

Lake DeSmet Conservation District

Long Range Natural Resource

Land Use Plan

2017-2022



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LAKE DESMET CONSERVATION DISTRICT LONG RANGE NATURAL RESOURCE LAND USE PLAN

Lake DeSmet Conservation District's (LDCD) Long Range Natural Resource Land Use Plan (LRP) has been developed in partial fulfillment of the requirements of the Wyoming Department of Agriculture Base Funding Criteria as per "Wyoming Conservation District Law" (W.S. 11-16-101 through 11-16-134).

It is the intent of this Plan to identify natural resource concerns as they relate to the agricultural heritage, resource base, soil health, water quality and quantity, and wildlife habitat, as well as protecting the tax base and general health and safety of the residents of LDCD's boundaries and use this information to conduct responsible conservation planning. Input from local rural and urban citizens, State, Federal, and local government entities, as well as numerous other constituents will be used to establish goals and objectives. These goals and objectives will be used to provide assistance to LDCD in providing focused and prioritized efforts in natural resource planning, land use, and land management issues.

LDCD Mission Statement:

"The Lake DeSmet Conservation District is dedicated to the development and implementation of programs to provide leadership and technical assistance for the conservation of Johnson County's natural resources, agricultural heritage, resource base, to promote the control of soil erosion, to promote and protect the quality and quantity of Wyoming's waters and all other natural resources, to preserve and enhance wildlife habitat, to protect the tax base, and to promote the health, safety, and general welfare of the residents of this county through responsible conservation planning"

LDCD Long Range Natural Resource Land Use Planning Process

Beginning in 2001 LDCD implemented the initial LDCD Long Range Plan which was submitted to and filed with the Johnson County Clerk. Subsequently LDCD has updated, written, and submitted a Long Range Plan every five (5) years.

LDCD's original goals were derived from public participation in order to be driven and shaped by the local constituents. In order to gather valuable input from the public surveys are mailed out to randomly selected property owners. Additionally, surveys are made available on LDCD's website and are published in two (2) weekly editions of the local newspaper publication in order to reach as many constituents as possible. The public has provided input on where they feel LDCD should focus our efforts under each goal. They ranked the ten (10) most important natural resource, land use, or land management issues facing our community. The public also ranked the most important services LDCD provides with our products and programs. Additionally, the public can rank five (5) customer groups they feel LDCD should focus our efforts on providing information, products, and programs to. Results from the survey have been formulated and summarized and will be used as a directional tool and will be used as the

foundation for LDCD's Long Range Natural Resource Land Use Plan. A copy of the survey is available at the District office located at 621 West Fetterman Drive Buffalo, WY.

Public input made within the 45-day comment period was incorporated to update the goals, objectives, and LDCD policies.

Current goals of LDCD are outlined as follows, recognizing that there is programmatic overlap within some of the programs:

- Maintain LDCD activities and address new resource concerns to complete future projects
- Provide educational/informational opportunities for private landowners, residents, and youth of LDCD
- Increase opportunities for conservation of natural resources through further development of the cost-share program
- Continue to take an active role in protecting air, soil, and water through safe collection and disposal of hazardous wastes and recycling
- Continue to provide technical assistance to agriculture producers, developers, and planners to ensure proper conservation planning for natural resources
- Continue involvement in watershed, rangeland, and irrigated lands planning
- Wildlife habitat enhancement
- Assist producers with regulatory compliance
- Continue annual tree program
- Assist with invasive weed management
- Continue to collaborate with State, Federal, and local government entities on projects and planning.

LDCD recognizes that there will be continuous change to natural resource issues and concerns based on evolving social and economic issues and this will result in programmatic evolution through time.

LDCD has been a Local Government Cooperator in the Bighorn National Forest's Forest Plan Revision and a Cooperating Agency in the Bureau of Land Management (BLM) Buffalo Field Office Resource Management Plan (RMP) revision.

LDCD relies on the USDA-Natural Resource Conservation Service (NRCS) for technical assistance and other support.

LDCD anticipates our continued membership in the Wyoming Association of Conservation Districts (WACD) and National Association of Conservation Districts (NACD).

Introduction

During the early 1930's a number of variables contributed to the rapid deterioration of western agricultural lands. Poor farming procedures, misuse of rangeland, and extreme drought were the most notable of these variables. Recognizing the need to reduce and stop further deterioration of these valuable lands a bill was introduced to establish the Wyoming Conservation Act in February 1941. This Act authorized the establishment of Soil

Conservation Districts. These entities were given the responsibility of natural resource conservation within their respective districts. In 1946 LDCD was established with the mission to conserve our nation's soil and water resources.

Authority

LDCD, pursuant to W.S. 11-16-122 (iv) and (xvi) of the Wyoming Conservation Districts Law is authorized to develop plans for LDCD and to file said plans in the office of the Johnson County Clerk.

Governmental Subdivision of the State

LDCD is a local government and a governmental subdivision of the state as defined and established by the Wyoming Statutes at Title 11, Chapter 16, et seq., entitled – “Wyoming Conservation Districts Law.” The Board of Supervisors of LDCD (5 members) are elected by the people of LDCD at General Elections, by popular vote. The elected members represent both the rural and urban populations within LDCD. The Supervisors are the only locally elected board charged specifically with the responsibility of representing local people on natural resource issues. A Conservation District Supervisor serves the community and district voluntarily and without pay. The LDCD Board of Supervisors employs a District Manager, and other personnel to implement the projects and programs of LDCD. LDCD programs and administration are supported by a voter approved one-mill levy, which generates revenue for projects and grants.

LDCD is guided by the legislative declarations and policy of the Wyoming State Legislature with the following charge:

AS REPRINTED FROM: W.S. § 11-16-103 Legislative declarations and policy

It is hereby declared that the farm and grazing lands of Wyoming are among the basic assets of the state; that improper land use practices cause and contribute to serious erosion of these lands by wind and water; that among the consequences which would result from such conditions are the deterioration of soil and its fertility and the silting and sedimentation of stream channels, reservoirs, dams and ditches; that to conserve soil, and soil and water resources, and prevent and control soil erosion, it is necessary that land use practices contributing to soil erosion be discouraged and that appropriate soil conserving land use practices be adopted.

It is hereby declared to be the policy of the legislature to provide for the conservation of the soil, and soil and water resources of this state, and for the control and prevention of soil erosion and for flood prevention for the conservation, development, utilization, and disposal of water, and hereby to stabilize ranching and farming operations, to preserve natural resources, protect the tax base, control floods, prevent impairment of dams and reservoirs, preserve wildlife, protect public lands, and protect and promote the health , safety and general welfare of the people of this state.

The above, being the charge and direction of the Wyoming Legislature for all Conservation Districts within the State of Wyoming, LDCD's responsibility to the cooperators of the District is measurable and accountable by the actions LDCD takes to accomplish the direction given by the Wyoming Legislature. The LDCD Board of Supervisors, an elected body and a local government, is the local guide to the management of lands within the jurisdiction of LDCD and is accountable to the citizens of the District.

Federal Involvement

This plan is intended to provide a guide for the people of LDCD, and local, state, and federal agencies in coordinating their management activities. This should be done in a manner consistent with locally led planning efforts. The intent is to ensure that federal agency actions provide additional benefits to local citizenry. Coordination with a local government, such as LDCD, can help achieve this important goal.

Statutes exist that outline roles of local government in federal agency planning activities. These statutes generally outline the need to coordinate land use planning activities with state agencies, boards, commissions and departments; and provide technical assistance, information and education to the state, counties, municipalities, regions, and political subdivisions of the state, relative to land use planning.

