as may be possible the acts, procedures, performances, and avoidances that are necessary or desirable for the effectuation of the plan. The act then allows a district to publish the plan and bring it to the attention of occupiers of lands within the district. Id. The act also allows land use regulations that are adopted by the conservation districts to include provisions for any other means, measures, operations, and programs as may assist conservation of soil and water resources and prevent or control soil erosion in the district, having due regard to the policy behind North Dakota's soil conservation district statute set forth in NDCC § 4.1-20-01. NDCC § 4.1-20-28(5).

With regard to counties, North Dakota Century Code § 11-33-01, for the purpose of promoting health, safety, morals, public convenience, general prosperity, and public welfare, allows counties to regulate and restrict within the County the condition of use, or the occupancy of lands for residence, recreation and other purposes. In order to do so, the regulations must be made in accordance with a comprehensive plan and designed to protect and guide the development of nonurban areas, provide for emergency management, lessen governmental expenditures, or conserve and develop natural resources. NDCC § 11-33-03. Further, these regulations shall be made with a reasonable consideration, among other things, to the character of the district and its peculiar suitability for particular uses. The comprehensive plan shall be a statement in documented text setting forth explicit goals, objectives, policies, and standards of the jurisdiction to guide public and private development within its control. Id. However, the County cannot prevent the use of land or buildings for farming or ranching and may not prohibit or prevent any of the normal incidents of farming or ranching. NDCC § 11-33-02.1.

Figure 1. Wheat Harvest in Slope County.

2 EXPECTATIONS FOR THE NATURAL RESOURCE AND LAND USE PLAN

2.1 COORDINATION, CONSISTENCY REVIEW AND COOPERATING AGENCY STATUS

While the federal statutes and regulations outlined above spell out the legal requirements of the federal agencies in their duties in dealing with local governments, the Bowman-Slope Soil Conservation District and Bowman and Slope Counties recognize that part of this land use planning process is to develop a solid working relationship with the federal agencies doing business in the Counties and District. These local governments also recognize that "coordination," "cooperating agency status" and "consistency review" are required actions on behalf of both the federal agencies and the local governments. To that end, the local governments commit to the following actions:

- Within 30 days of the date of adoption of this plan, the local governments will inform the federal agencies of the date, time, and location of their regularly scheduled meetings with an open invitation that federal agency personnel should attend such meetings if there are issues to discuss and to share any information between the local governments and the federal agencies.

- Within 30 days of the date of adoption of this plan, the local governments will transmit a copy of this NRPP to the state, regional, and local federal agency offices doing business within Bowman and Slope Counties or the District for their consideration as part of any consistency review that is required pursuant to federal statute.

- Within 30 days of the adoption of this plan, the local governments will contact the offices of the following federal agencies to determine a protocol for regular communication that should periodically occur so that each is apprised of issues and concerns as early as possible:
    - United States Forest Service (USFS);
    - Bureau of Land Management (BLM):
    - U. S. Fish and Wildlife Service (USFWS):
    - U.S. Army Corps of Engineers (Corps);
    - National Park Service (NPS);
    - Natural Resource Conservation Service (NRCS)
    - U.S. Air Force (USAF); and
    - Any additional federal or state agencies deemed appropriate

- In a timely manner, the local governments will review NEPA documents to determine if they will request cooperating agency status and will consider entering into Memorandums of Understanding (MOU) or Memorandums of Agreement (MOA) as appropriate. The local governments reserve the right to negotiate an MOU or MOA on a case-by-case basis, although an MOU or MOA is not appropriate or necessary in all cases.

2.2 DEMAND FOR CREDIBLE DATA TO BE USED AND SHARED WITH LOCAL GOVERNMENTS

To the greatest extent possible, data should drive all land use decisions. Unfortunately, sufficient data, data at an appropriate scale, or timely data to use in analyses are not always available. For all references to "data" in this plan, we refer to information that meets, at a minimum, the Federal Data Quality Act (FDQA), also referred to as the Information Quality Act (IQA).

The FDQA directs the Office of Management and Budget (OMB) to issue government-wide guidelines that "provide policy and procedural guidance to Federal agencies for ensuring and maximizing the quality, objectivity, utility and integrity of information (including statistical information) disseminated by Federal agencies". (Sec. 552(a) Pub. Law. 106-554; HR 5658; 114 Stat. 2763 (2000))

The OMB guidelines apply to all federal agencies and require that information disseminated by the Federal government will meet basic informational quality standards. (66 Fed. Reg. 49718, Sept. 28, 2001; see also 67 Fed. Reg. 8452, Feb. 22, 2002)

This "standard of quality" requires that data used and published by all federal agencies meet four elements. These elements include:

- Quality
- Utility (i.e., referring to the usefulness of the data for its intended purpose)
- Objectivity (i.e., the data must be accurate, reliable, and unbiased)
- Integrity (66 Fed. Reg. at 49718)

In addition to following the OMB guidelines, all federal agencies were also to issue data quality guidelines by October 1, 2002. (67 Fed. Reg. 8452)

In 2004, the OMB issued a memorandum requiring that, after June 15, 2005, influential scientific information representing the views of the department or agency cannot be disseminated by the federal government until it has been "peer reviewed" by qualified specialists (5). This requirement does not specifically require outside peer review. Internal review is acceptable.

2.2.1 POLICY STATEMENTS

i. Require the inclusion of quantitative data that meets credible data criteria, even if the data were not produced by a federal agency.

ii. Support the use of credible scientific data. Credible scientific data is defined as rigorously reviewed, scientifically valid chemical, physical and/or biological monitoring data, collected in a timely manner under an accepted sampling and analysis plan; including quality control and assurance procedures and available historical data.

iii. Require federal agencies to only use data that meets at least the minimum criteria described in their respective most recent handbooks such as for the BLM, USFS, NRCS, USFWS, and USACE respectively : BLM H-1283-1 Data Administration and Management (Public); FSH 1909.12, Chapter 40, Land Management Planning Handbook – Key Processes Supporting Land Management Planning (United States Forest Service 2013), Land and Resource Management Plan for the Dakota Prairie Grasslands: Northern Region (United States Forest Service 2001); NRCS Field Office Technical Guide; USFWS Information Technology Management, Chapter 2, Establishing Service Data Standards; US Army Corps of Engineers Data Quality Review Process for Civil Work Programs Publication, unless other criteria are agreed upon between the county and agencies.

3 DESCRIPTION AND OVERVIEW OF GEOGRAPHIC AREA

The Bowman-Slope Soil Conservation District (BSSCD) is a subdivision of state government at the county level. A soil conservation district is a local unit of government organized under authority of the North Dakota Soil Conservation District Law. Although the BSSCD partners with USDA agencies, it is a separate entity of local and state government and is managed by a locally elected board. A soil conservation district has established boundaries (6).

The BSSCD has a cooperative agreement with the federal agency the Natural Resources Conservation Service (NRCS). Both are housed, with the Farm Service Agency (FSA) in the Bowman-Slope USDA Field office in Bowman, ND. BSSCD is comprised of all of Bowman County and part of Slope County (boundary is Township Specific)(6).

Bowman and Slope Counties are in the southwest corner of North Dakota. The area is very rural and sparsely populated. Each county alone is larger than the state of Rhode Island with a combined population of less than 4,000 people (7,8).

Bowman County has a total area of 1,167 square miles, of which 1,162 square miles (99.6%) is land and 5.2 square miles (0.4%) is water. The population is 3,151 people, resulting in a density of 2.7 people per square acre. Cities is the county seat of Bowman with a land area of 1.53 square miles and a population of 1,600, Gascoyne with a land area of 1.0 square miles and a population of 16, Rhame with a land area of 1.5 square miles and a population of 169, and Scranton with a land area of 0.90 square miles and a population of 281 (8).

Slope County is 1,219 square miles of which 1,214 square miles are land (99.7%) and 4.24 square miles are water (0.3%). With a population of 727 the density of people per square mile is 0.6. The county seat is Amidon, which is 0.64 square miles and has a population of 20. The city of Marmarth is 2.53 square miles (0.02% of which is water) with a population of 136 (7).

There are 24 civil townships in Bowman County and 19 in Slope County. A civil township is a unit of local government in some states. It is subordinate to a county. Civil townships are based on a belief that the best and the most responsive democratic government is that government which is closest to the people. Specific responsibilities and the degree of autonomy vary based on each state. Civil townships are distinct from survey townships but in states that have both the

boundaries often coincide and may completely geographically subdivide a county (7–9). (5–7).

White Butte in Slope County is the highest point in North Dakota at 3,508 feet. It is a prominent butte, located on private land, about six and half miles south of Amidon (10). The Bowman Haley Lake is a 1,740-acre V-shaped lake at the confluence of Spring Creek, Alkali Creek, and North Fork Grand River about ten miles southeast of the city of Bowman. Other prominent water features are Gasconye Lake, Kalina Dam, Lutz Dam, and Spring Lake in Bowman County and Cedar Lake and Davis Dam in Slope County. The Little Missouri River winds its way through the western part of Bowman and Slope Counties (11).

Bowman County has 39,571 acres of federal land – 33,100 acres managed by the BLM and 6,471 acres managed by the US Army Corps of Engineers. Slope County has 135,782 acres of federal land all managed by the US Forest Service as part of the Little Missouri National Grasslands (Figure 1). (12)

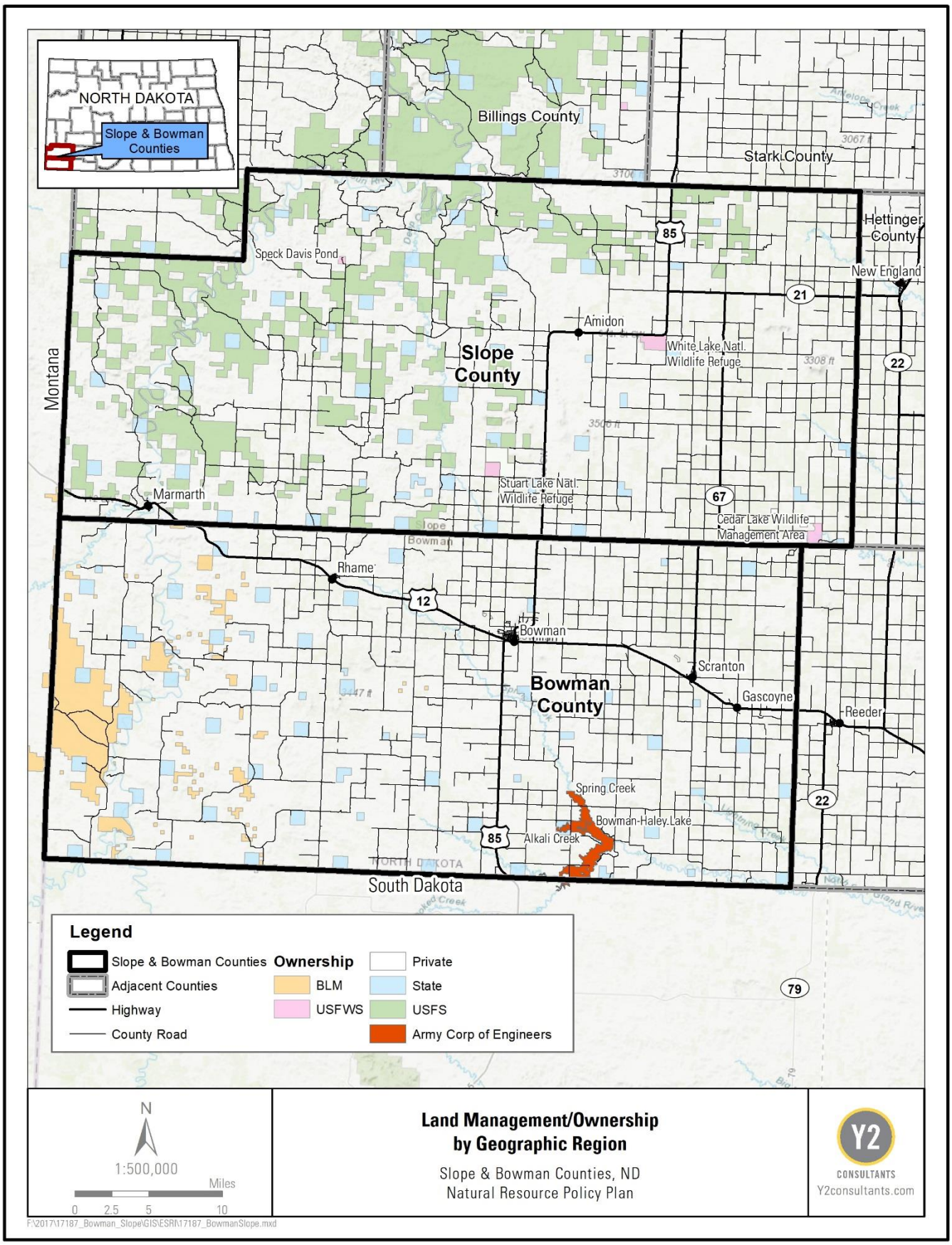

Figure 2. Land ownership in Bowman and Slope Counties.

3.1 HISTORY, CUSTOM & CULTURE

Custom and Culture

The terms “custom” and “culture” describe the character of the citizens of a community through history as well as current practices. “Culture” is defined as: the customary beliefs, social forms and material traits of a group; an integrated pattern of human behavior passed to succeeding generations and “the characteristic features of everyday existence (such as diversions, or a way of life) shared by people in a place or time” (13,14). “Custom” is defined by Black’s Law Dictionary as:

> A usage or practice of the people, which by common adoption and acquiescence, and by long and unvarying public habit, has become compulsory, and has acquired the force of a law with respect to the place or subject-matter to which it relates [. . .]. A habitual or customary practice, more or less widespread, which prevails within a geographic or sociological area (15).

Common use and everyday experience show that the words “custom” and “culture” are frequently interchanged. We often rely on just one of the two terms to convey the meanings of both. However, the individual meanings of “custom” and “culture” are quite different and are not so easily switched or substituted. Culture pertains more to human activities and practices and the acceptance and adoption of those activities and practices as community norms. Culture is invisible, at least in the sense of not being immediately evident on the surrounding landscape. It pertains to what people believe and value and how they pursue and realize those beliefs and values. Custom, on the other hand, is the way that people implement their culture. It encompasses with the ways that people traditionally use the land and its natural resources, make a living and act toward each other. Custom is the visible and tangible manifestation of the shared beliefs that binds a group of people into a community. (16)

History

Before Euro-American settlement of the Northern Plains began in the 19th Century, the land had been occupied for many centuries. When the first white explorers arrived, distinct Indian groups existed in what is now North Dakota. These included the Dakota and Lakota nation (also called "Sioux"), Assiniboine, Cheyenne, Mandan, Hidatsa, and Arikara. Cree, Blackfeet, and Crow frequented the western buffalo ranges. Thousands of bison ranged over this vast territory. Indians and Euro-Americans first came into contact during the 18th Century. Most contact resulted from the Canadian fur trade until the Lewis and Clark expedition up the Missouri River from St. Louis in 1804 (17). Initially, the movement of Euro-Americans into the Northern Plains caused few confrontations with Indian peoples, but that pattern changed and the struggle between opposing cultures intensified as settlers continued to move west in large numbers. Battles at Whitestone Hill in 1863, and at Killdeer Mountain and the Badlands in 1864 diminished Dakota resistance. The destruction of the bison herds by hide hunters, together with the relentless campaigns by the Army following the Battle of the Little Bighorn in 1876, progressively forced Indians onto greatly reduced reservations to avoid starvation. As a result, thousands of acres of land claimed by the federal government were opened to further Euro-American settlement (18).

The immigrant experience began, often enough with a vague rumor about a far off place called America. […]. That experience included an anxious journey by ship, the uncertainties of Ellis Island loomed ahead. Once safely through immigration, many newcomers did not hesitate but caught the first train west. Or they walked, rode horseback, came by wagon train or stage. They heard tell of open land in Dakota […]. There were cold hard winters with mounds of snow contrasted by hot, dry springs and summers when the crops failed. But did that stop the immigrants? No – these tough and hardy people banded together in small settlements and started a new life here in the promised land.

Phillis Schopp, Prairie Tales II

Other early arrivals to the area came with the Army. They came before the farmers and homesteaders and have a distinct set of traditions that continue to influence the people of the area today who cherish independence as they did (19,20). The first settler to homestead in Bowman County filed in 1903 (21).

An early pioneer to the area that contributed a great deal to the custom and culture was the rancher of the "cowboy" tradition. The 1800's was a boom period for the open cattle range industry across the Great Plains. Cowboys first arrived from Montana and South Dakota as part of the western cattle culture that originated in Texas and southwest – moving with the trail herds that moved up and down the eastern slopes of the Rocky Mountains along what became known as the Great Western Trail. After the Civil War, Texans started gathering the millions of cattle that were running wild across Texas. There was no market in Texas, so they drove the cattle north, all the way to the lush grasslands of the Dakota Badlands, a journey of over 1,500

miles. The first Texas cattle reached North Dakota in 1884 and by 1885, it was estimated 250,000 head of cattle had been driven into the Little Missouri Valley. In many cow towns including Medora, the entire economy was built on the herds. When Roosevelt was ranching in the Badlands near Medora to the north he was running 4,000 to 5,000 head of cattle while larger ranches in the area were running as many as 15,000 head of cattle. (19,20)

Euro-American settlement of the Northern Plains had commenced in earnest after 1861, when Dakota Territory was organized by Congress. More significant immigration happened when the westbound Northern Pacific Railway built to the Missouri River in 1872 and 1873. (22)

The year 1883 witnessed the beginning of a drastic change in the Little Missouri Badlands. Early that year, the last remaining herds of the bison were destroyed. In the same year, the Northern Pacific Railway completed its track building project extending from St. Paul, Minnesota to the Pacific Coast. Simultaneously, cattlemen began the occupation of the Little Missouri region. (19,20)

Theodore Roosevelt was a Dakota rancher from 1883 until 1898. He first came to the area around present-day Medora just north of Bowman and Slope Counties in 1883 to hunt bison and entered the cattle business the same year on the Chimney Butte Ranch, which was later known as the Maltese Cross Ranch. The following year, Mr. Roosevelt began ranching on the Elkhorn Ranch north of Medora. However, in the winter of 1886-87, when stockman on the Northern Great Plains suffered staggering losses, Roosevelt lost approximately sixty percent of his cattle. Due to his increasingly busy political duties, Roosevelt sold his North Dakota ranching interests in 1898. He frequently cited his experiences as a rancher for his later success: “If it had not been for what I learned during those years I spent here in North Dakota, I never would have been President of the United States”. (20)

What we now celebrate is the era beyond discovery; that of the civilization, settlement and development of a rich agricultural region by hundreds of thousands of impoverished immigrants seeking freedom, self-reliance and hope for the future.

Burdette B. Calkins on the North Dakota Centennial

The first rancher in Bowman County built his house in 1892 about fifteen miles southwest of the town of Bowman on the Grand River. For the next fifteen years, Bowman County was dedicated to cattle ranching. Cattle grazed year-round on the open range. The immense cattle herds fattened on the rich grass of the Northern Great Plains found a ready market in the East and became famous across the United States. (21)

The federal government finished surveying in southwestern North Dakota and opened the area to

settlement in 1900. The Milwaukee Railroad played a significant role in the history of this area within Bowman and Slope Counties. In the 1900's, a proposal was launched for the Milwaukee Railroad, which originated in Illinois, to develop west out of Aberdeen in northeast South Dakota. This spurred enthusiasm and dreams of settlement in North Dakota. The Milwaukee Railroad plotted sites for towns, approximately ten miles apart. The community of Scranton was an exception, having sprung up due to the coal mining in the area. Before the Milwaukee Railroad settlers arrived in Dickinson, North Dakota on the Northern Pacific Railroad and then had to find a way to transport themselves and their belongings south to this area. The first passenger train arrived in present day Gascoyne (then called Fischbein) in 1907 with 92 settlers seeking new opportunities in the west. Many came out in immigrant trains – a family along with livestock, machinery, and household goods would all travel in the same boxcar. Settlers continued to arrive moving out from the depot stops along the rail line. (21)

By 1907 there were over 1,200 homesteads in Bowman County. Early settlers remarked on the hardships and their perseverance: "[I]t was hard sledding at first, but stuck to it through thick and thin, as we had faith in the country" (21). Crop failures, hard winters, fires on the prairie did not deter them or dampen their spirits - they came, and they stayed. They built houses and barns – initially out of sod. In addition to homesteading, settlers hoped to establish businesses or get rich ranching and many young men wanted to be cowboys. (21)

The County of Bowman was first established by the Dakota territorial legislature in 1883. The town of Bowman was selected for the county seat in 1907. The year 1907 brought the town of Bowman its first building, followed by its first newspaper, bunkhouse, general store, bank, restaurant, and a post office. Growth continued to be steady in following years. (21)

The City of Rhame in Bowman County started out as a stop along the Chicago-Milwaukee Railroad called Petral with just a derailed box car. Before long a small depot building and then several other businesses were established, and the spot was renamed Rhame after a respected and beloved railroad engineer. In a short-time it had livery bars, a blacksmith, lumber yards, grocery and hardware stores, a school and a post office. The first newspaper was published in 1908. Early settlers were mostly German, Swedish and Norwegian. The churches they established became a large part of their lives. (21)

Scranton was first settled in 1915 for an early industry to briquette the lignite coal in the area – essentially mining it and compressing it into bricks. It was used for fuel in homes, steamboats, and railroads used it to power their steam engines. (21,23)

The City of Gascoyne was first called Fischbein after the first postmaster in January 1908. The first passenger train arrived in November 1907. It was renamed for a railroad foreman in 1909 because there were too many dots and dashes to the name Fischbein when using Morse Code. By the 1920's, before the devastating dust bowl years and the Great Depression, there were twenty businesses in Gascoyne. The Knife River Coal mine is about 2 miles east which resulted in a spur rail line from the former Milwaukee line. (21)

The first mining claim in Bowman County was placed in 1887 and located by a Black Hills prospector who reportedly discovered placer gold on Grand River near present day Haley. The abundance of lignite coal helped the early settlers because it was abundant and easy to obtain (21). In 1949 "hordes of agents" of oil leasing companies began seeking out landowners in the area. Rental and bonus payments were low, but many farmers and ranchers needed help due to a dry year and entered into leases. (20)

Slope County was created when Billings County was divided into three counties in 1915 (21,24).

In the 1930's the area underwent a traumatic period brought on by the Great Depression and drought. The drought reduced the grazing potential of the land and ranchers started to go out of business. The U.S. Congress passed the Resettlement Act of 1935 and the Department of Agriculture initiated the Land Utilization program to help struggling families. The federal government offered to purchase sub-marginal lands. Many farmers resettled in the Red River Valley and Montana. Farming lands were seeded to grass and the homesteads removed. Much of the land acquired by the federal government during this time eventually became a part of the National Grasslands. The lands that were purchased were to be managed for "grassland agriculture." These pastures were leased back to the farmers and ranchers who had sold their land to the federal government but remained. Ranching remained the main use of the land and continues to be a primary economic driver and shapes the culture and customs of the communities of Bowman and Slope Counties. (16,20)

Ranching is one of the oldest industries in the area and continues to be a significant aspect to the economy, custom and culture of the community. It sustained the local economy before other industries arose and still exists as one of the mainstays of the economy. Because range forages are a renewable resource, ranching will continue as long there are markets for the products of grazing animals. The ranch families have not only been responsible for much of the history of the area, but for contributing and supporting the schools and other public entities funded by tax revenues (16). Cattle finishing operations are an important component of the agricultural community.

During the early 1980s, oil production continued to expand as the price of crude oil rose to near $40.00 per barrel. Oil prices began declining in the early to mid-1980s, which led to a sharp decrease in new exploration. Producers abandoned marginal and poor producing wells and other formerly high-producing wells played out by the 1990s.

The advent of new technology such as horizontal drilling has helped expand new exploration efforts (20). The Williston Basin continues to be one of the nation's most productive oil and gas producing regions (16).

Demographics and Statistics

The demographic profile for Bowman and Slope Counties is somewhat typical of the region (i.e., having a sparse, rural, aging population base) (Table 1). Unlike adjacent counties, the absence of trade centers has likely protected the county from experiencing the rapid population changes associated with the rise and decline of energy activities.

Historically, unemployment levels in these counties have been low. Despite the employment trends, recently the population has shown modest gains. Total employment in agriculture and government has remained mostly steady. Changes in employment in private industries (primarily energy and associated activities) are largely responsible for the changes in the county's employment. (16)

.2010 Census	Bowman Population Numbers / % (24,25)	Slope Population Numbers / % (26,27)
Total Population	3,151 / —	727 / —
Age:		
Age 19 and Under	731 / 23.2%	163 / 22.4%
Age 20 to 34	478 / 15.2%	92 / 12.7 %
Age 35 to 49	503 / 16.0%	118 / 16.3%
Age 50 to 64	747 / 23.8%	219 / 30.1%
Age 65 and Older	692 / 22.0%	135 / 18.6
Median age	**46.9**	**49.2**
Race:		
White	98.9%	97.5%
American Indian/Alaskan Native	0.6%	2.2%
Black or African American	0.1%	—
Asian Indian	0.1%	—
Households:		
Total Households	1,385	326
Family Households	873 / 63%	224 / 68.7%
Family Households with children under 18	331 / 23.9%	73 / 22.4 %
Husband-Wife Family Households	761 / 54.9%	198 / 60.7%
Husband – Wife Family Household with Children Under 18	263 / 19.0%	60 / 18.4%
Non-family Households	512 / 37.0%	102 / 31.3%
Households Living Alone	455 / 32.9%	96 / 29.4%
Male Households Living Alone	224 / 16.2%	61 / 18.7%
65 and Older	70 / 5.1 %	10 / 3.1%
Female Households Living Alone	231 / 16.7%	35 / 10.7%
65 and Older	156 / 11.3%	29 / 8.9%
Households with children under 18	355 / 25.6%	73 / 22.4%
Households with individuals 65 and over	466 / 33.6%	100 / 30.7%
Average Household Size	2.22	2.23
Average family size	2.82	2.74
Household in owner occupied housing	1,385 / 74.8%	278 / 85.3%
Households in rental housing	349 / 25.2%	48 / 14.7%

Table 1. 2010 census data for Bowman and Slope Counties. Census data provided is from the official 2010 census. Additional data, including preliminary data for Bowman and Slope Counties are available at www.census.gov

4 SOCIOECONOMICS AND ECONOMIC VIABILITY

The following information was compiled for Bowman and Slope Counties combined.

Bowman and Slope Counties - Long Term Trends

From 1970 to 2016, population shrank from 5,380 to 4,004 people, a 26% decrease (Figure 2). From 1970 to 2016, employment grew from 2,475 to 3,131, a 27% increase (Figure 3). From 1970 to 2016, personal income grew from $126.6 million to $229.6 (in real terms), an 81% increase (Figure 4). (25)

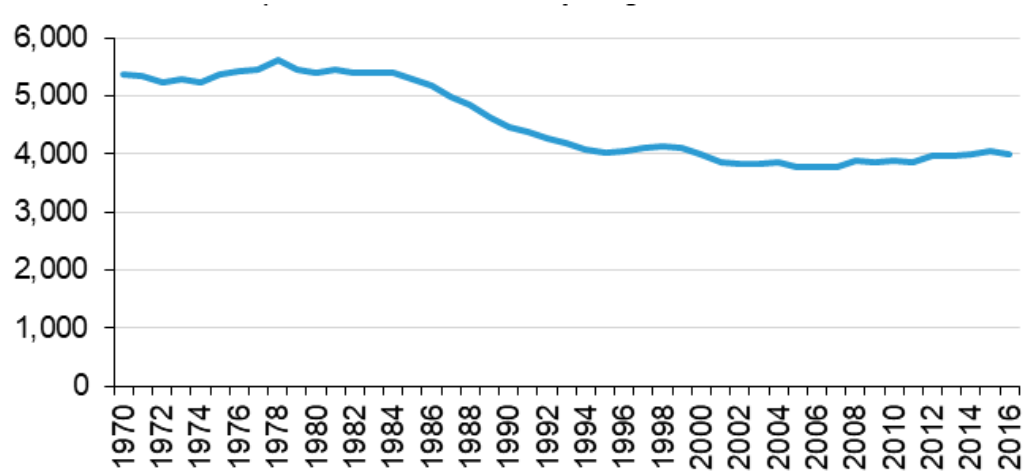

Figure 3. Population and trend for Bowman and Slope Counties. (25)

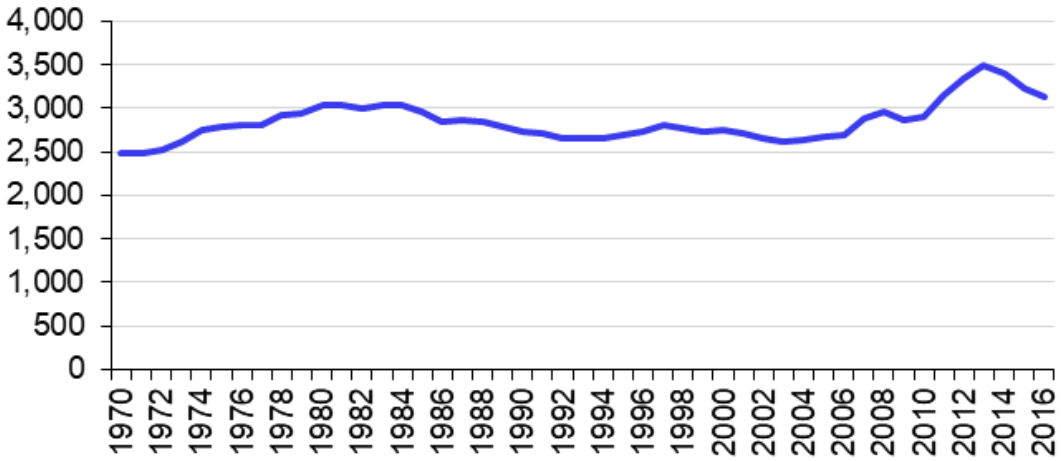

Figure 4. Employment Trend for Bowman and Slope Counties. (25)

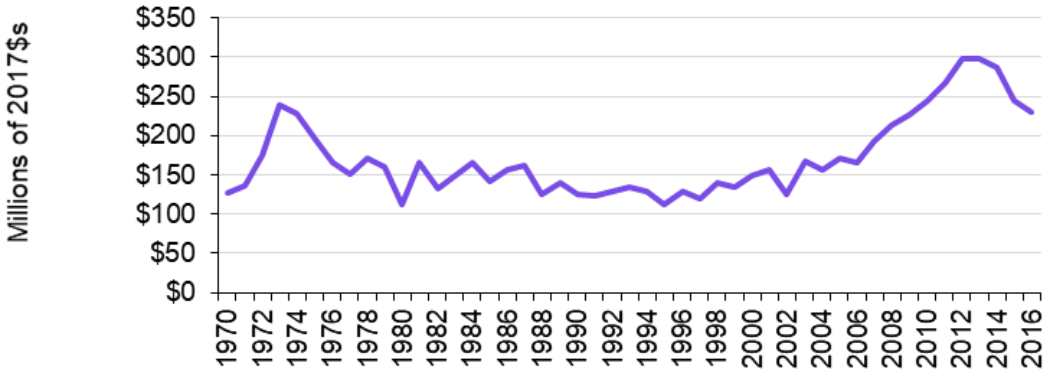

Figure 5. Personal income trends for Bowman and Slope Counties. (25)

Bowman and Slope Counties - Employment by Industry from 1970 to 2000

In 2000, the top sectors with the largest number of jobs were farm (733), services (589), retail trade (390), and government (345 jobs) (Figure 5). From 1970 to 2000, the three sectors that added the most new jobs were services (296 new jobs), wholesale trade (82 new jobs), and transportation and public utilities (41 new jobs). (25)

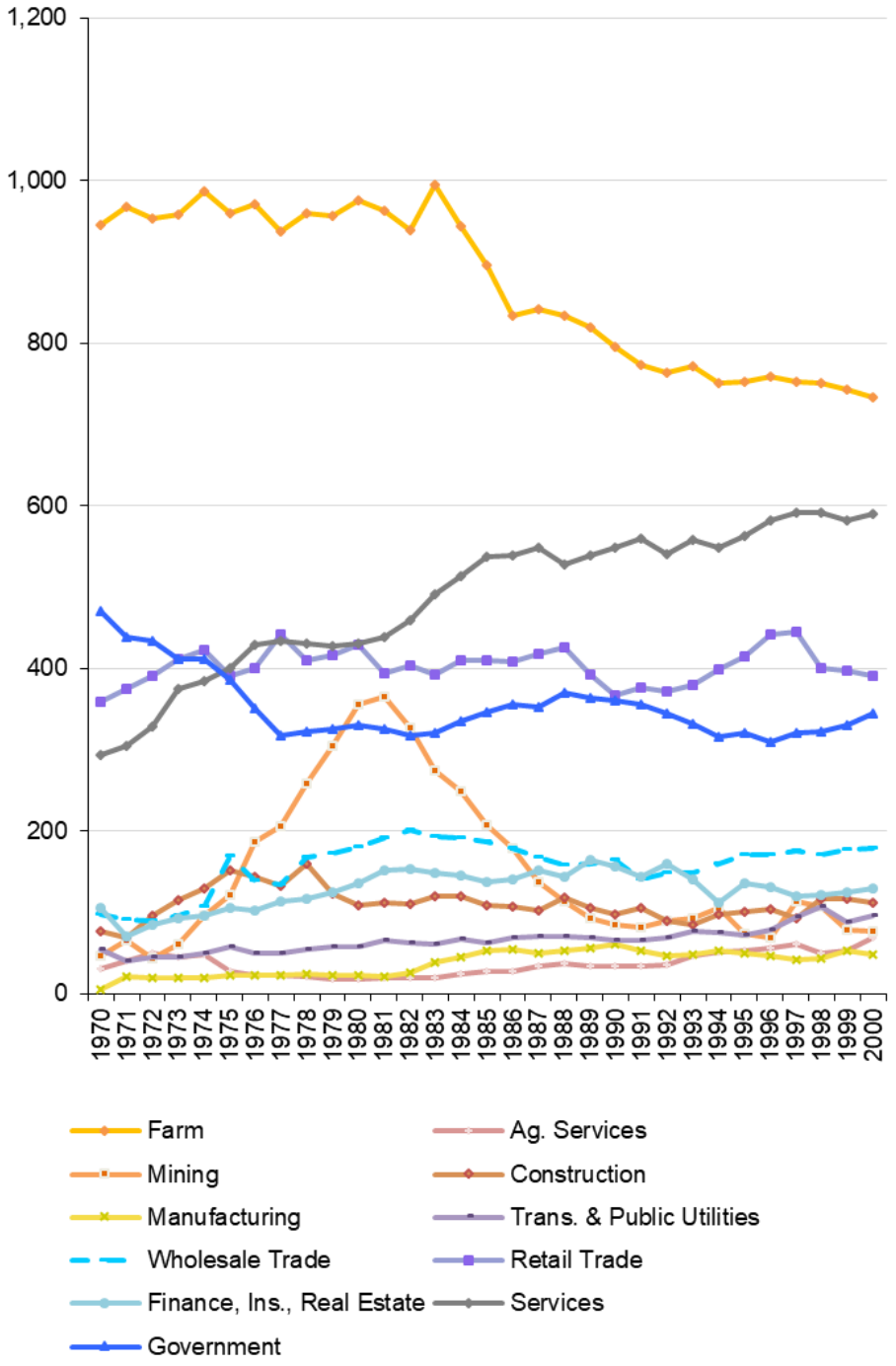

Figure 6. Employment by industry from 1970 to 2000 for Bowman and Slope Counties. (25)

Bowman and Slope Counties - Earnings by Industry from 1970 to 2000

In 2000, the top sectors with the largest earnings were farm ($33.7 million), services ($17.5 million) government ($10.5 million), and wholesale trade ($8.1 million) (Figure 6). From 1970 to 2000, the three sectors that added the most earnings were services ($6.8 million), transportation and public utilities ($3.5 million), and wholesale trade ($3.2 million). (25)

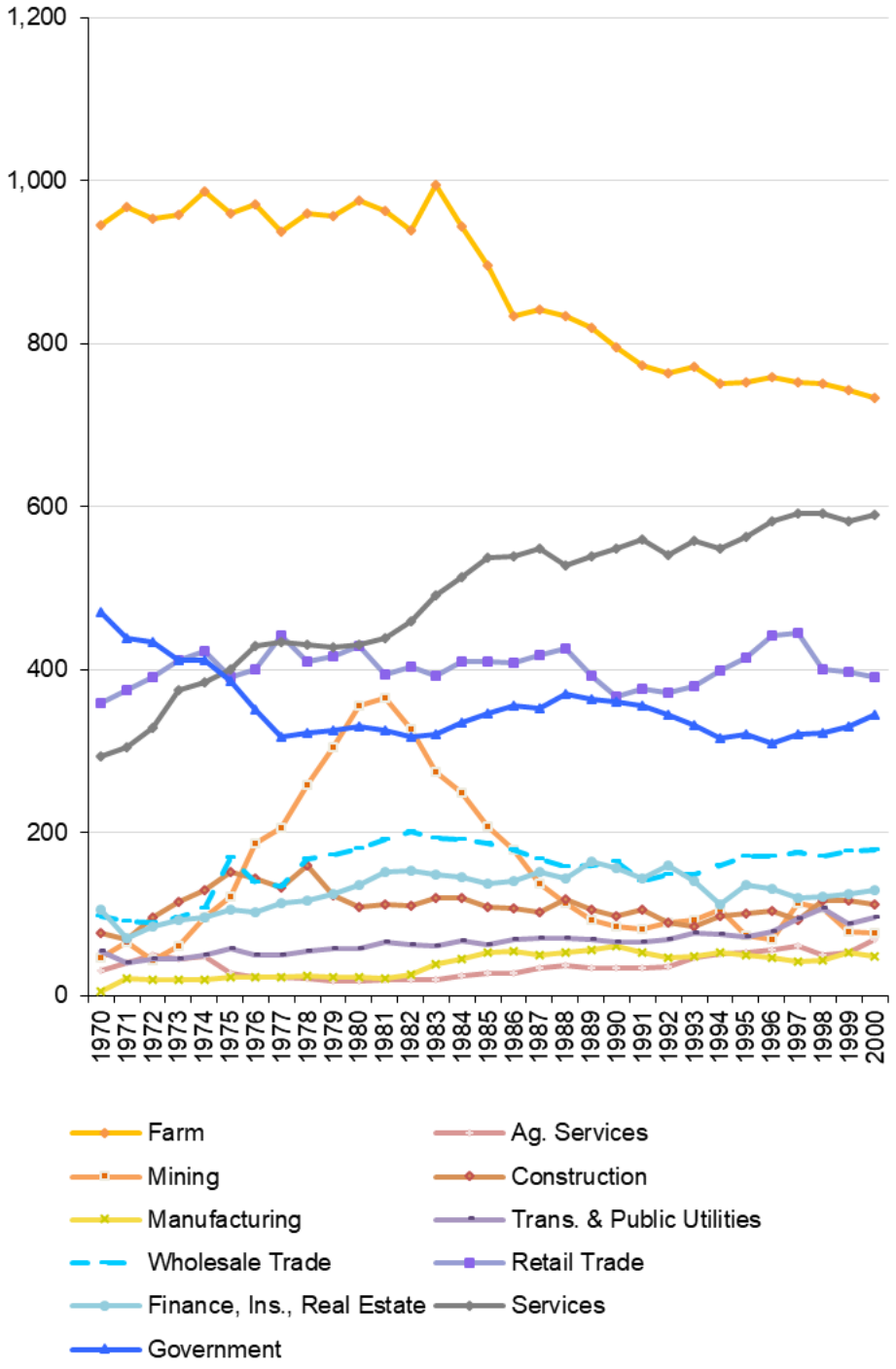

Figure 7. Earnings by industry from 1970 to 2000 for Bowman and Slope Counties. (25)

Bowman and Slope Counties - Employment by Industry since 2000

In 2000, the top sectors with the largest number of jobs were farm (573), government (338) health care and social assistance (335), and retail trade (300 jobs) (Figure 7). From 1970 to 2000 the three sectors that added the highest number of new jobs were construction (101 new jobs), retail trade (61 new jobs), and real estate and rental and leasing (60 new jobs). (25)

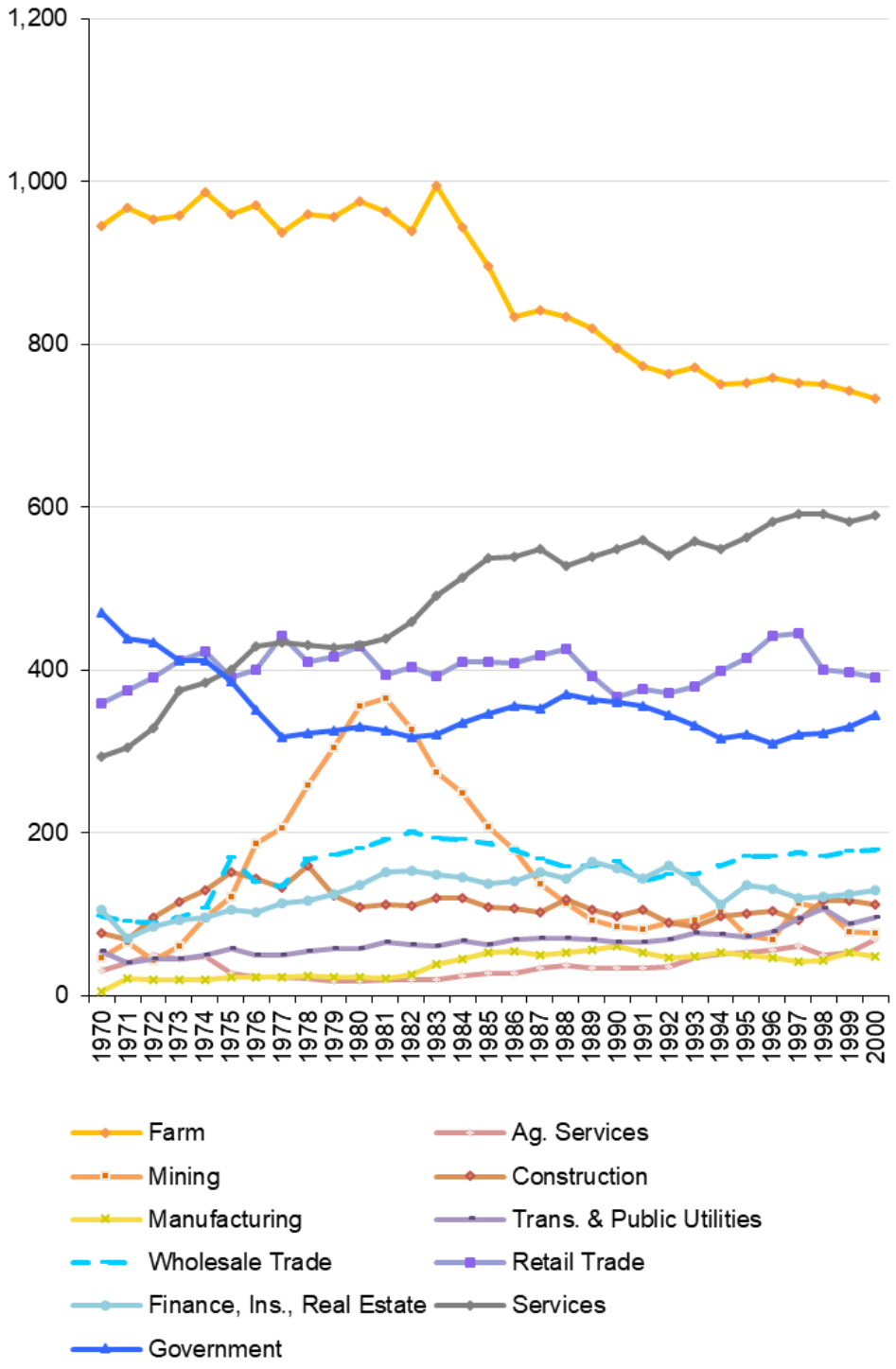

Figure 8. Employment by industry since 2000 for Bowman and Slope Counties. (25)