At the highest levels of our government this intent is evident and mandated by statute. In the Executive Order (13352) for Facilitation of Cooperative Conservation, August 26, 2004, guidance is given to multiple federal government agencies including the Department of the Interior, Department of Agriculture, Department of Defense, and the Environmental Protection Agency, and states:

“... to ensure that... implementing laws relating to the environment and natural resources in a manner that promotes cooperative conservation, with an emphasis on appropriate inclusion of local participation in Federal decision making, in accordance with their respective agency missions, policies, and regulations.”

“Cooperative conservation” in said order is defined as: “actions that relate to use, enhancement, and enjoyment of natural resources, protection of the environment, or both...”

The order goes on to state that federal agencies must carry out environmental programs and projects in a manner which:

- “(i) facilitates cooperative conservation;*
- (ii) takes appropriate account of and respects the interests of persons with ownership or other legally recognized interests in land and other natural resources;*
- (iii) properly accommodates local participation in Federal decision making;”*

Upon gaining Statehood, the State of Wyoming retained concurrent civil and criminal jurisdiction by the State of Wyoming on all lands ceded to the federal government (W.S. 36-10-103). To this end, local government works in coordination and cooperation with federal agencies.

It is the intent of LDCD to ensure communication with federal and state agencies on proposed actions that affect resources that lie within jurisdictional boundaries of LDCD. Where appropriate, the LDCD board will coordinate with federal and state agencies in planning and implementation of those actions. When formal communication is required, official notification and delivery of information and documents should be directed to the Lake DeSmet Conservation District, 621 West Fetterman Drive, Buffalo, WY 82834. Electronic correspondence should be sent to zach.byram@LDCD.org.

Statutory Requirements for Local Government-to-Federal Interaction and Influence

1. The National Environmental Policy Act (NEPA)

NEPA applies to “*every major Federal action significantly affecting the quality of 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. There are several ways local governments can participate in the NEPA process, depending on the type of federal decision, the level of commitment of the local government, and the goal of the local government.

First, the local government can use its local land use or resource plan as part of the federal agency’s “consistency review” process. Under this provision, if the federal agency, in the course of writing an EIS, receives a local land use or resource plan, NEPA commands the federal agency to “*discuss any inconsistency of a proposed action with any approved state or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the [environmental impact] statement should describe the extent to which the [federal] agency would reconcile its proposed action with the [local government] plan or law.*” (40 C.F.R. §§ 1506.2, 1506.2(d)).

NEPA also requires that copies of comments by state or local governments must accompany the EIS or EA throughout the review process (421 U.S.C. §4332(c)).

Second, local governments can separately participate in the NEPA process as a “cooperating agency” (40 C.F.R. §1508.5). Pursuant to NEPA, an applicant for “cooperating agency status” must both (1) be a locally elected body such as a conservation district board of supervisors or a county commission; and (2) possess “special expertise.” A local government’s special expertise is defined as the authority granted to a local governing body by state statute. Wyoming statutes specifically recognizes a conservation district’s duty to:

“provide for the conservation of soil, and soil and water resources of this State, and for the control and prevention of soil erosion and for flood prevention or the conservation, development, utilization and disposal of water, and thereby stabilize ranching and farming operations, to preserve natural resources, protect the tax base, control floods, prevent impairment of dams and reservoirs, preserve wildlife, protect public lands, and protect and promote the health, safety and general welfare of the people of this state.” W.S. 11-16-103(b).

Wyoming statutes go on to state that the powers and duties of conservation districts and

supervisors include “*cooperate, including but not limited to representing the conservation district as a cooperating agency with special expertise as provided by the National Environmental Policy Act....*” and to:

“Develop and implement comprehensive resource use and management plans for range improvement and stabilization.....In developing plans under this paragraph, the supervisors of the district shall consider the customs and cultures of residents of the district as those customs and cultures relate to the land and resource, current and historical information and data related to the uses of the land and resource... The supervisors of a conservation district which has officially adopted a comprehensive plan pursuant to W.S. §11-16-122 (b)(xvi) may coordinate with federal agencies as provided in the Federal Land Policy and Management Act of 1976, the Forest Rangeland Renewable Resources Act of 1974, as amended by the National Forest Management Act of 1976 and any other federal statute which provides for coordination with local governments and federal regulations adopted pursuant to this statute.” W.S. §11-16-122(b)(viii), (xvi) and (xxviii).

Third, the Wyoming Statutes state:

“When representing a conservation district as a cooperating agency in matters related to the National Environmental Policy Act and in federal land planning, implementation and management actions, supervisors of a conservation district shall be deemed to have special expertise on all subject matters for which they have statutory responsibility as provided in W.S. 11-16-122, including but not limited to all subject matters directly or indirectly related to stabilization of the agriculture industry, protection of natural resources including but not limited to data and information, conservation of soil and water resources, control and prevention of soil erosion, flood prevention of the conservation , development, utilization and disposal of water within the district.” W.S. § 11-16-135.

These statutes clearly define the local government’s “special expertise” required to be a cooperating agency pursuant to NEPA.

2. Federal Land Policy and Management Act (FLPMA)

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 (43 U.S.C. § 1712):

“To the extent consistent with laws governing the administration of the public lands, coordinate the inventory, planning and management activities for such lands with the land use planning and management programs of other federal departments and agencies of the State and local governments within which the lands are located...considering the policies of approved State and tribal land resource management programs.”

Such coordination is to be achieved by:

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

- The BLM must assure that local land use plans germane to the development of BLM land use plans are given consideration.
- To the extent practical, the BLM must assist in resolving inconsistencies between local and BLM land use plans.
- The BLM must provide for the meaningful involvement of local governments in the development of BLM land use programs, regulations, and decisions that may impact non-federal lands.

Additionally, FLPMA requires BLM land use plans to be consistent with local land use plans, provided that achieving consistency does not result in a violation of federal law. FLPMA states:

“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 (Bureau of Land Management, 2012). FLPMA’s consistency review requirement states that if a BLM land use plan is inconsistent with a local land use plan, the BLM owes an explanation of how achieving consistency would result in a violation of federal law.

Finally, FLMPA requires that the BLM also provide for a Governor’s consistency review as part of the land use planning process (43 C.F.R. § 1610.3-2€).

3. The National Forest Management Act (NFMA)

NFMA, which governs the U.S. Forest Service (USFS), requires the agency to “coordinate.” The NFMA requires:

“[T]he Secretary of Agriculture shall develop, maintain, and, as appropriate, revise land and resource management plans for units of the National Forest System, coordinated with the land and resource management planning processes of State and local governments and other Federal agencies (16 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.

4. Governor’s Consistency Review Process

State Governors are entitled to a separate consistency review of BLM and land use plans, revisions, and amendments. Title 43 C.F.R § 1610.3-2 provides an opportunity for the Governor to review all proposed plans 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.

Multiple Use

LDCD, and its citizens, recognize that federal law outlines a multiple use management paradigm of federally managed lands. The Federal Land Policy and Management Act states in objective 7, *“that management be on the basis of multiple use and sustained yield unless otherwise specified by law;”* and in objective 12 the BLM is mandated to manage public lands *“in a manner which recognizes the Nation’s need for domestic sources of minerals, food, timber and fiber.”*

The Bureau of Land Management Buffalo Field Office Approved Resource Management Plan (RMP) 2015, which directs the local BLM field offices, states a commitment to multiple use on page 4: *“An RMP is a land use plan that provides direction for managing public lands administered by the BLM in accordance with its multiple use mandate.”*

The National Forest Management Act of 1976, Part 1600 states

“(3) to serve the national interest, the renewable resource program must be based on a comprehensive assessment of present and anticipated uses, demand for, and supply of renewable resources from the Nation’s public and private forests and rangelands, through analysis of environmental and economic impacts, coordination of multiple use and sustained yield opportunities as provided in the Multiple-Use Sustained-Yield Act of 1960 and public participation in the development of the program.”