Bowman and Slope Counties – Earnings by Industry since 2000

In 2016, the top sectors with the largest earning were farm ($21.2 million), wholesale trade ($20.6 million), government ($16.5 million), construction ($16.2 million) and health care and social assistance ($14.8 million) (Figure 8). From 2000 to 2016, the two sectors that added the most earnings were construction ($11.9 million), health care and social assistance ($14.8 million). (25)

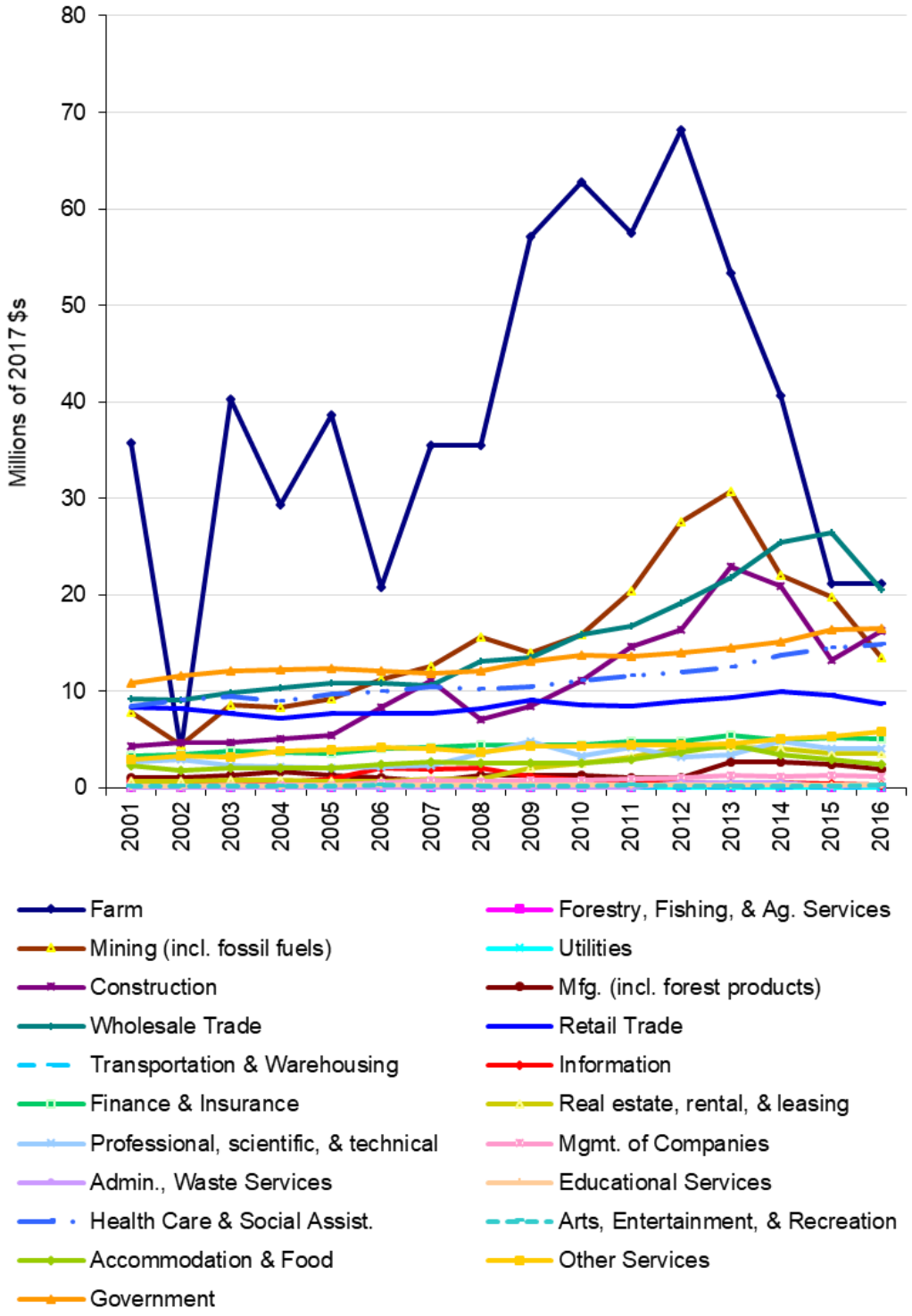

Figure 9. Earnings by industry since 2000 for Bowman and Slope Counties. (25)

Bowman and Slope Counties – Earnings per Job and Per Capita Income

Average earnings per job are an indicator of the quality of local employment. Higher average earnings per job indicate that there are relatively more high-wage occupations. It can be useful to consider earnings against the local cost of living indicator. Per capita income is one of the most important measures of economic well-being. It can be relatively low in a population with a disproportionate number of children and elderly people and can be high if there is non-labor income in a community as can be the case with retirees or people with investment income. From 1970 to 2016, average earning per job in Bowman and Slope Counties grew $40,214 to $47,678 (in real terms), a 19% increase (Figure 9). From 1970 to 2016, per capita income in Bowman and Slope Counties grew from $23,523 to $57,344 (in real terms), a 144% increase. (25)

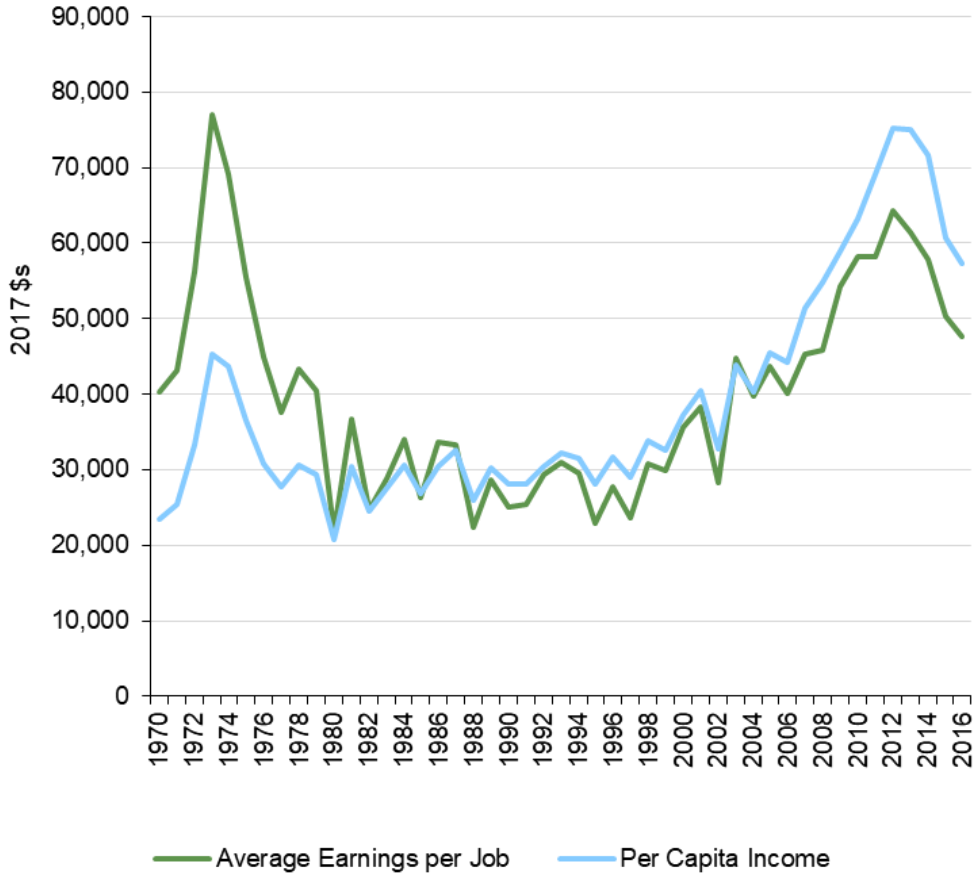

Figure 10. Average earnings per job and per capita income from 1970 to 2016 for Bowman and Slope Counties. (25)

Bowman and Slope County - Wages by Industry

The following charts describe employment and average annual wages by industry. It is sometimes the case that industries that pay well employ few people. Jobs in manufacturing and natural resource industries (e.g., timber, fossil fuel energy development, and mining) often provide high average wages, but some services-related industries also offer high wages (e.g., information, financial activities, and professional and business services). In some areas, the highest-paying jobs are in the public sector. During recessions, government jobs may serve as an economic buffer against declining employment and earnings in the private sector. In 2016, non-services related jobs paid the highest wage ($63,746) and government jobs paid the lowest ($36,146). In 2016, trade, transportation and utilities jobs employed the largest number of people (1,085) and the federal government employed the smallest (274 jobs) (Figure 10) (28). (25)

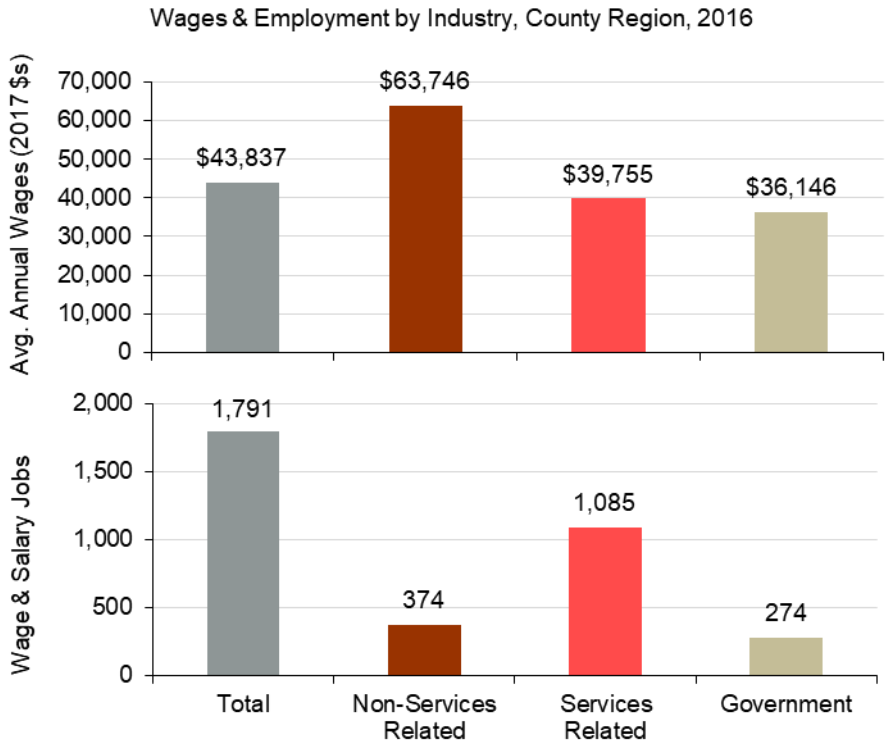

Figure 11. Wages and Employment by industry in 2016 for Bowman and Slope Counties. (25)

Bowman and Slope Counties - Wages/Salaries and Proprietors

From 1970 to 2016, wage and salary employment (people who work for somebody else) grew from 1,334 to 1,924, a 44% increase. From 1970 to 2016, proprietors (self-employed) grew from 1,141 to 1,207, a 6% increase (Figure 11). (25)

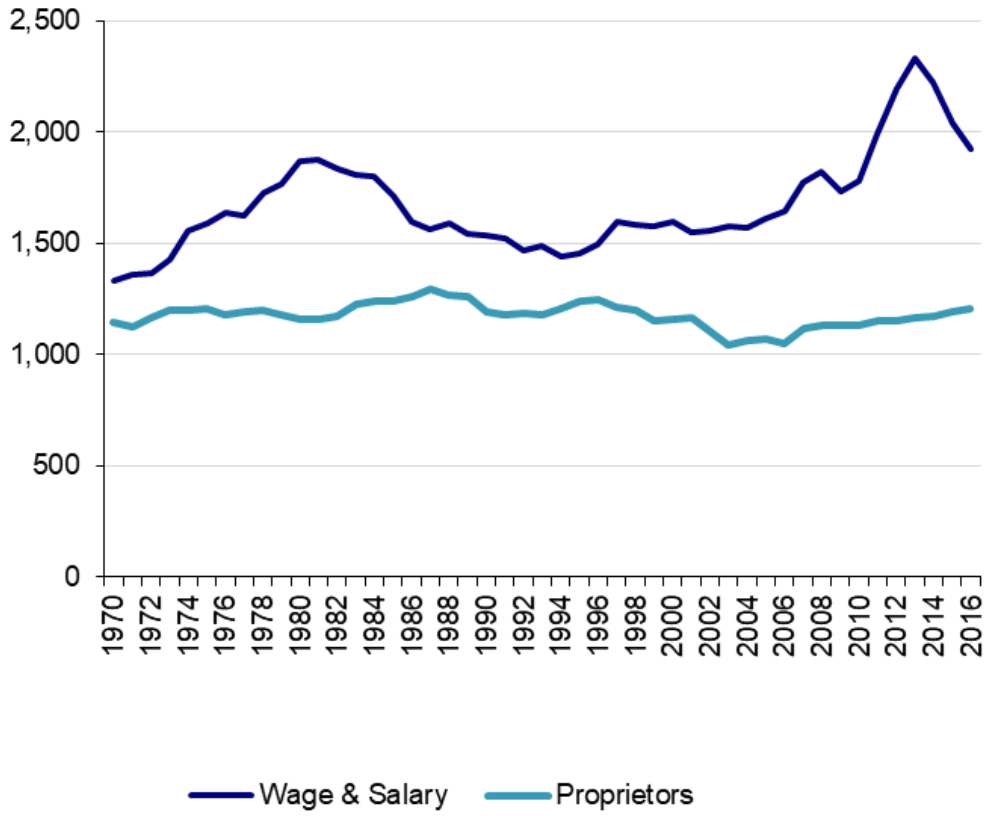

Figure 12. Wages, salaries and number of proprietors from 1970 to 2016 in Bowman and Slope Counties. (25)

Bowman and Slope Counties – Wages/Salaries and Proprietors' Income

Labor earnings examine wages and salaries and represents net earnings by place of work. Part time and full-time jobs are counted equally in the tables. Proprietors' income includes those self-employed in both farm and non-farm sectors. Farm self-employment is the number of non-corporate farm operators, consisting of sole proprietors and partners. From 1970 to 2016, labor earning from wage and salary employment grew from $32.6 million to $84.7 million (in real terms), a 160% increase. From 1970 to 2016, labor earnings from proprietors' employment shrank from $63.2 million to $43.6 million (in real terms), a 31% decrease. In 1970, proprietors represented 46% of total employment. By 2016, proprietors represented 39% of total employment (Figure 12). (25)

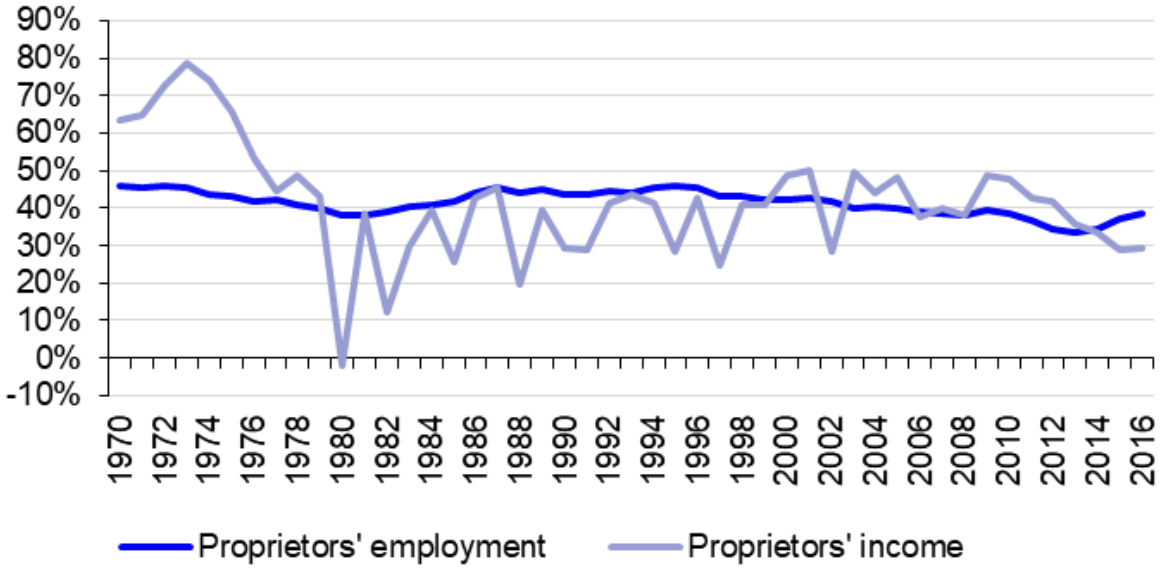

Figure 13. Proprietors' share of employment and income from 1970 to 2016 for Bowman and Slope Counties. (25)

Bowman and Slope Counties - Unemployment

Since 1990, the annual unemployment rate ranged from a low of 1.3% in 1997 to a high of 4.8% in 1992 (Figure 13). (25)

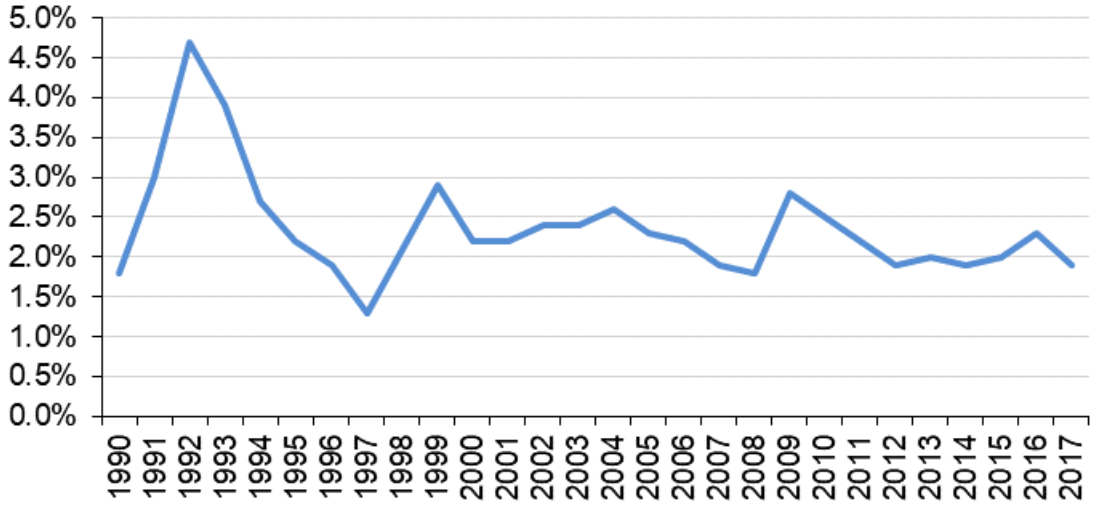

Figure 14. Average annual unemployment rate from 1990 to 2017 for Bowman and Slope Counties. (25)

Recessions

One measure of economic well-being is the resilience of the local economy during periods of national recession. It is a positive sign if local employment continues to grow (or does not decline) during a recession. Another sign of economic well-being is how well the local economy recovers from a recession, measured as growth of employment from the trough (at the depth of the recession) to the peak (just before the next period of decline). There have been five national recessions since 1976 (Figure 14). (25)

Figure 15. Employment and national recessions from 1976 to 2015 and their relationship to Bowman and Slope Counties. (25)

4.1.1 POLICY STATEMENTS

i. Support the analysis of social and economic factors at the county level in addition to consideration on a state-wide or national scale for all federal decisions and actions.

ii. Require consultation and coordination with the local governments at the earliest time possible for any proposed action, change of existing activities, newly permitted activities, or changes in regulations that may affect the economic basis, custom or culture of the communities within Bowman and Slope Counties.

iii. Support continued access to natural resources development/use on federal lands to maintain economically viable communities within Bowman and Slope Counties.

iv. Support consultation and coordination with the BSSCD and Bowman and Slope Counties to determine the full scope of potential social and economic effects of activities proposed on federal lands, including impacts to circulating dollars when change in access and use of federal lands is proposed.

v. Promote the Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act, which provides small entities an expanded opportunity to participate in the development of certain regulations (http://www2.epa.gov/reg-flex/learn- about-regulatory-flexibility-act).

vi. Subject experts shall complete socioeconomic analyses for proposed projects; the experts shall be familiar with and focus on the unique history, culture, economy and resources of the communities within Bowman and Slope Counties. Analyses will include a description of existing social, demographic and economic conditions; the analytical methodologies used; and the impacts to topics including (but not limited to) population, employment, income levels, industry activity, housing, community services, utility services, schools, fiscal impacts to the Counties and local jurisdictions, public revenues and expenses, transportation, and quality of life.

Figure 16. A ranch branding in Slope County. Multiple generations of family members and neighbors gather to brand the ranch's calf crop each year.

5 FEDERAL AGENCIES IN BOWMAN AND SLOPE COUNTIES

5.1 UNITED STATES FOREST SERVICE

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. The Office was expanded 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 (26). In 1891, Congress passed the Forest Reserve Act (also called the Creative Act) allowing the President to designate western lands as "forest reserves". Western communities strongly opposed forest reserves under the Creative Act because development and use of these "reserved lands" was prohibited. The subsequent Organic Administration Act of 1897 declared that forest reserves would be created for two purposes: to protect water resources for local communities and agriculture and to provide a continuous supply of timber. The Act required a vote of Congress to create a forest reserve and changed the use of forests to allow use for economic development by local communities. The Supreme Court upheld the purposes of the Organic Administration Act in *U.S. v. New Mexico*, 438 U.S. 696 (1978).

Responsibility for management of the early forest reserves was initially given, not to the Division of Forestry that already existed within 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. The USFS mandate of 1905 was to provide quality water and timber for the nation's benefit. Congress later directed the USFS to broaden its management scope for additional multiple uses and benefits, including the sustained yield of renewable resources such as water, forage, wildlife, wood, and recreation. (26)

The National Forest Management Act (NFMA) of 1976 (P.L. 94-588), an amendment to the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 (P.L. 93-378), is the primary governing law for the use and management of the National Forests today. It 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 grasslands. The mission of the USFS today under NFMA is to sustain the health, diversity, and productivity of all the nation's forests and grasslands in order to meet the needs of present and future generations including multiple uses.

The most recent planning rules and directives for the National Forest System were proposed in 2012 and finalized in January 2015. They emphasize collaboration and working across landscape boundaries. (27)

Lands administered by the USFS are still governed by the RPA of 1974. RPA requires the USFS to prepare a renewable resource assessment, implement a renewable resource program, conduct a resource inventory, and develop land and resource management plans for units of the National Forest System. The 1976 NFMA amended the RPA and added more specific requirements to the USFS planning obligations. In particular, Section 6(e) of NFMA required that the land and resource management plans for National Forest System units:

provide for multiple use and sustained yield of the products and services obtained therefrom in accordance with the Multiple-Use Sustained-Yield Act of 1960 [citation omitted], and, in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness.

National Grasslands

There are twenty National Grasslands totaling almost 4 million acres across the country. Seventeen National Grasslands stretch across the Great Plains from the Badlands of North Dakota to north-central Texas. While the National Grasslands were not officially designated as such until 1960, their origins trace back over one hundred years to the Homestead Act of 1862. The Homestead Act was enacted to facilitate settlement of the Great Plains and other sparsely populated areas in the American West. It authorized the essentially free disposal of 160-acre parcels of land to qualified individuals who met certain requirements. After filing an application and establishing a residence through actual settlement and cultivation for five years, a homesteader could apply for a patent (title) to the land. The Homestead Act of 1862 brought almost 6 million settlers to the Great Plains by 1890 with economic aspirations to farm by replacing grass with cash crops. The enlarged Homestead Act of 1909 doubled the permitted acreage available to 320 acres to improve the economic viability of these homesteads. Despite the hardships, the prospect of free land continued to draw people and by 1904 nearly 100 million acres had been homesteaded into half a million farms. People continued to settle rural areas, fleeing cities and towns, during the Great Depression of the late 1920's and early 1930's. (28)

The economic hardships were exacerbated by destructive natural events like drought, floods, insect infestations, and erosion. While the vast grasslands were productive in wet years, they were subject to serious drought and bitter winters. Many of the farms homesteaded were ill-suited for farm crops. Land that should never have been plowed yielded its topsoil to incessant dry winds. Dust clouds rose to over 20,000 feet above parts of Oklahoma, Texas, Wyoming, Nebraska, Kansas, Colorado and the Dakotas. Ten-foot drifts of fine soil particles piled up like snow in a blizzard, burying fences and closing roads (29). The challenges from the Great Depression and the Dust Bowl were simply too much for most settlers. (28)

To save farmers and settlers, emergency measures were taken. A large scale "Land Utilization Program" was launched by the federal government to respond to the problems. The National Industrial Recovery Act of 1933 and the Emergency Relief Appropriations Act of 1935 allowed the federal government to purchase and restore damaged lands and resettle destitute families. The program culminated in the passage of the Bankhead-Jones Farm Tenant Act of 1937 (BJFTA). (30)

Figure 17. Grass strips on the Herb Pittsley farm.

A total of 11.3 million acres were eventually acquired by the federal government for the Land Utilization Program. Approximately 5.8 million were gradually transferred to other federal agencies including the National Park Service (NPS), US Fish and Wildlife Service (USFWS), BLM and Bureau of Indian Affairs and about 5.5 million remained within the Department of Agriculture. Much of the acquired lands in the Southern and Eastern United States became part of existing National Forests. In 1960, the remaining 3.8 million acres, much of which was in the Great Plains, were designated as National Grasslands. (28)

Bankhead-Jones Farm Tenant Farmers Act

The Bankhead-Jones Farm Tenant Act (BJFTA) originally contained four titles. Title I authorized loans to farm tenants, laborers, sharecroppers and others for the purchase of farms. Title II authorized rehabilitation loans and the voluntary adjustment of indebtedness between farm debtors and their creditors. Title III gave the Secretary of Agriculture a broad mandate to acquire sub-marginal lands by purchase or donation. It resulted in the formal establishment of the formerly ad hoc Land Utilization Program and set forth the purpose and direction of the program. Section 33 of Title III also authorized payment to counties of 25% of the net revenues received on lands acquired under BJFTA from grazing, forestry, mining, and under the Agriculture and Food Act of 1981 (PL 97-98), energy development. Title IV established the Farm Security Administration to implement and administer the Act. There have been major changes to the Bankhead-Jones Act since its enactment including the repeal of Titles I, II, and IV by Congress in the Agricultural Act of 1961. (28)

Title III, however, remains in effect. It has been amended several times by Congress and today Section 31, which sets forth the purpose of the program and the permitted uses for the acquired lands administered under BJFTA, states:

> The Secretary is authorized and directed to develop a program of land conservation and land utilization, in order thereby to correct maladjustments in land use, and thus assist in controlling soil erosion, reforestation, preserving natural resources, protecting fish and wildlife, developing and protecting recreational facilities, mitigating floods, preventing impairment of dams and reservoirs, developing energy resources, conserving surface and subsurface moisture, protecting the watersheds of navigable streams, and protecting the public lands, health, safety, and welfare, but not to build industrial parks or establish private industrial or commercial enterprises. (71 USC§1010)(28,30,31)

For twenty-five years BJFTA lands were managed primarily to stabilize soils and increase their productivity. By the 1960s, management of these lands changed with the broader shift towards multiple-use for public lands. Congress added fish and wildlife protection in 1962 (PL 87-703) and made recreation a consideration in 1966 (PL 89-796) for BJFTA lands. Passage of the NEPA (1969), Endangered Species Act (ESA) (1973), RPA (1974), and NFMA (1976) subjected lands acquired by the federal government under the BJFTA to greater environmental regulation, mandating environmental impact studies and greater attention to species at risk. As with other federal lands in the West, one consequence of altering management to accommodate multiple uses and environmental concerns is that counties have seen revenues decline from these untaxable federal lands. (31)

Figure 18. Russian wildrye seeding 8 miles north of Bowman. February 1924.

The Secretary of Agriculture originally had power to transfer or otherwise dispose of land acquired under BJFTA, this authority was precluded under NFMA in 1976, which prohibits the Secretary from returning land in the National Forest System to the public domain. Thus, the only power retained by the Secretary is to lease the land, and to regulate the use and occupancy of the land. (30)

The Department of Agriculture further codified the creation of National Grasslands and gave the USFS the authority to administer the BJFTA lands (36 C.F.R. § 213.1). Under this regulation, the USFS must administer the land with "sound and progressive principals of land conservation and multiple use," and "promote development of grassland agriculture and sustain yield management" of the various uses in the area (Id. at 213.1(c)). The USFS must manage national grassland resources "so as to maintain and improve soil and vegetative cover, and to demonstrate sound and practical principles of land use for the areas in which they are located". (Id. at § 213.1(d) (30))

USFS must adopt regulations that protect National Grasslands, as well as adapting them to their "most beneficial use" (7 U.S.C. § 1011(b)). The USFS has implemented regulations to adopt a multiple use and sustainable yield approach to its management of Grasslands; though there is an intent that the land ultimately be used for grassland agriculture. (36 C.F.R. § 213.1(c) (30))

Land and Resource Management Plans

NFMA requires that every national forest or grassland managed 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" (36 C.F.R. § 219.5(b)). The Forest Service Handbook (FSH) gives guidance on Interdisciplinary Team selection (FSH 1909.15,

chapter 10, section 12.2). The Responsible Official also provides the Interdisciplinary Team with direction regarding the scope and nature of the new plan or plan revision. This team is responsible for designing the process in a manner that is transparent and efficient, reflects principles of adaptive management, and engages the public with meaningful opportunities for public 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 C.F.R. § 219.16 (FSH 1909.12, ch. 40, sec. 42). After the assessment phase and during planning phase, the Interdisciplinary Team develops potential plan components and constantly reviews, evaluates, and adjusts them throughout the planning phase to assure that they make a coherent whole.

While the Agency does not specify a sequence of steps for developing or revising plans, general stages for conducting the planning process include:

1. Identifying the need to change the plan (36 C.F.R. § 219.7(c)(2)(i)).
2. Describing the plan area's distinctive roles and contributions in the broader landscape (36 C.F.R. § 219.7(f)(1)(ii)).
3. Identifying the species of conservation concern (36 C.F.R. § 219.9(c)).
4. Developing a proposed new plan or revised plan with public participation (36 C.F.R. §§ 219.4 and 219.16).
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 C.F.R. § 220).
6. Reviewing the land use policies of federally recognized Indian Tribes, Alaska Native Corporations, other federal agencies, and state and local governments that are required and documenting that review in the EIS (36 C.F.R. § 219.4(b)(2).
7. Providing an opportunity for the public to comment, within at least a 90-day comment period, on the proposed new plan or revised plan and the draft EIS (36 C.F.R. § 219.16(a)(2)).
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) or the USFWS to determine if the approval of a plan, 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 C.F.R. § 219.52).
11. Approving the final plan or plan revision within a decision document that also serves as a Record of Decision (ROD) and notifying the public (36 C.F.R. §§ 219.14(a) and 219.16(a)(4)).

When creating land management plans, "the responsible official must use a collaborative and participatory approach to land management planning […] by engaging the skills and interests of […] State or local governments or other interested or affected communities, groups, or persons" (36 C.F.R. § 219.9). Further, the USFS must seek assistance, where appropriate, from other state and local governments to help address management issues or opportunities (ID. at § 219.9(a)(2)). BJFTA directs the Secretary to "cooperate with Federal, State, territorial, and other public agencies and local nonprofit organizations in developing plans for a program of land conservation and land utilization or plans for the conservation" (7 U.S.C. § 1011(e)). Thus, local officials and local land use plans must be considered and can affect the development of the Land and Resource Management Plan for the Dakota Prairie National Grasslands. (30)

Dakota Prairie Grasslands Management

The Dakota Prairie Grasslands (DPG) contain over 1.2 million acres administered by the USFS. It was reorganized in 1998 from USFS lands formerly administered by the Custer National Forest in North and South Dakota. The DPG includes the rolling plains of tall grass prairie of the Sheyenne National Grasslands including over 70,000 acres in eastern North Dakota, the rugged Badlands of the Little Missouri National Grasslands including over 1 million acres in western North Dakota, and the savannas of the Cedar River and Grand River National Grasslands (6,700 acres in southern North Dakota and 155,000 acres in northern South Dakota respectively). The lands of the DPG are not solid blocks of land, but heavily intermingled with land managed by other federal agencies, state and private land. The grasslands are remote and relatively undeveloped. (32)

The DPG Supervisor's office is in Bismarck; two ranger districts are within the Little Missouri National Grasslands in Watford City and Dickinson, North Dakota. (32)

Grazing comprises the largest portion of the various uses for the Grasslands. DPG provides forage for about 63,000 cattle annually and oil and gas development is present. It also provides abundant recreational opportunities and wildlife habitat. Species include mule deer, pronghorn, elk, bighorn sheep, coyote, sharp-tail grouse, greater prairie chicken, pheasant, turkeys, eagles, falcons and prairie dogs. There are paleontological and archaeological resources as well. There is an unusual abundance of fossil resources. Museums around the world contain marine, dinosaur, reptile, plant, and mammal fossils aged between, 73 to 28-million-years-old, from the area.(32)

There are no wilderness or grassland wilderness areas in the DPG. There are about 280,000 acres inventoried as "roadless" (21% of the grasslands) of which 265,180 acres were identified as roadless by the USFS and 14,000 were identified by the public and met the criteria for roadless. About 11,000 acres were proposed by the public to be roadless but did not meet the criteria. For more see Chapter 12. (33)

In 1995, the USFS began the *Northern Great Plains Management Plans Revision* (NGP Revision), a combined planning effort for the Dakota Prairie Grasslands (previously managed under the Custer National Forest Land and Resource Management Plan), Thunder Basin National Grasslands (managed by the Medicine Bow-Routt National Forest), and Nebraska National Forests. Three separate management plans were prepared for each, but only one EIS was prepared to provide the basis for revising and developing each plan. The areas collectively cover 2.9 million acres across a 250-million-acre expanse in four states but share many physical, biological, and social elements. The combined effort allowed the three areas to share ecological assessments, plan related analysis, and resource expertise. A Draft EIS was issued in 1999, the Final EIS issued in June 2001, and the Record of Decision (ROD) was issued in August 2002. (34)

The *Revised Land and Resource Management Plan for the Dakota Prairie Grasslands Northern Region* (DPG Management Plan) was released in 2002 for the Grand River National Grassland in South Dakota, and the Cedar River National Grassland, the Little Missouri National Grassland, and the Sheyenne National Grasslands in North Dakota. The DPG Management Plan was based on the analysis and alternative selected in the Northern Great Plains Revision FEIS. The DPG Management Plan established goals and management direction for the entire Grasslands. Five alternatives were developed for revising the management plan. A "Modified" version of Alternative 3 - the preferred alternative from the Final EIS (FEIS) was selected for management direction when the ROD was released in July 2002. A supplemental EIS was deemed not necessary for the Modified Alternative 3 Final as the effects were determined to be

similar and analyzed sufficiently in the discussions on Alternative 3 in the FEIS. (35)

Within the DPG Management Plan, the USFS gives direction to agency action in three different zones. The first zone is the "Grassland-Wide Direction," which sets forth the direction for the entire DPG and which often reflects national or regional goals for the grasslands. (35)

The second zone is a "Geographic Area Direction," which is more narrowly tailored and reflects the best use for a more localized region that would not be applicable to the grassland as a whole. More stringent and restrictive direction for a Geographic Area can be outlined than what is found in the Grassland-Wide Direction. For each Geographic Area the plan includes a description of the physical setting and unique features including size, location, drainages, vegetation, and topography; a description of desired conditions and management emphases; and objectives, standards and guidelines for the area. Geographic Areas are also given a rating on a Recreational Opportunity Spectrum (ROC) and Scenic Integrity Objectives (SIO) (35). There are three primary Geographic Areas within the Dakota Prairie Grasslands: The Little Missouri National Grasslands, the Sheyenne National Grassland, and the Cedar River National Grasslands. The Little Missouri Grasslands are further broken into two geographic areas – the Badlands Geographic Area in the south and the Rolling Prairie Geographic Area to the north. (35)

The third zone is "Management Area Direction;" which are areas of the grassland that are managed for a particular emphasis or theme. For example, "Suitable for Wilderness," "Scenic Areas, Vistas, or Travel Corridors," "American Indian Traditional Use Areas," or "Dispersed Recreation: High Use." Management Areas are not contiguous and can be scattered throughout the Grassland (30). Smaller, linear and point areas such as campgrounds, utility corridors, and riparian areas are combined into other larger Management Areas. The DPG Management Plan also includes Management Areas devoted to preservation of particular wildlife or plant species as well as some areas where plant and animal species were consolidated into a "special" area featuring both. (35)

Grazing under the DPG Management Plan

Due to uncertainty and considerable controversy regarding the assumptions, standards and guidelines, and the projected effects of the 2002 DPG Management Plan on grazing, the ROD established a "phased in" or "interim" approach to implementing the livestock grazing guidance and direction. Concerns were expressed that the grazing portion of the Grasslands Plan could not be implemented; and that if implemented, the Plan would result in much higher reductions in livestock numbers than was predicted by the USFS. The USFS estimated a 9 percent reduction in livestock grazing levels while other interests estimated reductions of 29 to 55 percent from the previous 20-year average and 43 to 69 percent from livestock grazing association preference numbers. (36)

The Regional Forester chose to delay the livestock grazing decision and "test drive" the grazing portion of the plan through the development of 64 sample Allotment Management Plans (AMP) which would be evaluated by an independent Scientific Review Team. After completion of the "test drive," a final decision to either adopt the grazing portion of the Grasslands Plan or make needed adjustments or changes was to occur. The Scientific Review Team completed their assigned task on November 31, 2005, and the DPG sent the results with the agency's response to the public for comment. In September 2006, the USFS announced it was moving forward to implement a livestock grazing decision and issued the *Livestock Grazing Record of Decision for Dakota Prairie Grasslands Final Environmental Impact Statement and Land and Resource Management Plan*. (36)

Oil and Gas Development under the DPG Management Plan

In 2003, the USFS, DPG, and the BLM Montana/Dakotas State Office issued the *Dakota Prairie Grasslands Oil and Gas Leasing Record of Decision* (DPG Oil and Gas ROD). The ROD documents decisions made by the USFS and the BLM regarding oil and gas leasing and establishes the specific lands were authorized to offer for lease in the Little Missouri and the Cedar River National Grassland pursuant to 36 CFR 228.102(e). The USFS characterizes this as the "Leasing for Specific Lands". This decision incorporates the lease terms and stipulations determined necessary to mitigate effects to surface resources. The decision, lease terms, and stipulations are based on analyses documented in the Northern Great Plains (NGP) Final Environmental Impact Statement (FEIS), and the previous Northern Little Missouri National Grassland Oil and Gas Leasing EIS (Northern FEIS), and the Southern Little Missouri and Cedar River National Grasslands Oil and Gas Leasing EIS (Southern FEIS). This ROD incorporates the project files for those FEISs.

The ROD also documents the BLM's decision to offer and issue leases on the lands identified in the USFS decision and on all split mineral estate lands (non-federal surface/federal subsurface) within defined project area. The BLM used the NGP Revision FEIS to satisfy its NEPA compliance requirement. (37)

Little Missouri National Grasslands

The Little Missouri National Grassland (LMNG) is the largest national grassland in the US and is approximately 1,033,271 acres (Figure 15). A predominant feature of the grassland is the colorful and beautiful badlands and rugged terrain extensively eroded by wind and water. It is a northern mixed grass prairie, meaning it has both tall and short grass species. Within the boundaries of the national grassland are significant portions of state-owned and privately-owned land, much of it leased by cattle ranchers for grazing. In descending order of land area, the LMNG is located in parts of McKenzie, Billings, Slope, and Golden Valley Counties. The primary commodity uses are cattle grazing and leasable mineral activity. There are about 400 grazing permittees and several hundred oil producing wells. (35)

There are two geographic areas within the LMNG located in Slope County, those zones in the DPG Management Plan that are designated for more narrowly tailored management direction and best use determination. The Badlands Geographic Area is approximately 573,000 acres; 383,800 acres are located in the Medora Ranger District. The Rolling Prairie Geographic Area includes approximately 452,600 acres; 141,600 acres are located in the Medora Ranger District. (35)

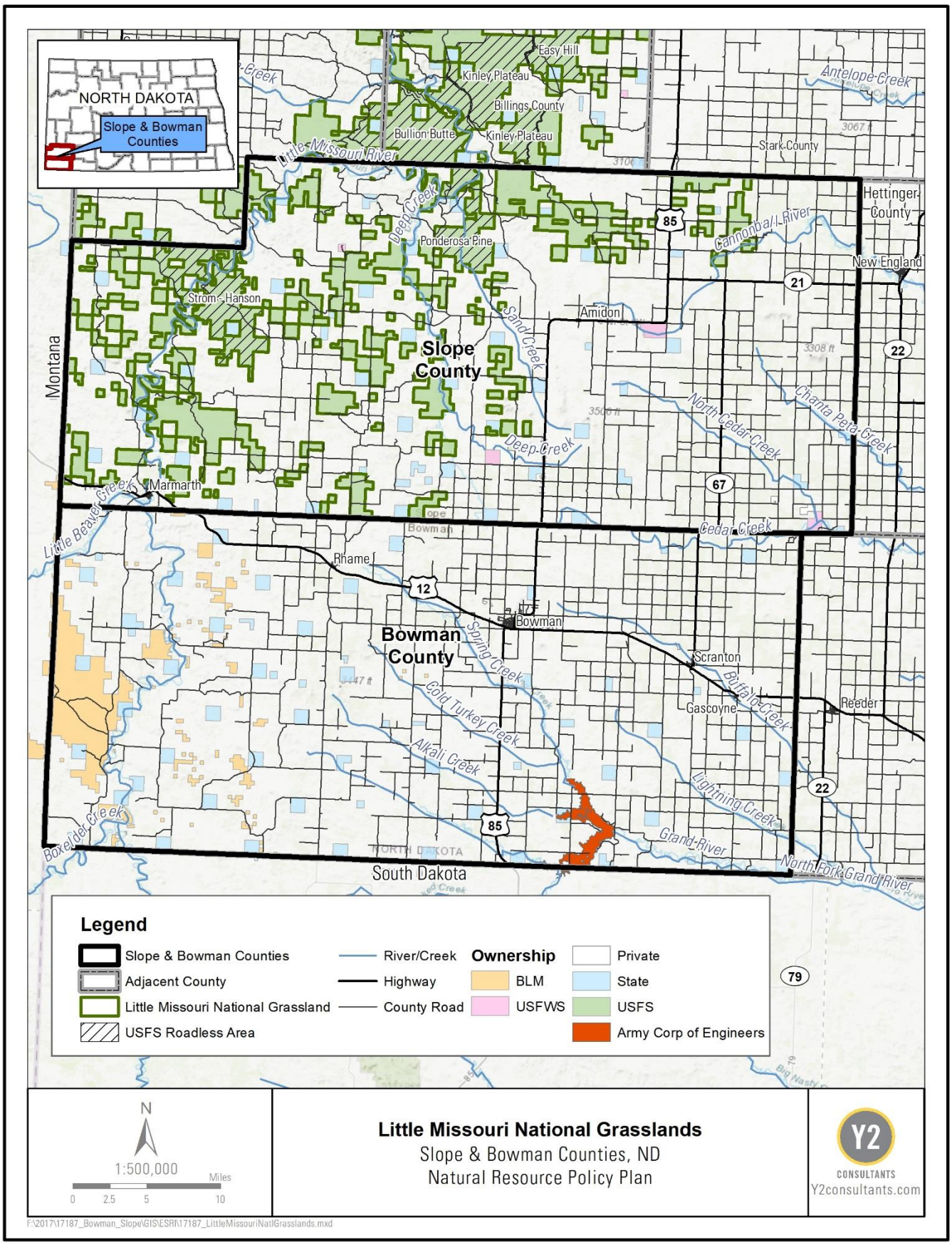

Figure 19. Little Missouri National Grasslands.