The Multiple Use Sustained Yield Act (16 U.S.C. 528-531) states, *“It is the policy of the Congress that the national forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes.”* More specifically the Bighorn National Forest Plan 2005 states

“Goal 2, Provide a variety of uses, values, products, and services for present and future generations by managing within the capability of sustainable ecosystems. Recognize the interdependence between the BNF and local communities. Consider natural and

social systems across landownership boundaries, including land use patterns and open space.”

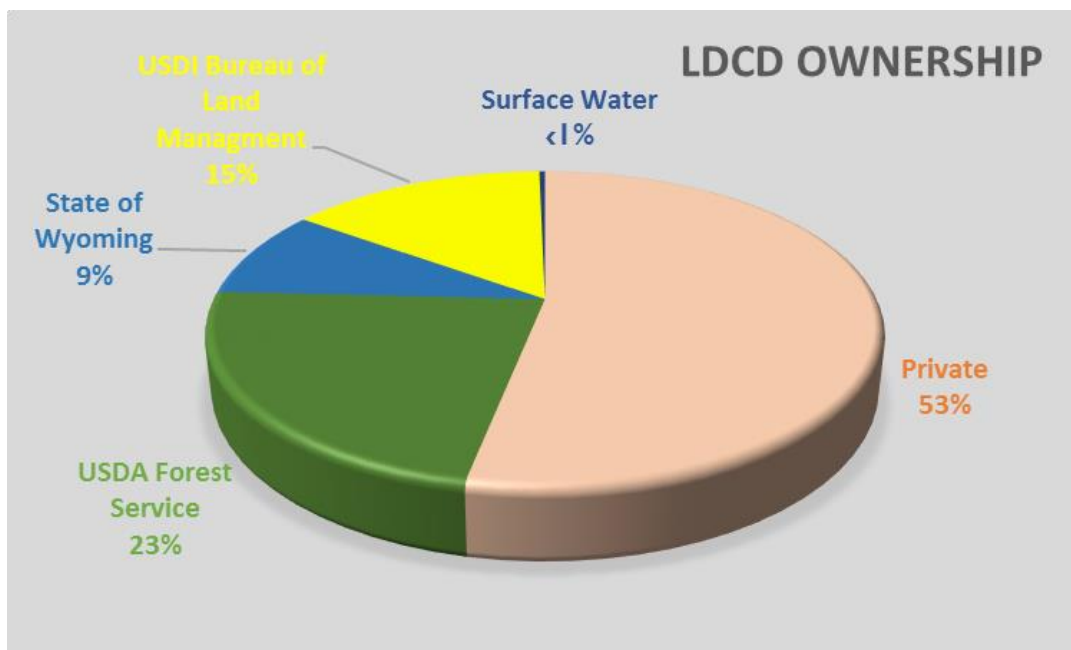
LDCD has long supported multiple use, not only for federally managed lands, but also for State lands. Sustaining multiple uses includes preservation of historic and traditional economic uses on federally and State managed lands within and affecting LDCD.

General Information about LDCD

LDCD includes the northern ½ of Johnson County, Wyoming. Johnson County is located in the western portion of the Powder River Basin, a large topographic drainage area and geologic structure known for its coal, gas, and oil deposits that extends 120 miles east to west and 200 miles north to south.

The western boundary borders both Johnson and Bighorn Counties. The northern boundary borders Sheridan County and the eastern boundary borders Campbell County. The southern boundary is shared with Powder River Conservation District’s northern border.

LDCD is comprised of 1,450,840 acres, which includes the incorporated town of Buffalo and is wholly located in Johnson County, in northeast Wyoming. Of the total area approximately 769,264 acres are privately owned; 327,265 acres are managed by the USDA Forest Service; 214,129 acres are managed by the USDI Bureau of Land Management; 131,762 acres are managed by the State of Wyoming; 3,211 acres are owned by Local government; and 4,771 acres are comprised of water bodies. Land ownership is shown in the chart below:



Water Resources

Ground Water

Past studies by the Water Resources Research Institute of Wyoming indicate that there are five major aquifers in northeast Wyoming (Feathers, Libra, Stephenson and Eisen, 1981). The aquifers include:

- Madison Aquifer System
- Dakota Aquifer System
- Fox Hills/Lance Aquifer System
- Fort Union/Wasatch Aquifer System
- Quaternary Alluvial Aquifer System.

Ground water from these aquifers has historically been used to support domestic uses and municipal water systems, agricultural livestock and crop production, as well as uranium mining and processing in Johnson County. A recent water study of the Powder/Tongue River Basin, which was prepared by HKM Engineering, Inc., summarized general hydrologic and groundwater quality characteristics, and groundwater development potential for each of the five aquifers in northeast Wyoming.

Madison Aquifer System

The Madison Aquifer System contains ground water available from the Tensleep Sandstone, Amsden Formation, Madison Limestone, Big Horn Dolomite, and Flathead Sandstone geologic units. Ground water obtained from Madison Limestone is used for municipal water systems, industrial use, irrigation, and livestock purposes. It is probably the most important high yield aquifer in Wyoming.

Groundwater Yields: Flow yields are recorded up to 400 gpm (Tensleep Sandstone). A yield of 600 gpm is reported for an irrigation well at the foot of Big Horn Mountains. Yields small quantities of water to springs from sandstone and conglomerate in the Big Horn Mountains (Flathead Sandstone).

Groundwater Quality: Ground water in Tensleep Sandstone contains highly variable levels of total dissolved solids that range from <300 to 3,240 mg/l. Water constituents contain variable amounts of magnesium carbonate, calcium magnesium sulfate, sodium

sulfate, calcium sodium sulfate, and calcium sulfate.

Dakota Aquifer System

The Dakota Aquifer System contains ground water in the Muddy Sandstone (New Castle Sandstone) and Cloverly Formation.

Historical Use: Domestic use and livestock.

Groundwater Yields: Flowing yields of 1-40 gpm are recorded in Cloverly Formation. No data is available for yields in Muddy Sandstone.

Groundwater Quality: In neighboring Natrona County, ground water from Cloverly Formation primarily contains Sodium bicarbonate. Total dissolved solids range between 300 and 3,000 mg/l.

Development Potential: No data is available from Powder/Tongue River Basin. Probably capable of yielding small quantities of no more than 10 gpm to wells (Muddy Sandstone). Well yields of 5 to 20 gpm may be expected from the Cloverly Formation.

Fox Hills/Lance Aquifer System

The Fox Hills/Lance Aquifer System comprises ground water in the Lance and Fox Hills geologic formations.

Historical Use: Domestic use and livestock (Lance Formation). Municipal water systems, domestic use, and livestock (Fox Hills Formation).

Groundwater Yields: <15 gpm in both formations.

Groundwater Quality: Total dissolved solids range from 500 to 3,060 mg/l. Ground water primarily contains sodium sulfate or calcium sulfate. However, water constituents are highly variable. This ground water is generally considered undesirable for domestic use due to potential elevated levels of iron, manganese, and sulfate. It is generally considered poor to good for livestock use; however, more suitable groundwater quality for livestock is found at depths less than 1,000 feet in Fox Hills Sandstone. Elevated salinity and/or SAR levels make this ground water generally unsuitable for irrigation.