Roadless Areas

"Inventoried Roadless Areas" are a group of USFS lands that have been identified as lands without existing roads that could be suitable for Wilderness or other special protection that preserves their roadless character. The inventoried roadless areas range from large areas with the requisite wilderness characteristics to small tracts of land that are immediately adjacent to wilderness areas, parks, and other protected lands. (38)

The first review of USFS roadless lands was started in 1967 after the enactment of the 1964 Wilderness Act, which mandated inventories to identify USFS lands with wilderness characteristics. Technically the Wilderness Act only required review of approximately 5 million acres of USFS lands but in 1971 the USFS initiated a survey of an additional 56 million acres. This effort was called the "Roadless Area Review and Evaluation" or "RARE I." RARE I review culminated with a recommendation in 1972 for 12.3 million acres as suitable for Wilderness designation. The RARE I recommendations were abandoned by the USFS after courts ruled that the agency had not sufficiently complied with NEPA. A second roadless inventory, RARE II, was initiated in 1977, which resulted in a recommendation of Wilderness designation for 15 million acres of national forest land and further study for another 10.8 million acres. This set of recommendations was also quickly challenged in the courts and largely voided as a result. (38)

The most recent review of inventoried roadless areas began in 1998 and concluded in 2000, resulting in a set of USFS regulations adopted in 2001 that are collectively known as the Roadless Area Conservation Rule or the "Roadless Rule" (2, 7). The 2001 Roadless Rule establishes prohibitions on road construction, road reconstruction, and timber harvesting on 58.5 million acres of inventoried roadless areas on USFS lands. It has been the subject of litigation for more than a decade, but it is in effect as of this writing (29). These inventoried roadless areas comprise roughly one third of all National Forest System lands and approximately 2% of the land base in the continental United States (40).

There are no roadless areas in Bowman County. Within Slope County there are two designated roadless areas within the Little Missouri National Grassland (Figure 16). (41)

Noxious Weeds

The noxious weeds of most concern on the LMNG are leafy spurge (*Euphorbia esula*), houndstongue (*Cynoglossum officinale),* and Canada thistle (*Cirsium arvense)* in Slope County. Other species on the LMNG include spotted knapweed (*Centaurea stoebe*) and Canada thistle (*Cirsium arvense*) along the Little Missouri River corridor. Absinth wormwood (*Artemisia absinthium*), black henbane, and saltcedar (*Tamarix* spp.) are also found in small densities throughout the LMNG. (42) The use of flea beetles (*Apthona czwalinae* / *Apthona lacertosa* mix and *Apthona nigriscutis*) on the Medora Ranger District has been used in controlling leafy spurge. Herbicide is also used to control leafy spurge, Canada thistle, saltcedar, black henbane, hoary cress, and burdock (*Arctium* spp.). (42)

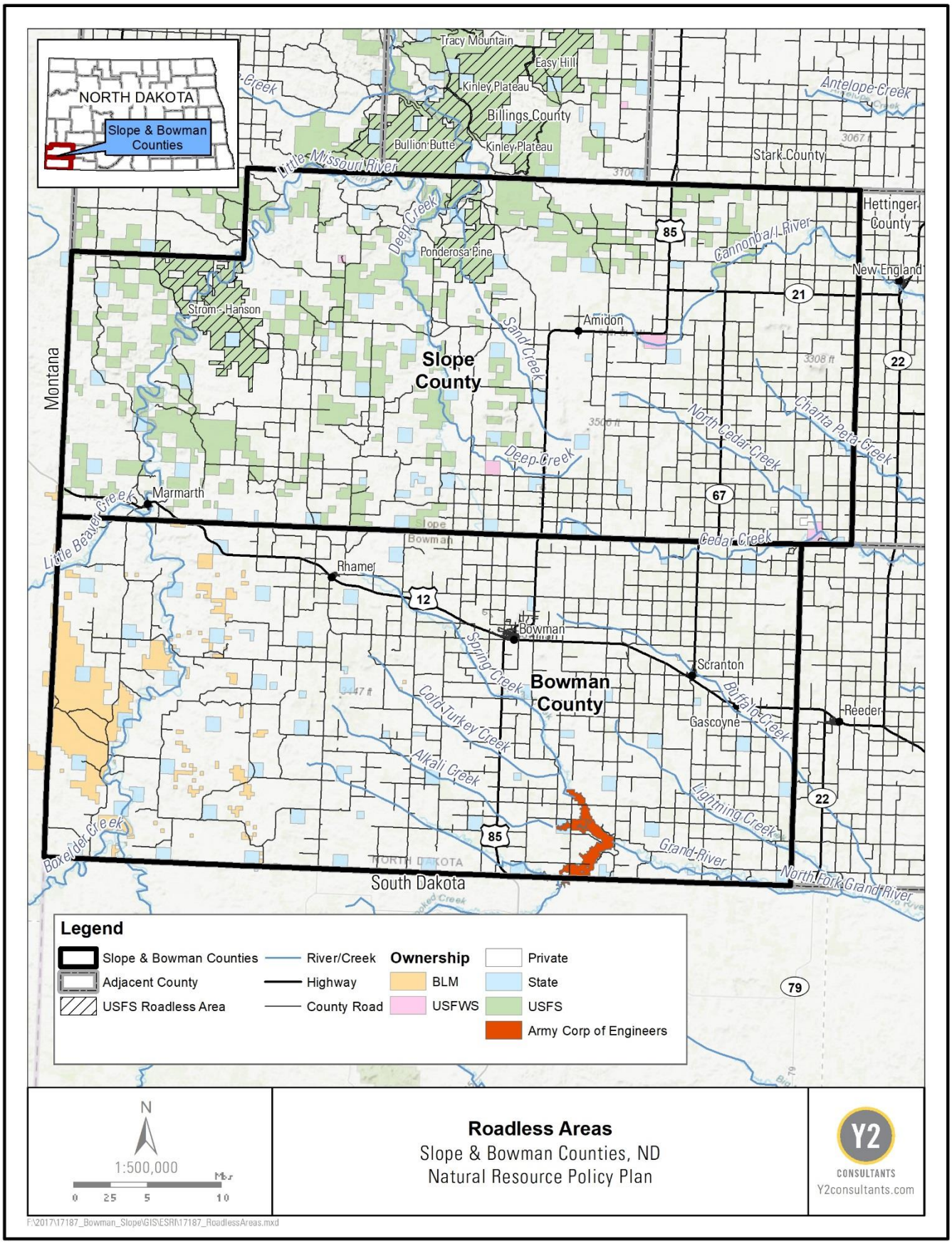

Figure 20. Roadless areas in Bowman and Slope Counties.

North Dakota Ex. Rel. Stenehjem v. U.S. (257 F. Supp.3d 1039 (2017))

In 2012, the state of North Dakota and Billings, Slope, McKenzie, and Golden Valley Counties filed suit in the United States District Court for the District of North Dakota against the United States to quiet title to their claims of public rights-of-way along section lines in the Dakota Prairie Grasslands, which the United States does not recognize. These claimed rights-of-way along section lines would include areas identified as roadless and inventoried for wilderness characteristics. In 2017, the District Court dismissed the claims specifically related to the section lines for failure to file their claims within the twelve-year statute of limitations.

The claims arose from a long-standing controversy surrounding purported public rights-of-way along section lines within the Dakota Prairie Grasslands arising from a federal law dating back to 1866 - a statute commonly referred to as "R.S. 2477." R.S. 2477 granted a "right of way for construction of highways across public lands not reserved for public uses." The law remained in effect for 110 years, during the time when the nation's policy promoted transferring public lands to private productive use. Many transportation routes in the west were established under its authority. The law was repealed by FLPMA in 1976 when Congress changed course and adopted a policy to retain lands still under federal ownership. FLPMA, however, preserved "any valid" right-of-way "existing on the date of approval of this Act."

In the litigation, the state of North Dakota and the counties brought two basic claims. First, they sought quiet title to a public easement for travel within a thirty-three feet corridor on each side of section lines in the DPG (66- feet total width). They claimed that the 1871 Dakota Territory Law and successive related acts constituted their acceptance of an open-ended grant by the federal government for rights-of-way provided under R.S. 2477, thereby creating an existing right that was preserved. Most of the lands in the DPG were reacquired by the federal government under the Land Utilization Program and the BJFTA subject to existing rights, they argued, including the public rights-of-way along section lines. They claim this public easement burdens the lands within the DPG regardless of whether a road was constructed or there was evidence of use.

On June 26, 2017, the District Court dismissed the claims of the counties regarding the roads along the section lines finding that the case was not brought within the statute of limitations. According to the District Court, the Quiet Title Act (QTA) is the exclusive way an adverse claimant can challenge the United States' over title to real property. Under the QTA, the state and counties attempt to quiet title for the rights-of-way would be barred unless it was brought within twelve years after receiving "notice" that the United States had a claim adverse to theirs. The time limit would start running to bring a claim when they "knew or should have known," defined as "reasonable awareness," of some interest adverse to their claims. This knowledge would be imputed to them when, according to the Court, the United States either directly communicated or demonstrated a clear intent that it exclusively controlled the thirty-three feet on either side of section lines – the claimed rights-of way.

The state and counties claimed that they received notice of the United States adverse claims when the USFS issued a ROD in 2001 prohibiting off-highway motor vehicle travel in the LMNG and with the 2002 issuance of the DPG LRMP FEIS which stated the Forest Service would not accept R.S. 2477 roads that had not actually been constructed. The court, however, concluded that North Dakota and the counties were on notice of the adverse claims of United States (through evidence of a clear intent to exclusively control the purported areas) as early as 1976 and as late as 1988, which triggered the QTA limitation

period and necessitating a filing of their claims no later than the year 2000. The District Court found the 1976/1977 Travel Plans for the LMNG and the Sheyenne National Grassland and accompanying public notices and the public notices for the Sheyenne National Grassland issued in 1982, 1984 and 1988 were reasonably calculated to put the claimants on notice that the United States claimed exclusive control over the rights-of-way. The language in those documents limited travel to existing roads and prohibited travel elsewhere including implicitly within the purported rights-of-way along section lines – demonstrating exclusive control. These communications triggered the twelve-year limitation period to file claims under the QTA. Thus, the District Court did not rule on the validity of the North Dakota Attorney General Opinion recognizing the roads along the section lines, but rather that this case was not brought within the statutory time frame to give the court jurisdiction to determine the merits of the case. Although the counties requested that a final order be issued for purposes of appeal, the District Court denied that request on August 22, 2017. Once a final order is issued, the state and counties will have 60 days to decide whether they will appeal.

The complaint also alleged that certain described roads should also be recognized as R.S. 2477 rights-of-ways. The court ruling above did not address these claims, so the parties are proceeding through discovery related to these individual roads.

5.1.1 POLICY STATEMENTS

i. BSSCD and the Counties may propose “most beneficial use” designations as necessary per National Grasslands Land Use Plans.

ii. Support managing for multiple uses on public lands to maintain and enhance desired plant communities that benefit watersheds, wildlife, water quality, recreation, and sustainable livestock grazing that are critical to the economic health of Bowman and Slope Counties.

iii. Support the North Dakota Attorney General opinion and the North Dakota Century Code that recognizes the validity of the roads along section lines.

iv. Oppose any additional wilderness or roadless designations.

v. Support oil and gas and other mineral development and exploration.

vi. Oppose application of any management action (i.e., critical habitat designation or decrease of agricultural activities) that may result in decreasing access to federal lands or effectively creates a roadless area or other limitations on land use.

vii. Oppose any permanent decrease in livestock grazing AUMs due to implementation of the 2002 Record of Decision.

viii. Support preparation and compliance with a plan (including ensuring adequate funding) to control noxious weeds on the federal lands.

ix. Support management of National Grasslands for grassland agriculture as required by federal statute.

x. Support management of Prairie Dogs on National Grasslands.

xi. Oppose the introduction of sensitive or ESA-listed species to federal lands, and any designation of critical habitat for listed species.

xii. Manage multiple uses on public lands to maintain and enhance desired plant communities that benefit watersheds, wildlife, water quality, recreation, and sustainable livestock grazing is critical to the economic health of Bowman and Slope Counties.

xiii. Recognize the nation’s need for domestic sources of minerals, food, timber, and fiber and

recognize that public lands in Bowman and Slope Counties help fill this need.

xiv. Domestic livestock grazing, energy development, and hunting shall continue to be recognized as important multiple uses on all public lands as documented in FLPMA, NFMA and the Taylor Grazing Act. The custom and culture of Bowman and Slope Counties is based on continued access to public lands for livestock grazing, commensurate with and adjudicated to private land base properties.

xv. Coordinate project planning activities within the agency departments, Bowman and Slope Counties, the BSSCD, and all impacted permittees to allow for opportunities to serve multiple resources with each project. For example, when an oil and/or gas pipeline project is going in, installation of a water pipeline for domestic livestock and wildlife use should be planned. This minimizes disturbance in the allotment and allows the permittee to improve domestic grazing distribution and helps wildlife.

xvi. Communicate with permittees or lessees prior to completing a site visit to the allotment or lease for any reason.

xvii. Require use of Credible Data as defined in Section 2.2 of this document and in accordance with Policy Statements in Section 2.2.1

xviii. Support the establishment of a multi-agency stakeholder group hosted by the Bowman-Slope Soil Conservation District to review and discuss ongoing issues on public lands and propose regular meetings on a schedule to be determined, but not less than annually, or as needed.

xix. Supports the Bowman-Slope County multi-hazard mitigation plan, on file at Bowman and Slope Counties.

5.2 BUREAU OF LAND MANAGEMENT

The BLM is administered within the Department of the Interior and is tasked with the administration of over 248 million acres of public lands. The BLM also manages 700 million acres of sub-surface mineral estate throughout the nation including the split mineral estate. BLM's mission is to sustain the health, diversity, and productivity of America's public lands for the use and enjoyment of both present and future generations. BLM is specifically mandated to follow the multiple use and sustained yield mandate. (26)

The BLM was established in 1946 by the consolidation of the General Land Office, created in 1812 to oversee the disposal of western public lands through sales and land grants, and the US Grazing Service, created in 1939 (then the Division of Grazing) to regulate grazing on public lands. In 1976, the BLM was granted its current legislative charter in FLPMA. FLPMA's goal was to establish a unified, systematic framework for the management of BLM administered federal lands and it granted BLM new authorities and responsibilities, amended or repealed previous legislation, and prescribed specific management techniques. Most significantly FLPMA established a national policy of retaining public lands in federal ownership (converting public lands to federal lands), effectively repealing the homestead laws and other laws that facilitated privatization. FLPMA charged BLM with managing federal lands for "multiple uses and sustained yield" and to protect the quality of "scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archeological values." (26)

Many lands administered by the BLM have historically been managed for resource development including livestock grazing, mineral, oil and gas extraction, and logging. BLM is one of the few federal agencies that generates more revenue than it spends. For example, in Fiscal Year 2016, nearly $75 billion in economic output was generated by activities on BLM-managed lands, including an estimated $42 billion

from oil and gas development, $11 billion in coal, and $2 billion in grazing. About half of those mineral revenues are returned to the states where the mineral leasing occurred. The resource development that is managed by the BLM, such as oil, gas and mineral development, is very tied to state and local rural economies. (43)

Grazing

The Taylor Grazing Act of 1934 (43 U.S.C. § 315) established the Grazing Service (which eventually became the BLM) and locally established grazing advisory boards, who created an adjudication process to determine where, when, and what type of livestock grazing could occur on public rangelands. To receive an allotment through this process, the stockman had to have (1) "commensurate base property" on which one could graze livestock when they were not using the federal lands, (2) have an economically viable livestock operation and (3) be members of the local community and support the local stability of the community. Current authorized grazing levels were established from 1940 to 1965, during which time the BLM completed livestock forage inventories to establish estimated grazing capacity. These levels have been adjusted to accommodate differences in production capabilities and use by other species. With the passage of FLPMA, BLM's mission was altered to require retention of the public lands rather than disposal. FLPMA did not repeal the Taylor Grazing Act (44).

All range improvements on BLM lands must be authorized by the agency. There are two options for authorization: a Cooperative Range Improvement Agreement or a Range Improvement Permit. The Cooperative Range Improvement Agreement identifies how the costs of labor, materials, and maintenance are divided between the agency and the permittee. Range Improvement Funds can be used for labor, materials, and final survey and design of projects to improve rangelands. The Range Improvement Permit requires the permittee or lessee to provide full funding for construction and maintenance of the improvement. NEPA analysis is not required for normal repair and maintenance of range improvements that are listed on a term grazing permit or for which a maintenance agreement exists; permission of the authorized officer is also not required. However, for reconstruction of a range improvement or construction of new improvements, NEPA analysis and a decision by the Authorized Officer is required.

Figure 21. Private buffalo ranch in Southwest Bowman County.

Oil and Gas

Energy exploration, development, and production for oil, natural gas, coal, and fossil fuels on all federal lands are administered by the BLM. This includes lands where the surface is managed by other federal agencies including the USFS, USFWS and NPS and the federal government's split estate rights – where the mineral rights are owned by the federal government, but they lie under private or state-held land.

For lands managed by other federal agencies, the BLM issues the lease and manages the sub-surface operations, but generally the USFS and other land management agencies manage the surface operations throughout the drilling process. All oil, gas, and mineral exploration and development in the Dakota Prairie Grasslands are managed and overseen by the BLM. (37)

BLM in North Dakota

The BLM manages federal lands through twelve state offices, then District Offices, and Field Offices. The BLM's Montana/Dakotas State Office in Billings, Montana manages about 8.3 million acres of federal lands and 47.1 million acres of federal mineral estate in Montana, North Dakota, and South Dakota (45). In 2016, BLM Montana/Dakotas administered almost 5,000 federal oil and gas leases in the three-state area. Currently more than 3.5 million acres of mineral estate is leased for oil and gas development which in 2015 generated $200 million dollars in revenue that went to the states, Indian Tribes, and the US Treasury. BLM Montana/Dakotas also authorizes over 1.2 million animal unit months on grazing lands across Montana and the Dakotas. (45)

Bowman County is in the BLM Montana/Dakota's Eastern Montana/North Dakota District based out of Miles City, Montana and the North Dakota Field Office (NDFO) which is based out of Dickinson, ND in Stark County to the northeast of Bowman County. (45)

Resource Management Plans

FLMPA requires management planning with processes that include public involvement and requires a continuing inventory of lands and resources. Planning and implementation decisions describe the desired resource conditions on the ground and the methods to achieve desired conditions across the millions of acres of federal lands managed by the BLM. Resource Management Plans (RMPs) are the foundation of BLM land management programs.

The aim of RMPs is to ensure that federal 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" (43 § 1601.0-2). The plans are the basis for every management decision regarding every action and allowed activity within each planning area. They are prepared by the District or Field Offices. RMPs are drafted to determine the appropriate mix of uses for the federal 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.

The planning process encourages collaboration and partnerships, and helps the BLM determine how to manage federal lands and how to balance the needs of adjacent communities with the needs of the nation as a whole. The NEPA review process is used to inform all land use planning decisions throughout the

planning 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. (46)

FLPMA requires the BLM to revise its RMPs periodically, always with the FLPMA goal of managing for multiple uses and sustained yield. The plans are typically revised, amended, or replaced every ten to twenty years as changing conditions warrant. There are currently twelve RMPs within the Montana/Dakota's State Office administrative area including one covering all of North Dakota. (46)

The North Dakota Resource Management Plan

The North Dakota Resource Management Plan and Final Environmental Impact Statement (ND RMP) was completed in 1988 for all federal lands and federal minerals in North Dakota. There is no known plan to update or amend the thirty-year-old ND RMP at this point. The BLM created the ND RMP "Desk Document," which consolidates and summarizes all the management directives developed through the planning process to assist and guide BLM employees on implementation. (47)

In 1988, the ND RMP analysis area included 67,500 surface acres and 4.8 million acres of federal subsurface minerals. Because so much of the BLM lands are small and scattered in North Dakota, a goal established in the RMP was the removal of these lands from BLM management. The RMP identified 22,739 acres as available for disposal, exchange, land swaps, or handing over management to other federal or even state agencies (before 1987 only 9,539 acres had been identified for disposal). About 11,715 acres were designated as available for exchange only with the aim of acquiring tracts around Big Gumbo and Lost Bridge or lands otherwise adjacent to tracts where values and management could be enhanced. The four most prominent planning issues identified for the RMP were coal leasing, oil and gas leasing, the need for land pattern adjustment, and off-road vehicle (ORV) use designations. (47)

In 2016, the BLM administered 58,970 surface acres and 5,593,410 subsurface acres in North Dakota (45). There are approximately 9,270 active Animal Unit Months (AUM) for grazing on BLM lands in North Dakota (48).

In 2016 mineral development on federal lands in North Dakota generated over $108 million dollars in revenue of which over $32 million was returned to the state. This was down from a high in 2013 of over $90 million dollars returned to the state from over $247 million in generated revenue. (49)

There are no BLM surface acres in Slope County, but the BLM manages all oil, gas and mineral development for federal subsurface rights in Slope County in cooperation with the USFS as well as the split estate federal mineral rights under non-federally owned surface land. BLM manages 33,100 surface acres in Bowman County (12).

5.2.1 POLICY STATEMENTS

i. Request that the BLM update the 30-year-old RMP to better reflect the current status of development of the surface and subsurface resources and to update agricultural management goals and objectives.

ii. Require involvement in the development of the new RMP.

iii. Notify and consult with the BSSCD and the Counties on any proposed land disposal, exchange, land swap, or management transfer of federal lands to other federal or state agencies, or when changes are proposed to land use designations such as monuments or lands with wilderness

characteristics.

iv. Require involvement in any proposed special use designations.

v. Oppose all proposed Wilderness and Roadless Area designations, or any other special use designation limiting multiple use objectives on federal lands by any federal agency.

vi. Support the North Dakota Attorney General opinion and the ND Century Code that recognizes the validity of the roads along section lines.

vii. Oppose any decrease in livestock grazing as identified in the 2002 ROD and subsequent AMPs.

viii. Require all federal agencies to adequately fund and implement management of undesirable plants, including controlling all noxious weeds.

5.3 US FISH AND WILDLIFE SERVICE

The US Fish & Wildlife Service (USFWS) is the agency within the Department of the Interior dedicated to the management of fish, wildlife, and their habitats, and charged with enforcing federal wildlife laws including, but not limited to, the Endangered Species Act. In addition to managing threatened and endangered species, they manage migratory birds, restore significant fisheries, conserve and restore wildlife habitat including wetlands, and distribute money to state fish and wildlife agencies. They also manage the National Wildlife Refuge (NWR) System created by President Theodore Roosevelt in 1903. (26)

There are 8 administrative regions for USFWS and approximately 700 field offices across the country. North Dakota is in the Mountain Prairie Region which consists of eight states - Colorado, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah and Wyoming. The regional office for the Mountain Prairie Region is in Denver, CO. The closest Field Office is in Bismarck, ND. There are 63 National Wildlife Refuges totaling 289,777 acres in North Dakota. There are 11 Wetland Management Districts with 1,288 Waterfowl Production Areas totaling 289,372 acres in the state and more than 1.3 million acres are under perpetual wetland and grassland easements. (50)

Wildlife Refuges in Bowman and Slope Counties

In 1903, President Theodore Roosevelt designated the first National Wildlife Refuge by executive order. It was not until 1966 that the refuges were put into the National Wildlife Refuge System and administered by the USFWS. The USFWS administers 89.1 million acres of federal land in the US of which 76.6 million are in Alaska (51). The mission of the National Wildlife Refuges is to administer these designated lands for the conservation, management, and if appropriate, restoration of fish, wildlife, and plant resources, and their habitats within the US for the benefit of present and future generations. A number of activities take place on Refuges including: hunting, fishing, ice fishing, bird- watching, hiking, bicycling, and water recreation (52).

There are 63 National Wildlife Refuges in North Dakota (50). Slope County has two: White Lake and Stewart Lake National Wildlife Refuges (Figure 1).

White Lake National Wildlife Refuge

The historic White Lake area is located in Slope County and was considered open range for grazing livestock prior to 1907. The land currently within the National Wildlife Refuge was homesteaded in 1907 and grazing continued until 1910. Subsistence farming in this area continued through World War I when wheat production increased, and more traditional farming of crops occurred. The Great Depression of the

1930s ended the wheat farming and subsistence farming resumed. (53)

A dam and spillway were built across the North Fork of the Cannonball River in 1936 and a second spillway in 1938 by the Bureau of Biological Survey and the Works Progress Administration. Approximately 190 acres of water were impounded. The area was established by executive order in 1941 by Franklin D. Roosevelt to protect and preserve migratory waterfowl. The White Lake name originated from the fact that the lake bed contains bentonite clay which gives the lake a grayish-white color when dry. (53)

A variety of tools are used to maintain, recover, and enhance the Refuge. These tools include working with local ranchers to graze livestock and controlling invasive vegetation. (53)

Stewart Lake National Wildlife Refuge

The Stewart Lake National Wildlife Refuge in Slope County was established by executive order in 1941. This 2,230-acre Refuge is a major water bird oasis. The lake itself is impounded by an earthen dam containing a spillway and low-level output (54). Stewart Lake is an easement refuge which is a special type of wildlife refuge under the auspices of the USFWS and partially exists on privately owned land, with the laws of easements guaranteeing their status. USFWS maintains the water rights and the right to restrict hunting, trapping and willful disturbance of any bird or wild animal of any kind; the landowner reserves the right to hay, graze, burn and manage the land with minimal intervention from USFWS. (55)

Endangered Species Act

USFWS administers the Endangered Species Preservation Act, passed by Congress in 1966, which provided limited protection for species listed as endangered. The Departments of the 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 (56). As a follow-up, Congress passed the Endangered Species Act (ESA) of 1973. The ESA:

- Defined "endangered" and "threatened" species;
- 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; such "take" prohibitions also include "adverse modification" of critical habitat;
- 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 adversely modify its "critical habitat";
- Made matching funds available to States with cooperative agreements;
- Provided funding authority for land acquisition for foreign species; and
- Implemented protection in the United States. (57)

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 listing as an endangered or threatened species, but not yet the subject of a proposed rule” (50 C.F.R. § 424.02(b)).

USFWS is also responsible for the identification of critical habitat. Critical habitat is a specific geographic area that contains features essential to the conservation and recovery 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. According to ESA regulations issued on February 11, 2016, such habitat includes temporary habitat, ephemeral habitat, potential habitat, and migratory habitat. The USFWS has now proposed additional regulations which would further define what is included in a critical habitat designation. Although economic impacts are not considered during the species listing process, the economic impacts of a critical habitat designation must be analyzed in the designation process. The ESA 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 (CCAA) (private landowner arrangements for the protection of Candidate species that provides the landowner with protection if the species is listed) and Species of Concern. (58)

Candidate, Threatened, and Endangered Species in Bowman and Slope Counties (59)

A total of five endangered, threatened and candidate species and habitats have been identified for Bowman and Slope Counties. Those species are:

- Whooping Crane (*Grus Americana*)-Endangered and known to occur
- Black-footed Ferret (*Mustela nigripes*)-Endangered, not known to occur, potential habitat
- Gray Wolf (*Canis lupus*)-Endangered, rare sightings but not known to occur, potential habitat
- Northern Long-Eared Bat (*Myotis septentrionalis*)-Threatened and known to occur
- Sprague’s Pipit (*Anthus spragueii*)-Candidate and known to occur

Whooping Crane (*Grus Americana*)

The Whooping Crane, an endangered species across all of its range, utilizes North Dakota for stopover habitat along its migration path from breeding in Northwest Territories and Alberta, Canada and wintering in the eastern US. Historically, whooping cranes were confirmed to have nested in North Dakota, but no nests have been confirmed in over 100 years. The primary habitat for Whooping Cranes in North Dakota is seasonal and palustrine (non-tidal) wetlands and cropland ponds that are used for roosting or feeding. Their migration corridor is identified as passing through Bowman and Slope Counties where cranes forage for frogs, fish, plant roots, insects, crayfish and waste grains. (60,61)

Conversion of prairie breeding habitat to croplands during settlement and unregulated hunting in the late 19th and early 20th centuries likely caused the drastic decline in populations leading to the endangered species listing of the Whooping Crane. The current population estimate for Whooping Cranes across their range is 300 wild individuals and 119 captive individuals. The Whooping Crane is now considered one of

the rarest bird species in North America. In the past fifty years, collisions with powerlines have been the leading cause of Whooping Crane mortality. Continued efforts to mark power lines and manage placement of wind turbines continues. (60,61)

The Whooping Crane was listed as threatened on the Endangered Species List in 1967 and subsequently listed as endangered in 1970. The species is listed as a Level 3 Species of Conservation Concern in North Dakota. Per Section 4 of the 1973 Endangered Species Act, the USFWS identified five listing factors that contribute to historical, current, and past population dynamics including:

- The present or threatened destruction, modification, or curtailment of habitat or range due to human settlement and freshwater inflows.
- Overutilization for commercial, recreational, scientific, or educational purposes including shooting and disturbance.
- Disease or Predation, including parasites.
- The inadequacy of existing regulatory mechanisms.
- Other natural or anthropogenic factors affecting its continued existence.
    - Life History
    - Food Availability/Sibling Aggression
    - Climatic Factors
    - Loss of Genetic Diversity
    - Red Tide
    - Chemical Spills
    - Collisions with Power Lines, Fences and Other Structures
    - Collisions with Aircraft
    - Pesticides (60)

Critical habitat is not identified in Bowman and Slope Counties.

Gray Wolf (*Canis lupis*)

The Gray Wolf is listed as an endangered species under ESA for North Dakota (62). The species is not identified as a Species of Conservation Concern in North Dakota (63). Gray wolves are a wide-ranging species that occupy diverse habitats in pursuit of food, mainly large ungulate species. Ungulate species found in Bowman and Slope Counties that may be food sources for wolves include white-tailed deer, mule deer, elk, and bison. Wolves may also prey upon beaver and other small animals. The species has been observed in sparsely populated forested and wilderness-like areas to more populated areas, such as prairies and agricultural landscapes. As a species who travels widely in search of food, winter home ranges of Minnesota packs average 30-59 square miles. (64)

The historical range of Gray Wolves lies across North Dakota. Although now unoccupied with rare sightings of the species, there are many limitations to the species recolonizing their historic range. Though white-tailed deer and mule deer may be a reasonably abundant food source across the agricultural landscape, the high density of roads and very high likelihood of human/livestock conflicts would likely continue to be obstacles limiting the expansion of Gray Wolves in North Dakota.

If wolves were to find Theodore Roosevelt National Park, a diversity of food sources would be present in a more protected setting. However, determined during the environmental review for culling elk in the park, wolves would be limited by the surrounding area and the park would likely only support a single pack. The species would require intensive management including birth control and restrictive fencing to

limit human/livestock conflicts. The colonization of Theodore Roosevelt National Park by Gray Wolves was ultimately deemed not feasible. (65)

Sprague's Pipit (*Anthus spragueii*)

The Sprague's Pipit is a candidate for ESA listing and a Level 1 Species of Conservation Concern in North Dakota. The grassland bird species is fairly common in north and western North Dakota and is endemic to North America, breeding across the Northern Great Plains and wintering across Mexico. They inhabit large patches of mixed-grass prairie across the Northern Great Plains. A ground nester, the species prefers vegetation conditions that are intermediate height (4-12 inches) and exhibit herbivory or use by cattle or wildlife.

Although Canadian prairies support about 80% of the breeding population of the species, the Sprague's Pipit has lost an estimated 73% of its population since 1970. The cause of decline is highly linked to conversion of native grasslands to cropland across their range. In addition to habitat conversion, over-use by cattle, increased fire control, oil and gas extraction, energy development, woody species encroachment, and invasive species have greatly contributed to the reduction in suitable habitat for the species. Management for this species should focus on maintaining large patches of native mixed-grass prairie. In existing habitat, promoting suitable vegetation structure through proper management of grazing, mowing, and prescribed fire is recommended. (66–69)

Northern Long-eared Bat (*Myotis septentrionalis*)

Most bats across the country are considered species of conservation priority. The Northern Long-eared Bat is considered a seasonal occupier of North Dakota and is rare as there are no hibernacula in the state (66). The species range is mainly eastern and north central US and all of the Canadian provinces (70). This bat is a North Dakota Species of Conservation Priority Level 1 classification (71). The Northern Long-eared Bat was listed as threatened on the Endangered Species List in 2015 (70). As of 2018, a recovery plan has not been created for the Northern Long-eared Bat nor has critical habitat been identified (70). This bat is classified as a medium sized bat, dark brown to tawny in color, with a 3-4 inch body, a 9-10 inch wingspan and large ears. The species roosts singly or in colonies in trees or snags under bark and is primarily found in woodlands in the riparian areas of the Little Missouri River area (Figure 17). It has been found roosting in structures such as abandoned buildings and barns. Northern Long-eared Bats are insectivorous and can be negatively impacted by pesticides. Loss of open water sources further limit this species. White-nose syndrome and wind farms can further impact the species (70)

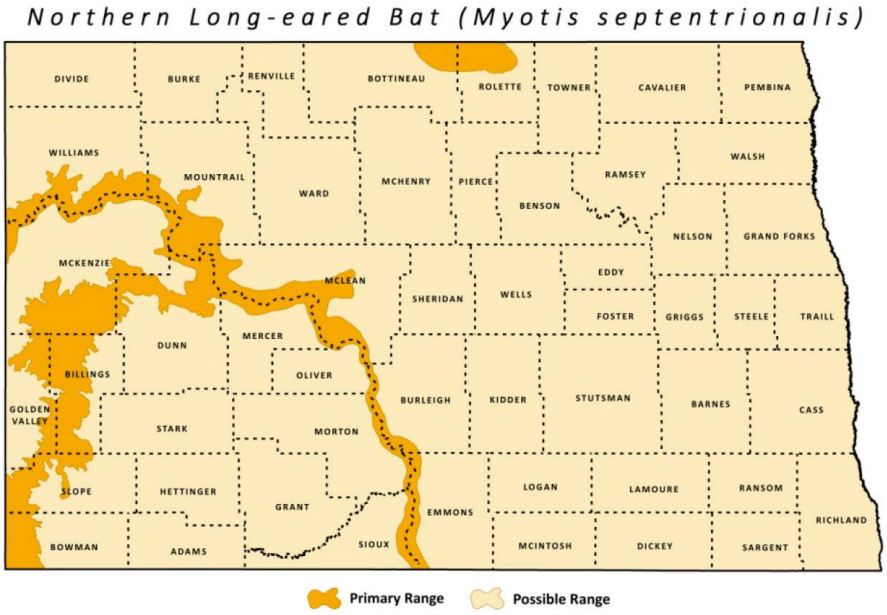

Figure 22. Northern Long-eared Bat range map (71)

5.3.1 POLICY STATEMENTS

i. Support participation as a cooperating agency in all decisions and proposed actions which affect Bowman and Slope Counties or the BSSCD regarding any sensitive, candidate, threatened or endangered species; the reintroduction or introduction of listed species or experimental populations; habitat conservation plans; conservation agreements or plans; and candidate conservation agreements.

ii. Participate as a cooperating agency and through consistency review with the USFS and LMNG in completing their RMP amendments related to the sage grouse portions of their land use plans.

iii. Immediately notify the local governments if critical habitat is being considered for any species within their jurisdictions.

iv. Require a robust, local economic analysis of any potential critical habitat designation, including the transactional costs of Section 7 compliance.

v. Require creating a unified cross-agency definition for “species of concern”.

vi. Oppose the use of climate change analysis in the listing of species or critical habitat.

vii. Federal agencies will develop a process to remove species from the “species of concern” list as habitat, population, or other objectives are met.

viii. Require use of Credible Data as defined in Section 2.2 and in accordance with Policy Statements in Section 2.2.1.

ix. Require use of other publicly-available data, including data from land grant universities and reputable third-parties, where it meets the minimum data criteria.

x. Require delisting of any species with insufficient, unsupported or questionable data not meeting the minimum criteria for its listing or protection level.

xi. Oppose management actions increasing the population of any listed species in Bowman and Slope Counties without an approved recovery plan. Without a recovery plan, management cannot focus on increasing the species population or habitat and cannot move closer to a potential delisting.

xii. Management plans shall be consistent with federal land management multiple use mandates. Therefore, management plans will not be created for single species.

xiii. Oppose the management of black-tailed prairie dog complexes to be large enough to support Black-footed ferret reintroduction. Expansion of prairie dogs and colonies cause erosion, soil loss, loss of grazing AUMs, significant additional damage to adjacent private lands, and prairie dogs can carry plague which can be deadly to humans.

xiv. Oppose management of black-tailed prairie dog complexes to effectively create critical habitat for black-footed ferrets.

xv. Involve BSSCD and the Counties in the species of concern review process, including the determination of what should be included as a species of concern or sensitive species.

xvi. Involve BSSCD and the Counties in the establishment of recovery objectives for species of concern, and the development of management actions to move species off the list of concern. Once recovery objectives have been reached, require moving species off the list of concern.

xvii. Require the participation of the BSSCD and the Counties as cooperating agencies and/or in coordination in federal rulemaking, including any NEPA analysis related to the designation of critical habitat.

xviii. Require the full analysis of the economic impacts on all proposed critical habitat designations or species management plans, and the inclusion of the BSSCD and the Counties in this analysis.

xix. Oppose the management of non-ESA listed species (i.e., species of concern, species of special concern, or any other non-ESA designation) as though they are protected by the rules of the Endangered Species Act.

xx. Support cooperation between private landowners and federal agencies to reduce the risk of listing under ESA.

xxi. Oppose the introduction or reintroduction of listed species into Bowman and Slope Counties, unless the local governments consent to terms and conditions that avoid disrupting current land uses.

xxii. Should an agreement not be reached on the potential introduction or reintroduction, and the species is introduced anyway, require it to be introduced only as a non-essential experimental population.

xxiii. Require the development of recovery plans within 18 months of listing that includes clear objectives for delisting; for species already listed require the development of a recovery plan within 18 months of the approval of this document.

xxiv. Require the immediate delisting of a species when allowed by statute.

xxv. Support the development of local solutions (i.e., habitat management plans, candidate conservation agreements, or candidate conservation agreements with assurances) to keep a species from being listed under ESA or as species of concern/species of special concern.

xxvi. Require the data used in any listing decision meet the minimum criteria defined in BLM Handbook H1283-1, Data Administration and Management and USFS Handbooks FSH 1909.12, Chapter 40 – Key Processes Supporting Land Management Planning.

xxvii. Require involvement of the BSSCD and Bowman and Slope Counties in the management and control of predators and zoonotic and vector borne diseases negatively impacting special status, candidate, or listed species.

xxviii. Require the continued use of existing valid permits and lease rights, including grazing and mineral leases, on lands with special status, candidate or listed species.

5.4 US ARMY CORPS OF ENGINEERS

The US Army Corps of Engineers (Corps) is an agency within the Department of Defense with both military and civil work responsibilities. The civil responsibilities of the Corps began with creating and regulating navigable channels and flood control projects. The agency's civil work responsibilities today are principally to support navigation, reduce flood and storm damage, and protect and restore aquatic ecosystems. Congress also has authorized Corps assistance for select environmental infrastructure activities (e.g., municipal water and wastewater treatment systems) and other nontraditional activities. Many Corps projects are multipurpose and may provide water supply, recreation, and hydropower in addition to navigation or flood control. Its environmental activities involve wetland and aquatic ecosystem restoration, and environmental mitigation activities for Corps facilities. The agency's regulatory responsibility for navigable waters extends to issuing permits for private actions that might affect wetlands and other waters of the United States. The economic and environmental impact of Corps' projects and the agency's regulatory activities can be significant locally and regionally. (72)

Other responsibilities of the Corps include flood emergency and natural disaster response, such as flood-fighting, repair to damaged levees, and emergency water supply assistance. For assistance for presidentially declared disasters pursuant to the Stafford Act (P.L. 93-288), the Corps may be tasked with performing various response and recovery activities that are funded through the Disaster Relief Fund and performed at the direction of the Federal Emergency Management Agency (FEMA), the President, or the request of the governor of a state or territory with an affected area. Under the National Response Framework, the Corps coordinates emergency support for public works and engineering, including technical assistance, engineering, and construction management as well as emergency contracting, power, and repair of public water, wastewater and solid waste facilities. The Corps assists in monitoring and stabilizing damaged structures and demolishing structures designated as immediate hazards to public health and safety. The agency provides technical assistance in clearing, removing, and disposing of contaminated and uncontaminated debris from public property, and establishing ground and water routes into affected areas; contaminated debris management is coordinated with the Environmental Protection Agency (EPA). (72)

In addition to work performed as part of the National Response Framework, Congress has given the Corps its own emergency response authority. This authority is commonly referred to as the agency's P.L. 84-99 authority, based on the act in which the authority was originally authorized, the Flood Control and Coastal Emergency Act (FCCE) (P.L. 84-99; 33 U.S.C. §701n). FCCE authorizes the Corps to perform emergency response and disaster assistance. It authorizes disaster preparedness, advance measures, emergency operations (disaster response and post-flood response), and rehabilitation of certain damaged flood control works, protection or repair of certain federally authorized shore protection works threatened by coastal storms, emergency dredging, and flood-related rescue operations. These activities are limited to actions to save lives and protect improved property (public facilities/services and residential or commercial developments). The Corps has some authority to assist with select activities during drought. (72)

The agency's civil works responsibilities are organized under 8 divisions divided into 38 districts. The boundaries for military work are organized along state lines within districts but management of a district's civil works are organized based on river basins. North Dakota is in the North Western Division. Civil works for the southwestern portion of North Dakota is led by the Omaha District while the St. Paul District oversees civil work for the northeast part of the state. Bowman and Slope Counties are in the Omaha District. The Omaha District is the lead district for the Corps disaster response missions in North Dakota, including the Missouri River Basin. This district covers an area of about 700,000 square miles in the

northern Great Plains and includes parts of Montana, Wyoming, Colorado, North Dakota, South Dakota, Nebraska, Iowa, and Missouri. (73)

Bowman-Haley Dam and Lake

Bowman-Haley Lake is a 1,740-acre lake located in southeastern Bowman County at the confluence of Spring Creek, Alkali Creek, and the North Fork Grand River. The lake has 17 miles of scenic shoreline and is used heavily for recreation (74). The Corps constructed the dam on Bowman-Haley Lake for flood damage reduction as well as fish and wildlife improvement, recreation, and water supply (75). The dam took two years to build and is approximately 5,730 feet across and 80 feet above the stream bed. Construction was completed in 1966 (75). Prior to installation of the dam the lands were privately held and used for livestock grazing.

Prior to construction in 1964, the land that is now owned by the Corps of Engineers was privately owned by farm and ranch families. 1957 aerial photography indicates most of land along creeks was non-cropland and was likely grazing land for area ranches.

Randy Gaebe, Bowman County Weed Officer

The warm-water fishery and area around the lake is a game management area managed by North Dakota Game & Fish (NDGF) although the land is owned by the Corps. A barbed-wire fence was installed approximately 1-foot inside the property boundary that is not maintained and insufficient to control livestock. Canada thistle expansion and the lack of grazing has decreased native plant species and expanded invasive cool season grasses. Wildlife food plots are dominated by Canada thistle and other weeds. Neighboring property owners are being forced to change their crop selections because of the expansion of Canada thistle and other hard-to-control weeds. In some cases, the most effective herbicides cannot be used because tree plantings on Corps lands harbor Canada thistle in the understory and the herbicide cannot be used within the tree rows.

Figure 23. 16-foot concrete principal spillway at the Bowman-Haley Dam. July 1966.

5.4.1 POLICY STATEMENTS

i. Require participation in the development of a management plan for the Bowman-Haley Dam property, including the use of livestock grazing to improve soil health, noxious weed management, wildlife habitat maintenance and enhancement, and a wildfire management tool.

ii. Request the expansion of the existing grazing and haying area in the Bowman-Haley Dam management area.

iii. Require management plans, funding and control of noxious weeds per North Dakota State Statute and federal noxious weed control rules within their jurisdiction and for use of the Commissioner of Agriculture funds.

iv. Oppose any habitat enhancement project that does not have a defined and funded weed control and monitoring plan for the anticipated life of the enhancement.

v. Request cooperating agency status and consistency review on land management plan changes as required by the NEPA.