Fort Union/Wasatch Aquifer System

Groundwater supplies from the Fort Union/Wasatch Aquifer System represent supplies obtained from the Wasatch Formation and Fort Union Formation. The Wasatch Formation is roughly 500 to 2000 feet thick while the Fort Union Formation is estimated to be 1,200 to 3,900 feet.

Historical Use: Important source supporting domestic uses and livestock (Wasatch Formation). Ground water from the Fort Union Formation is used extensively at depths of less than 1,000 feet.

Groundwater Yields: <15 gpm within the Wasatch Formation. In contrast, flowing yields of 1 to 60 gpm have been reported in the Fort Union Formation where ground water is confined.

Groundwater Quality: In the Wasatch Formation, total dissolved solids are variable and range from 141 to 6,620 mg/l. Sulfate levels range from 0.6 to 4,080 mg/l. The iron content of ground water in the Wasatch Formation ranges between 0 and 25 mg/l. Water varies from soft to very hard. Total dissolved solids in the Fort Union Formation vary from 484 to 4,630 mg/l. Sulfate ranges from 0.3 to 1,870 mg/l while iron content ranges between 0.06 to 19 mg/l.

Quaternary Alluvial Aquifer System

The Quaternary Aquifer System is a relatively thin aquifer that is typically located within alluvium and terrace deposits.

Historical Use: Ground water from this aquifer has been used to support municipal water systems, domestic uses, and livestock production.

Groundwater yields: 50 to 300 gallons per minute (gpm) are possible, often through induced recharge.

Groundwater Quality: Total dissolved solids generally range from roughly 100 to >4000 milligrams per liter. Otherwise, water chemistry varies considerably on a geographical basis.

Surface Water

Johnson County is situated almost entirely within the Powder River Basin. Most of the perennial streams, which reach the Powder River, originate in the Big Horn Mountains. A small portion of the headwaters of the Upper Tongue River Basin is located in the northwest corner of Johnson County. The headwaters of the Upper Tongue River basin and related tributaries drain into Montana. There are four (4), HUC 6 level hydrologic units (Figure 1) in Johnson County that are connected to the Powder River Basin but because of little or no population only four of these were surveyed for inclusion in this document. These hydrologic units are the following watershed areas:

- Clear Creek
- Crazy Woman
- Upper Powder River
- Middle Fork

Major rivers and streams, within the portion of the Powder River Basin in Johnson County, include the Powder River, Clear Creek and Crazy Woman Creek (Figure 1). Primary tributaries to Powder River are Salt Creek, South Fork Powder River, North Fork Powder River, Red Fork Powder River, Beaver Creek, Middle Fork Powder River and Buffalo Creek. Within the Clear Creek drainage, the primary tributaries are Piney Creek, Little Piney Creek, North Piney Creek, South Piney Creek, Shell Creek, Rock Creek, Johnson Creek, and French Creek. Primary tributaries of the Crazy Woman Creek drainage are Middle Fork Crazy Woman Creek, Billy Creek, Muddy Creek, North Fork Crazy Woman Creek, Little North Fork Crazy Woman Creek, and Kelly Creek (HKM Engineering, Inc., 2002).

Existing Flows

As stated earlier, most of the perennial streams in Johnson County that reach the Powder River originate in the Big Horn Mountains. However, there are other streams in the Powder River Basin that do not receive direct surface runoff from the Big Horn Mountains.

These streams are generally ephemeral and flow as a consequence of snowmelt and rainfall that generate surface runoff within local drainages. Average monthly stream flows are available for several streams in Johnson County under normal, wet and dry conditions (Table 1).

| TABLE 1 AVERAGE STREAM FLOWS AT SELECTED NATURAL FLOW STATIONS IN THE POWDER RIVER BASIN NORMAL, WET, AND DRY CONDITIONS 1970-1999 | | | | | | | | | | | | | | |
|---|---|--------|---------------------------------|-----|-----|-----|-----|-----|-------|-------|--------|-------|-------|--------|
| Station Number | Station Name | | Average Stream Flow (Acre Feet) | | | | | | | | | | | |
| | | | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Annual |
| 06314000 | North Fork Crazy Woman Creek near Buffalo, WY | Normal | 681 | 494 | 412 | 327 | 273 | 313 | 1,079 | 5,238 | 5,249 | 1,878 | 934 | 17,577 |
| | | Wet | 557 | 448 | 366 | 314 | 275 | 331 | 875 | 7,077 | 9,409 | 3,174 | 1,220 | 24,787 |
| | | Dry | 599 | 475 | 373 | 285 | 232 | 264 | 1,648 | 4,661 | 3,031 | 1,127 | 598 | 13,744 |
| 06313950 | North Fork Crazy Woman Creek Below Pole Creek near Buffalo, WY | Normal | 670 | 487 | 403 | 316 | 261 | 305 | 1,062 | 5,365 | 5,452 | 1,909 | 946 | 17,873 |
| | | Wet | 542 | 449 | 359 | 315 | 272 | 329 | 874 | 7,018 | 9,478 | 3,068 | 1,159 | 24,544 |
| | | Dry | 596 | 463 | 368 | 27 | 227 | 260 | 1,652 | 4,799 | 3,037 | 1,127 | 598 | 13,744 |
| 06314500 | North Fork Crazy Woman Creek Below Spring Draw near Buffalo, WY | Normal | 581 | 430 | 358 | 268 | 229 | 273 | 1,081 | 7,809 | 7,212 | 2,176 | 946 | 22,032 |
| | | Wet | 539 | 398 | 324 | 291 | 221 | 314 | 798 | 9,188 | 15,384 | 3,455 | 1,171 | 32,766 |
| | | Dry | 510 | 374 | 287 | 222 | 177 | 212 | 1,878 | 6,015 | 3,677 | 1,130 | 577 | 15,483 |
| 06317300 | Sourdough Creek near Buffalo, WY | Normal | 73 | 56 | 47 | 36 | 30 | 33 | 96 | 822 | 847 | 265 | 115 | 2,504 |
| | | Wet | 66 | 50 | 41 | 37 | 29 | 40 | 94 | 953 | 1,555 | 379 | 137 | 3,462 |
| | | Dry | 64 | 45 | 36 | 25 | 22 | 28 | 153 | 457 | 433 | 152 | 75 | 1,545 |
| 06317340 | Little Sourdough Creek near Buffalo, WY | Normal | 34 | 20 | 7 | 3 | 2 | 5 | 188 | 201 | 133 | 35 | 16 | 668 |
| | | Wet | 65 | 39 | 13 | 5 | 3 | 9 | 359 | 373 | 242 | 62 | 28 | 1,242 |
| | | Dry | 16 | 11 | 3 | 1 | 1 | 2 | 106 | 95 | 55 | 12 | 5 | 314 |
| 06319470 | South Rock Creek at Forest Boundary near Buffalo, WY | Normal | 461 | 353 | 296 | 234 | 199 | 220 | 818 | 5,550 | 5,256 | 1,631 | 730 | 16,268 |
| | | Wet | 437 | 337 | 274 | 244 | 187 | 244 | 621 | 6,203 | 10,264 | 2,837 | 914 | 23,106 |
| | | Dry | 414 | 308 | 240 | 189 | 152 | 181 | 1,425 | 4,299 | 2,691 | 882 | 466 | 11,594 |
| 06319480 | South Rock Creek Above Red Canyon near Buffalo, WY | Normal | 439 | 336 | 278 | 216 | 186 | 208 | 790 | 5,473 | 5,219 | 1,595 | 706 | 15,949 |
| | | Wet | 417 | 325 | 262 | 238 | 180 | 232 | 599 | 6,175 | 10,222 | 2,742 | 882 | 22,788 |
| | | Dry | 395 | 293 | 227 | 178 | 143 | 170 | 1,383 | 4,239 | 2,637 | 850 | 445 | 11,228 |

Geology

The Big Horn Mountains, which are part of the Rocky Mountains, represent a significant geologic feature along Johnson County's west boundary. Available mapping, prepared by the Wyoming Geological Survey, indicates that older Pre-Cambrian rocks characterize a portion of the Big Horn Mountains that are situated in the northwest portion of Johnson County.

The eastern flank of the Big Horn Mountains generally contains Paleozoic and Mesozoic sedimentary rocks that extend east up to several miles west of Interstate 25. In the southern part of Johnson County, Mesozoic sedimentary rocks are believed to extend from the west Johnson County boundary to within a few miles west of Interstate 25 (Figure 2).

Cenozoic sedimentary rocks generally characterize the remaining portions of Johnson County (Harris, 1996).

Soils

Soils found within LDCD's district boundaries are diverse and large differences in soil properties can change in short distances. The distribution and occurrence of these soils can depend on a large number of factors which include slope, parent material, living organisms, climate, and time. For descriptive purposes soils in the northern half of Johnson County soils are grouped by Major Land Resource Areas (MLRAs). The dominant MLRA within the district is 58B- Northern Rolling High Plains Southern Part (Figure 3). Soils in this MLRA are formed in alluvium, eolian sediments, colluvium, or residuum on fans, terraces, hills and plateaus (BLM 2015). The remaining areas are comprised of MLRA 33- Semiarid Rocky Mountains, 43- Northern Rocky Mountains, and 48- Northern Rocky Mountain Foothills.

Vegetation

Native vegetation fills a foundational role in LDCD, providing forage and cover for both wildlife and livestock, visual aesthetics, erosion control, soil fertility, photosynthesis, carbon sequestration, evapotranspiration, and economic benefits to LDCD. Several general vegetation types are prevalent in LDCD and reflect the differing climatic and parent soil regimes in the region of LDCD (Figure 4).

Forests:

Forested areas are found mostly along LDCD's western boundary and are dominated by lodgepole pine, ponderosa pine, Douglas fir, Engelmann spruce, subalpine spruce, and aspen. These species can be found as a pure single species stand to mixed species stands. Ponderosa pine dominates at the lower elevations and on the northern aspects, Douglas fir and lodgepole pine can be found. As the elevation rises ponderosa pine becomes less frequent while Douglas fir and lodgepole pine forests increase and become dominant. Aspen stands are easily influenced by soil moisture and fertility therefore aspen stands are often small and scattered within other forest types. Forests within the LDCD boundary support, define, and create stability for many resources, including watersheds, wildlife, recreation, air quality, other plant communities, and products for mankind.

Woodlands:

Woodland communities are scattered throughout the District boundaries and can be found as monotypic to large mixed stands of aspen, limber pine, ponderosa pine, Rocky Mountain juniper, and Utah juniper. The woodlands are typically widely dispersed with grasses, forbs, and shrubs in the understory. Woodlands typically do not produce wood that is highly desirable for wood products, however, these woodlands are important in the landscape as they provide cover, food, and protection for many wildlife species.

Grasslands:

Grasslands typify the majority of the lands within LDCD and symbolize the “open space” prairie landscapes and can be divided into two categories, short-grass prairie and mixed-grass prairie. Grasslands can be found from the foothills of the Bighorns to the northern, southern, and eastern boundaries of LDCD. These grasslands are dominated by cool-season grasses, sedges, and shrubs. Sagebrush is the dominant shrubland type and is typically found on the open plains but can be found in the mountains as well. Wyoming big sagebrush and mountain big sagebrush are the most prevalent sagebrush species. Wyoming big sagebrush is general found in the lower elevations on drier sites while mountain big sagebrush occurs in the higher elevations in more mesic conditions.

Short-grass Prairie: This vegetation type generally occurs on drought-prone, mildly alkaline, medium-textured, and fine-textured soils. Dominant vegetation in the short-grass prairie consists of blue grama, western wheatgrass, sand dropseed, needle and thread, scarlet globemallow, and four-wing saltbush.

Mixed-grass Prairie: This vegetation type is a combination of low, medium, and high herbaceous rangeland grasses. The topography generally consists of rolling plains with many dissecting draws. Mixed-grass prairie can be divided into several types and is characterized by common species such as needle and thread, western wheatgrass, blue grama, prickly pear cactus, and scarlet globemallow. Wyoming big sagebrush is a common shrub species found in the mixed-grass prairie.

Shrublands: Shrublands with the District consist of a combination of sagebrush crown closure and a variety of understory grasses and forbs and include sagebrush shrublands, Wyoming big sagebrush/grasslands, and Mountain big sagebrush/grasslands. These vegetative communities are widely distributed and comprise a large portion of lands located within LDCD district boundaries.

Climate

Precipitation: Long-term precipitation data from the National Weather Service indicates that the community of Buffalo receives an average of about 13 to 14 inches of precipitation per year (Figure 5). The U.S. Forest Service reports that average annual precipitation in the Bighorn National Forest ranges from 35 inches in the Cloud Peak Wilderness to roughly 15 inches near the eastern Forest boundary (U.S. Forest Service, 2005). In general, the greater precipitation (up to 35 inches) occurs on the west side of Johnson County and gradually declines east of the Big Horn Mountains. Lower annual precipitation, ranging from 11 to 13 inches per year, is estimated for the area that is generally east of the Big Horn Mountains and north of Interstate 90.

Air Temperature: In summer and winter, the daily maximum and minimum temperatures vary greatly. This is primarily because of the high elevation and low humidity, which permit rapid warming by solar radiation, and also because of the passage of both warm and cold air masses. Thus, Buffalo is subject to wide and sometimes abrupt changes in temperature. The average annual air temperature is about 45 degrees Fahrenheit. Freezes late in spring and early in fall are common. The average last occurrences of 32 degrees in spring is May 12 and the average first occurrences of 32 degrees in fall is September 25 making the average growing season 136 days each year.

Public Lands

“Public land” as used in this section is real property owned or controlled by an agency or bureau of either the state or federal government. Approximately 47% of the land which makes up LDCD is public land. The county’s custom and culture has been significantly influenced by the relationship of the citizenry to public land, and the economic benefits derived from public

land. The public lands and the rights and privileges they confer on local residents are central to the custom and culture of LDCD. LDCD finds public land and natural resources management practices are both relevant and substantive to its custom and culture; its economy; its environment; its quality of life; and its ability to protect and enhance local resources.

State and Federal Lands

Upon the statehood of Wyoming in 1889, the state was granted the Section 16 and 36 lands in all Townships across Wyoming. They were ceded to the state for the support of the common schools. These lands were in turn leased in most cases to adjacent landowners who acquired preference rights to graze said lands. State lands total 131,162 acres in LDCD (Figure 6), the overriding majority of which are native rangelands (ESRI). As grazing leases on state lands are often integral parts of ranching operations in LDCD, any change in their management that would eliminate their continued use would not be in the best interest of the citizens of LDCD.

LDCD contains 214,129 acres of land managed by the BLM (ESRI). The Federal Land Policy and Management Act of 1976 (FLPMA), mandates the BLM to manage these lands for multiple use, including energy development, livestock grazing, recreation and timber harvesting.

The Taylor Grazing Act of 1934 designated grazing lands as either Section 3 or Section 15 lands. Section 3 lands were public lands with designated grazing districts established by the Act. Grazing permits for section 3 lands were issued for 10 years and required the permittee to have control (owned or leased) of a base private property capable of providing feed for a specified number of livestock. Base property of Section 3 lands did not have to be adjacent to the permitted grazing area, but preference was given to landholders within close proximity

(The Taylor Grazing Act, 1934). The Taylor Grazing Act also designated federally owned Section 15 lands outside of grazing districts as available for grazing *leases*. Base private property is usually adjacent, surrounding or intermixed with leased Section 15 lands, such as in the case of “checkerboard” ownership.