5.5 NATURAL RESOURCES CONSERVATION SERVICE

The Natural Resources Conservation Service (NRCS) in an agency within the United States Department of Agriculture. The NRCS was established on April 27, 1935 as the Soil Conservation Service (SCS) for the purpose of soil conservation as result of the Dust Bowl. The NRCS is tasked with assisting private landowners establish conservation practices on their land. The NRCS is the primary Federal Agency responsible for soil science and soil surveys in the United States. Since its inception, the role of the NRCS expanded to include watershed planning and protection, drought monitoring, and the health of the environment. (76)

NRCS in North Dakota manages Farm Bill programs such as the Environmental Quality Incentives

Program (EQIP), Conservation Stewardship Program (CSP) and Water Bank Program (WBP). North Dakota Landscape Conservation Initiatives include the On-Farm Energy Initiative, Honey Bee Effort, Organic Initiative and the Working Lands for Wildlife Initiative. The NRCS uses a locally led conservation approach to conservation program planning at the county level. This established local process is a successful tool to address local resource concerns effectively and efficiently with federal programs.

5.6 FARM SERVICE AGENCY

The organizational structure of the Farm Service Agency is laid out by Congress and overseen by the Secretary of Agriculture. The FSA administrator reports to an undersecretary of agriculture for Farm and Foreign Agricultural Services (FFAS). The national administrative functions are managed in Washington, D.C. Computational and statistical work is done in Kansas City. Implementation of farm policy through FSA programs is the responsibility of state and field offices based in counties and U.S. territories. (77)

The mission of the Farm Service Agency is equitably serving all farmers, ranchers, and agricultural partners through the delivery of effective, efficient agricultural programs for all Americans. (77)

The Bowman and Slope County FSA office is serving the producers of Bowman and Slope Counties out of the Bowman USDA Service Center. To help administer these programs and services are FSA County Committees, which replaced the New Deal AAA Committees in the 1950s. Each year, approximately 2,500 county committee members are elected by their peers to help administer farm programs and services. (77)

5.7 US AIR FORCE

The Powder River Training Complex (PRTC) is a US Air Force (USAF) Training Range that encompasses part of Montana, Wyoming, North Dakota and South Dakota. The PRTC serves the 28th Bomb Wing from Ellsworth AFB, South Dakota and the 5th Bomb Wing from Minot AFB, North Dakota (78). Specifically, the PRTC takes in the entirety of Bowman County and all but the northeast portion of Slope County, North Dakota (79). According to the Final EIS, the expansion of the PRTC was needed to increase air space for the USAF to conduct combat operations to improve pilot training realism, deploy chaff and flares, and supersonic maneuvers (78).

The USAF proposed expansion of the Powder River Training Complex in 2008. The draft EIS and, the Draft EIS Executive Summary Proposed Map Alternatives were issued in August 2010. The Final EIS, Final EIS Executive Summary and associated appendices were issued in November 2014 (78). USAF issued its ROD to expand PRTC on January 16, 2015 and the Federal Aviation Administration Record issued its Decision on March 15, 2015 (80,81).

According to the 2014 Final EIS, the USAF conducted 19 public hearings from August 20, 2010 to January 20, 2011 (78). The USAF participated in communication and consulted with state agencies and tribal representatives between 2008 and 2014 (78). Copies of the communication with state agencies and tribal representatives and other programmatic files are located at the following website. http://www.ellsworth.af.mil/Home/Powder-River-Training-Complex/Cultural-and-Historic-Preservation-Information

Modified alternatives were developed to address public, state and tribal concerns about PRTC expansion and the PRTC ROD contained mitigation measures as described in the final EIS (78). The PRTC Mitigation and Monitoring Plan was issued in March 2015 (82). The Mitigation and Monitoring Plan details the mitigation and monitoring, responsible parties, methods for accomplishing mitigation measures and adaptive management. Mitigation measures include but are not limited to adjusting air space boundaries,

publishing information on when the military operations area are active and inactive, supporting civil aviation planning and scheduling, avoiding low-altitude flights over Standing Rock and Cheyenne River Reservations, ranches and communities, limiting the use of chaff and flares and coordinating activities and training with local fire agencies (82).

Documents related to the PRTC expansion including the Final EIS, RODs, Mitigation and Monitoring Plan, maps, and Proposed alternatives are available online at http://www.ellsworth.af.mil/Home/Powder-River-Training-Complex/.

5.7.1 POLICY STATEMENTS

i. Support use of a VHF (very high frequency) communication network.
ii. Support a Remote Radar Outlet in the Powder River 3 training area.
iii. Support an ADS-B out (Automatic Dependent System-Broadcast) for all aircraft by 2020.
iv. Support establishment of a Range Control Center operated by Ellsworth Air Force to control radar and communication for the PRTC.
v. Encourages the USAF to develop and release a cellular phone application for instant notification of training area activity. This would increase safety for civilian pilots without radar communication capabilities.
vi. Support a better procedure to notify Ellsworth Air Force Base about sensitive over flight areas (e.g. confined feedlot operation, confined hog operation, seasonal operation with calving, lambing and weaning of livestock).
vii. Require consultation on any management plan changes in the PRTC.

Figure 24. Burning coal mine near Amidon. July 1967

6 AIR QUALITY

Air quality in North Dakota is regulated by the EPA and the Environmental Health Section of the North Dakota Department of Health. In 2017, the North Dakota Legislature passed Senate Bill 2327, establishing a stand-alone North Dakota Department of Environmental Quality (83). The Department of Environmental Quality administers and enforces the environmental protection programs formerly administered by the Environmental Health Section of the North Dakota Department of Health. The transition of air quality regulation and monitoring from the Environmental Health Section of the North Dakota Department of Health to the North Dakota Department of Environmental Quality is ongoing and is scheduled to be completed by July 1, 2019 (83). This report will refer to the department as the combined North Dakota Department of Health/Department of Environmental Quality (NDDH/DEQ).

Passage of the Federal Clean Air Act of 1970 created National Ambient Air Quality Standards (NAAQS) as established by the EPA. Standards were established for total suspended particulate matter, carbon monoxide, ozone, nitrogen dioxide, and sulfur dioxide. EPA, working with states and tribes, identify areas as meeting (attainment) or not meeting (nonattainment) the NAAQS standards. The Clean Air Act requires states to develop a plan to attain air quality standards in their state. These plans are called State Implementation Plans (SIPs). (84)

The EPA operates and maintains a national multipollutant monitoring network, known as NCore. The NCore nationwide network consists of 80 sites; 17 site are rural with one site located in Bismarck, North Dakota. Before 2015 the NCore site was in Fargo, North Dakota, but was moved to Bismarck, North Dakota due to increases in the oil and gas sector in the western part of the state. (84)

In general air quality in North Dakota is cleaner than most set standards. The NDDH/DEQ is charged with protecting the air quality of North Dakota under North Dakota Century Code Chapter 23-25 Air Pollution Control. Rules and regulations regarding North Dakota Air Pollution Controls are found in Chapter 33, Article 15 of the North Dakota Administrative Code (85). NDDH/DEQ operates programs for outdoor ambient, industrial air quality, radiation control and indoor air quality. To maintain the quality of ambient air in North Dakota Standard 33-15-02-02 states **"**It is the purpose of these air quality standards to set forth levels of air quality for the maintenance of public health and welfare and to provide guidance to governmental and other parties interested in abating air pollution. Since the ambient air in North Dakota is generally cleaner than these standards, the standards are not a permit for the unnecessary degradation of air quality." (85)

The NDDH/DEQ owns and operates ten State and Local Monitoring Stations (SLAMS) within the state, although none are located in Bowman and Slope Counties (Figure 18). These sites are in Fargo, Bismarck, Hannover, Beulah, Dunn, Ryder, Lostwood National Wildlife Area, Williston, Theodore Roosevelt National Park's (THRO) North Unit, and THROs South Unit-Painted Canyon. The SLAMS sites located in the THRO are monitored in cooperation with the NPS. NDDH/DEQ operates two additional sites, Hess Corporation's Tioga Station A and Station B, for monitoring air quality in Williams County. (86)

NDDH/DEQ is responsible for permitting, regulation, compliance, and enforcement of industrial air emissions, and as such requires owners to operate air quality monitoring sites related to their sites. Permitting, compliance, reporting, and enforcement of industrial air quality facilities in North Dakota can be found at https://deq.nd.gov/AQ.

Annual Air Quality Reports are available online for the Ambient Air Quality Network from 1983 to present at https://deq.nd.gov/aq/monitoring. The 1983 annual report indicates that the entire state of ND was designated Class II PSD (prevention of significant deterioration) based on the EPA December 5, 1974 Air Quality Rules. The EPA 1977 amendments included adding two Class 1 areas in ND, which included the THRO and Lost Wood National Wilderness Area. (86)

Review of the annual air quality reports from 2009 to 2017 show that North Dakota has been in attainment for both ambient and industry air quality monitoring, with the exception of the Tioga area in 2015 (85). The 2015 nonattainment in Tioga is for Sulfur Dioxide. The Hess Gas Plant and the ND Department of Health have various reports online regarding this issue (87). A list of Permits to Operate and Permits to Construct are online at https://deq.nd.gov/AQ/ and listed by County.

The 2017 Annual Report for North Dakota Ambient Air Quality Monitoring Program stated there were no exceedances of state or federal air quality standards for the summary period of 1995 to present (86).

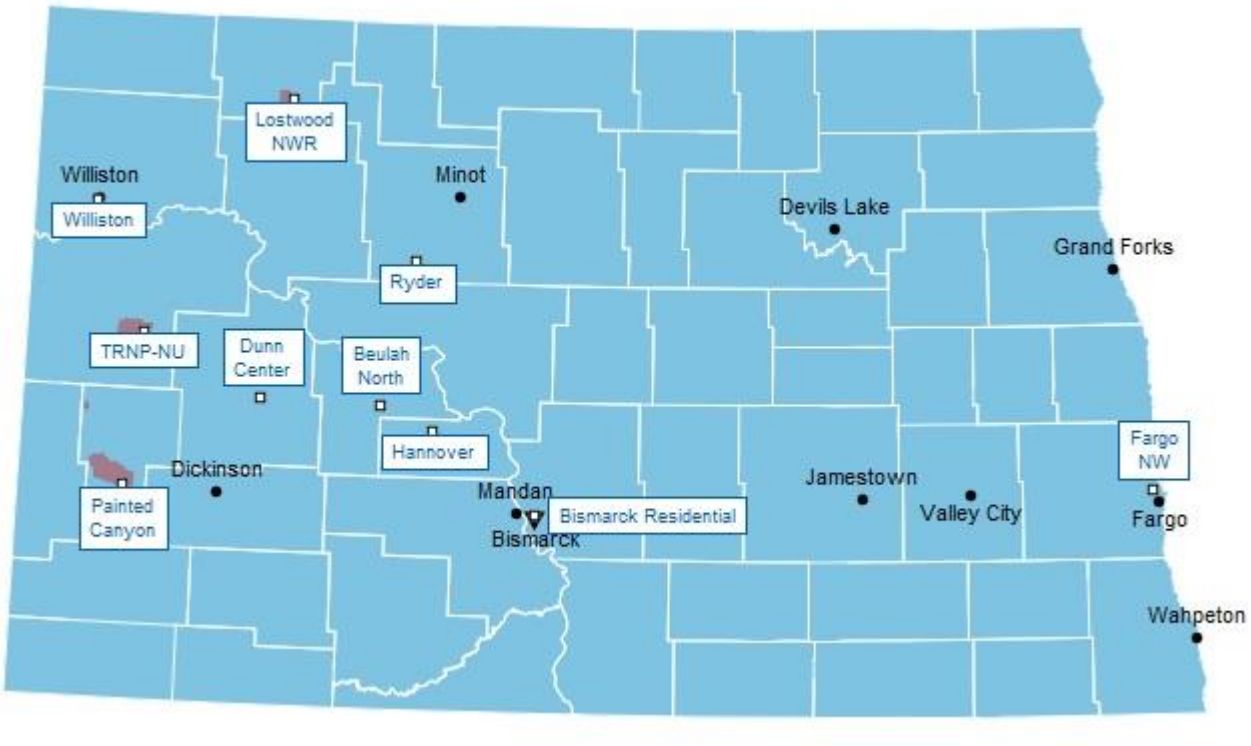

Figure 25. North Dakota Ambient Air Quality Monitoring Sites (white labels). (88)

6.1 POLICY STATEMENTS

i. Balance the Clean Air Act Amendments of 1990 with economically viable and sustainable communities.

ii. Support consultation and coordination with the BSSCD and Counties in the development of mitigation strategies to reduce air quality impacts if NAAQS are being exceeded.

iii. Require consultation and coordination with the BSSCD and Counties when federal agencies are developing permitting or leasing stipulations (including enforcement protocols and exceedance levels) for proposed activities that may impact air quality.

7 CLIMATE CHANGE

Climate change means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and natural climate variability observed over comparable time periods.

Under NEPA, federal agencies must assess the effects of major federal actions that affect the environment. In February 2010, the Council on Environmental Quality (CEQ) released draft NEPA guidance on the consideration of the effects of climate change and greenhouse gas (GHG) emissions. Revised draft guidance was released in December 2014 that describes how agencies should consider the effects of GHG and climate change in NEPA documents pursuant to Section 102 of NEPA and its regulations in 40 C.F.R. § 1500-1508. This guidance explains that agencies should consider the potential effects of a proposed action on climate change, as indicated by its estimated GHG emissions, and the implications of climate change for the environmental effects of a proposed action. (89)

To remain consistent with NEPA, federal agencies must consider the extent to which a proposed action and its reasonable alternative(s) contribute to climate change through GHG emissions and consider the ways in which a changing climate over the life of the proposed project may alter the overall environmental impacts of such actions. The revised guidance states that when addressing climate change, the potential effects of a proposed action on climate change as indicated by its GHG emissions must be analyzed; and the implications of climate change for the environmental effects of a proposed action must be analyzed. To allow agencies to focus on proposed projects with potentially large emissions, CEQ provides a reference point of 25,000 metric tons of carbon dioxide emissions on an annual basis to meet the need for analysis.

Land management practices such as prescribed burning, timber stand improvements, fuel load reductions, scheduled harvesting, and grazing can result in both carbon emissions and carbon sequestration. Thus, agencies are supposed to include a comparison of net GHG emissions and carbon stock changes that would occur with and without implementation of the proposed action. The analysis of impacts on the affected environment should focus on those aspects of the human environment that are impacted by both the proposed action and climate change.

7.1 POLICY STATEMENTS

i. Require inclusion of additional scientific data that meets the credible data criteria, even if not produced by a federal agency.

ii. Support climate analysis at a scale to be identified through consultation and coordination with the BSSCD, Slope and Bowman Counties.

iii. Oppose regulation of greenhouse gases through climate change analysis.

iv. Support the decreased monitoring of oil and gas emissions via the SLAMS program to not monitor beyond the federal requirements for air quality parameters.

v. Oppose denial of economically viable projects solely on climate change analysis.

vi. Require an analysis of the impact each decision will have upon the global environment and the local economy. If the decision will have insignificant impact on the global environment but will have significant negative impact on the local economy, the alternative/decision is unacceptable.

8 GEOLOGY

The North Dakota Geological Survey was created by the North Dakota Legislature in 1895 (90). The Geological Survey publishes maps and reports related to North Dakota's mineral resources including oil and gas, coal, uranium, clay, sand and gravel (90) (Figure 19). The Geological Survey and the Oil and Gas Division are part of the Department of Mineral Resources under the North Dakota Industrial Commission (90).

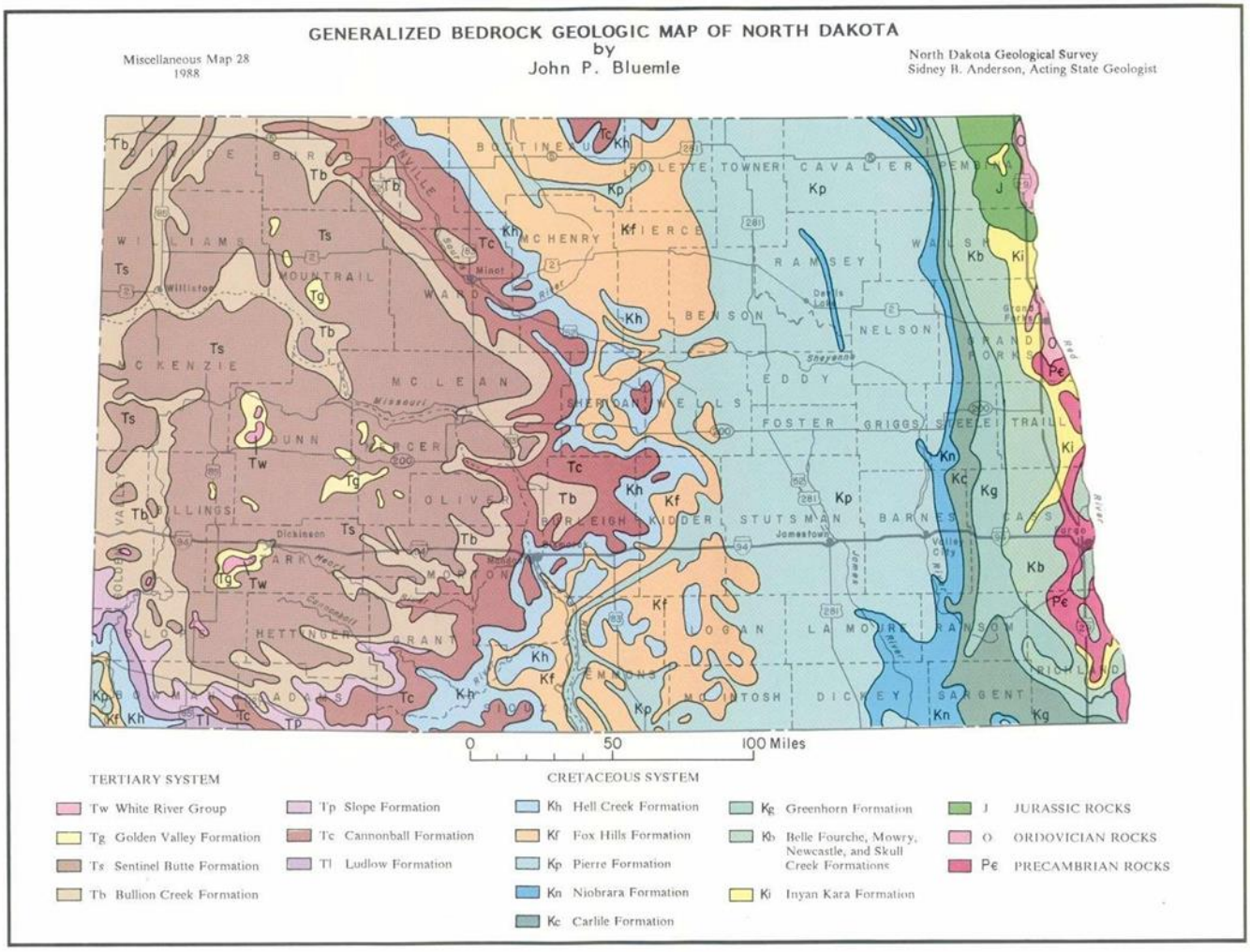

Figure 26. Generalized Geologic Map of North Dakota (91).

8.1 GEOLOGY OF SLOPE AND BOWMAN COUNTIES

The geology of Bowman County is comprised of the Paleocene Sentinel Butte, Bullion Creek (also called the Tongue River), Slope, Cannonball and Ludlow Formations in the eastern two-thirds of the County. The western one-third of Bowman County is comprised of the Cretaceous Hell Creek, Fox Hills and Pierre Formations (92). The majority of Slope County is comprised of the Paleocene Sentinel Butte, Tongue River, Slope and Ludlow Formations (93). The Cretaceous Hell Creek, Fox Hill and Pierre Formations are exposed in the southwest corner of Slope County (93). The Oligocene White River Group is found the eastern portion of Slope County (Figure 19).

Erosion from the Little Missouri River has exposed the Sentinel Butte and Bullion Creek Formations in

Bowman and Slope Counties and formed the badland topography. Quaternary alluvium is found along recent drainages in both Counties (92,93).

The stratigraphy of Bowman and Slope Counties shown in Figure 20 are:

- Quaternary - alluvium; brownish gray, silt, clay, sand and gravel deposited as floodplain deposits of recent drainages (Qaf), and alluvium deposited as floodplain deposits when the base level of flow of the drainage was at that level (Qat).
- Paleocene Sentinel Butte Formation (Tsb), Interbedded brownish-gray and gray sand, silt, clay and lignite with the HT Butte bed at the base. 650 feet thick.
- Paleocene Bullion Creek Formation (Ttr/Tbc) interbedded brown and light gray colored sand, silt, clay and lignite. 650 feet thick.
- Paleocene Slope Formation (Ts) dark colored sandstone, siltstone, clinker and lignite with swelling and none swelling claystone.
- Paleocene Cannonball Formation (Tc) dark gray to black mudstone, greenish gray to yellow sandstone, abundant marine fossils.
- Paleocene Ludlow Formation (Tl) brown and gray sandstone, siltstone, claystone, clinkers and lignite.
- Cretaceous Hell Creek Formation (KHC) gray, brown and purple sandstone, mudstone thin, discontinuous lignite.
- Cretaceous Fox Hill Formation (KFH) yellowish brown to gray sandstone, mollusk-rich beds, abundant marine fossils.
- Cretaceous Pierre Formation (KP) dark gray, blocky shale, subdivided into five members (Odanah, Degrey, Gregory, Pembina and Gammon). (94)

Figure 27. Dinosaur leg found near Marmarth.

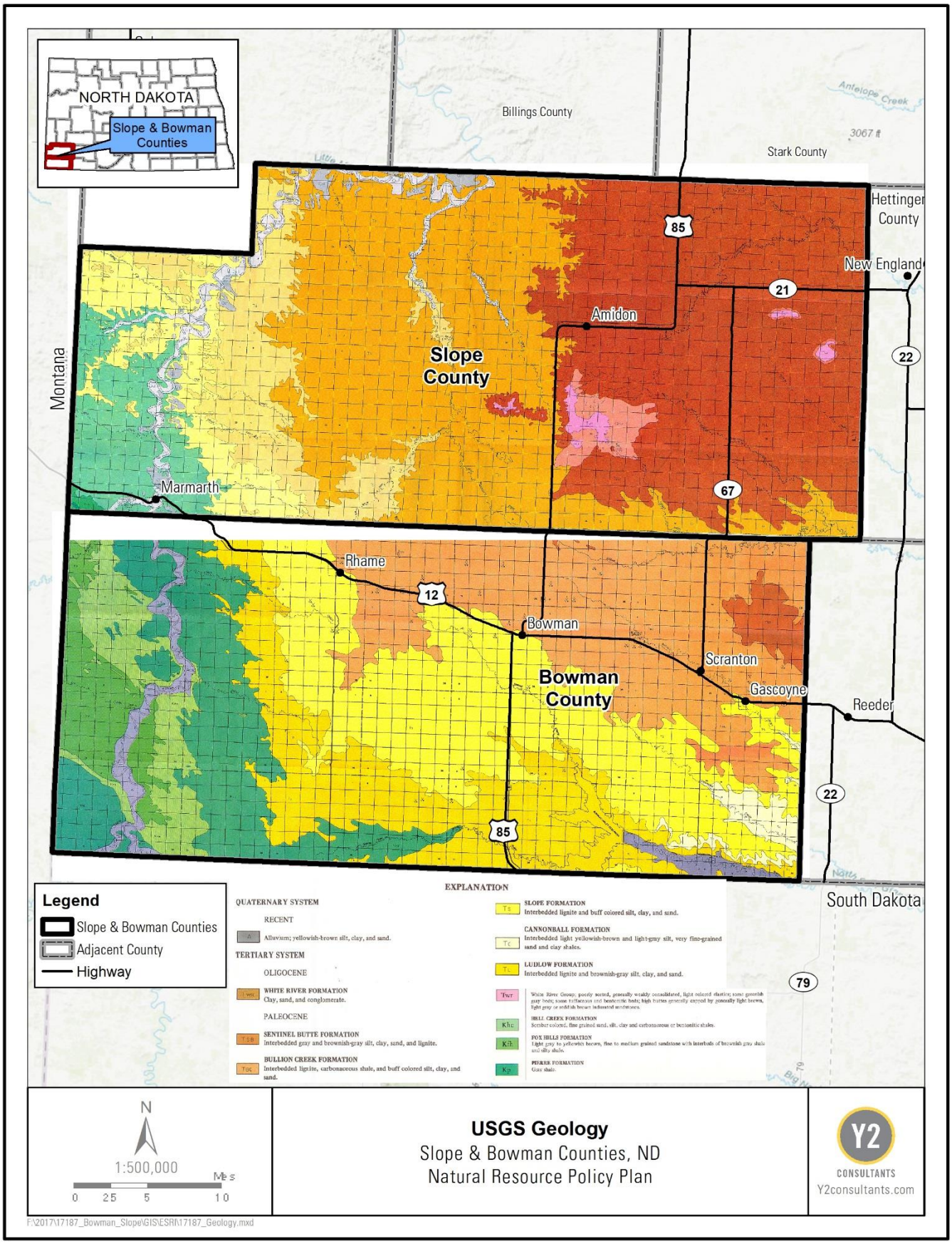

Figure 28. Geologic Map of Bowman and Slope Counties

9 WATER RESOURCES

The North Dakota State Water Commission (NDSWC) was created in 1937 and has the authority to investigate, plan, develop and construct water resources and infrastructure (95). Under Chapter 61-02 of North Dakota's Century Code and 89-01 of the State Administrative Code water quantity, appropriation and other regulatory tasks are governed by the North Dakota State Engineers Office (NDSEO). The NDSEO was created in 1905 to administer the law governing water resources. The NDSEO are authorized Chapter 61-03-01 of North Dakota's Century Code (96).

Water quality in North Dakota is regulated by the EPA and the Environmental Health Section of the North Dakota Department of Health. In 2017, the North Dakota Legislature passed Senate Bill 2327, establishing a stand-alone NDDEQ (83). The NDDEQ will administer and enforce the environmental protection programs formerly administered by the Environmental Health Section of the NDDH, including water quality. The transition of water quality regulation and monitoring from NDDH to the NDDEQ is ongoing and scheduled to be completed by July 1, 2019. (83)

9.1 WATER QUANTITY AND APPROPRIATION

In North Dakota ground and surface water is "the water of the state" and belongs to the public. The right to use the waters of North Dakota is acquired through appropriation for beneficial use (Title 61, Chapter 61-01). North Dakota State Statute 61-01-26.2 states, "Well-being of all the people of the state shall be the overriding determinant in considering the best use, or combination of uses, of water and related land resources". (97)

Water rights in North Dakota are governed by the doctrine of Prior Appropriation, also known as first in time first in right (61-04-06.3 (97). Under the Prior Appropriation system, the first party to use the water becomes the senior water right holder with the first right to use that quantity of water.

Surface water is defined by North Dakota as "Waters on the surface of the earth, excluding diffused surface waters but including surface waters whether flowing in well-defined channels or flowing through lakes, ponds, or marshes which constitute integral parts of a stream system, or waters in lakes" (97). Groundwater in North Dakota is defined as "Waters under the surface of the earth whether such waters flow in defined subterranean channels or are diffused percolating underground water" (97).

North Dakota is divided into five basins based on the major watersheds. They are the Red River Basin, Devils Lake Basin, Mouse/Souris River Basin, James River Basin, and the Missouri River Basin. Bowman and Slope Counties are located in the Missouri River Basin (Figure 21). (98)

North Dakota does not require a permit for water that is impounded, diverted or withdrawn for domestic, livestock, fish or wildlife, or other recreational uses if the amount of water is less than 12.5-acre feet. This applies to both surface and groundwater. The State Engineer must be notified of the location and acre-feet capacity that is stored or utilized once the facility is constructed. While a water right and permit is not required for appropriating less than 12.5 acre-feet, water users may apply for a water right to establish a priority date for the water. Any appropriation of surface or groundwater in excess of 12.5-acre feet requires a water right and permit to construct. (99)

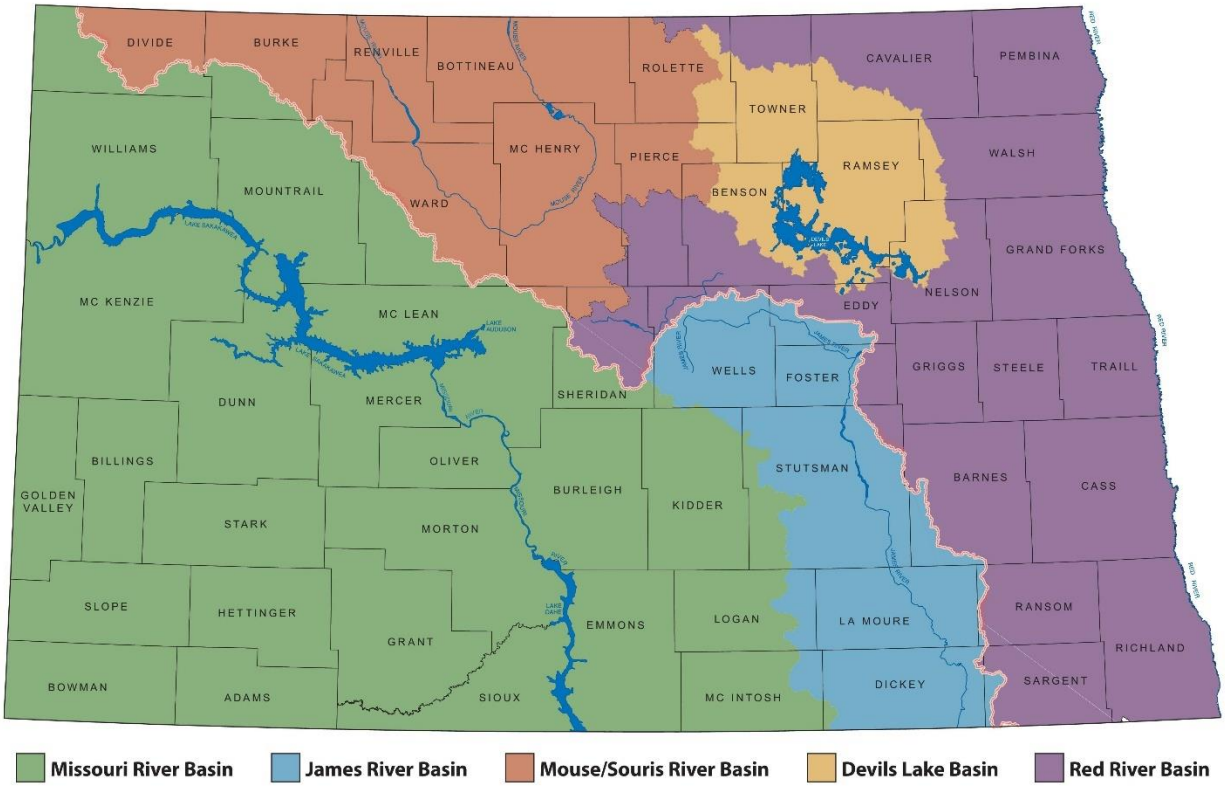

Figure 29. Major watershed basins of North Dakota (100)

9.2 WATER QUALITY

The EPA and NDDH/DEQ establish, administer and monitor standards, policies, rules, and regulations for ground and surface water quality.

Groundwater Quality

NDDH/DEQ has four primary groundwater programs: Source Water Protection, Underground Injection Control, Water Well Construction, and Ambient Monitoring (101). The Source Water Protection Program goals are to prevent contamination, encourage strategic placement of potential contaminating activities, and provide education and awareness of water resources. The Underground Injection Program regulates the injection of water, wastewater, and water mixed with chemicals into the subsurface. The Water Wells and Construction program regulates the construction of monitoring and water wells to ensure they are drilled and completed to North Dakota Administrative Code 33-18 (102). The Ambient Monitoring program samples groundwater to evaluate baseline quality (101).

Within the Ambient Monitoring program, NDDH/DEQ monitors groundwater to determine if groundwater has been impacted by agricultural and oil producing activities, termed the Agricultural and Western Programs, respectively (101). The Agricultural Groundwater Sampling Program began in 1992 to assess agricultural influence on ground water quality. The Western Ground Water Sampling Program began in 2013 to assess and monitor groundwater in oil and gas producing areas of the state. In addition, the NDDH monitors arsenic in aquifers located in glacial till. Arsenic monitoring has been conducted since 1993 (101).

NDDH conducted sampling of drinking water wells in southwestern North Dakota in 1991 and 1992 for uranium (103). Drinking water wells in southwestern North Dakota have the potential to have uranium in the drinking water above the maximum contaminant level (MCL) of 30 ug/l (103). Health risk, specifically to the renal system exists for people consuming water exceeding 30ug/l of uranium and associated compounds. NDDH recommends water treatment for wells and water supplies exceeding 30ug/l of uranium.

NDDH/DEQ supports an interactive Monitoring Program Map Viewer that provides information on arsenic monitoring for Agricultural and Western programs. The map viewer can be found at https://deq.nd.gov/WQ/1_Groundwater/4_AM.aspx . According to this map, ambient groundwater monitoring is not being conducted in Bowman and Slope Counties.

The EPA and North Dakota regulate underground injection wells in the state. Wells are categorized into five classes according to function (104). Oil and gas extraction are major industries and economic drivers. Class I injection wells are associated with industrial and municipal wastes and are the most strictly regulated and are regulated by the EPA through the Resource, Conservation and Recovery Act. Class II injection wells that are associated with oil and gas production, are regulated by the North Dakota Oil & Gas Division. Class III injection wells that are associated with solution of mining minerals are regulated by the North Dakota Geological Survey (104). Class IV injection wells are associated with hazardous or radioactive material and are banned. Class V includes non-hazardous fluids such as septic system leach fields.

Surface Water Quality

Under the federal Clean Water Act (CWA), every state must adopt water quality standards to maintain, protect, and improve the surface waters of the United States (105). The NDDH/DEQ establishes standards, policies, rules, and regulations for both ground water and surface water quality and administers monitoring of both. The NDDH/DEQ has a classification system for all of North Dakota's aquifers, streams, and designates uses (recreation, drinking water, agriculture, etc.). Standards and regulations are written for each designated use. The EPA must approve the NDDH classifications and standards. The EPA may step in to enforce state standards if the state fails to do so.(106)

North Dakota surface water protection is essentially divided into two programs: The North Dakota Pollutant Elimination Discharge System (NDPES) and the Watershed Management Program. The NDPES program administers permits as required by the CWA and includes Animal Feeding Operations, Biosolids/Sludge, Municipal/Industrial, Pesticide Application, Pretreatment, Septic Pumper, Storm Water and Temporary Discharge permits. The Watershed Management Program (WMP) administers the Nonpoint Source Pollution Program, Total Maximum Daily Load Watershed Liaison Program, Nutrient Reduction Strategy, Ambient Stream Monitoring Network, Lake Water Quality Assessment and Basin Framework Strategy.

Figure 30. Davis Dam beginning to fill after construction in 1963.

As part of these programs, surface waters are monitored by the NDDH/DEQ. The WMP manages nonpoint source pollution, rivers, lakes, and streams. The WMP maintains a list of impaired waters, per CWA requirements, and reports impairments to the EPA. The 303(d) listing of impaired and threatened waters is generally updated every two years. The most recent monitoring report is the 2016 Integrated Report. NDDH/DEQ identifies waters not meeting their designated use and reports those waters to the EPA and public through the Integrated Report process and establishes a Total Maximum Daily Load (TMDL) for the listed water. A TMDL is the set amount of the identified pollutant to be reduced to meet the state water quality regulations. Data from the 2016 Integrated report shows surface waters in the Lake Sakakawea and Lake Oahe of Missouri River Basin, within Bowman and Slope County, are classified as a Category 4A TMDL Approved, Uses Still Impaired and Category 5 – Use(s) Impaired, Needing a TMDL. (107)

Surface water monitoring is conducted at ten sites in Slope County and thirteen sites in Bowman County (108). Site locations, type of monitoring and analytical results can be found at the NDDH/DEQ Surface Water Quality Data Map Viewer at https://deq.nd.gov/WQ/3_Watershed_Mgmt/SWDataApp/viewer.html.

Cloud Seeding

The North Dakota Cloud Modification Project (NDCMP) is an operational program that seeds clouds for hail damage reduction and rain enhancement in western North Dakota. The Counties currently participating in the program include Bowman, Burke, McKenzie, Mountrail, Ward, Williams, and part of Slope. Cloud seeding began in North Dakota in the 1950's when hail was recognized as a significant weather-related threat to small grain crops and many farmers suffered significant multi-year losses of crops to hail. The NDCMP was developed by Bowman County farmer-rancher Wilbur Brewer and pilots Bill Fisher and Bill Mazaros who formed Weather Modification, Incorporated. (109)

Silver iodide was historically the seeding agent and was released in the updrafts of mature storms thought to be a hail threat. In 1975, the North Dakota Weather Modification Board was created as a division of the Aeronautics Commission and in 1976 state cost-sharing was available to the program. In 1980, the Federal-State Cooperative Program in Atmospheric Modification Research was funded through the National Oceanic and Atmospheric Administration (NOAA) to develop an understanding of the physical processes involved in hail and precipitation formation. (109)

In 1980, a federally-funded research program was undertaken to develop an understanding of the physical processes involved in hail and precipitation formation, and how such processes might be best modified beneficially. The program, known as the Federal-State Cooperative Program in Atmospheric Modification Research, was funded through NOAA. (109)

Flooding

North Dakota maintains a long history of regular flooding, especially along the Missouri River, Red River, Mouse River, James River, Sheyenne River, and Devil Lake Basin. The Missouri River drains 48% of the total area of the state of North Dakota. Bowman and Slope Counties are within Missouri River Basin. According to the Bowman County and Slope County Multi-Hazard Mitigation Plan (2018) the counites have experienced eight flood events since 1950. These flood events have resulted in over a million dollars in property damage and are listed in Table 2. (110).

Flood Events 1952-2016				
Location	Date	Type	Property Damage	Crop Damage
Bowman City	1966	Flood	Not available	Not available
Bowman County	3/13/1972	Flood	$19230	Not available
Slope County	3/13/1972	Flood	$19230	Not available
Scranton City	7/26/2001	Urban/Structure Flood	Not available	Not available
Bowman County	6/6/2007	Flood	$400K	$150K
Slope County	6/6/2007	Flood	$500K	$500K
Bowman County	6/22/2007	Flash flood	$50K	Not available
Bowman County	03/06/2009	Flood	$37K	Not available
Scranton City	2009	Flood	Not available	Not available
Scranton City	2011	Flood	Not available	Not available

Table 2 Flood Events

Levees

The City of Marmarth is the non-federal sponsor for the Little Missouri LB and Little Beaver Creek LB federally constructed levee system. The levee system was rated “Unacceptable” in 2015 after a Continuing Eligibility Inspection. In response to this designation, the City of Marmarth initiated a System Wide Improvement Framework plan in 2016. The Little Beaver Creek LB Little Missouri LB 60% System Wide Improvement Framework plan date December 15, 2017 details the levee system, proposed improvements, schedule and milestones (111).

Federal Emergency Management Agency’s (FEMA)

The North Dakota Floodplain Management Act of 1981, by reference in NDCC 61-16.2, adopted the National Flood Insurance Program (NFIP). Communities that participate in NFIP, and implement the floodplain management regulations, are eligible for the services provided by the FEMA Community Assistance Program – State Support Services Element (CAP-SSSE) (112). The CAP-SSSE program “provides funding to states to provide technical assistance to communities in the NFIP and to evaluate community performance in implementing NFIP floodplain management activities” (113). Where the CAP-SSSE program provides direct support in managing local floodplain development, the Risk Mapping and

Assessment Planning (Risk MAP) projects develop high quality maps and data to assess the factors contributing to increased risk of flooding in an area, and then develops plans to reduce risk (114). FEMA funds much of North Dakotas Floodplain Management program in addition to fully funding FEMA CAP and Risk MAP. There are currently completed Risk MAP projects within Bowman and Slope Counties (112,115,116).

North Dakota State Water Commission (NDSWC)

The NDSWC Regulatory Division oversees the state's Floodplain Management Program. The objectives of this program are to perform the responsibilities of the Risk MAP program and FEMAs CAP. The NDSWC participates in programs addressing pre-flood support and management as well as flooding assistance and response. The Regulatory Divisions Floodplain Management program guides floodplain development, reduces future flood damages through sound management, ensures that channels and floodways are free of obstructions, coordinates state assistance for communities, and coordinates federal, state, and local floodplain management activities. (112)

Silver Jackets Program

The Silver Jackets Program was initiated in May 2010 between the NDSWC, North Dakota Division of Emergency Services (NDDES), FEMA Region Vlll, and the Corps St. Paul and Omaha Districts (112). The Program objective is to reduce the risk of flooding and other natural disasters through interagency partnership and coordination. The North Dakota Chapter charter was officially signed in 2013 (117). This program educates and assists communities and counties in maintaining current Hazard Mitigation Plans related to flooding, assists with FEMA's levee recertification requirement or Provisionally Accredited Levee (PAL) program, assists with flood Emergency Operation Plans, and supports communities in flood control and long-term flood mitigation projects through the State Water Commission (SWC) and other state and federal agencies. Outside of community support, the Silver Jackets Program also coordinates state flood-related priorities, coordinates the development of Light Detection and Ranging (LiDAR) data for large scale flood management projects, and improves communication with chartered agencies (112). The Program was initiated in North Dakota in response to the large-scale flooding in 2009. The charter was then updated in 2014 to include the National Weather Service (NWS), US Geological Survey (USGS), ND Geological Survey (NDGS), USFWS, and the Natural Resources Conservation Service (NRCS) (112).

North Dakota Disaster Emergency Services (NDDES), Homeland Security

The NDDES was first initiated with the Civil Defense Act in 1951. In subsequent years State Radio became operational and the NDDES was deemed overseer of the Division of Homeland Security and State Radio Communications. In 1979, with the start of FEMA, the emphasis of the NDDES shifted to natural disaster coordination and statewide communication for nuclear preparedness (118). Due to its history and resources, the NDDES provides critical planning, coordination, operations, and communication for disaster preparation and relief. Before a predicted flood emergency, NDDES staff coordinates resource inventories of federal, state, and local groups across the state. Resource gaps and areas of concern are identified and addressed with local jurisdictions (119).