Current policy as laid out by the more recent FLPMA of 1976 and amendments of 1978, removed the management distinction of Section 3 and Section 15 lands and requires BLM grazing lands to be categorized as “custodial” “improve” or “maintain” management goals. Permits are authorized for 10 years. Generally, lands previously designated as Section 15 parcels, which are smaller, isolated, federal lands, are managed as custodial (BLM, 2005b). The checkerboard of private and federal lands limits the ability to manage these lands for multiple use such as recreation or oil and gas exploration. The historic human activity on these lands is livestock grazing. Private land owners whose holdings are interspersed with federal lands accept the fact that wildlife and livestock travel across ownership boundaries. Deer, elk, antelope, cattle, sheep and domestic horses use these lands without regard to human-made boundaries.

Although management distinctions between Section 3 and Section 15 lands have been made consistent with more recent legislation, receipts from grazing on Section 3 and Section 15 lands are still handled differently. Section 3 fees are distributed with 50% going to range betterment projects, 37.5% remaining in the US treasury, and 12.5% returned to the state. Fees from Section 15 lands are split with 50% used for range betterment projects and 50% returned to the state (BLM, 2005b).

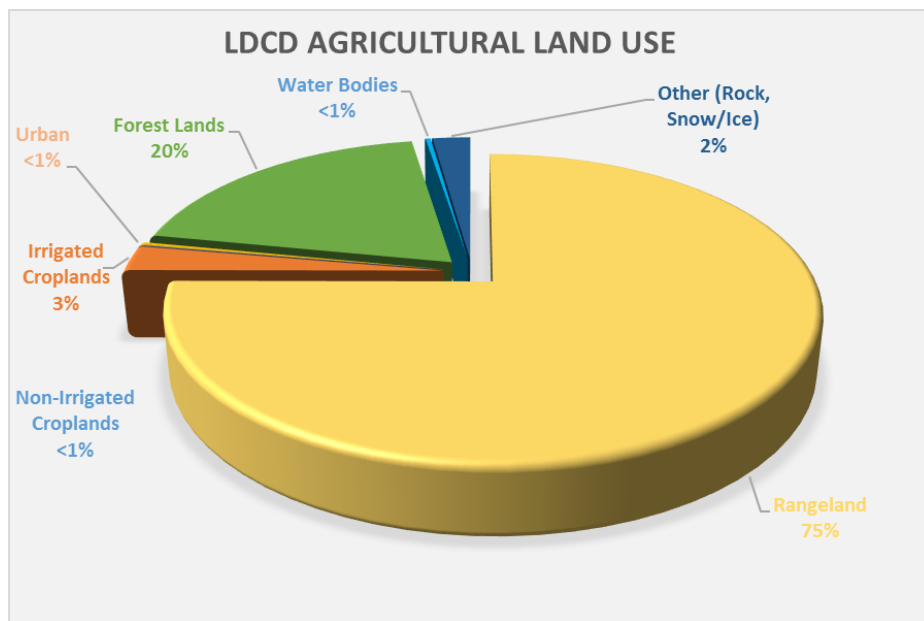
LDCD contains 327,265 acres within the Big Horn National Forest, which is administered by the USDA Forest Service (ESRI). The Forest Service manages land under the National Forest Management Act of 1976 and is mandated to manage these lands for multiple use and sustained yield. Traditional uses include livestock grazing, recreation, timber harvest, and wildlife habitat. The 2005 Bighorn National Forest Land and Resource Management Plan defines land management emphases under Management Area Prescriptions and outlines

activities allowable to meet management goals. Management Area Prescriptions within LDCD include rangeland vegetation, deer and elk winter range, scenery, forest products, and a research natural area (USDA, 2005).

Agriculture

Agricultural land in the State of Wyoming refers to lands where, at least, \$1,000 of income have been derived from some type of agricultural production in a given tax year (U.S.

Department of Agriculture, National Agricultural Statistics Service, 2001). U.S. Department of Agriculture, National Agricultural Statistics Service, reported that 2,035,591 acres of private land in Johnson County were in use for agricultural purposes in 2012 (U.S. Department of Agriculture, National Agricultural Statistics Service, 2012). Of these, approximately 75 percent of the lands in LDCD were determined to be agricultural rangelands, about 3 percent were irrigated croplands; the remaining lands were determined to be non-irrigated, dry croplands, forest lands, water bodies, and other land types which included rock, snow/ice (Figure 7) (ESRI).



Major crops are all hay and haylage, grass silage, and greenchop (USDA, 2012 Table 8). Farm sizes are fairly evenly distributed over a range of sizes; from less than 10 acres to over 1000 acres. Larger (>1000 acres) agriculture parcels are typically range livestock operations instead of cropland (USDA, 2012 Table 8).

The livestock industry accounts for a large portion of LDCD's agricultural income and is the oldest continuing industry in Johnson County and is still the single largest land user with 96% of the acreage in the county utilized for grazing (USDA, 2012, Table 8). Wyoming is the third largest producer of domestic wool and the 15th largest producer of beef cattle (USDA, 2015). Accordingly, livestock raised in the LDCD area is primarily cattle and sheep. Many of the ranches have summer range on the Big Horn Mountains and some operate on rangeland year round, supplementing the range grass with hay and concentrates during the winter and spring. The sustained use of agricultural lands in Johnson County for livestock and crop production suggests the presence of a stable agricultural industry and also demonstrates the commitment of local ranchers to agriculture, and their economic dependence upon profitable agricultural production.

Industry, Minerals, and Oil and Gas Development

A variety of industries operate in the county. Natural gas and oil constitute the majority of the commercial non-renewable resources in northern Johnson County (Figure 8). Sand, gravel, and scoria are other economic resources present within LDCD.

Many residents find employment in the mining and processing of minerals and related services. Oil and gas are produced from several fields in the county. In 2016 1,148,142 barrels of oil and 101,163,031 million cubic feet of gas were produced (WOGCC, 2017).

Tourism and Recreation

The travel and tourism industry has a significant impact on Johnson County economics. Tourism and recreation have been increasing in recent years, and LDCD is experiencing the increased amount of visitation and requirements for access. Some of the recreation enjoyed within LDCD include off-road vehicle (4-wheelers and larger vehicles) use, snowmobiling, hunting & fishing, rock climbing, rock-hunting, skiing, horseback riding, hiking, camping, rodeos, county fairs, and enjoying the abundant wildlife of the area.

In the higher elevations, the construction of cabins near reservoirs and streams for leisure time/vacation activities reflects a shift in land ownership from long-term ranch family land ownership to vacation homes and seasonal occupation.

Wildlife

Wildlife and fish are a recreational, renewable natural and aesthetic resource in LDCD. Wildlife populations are considered a state resource and are managed solely by the Wyoming Game and Fish Department. Big game resources are important to Johnson County as both residents and visitors are afforded the opportunity to view and/or hunt big game animals throughout most of the unincorporated area. The continued availability of these opportunities is important to the lifestyle of Johnson County residents, as well as the Johnson County economy. However, wildlife and fish know no political or jurisdictional boundaries and private landowners play a key role in supporting wildlife by providing additional forage that eases pressures on sensitive wildlife habitat. Because of this future land use decisions in LDCD need to consider the variable habitats of big game resources in within the District. Any future decisions concerning land subdivisions should give consideration to the impacts of future land use subdivisions and related land uses upon significant big game habitats. Crucial range areas are especially important since these habitat areas often represent a determining factor that is essential to the survival and reproduction of one or more species of big game animal. Although LDCD is home to many big-game species only crucial big game ranges for elk and moose exist within the District (Figure 9) (ESRI). In addition to big-game crucial range LDCD contains 218,123 acres of Greater Sage-grouse Core area and 31,653 acres of Greater Sage-grouse Connectivity (ESRI) (Figure 10). In addition to big game animals, there are some 65 other mammals that inhabit Johnson County. These mammals include a variety of marsupials, shrews and moles, bats, pikas and cottontails, hares, chipmunks, marmots, ground squirrels and prairie dogs, pocket gophers, pocket and other mice, kangaroo rats, beavers, small mice, wood rats, voles, muskrats, domestic rats, porcupines, raccoons, weasels, badgers, coyotes, skunks, and bobcats. LDCD is also home to several species of upland game birds throughout the year. These birds include the ring-necked pheasant, the sage grouse, ruffed grouse, sharp-tailed grouse, blue grouse, chukar,

mourning dove, gray partridge and wild turkey. Additionally, up to 284 non-game bird species can be found in Johnson County, these include raptors as well as migratory songbirds and waterfowl.

Aquatic Resources

As stated earlier the Lake DeSmet Conservation District Long Range Natural Resource Land Use Plan survey was distributed to four (4) hydrologic units within LDCD:

1. Clear Creek
2. Crazy Woman
3. Upper Powder River
4. Middle Fork Powder River

Streams within these hydrologic units support a diverse fish fauna that is comprised primarily of native, non-game species. The Johnson County Comprehensive Land Use Plan summarizes the occurrence of various fish species within each of the four watersheds in LDCD.

Clear Creek Watershed

The Clear Creek watershed contains a diverse fish population. Streams and lakes in the headwaters of the watershed contain various species of non-native trout such as grayling, golden, Yellowstone and Snake River cutthroat, rainbow, as well as brown and brook trout. A reach of Clear Creek contains channel catfish, sauger, and goldeye (Stewart, 2001).

Crazy Woman Watershed

A diverse population of native and introduced fish resides in the Crazy Woman watershed. The upper portion of this watershed is situated within the Bighorn National Forest where cold-water streams in alpine and sub-alpine areas provide habitat for wild trout populations. However, the trout population declines in lower portions of the watershed (generally east of Highway 87).

Native game species, including black bullhead, stonecat, shovelnose sturgeon and channel catfish, primarily reside in the lower reaches of Crazy Woman Creek and its three main tributaries. Channel catfish also inhabit the lower reaches of Crazy Woman Creek near its confluence with the Powder River. The rare goldeye inhabits Crazy Woman Creek, as well as its Middle and South Forks. Introduced game fish generally include brook trout, brown trout, rainbow trout, splake, largemouth bass, and green sunfish (Bradshaw, 2001).

Middle Fork Powder River

Most streams in the Middle Fork Powder River watershed support trout. The headwaters of the watershed, along the eastern face of the Big Horn Mountains, are dominated by brook trout.

The Middle Fork Powder River is one of the more important trout fisheries in northeast Wyoming. A 12.8-mile segment of the Middle Fork supports very high trout densities and represents one of the more popular fishing areas in northeast Wyoming. With lower stream reaches of the watershed, trout densities are considerably lower. Rainbow and brown trout dominate the streams at lower elevations of the watershed. The black bullhead, the only native game fish in the watershed, also inhabits the lower stream reaches within the watershed (Bradshaw, 2001).

Upper Powder River Watershed

The Upper Powder River watershed supports a diverse fish population that primarily comprises native, non-game species. Channel catfish, sauger, shovelnose sturgeon and stonecat inhabit streams within the Upper Powder River watershed. Channel catfish, sauger, and shovelnose sturgeon are most common below the mouth of Crazy Woman Creek.

The sturgeon chub, once endemic to several Wyoming rivers, is now found only in the Powder River and is considered rare by the Wyoming Game and Fish Department. This fish apparently requires turbid waters which are common along the Powder River.

The Wyoming Game and Fish Department believes that extreme fluctuations in stream flow and temperature, low aquatic invertebrate production, high turbidity and dissolved solids, and an unstable streambed limit the capability of the Powder River and its tributaries to support salmonids and most Wyoming gamefish (Bradshaw, 2001).

| Fish Species | | | | |
|--|-----------------------------|-----------------------|----------------------|-------------|
| Common Name (Scientific name) (Species: I - Introduced or N- Native) | Middle Fork Powder River | Upper Powder River | Crazy Woman Creek | Clear Creek |
| Black crappie (<i>Pomoxis nigromaculatus</i>)(I) | | X | | |
| Brassy minnow (<i>Hybognathus hankinsoni</i>)(N) | | X | | X |
| Brook trout (<i>Salvelinus fontinalis</i>)(I) | X | | | |
| Brown trout (<i>Salmo trutta</i>)(I) | X | X | | |
| Channel catfish (<i>Ictalurus punctatus</i>)(N) | | X | X | |
| Common carp (<i>Cyprinus carpio</i>)(I) | | X | X | X |
| Creek chub (<i>Semotilus atromaculatus</i>)(N) | | X | | X |
| Emerald shiner (<i>Notropis lutrensis</i>)(I) | | X | | |
| Fathead minnow (<i>Pimephales promelas</i>)(N) | | X | X | X |
| Flathead chub (<i>Platygobio gracilis</i>)(N) | X | X | X | X |
| Goldeye (<i>Wiodon alosodies</i>)(N) | | X | X | X |
| Lake trout (<i>Salvelinus namaycush</i>)(I) | | X | | |
| Longnose dace (<i>Rhinichthys cataractae</i>)(N) | X | X | X | X |
| Longnose sucker (<i>Catostomus catostomus</i>)(N) | X | X | X | X |
| Mountain sucker (<i>Catostomus platyrhynchus</i>)(N) | X | X | X | |
| Northern redbreast (<i>Maxostoma macrolepidotum</i>)(N) | | X | X | X |
| Plains killfish (<i>Fundulus zebrinus</i>)(N) | | X | | |
| Plains minnow (<i>Hybognathus placitus</i>)(N) | | X | | X |
| Rainbow trout (<i>Oncorhynchus mykiss</i>)(I) | | X | | |
| River carpsucker (<i>Carpionodes carpio</i>)(N) | | X | X | X |
| Rock bass (<i>Ambloplites rupestris</i>)(I) | | X | X | X |
| Sand shiner (<i>Notropis stramineus</i>)(N) | | X | X | X |
| Smallmouth bass (<i>Micropterus dolomieu</i>)(I) | | | X | X |
| Stonecat (<i>Noturus flavus</i>)(N) | X | | X | X |
| Sturgeon chub (<i>Macrhybopsis gelida</i>)(N) | | | | X |
| White sucker (<i>Catostomus commersoni</i>)(N) | X | | X | X |
| | | | | |

Hunting, fishing, and outfitting licenses are economically important to the state economy. Hunting licenses sold to resident and non-resident hunters has held steady over the last ten years and grossed over \$25 million dollars to the state in 2015 (U.S. Fish and Wildlife Service, 2015a). Fishing licenses to non-residents has increased significantly (>27%) over the last decade. Statewide, total sport fishing licenses grossed over \$6 million in 2015 (U.S. Fish and Wildlife Service, 2015b).

Economics

The median annual household income in LDCD is \$55,327. Six percent of the county population is considered below the national poverty level. LDCD's main employers based on annual payroll are health care/social assistance, construction, retail trade, professional, scientific, and technical services, accommodations and food service, and finance and insurance (City Data, 2016).