Flood Prediction

Accurate flood prediction determines state, local, and federal agencies ability to prepare and respond in the event of large-scale flooding. The NDSWC, USGS, and the NWS contribute to flood prediction and mapping. Data collected in the summer and early fall of 2010 by these agencies predicted large state-wide floods. This provided extra time for preparation to begin in the fall of 2010 for the upcoming 2011 spring floods. (119)

Flood Response

In the event of state-wide flooding, the State Emergency Operations Center tracks the severity of flooding across the state. At full activation, representatives from FEMA, Corps, NDSWC, NWS, North Dakota National Guard (NDNG), North Dakota Department of Transportation (NDDOT), North Dakota Highway Patrol (NDHP), NDDH, and North Dakota Department of Agriculture's Division of Animal Health are staffed at the emergency center to coordinate response and relief across the state. (119)

In the early stages of flooding communities begin sandbagging operations and local jurisdictions may request assistance from NDNG and the Corps for direct and technical assistance and constructing levees. As flooding increases the NDNG deploys Quick Reaction Forces, traffic control, and dike patrols; NDSWC and NDDOT deploy flood response; the Corps places dikes in optimal locations to reduce flood damage; and other state agencies and counties assist where available with additional resources and materials. (119)

Drought

Drought is characterized by low precipitation levels and higher than normal temperatures and affects water levels, vegetation, crops, wildlife, livestock, domestic and industrial water supply. Prolonged drought causes economic strain on agriculture, food processing, energy development, oil and gas production, tourism/recreation, and other industries related to water. Because drought tends to occur on a large scale, during a drought the entire state may experience the effects. (120)

How drought influences agriculture depends on many environmental factors including the amount of moisture stored in the soil, temperature, humidity, wind, and time of year. Farmers and ranchers are usually the first to feel the pressure from a drought; over time this pressure translates to loss of income, increased indebtedness, and bankruptcy. Drought can cause regional instability due to increases in unemployment and economic disruption. Additional issues that state and local jurisdictions can face include rising prices, food shortages, foreign trade losses, increased payment to the agriculture sector and public health problems. Environmentally, drought can cause increased wind erosion and water erosion when a rain event does occur, this can lead to increased sediment in waterways; stagnant pools from reduced water flows and increased heat can increase insect and algal bloom precedence; reduced water flows can negatively impact the chemical quality of rivers and lakes; drought can also increase rural grassland fires. (120)

Precipitation averages 12.8 inches in Bowman County, predominantly occurring April through September. Because a majority of precipitation occurs in the early spring months, droughts during this time cause reduced vegetation growth early in the growing season and result in livestock forage shortages across the region. (120,121)

The North Dakota Multi-Hazard Mitigation Plan

The North Dakota Multi-Hazard Mitigation Plan was originally implemented in 1989 and is a comprehensive report, designed to plan and designate responsibilities for natural disaster mitigation, developed through the coordination of federal, state, and local agencies. The report addresses previously existing programs and coordinates efforts between agencies. The multi-hazard mitigation plan is updated after each disaster as needed, and at least every three years (120). The plan was last updated in 2014. The North Dakota Multi-Hazard Mitigation Plan states the major components and elements used to develop this plan are to:

- Identify the types of natural and human-caused hazards that affect the state and develop a brief history for each.
- Determine the present and future risk and vulnerability of North Dakota citizens to these hazards.
- Determine our present capability to perform hazard mitigation at the local, tribal, state, and federal levels.
- Establish and prioritize the major hazard mitigation issues that should be addressed.
- Determine mitigation measures and strategies for addressing and reducing the state's vulnerability to present and future hazards.
- Outline a system for managing and improving mitigation programs at the state level. (120)

The North Dakota Multi-Hazard Mitigation Plan outlines the ND Drought Task Force and agency duties. The NDDES, NDSWC, and Department of Agriculture are responsible for "supporting practices that reduce drought losses and impacts," while the North Dakota Forest Service is responsible for "reducing the vulnerability of homes and business from approach wildland fires." The ND Drought Task Force are to coordinate with the North Dakota Dept. of Agriculture, NDDES, SWC, NWS, and existing state and federal budgets/programs to implement and initiate programs and strategies to relieve water shortages, share and relocate feed stocks, and assist vulnerable populations (120). Similarly, Bowman and Slope Counties have approved a Multi-Hazard Mitigation Plan, which was updated in 2018 (110).

Drought Risk for Bowman and Slope County

The 2007 market value of agricultural products in Bowman County was approximately $77,682,000. Between the years 2003 and 2012, drought related expenses were approximately $22,769,000 extrapolated in crop damages and $20,265,000 paid-out in crop insurance within Bowman County (122). The North Dakota Multi-Hazard Mitigation Plan ranks Bowman County as having "moderate-high" overall agricultural vulnerability to drought (123). The Drought Agricultural Vulnerability Analysis evaluates factors including "Annualized Estimated Crop Damages" per county (120).

The 2007 market value of agricultural products in Slope County was approximately $47,645,000. Between the years 2003 and 2012, drought related expenses were approximately $33,862,000 extrapolated in crop damages and $30,173,000 paid-out in crop insurance within Slope County (122). The North Dakota Multi-Hazard Mitigation Plan ranks Slope County as having "high" overall agricultural vulnerability to drought (123). The Drought Agricultural Vulnerability Analysis evaluates factors including "Annualized Estimated Crop Damages" per county (120).

Drought Response Resources

In the event of a drought there are multiple agencies that offer assistance programs to farmers and ranchers to mitigate the earliest impacts of drought on communities and the economy.

North Dakota State Water Commission

The North Dakota State Water Commission (NDSWC) can activate the Drought Disaster Livestock Water Supply Project Assistance Program (124). This cost-share program financially assists producers with the development of new water wells, new rural water system connections, new pipeline extensions and associated pasture taps as well as labor, materials, and equipment for new water supply projects. To qualify for this state program the livestock operation must be located in a county that has been deemed a "drought disaster county" at the activation of the program or in a proclamation adding counties to the program during the drought. This program was most recently activated by the NDSWC in June of 2017

(125).

North Dakota Department of Agriculture

The North Dakota Department of Agriculture (NDDA) has multiple programs including Hay Transportation Assistance and Cost-Share and a Drought Hotline Map (126). The Hay Transportation Program is designed to help offset some of the additional cost to producers incurred during emergency hay transportation. From June to November in 2017 producers applied for $4.1 million in hay transportation assistance. The state approved $1.5 million for this program; producers received about 36 percent of the funding they qualified for (127). The Drought Hotline Map was an interactive map, available during the 2017 drought, that provided an interface to locate and communicate with producers selling/donating hay, land owners willing to rent/donate pasture land, and people available to haul hay across 33 states and two Canadian provinces (128). Hay Lottery Drawings for donated hay are also instrumental to many producers impacted by drought. In the 2017 drought, several lottery drawings occurred, one coordinated between the NDDA and North Dakota State University donated hay to twelve producers and received more than 1,300 applications (129).

US Department of Agriculture Farm Service Agency

In emergency drought situations the USDA may open Conservation Reserve Program (CRP) acres for grazing and haying. The application of opened grazing has varied from only a few counties up to multiple states (130). The counties opened for 2017 emergency grazing included the Dakota's and sections of Montana, Wyoming, Nebraska, and Minnesota (130,131) (Figure 22). The USDA Farm Service Agency also has many disaster relief programs that are available to ranchers and farmers during drought. These programs include: Emergency Assistance for Livestock, Honeybees and Farm-Raised Fish Program [applicable to water transportation]; Emergency Loan Program; Livestock Forage Disaster Program; Noninsured Crop Disaster Program and the Tree Assistance Program (132).

In May 2018 legislation was introduced (Improved Soil Moisture and Precipitation Monitoring Act of 2018, S.2936) to provide tools and information to USDA to improve the accuracy of the Drought Monitoring program. The program has faced criticism for a lack of site-specific data to document local drought conditions. The S.2936 was read twice by the 115th Congress and referred to the Committee on Energy and Natural Resources. No further action has been taken. (133)

Figure 31. Construction of the north side of the spillway of the Bowman-Haley Dam.

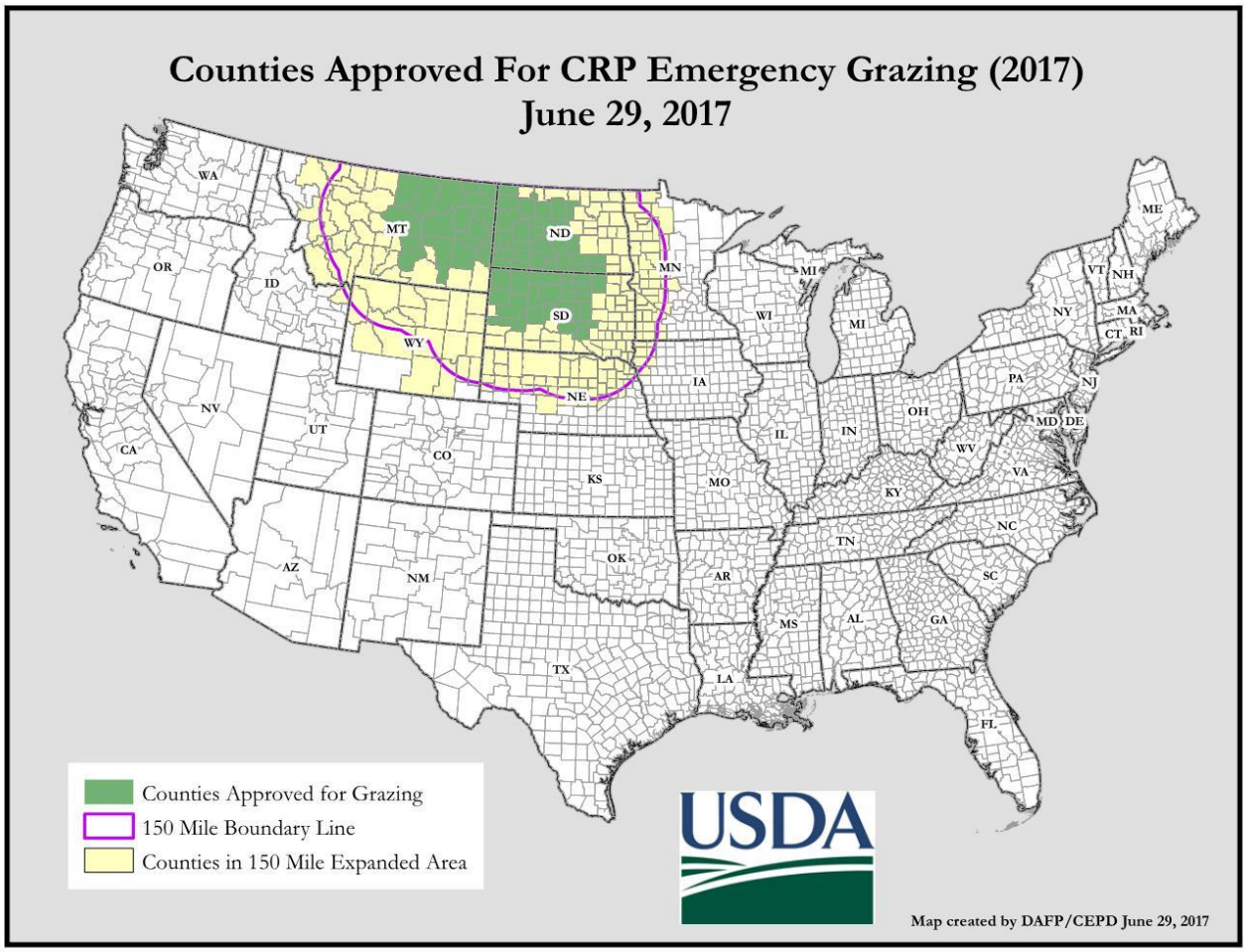

Figure 32. Counties approved for emergency CRP grazing in 2017 (134).

9.3 RIPARIAN LANDS

Riparian ecosystems make up roughly 2% of the landscape in North Dakota. Riparian ecosystems are the transitional areas between the uplands and areas where water is present such as streams, lakes, or rivers (135). Riparian ecosystems in North Dakota are generally comprised of a variety of trees, shrubs, grasses, and forbs. The woodlands of North Dakota are mostly contained within riparian ecosystems (136). Although these areas are small they are important to a variety of wildlife species and vital to stream health (137).

The Little Missouri River runs through western Bowman and Slope Counties. The Cannonball Rivers run through eastern Slope County while the North Fork Grand River runs through Bowman County. These river systems along with their tributaries account for much of the riparian area in these areas.

The North Dakota Riparian Conservation Reserve Enhancement Program (CREP) assists landowners with enrollment in CRP for 10-15 year contracts. In this program, participants remove cropland from agriculture voluntarily and convert the land into a riparian buffer or filter strip with native grasses and forbs. This conversion will assist in improving water quality, reducing soil erosion, reducing the amount of sediment, phosphorous and other pollutants entering waterways and will help to improve pollinator and other wildlife habitat. (138)

Figure 33. Riparian area along the Little Missouri River in Slope County in 2017.

Wetlands

North Dakota regulates wetlands primarily through §401 water quality certification under the Clean Water Act. The North Dakota Department of Health's Division of Water Quality is the state's permitting agency and is developing a bio assessment program with the goal to develop wetland-specific state water quality standards. The Office of State Engineer oversees permitting for any drainage of basin that has a drainage area exceeding 80 acres. State and federal agencies coordinate regularly to discuss §404 permit applications that involve impacts to North Dakota's aquatic resources. (139)

Bureau of Land Management

The BLM is required to manage riparian-wetland areas in Proper Functioning Condition (PFC). PFC is the minimum state of resilience needed to withstand moderate flooding and make progress toward a desired condition that supports fish habitat, water quality, and wildlife needs (140). Within the BLM lands of Bowman County there are approximately 40 reservoirs. In the Big Gumbo Management Area, no freshwater aquifers are known to exist. Water sources on BLM lands include isolated spring and seeps and some intermittent and perennial streams. (141)

National Wildlife Refuges

The Stewart Lake National Wildlife Refuge is approximately 2,230 acres and provides riparian and wetland habitat for many bird species in Slope County (Figure 1). The lake is the largest wetland on the refuge and is surrounded by native grasslands, tame grasses, and rock outcroppings. (54)

The White Lake National Wildlife Refuge, in Slope County (Figure 1), wetlands are among some of the few natural wetlands in this area. Wetlands are surrounded by rolling mixed-grass prairie. (53)

9.4 WATER PIPELINES

North Dakota Legislation dictates that any water project proposed to the NDSWC must be deemed meritorious and feasible for approval. Legislation defines "meritorious and feasible" in NDCC § 61-21.1-05 as meeting the criteria that:

- The benefit of the water project must exceed all costs of the water project, or be beneficial for water conservation, fish and wildlife, and recreational use.
- The water project must be designed, engineered, surveyed, and constructed in a safe manner using existing proven knowledge and techniques.
- All governmental permits and water rights and private water rights or permissions required to complete the water project must be obtained. (NDCC § 61-21.1-05, (140))(NDCC § 61-21.1-05, (140))

Several water supply projects have been approved by the NDSWC including the Northwest Area Water Supply Project, Red River Valley Water Supply Project, and the Southwest Pipeline project. In all three approvals NDSWC determined that these areas lacked a dependable, long-term supply of water necessary for the "protection of health, property, and enterprises and for the promotion of prosperity and the general welfare of the people." (NDCC § 61-24.7, § 61-24.6, § 61-24.3) (140)

Southwest Pipeline Project

The Southwest Pipeline Project is the largest regional, multi-county, rural water project in North Dakota (Figure 23). Currently the pipeline supplies water to 58,000 people, including 33 communities and over 6,300 rural locations, and the project is still under construction (141). Construction of this pipeline is authorized by NDCC § 61-24.5. Section 61-24.3 states that the pipeline is a necessity to provide supplemental water resources to the area of North Dakota south and west of the Missouri River. The NDSWC has been developing the project since construction began in 1986.

Southwest Water Authority (SWA) is charged with the construction and operation of the pipeline. At the end of 2017, the Dickinson Water treatment plant and bid on the Second Davis Buttes Tank were to be completed. The bid on the Supplementary Intak Pump Station Building is to be completed by spring of 2018 (112). The pipeline is going to supply water to much of southwest North Dakota and enters the northeast corner of Bowman County (143,144).

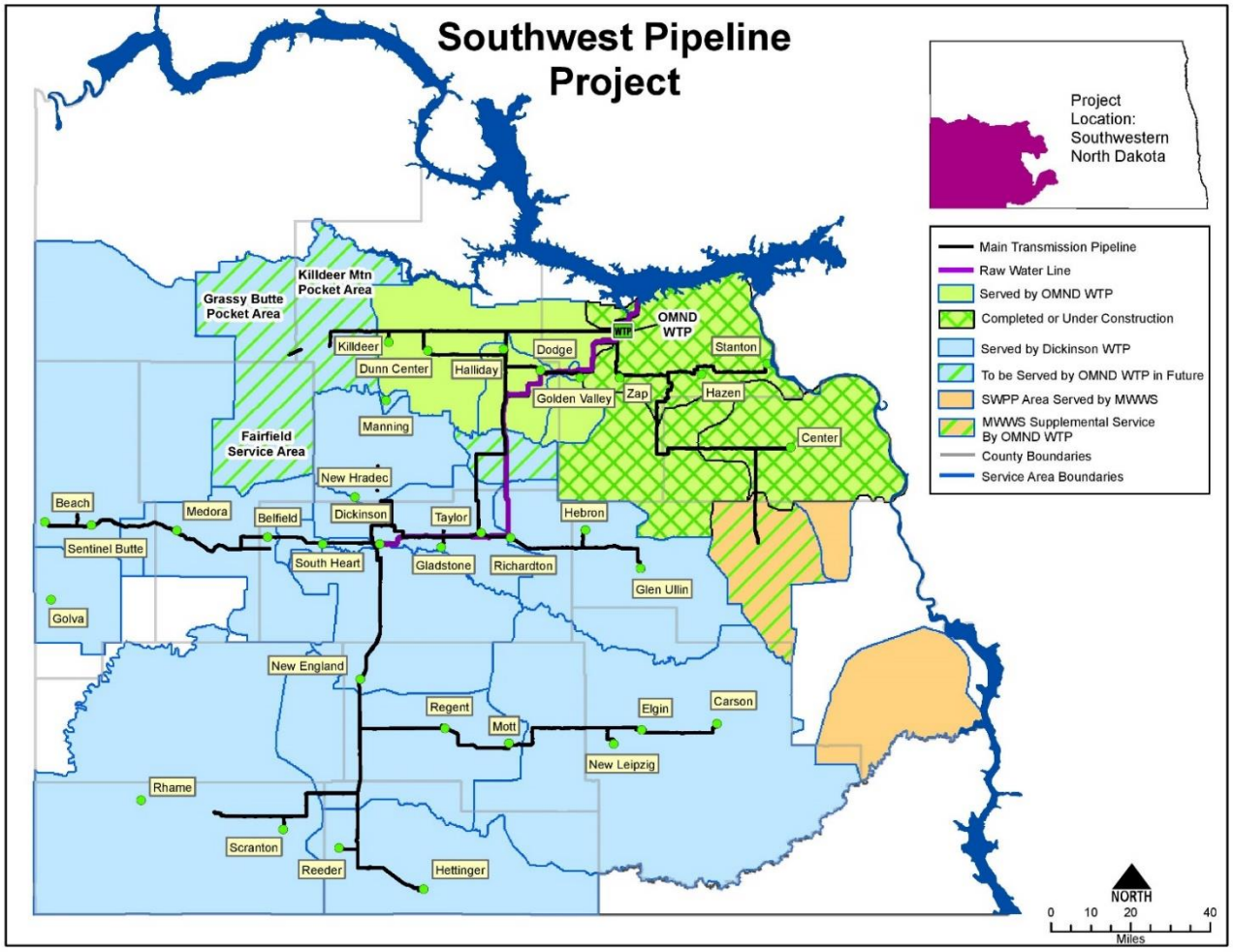

Figure 34. Southwest Pipeline Project location (144).

9.4.1 POLICY STATEMENTS

i. Support access to and expansion of the Southwest Water Pipeline for Bowman and Slope County residents.

ii. Support increased funding and installation of additional monitoring locations for the USDA Drought Monitor program.

iii. Support submission of locally-gathered data (including photos) to support accurate drought mapping efforts.

iv. Oppose placing water rights in the name of any state or federal agency when the water right is applied for and proved upon by a private individual or corporation, or as the condition of any permit.

v. Manage riparian areas damaged by non-native species (i.e. salt cedar) to decrease the impact of these species on the watershed, including water quality and to restore the areas to a proper functioning condition.

vi. Manage watersheds in a manner that native species (i.e. prairie dogs) cannot cause soil erosion and environmental degradation.

vii. BSSCD and Counties shall participate in all Clean Water Act 303(d) listing/designation processes.

viii. BSSCD and the Counties shall participate in any proposed changes to federal rulemaking on confined feeding operations.

ix. Support voluntary projects that improve water quality and quantity and increase the dependability of the water supply will be considered for support by the BSSCD and Counties.

x. Ensure any recovery plan, habitat management plan, critical habitat designation or any other plan proposing an “in stream flow” requirement adequately considers local existing and anticipated future water uses, local custom and culture, local economic and individual needs and is consistent with North Dakota water laws.

xi. Prioritize locally-led efforts to monitor and improve water quality, and where feasible complete in conjunction with existing state and federal agencies with the same mandate.

xii. Require baseline water quality sampling and cataloguing of all collected data for wells (including injection wells) drilled on federal lands.

xiii. Use the North Dakota Constitution and North Dakota statutes as the legal basis for the acquisition of water rights and water use in Bowman and Slope Counties.

xiv. Protect privately-held water rights from federal encroachment and/or coerced acquisition.

xv. Consult BSSCD and the Counties regarding federal land management decisions for their potential impact on water quality, yields and timing of those yields; impacts on facilities such as dams, reservoirs, delivery systems, or monitoring facilities; and any other water-related proposal.

xvi. Oppose any action, or lack of action or permitted use that results in a significant or long- term decrease in water quality or quantity.

xvii. Implement land use improvements and practices which promote healthy drainages and watersheds.

Figure 35. Dynamited stock pond west of Bowman.

10 SOILS AND VEGETATION

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 (145). 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 anthropogenic land disturbance and wildfire can influence soil quality. Soil issues arising from both anthropogenic and natural causes include erosion, drainage, invasive species, soil compaction, salination, and loss of vegetation. (145)

The vegetation types of Bowman and Slope Counties are diverse and provide for an abundance of plant species and wildlife habitats. Most of the vegetation types within the county are the mixed prairie and badlands. Along with these native landscapes, Bowman and Slope Counties also have areas of converted agriculture that have been re-planted to native grasses, in some cases used as hay land. (137)

10.1 MAJOR LAND RESOURCE AREAS AND ECOLOGICAL SITE DESCRIPTIONS

Major Land Resource Areas (MLRA) are larger geographically associated land resources units. They are large areas defined, broadly, by the type of bedrock, soil, land slope, precipitation, soil fertility, and salinity present (146). Within the MRLAs are Ecological Sites. An "ecological site" is a distinctive kind of land with specific soil and physical characteristics which produce distinctive kinds and amounts of vegetation, and that uniquely respond to management actions and natural disturbances. Ecological site classification catalogues these sites according to their geomorphology, climate, soil, hydrology, as well as its plant community and their interaction. (147)

An Ecological Site Description (ESD) documents the specific type and amount of vegetation and other data (soils, hydrology, ecology, climate, management, etc.) relevant to a site; this allows land managers to document its present condition, to monitor health, and track any future changes (147). ESDs are repositories of information regarding 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 (147).

The NRCS and North Dakota State University published the Ecological Sites of North Dakota in January of 2012. Eight MRLAs are identified in North Dakota (Figure 24) (148). The eastern portion of Bowman County lies in the Rolling Soft Shale Plains (MLRA 54) (148). The western portion of Bowman County is comprised of three MRLAs identified as the Pierre Shale Plains, Northern Part (60B), Northern Rolling High Plains, Eastern Part (58D), and Northern Rolling High Plains, Northeastern Part (58C) (146). The eastern portion of Slope County lies in the Rolling Soft Shale Plains (MLRA 54) (148). The western portion of Slope County lies in the Northern Rolling High Plains, Eastern Part (58D) and the Northern Rolling High Plains, Northeastern Part (58C) (146).

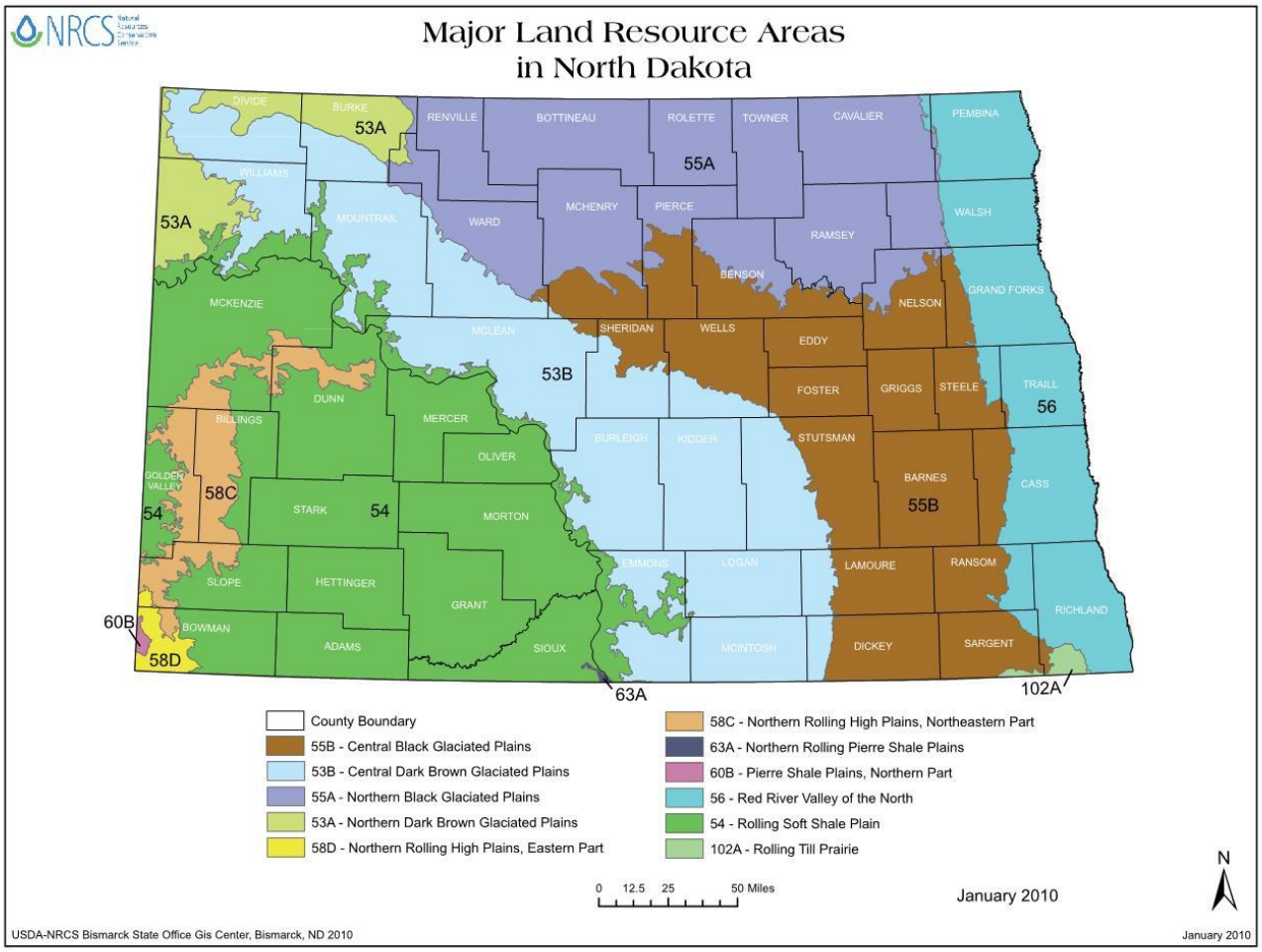

Figure 36. Major Land Resources Areas in North Dakota. (149).

10.2 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. 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. 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 (150).

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 USDA NRCS and are available online through Web Soil Survey (151). The soil survey of Bowman County was published in 1965 with major field work done between 1963 and 1966 (150). The soil survey of Slope County was published in 1978 with the major field work done between 1967 and 1973 (152).

10.3 Noxious Weeds and Invasive Species

Federal

The Federal Noxious Weed Act requires that each federal agency shall (1) designate an office or person to develop and coordinate management of undesirable plants and noxious weeds on the federal lands under its jurisdiction; (2) establish and adequately fund an undesirable plant management program; (3) complete cooperative agreements with each State regarding management of undesirable plants on federal lands and (4) establish an integrated management system to manage for undesirable plants targeted by the cooperative agreements with each State. 7 U.S.C. § 2814(a). The federal agency development and implementation of a cooperative agreement with the appropriate state governmental agency pursuant to state law is mandatory (assuming that there is agreement from the State management agency).

State

Weed control is managed at both a local and state level in North Dakota. The initial responsibility of weed control is on private individuals. N.D.C.C. § 4.1-47-02 (requiring each person "do all things necessary and proper to control the spread of noxious weeds). Responsibility also falls to local counties and municipalities. The North Dakota Commissioner of Agriculture is also responsible for controlling and eradicating noxious weeds in the state. Finally, North Dakota statute also requires both state and federal agencies to control noxious weeds on public lands held by the agencies.

Counties and Municipalities

By statute, each county in North Dakota must establish a county weed board. *Id.* at § 4.1-47-06(a). Each county weed board has the power to expend funds from all available sources if it determines that the noxious weed infestation on certain land is so severe that control efforts would place an extreme financial burden on the landowner. *Id.* at § 4.1-47-08(1). The funds available for noxious weed control include proceeds from the county general fund, or from proceeds collected from a special tax levy authorized by the board of county commissioners. *Id.* at § 4.1-47-14. The commission also has the power to employ workers to assist in noxious weed control efforts. *Id* at § 4.1-47-08(2). Finally, the commission has the power to designate certain weeds not included on the state's list of noxious weeds if the board consults with North Dakota State University's Extension Services and the designation is approved by the Commissioner of Agriculture. *Id.* at § 4.1-47-10(1). Further, each county weed board has several statutory duties. Each must implement a program to control noxious weeds, *id.* at § 4.1-47-09(1), and control noxious weeds along county and township roads, *id.* at § 4.1-47-09(2). The commission must also employ weed control officers. *Id.* at § 4.1-47-09(8).

County weed officers may enter any land to enforce the provisions of the statute, without being subject to any action for trespass or damages, so long as the officer uses reasonable care. *Id.* at § 4.1-47-23. The county weed officers have several duties. One of those duties includes providing notice to landowners to remove noxious weeds. *Id.* at § 4.1-47-28. Another duty is that a weed officer must remove the noxious weeds and charge the landowner reasonable expenses if the landowner fails to comply with

the notice. *Id.*

Although much of the responsibility of weed control rests with the counties, municipalities with a population greater than three thousand people can elect to create a city weed commission and enjoy the same authority and responsibilities given to the county within their jurisdiction. *Id.* at § 4.1-47-17. If municipality elects to create a noxious weed commission, the county no longer has authority within the municipality. *Id.* at § 4.1-47-07.

Commissioner of Agriculture

The North Dakota Commissioner of Agriculture also has a role in controlling noxious weeds in the state. The main responsibility of the Commissioner is to maintain and update a state noxious weed list. *Id.* at § 4.1-47-04. The Commissioner also must distribute funds from the state's noxious weed control fund. The distributions are extended mainly to city and county weed boards; however, there is a landowner assistance program that must be run locally through the county and city weed boards that uses state funds as well. *Id.* at § 4.1-47-15, 16. The Commissioner also has the ability to declare a quarantine if the Commissioner determines that the quarantine is necessary to prevent the spread of noxious weeds. *Id.* at § 4.1-47-29.

State and Federal Agencies

State and federal agencies also must control the spread of noxious weeds on public lands held by the agencies. By statute, each state agency must control noxious weeds on land within its jurisdiction. *Id.* at § 4.1-47-26. If the agency fails to do so, the local county weed board, with the Commissioner's approval may enter upon the land to control the weeds and be reimbursed by the agency for any expenses incurred in controlling the weeds. *Id.*

Under a recently enacted statute, if a federal agency does not control or eradicate noxious weeds on lands under its jurisdiction, the appropriate weed control office must notify the agency of its failure. *Id*.at § 4.1-01-13). Upon receiving notice, the federal agency must provide a report to the weed control authorities detailing its methods of controlling the noxious weeds and showing cause for why the weeds are not controlled or eradicated. *Id.* The Commissioner may also hold a public hearing to determine the reason of the agency's failure.

As a note, the North Dakota legislature recently redesignated chapter 47 of the North Dakota Century Code and moved the statutes to chapter 24. Thus, for example, § 4.1-47-26 will now be § 4.1-24-26.

North Dakota has identified 13 different species as noxious weeds (153). Bowman County has four listed county noxious weeds: baby's breath (*Gypsophila paniculata*), black henbane (*Hyoscyamus niger*), houndstongue (*Cynoglossum officinale*), and Scotch thistle (*Onopordum acanthium*) (154). Slope County has two listed county noxious weeds: black henbane and houndstongue (154).

- Absinth wormwood (*Artemisia absinthium)*
- Canada thistle *(Cirsium arvense)*
- Dalmatian toadflax (*Linaria genistifolia* spp. *dalmatica)*
- Diffuse knapweed (*Centaurea diffusa)*

- Houndstongue (*Cynoglossum officinale*)
- Leafy spurge (*Euphorbia esula)*
- Musk thistle (*Carduus nutans)*
- Palmer Amaranth (*Amaranthus palmeri*)
- Purple loosestrife (*Lythrum salicaria, Lythrum virgatum,* and all cultivars)
- Russian knapweed (*Centaurea repens)*
- Saltcedar (*Tamarix* spp.)
- Spotted knapweed (*Centaurea maculosa)*
- Yellow toadflax (*Linaria vulgaris)*

Bowman and Slope County Weed Control Boards

The Bowman County Weed Control Board is made up of three members while the Slope County Weed Control Board is made up of five members. Both boards advise their respective County Commissioners on weed management within the county (155).

10.3.1 POLICY STATEMENTS

i. Require BLM, the Corps, USFS and State agencies to meet the weed control requirements of noxious weed law and support the County Weed Boards.

ii. Require management plans, funding and control of noxious weeds per North Dakota State Statute and federal noxious weed control rules on public lands within their jurisdiction.

iii. Require development of a policy regarding adequate notice to all parties responsible for noxious weed control in the area for funding and use of Commissioner of Agriculture funds.

iv. Oppose any habitat enhancement project that do not have a defined and funded weed control and monitoring plan for the anticipated life of the enhancement.

v. Support the federal agencies' development of an environmental analysis to expand weed control options.

vi. Encourage implementation of local Weed Management Plans, including mapping of all noxious weed populations.

vii. Prioritize eradication of listed noxious weeds within Slope and Bowman Counties as identified by the State and local weed management plans and noxious weed lists.

viii. Support monitoring efforts to accurately identify the extent of noxious weed infestations, and the identification of dispersal mechanisms where possible.

ix. Support the prevention of aquatic nuisance species (i.e., zebra mussels, quagga mussels) and other invasive species on all waters within Bowman and Slope Counties and the BSSCD.

x. Educate public land users regarding all possible vectors of weed spread.

xi. Support preparation and compliance with a plan including ensuring adequate funding to control noxious weeds on federal lands.

11 WILDLAND FIRE

Wildland fire hazards are discussed in the Bowman County and Slope County Multi-Hazard Mitigation Plan. Bowman County does not have a county based mutual aid agreement with either USFS or the BLM. There is a mutual aid agreement between Slope County and the USFS. When there is a fire on USFS land, Slope County Fire conducts the initial attack until the USFS arrives. There are mutual aid agreements between the federal agencies and the local fire departments in Rhame and Marmarth. A Master Cooperative Wildland Fire Management and Stafford Act Response Agreement (2017-2021) has been developed between the State of North Dakota and the BLM, USFS, USFWS, the NPS and the Bureau of Indian Affairs for addressing wildland fire management activities.

USFS

In their 2001 plan the USFS set forth several objectives on fire:

- Use prescribed fire and other methods to move landscapes toward desired vegetation composition and structure.
- Suppress all wildfires, natural- and human-caused, using fire management strategies based on aggressive initial attack. Encourage the use of natural barriers and burning out when appropriate.
- Reduce the threat of wildfire to public and private developments by reducing the fuel load to acceptable levels.
- Use grazing and prescribed fire to enhance habitat suitability for wildlife, including prairie dogs.
- Adjust livestock management activities annually, as needed, to take into account the effect of fires.
- Develop an Appropriate Management Response (AMR) for each management area.
- Minimize impacts to paleontological and heritage resources. (33)

BLM

Fires on BLM lands are covered under the Annual Operating Plan (AOP) within the Miles City Division of the Northern Rockies Coordination Group Eastern Zone. This AOP covers activities of the BLM's North Dakota Field Office. This AOP provides guidance for interagency cooperation and coordination in their responses to wildland fire.

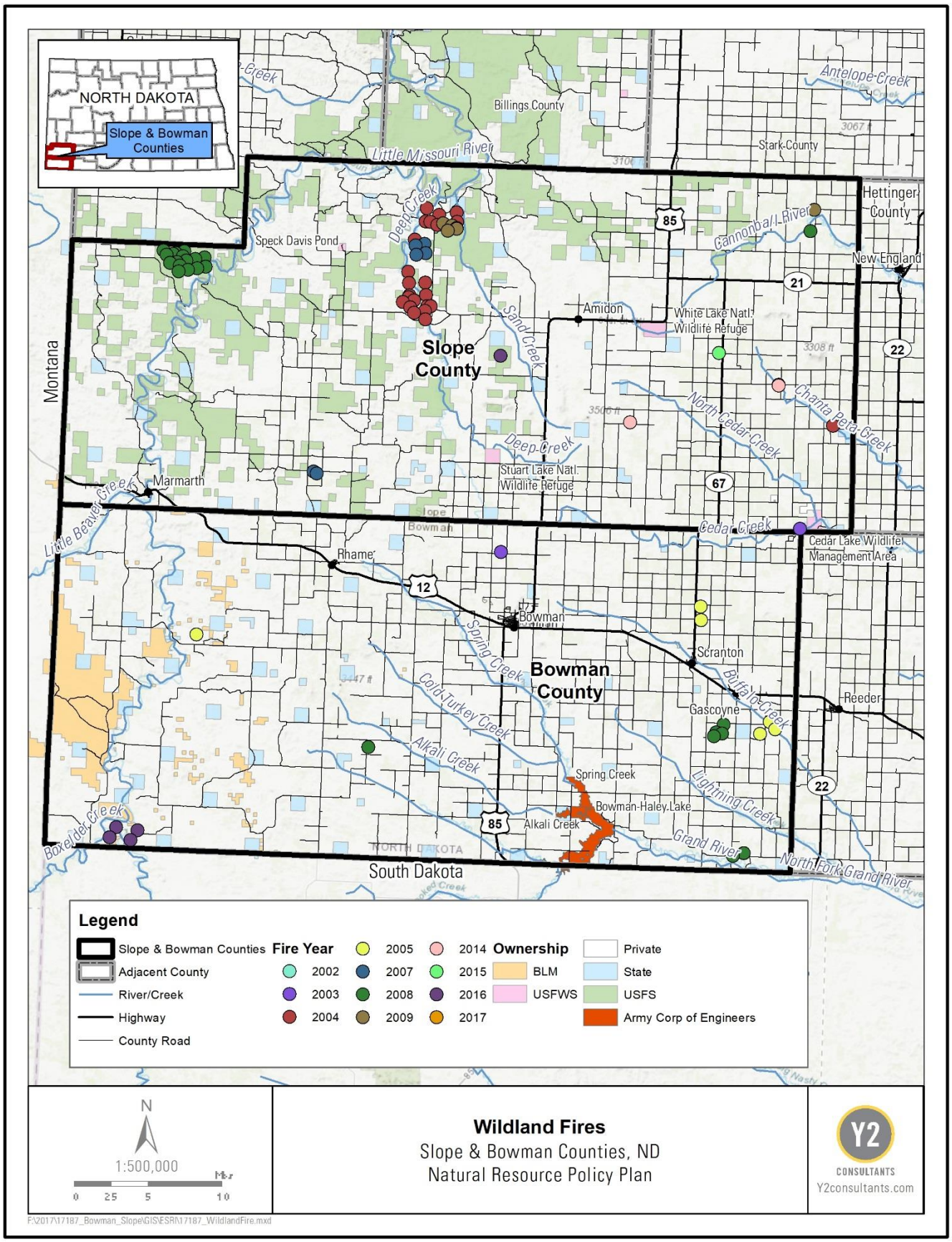

Figure 37. Wildland fires in Bowman and Slope Counties since 2002

11.1 POLICY STATEMENTS

i. Oppose all prescribed burns on federal lands. Instead the preferred method for management of timber on the Forest Service managed lands is logging, thinning, chaining and increased livestock grazing.

ii. Support the management of non-native and noxious weeds after wildland fire events using tools including (but not limited to) livestock grazing, chemical and other mechanical control that are critical to ecosystem health.

iii. Involve the BSSCD and Counties as cooperating agencies in the Master Good Neighbor Agreement planning process.

iv. Support use of managed livestock grazing as an appropriate management tool for revegetation and fuels reduction for all federal lands.

v. Include the BSSCD and Counties on proposed changes and updates to the Fire Management Plans on federal lands.

vi. Return livestock grazing to pre-fire levels when post-fire monitoring data shows objectives have been met or have been achieved to extent allowed by the site potential. Require use of Credible Data as defined in Section 2.2 of this document and in accordance with Policy Statements in Section 2.2.1.

vii. Develop adaptive management practices for grazing and include in term permits to allow for flexible management practices that will decrease fuel loads on the landscape particularly in areas with heavy grass understory.

viii. Post-fire objectives will be consistent with site potential as defined in approved Desired Future Conditions or Ecological Site Descriptions. Require use of Credible Data as defined in Section 2.2 of this document and in accordance with Policy Statements in Section 2.2.1.

ix. Vacant grazing allotments should be assigned to permittees, at the Grazing Association Boards' discretion, affected by fire or other catastrophic resource concerns out of their control as quickly as possible to minimize the economic disruption to permittees.

x. Support efforts of local fire departments in wildfire suppression activities.

12 SPECIAL DESIGNATION AREAS

12.1 SCENIC VISTAS AND VIEWSHEDS

In the Clean Air Act, Congress declared "…as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Federal Class I areas which impairment results from manmade air pollution" (42 U.S.C. §7491(a)). Wilderness areas greater than 5,000 acres and national parks greater than 6,000 acres that had been established before August 7, 1977 were designated as mandatory Class I areas. These areas are afforded the highest level of air quality protection. (156)

The term visibility, when used in the context of scenic vistas at mandatory Federal Class I areas, refers to the clarity with which distant objects are perceived. Visibility is affected by pollutant concentrations, the viewing angle, relative humidity, cloud characteristics, and other physical factors such as color contrast between objects. Without the effects of manmade air pollution, a natural visual range would be nearly 140 miles (225 km) in western areas and 90 miles (145 km) in eastern areas. (42 U.S.C. §7491) (157)

States are required to establish goals aimed at improving visibility in the mandatory Federal Class I areas and to develop long-term plans for reducing pollutant emissions that contribute to visibility degradation in their State Implementation Plans. They are given flexibility to develop cost-effective strategies for pollution reductions and are encouraged to coordinate through regional planning efforts. (42 U.S.C. §7491)(158)

The Clean Air Act states that federal land managers have "an affirmative responsibility to protect the air quality related values (including visibility) of any such lands within a class I area and to consider, in consultation with the Administrator [of EPA], whether a proposed major emitting facility will have an adverse impact on such values" (158). There are no mandatory Class 1 areas in Bowman and Slope Counties (159).

12.2 POLICY STATEMENTS

i. Oppose any National Monument Designations or creations.
ii. Oppose any and all designation of the Little Missouri River as a Wild and Scenic River.
iii. Land use classifications will not establish areas effectively managed as wilderness areas outside of already-identified Wilderness Areas.
iv. Special land use designations will only be used when they are consistent with surrounding management and contribute to the sound policy of multiple use, economic viability, and community stability.
v. No change in access to water developments, fences, or other infrastructure located within designated wilderness, roadless, or other special status areas will be allowed.
vi. Accurately represent potential wilderness areas by not mapping around existing, known infrastructure such as roads or water tanks.
vii. Require accurate, on-the-ground mapping of roads, fences, rangeland improvements and any other anthropogenic influence in lands under consideration for special designations.

viii. Require recognition of historical access and uses on lands already designated as special areas.

ix. No buffer zones will be established around special designation areas.

x. Viewsheds shall not impact the use of private property.

xi. Viewshed boundary designations should not adversely impact the multiple uses of federal lands.

Figure 38. Little Missouri River in Slope County.

13 WILDLIFE

Wildlife in North Dakota are managed by the North Dakota Game and Fish Department (NDGF). The NDGF was created in 1930 to enforce game and fish laws, which were the primary conservation tools in use at the time. Their mission is to protect, conserve, and enhance fish and wildlife populations and their habitat for sustained public consumptive and nonconsumptive use. An Advisory Board of 8 members acts as liaisons between the Department and the public (160). The essential element of wildlife law going back to the founding of the United States is the public trust doctrine. The public trust doctrine holds that certain natural resources including fish and wildlife are preserved for public use and are not private property. When one purchases land, it does not secure ownership of fish and wildlife. Governments own and must protect and maintain these resources for the public's use. In the United States, despite some federal legislation, wildlife remains primarily the prerogative of the states (39).

The NDGF utilizes a State Wildlife Action Plan, recently updated in 2015, to provide strategy for managing various wildlife groups including mammals, birds, reptiles, amphibians, fish, mussels, and insects. The state plan is built upon eight essential elements, identified by Congress and implemented by the state game agency, with an overall focus on “species of greatest conservation need”. The essential elements are as follows:

- Information on the distribution and abundance of species of wildlife including low and declining populations.
- Descriptions of locations and relative condition of key habitats and community types.
- Problems affecting species and priority research or survey efforts needed.
- Conservation actions needed to conserve the identified species.
- Plans for monitoring species and the effectiveness of conservation actions.
- Plans for reviewing the strategy.
- Coordinating with federal, state, and local agencies and Tribal government on the development and implementation of the strategy; and
- Involve broad public participation.

The species list includes 115 total species including forty-seven birds, two amphibians, nine reptiles, twenty-one mammals, twenty-two fish, ten freshwater mussels, and four insects, each with a specific priority designation based on the essential elements listed above. (66)

The North Dakota State Wildlife Action Plan is habitat based, rather than species focused. This habitat-based approach focuses on the nine primary landscape components of the state. North Dakota’s major habitat types include Tallgrass Prairie; Eastern Mixed-grass Prairie; Mixed-grass Prairie; Western Mixed-grass/Short-grass prairie; Planted or Tame Grassland; Wetlands and Lakes, Rivers, Streams, and Riparian; Badlands; and Upland Forest (66). Habitat based approaches, such as this, are designed to follow the idea of multiple species management. NDGF uses the habitat-based approach to ensure all species are given acknowledgement.

Once a species is identified as deserving a place on the list, funding and existing conservation efforts are evaluated. Funding sources such as ongoing conservation funding, external non-State Wildlife Grant funding, or State Wildlife Grant funding opportunities are evaluated to narrow down which level is assigned. Level 1 are species in decline and receive little or no monetary support for conservation efforts.

In these situations, State Wildlife Grants are obligatory to be used for conservation. Level 1 species have a high conservation priority because of declining status in North Dakota or across their range, or, have a high rate of occurrence in North Dakota constituting their "core" range and are at-risk across their range. Level 2 are species that receive State Wildlife Grant fund if the funding for Level 1 species is sufficient. Level 2 species have a moderate level of conservation priority, or, have a high level of conservation priority but have substantial non-State Wildlife Grant funding available. Most often federally listed species are considered Level 2 designation due to outside funding sources such as the Cooperative Endangered Species Conservation Fund. Level 3 are species that have a moderate level of conservation priority but are believed to be peripheral or non-breeding in North Dakota. (66)

The North Dakota Game and Fish Department updates the Species on the Conservation Priority List in conjunction with the State Wildlife Action Plan. List of species at the writing of this plan are provided in Table 3 and can also be found on North Dakota Game and Fish website (https://gf.nd.gov/wildlife/scp).

North Dakota Species of Conservation Priority		
Level I	**Level II**	**Level III**
Horned Grebe (*Podiceps auritus*)	American White Pelican (*Pelecanus erythrorhynchos*)	Whooping Crane (*Grus americana*)
American Bittern (*Botaurus lentiginosus*)	Northern Pintail (*Anas acuta*)	Red Knot (Rufa) (*Calidris canutus rufa*)
Swainson's Hawk (*Buteo swainsoni*)	Canvasback (*Aythya valisineria*)	Peregrine Falcon (*Falco peregrinus*)
Ferruginous Hawk (*Buteo regalis*)	Lesser Scaup (*Aythya affinis*)	Brewer's Sparrow (*Spizella breweri*)
Greater Sage Grouse (*Centrocercus urophasianus*)	Northern Harrier (*Circus cyaneus*)	McCown's Longspur (*Calcarius mccownii*)
Yellow Rail (*Coturnicops noveboracensis*)	Golden Eagle (*Aquila chrysaetos*)	Smooth Softshell (*Apalone mutica*)
Long-billed Curlew (*Numenius americanus*)	Bald Eagle (*Haliaeetus leucocephalus*)	Spiny Softshell (*Apalone spinifera*)
Marbled Godwit (*Limosa fedoa*)	American Kestrel (*Falco sparverius*)	False Map Turtle (*Graptemys pseudogeographica*)
Wilson's Phalarope (*Phalaropus tricolor*)	Prairie Falcon (*Falco mexicanus*)	Sagebrush Lizard (*Sceloporus graciosus*)
Franklin's Gull (*Leucophaeus pipixcan*)	Sharp-tailed Grouse (*Tympanuchus phasianellus*)	Northern Prairie Skink (*Plestiodon septentrionalis*)
Black Tern (*Chlidonias niger*)	Greater Prairie Chicken (*Tympanuchus cupido*)	Arctic Shrew (*Sorex arcticus*)
Black-billed Cuckoo (*Coccyzus erythropthalmus*)	Piping Plover (*Charadrius melodus*)	Merriam's Shrew (*Sorex merriami*)
Red-headed Woodpecker (*Melanerpes erythrocephalus*)	American Avocet (*Recurvirostra americana*)	Western Small-footed Bat (*Myotis ciliolabrum*)
Sprague's Pipit (*Anthus spragueii*)	Willet (*Tringa semipalmatus*)	Long-eared Bat (*Myotis evotis*)
Grasshopper Sparrow (*Ammodramus savannarum*)	Upland Sandpiper (*Bartramia longicauda*)	Long-legged Bat (*Myotis volans*)
Baird's Sparrow (*Ammodramus bairdii*)	Least Tern (Interior) (*Sterna antillarum athalassos*)	Hispid Pocket Mouse (*Chaetodipus hispidus*)
Nelson's Sparrow (*Ammodramus nelsoni*)	Short-eared Owl (*Asio flammeus*)	Plains Pocket Mouse (*Perognathus flavescens*)
Lark Bunting (*Calamospiza melanocorys*)	Burrowing Owl (*Athene cunicularia*)	Sagebrush Vole (*Lemmiscus curtatus*)
Chestnut-collared Longspur (*Calcarius ornatus*)	Loggerhead Shrike (*Lanius ludovicianus*)	Eastern Spotted Skunk (*Spilogale putorius*)
Canadian Toad (*Anaxyrus hemiophrys*)	Dickcissel (*Spiza americana*)	Gray Fox (*Urocyon cinereoargenteus*)
Plains Spadefoot (*Spea bombifrons*)	Le Conte's Sparrow (*Ammodramus leconteii*)	Chestnut Lamprey (*Ichthyomyzon castaneus*)
Smooth Green Snake (*Opheodrys vernalis*)	Bobolink (*Dolichonyx oryzivorus*)	Silver Lamprey (*Ichthyomyzon unicuspis*)
Plains Hog-nosed Snake (*Heterodon nasicus*)	Western Meadowlark (*Sturnella neglecta*)	Largescale Stoneroller (*Campostoma oligolepis*)
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	Snapping Turtle (*Chelydra serpentina*)	Hornyhead Chub (*Nocomis biguttatus*)
Big Brown Bat (*Eptesicus fuscus*)	Short-horned Lizard (*Phrynosoma hernandesi)*	Pugnose Shiner (*Notropis anogenus*)
Little Brown Bat (*Myotis lucifugus*)	Pygmy Shrew (*Sorex hoyi*)	Blacknose Shiner (*Notropis heterolepis*)
Northern Long-eared Bat (*Myotis septentrionalis*)	Richardson's Ground Squirrel (*Urocitellus richardsonii*)	Carmine Shiner (*Notropis percobromis*)
Black-tailed Prairie Dog (*Cynomys ludovicianus*)	Swift Fox (*Vulpes velox*)	Finescale Dace (*Phoxinus neogaeus*)
Sturgeon Chub (*Marcrhybopsis gelida*)	River Otter (*Lontra canadensis*)	Yellow Bullhead (*Ameiurus natalis*)
Sicklefin Chub (*Marcrhybopsis meeki*)	American Marten (*Martes americana*)	Logperch (*Percina caprodes*)
Northern Pearl Dace (*Margariscus nachtriebi*)	Black-footed Ferret (*Mustella nigripes*)	River Darter (*Percina shumardi*)
Blue Sucker (*Cycleptus elongatus*)	Paddlefish (*Polyodon spathula*)	Mapleleaf (*Quadrula quadrula*)
Creek Heelsplitter (*Lasmigona compressa*)	Pallid Sturgeon (*Scaphirhynchus albus*)	Fragile Papershell (*Leptodea fragilis*)
Pink Papershell (*Potamilus ohiensis*)	Burbot (*Lota lota*)	Deertoe (*Truncilla truncata*)
Monarch Butterfly (*Danaus plexippus*)	Northern Redbelly Dace (*Chrosomus eos*)	Creeper (*Strophitus undulatus*)
Regal Fritillary (*Speyeria idalia*)	Silver Chub (*Marcrhybopsis storeriana*)	
	Flathead Chub (*Platygobio gracilis*)	
	Trout-perch (*Percopsis omiscomaycus*)	
	Threeridge (*Amblema plicata*)	
	Wabash Pigtoe (*Fusconaia flava*)	
	Black Sandshell (*Ligumia recta*)	
	Pink Heelsplitter (*Potamilus alatus*)	
	Dakota Skipper (*Hesperia dacotae*)	
	Poweshiek Skipperling (*Oarisma poweshiek*)	

Table 3. North Dakota Species of Conservation Priority.

US Forest Service

Regulations in 36 CFR 219.19 and 219.20 call for the selection, evaluation, and monitoring of management indicator species and their habitat. Management indicator species may be "plant or animal species and are selected because their population changes are believed to indicate the effects of management activities on other species of selected major biological communities or on water quality" (161). These regulations do not imply that the population dynamics of management indicator species directly represent the population dynamics of other species. Criteria that direct management indicator species consideration include:

- Species is indigenous.
- Species is a year-long resident of the vicinity (non-migratory), or population trends of the species in the local or regional vicinity are closely tied to habitat conditions resulting from land uses on NFS lands in the same area.
- Species is considered a keystone species or habitat specialist.
- Species is sensitive to management activities on NFS lands in the local or regional vicinity. Population trends of the species are assumed to be related to changes in habitat composition, structure, ecological processes, and/or human activities.
- Species is appropriate for the scale that best represents the key issues or management concerns.
- Biologically and economically feasible to monitor populations and habitat of the species at similar spatial scales. Populations are of sufficient size or density to be reasonably detected and monitored. Accepted survey protocols exist. Analysis and interpretation of inventory data should produce meaningful and reliable trend information. Species that require high investment for low returns or suspect results should be avoided.
- Species where the scientific literature supports the assumed limiting factors and habitat associations. (34)

Indicator species identified on the LMNG include:

- Sharp-tailed Grouse (*Tympanuchus phasianellus*)
- Greater Sage Grouse (*Centrocercus urophasianus*)
- Black-tailed Prairie Dog (*Cynomys ludovicianus*) (36)

The USFS also provides a sensitive species list for North Dakota containing 21 species. These species include:

- American Peregrine Falcon (*Falco peregrinus*)
- Baird's Sparrow (*Ammodramus bairdii*
- Bald Eagle (*Haliaeetus leucocephalus*)
- Burrowing Owl (*Athene cunicularia*)
- Greater Prairie Chicken (*Tympanuchus cupido*)
- Greater Sage-Grouse (*Centrocercus urophasianus*)
- Loggerhead Shrike (*Lanius ludovicianus*)
- Long-billed Curlew (*Numenius americanus*)
- Sprague's Pipit (*Anthus spragueii*)
- Black-tailed Prairie Dog (*Cynomys ludovicianus*)
- Bighorn Sheep (*Ovis canadensis*)
- Northern Redbelly Dace (*Chrosomus eos*)

- Arogos Skipper (*Atrytone arogos*)
- Broad-winged Skipper (*Poanes viator*)
- Dakota Skipper (*Hesperia dacotae*)
- Dion Skipper (*Euphyes dion*)
- Mulberry wing (*Poanes Massasoit*)
- Ottoe Skipper (*Hesperia ottoe*)
- Powesheik Skipper (*Oarisma powesheik*)
- Regal Fritillary (*Speyeria idalia*)
- Tawny Crescent (*Phyciodes batesii*) (162)

Bureau of Land Management

Special Status Species are designated by the BLM and include federally listed or proposed for listing as threatened or endangered, candidate species, state protected and sensitive species, and other special-status species including federal and state "species of concern". The BLM designates special-status species where there is credible scientific evidence to document a threat to the continued viability of a species population. Moreover, Special Status Species are typically designated as sensitive by a BLM state director in cooperation with state agencies that are responsible for managing the particular species. State natural heritage programs are typically involved as well, where applicable. Species are usually those that fall in the following criteria:

- Could become endangered in or extirpated from a state or within a significant portion of its distribution;
- Are under status review by the USFWS;
- Are undergoing significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution;
- At federal listed, proposed, candidate, or state-listed status may become necessary;
- Typically have small and widely dispersed populations;
- Inhabit ecological refugia or other specialized or unique habitats; or
- Are state-listed but which may be better conserved through application of the BLM Sensitive Species Status. (163)

13.1 POLICY STATEMENTS

i. Management plans shall be generated to protect the overall health of all natural resources, not specifically managed for one individual species.

ii. Require prompt participation and response from federal agencies when requested by BSSCD and counites for resources concerns, management plans and other sensitive, candidate or listed species.

iii. Management plans will use independent scientific data to generate plans.

iv. Minimize management of "special status" species to decrease single-species management efforts.

v. Create management objectives based on the carrying capacity of the habitat including all multiple use mandates (livestock grazing, mineral extraction, etc.) on federal lands.

vi. Support habitat monitoring efforts and refine available habitat data.

vii. Consultation and coordination will occur with Bowman and Slope Counties, and BSSCD where federal monies or resources are committed for the development of management plans, population

objectives, wildlife introductions (i.e., big horn sheep or pronghorn), or other decisions that may affect the economic viability of the communities within Bowman and Slope Counties, and the BSSCD.

viii. Peer-reviewed science, or those data meeting the agency data specifications, will be used in the management of disease spread between native and domestic species, with consultation and coordination of local government.

ix. All agencies should regularly review indicator species designations and support the designation with credible scientific data. If the credible scientific data no longer supports an indicator species designation, the agency should remove said designation.

14 LIVESTOCK GRAZING

Grazing has been occurring in Bowman and Slope Counties for thousands of years. Prior to domestic livestock grazing, bison roamed these prairies. With the introduction of the horse Native Americans began grazing their stock along with the bison they hunted. Livestock grazing is one of the oldest industries in Bowman and Slope Counties. The early 1880s were the boom period for the range cattle industry on the Great Plains due, in part, to the removal of the last herds of bison and the construction of the Northern Pacific Railway. During this time, ranchers began grazing the Little Missouri region. (164)

Livestock production is an essential component of the economy and lifestyle of Bowman and Slope Counties. It is one of the largest industries. As long as markets for the products that livestock provide exist, there will be ranching in Bowman and Slope Counties. The ranching families not only hold much of the history of the area but also support schools and other public and private entities throughout the county. (165,166)

The Horse Creek Grazing Association operates on the western side of Slope County. As of 2018 the association consists of four members at the time of this report. (167).

The much larger Little Missouri Grazing Association (LMGA) was formed in 1940. Its mission is to aid its members with "conservation, restoration, improvement, development and utilization of natural resources within the area of the Little Missouri in the counties of Slope and Golden Valley…where a grazing area has been acquired." The LMGA operates on private and other non-federal lands to facilitate sound land management. The LMGA's current allotments are comprised of 155,216 acres of National Grasslands, 95,839 acres of private lands, 7,541 acres of North Dakota State lands, and 40 acres of private lands in Montana. There were 123 permits and 59,690 AUM's within the LMGA. There are five districts within the LMGA and each is represented by an elected board member. There are three officers: President, Vice President, and Secretary/Treasurer and a full-time business manager and seasonal range technician. (168).

The LMGA, BSSCD, BLM, NRCS, NDGF, and Bowman and Slope Counties have been proactive in working to protect greater sage-grouse habitat and prevent listing of the species. LMGA began using the NRCS monitoring protocols and working the USFS to collect sage-grouse habitat monitoring points. (169)

Little Missouri National Grasslands Grazing and Range Improvements

All range improvements on USFS lands must be authorized by the agency. The USFS allows both structural (e.g., fencing) and non-structural improvements (e.g., change in management practices). Any requirements for permittee construction or development of range improvements are identified in the grazing permit with credits for improvements (if any) to be allowed toward the annual grazing fee. It is common practice for USFS to furnish materials and the permittee to provide labor for structural

improvements. If significant costs are expected, the permittee can assume responsibility for the improvement (maintenance), but the USFS generally holds title to the improvement. Should the improvement not be adequately maintained, the USFS can take action against the permittee for non-compliance with their grazing permit. Range Betterment Funds are available for planning and building rangeland improvements. (170)

Figure 39. Cattle grazing the Little Missouri Grasslands.

National Wildlife Refuges

The Stewart Lake and White Lake National Wildlife Refuges allow grazing through a permit process applied for by the producer. The areas for grazing change yearly and are dependent on habitat condition, permittee access, water and fence availability. (171)

Bureau of Land Management and Range Improvements

There are no BLM lands in Slope County. As of 1984, Bowman County contained 32,688 acres of BLM lands (4.4% of the county) with 22,164 acres in the Big Gumbo area (47,141). In 1984, there were approximately 9,751 permitted AUMs in North Dakota (141). The 2015 North Dakota Greater Sage-Grouse Approved Resource Management Plan Amendment (ARNPA) indicate that both priority (PHMA) and general (GHMA) habitat management area for sage-grouse exists on the western side of the county. The ARMPA states that livestock grazing will be allowed on all lands identified as suitable including GHMA and PHMA. Areas that contain PHMA are prioritized for monitoring and those areas not meeting Land Health Standards will be prioritized for review of grazing permits/leases. (172)

All range improvements on BLM lands must be authorized by the agency. There are two options for authorization: Cooperative Range Improvement Agreement or a Range Improvement Permit. The Cooperative Range Improvement Agreement identifies how the costs of labor, materials, and maintenance are divided between the agency and the permittee. Range Improvement Funds can be used for labor, materials, and final survey and design of projects to improve rangelands. The Range

Improvement Permit requires the permittee or lessee to provide full funding for construction and maintenance of the improvement. NEPA analysis is not required for normal repair and maintenance of range improvements that are listed on a term grazing permit; permission of the authorized officer is also not required. However, for reconstruction of a range improvement or construction of new improvements, NEPA analysis and a decision by the authorized officer is required. (43 CFR 4120.3-3)(173)

14.1 ESTRAY LIVESTOCK

In North Dakota, "estray" refers to cattle, horses, or mules, whether branded or unbranded whose ownership has not been determined. If an individual discovers an estray on property that he/she owns or controls, a good-faith effort should be made to take possession of the estray, determine its ownership, and facilitate its return. If unable to determine ownership, the individual should notify the sheriff or chief brand inspector of the county in which the estray was found or deliver the estray to a livestock auction market in or out-of-state that received brand inspection and notify that the animal appears to be an estray. Reimbursement from those who claim the estray follows the reimbursement schedule developed by the North Dakota stockmen's association. (174)

14.1.1 POLICY STATEMENTS

i. Support management plans generated for the overall health of all natural resources, not specifically managed for one individual species.

ii. Support livestock grazing on all federally owned and operated lands as an integral part of habitat management.

iii. Oppose grass-banking and long-term rest on any federal lands.

iv. Support opening of CRP lands for grazing and haying in times of drought or economic need.

v. Require site-specific review to determine the appropriate grazing suspension period post-fire.

vi. Require site-specific economic analysis of suspending grazing for allotment closures.

vii. Support FSA expanding their policy for emergency grazing to accommodate "other emergencies" beyond drought and fire as allowed by statute.

viii. Oppose permanent retirement of any grazing allotment. Any closure or retirement of an allotment will be based upon a consideration of the economic impacts and custom and culture of the communities within Bowman and Slope Counties and the BSSCD.

ix. When a grazing allotment is in non-use, it should be made readily available for other permittees to utilize. If there is a resource concern on that allotment, the grazing plan should acknowledge the concern and utilize the livestock as a tool to help in recovery. If the allotment is in non-use and the range is in good condition, the grazing plan must fully utilize all available grazing AUMs.

x. Create adaptive grazing programs that allow permittees to respond to changes in forage availability. Adaptive management is a process that uses focused monitoring information to determine if management changes are needed, and if so, what to change and to what degree change needs to occur.

xi. Oppose the reduction of domestic livestock grazing AUMs to provide additional forage for another species or strictly for conservation purposes.

xii. AUMs on federal lands should not be reduced unless a documented resource condition indicates a need for temporary reduction to improve condition. Any reduction should include a plan to reinstate AUMs when the resource condition has been addressed.

xiii. Vacant grazing allotments should be assigned to permittees, with the approval of the Grazing

Association, affected by drought, fire, or other catastrophic resource concerns as quickly as possible to minimize the economic disruption to permittees.

xiv. Timely processing of all term grazing permits renewals, including actions proposed by the permittee, is necessary.

xv. Support the use of site-specific soils and range site data to create appropriate objectives for livestock and wildlife. The US Forest Service should use the Ecological Site Descriptions developed by the NRCS and NDSU rather than devoting time to developing their own Ecological Site Descriptions.

xvi. Drill-seeding can be one of the most effective methods of establishment for rangeland restoration or improvement efforts and should be utilized wherever possible. Native seed mixes consistent with the Ecological Site Description and free of noxious weeds and invasive species are encouraged for all reclamation efforts and must be beneficial to both livestock and wildlife and developed on a site-specific basis thorough a collaborative effort with the BSSCD and permittee.

xvii. Develop and implement rangeland monitoring programs for all allotments using monitoring methods and return intervals agreed to by the permittee, local and federal agencies, and Grazing Associations to ensure proper collection and analysis of data.

xviii. Support the review and incorporation of data collected by a permittee, or qualified team or third-party, for use in management decisions.

xix. Support consultation, cooperation and collaborative efforts to ensure that overall rangeland health is being maintained through monitoring and implementation of well-designed livestock grazing management plans on all public land allotments. The federal agencies should use range improvement and noxious weed control funds on grazing allotments in a timely manner.

xx. Encourage development of additional rangeland improvements when the opportunity presents itself.

xxi. Term permit renewals should reinstate suspended AUMs.

xxii. Support the use of native reclamation seed mixes, and post-seeding management to ensure success of the seeding.

xxiii. Support involvement of the livestock operator and when applicable the Grazing Association, in developing post-reclamation management plans.

15 ENERGY PRODUCTION

The development and production of extractable resources are vital to the custom, culture, social, and economic stability of Bowman and Slope Counties. Because of the nature of mineral and land ownership within the Counties, many stakeholders have vested interest in these developments. Mineral resource development plays a crucial role in the existence and growth of many rural and western states and communities.

Federal Oil and Gas Regulation and Framework

The Mineral Leasing Act of 1920, and the Mineral Leasing Act for Acquired Lands of 1947, give the BLM responsibility for oil and gas leasing activities on BLM, National Forest, and other federal lands, as well as private lands where mineral rights have been retained by the federal government (175). The BLM is a multi-use agency and must balance the development of mineral resources in the best interests of the country as well as managing for uses such as livestock grazing, recreation, development and conservation of wildlife habitat (176). The USFS regulates all surface disturbing activities on USFS land (177). The USFS is the primary agency to apply stipulations on a lease and conduct environmental analysis of leasing and permitting activities on USFS lands. (176)

BLM-administered public lands and resources are managed in accordance with approved RMPs (178). BLM field offices prepare RMPs for lands within their boundaries. An RMP is a blueprint explaining how the BLM will manage areas of public land over a certain period (generally 10-15 years). RMPs contain decisions to guide future management actions and subsequent site-specific implementation decisions. RMPs establish goals and objectives for resource management, desired outcomes, and the measures needed to achieve these goals and objectives (management actions and allowable uses)(179).

The USFS works with the BLM to administer exploration and development of leasable minerals. The Federal Onshore Oil and Gas Leasing Reform Act was enacted by Congress in 1987. This amendment to the Mineral Leasing Act granted the USFS the authority to make decisions and implement regulations concerning the leasing of public domain minerals on USFS lands containing oil and gas. The BLM administers leases, but the USFS has more direct involvement in the leasing process for lands under its jurisdiction. The Act changed the analysis process from responsive to proactive. The Act also established a requirement that all public lands that are available for oil and gas leasing be offered first by competitive leasing. The implementing regulations for the USFS, 36 CFR 228, were enacted in 1990 and the related BLM regulations at 43 CFR 3100, in 1988 (37).

Oil and Gas Bearing Formations

The primary oil and gas bearing unit in North Dakota is the Bakken and Three Forks Formations in the Williston Basin. The Williston Basin encompasses parts of Montana, South Dakota, North Dakota, Saskatchewan and Manitoba (174). The Red River and Mission Canyon formations are noted as producing formations within the area. The North Dakota Geological Survey states "..the Red River Formation is the second most important hydrocarbon producing horizon in

North Dakota.." (174). In 2008, the USGS completed an assessment of the Bakken Formation "Using a geology-based assessment methodology, the USGS estimated mean undiscovered volume of 3.65 billion barrels of oil, 1.85 trillion cubic feet of associated/dissolved natural gas, and 148 million barrels of natural gas liquids in the Bakken Formation of the Williston Basin Province, Montana and North Dakota" (180).

Statistics

The BLM compiles and maintains oil and gas statistics on federal oil and gas leasing. According the BLM statistic website there were 1,837 federal oil and gas leases in North Dakota in 2016 of which 1,324 were producing leases. (181)

The North Dakota Oil and Gas Division (NDOGD) tracks active drill rigs on a weekly basis. As of March 20, 2018, there were 58 active rigs in North Dakota, none of which are in Bowman or Slope Counties (182). NDOGD tracks a variety of statistics including daily oil production, monthly oil production by county and monthly statistical updates from 1980 to present. This information can be found at https://www.dmr.nd.gov/oilgas/stats/statisticsvw.asp.

At the time of this report the 2017 Oil in North Dakota Production Statistics Report was not available. The following information was provided by the 2016 Oil in North Dakota Production Statistics Report. Bowman County was ranked 6th of the Top 10 Oil Producing Counties in North Dakota for 2016 with 6,792,228 barrels of oil (183).

Office of Natural Resources Revenue

While BLM is responsible for onshore leasing, and related operational functions such as issuing drilling permits, production verification, diligence, onsite inspections, and enforcement, the Office of Natural Resources Revenue (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 back to the states, American Indian Tribes and individuals, various special funds and the US Treasury. ONRR is in the Department of Interior. In performing this fiduciary role, ONRR collects an average of over ten billion dollars in annual revenue – it is one of the federal government's biggest sources of non-tax revenue (184). Over $6 million in revenue was collected in Bowman County, and over $500,000 in Slope County, in 2017 (Table 3).

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 leased land area or play starts producing, at which time the lease holder will pay royalties. A cash payment is made to the U.S. government by the successful bidder of a lease and 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 and then disbursed back out by ONRR according to a variety of laws. The Mineral Leasing Act 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

Collected federal mineral revenue from Bowman and Slope Counties in the State of North Dakota (201)		
	Bowman	Slope
2017	$6,200,063.00	$539,857.00
2016:	$5,033,548.00	$446,830.00
2015:	$7,407,900.00	$624,368.00
2014:	$15,278,270.00	$2,646,524.00
2013:	$16,103,015.00	$1,640,070.00
2012:	$17,684,002.00	$4,763,149.00

ONNR disbursements to North Dakota of their share of mineral revenue collected from public lands ONNR disbursements to North Dakota of their share of mineral revenue collected from public lands (50)	
2017	$39,922,536.16
2016	$32,521,124.09
2015	$47,164,776.69
2014	$68,413,590.60
2013	$90,290,490.48
2012	$64,501,003.82

Table 4. Bowman and Slope County collected federal mineral revenue and ONNR disbursements.

Other statistics about production include:

- 7,221,834 MCF (1000 cubic feet) of gas were produced in Bowman and Slope Counties between 2012 and 2016 (49).
- 108,253,420 BBL (Barrels) of oil were produced in Bowman and Slope Counties between 2012 and 2016 (49).

In North Dakota, extractive industries accounted for $4,957,000,000 or 9.3% of gross domestic product (GDP) in 2016, and jobs in the extractive industries made up 3.7% of statewide employment. There were 13,146 oil and gas jobs in North Dakota, 1,198 coal jobs, and 958 nonenergy mineral jobs. There were also 7,296 self-employed people working in the extractive industries in North Dakota (people who work in natural resource extraction, but don't receive wages or salaries because they own their own companies). (49)

Gas Plants

North Dakota has more than 25 natural gas processing plants located on the western side of the state (185). The is one gas plant in Bowman County (110,186). There is one gas plant in Slope County, near Marmarth (187).

Pipelines

The North Dakota Pipeline Authority Commission (NDPAC) is a non-regulatory agency established in 2007 "…for the purpose of diversifying and expanding the North Dakota economy by facilitating development of pipeline facilities to support the production, transportation, and utilization of North Dakota

energy-related commodities." (188). The NDPAC publishes monthly updates on oil and gas production, transportation, current drilling activity and prices. Monthly reports from April 2012 through March 2018 can be found at https://northdakotapipelines.com/directors-cut/. Bowman County contains the Bridger Pipeline LLC resources (Figure 26) (189).

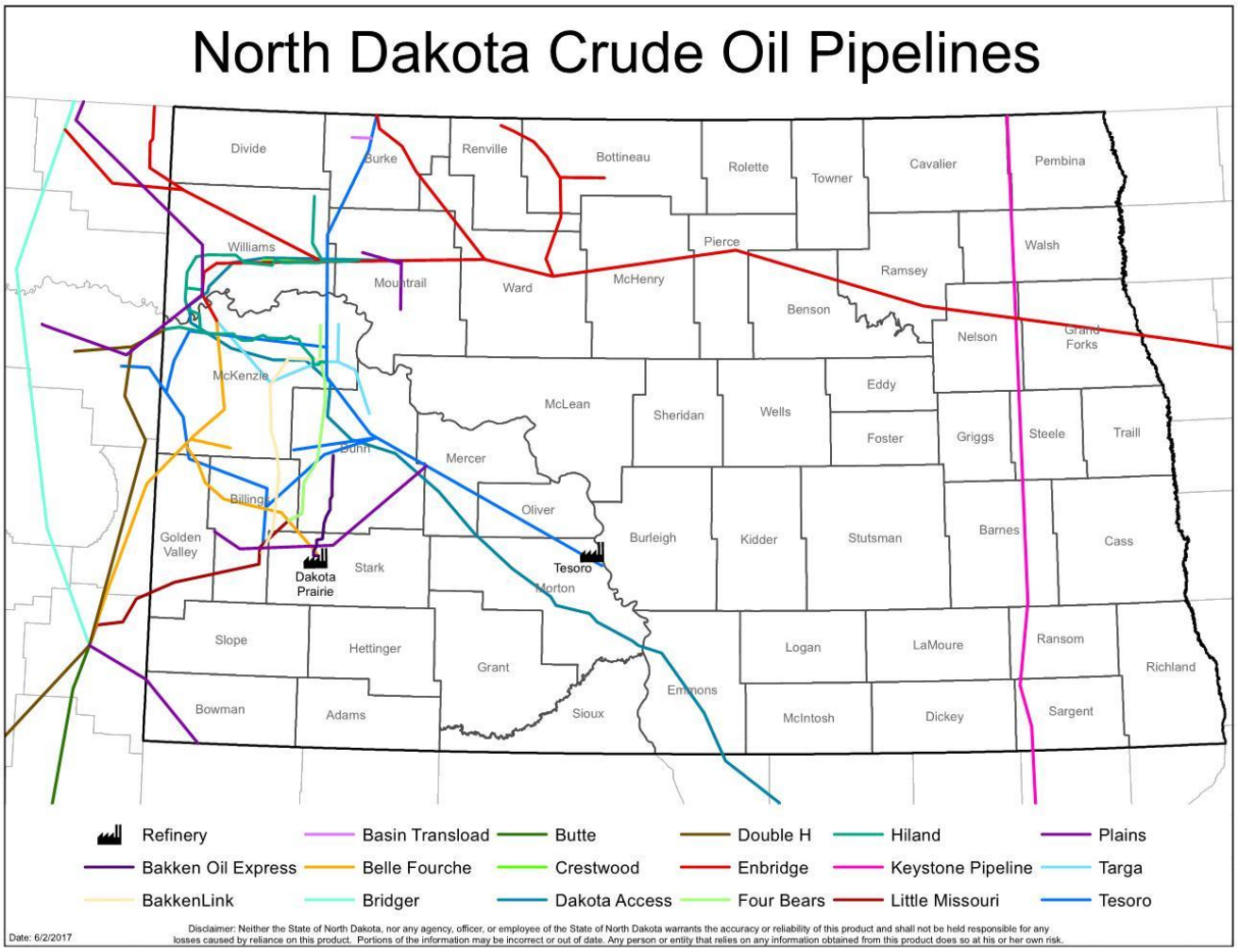

Figure 40. Major oil pipelines in North Dakota, June 2017 (190).

The NDDH monitors and responds to environmental issues related to oil and gas through authority granted by the NDCC Title 33. NDDH and NDIC receive Environmental Incident Reports through the NDDH Spill Investigation Program (191). Environmental incidents are divided into the following categories.

- General Environmental Incidents;
- General Environmental Incidents older than 12 months;
- Oilfield Environmental Incidents that occurred in the last 12 months which were contained within the boundaries of the production or exploration facility;
- Oilfield Incidents older than one year include data from 1975 to 2016.

The NDDH website can be search by County and written reports of all incidents are available online. http://ndhealth.gov/EHS/Spills/.

Coal

The US Department of the Interior's Office of Surface Mining, Reclamation, and Enforcement (OSM) is tasked with implementing and enforcing the Surface Mining Control and Reclamation Act (SMCRA) of 1977 (192). SMCRA was designed to protect the environment from the adverse effects of surface coal mining operations and allows the state to enter into a cooperative agreement with OSM to regulate surface coal mining and reclamation on federal lands.

State regulatory authority for coal mining is set forth in Chapter 38 of the North Dakota Century Code (95). The North Dakota Public Service Commission has jurisdiction over coal via the North Dakota Century Code and oversees exploration data, mining and reclamation efforts, surface ownership protection, and interstate mining (193).

Lignite deposits underlie approximately 32,000 square miles of western and central North Dakota (194). The minable coal in North Dakota is found in the Paleocene age Fort Union Group in the Williston Basin and is the single largest deposit of lignite in the world (195). In 1939 there were 306 coal mines in North Dakota. In 1980 there were 12 mines in North Dakota. At the time of this report, six coal mines operating in North Dakota including the American Colloid Company Gascoyne, Bowman County. (194).

According to the North Dakota Geological Survey coal reserves in Bowman County contains 1.6 billion tons of economically mineable lignite. Slope County contains 4 billion tons of mineable lignite. Slope County contains more coal reserves than any other county in North Dakota but coal has not been mined on a large scale. (194).

Abandoned Mine Lands

North Dakota Public Service Commission has jurisdiction over Abandoned Mine Lands (AML) for the state. The AML Division mission is to eliminate hazards associated with abandoned mines. Funding for the program comes from federal reclamation fees on coal. (196)

Slope County hosts The Burning Coal Vein, an underground vein of lignite coal that has been burning on and off since the 1880s. The vein was ignited by a prairie fire or lightning strike over 130 years ago.

Once the coal has been removed, land reclamation is imperative. The Public Service Commission administers the Abandoned Mine Lands (AML) Program on behalf of the State of North Dakota. The State AML Program was approved by the U.S. Department of the Interior in 1981 under authority of the Surface Mining Control and Reclamation Act of 1977 (P.L. 95-87, Title IV). Program funding comes from a federal reclamation fee on coal that has been mined in the United States since the late 1970's. These fees are placed into the AML fund and the money that North Dakota receives from this fund is used to eliminate existing and potential public hazards resulting from abandoned surface and underground coal mines.

Halleck Mine Project. The Halleck Mine was an underground mine in Bowman County that operated from about 1919 to 1944. The coal seam at this mine was 30 to 40 feet thick and the top of the coal seam was only 10 to 50 feet below the surface. Sinkholes were common in the area and previous exploratory drilling had located mine voids near public roads and a large 30-inch diameter high-pressure natural gas pipeline. In 2014, emergency repairs had to be completed due to several large sinkholes that severed a fiber optic telecommunications cable and were within 90 feet of the pipeline.

The reclamation project primarily involved drilling and grouting to locate and fill underground mine voids along public roads and near the pipeline. Special safety measures had to be taken during the drilling and grouting to prevent any damage to the pipeline while ensuring the voids were filled. In July 2016, the project was recognized as “one of the highest quality coal mine reclamation projects in the nation” by the Office of Surface Mining Reclamation and Enforcement.

Bowman Foxhole Project. The Bowman Foxhole Project was a ten-acre project which eliminated about 1100 feet of dangerous highwalls at an abandoned surface mine site located on either side of a public road (78th Street SW) about six miles north of Bowman, ND (near the Bowman-Slope County border). The contract cost was $90,447.

2017-2018 Sinkhole Filling AML Project (Current). The 2017-2018 Sinkhole Filling AML Project will be conducted to backfill hazardous sinkholes caused by collapse of underground mines. Some funds may be used to conduct maintenance work on reclaimed sites. If necessary, some of these funds may also be used for emergency projects. Work will be conducted as needed during the two-year contract period. The estimated project cost is $200,000. An Environmental Assessment has been completed for the project.

Special Waste Disposal Facilities

The North Dakota Department of Health Division of Waste Management oversees programs for waste management and permits Special Waste Disposal Facilities. Little Missouri Special, Inc is a permitted Solid Waste Landfill located 12 miles south of Marmarth, North Dakota to dispose of special waste produced by the oil and gas industry. Gascoyne Materials Handling and Recycling, LLC is permitted to for the treatment and disposal of refined petroleum contaminated soils. (197) Petrocomp handles non-marketable crude oil and other waste generated by the oil and gas industry. (198)

15.1 RENEWABLE ENERGY

Regulatory authority for renewable energy is set forth in Chapter 63-64 of the North Dakota Century Code (95). The Renewable Energy Council is formed under the North Dakota Industrial Commission and is responsible for developing wind, biofuels, solar, hydroelectric, geothermal and renewable hydrogen energy sources (199). The goals of the REC is to "promote efficient, economic, and environmental sound develop and use of North Dakota's vast renewable resources, particularly in the areas of wind energy, biofuels (ethanol and biodiesel), and biomass" (200). The REC administers the North Dakota's Renewable Energy Program (199).

The Renewable Energy Trust Fund was established in 2007 and the North Dakota Legislature authorized $3,000,000 in funding each biennium (201). The REC administers a grant program for renewable energy and priority is given to projects that the highest probability and potential for bringing renewable energy companies and jobs to North Dakota (200).

Wind Energy

The North Dakota Public Service Commission regulates the siting of wind power for facilities greater than 500 kilowatts by providing a Certificate of Site Compatibility under NDCC 49-22. The application must contain an analysis of environmental impact of the facility, a comprehensive analysis supporting the proposed site location, mitigation measures for anticipated adverse impacts, and other information (95). The North Dakota Administrative Code lists where energy conversion facilities cannot be placed such as national, state and local parks, prime and unique farmland, areas critical to threatened or endangered species (202,203). In addition, the North Dakota Public Service Commission placed restrictions on distances to roadways, historical and recreational resources (202,203).

The Wind Energy Property Rights Act places several restrictions on wind energy easements and leases. These restrictions are procedural requirements during the leasing negotiations, requirements on what is in the easement or lease itself, and it dictates when a land owner can terminate the agreement. The procedural requirements include a notice to the property owner advising them to retain an attorney before agreeing to an easement, a lease or an easement cannot be executed by the parties until at least ten business days after the first proposed easement or lease was delivered to the property owner and neither party must be required to maintain confidentiality of any of the negotiations, or terms proposed, except for the mutual confidentiality agreement in the final executed lease or easement. The easement must preserve the right of the property owner to continue conducting business operations, but the property owner must make accommodations to the developer to allow for the construction and operation of the wind energy facility. The easement cannot make the property owner liable for any expenses and liability, damages to the property owner or third parties, or noncompliance with state or federal laws and regulations. A property owner may terminate an agreement if the wind energy facility has not operated for three years, unless the property owner has received the normal minimum lease payments that would have occurred had the facility been operating. (203)

At the time of this report, there is a wind energy field west of Rhame in Bowman County owned by Montana-Dakota Utilities.

Nuclear Energy

Radioactive waste is defined as a waste containing radioactive material. This is usually a by-product of

nuclear power generation through and other applications of nuclear fission or nuclear technology such as research or medicine. Radioactive waste is hazardous to all forms of life and the environment. As such it is regulated by government agencies to protect human health and the environment. Although nuclear waste has been discovered in the Bakken oil field, North Dakota statutes prohibit the disposal of nuclear waste within its borders. That nuclear waste is currently disposed of at a licensed site in Montana. Currently, neither Bowman County nor Slope County have any existing nuclear waste sites.

15.1.1 POLICY STATEMENTS

i. Oppose the disposal of any nuclear waste in Bowman or Slope Counties.

ii. Support the continued exploration and development of energy resources.

iii. Recognize the impacts of pipelines and split-estate development and reclamation on private lands and encourage the involvement of the landowner at the earliest point in the development planning process.

iv. Support the use of access roads created for energy development for other purposes.

v. Require the reclamation of distribution lines (pipelines, electrical lines) to its pre- disturbance condition, or to a condition agreed upon with the landowner.

vi. Streamline regulations to decrease overlap and contradictions between various permitting agencies.

vii. Open all federal lands shown to have reasonable mineral potential leasing with stipulations and conditions that consider resource values.

viii. Extractable resource development will occur with science-based reclamation practices and responsible land stewardship.

ix. Develop weed-free, site-specific seed mixes for reclamation of disturbed sites to maximize diversity of high-quality forage available for livestock, wildlife and to maintain rangeland health.

x. Support consistent, appropriate reclamation of all surface resource disturbances as soon as feasible after impacts have been created. “As soon as feasible” means restoring at the time and season that seed establishment methods are most likely to succeed and are appropriate for the site (i.e. seeding should occur in the fall).

xi. Support analysis of all fiscal and economic impacts to the minerals industry and the communities within the BSSCD, Bowman or Slope Counties from any proposed land management changes or natural resource-related plans.

xii. Consult with BSSCD, Bowman or Slope Counties regarding road placement to reduce soil erosion.

xiii. Require documentation of existing range improvements (i.e., two-track roads) prior to development and require return of the improvement at least to its original condition when the development closes, as appropriate for the site.

xiv. Support the installation and maintenance of reuse water ponds or tanks, if of acceptable quality, for livestock use where feasible.

xv. In agreement with the landowner, allow continued use of pipeline or well access roads, even after the facility is closed.

.

16 TRAVEL MANAGEMENT AND TRANSPORTATION INFRASTRUCTURE

Federal Highway Administration

The Federal Highway Administration (FHWA) is an administration of the US Department of Transportation and was created in 1967. There are 52 Division Offices. The North Dakota Division Office administers the federal-aid highway program and works with the North Dakota Department of Transportation along with other local government transportation organizations (204). The federal-aid highway program provides financial assistance to support the state highway system. This funding is used for construction, maintenance, and operation of the Interstate Highway System, primary highways, and secondary local roads. Local public agencies own and operate 75% of roadways and manage 15% of FHWA project funding. (205)

The proposed route for the Theodore Roosevelt Expressway includes portions of the BSSCD.

Federal Lands

Under federal law, the Land and Water Conservation Fund (LWCF) Act of 1965 (Public Law 88-578, as amended) was enacted "…to assist in preserving, developing and assuring accessibility to all citizens of the United States of America of present and future generations and visitors… such quality and quantity of outdoor recreation resources as may be available and are necessary and desirable for individual active participation in such recreation and to strengthen the health and vitality of the citizens of the United States by providing funds for and authorizing Federal assistance to the States in planning, acquisition and development of needed land and water areas and facilities…". Section 6(d) of the Act states, "A comprehensive statewide outdoor recreation plan shall be required prior to the consideration by the Secretary of financial assistance for acquisition or development projects." (206)

Federal funding support for recreation comes from the LWCF and the Recreational Trails Program (RTP). The LWCF was created in 1965 by Congress create a nationwide action program that would assist in preserving, developing and assuring all United States citizens and visitors have access to quality outdoor recreation resources. This program is funded by Outer Continental Shelf mineral leasing receipts. The RTP is a program through which states can acquire 80/20 matching federal grant money for both motorized and non-motorized recreational trails. It was established by the federal highway bill and is funded through the Federal Highway Trust Fund. (206)

State Lands

The North Dakota Parks & Recreation Department (NDPRD) shall "plan and coordinate government programs encouraging the full development and preservation of existing and future parks, outdoor recreation areas, and nature preserves." (206)

The state also has programs that assist in providing support for recreational opportunities. The OHV Recreation Grant Program is funded through state registration fees of off-highway vehicles (OHV). This grant is an 80/20 match offered through NDPRD for construction, improvement or renovation of OHV recreation facilities throughout the state. The Community Grant Program is set up similarly to the federal LWCF program and funded periodically through legislative appropriation. This program is also managed by the NDPRD with a 50/50 match grant program that provides funds to political subdivisions for the development or renovation of outdoor recreation facilities. (206)

The Outdoor Heritage Fund is funded through the state's oil and gas production tax and receives up to $40 million per biennium. This fund provides a 75/25 match to state agencies, tribal governments, political subdivisions and nonprofit organizations, with high priority going to projects that enhance conservation practices in the state. There are four directives given:

- Provide access to private and public lands for sportsmen, including projects that create fish and wildlife habitat and provide access for sportsmen.
- Improve, maintain, and restore water quality, soil conditions, plant diversity, and animal systems by supporting other practices of stewardship to enhance farming and ranching.
- Develop, enhance, conserve and restore wildlife and fish habitat on private and public lands.
- Conserve natural areas and create other areas for recreation through the establishment and development of parks and other recreation areas

The Speck Davis Pond (Slope), Alkali Creek (Bowman), and Spring Creek (Bowman) State Wildlife Management Areas (WMA) are available for public access (207). Hundreds of acres have been enrolled in the Private Land Open to Sportsmen (PLOTS) program. This program is part of the North Dakota Game and Fish's Private Land Initiative which has goals to conserve habitat for fish and wildlife populations, provide landowners interested in wildlife conservation with cost-share assistance for developing and protecting wildlife habitat, and provide public opportunities to access fish and wildlife resources on private land (208).

The Audubon National Wildlife Refuge Complex including Stewart Lake in Slope County allows for deer and upland bird hunting. Fishing is permitted only as ice fishing in the winter months. Special regulations apply for these uses (54,209). The White Lake National Wildlife Refuge is also included in the Audubon National Wildlife Refuge Complex. White Lake does not allow public recreation and focuses on managing the land to meet the habitat needs of waterfowl, other migratory birds, threatened and endangered species, and resident wildlife. (209,210)

Bowman and Slope Counties

Bowman and Slope Counties have numerous recreational opportunities that include hunting, biking, hiking, camping, horseback riding, wildlife viewing, and more. Bowman and Slope Counties have numerous water resources that provide for recreational activity, including, the Little Missouri River, North Fork of Grand River, Cannonball River, Deep Creek and numerous lakes which provide opportunities for fishing, kayaking, and canoeing.

Access to land, water, and natural resources on public land is an important part of the economy of these Counties. Ranchers rely on established roads to access water tanks, salting locations, fences, and forage on their public land allotments. Hunters and outdoorsmen rely on access to hunt areas.

The Counties depend on access to public lands for social and economic pursuits. The development of public land resources also requires access with motorized and non-motorized travel.

Maah Daah Hey Trail

The southern portion of the Maah Daah Hey Trail system lies in northern Slope County (Figure 27). This 96 mile trail system runs north along the Little Missouri River to the north unit of the Theodore Roosevelt National Park (211). Nine trail units of varying distances and difficulty make up the trail system with a

variety of landscape features from rolling grasslands to steep clay badlands (212). Maah Daah Hey comes from the Mandan Indian language meaning “Grandfather” or “something that will be around a long time” while the trail’s “Turtle” symbol comes from the Lakota Indian’s symbolic meaning of long life and patience (211).

16.1 TRAVEL MANAGEMENT

Travel throughout Bowman and Slope Counties occurs in many forms. Motorized travel includes both on-highway and off-highway vehicles (OHVs). All OHVs must be registered with the North Dakota Department of Transportation. OHVs include motorcycles, dirt bikes, three-wheelers, all-terrain vehicles (ATVs), and dune buggies. All OHVs (including motor vehicles and motorcycles that are not licensed for public road access) must securely affix the registration number in a position that provides clear legibility for identification (213). The North Dakota Parks & Recreation manages the trail program for the State; the BLM and Forest Service have their own processes, described below.

Little Missouri National Grasslands

Motorized travel within the LMNG is limited to existing roads and trails. Off-road motorized vehicle use is allowed for grazing permittees and oil and gas companies (those who hold permits). The 2005 Travel Management Rule requires that National Forest system roads, trails, or areas open to motor vehicles be designated on a motor vehicle use map and made available to the public. The DPG is currently in the process of completing a travel management plan for the LMNG. The proposed action would close all single use oil and gas roads, unauthorized roads, and an additional 18 miles of system roads. (214)

BLM

Recreational opportunities enjoyed by the public on BLM lands include hunting, hiking, camping, fishing, photography, off-road vehicle activities, picnicking, wildlife viewing and winter activities such as snowmobiling (215).

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 right-of-way for the construction of highways across public lands not otherwise reserved for public purposes is hereby granted.” Repealed in 1976 with the passage of the Federal Land Policy Management Act (FLPMA), the existing rights remained in place (216).

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 the BLM’s management responsibilities. FLPMA directs the BLM regarding travel to balance public access and multiple uses 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. NEPA requires for certain federal projects and land use decisions (including decisions related to opening and closing of BLM roads) to go through an environmental review process. The Wilderness Act of 1964 prohibits motorized vehicles in wilderness areas except in emergency situations or when there is a possible management need.

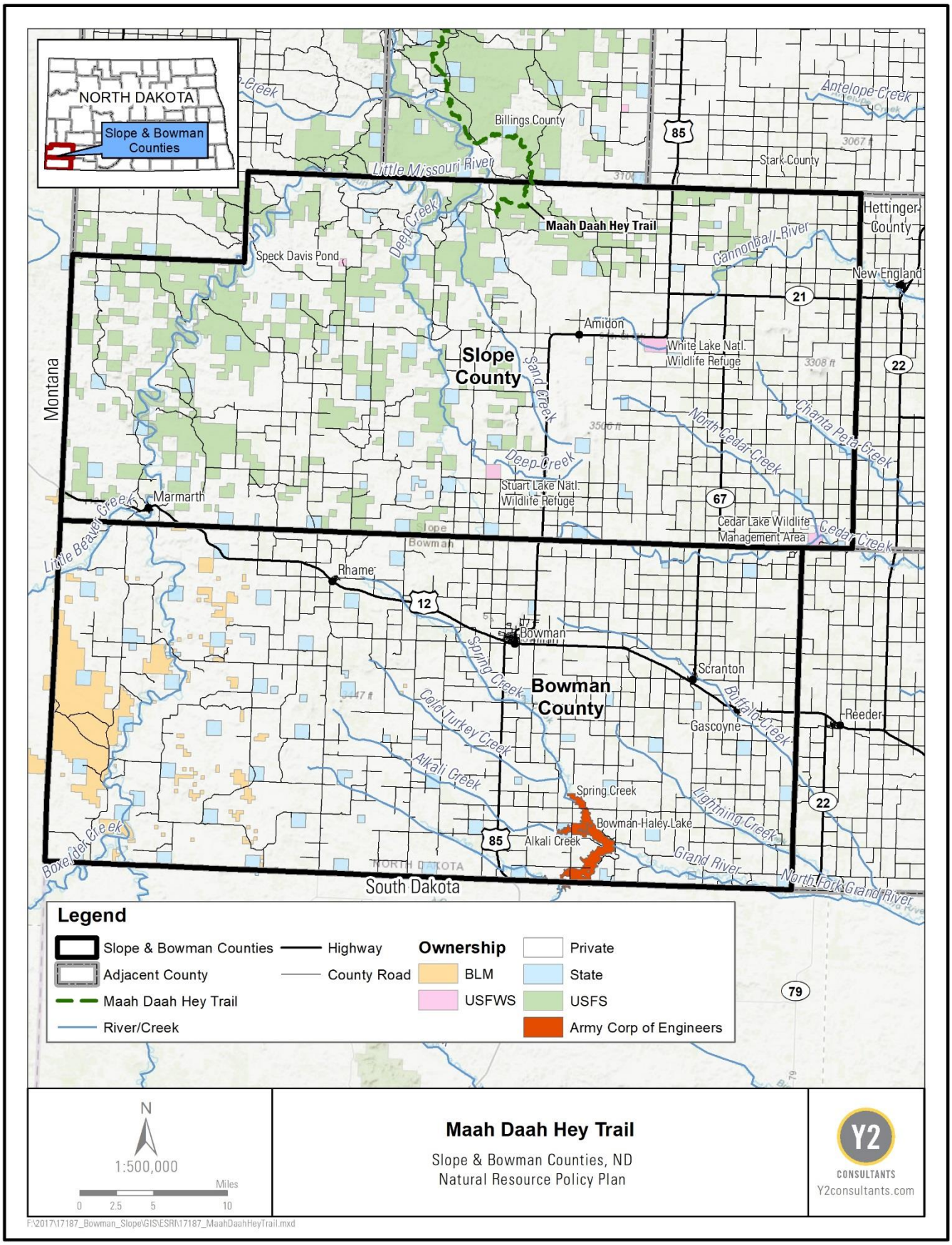

Figure 41. Maah Daah Hey Trail location

16.1.1 POLICY STATEMENTS

i. Oppose the use of federal funds to extend the Maah Daah Hey Trail.

ii. Oppose the proposed action in the Little Missouri National Grassland Travel Management Plan to close single use/oil and gas roads, “unauthorized” roads and the additional identified roads. These roads are necessary to support our livestock ranching operations.

iii. Bowman or Slope Counties will document county roads recognized by R.S. 2477 and provide such information to federal agencies. This information should be incorporated into travel plans and map updates to minimize trespass and inform the agencies of valid travel rights in a timely manner.

iv. Support the historic right to travel using motorized or non-motorized means over federal lands in the pursuit of mining, oil and gas development, ranching, farming, logging, recreational activities, motorized vehicle use, hunting and other historic uses. Support the use of roads used by emergency medical and/or law enforcement services in the protection of residents and visitors.

v. Identify all roads and public rights-of-way on public lands within the BSSCD, Bowman and Slope Counties to protect the resources and promote public health and safety (i.e., search and rescue, fire protection, resource conservation, law enforcement, emergency medical services).

vi. Create and adopt rules where needed to protect resource values including air quality and wildlife, and limits noxious weed expansion.

vii. Support a Travel Management System that protects private property rights while facilitating access for grazing permittees, recreation, hunting and other multiple use and minimizes the expansion of noxious weeds.

viii. Support federal agencies in education of user groups in private property rights and access.

ix. Require that the federal agencies accurately show public and private access on roadways throughout the Counties and limit federal signage and maps directing public to features on private land.

17 REFERENCES

1. Budd-Falen K. Local Government Participation in Federal Agency Decision Making. 2018.

2. Bureau of Land Management. “A Desk Guide to Cooperating Agency Relationships and Coordination with Intergovernmental Partners.” Washington D.C. 2012.

3. Department of the Interior: National Park Service. National Park Service History: National Park System Timeline [Internet]. History E-Library. [cited 2018 Nov 13]. Available from: https://www.nps.gov/parkhistory/hisnps/npshistory/timeline_annotated.htm

4. FedCenter - Executive Order 13352 [Internet]. FedCenter. 2017 [cited 2018 Nov 14]. Available from: https://www.fedcenter.gov/Bookmarks/index.cfm?id=57

5. Executive Office of the President: Office of Management and Budget. Office of Management and Budget, Issuance of OMB’s “Final Information Quality Bulletin for Peer Review, M-05-03 [Internet]. [cited 2018 Mar 14]. Available from: https://georgewbush-whitehouse.archives.gov/omb/memoranda/fy2005/m05-03.html

6. North Dakota State University. About Soil Conservation Districts — North Dakota State Soil Conservation [Internet]. [cited 2018 Mar 20]. Available from: https://www.ag.ndsu.edu/ndssc/north-dakota-soil-conservation-districts

7. US Census Bureau. American FactFinder - Results Slope County ND [Internet]. [cited 2018 Mar 19]. Available from: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF

8. US Census Bureau. American FactFinder - Results Bowman County [Internet]. [cited 2018 Mar 20]. Available from: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF

9. North Dakota Township Officers Association, NDTOA, ndtoa.com [Internet]. [cited 2018 Mar 20]. Available from: http://www.ndtoa.com/index.html

10. High Point Plains Adventure. Country Meida Inc.; 2017.

11. Camping & Fishing [Internet]. Bowman County North Dakota. [cited 2018 Mar 20]. Available from: http://www.bowmannd.com/recreation/camping--fishing/

12. Payment in Lieu of Taxes -(PILT)County Payments and Acres [Internet]. [cited 2017 Jun 12]. Available from: https://www.nbc.gov/pilt/counties.cfm?term=county&state_code=ND&fiscal_yr=2016&Search.x=40&Search.y=13&Search=Search

13. Webster’s Ninth New Collegiate Dictionary: Editorial Staff: 9780877795094: Amazon.com: Books [Internet]. [cited 2018 Mar 15]. Available from: https://www.amazon.com/Websters-Ninth-New-Collegiate-Dictionary/dp/B003IWTJUY

14. Definition of CULTURE [Internet]. [cited 2018 Mar 16]. Available from: https://www.merriam-webster.com/dictionary/culture

15. Black’s Law Dictionary [Fifth Edition 1979] [Internet]. [cited 2018 Mar 15]. Available from:

http://archive.org/details/BlacksLawDictionaryFifthEdition1979

16. Billings County. Billings County Comprehensive Land Use Plan [Internet]. 2016 [cited 2019 Feb 27]. Available from: http://www.billingscountynd.gov/documents/2016_Updates_ENTIRE.pdf

17. First People - Summary of North Dakota History - State Historical Society of North Dakota [Internet]. [cited 2018 Mar 13]. Available from: http://history.nd.gov/ndhistory/firstpeople.html

18. Military Confrontation - Summary of North Dakota History - State Historical Society of North Dakota [Internet]. [cited 2018 Mar 13]. Available from: http://history.nd.gov/ndhistory/military.html

19. Sletten R. Medora: Boom, Bust, and Resurrection. Theodore Roosevelt Medora Foundation; 2012. 197 p.

20. Echoing Trails I. Billings County Historical Society; 1979.

21. Prairie Tales II. Bowman County Historical Society; 1989.

22. American Settlement - Summary of North Dakota History - State Historical Society of North Dakota [Internet]. [cited 2018 Mar 13]. Available from: http://history.nd.gov/ndhistory/settlement.html

23. History of Lignite Use in North Dakota | ND Studies Energy Curriculum [Internet]. [cited 2018 Mar 20]. Available from: https://www.ndstudies.gov/energy/level2/module-3-coal/history-lignite-use-north-dakota

24. DT, ND, SD: Individual County Chronologies [Internet]. [cited 2018 Mar 20]. Available from: http://publications.newberry.org/ahcbp/documents/DAKs_Individual_County_Chronologies.htm

25. Headwater Economics Economic Profile System: A profile of Socioeconomic Measures for Bowman and Slope Counties, North Dakota. 2017 Jul.

26. Wilson RK. America's Public Lands: From Yellowstone to Smokey Bear and Beyond. Rowman & Littlefield Publishers, Incorporated; 2016. 334 p.

27. Planning Rule - Home [Internet]. [cited 2018 Mar 19]. Available from: https://www.fs.usda.gov/planningrule

28. Olson E. National Grasslands Management: A Primer. US Department of Agriculture; 1997.

29. Budd-Falen K, Nicklas C. Memorandum to Billings County RE: Wilderness Areas and Wilderness Study Areas. 2017.

30. Budd-Falen. Memorandum: Overview of the BJFTA. 2017.

31. Follow The Money: Bankhead-Jones/Other [Internet]. [cited 2018 Jan 15]. Available from: http://followthemoney.stanford.edu/pages/Bankhead_Jones_Other.html

32. Dakota Prairie Grassland - Home [Internet]. [cited 2018 Jan 16]. Available from: https://www.fs.usda.gov/dpg

33. Dakota Prairie Grasslands. Land and Resource Management Plan for the Dakota Prairie Grasslands Northern Region: Appendix H. 2001.

34. USDA Forest Service. Final Environmental Impact Statement for the Northern Great Plains Management Plan Revision [Internet]. 2001. Available from: https://www.fs.usda.gov/detail/mbr/landmanagement/planning/?cid=fsbdev3_025111

35. Land and Resource Management Plan, 2001 Revision: Dakota Prairie Grasslands. U.S. Department of Agriculture, Forest Service, Northern Region; 2001. 352 p.

36. The Livestock Grazing Record of Decision for Dakota Prairie Grasslands FEIS.pdf [Internet]. [cited 2018 Mar 15]. Available from: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3818907.pdf

37. Dakota Prairie Grasslands Oil and Gas Leasing Record of Decision (2002) [Internet]. [cited 2018 Mar 16]. Available from: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3818893.pdf

38. Roadless - Proposed Rule Documents [Internet]. [cited 2018 Mar 20]. Available from: https://www.fs.usda.gov/roadmain/roadless/2001rule/proposeddocuments

39. Glicksman, Robert L., Coggins, George Cameron. Modern Public Land Law.

40. Roadless - Home [Internet]. [cited 2018 Feb 4]. Available from: https://www.fs.usda.gov/roadmain/roadless/home

41. Roadless - State Maps [Internet]. [cited 2018 Feb 4]. Available from: https://www.fs.usda.gov/detail/roadless/2001roadlessrule/maps/statemaps/?cid=fsm8_037720

42. Dakota Prairie Grasslands, Noxious Weed Management: Environmental Impact Statement. 2007. 230 p.

43. Department of the Interior: Bureau of Land Management. The BLM: Sound Investment for America 2017 [Internet]. Socioeconomic Impact Report. 2016 [cited 2018 Dec 21]. Available from: https://www.blm.gov/about/data/socioeconomic-impact-report

44. Reviews CTI. Range Management , Principles and Practices: Earth sciences, Earth sciences. Cram101 Textbook Reviews; 2016. 269 p.

45. Bureau of Land Management Montana/Dakotas. 2016 Annual Report Bureau of Land Management Montana/Dakotas [Internet]. US Department of Interior; 2016. Available from: file:///C:/Users/Y2/Downloads/Annual%20Report%202016%20for%20web.pdf

46. Y2 Consultants LLC. Study on Management of Public Lands in Wyoming. 2016.

47. District USB of LMD. North Dakota Resource Management Plan and Environmental Impact Statement. The Office; 1987. 220 p.

48. PublicLandStatistics2016.pdf [Internet]. [cited 2018 Feb 2]. Available from: https://www.blm.gov/sites/blm.gov/files/PublicLandStatistics2016.pdf

49. ONRR Statistical Information Page [Internet]. [cited 2018 Feb 2]. Available from: https://statistics.onrr.gov/

50. USFWS. ND USFWS Office Profiles FINAL. 2014 Dec; Available from: https://www.fws.gov/uploadedFiles/ND%20USFWS%20Office%20Profiles%20FINAL%2012_2014%2

0(6).pdf

51. Federal Land Ownership: Overview and Data [Internet]. [cited 2018 Mar 22]. Available from: https://www.everycrsreport.com/reports/R42346.html#_Toc476565242

52. About: Mission | National Wildlife Refuge System [Internet]. [cited 2018 Mar 22]. Available from: https://www.fws.gov/refuges/about/mission.html

53. About the Refuge - White Lake - U.S. Fish and Wildlife Service [Internet]. [cited 2018 Mar 19]. Available from: https://www.fws.gov/refuge/White_Lake/about.html

54. Wildlife & Habitat - Stewart Lake - U.S. Fish and Wildlife Service [Internet]. [cited 2018 Mar 19]. Available from: https://www.fws.gov/refuge/Stewart_Lake/wildlife_and_habitat/index.html

55. US Fish and Wildlife Service. Partnerships - Stewart Lake - U.S. Fish and Wildlife Service [Internet]. 2014 [cited 2018 Mar 22]. Available from: https://www.fws.gov/refuge/Stewart_Lake/what_we_do/partnerships.html

56. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): EC Annual Report. Office for Official Publications of the European Communities; 1986. 628 p.

57. Department of the Interior: U.S. Fish and Wildlife Service. Endangered Species Act of 1973. 1973.

58. Endangered Species | What We Do | Listing and Critical Habitat | Critical Habitat | FAQ [Internet]. [cited 2018 Mar 16]. Available from: https://www.fws.gov/endangered/what-we-do/critical-habitats-faq.html

59. Species By County Report [Internet]. [cited 2018 Mar 16]. Available from: https://ecos.fws.gov/ecp0/reports/species-by-current-range-county?fips=38007

60. Lewis JC. Whooping Crane (Grus americana). Poole A, Gill F, editors. Birds N Am Online [Internet]. 1995 [cited 2018 Mar 16]; Available from: https://birdsna.org/Species-Account/bna/species/whocra/introduction

61. Whooping Crane | North Dakota Game and Fish [Internet]. 2018 [cited 2018 Mar 16]. Available from: https://gf.nd.gov/wildlife/id/grassland-birds/whooping-crane

62. North Dakota Game and Fish Department. Threatened and Endangered Species [Internet]. 2016 [cited 2018 Dec 20]. Available from: https://gf.nd.gov/wildlife/endangered

63. Species of Conservation Priority | North Dakota Game and Fish [Internet]. 2016 [cited 2018 Mar 13]. Available from: https://gf.nd.gov/wildlife/scp

64. North Dakota Game and Fish Department. Gray Wolf [Internet]. Fish and Wildlife Species Identification. 2016 [cited 2018 Dec 20]. Available from: https://gf.nd.gov/wildlife/id/carnivores/wolf

65. French B. Researchers suggesting a new use for wolves [Internet]. The Billings Gazette. 2010 [cited 2018 Dec 20]. Available from: https://billingsgazette.com/lifestyles/recreation/researchers-suggesting-a-new-use-for-wolves/article_d279e2cc-113a-11df-9d6a-001cc4c002e0.html

66. North Dakota Game and Fish Department. North Dakota State Wildlife Action Plan. 2015.

67. Partners in Flight. Sprague's Pipit [Internet]. Partners in Flight. [cited 2018 Mar 16]. Available from: https://www.partnersinflight.org/species/spragues-pipit/

68. Robbins MB, Dale BC. Sprague's Pipit (Anthus spragueii). Poole A, Gill F, editors. Birds N Am Online [Internet]. 1999 [cited 2018 Mar 16]; Available from: https://birdsna.org/Species-Account/bna/species/sprpip/introduction

69. Northern Great Plains Joint Venture Technical Committee. Northern Great Plains Joint Venture, Priority Birds. 2012.

70. US Fish and Wildlife Service. Species Profile for Northern long-eared Bat (Myotis septentrionalis) [Internet]. [cited 2018 Mar 20]. Available from: https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=A0JE

71. North Dakota Game and Fish. Northern Long-eared Bat | North Dakota Game and Fish [Internet]. [cited 2018 Mar 20]. Available from: https://gf.nd.gov/wildlife/id/bats/northern-long-eared

72. Army Corps of Engineers: Water Resource Authorization, Appropriations, and Activities. Congressional Research Service;

73. Omaha District > About > History [Internet]. [cited 2018 Feb 4]. Available from: http://www.nwo.usace.army.mil/About/History/

74. Recreation.gov. Bowman Haley Lake - Recreation area details [Internet]. 2014 [cited 2018 Mar 20]. Available from: https://www.recreation.gov/recreationalAreaDetails.do?contractCode=NRSO&recAreaId=283&agencyCode=70902

75. US Army Corps of Engineers: Omaha District. Bowman-Haley Dam and Lake: Dam and Lake Projects > Additional Dams & Lakes [Internet]. [cited 2018 Mar 20]. Available from: http://www.nwo.usace.army.mil/Missions/Dam-and-Lake-Projects/Additional-Dams-Lakes/

76. USDA: Natural Resources Conservation Service. NRCS History [Internet]. USDA NRCS Webpage. [cited 2018 Dec 21]. Available from: https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/about/history/?cid=stelprdb1041450

77. USDA FSA. Structure and Organization [Internet]. temp_FSA_02_Landing_InteriorPages. [cited 2019 Feb 28]. Available from: https://www.fsa.usda.gov/about-fsa/structure-and-organization/index

78. AFD-141124-072.pdf [Internet]. [cited 2018 Mar 17]. Available from: http://www.ellsworth.af.mil/Portals/146/documents/AFD-141124-072.pdf

79. AFD-100810-042.pdf [Internet]. [cited 2018 Mar 17]. Available from: http://www.ellsworth.af.mil/Portals/146/documents/AFD-100810-042.pdf

80. AFD-150116-079.pdf [Internet]. [cited 2018 Mar 17]. Available from: http://www.ellsworth.af.mil/Portals/146/documents/AFD-150116-079.pdf

81. record_of_decision_prtc.pdf [Internet]. [cited 2018 Mar 17]. Available from: https://www.faa.gov/air_traffic/environmental_issues/media/record_of_decision_prtc.pdf

82. AFD-160425-044.pdf [Internet]. [cited 2018 Mar 17]. Available from: http://www.ellsworth.af.mil/Portals/146/documents/AFD-160425-044.pdf

83. North Dakota Bill Actions: SB 2327 [Internet]. [cited 2018 Mar 13]. Available from: http://www.legis.nd.gov/assembly/65-2017/bill-actions/ba2327.html

84. US EPA O. Reviewing National Ambient Air Quality Standards (NAAQS): Scientific and Technical Information [Internet]. US EPA. 2016 [cited 2018 Mar 13]. Available from: https://www.epa.gov/naaqs

85. 33-15-02.pdf [Internet]. [cited 2018 Mar 13]. Available from: http://www.legis.nd.gov/information/acdata/pdf/33-15-02.pdf?20150330134256

86. North Dakota Department of Health. Annual Report North Dakota Ambient Air Quality Monitoring Program Network Plan with Data Summary [Internet]. North Dakota Department of Health; 2017. Available from: https://deq.nd.gov/DataPDFs/AQ/Monitoring/Monitoring_Annual_Reports/ARNP_16-17.pdf

87. Tioga Ambient Monitoring Analysis.pdf [Internet]. [cited 2018 Mar 13]. Available from: http://www.ndhealth.gov/AQ/ambient/Annual%20Reports/Tioga%20Ambient%20Monitoring%20Analysis.pdf

88. Health NDD of. Annual Report North Dakota Ambient Air Quality Monitoring Program Network Plan with Data Summary. 2017; Available from: https://deq.nd.gov/DataPDFs/AQ/Monitoring/Monitoring_Annual_Reports/ARNP_16-17.pdf

89. State, Local, and Tribal Leaders Task Force. Revised NEPA: Recommendation of the State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience. 2014.

90. North Dakota Geologic Survey - General [Internet]. [cited 2018 Mar 16]. Available from: https://www.dmr.nd.gov/ndgs/

91. MM-28.pdf [Internet]. [cited 2018 Mar 19]. Available from: https://www.dmr.nd.gov/ndgs/documents/Publication_List/pdf/MisMaps/MM-28.pdf

92. Geology of Adams and Bowman Counties, North Dakota: part I - geology [Internet]. [cited 2018 Mar 20]. Available from: https://ngmdb.usgs.gov/ngm-bin/pdp/zui_viewer.pl?id=39662

93. Geology of Billings, Golden Valley, and Slope Counties, North Dakota: part I [Internet]. [cited 2018 Mar 16]. Available from: https://ngmdb.usgs.gov/ngm-bin/pdp/zui_viewer.pl?id=39687

94. Strat-column-NDGS-(2009).pdf [Internet]. [cited 2018 Mar 16]. Available from: https://www.dmr.nd.gov/ndgs/documents/Publication_List/pdf/Strat-column-NDGS-(2009).pdf

95. North Dakota Century Code [Internet]. [cited 2018 Mar 13]. Available from: http://www.legis.nd.gov/cencode/t61c02.html

96. North Dakota Administrative Code 89-03 Water Permits [Internet]. [cited 2018 Mar 13]. Available from: http://www.legis.nd.gov/information/acdata/html/89-03.html

97. t61c01.pdf [Internet]. [cited 2018 Mar 13]. Available from:

http://www.legis.nd.gov/cencode/t61c01.pdf

98. State Water Commission. ND State Water Commission [Internet]. [cited 2018 Mar 13]. Available from: http://www.swc.nd.gov/basins/#

99. t61c04.pdf [Internet]. [cited 2018 Mar 13]. Available from: http://www.legis.nd.gov/cencode/t61c04.pdf

100. basin_map.pdf [Internet]. [cited 2018 Mar 19]. Available from: http://www.swc.nd.gov/pdfs/basin_map.pdf

101. Groundwater [Internet]. [cited 2018 Mar 13]. Available from: https://deq.nd.gov/wQ/1_Groundwater/

102. North Dakota Administrative Code [Internet]. [cited 2018 Mar 16]. Available from: http://www.legis.nd.gov/information/acdata/html/Title33.html

103. Roberts KD. A Survey of Naturally Occurring Uranium in Groundwater in Southwestern North Dakota. North Dakota Department of Health; 2015.

104. Underground Injection [Internet]. [cited 2018 Mar 15]. Available from: https://deq.nd.gov/WQ/1_Groundwater/2_UIC.aspx

105. USCODE-2011-title33-chap26.pdf [Internet]. [cited 2018 Mar 15]. Available from: https://www.gpo.gov/fdsys/pkg/USCODE-2011-title33/pdf/USCODE-2011-title33-chap26.pdf

106. Budd-Falen. Memorandum to Bowman and Slope Soil Conservation District: North Dakota Water Quality. 2017.

107. 2016_Final_ND_Integrated_Report_20170222.pdf [Internet]. [cited 2018 Mar 15]. Available from: https://deq.nd.gov/publications/WQ/3_WM/TMDL/1_IntegratedReports/2016_Final_ND_Integrated_Report_20170222.pdf

108. NDDoh Surface Water Viewer [Internet]. [cited 2018 Mar 20]. Available from: https://deq.nd.gov/WQ/3_Watershed_Mgmt/SWDataApp/viewer.html

109. North Dakota State Government. ND State Water Commission: Cloud Seeding [Internet]. [cited 2018 Mar 22]. Available from: http://www.swc.nd.gov/arb/ndcmp/

110. Bowman County, Slope County. Bowman County and Slope County Multi-Hazard Mitigation Plan. 2018.

111. City of Marmarth. Little Beaver Creek LB Little Missouri LB 60% SWIF. The City of Marmarth; 2016 p. 1–23.

112. State Water Commission Strategic Plan 2017-2019 [Internet]. [cited 2018 Mar 15]. Available from: http://www.swc.nd.gov/info_edu/reports_and_publications/strategic_plans/pdfs/2017.pdf

113. FEMA. Community Assistance Program - State Support Services Element | FEMA.gov [Internet]. [cited 2018 Mar 16]. Available from: https://www.fema.gov/community-assistance-program-state-support-services-element

114. FEMA. Risk Mapping, Assessment and Planning (Risk MAP) | FEMA.gov [Internet]. [cited 2018 Mar 16]. Available from: https://www.fema.gov/risk-mapping-assessment-and-planning-risk-map

115. ND State Water Commission. Regulatory Program: Floodplain Management [Internet]. ND State Water Commission. [cited 2018 Mar 23]. Available from: http://www.swc.nd.gov/reg_approp/FloodplainManagement/

116. Haynes D. Bowman/Slope Soil Conservation District NRRP Comments. 2019.

117. Silver Jackets: Many Agencies, One Solution [Internet]. North Dakota Silver Jackets. [cited 2018 Mar 16]. Available from: https://silverjackets.nfrmp.us/State-Teams/North-Dakota

118. NDDES. ND Department of Emergency Services: About NDDES [Internet]. NDDES: Homeland Security, State Radio. [cited 2018 Mar 16]. Available from: https://www.nd.gov/des/about/

119. NDDES. 2011 Flood Report: Response and Recovery. 2011.

120. NDDES, AMEC. State of North Dakota Multi-Hazard Mitigation Plan. State of North Dakota; 2014.

121. North Dakota Agricultural Weather Network. NDAWN Tables - Yearly Weather Data [Internet]. [cited 2019 Feb 27]. Available from: https://ndawn.ndsu.nodak.edu/get-table.html?station=13&variable=ydr&ttype=yearly

122. NDDES. State of North Dakota Multi-Hazard Mitigation Plan: Table 5.29. State of North Dakota; 2014.

123. NDDES. State of North Dakota Multi-Hazard Mitigation Plan: Figure 5.18. State of North Dakota; 2014.

124. SWC. ND State Water Commission Drought Disaster Livestock Water Supply Project Assistance Program [Internet]. [cited 2018 Mar 17]. Available from: http://www.swc.nd.gov/project_development/drought_disaster_livestock.html

125. SWC. Livestock water supply assistance program: drought disaster. SWC; 2017.

126. NDDA. Drought Resources | North Dakota Department of Agriculture [Internet]. [cited 2018 Mar 17]. Available from: https://www.nd.gov/ndda/drought-resources

127. NDDA. Hay transportation assistance program disburses funds | North Dakota Department of Agriculture [Internet]. [cited 2018 Mar 17]. Available from: https://www.nd.gov/ndda/news/hay-transportation-assistance-program-disburses-funds

128. NDDA. Interactive drought map | North Dakota Department of Agriculture [Internet]. [cited 2018 Mar 17]. Available from: https://www.nd.gov/ndda/news/interactive-drought-map-be-deactivated

129. NDDA. Hay lottery drawing conducted | North Dakota Department of Agriculture [Internet]. [cited 2018 Mar 17]. Available from: https://www.nd.gov/ndda/news/hay-lottery-drawing-conducted

130. NDDA. CRP Acres Expanded for Grazing | North Dakota Department of Agriculture [Internet]. [cited 2018 Mar 17]. Available from: https://www.nd.gov/ndda/news/crp-acres-expanded-grazing

131. DAFP/CEPD. Counties approved for CRP emergency grazing (2017). USDA; 2017.

132. USDA FSA. Disaster Assistance fact sheet: Farm Service Agency Disaster Assistance Programs at a glance. USDA; 2017.

133. Thune J. Actions - S.2936 - 115th Congress (2017-2018): Improved Soil Moisture and Precipitation Monitoring Act of 2018 [Internet]. 2018 [cited 2018 Nov 16]. Available from: https://www.congress.gov/bill/115th-congress/senate-bill/2936/all-actions

134. Grazing Approved_Final1_06_29_2017.pdf [Internet]. [cited 2018 Mar 19]. Available from: https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/Conservation/PDF/Grazing%20Approved_Final1_06_29_2017.pdf

135. Meehan M, Sedivec K, DeKeyser E. Riparian Ecosystems of North Dakota Fact Sheet [Internet]. North Dakota State University Extension Service; 2011. Available from: https://library.ndsu.edu/ir/bitstream/handle/10365/16431/r1539.pdf?sequence=1

136. Herman G, Johnson L. Habitats of North Dakota Riparian Areas [Internet]. North Dakota Center for Distance Education; 2008. Available from: https://www.ndstudies.gov/sites/default/file/Riparian_web.pdf

137. Hagen S, Isakson P, Dyke S. North Dakota Comprehensive Wildlife Conservation Strategy [Internet]. North Dakota Game and Fish; 2005. Available from: https://gf.nd.gov/sites/default/files/publications/north-dakota-wildlife-action-plan.pdf

138. USDA Farm Service Agency. Conservation Reserve Enhancement Program- North Dakota Riparian Project [Internet]. US Department of Agriculture; 2017. Available from: https://library.ndsu.edu/ir/bitstream/handle/10365/16431/r1539.pdf?sequence=1

139. North Dakota State Water Commission. North Dakota State Wetland Program Summary [Internet]. n.d. Available from: https://www.aswm.org/pdf_lib/state_summaries/north_dakota_state_wetland_program_summary_083115.pdf

140. alkrause@blm.gov. Programs: Natural Resources: Wetlands and Riparian: Riparian Health: Montana-Dakotas [Internet]. 2016 [cited 2018 Mar 15]. Available from: https://www.blm.gov/programs/natural-resources/wetlands-and-riparian/riparian-health/montana-dakotas

141. District USB of LMD. North Dakota grazing environmental impact statement. The Office; 1984. 116 p.

142. North Dakota Century Code: Title 61- Water [Internet]. [cited 2018 Mar 16]. Available from: http://www.legis.nd.gov/cencode/t61.html

143. Southwest Water Authority. Southwest Pipeline Progress: Southwest Water Authority [Internet]. [cited 2018 Mar 16]. Available from: http://swwater.com/maps/

144. Southwest Water Authority. Southwest Pipeline Project. n.d.

145. Soil Health | NRCS Soils [Internet]. [cited 2018 Mar 17]. Available from: https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/

146. nrcs142p2_051845.pdf [Internet]. [cited 2018 Mar 17]. Available from: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051845.pdf

147. Ecological Site Information | NRCS Soils [Internet]. [cited 2018 Mar 17]. Available from: https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/office/ssr12/profile/

148. Sediv K, Printz JL. Ecological Sites of North Dakota [Internet]. North Dakota State University Extension Service; 2012 Jan. Report No.: R-1556. Available from: https://www.ag.ndsu.edu/pubs/ansci/range/r1556.pdf

149. USDA-NRCS Bismarck State Office GIS Center. Major Land Resource Areas in North Dakota. Natural Resources Conservation Service; 2010.

150. Natural Resources Conservation Service. Soil Survey of Bowman County. 1975.

151. Web Soil Survey - Home [Internet]. [cited 2018 Mar 20]. Available from: https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm

152. Natural Resources Conservation Service. Soil Survey of Slope County, North Dakota. 1978.

153. Noxious Weeds | North Dakota Department of Agriculture [Internet]. 2018 [cited 2018 Mar 13]. Available from: https://www.nd.gov/ndda/plant-industries/noxious-weeds

154. North Dakota Department of Agriculture. County and City Listed Noxious Weeds. 2018.

155. North Dakota Department of Agriculture. North Dakota County and City Weed Board Directory [Internet]. n.d. Available from: https://www.nd.gov/ndda/sites/default/files/legacy/resource/CWBDirectoryPublic.pdf

156. Visibility in Mandatory Federal Class I Areas (1994-1998): A Report to Congress - Chapter 1. Introduction to Visibility Issues.

157. US EPA O. Visibility and Regional Haze [Internet]. US EPA. 2015 [cited 2018 Mar 21]. Available from: https://www.epa.gov/visibility

158. Clean Air Act - Air (U.S. National Park Service) [Internet]. [cited 2018 Mar 21]. Available from: https://www.nps.gov/subjects/air/cleanairact.htm

159. US EPA O. List of Areas Protected by the Regional Haze Program [Internet]. US EPA. 2015 [cited 2018 Mar 20]. Available from: https://www.epa.gov/visibility/list-areas-protected-regional-haze-program

160. North Dakota Game and Fish. Department Information | North Dakota Game and Fish [Internet]. [cited 2018 Mar 21]. Available from: https://gf.nd.gov/about

161. US Forest Service. National Forest System Land and Resource Management Planning 1982 Rule [Internet]. 1982 [cited 2018 Mar 21]. Available from: https://www.fs.fed.us/emc/nfma/includes/nfmareg.html

162. Forest Service, Region 1. Sensitive Species List. 2011.

163. Bureau of Land Management. Environmental Assessment DOI-BLM-MT-C030-2014-189-EA

[Internet]. 2015. Available from: https://www.blm.gov/sites/blm.gov/files/MT-DAKs%20NDFO_July2015_LeaseSaleEA_DRAFT_9Feb2015.pdf

164. Slope County North Dakota [Internet]. [cited 2018 Mar 20]. Available from: https://www.midrivers.com/~whtmule/genweb/slope/slope.htm

165. US Census of Agriculture. 2012 Census of Agriculture Bowman County Profile [Internet]. 2012. Available from: https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/North_Dakota/cp38011.pdf

166. US Census of Agriculture. 2012 Census of Agriculture Slope County Profile [Internet]. 2012. Available from: https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/North_Dakota/cp38087.pdf

167. US Forest Service. USDA Forest Service - WO Lands-LWCF-HOME PAGE [Internet]. 2007 [cited 2018 Mar 22]. Available from: https://www.fs.fed.us/land/staff/LWCF/purchases07/1.shtml

168. Little Missouri Grazing Association. Outdoor Heritage Fund Grant Application [Internet]. 2013. Available from: http://www.nd.gov/ndic/out/applications/r2/gr2-026.pdf

169. Little Missouri Grazing Association commits to protecting sage grouse habitat [Internet]. [cited 2018 Mar 22]. Available from: https://www.tsln.com/news/little-missouri-grazing-association-commits-to-protecting-sage-grouse-habitat/

170. US Forest Service. Record of Decision for North Billings County Allotment Management Plan Revisions. United States Department of Agriculture; 2014.

171. Home - White Lake - U.S. Fish and Wildlife Service [Internet]. [cited 2018 Mar 19]. Available from: https://www.fws.gov/refuge/White_Lake/

172. Bureau of Land Management North Dakota Field Office. North Dakota Greater Sage-Grouse Approved Resource Management Plan Amendment [Internet]. 2015. Available from: https://eplanning.blm.gov/epl-front-office/projects/lup/36811/63113/68356/NDFO_ARMPA_camera_508.pdf

173. 43 CFR 4120.3-3 - Range improvement permits. [Internet]. LII / Legal Information Institute. [cited 2018 Mar 22]. Available from: https://www.law.cornell.edu/cfr/text/43/4120.3-3

174. 2016 North Dakota Century Code :: Title 4.1 Agriculture :: Chapter 4.1-75 Estrays [Internet]. Justia Law. 2016 [cited 2018 Mar 13]. Available from: https://law.justia.com/codes/north-dakota/2016/title-4.1/chapter-4.1-75

175. mla_1920_amendments1.pdf [Internet]. [cited 2018 Mar 16]. Available from: https://www.blm.gov/or/regulations/files/mla_1920_amendments1.pdf

176. Budd-Falen K. ND and Fed Regs for Oil and Gas Well Drilling. 2017.

177. US Code. U.S.C. Title 30 - MINERAL LANDS AND MINING [Internet]. [cited 2018 Mar 16]. Available from: https://www.gpo.gov/fdsys/pkg/USCODE-2011-title30/html/USCODE-2011-title30.htm

178. blm_admin. About: How We Manage [Internet]. 2016 [cited 2018 Mar 16]. Available from: https://www.blm.gov/about/how-we-manage

179. blm_admin. About: What We Manage: Montana-Dakotas [Internet]. 2016 [cited 2018 Jan 23]. Available from: https://www.blm.gov/about/what-we-manage/montana-dakotas

180. North Dakota Geologic Survey - General [Internet]. 2018 [cited 2018 Mar 16]. Available from: https://www.dmr.nd.gov/ndgs/

181. blm_admin. Programs: Energy and Minerals: Oil and Gas: Oil and Gas Statistics [Internet]. 2016 [cited 2018 Mar 16]. Available from: https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/oil-and-gas-statistics

182. Active Drilling Rig List [Internet]. [cited 2018 Mar 16]. Available from: https://www.dmr.nd.gov/oilgas/riglist.asp

183. 2016AnnualProductionReport.pdf [Internet]. [cited 2018 Mar 18]. Available from: https://www.dmr.nd.gov/oilgas/stats/AnnualProduction/2016AnnualProductionReport.pdf

184. Office of Natural Resources Revenue [Internet]. [cited 2018 Mar 18]. Available from: https://www.onrr.gov/

185. North Dakota State Government. Transportation | ND Studies Energy Curriculum [Internet]. 2018 [cited 2018 Mar 22]. Available from: https://www.ndstudies.gov/energy/level1/module-2-petroleum-natural-gas/transportation

186. ONRR. Gas Plant List for Offshore and Onshore (as of 10/3/2016). 2016.

187. Natural Gas Processing Capacity [Internet]. [cited 2018 Mar 22]. Available from: https://ndpipelines.files.wordpress.com/2018/03/nd-gas-plants-3-12-18.png

188. t54c17-7.pdf [Internet]. [cited 2018 Mar 18]. Available from: http://www.legis.nd.gov/cencode/t54c17-7.pdf

189. North Dakota. North Dakota Crude Oil Pipelines. 2017.

190. North Dakota Crude Oil Pipelines [Internet]. 2017. Available from: https://www.ndstudies.gov/energy/level2/module-2-petroleum-natural-gas/transporting-and-processing

191. Environmental Health Section [Internet]. [cited 2018 Mar 18]. Available from: https://deq.nd.gov/WQ/4_Spill_Investigations/Reports.aspx

192. OSMRE Laws, Regulations, and Guidance [Internet]. [cited 2018 Mar 19]. Available from: https://www.osmre.gov/LRG.shtm

193. Laws: Laws, Rules and Policies: Public Awareness: Public Service Commission, North Dakota [Internet]. [cited 2018 Mar 19]. Available from: https://www.psc.nd.gov/public/laws/lawscoalmining.php

194. Murphy E. The Lignite Reserves of North Dakota. North Dakota Geological Survey; 2006 p. 1–149. Report No.: 104.

195. North Dakota Geologic Survey - Coal [Internet]. [cited 2018 Mar 19]. Available from: https://www.dmr.nd.gov/ndgs/Mineral/coal.asp

196. Jurisdiction: Abandoned Mine Lands: Public Service Commission, North Dakota [Internet]. [cited 2018 Mar 19]. Available from: https://www.psc.nd.gov/jurisdiction/aml/index.php

197. Environmental Health Section [Internet]. [cited 2018 Nov 16]. Available from: https://deq.nd.gov/WM/

198. Petrocomp – WDS Facility | D&M Water Service, Inc. [Internet]. [cited 2018 Nov 16]. Available from: http://www.dmwaterserviceinc.com/petrocomp/

199. t54c63.pdf [Internet]. [cited 2018 Mar 18]. Available from: http://www.legis.nd.gov/cencode/t54c63.pdf

200. renew-goals.pdf [Internet]. [cited 2018 Mar 19]. Available from: http://www.nd.gov/ndic/renew/info/renew-goals.pdf

201. Home page for the Renewable Energy Program [Internet]. [cited 2018 Mar 19]. Available from: http://www.nd.gov/ndic/renew-infopage.htm

202. Budd-Falen. Memorandum: Wind Energy and Fed Wildlife Laws. 2017.

203. Budd-Falen K. Memorandum to Bowman-Slope Soil and Water Conservation District Land use Plan Steering Committee RE: Industrial Siting for Wind Energy Development. 2017.

204. About Us | North Dakota Division | Federal Highway Administration | Federal Highway Administration [Internet]. [cited 2018 Mar 22]. Available from: https://www.fhwa.dot.gov/nddiv/aboutus.cfm

205. About the Federal-aid Highway Program - Federal-aid Essentials for Local Public Agencies [Internet]. [cited 2018 Mar 22]. Available from: https://www.fhwa.dot.gov/federal-aidessentials/federalaid.cfm

206. North Dakota Parks & Recreation. Draft North Dakota State Comprehensive Outdoor Recreation Plan [Internet]. 2018. Available from: http://www.parkrec.nd.gov/images/attraction_of_week/SCORP%202018-2022%20General-Public%20Comment%20Draft.pdf

207. Wildlife Management Areas - Listing | North Dakota Game and Fish [Internet]. [cited 2018 Mar 14]. Available from: https://gf.nd.gov/wma-listing

208. PLOTS/Private Lands | North Dakota Game and Fish [Internet]. [cited 2018 Mar 14]. Available from: https://gf.nd.gov/index.php/private-lands

209. About the Refuge - Audubon - U.S. Fish and Wildlife Service [Internet]. [cited 2018 Mar 19]. Available from: https://www.fws.gov/refuge/Audubon/about.html

210. Wildlife & Habitat - White Lake - U.S. Fish and Wildlife Service [Internet]. [cited 2018 Mar 19]. Available from: https://www.fws.gov/refuge/White_Lake/wildlife_and_habitat/index.html

211. Maah Daah Hey Trail [Internet]. [cited 2018 Mar 15]. Available from:

http://www.parkrec.nd.gov/activities/national_recreation/maah_daah_hey.html

212. Wiebe S, Marko B. About – Maah Daah Hey Trail Association [Internet]. [cited 2018 Mar 14]. Available from: http://mdhta.com/about/

213. North Dakota Parks & Recreation Department. North Dakota Parks & Recreation Department OHV-Highway Vehicle Laws & Safety Guidelines [Internet]. 2017. Available from: http://www.parkrec.nd.gov/recreation/attachments/OHV%20Manual.pdf

214. US Forest Service. Final Environmental Impact Statement Volume I North Billings County Allotment Management Plan Revisions. US Department of Agriculture; 2013.

215. Bureau of Land Management. Environmental Assessment-DOI-BLM-MT-C030-2013-221-EA North Dakota Field Office Oil and Gas Leasing EA for January 2014 [Internet]. 2014. Available from: https://www.blm.gov/sites/blm.gov/files/MT-DAKs%20Jan2014_NDFO%20LEASING%20EA_FINAL_30Oct2013.pdf

216. Congressional Research Service. Highway Rights of Way on Public Lands R.S, 2477 and Disclaimers of Interest [Internet]. 2003 [cited 2018 Mar 13]. Available from: https://www.everycrsreport.com/files/20031107_RL32142_1694ab0db13d9316943fb58a8064bfc844c4ca36.pdf

18 ACRONYMS

Acronym	Definition
AML	Abandoned Mine Lands
AMP	Allotment Management Plans
AMR	Appropriate Management Response
ARNPA	Approved Resource Management Plan
ATV	All-terrain Vehicle
BJFTA	Bankhead-Jones Act
BLM	Bureau of Land Management
BSSCD	Bowman Slope Soil Conservation District
CAP-SSSE	Community Assistance Program – State Support Services Element
CCA	Candidate Conservation Agreements
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CIP	Comprehensive Interpretive Plan
CORPS	U.S. Army Corps of Engineers
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program
CWA	Clean Water Act
DEIS	Draft Environmental Impact Statement
DEQ	Department of Environmental Quality
DPG	Dakota Prairie Grasslands
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPMT	Exotic Plant Management Team
ESA	Endangered Species Act
ESD	Ecological Site Description
FCCE	Flood Control and Costal Emergency Act
FDQA	Federal Data Quality Act
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FLO	Falen Law Offices
FLPMA	Federal Lands Policy and Management Act
FRV	Fundamental Resources and Values
FSA	Farm Service Agency
FSH	Forest Service Handbook
GDP	Gross Domestic Product
GHG	Greenhouse Gas

GHMA	General Habitat Management Area
GMP	General Management Plans
IQA	Information Quality Act
LiDAR	Light Detection and Ranging
LMNG	Little Missouri National Grasslands
LRIPs	Long-Range Interpretive Plans
LUPs	Land Use Plans
LWCF	Land and Water Conservation Fund
MCL	Maximum Contaminant Level
MOA	Memorandums of Agreement
MOU	Memorandums of Understanding
MLRA	Major Land Resource Areas
NAAQS	National Ambient Air Quality Standards
NCCC	North Dakota Century Code
Ncore	Air Quality national multipollutant monitoring network
NDDA	North Dakota Department of Agriculture
NDDES	North Dakota Division of Emergency Services
NDDH	North Dakota Department of Health
NDDH/DEQ	North Dakota Department of Health/ Department of Environmental Quality
NDDOT	North Dakota Dept of Transportation
NDFO	North Dakota Field Office
NDGF	North Dakota Game and Fish
NDGS	North Dakota Geological Survey
NDHP	North Dakota Highway Patrol
NDIC	North Dakota Industrial Commission
NDNG	North Dakota National Guard
NDOGD	North Dakota Industrial Commission Oil and Gas Division
NDPAC	North Dakota Pipeline Authority Commission
NDPES	North Dakota Pollutant Elimination Discharge System
NDPRD	North Dakota Parks & Recreation Department
NDPSC	North Dakota Public Service Commission
NDRMP	North Dakota Resource Management Plan and Final Environmental Impact Statement
NDSEO	North Dakota State Engineers Office
NDSWC	North Dakota State Water Commission
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NFMA	National Forest Management Act
NGP	Northern Great Plains
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service

NRCS	Natural Resources Conservation Service
NRPP	National Resource Policy Plan
NWR	National Wildlife Refuge
NWS	National Weather Service
OHV	Off-highway Vehicle
OIRV	Other Important Resources and Values
OMB	Office of Management and Budget
ONRR	Office of Natural Resources Revenue
ORV	Off-road Vehicle
OSM	Office of Surface Mining, Reclamation, and Enforcement
PAL	Provisionally Accredited Levee
PFC	Proper Functioning Condition
PHMA	Priority Habitat Management Area
PLOTS	Private Land Open to Sportsman
PRIA	Property Records Industry Association?
PRTC	Powder River Training Complex
QTA	Quit Title Act
RARE	Roadless Area Review and Evaluation
REC	Renewable Energy Council
REP	Renewable Energy Program,
Risk MAP	Risk Mapping and Assessment Planning
RMP	Resource Management Plans
ROC	Recreational Opportunity Spectrum
ROD	Record of Decision
RPA	Renewable Resources Planning Act
RTP	Recreational Trails Program
SIO	Scenic Integrity Objectives
SIP	State Implementation Plans
SLAMS	State and Local Monitoring Stations
SMCRA	Surface Mining Control and Reclamation Act
THRO	Theodore Roosevelt National Park
TMDL	Total Maximum Daily Load
USAF	United States Air Force
USFS	United States Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Service
WMA	Wildlife Management Area
WMP	The Watershed Management Program
WSA	Wilderness Study Area
Y2	Y2 Consultants

APPENDIX A. . FALEN LAW OFFICE MEMOS

Page left intentionally blank

APPENDIX B. : PUBLIC COMMENT SPREADSHEET

Page left intentionally blank

Section Number	Comment(s) received	Action/Response
	If surface or groundwater will be diverted for project(s) associated with the land use plan, a water permit(s) may be required per North Dakota Century Code (NDCC) § 61-04-02. Please consult with the Water Appropriations Division of the Office of the State Engineer (OSE) if you have any questions regarding this comment at 701-328-2754 or waterpermits@nd.gov.	This comment assumes that the land use plan is substantive and could require water to be diverted. That assumption is incorrect due to the fact that this land use plan is not a form of land use regulation, instead, it is a compilation of policy statements used to require federal agencies to review and consider its policies when making decisions that might affect the local area. Thus, due to the fact that this plan cannot require surface or groundwater to be diverted, no water permit is required for this plan. It is worthwhile, however to note that any project that requires water to be diverted may be required to get a water permit.
	Specific projects which involve the Cannonball River in Slope County should be evaluated by the OSE for a need of a Sovereign Land Permit. Please contact Sovereign Land Specialist, Ashley Persinger at 701-328-4988 or apersinger@nd.gov if you have a questions regarding this comment.	This comment assumes that the land use plan is substantive and could require specific projects. That assumption is incorrect due to the fact that this land use plan is not a form of land use regulation, instead, it is a compilation of policy statements used to require federal agencies to review and consider its policies when making decisions that might affect the local area. Thus, due to the fact that this land use plan does not require specific projects involving the Cannonball River, a Sovereign Land Permit is not required. It could however, be worth noting that a Sovereign Land Permit could be required with the North Dakota Office of the State Engineer for certain projects on the Cannonball River.
	Please work with the local floodplain administrators for floodplain regulations, including the National Flood Insurance Program (NFIP) requirements. Visit our website for a current list of administrators: www.swc.nd.gov/reg_approp/FloodplainManagement/. You may contact Dionne Haynes for additional assistance at 701-328-4961 or dfhaynes@nd.gov.	Y2: DW contacted Dionne Haynes and received written comments on 2/15/2019
	The OSE Engineers and Permitting Section reviewed the study area and determined that it includes surface water resources. The OSE requests to be notifies regarding the proposed project's impacts, if any, to water resources (i.e. streams or rivers), drains, and wetlands (i.e. ponds, sloughs, lakes, or any series thereof) as any alterations, modifications, improvements, or impacts to those water resources may require a drainage permit(s) or a construction permit(s) from the OSE. For further information on the OSE's permitting requirements, please visit the Regulations & Appropriation tab on the OSE's website (swc.nd.gov). Please contact Jordan Woroniecki at 701-328-4898 if you have any questions regarding this comment.	This land use plan will not impact any water resources due to the fact that this plan does not create any substantive requirements for any water projects, nor does the plan create any local regulations.

N/A	I support the Natural Resource Policy Plan for Bowman and Slope counties. It has a lot of common sense ideas that are backed up and proved by generations of hard work from our local farmers and ranchers. I hope that when some of the special interest groups read this plan they may better understand how their ideas, in most cases, cause great harm to our precious resource that we all love. Farmers and ranchers are the greatest conservationists there is and our livelihood depends on doing the right thing and protecting the resource. My biggest concern with the plan is where the Black-tailed Prairie Dog is listed as an indicator species. The Forest Service believes that Prairie Dogs indicate a healthy grassland. In reality this couldn't be any further from the truth. Prairie Dog towns are erosion disasters, because all the vegetation is gone allowing wind and water erosion to wash away precious topsoil. These towns are almost always full of noxious weeds, because all the healthy forage is either mowed off or killed. All in all I think it's a great plan and I hope it works like it should and help fight off some of the radical ideas that seem to keep surfacing. Thanks you for all your hard work on this plan.	It is true that the plan states that the black-tailed prairie dog is listed as an indicator species. This is however, due to the fact that the Forest Service lists it as such, by discussing that it is listed as an indicator species, this plan remains relevant and up to date. Stating that the Forest Service lists the black-tailed prairie dog as an indicator species does not indicate that the Resource Management Plan supports the designation. BSSCD will create a policy statement in 13.1 stating "All agencies should regularly review indicator species designations and support the designation with credible scientific data. If the credible scientific data no longer supports an indicator species designation, the agency should remove said designation."

	Unfortunately, given the federal furlough impacts, even with the additional period that you extended for the input process, there simply was not enough time available for a thorough review of the analysis or data you provided. In the initial review we did conduct, there is language that infers a federal statute justification which provides local jurisdictions the ability through this plan to compel or direct US Forest Service land management activities or outcomes. The inferences or interpretations are incorrect and must be acknowledged here as so. (Continued below)	The plan was released for public review and comment from January 7, 2019 through January 30, 2019. Due to the federal government shut down that occurred between December 22, 2018 and January 25, 2019, the comment period was extended to February 15, 2019 to allow federal agencies the opportunity to comment on the plan. This extension was the same time period given from the Farm Service Agency to the public. The purpose of this plan is not to compel or direct US Forest Service land management activities or outcomes. The plan in fact acknowledges that local governments do not have jurisdiction over the federal government or public land and NRPPs cannot require federal agencies to take specific actions. However, federal agencies and departments are mandated by various federal statutes to engage local governments during the decision-making process on federal plans, policies, and programs that will impact the management of land and natural resources within a community and ultimately affect the local tax base and lives of local citizens. Federal agencies are required to coordinate and consult with local governments and to give meaningful consideration to policies asserted in written plans prepared and adopted by local governments concerning management of federal lands in their area. Required engagement between federal agencies and local governments takes the form of "consistency review" under the National Environmental Policy Act (NEPA) and the Federal Lands Policy and Management Act (FLPMA), the requirement for "coordination" under both FLPMA and the National Forest Management Act (NFMA), engaging local governments acting as a "cooperating agency" under NEPA, and a State Governor's consistency review process. This plan's purpose and goal is to ensure that such interactions occur and that the local governments in the area are afforded the rights of collaboration, coordination, and consistency review they are given in federal statute. If the USFS believes that there are any specific and substantive statements that imply that the BSSCD is attempting to compel or direct land management activities or outcomes, please specify those portions of this document.

	The Forest Service welcomes input from local governments. As well, we are required to engage with interested individuals and organizations, State and local governments, federal agencies, and Indian tribes. The input received from these varied sources could suggest contradictory management approaches, and the Forest Service must consider the competing interests based on the unique circumstances applicable to the planning effort and cannot mandate that a particular party's' interests eclipse all others. While local and county interests are important, under Forest Service land management statutes and applicable case law, the Forest Service cannot elevate the policy preferences of the BSCDSC over those of the general public or other interests in regards to federal land use planning. Likewise, the Forest Service is not subject to either the substantive or procedural provisions of State and local law, ordinances, land management plans, or resolutions.	Although it is generally true that local governments cannot compel or direct specific or procedural action from a federal government agency, it is untrue that local governments cannot have an elevated voice compared to the general public. According to NEPA, if in the course of writing an environmental impact statement (EIS), a local government makes its land use plan or policy available to the lead federal agency, the lead agency must "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 [impact] statement should describe the extent to which the [federal] agency would reconcile its proposed action with the [local government] plan or law." 40 C.F.R. §§ 1506.2, 1506.2(d). Emphasis added. Additionally, NEPA commands that copies of comments by State or local governments must accompany the EIS or environmental assessment (EA) throughout the review process. 42 U.S.C. § 4332(c). Further, the National Forest Management Act (NFMA) also requires coordination. NFMA states, "The 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 Forest Service is directed to "coordinate" with local governments implies, by its plain meaning that the Forest Service must engage in a process that involves more than simply "considering" the plans and policies of local governments as it would when receiving comments from interested parties and the general public. The Forest Service must attempt to achieve compatibility between Forest Service plans and local land use plans.

	Most importantly this proposed plan is very useful in that is can further the effective cooperation and collaboration among the Forest Service, the Bowman-Slope Soil Conservation District and other local and state government entities. Especially in consideration of the Forest Service's next iteration of revision of the Dakota Prairie Grassland's Land & Resource Management Plan, your proposal can provide critical local government input. In that vein of collaboration and cooperation the US Forest Service looks forward to expanded effort and results gained working together, to the benefit of the resource, multiple users and for the members of the public for whom we've been entrusted with federal management responsibility over the invaluable public grasslands of southwestern North Dakota.	Thank you for your comment.
	Thank you for the opportunity to provide this initial comment for your draft. We're looking forward to your next steps and the venues and timing you may have scheduled for further public and agency involvement in finalizing your document.	Thank you for your comment.
	pg 15: last Paragraph: Change 'prospector who discovered placer gold on Grand River' to 'prospector who reportedly discovered placer gold on Grand River'	Corrected
	In general, this is a well-crafted document; however, some of the fine details of the document are concerning. One major concern is that several policies listed in the plan will likely reduce conservation options and flexibility by the counties. This approach may very well create more limitations than solutions for fostering conservation in the future. Other policies seem to stand in stark contradiction to each other and thereby defeat the very purpose of the plan. Finally, are the policies which focus on and advocate for the protection of individuals (including permittees) rather than safeguarding the natural resource for the overall public good. When regarding public lands, the Department strongly urges the counties to consider the well-being of the public and the resource as much as the individual permittee.	The BSSCD, Slope and Bowman Counties, respect the resource and acknowledge and support multiple use of resources. Policy statements throughout the document support the resource and are not focused on the party using the resource.
Pg. 10	Figure 1 and all associated Figures: The map is incorrect, Spring Creek and Alkali Creek WMA are shown to be owned by USFWS but are owned by the Army Corp of Engineers and leased to North Dakota	Corrected
5.1.1 ii.	Items iv and vi may directly conflict with item ii, specifically "managing lands to maintain and enhance desired plant communities that benefit watersheds, wildlife, and water quality". Item xv makes strong assumptions that are not necessarily accurate. New water pipelines may provide water to areas not being intensively grazed due to lack of water. These areas may host native wildlife that will be negatively impacted with an increase of grazing pressure.	The BSSCD, Slope and Bowman Counties do not agree that these policy statements are in conflict. Roadless and Wilderness areas are not the only tools available to accomplish Policy statement ii.
5.1.1 vi	Multiple use covers fish and wildlife, just as it covers grazing. However, policies in this document seem to prioritize some uses above others, such as item v. Many native wildlife species are negatively impacted by habitat loss and fragmentation and having areas designated for their protection, such as roadless areas, are vital. These areas should be afforded as much support under the multiple use designation as grazing and opposing ALL proposed Wilderness and Roadless Area designations should be omitted from policies.	The BSSCD, Slope and Bowman Counties do not agree with this statement. The BSSCD, Slope and Bowman Counties, are in support of multiple use and protecting natural resources. The BSSCD, Slope and Bowman Counties do not agree with the opinion that roadless areas are vital to appropriate multiple use management which incorporates fisheries and wildlife.
Pg. 45	The document first says there are 63 wildlife refuges in ND and then two paragraphs later claims there are only 33.	Corrected

Pg. 53	Grazing and haying are important land management tools but should not be the primary use of these public lands. It should be noted that increased grazing may impact fisheries, wildlife, and hunting opportunities. Further, this action also appears counter to the reason Bowman-Haley Dam was first created "for flood damage reduction as well as fish and wildlife improvement..."	The BSSCD, Slope and Bowman Counties, want to maintain, and where appropriate increase, grazing as a land management tool for the Bowman-Haley US Corp of Engineers lands. Grazing can be used as a land management tool for the improvement of fish and wildlife habitat as well as other resources.
Pg. 58	The state should be striving to achieve the most sustainable energy development with as little impacts as possible and blanket statements about opposing regulations and supporting a decrease in monitoring with no justification, such as items iii and iv, have no place in a Natural Resource Policy Plan.	The BSSCD, Slope and Bowman Counties maintain these policies are completely with in the scope of this plan and are appropriate. This comment is an opinion which is driven by ND Game and Fish policies.
Pg. 74	Broad policies that put a single individual about state or federal agency such as iv may result in the counties denying a public benefit for the benefit of one. Careful consideration of how these policies may impact the public should be considered.	This is an appropriate comment that protects the rights of all, and particularly protects against the possibility of federal and state agencies from using exaction tactics to take water rights from private owners. Protecting the public from the increasing threat of exaction of water rights is a benefit to the entire public.
10.3.1 iv	Relating to items I and ii, it should be noted that funding may be dependent on Congress. As for item iv, from PLOTS standpoint, our habitat projects do not include a defined and funded weed control and monitoring plan. In this program, it is expected the landowner will observe, monitor and control weeds as part of the establishment of the habitat. However, we do have cost share and incentives that landowners can put towards weed control and future management. Also relating to item iv, habitat enhancement projects should not have stricter weed control policies than any other type of project, including wind, oil, grazing, new roads and any other development. It is not appropriate to suggest habitat enhancement projects are the only land use practice that may require weed management. If the counties are to oppose habitat enhancement projects without defined and funded weed control and monitoring plans, all other types of projects/development without the same should also be opposed.	The BSSCD, Slope and Bowman Counties, recognize that the landowner is responsible for the control of noxious weeds. We agree that both public and private land owners are responsible to observe, monitor and control weeds as part of the establishment of the habitat. The law is the law.
11.1 i	Fire has long been a part of the prairie ecosystem and in a natural occurring phenomenon. Grasslands evolved with fire and fire suppression has led to the invasion of grasslands, especially by introduced grasses and woody species. A blanket statement in opposition of prescribed burning as a conservation tool, such as item i, is counter intuitive to land management options.	The BSSCD, Slope and Bowman Counties, recognize other management tools exist that can be used instead of fire. The BSSCD, Slope and Bowman Counties, oppose using prescribed burning as a management tool. Historically and locally, prescribed burns have escaped and resulted in wildfires that have caused damage to private and public lands.

14.1.1	The Department does not support policy item xi and those that consider only a single permittee but do nothing to address the public needs or other conservation strategies. We also question the validity of item xii. A policy such as this only works if the most beneficial number of AUMs for the producer and the resource, policies that oppose change may only lead to failure in the future.	The BSSCD, Slope and Bowman Counties, feel this comment is a matter of opinion. The policy statements support multiple use management. The BSSCD, Slope and Bowman Counties, do not want AUMs to be reduced for the benefit of a single species. The economic vitality of the area and credible data should be used to determine the most beneficial number of AUMs.
16.1.1	Recreation is one of the components of multiple use designation. Policies such as item I, which outright oppose recreation, are in opposition to previous policies in this document that support multiple use management of public lands. Relating to item ii, there is not data supporting the statement that all single use/oil and gas roads, "unauthorized" roads and the additional identified roads are necessary to support livestock operations. An inventory should be done, and necessary roads identifies, rather that creating a blanket policy that opposes the Little Missouri National Grassland Travel Management Plan.	The BSSCD, Slope and Bowman Counties does not oppose recreation. The BSSCD, Slope and Bowman Counties oppose the infringement upon private lands and the possible condemnation of private lands for recreation. Therefore BSSCD, Slope and Bowman Counties oppose the use of federal funds to buy private land to extend the Maah Daah Hey Trail due to the fact that such funds will be used to infringe upon private lands and could also provide for possible condemnation of those lands.
	Add to the NRCS section “The NRCS uses a locally led conservation approach to conservation program planning at the county level. This established local process is a successful tool to address local resource concerns effectively and efficiently with federal programs” -- or your suggested similar language, we wanted to document that NRCS currently uses this locally led process so its documented that it is here and being used if it is ever proposed to change	Corrected
	The Annual precipitation average for Bowman County is 15.61, source ND Agriculture Weather Network, Bowman Site. There is not one of these sites in Slope County…….. so what to you recommend we do there? Our FSA director asked how we could have a range of average rainfall?	?, BSSCD : Sand Creek
N/A	Request to add BSSCD mailing address to the LUP website.	N/A
5.3	pg. 46: Stewart Lake National Wildlife Refuge -- Not on private land?	Corrected
	Editorial: insert "services provided by" into the sentence "Communities that participate in NFIP, and implement the floodplain management regulations, are eligible for * the FEMA Community Assistance Program – State Support Services Element (CAP-SSSE) (113)."	Change to accommodate their request.

	Editorial: Change "CAP-SSE provides support and funding for activities such as strategic planning, ordinance assistance, technical assistance, mapping coordination, state program and agency coordination assistance, and general outreach and training (113). " to "The CAP-SSSE program provides funding to states to provide technical assistance to communities in the NFIP and to evaluate community performance in implementing NFIP floodplain management activities. "	Change to accommodate their request.
	Editorial: Change "Where CAP-SSE provides general preparedness funding, planning, and management the Risk Mapping and Assessment Planning (Risk MAP) projects develop high quality maps and data to assess the factors contributing to increased risk of flooding in an area, and then develops plans to reduce risk (114)." to "Where the CAP-SSSE program provides direct support in managing local floodplain development, the Risk Mapping and Assessment Planning (Risk MAP) projects develop high quality maps and data to assess the factors contributing to increased risk of flooding in an area, and then develops plans to reduce risk."	Change to accommodate their request.
13.1 & 5.1.1	I think that there should be a policy statement in Section 13.1 & 5.1.1 to require the USFS to remove the Black-tailed Prairie Dog from their Indicator species list and Sensitive species list for North Dakota included in the 2002 Record of Decision for the Dakota Prairie Grasslands land and Resource Management Plan. In the ROD the USFS put the emphasis on the "good habitat" prairie dog towns and not on the negative impacts these towns have on the landscape and watersheds.	It is true that the plan states that the black-tailed prairie dog is listed as an indicator species. This is however, due to the fact that the Forest Service lists it as such, by discussing that it is listed as an indicator species, this plan remains relevant and up to date. Stating that the Forest Service lists the black-tailed prairie dog as an indicator species does not indicate that the Resource Management Plan supports the designation. BSSCD will create a policy statement in 13.1 stating "All agencies should regularly review indicator species designations and support the designation with credible scientific data. If the credible scientific data no longer supports an indicator species designation, the agency should remove said designation."
5.1.1	The LMGA would like to add another policy: Require use only of the FS manuals, policies, and Acts that are specific to the National Grasslands. The FS routinely bounces between manuals and handbooks developed for term direct permits, and other Forest land manuals and handbooks. The National Grasslands were developed under unique conditions and management objectives.	The Land and Resource Management Plan For the Dakota Prairie Grasslands Northern Region 2001 has been added to Section 2.2.1
7.1	The LMGA strongly supports all the policies. The LMGA proposes that an additional policy Require that the scientific data identify what agency or organization funded the research be added to the statements. Many climate change studies and computer models have been proven to be flawed and biased, depending on what agency or organization funded the research.	The BSSCD, Slope and Bowman Counties, agree and address this issue in the Credible Data Section 2.2
14.1	The LMGA would like to add to xv: “Support the use of site-specific soils and range site data to create appropriate objectives for livestock and wildlife. The US Forest Service should use the Ecological Site Descriptions developed by the NRCS and NDSU rather than devoting time to developing their own Ecological Site Descriptions.	Policy statement added 14.1 xv

16.1.1	The LMGA strongly supports all the policies. These policies are well thought and well addressed. The LMGA emphasizes that the Maah Daah Hey Trail is occupied by noxious weeds along its course. Maah Daah Hey Trail users are vectors for noxious weeds. Noxious weed eradication on this trail must be a priority.	The BSSCD, Slope and Bowman Counties, agree and feel that we have appropriately addressed the management of noxious weeds and the Maah Daah Hey Trail. Addressed in Section 10.3
13.1	My one suggestion is to let the Forest Service know we do not support using the Greater Sage Grouse as an indicator species in North Dakota. This fringe population was legally hunted for far too long in North Dakota. I strenuously objected to the North Dakota Game and Fish about this both in writing and in person with several directors years before the season on sage grouse was finally terminated. When West Nile virus hit this area it was also devastating to the sage grouse. The few birds that remained were netted in their nests to collar them as part of an over-zealous study on them and that was the final blow.	Policy statement added to Section 13.1 ix
13.1	We could write a policy statement that states agencies must review all indicator species using credible data to determine use as an indicator	Policy statement added to Section 13.1 ix
	Editorial: Change "FEMA funds much of North Dakotas Floodplain Management program in addition to fully funding FEMA CAP and Risk MAP. There are currently active Risk MAP projects within Bowman County and completed Risk MAP projects within Slope County" to "FEMA funds much of North Dakota's Floodplain Management program through the CAP-SSSE grant, and fully funds the Risk MAP program. There are currently completed Risk MAP projects within Bowman County and Slope County."	Corrected
9.2	pg 68: third paragraph of 'Drought' - '12-18 inches' is highlighted. Change to 12-13?	BSSCD: is going to look at some different sources for Slope county.
10.3.1	The LMGA strongly supports all the policies. Policies i. ii & x. are necessary to ensure that the Federal Land Management agencies recognize that all land users are vectors for spreading noxious weeds. The Deep Creek Vegetation Management Plan Environmental Assessment states "Livestock are a known vector for noxious weed spread and with removal of grazing from the project acres that vector would be removed." This statement completely ignored other known vectors: hunters, hikers, wildlife, and other users of the land. This statement was part of Alternative 1: No grazing.	The BSSCD, Slope and Bowman Counties, agree that our noxious weed management policies address your concerns here (see 10.3.1.x.). The BSSCD, Slope and Bowman Counties, encourages the LMGA to provide public comment on the EA referenced.
15	pg. 99: last Paragraph: ?12 miles south? (In reference to the landfill located in Marmarth that is permitted for treatment of oil contaminated soil?)	Corrected
3	pg. 9: 3,056 ft to 3,508 ft. Paragraph 4: 'Cities is the county seat', 'cities' is circled and highlighted.	Corrected
3.1	Pg 12: Par. 1: Change 'These included the Dakota or Lakota nation' to 'These included the Dakota and Lakota nations'	Corrected
5.5	Add FSA	FSA section added to document.
	Page 66: FEMA and NDSWC sections have some inaccuracies. Please contact Dionne Haynes at 701-328-4961 or dfhaynes@nd.gov for assistance with rewriting these sections	Y2: DW: phone call on 1/30/2019, waiting for Dionne Haynes to look at the document and develop specific comments, follow up email/phone call mid next week./ Follow up email sent 2/13/2019 with reminder of the deadline.

Appendix	Can the power point presentation be added to the appendix in the plan?	PowerPoint is included in the Document
2.2	The hydrologist with the Forest Service requiring that you bore across every creek when piping water. How does the document address this? Is there a policy statement requiring that other viable opportunities be addressed?	Y2 and Steering Committee Response: The credible data section requires that they provide evidence using credible data that that is the only viable option.
14	How will this plan help permittees fight grazing cuts?	Falen and Y2: The plan forces the government to have good reason and evidence to cut grazing numbers.
N/A	With other adopted plans in other areas, how have the agencies responded?	Falen Law and Y2 Response: It varies, it really depends on how forceful the county is with the agencies about acknowledging the plan.
N/A	How often do we need to update the policy plan?	Falen Law Response: Constantly, as things change update your plan. Steering Committee Response: We plan to look at it annually to make adjustments as needed. We don't want this document to fall through the cracks and become forgotten and outdated.
13.1	The Black-tailed Prairie Dog is listed as an indicator species for the Forest Service. If we were to get that changed and it is removed as an indicator species will we still be tied into having it as an indicator because it is listed in our plan?	Falen Law Response: No, if that occurs you would be able to update the plan to change that. Steering Committee Response: We are planning on updating this plan annually to keep up on any updates and changes like that.
N/A	There are many people who aren't directly associated with Forest Service or Bureau of Land Management land. Where else can this be used besides these agencies' land?	Falen Law Response: This is not limited to these two agencies. This LUP applies to any federal action or policy.
Appendix	Can the power point presentation be added to the appendix in the plan?	1/17/2019 PowerPoint included in the document
N/A	Does this document have any adverse effects on property rights?	Falen Law: No
2.2	Can this plan be used to make the Forest Service use credible data?	Falen Law: Yes, it actually references current statutes that are already in place and can be used to hold the Forest Service to their own data standards that they are already technically supposed to be following.
2.2/ 13.1	The Black-tailed Prairie Dog being used as an indicator species is not really held in credible science. Can we have a policy statement that addresses that?	Multiple Party Response: We could use a policy statement and tie it into the credible data section.
N/A	Did we address emissions and the Clean Air Act in this document?	Response: Yes, we did.
	Want a policy statement added: We don't agree with the USFS in using the Black-tailed Prairie Dog or the Greater Sage Grouse as indicator species.	Steering Committee and Falen Law

16.1.1?	If we do have pipelines come through and we have protest camping like in the past? Is there anything to address that?	Steering Committee and Falen Law Response: There are statements in the document regarding trespass and how the federal agencies should handle trespass.
N/A	Is the section of Hettinger county included in the Bowman Slope Soil Conservation District also included in this plan?	Steering Committee response: No, we only included the counties Bowman and Slope. We were able to include the section of Slope County outside of the BSSCD jurisdiction through permission from that conservation district.
N/A	Can we have the LUP website linked to the BSSCD website?	Steering Committee, Y2, yes.
11.1.x.	Regarding the fire policy statement 11.1 x. The policy statement should state that Slope County should have control of fire suppression efforts until 'we turn in over to the Forest Service'.	Steering Committee: That is dependent on the land ownership and jurisdiction where the fire is.
14.1.1.ix	Does this statement leave a permit open or locked to certain permittees? Is this statement in conflict with the present non-use policy?	Steering Committee: The policy statement states 'it should', leaving it at the discretion of the Grazing Association.
N/A	What is the process moving forward? Will there be an additional public hearing?	Steering, Falen, Y2: No it will go to the county board after this.
	Add 'Element' to CAP-State Support Services (Element). Change the abbreviation from CAP--SSE to CAP--SSSE. (Both throughout paragraph)	Corrected
	Page 121: NFIP stands for National Flood Insurance Program	Corrected
10.3	pg. 79: add houndstongue and palmer Amaranth to noxious species list	Corrected
5.1	pg. 37: Noxious Weeds first paragraph: change used in to used in	Corrected
3	pg. 9: Paragraph 6: remove approximately from 'There are approximately 24 civil townships in Bowman County'.	Corrected
3	pg. 9: 3,506 ft. is the correct height	Corrected
3	pg 9: Paragraph 7: North Fork Grand River about ten miles (southeast not east) of the city of Bowman	Corrected
	Pg 12: Par. 1: Change 'Most contact resulted from the fur trade until the Lewis and Clark' to 'Most contact resulted from the fur trade after the Lewis and Clark'	Changed
	Pg 14: Par. 2: Change 'They built houses and bars ' to 'They built houses and barns'	Corrected
	Pg 14: Par. 3: Strike out 'It subsequently became part of Billings County but then was re-established by the governor of North Dakota in 1907'. I am unaware that it was ever a part of Billings County.	Corrected
5.1	pg 33: par. 4: Change 'Museums around the world contain 30-million-year-old mammal fossils from the area.' to 'Museums around the world contain from 73 to 28-million-year-old marine, dinosaur, reptile, plant, and mammal fossils from the area.'	Changed

9.2	pg 68: The ND multi-hazard mitigation plan was updated in 2018 not 2014	Corrected
15	pg. 95: par. 3: Question mark on '6,972,8228 barrels of oil.'	Corrected. The number was 6,792,228 according to source.
10.3	On page 79, Section 10.3 the North Dakota Noxious Weed list has 12 species on listed, Houndstongue needs to be added to the list on this document.	Corrected
pg. 68	There is an error on page 68. The Hazard Mitigation Plan was updated at the end of 2018, the 2014 citation is now outdated.	Corrected
pg. 79	On page 79, the species Houndstongue and Palmer Amaranth need to be added to the Bowman County Noxious Weed List as those have been recently added.	Corrected
pg. 9	On page 9 there is an error, White butte is actually 3,506 feet tall.	These policies are completely with in the scope of this plan and are appropriate. This comment is an opinion which is driven by ND Game and Fish policies.
Maps	On the maps in the document move the Highway 21 label to the west so that it is not on top of the county border. Makes the highway on the map confusing to read.	Maps have been corrected.
N/A	We are seeing more and more camping on federal lands or other recreation uses and parking in areas that influence grazing or other uses. Is there anything in this document that addresses that?	Y2 and Falen Law Response (discussion with all parties): This document can help hold the agency accountable in making sure that 'all' impacts are taken into account and that other uses are not blamed exclusively on grazing. For example, assuring more strict enforcement of camping limits. This also applies to off-road vehicle use and other drought policy enforcement.
N/A	I have participated in review and comment period meeting and have also read through the policy plan. I am in favor of the natural resource policy plan.	Thank you for your comment.
N/A	I read and support this management land use plan. I can tell a lot of thought and time has been put into this plan.	Thank you for your comment.
N/A	I was glad to see the Bowman-Slope SCD take the initiative to work with Y2 Consultants and Falen Law Offices to complete this natural resource policy plan. I was first elected to the Little Missouri Grazing Association board of directors in the 1970's and have held many positions since then. During that time I have seen a constant increase in the regulations on both private and public land use. My sons and their families, including seven of my grandchildren, also live in Slope County. My wife and I would like to see them have the same chance at raising a family in the country that we have had. I hope that this natural resource policy plan can stop some of the constant bombardment of new regulations that is driving so many of the people out of the area. After reading the natural resource policy plan and concentrating on the policy statements, I fully support this plan as drafted. I would like to thank all of the people who took the time to prepare this plan. I believe it could be integral to several more generations of my family having the opportunity to live along the Little Missouri River in the Badlands of western North Dakota.	Thank you for your comment.
	We need this plan. It has been proven in other states to be beneficial. Thanks.	Thank you for your comment.

N/A	I am very much in favor of this plan and the way it is written. I feel it will be a very beneficial resource to all residents and landowners of Bowman and Slope counties.	Thank you for your comment.
N/A	I feel that local citizens should have a strong voice in the management practices on federal lands in Bowman County. For far too long, the federal employees that make decisions on the use of US Forest Service, Bureau of Land Management, and US Army Corps of Engineers have discounted the needs and desires of local landowners in favor of their personal preferences. The results have been mismanagement of some of the land. When the majority of noxious weed complaints from the public point to the relatively small amount of federal land, then obviously the private lands are being better managed than the federal lands, particularly in the case of Bowman Haley Dam under the management of the Corps of Engineers.	Thank you for your comment.
N/A	The plan is comprehensive and well written.	Thank you for your comment.
2.2.1	The LMGA strongly supports policy statements: i-iii, particularly ii. Many plans and policies have not been rigorously reviewed scientifically and is biased toward livestock reduction on the federal allotments. Quality control was missing from the Deep Creek Vegetation Management Project Environmental Assessment released for public comment on December 15, 2018. Data was simply wrong in several allotment specific proposals. Had the County Commissioners and/or the Soil Conservation District Board participated as a cooperating agency, the FS may have had to verify that data was credible scientific data.	Thank you for your comment.
4.1.1	The LMGA strongly supports all the policy statements, particularly vi: subject experts. Subject experts should be used by the FS when developing the NEPA analysis and the local cooperating agency should be able to verify an experts' credentials.	Thank you for your comment.
5.1.1	The LMGA strongly supports all the policy statements, particularly x: prairie dog management. The LMGA would like to see credible scientific data that supports the FS's claim that exterminating prairie dog colonies negatively impact other species (the black footed ferret is excluded from this discussion). For instance, what other habitats do burrowing owls occupy? Badgers occupy habitat other than prairie dog colonies as well. The FS prairie dog management as described in the 2002 Record of Decision for Dakota Prairie Grasslands Land and Resource Management Plan misleads the average reader that prairie dog towns are critical habitat for burrowing owls and badgers when other habitat types provide adequate habitat for those species.	Thank you for your comment.
5.2.1	The LMGA strongly supports the policy statements, particularly vii: providing adequate funding for controlling noxious weeds.	Thank you for your comment.
5.3.1	The LMGA strongly supports all the policies. These policies are well thought and well addressed.	Thank you for your comment.
5.4.1	The LMGA strongly supports all the policies that require the US Army Corps of Engineers to recognize their obligation to be a "good neighbor" and to direct management toward improving the Bowman-Haley Dam property.	Thank you for your comment.
5.6.1	The LMGA strongly supports all the policies. These policies are well thought and well addressed.	Thank you for your comment.
6.1	The LMGA strongly supports all the policies. These policies are well thought and well addressed.	Thank you for your comment.

9.4.1	The LMGA strongly supports all the policies. These policies are well thought and well addressed.	Thank you for your comment.
11.1	The LMGA strongly supports all the policies. These policies are well thought and well addressed. Local fire departments are well trained to initially attack wildland fires in their service areas.	Thank you for your comment.
12.2	The LMGA strongly supports all the policies. These policies are well thought and well addressed.	Thank you for your comment.
13.1	The LMGA strongly supports all the policies. These policies are well thought and well addressed. The LMGA emphasizes i. & v. as very important policies for the counties.	Thank you for your comment.
14.1	The LMGA strongly supports all the policies. These policies are well thought and well addressed.	Thank you for your comment.
15.1.1	The LMGA strongly supports all the policies. These policies are well thought and well addressed. The LMGA especially approves of v, x,xi, xiii, & xv. Using roads developed by energy companies keeps vehicles off the allotments and maybe closes more ecologically sensitive two tracks.	Thank you for your comment.
	This is a very concise draft proposal for Bowman and Slope counties in North Dakota. There may have been other land plans attempted, but, nothing has ever come close to affirming the culture of the people who settled these lands in the beginning, or recognizing those who reside here at the present time. A plan that has been this well developed is very much long over due. I am very happy to extend my personal approval to those who spent a lot of time to develop such a meaningful document!	Thank you for your comment.
N/A	I support and approve of the intent of this local plan to provide local input and documentation in federal decisions that impact the land and citizens of Bowman and Slope Counties. This plan accurately documents the custom, cultures and economies of Bowman and Slope Counties. The citizens of Bowman and Slope Counties have had significant input and consideration into the content of this plan.	Thank you for your comment.

APPENDIX C: PUBLIC MEETING POWERPOINT PRESENTATION

Page left intentionally blank