County revenue from property taxes are greatly impacted by the oil and gas industry. Over 42% of the county's property taxes came from the oil and gas industry in 2014 (Petroleum Association of Wyoming 2015). Oil and gas extraction/non-metal mining/petroleum and coal product manufacturing valuations totaled \$101,161,514 million.

As a major natural resource producer, the state of Wyoming is significantly affected by the ups and downs in the national energy market, and the historic cycles of boom and bust in the oil/gas/coal industries are familiar to Wyoming residents. Agriculture is a stabilizing economic force in LDCD. Since the mid 1800's the vast open rangelands of Wyoming have been recognized for their ability to grow livestock and fiber for humans. As irrigation techniques evolved, northern Johnson County's climate was recognized as suitable for a variety of hay crops, and lowlands, usually along waterways, was turned into cropland.

Currently, agriculture provides a consistent economic base for local economies including county revenues to provide public services. In 2016, irrigated land valuations totaled \$10.1 million, and non-irrigated agricultural land valuations totaled \$7.9 million (Wyoming Dept. of Revenue, 2017). There are 358 farms in LDCD. The market value of agricultural products sold in the county were over \$51.7 million according to the 2012 Census of Agriculture (USDA, 2012).

With 38% of LDCD being federal lands, it is clear that changes to federal grazing opportunities directly affect local producers. A typical livestock operation grazes federal lands in the spring, summer, and fall, with livestock pastured on private land late fall through spring. This allows the private land to rest or go into hay or crop production during the growing season. Any reduction in grazing on federal lands would place a burden on the private lands. Livestock producers would either have to purchase more hay to feed livestock on private lands; or lease pasture (usually at a distance away that precludes any profit); or reduce herd size.

Custom and Culture

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 (*Webster's New Collegiate Dictionary*, 227, 1975).

Open spaces are a defining quality of Wyoming and LDCD. A 2004 poll conducted by the University of Wyoming reports that the preservation of farms and ranches, the western lifestyle, and protecting private property rights are of particular importance to Wyoming residents. A more recent polling identified the loss of family farms and ranches as the issue of greatest concern to Wyoming residents (Reedman and Korfanta 2014). Seventy-nine percent of the respondents in that poll described themselves as “personally benefitting from the presence of ranches and farms in Wyoming.”

Due to the nature of LDCD's landscapes and ecology, agriculture goes hand in hand with maintaining the custom and culture of open space and its attendant values. Agriculture as practiced in harmony with LDCD's ecology, provides a basis for community while maintaining those values.

Agriculture production accounts for almost 80% of the private land in Johnson County (ESRI). Because agriculture is the dominant private land use in the county, the future of open spaces in LDCD will depend to a large extent on what happens to agriculture. A number of factors may adversely affect the retention of agricultural land in Wyoming including the

continued uncertainty about livestock grazing on federal lands (Taylor, et al. 2003).

There has been recent interest in assigning monetary value to open space ecosystem services. It is recognized that open landscapes provide “natural goods and services” such as water filtration and wildlife habitat, along with livestock grazing and agriculture goods (Taylor, et al. 2011). A recent study estimates the value of natural goods and services at \$22 per acre for native rangelands, \$66 per acre for pasture and hay lands, and \$55 per acre for cultivated cropland. These adjusted 2016 values are in addition to the actual market value of the land; jobs and income generated from the use of these lands. Using these values and 2012 Census of Agriculture data for private lands, natural goods and services provide an \$37,691,203 value to Johnson County residents.

Due to the historic and ecological nature of land use across public and privately owned land and the inherent impact on the custom, culture, and economic welfare on the residents of LDCD, we expect (1) to engage with the federal government, such as BLM and Forest Service through coordination, and (2) to be given early notification of any opportunities for cooperating agency status by all federal agencies as part of the NEPA process regarding any land use management policy or proposed projects.

Endangered Species Act

Animal species that are influenced by federal management or designation include candidate species, threatened and endangered species, species of concern, and critical habitat designations. Candidate species are species that are being considered for listing as a threatened or endangered species but are not yet the subject of a listing rule. A sensitive species or species of concern is a species for which either the Bureau of Land Management or Forest Service, through a land use plan, has established special management considerations.

These designations, along with listed threatened or endangered species, can significantly impact the use of private and federal lands by LDCD's constituents.

Critical habitat is a specific geographic area that contains features (or may develop 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 the ESA regulations issued on February 11, 2016, such habitat includes temporary habitat, ephemeral habitat, potential habitat, and migratory habitat. 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. Critical habitat includes private land as well as federal and state managed land. However, according to IPaC no critical habitats are located within LDCD.

LDCD is currently impacted by the following threatened, endangered, proposed, and candidate species. (IPaC, 2017):

- Canada lynx – Threatened (IPaC, 2017)
- Northern Long-eared Bat – Threatened (IPaC)
- Ute Ladies' Tresses – Threatened (IPaC, 2017)

LDCD Goals and Policies

The LDCD Board of Supervisors have adopted the following general policies which will help in the operation and administration of LDCD.

- i. Consults with stakeholders of LDCD, and may act as a cooperator with public institutions and government agencies in the conservation of the water, soil, plants and wildlife resources within budgetary constraints
- ii. Facilitates the formation of stakeholder committees to help develop LDCD's natural resource planning documents
- iii. Provides technical and material assistance in an equitable fashion for stakeholders
- iv. Conducts our statutory responsibilities in cooperation and with the trust and acceptance of stakeholders
- v. Reviews, studies and comments, when possible, on all local, state and federal legislation, rules and regulations promulgated or revised that may have an effect on this plan and stakeholders
- vi. Considers historic uses, customs, and culture during decision making to maintain a sustained yield of renewable and natural resources
- vii. Cooperates and consults with stakeholders, other interested parties, along with local, state, and federal governmental agencies in order to pursue the continued resource management and enhancement in the watersheds of LDCD in conjunction with existing or adopted resource management practices of all agencies within the jurisdictional boundaries of LDCD
- viii. Maintain an awareness of natural resource issues and concerns and create information sources to share with the stakeholders regarding their on-the-ground soil and water resource management projects, to help sustain the long term economic base for future generations
- ix. Coordinates with the Johnson County Commissioners and/or Johnson County Planning & Zoning Commission concerning the impacts of the lands affected by development

- x. Provides a written copy of LDCD's Natural Resource Land Use Plan to every local, state, and federal agency doing business within Johnson County within 30 days after the plan is adopted
- xi. Requests timely notification from all local, state and federal agencies regarding legislation and rules and regulations promulgated or revised, that may have an effect on this plan and stakeholders
- xii. Encourages the local, state, and federal agencies to share information they routinely collect (i.e. geographic information system mapping and the assessment of new management practices and techniques) with LDCD.

INTERNAL DISTRICT OPERATIONS

Goal:

LDCD will carry out duties established by statutes, the local public, and Board of Supervisors to maintain a structural, stable and functioning Conservation District.

Objectives:

- i Employs personnel to effectively carry out LDCD goals
- ii Analyzes district manager and staff needs and makes every effort to secure assistance and/or training from private, local, state and federal sources
- iii Reviews the powers and duties of conservation districts and supervisors annually, as clarified in 11-16-122 of the Conservation District Law
- iv Budgets funds to carry out LDCD goals
- v Reviews the development and/or revision of conservation plans and the implementation of those scheduled conservation practices
- vi Completes and maintains an up-to-date Natural Resource Land Use Plan
- vii Convenes monthly board meetings in addition to special or emergency meetings as needed
- viii Participates actively at meetings of organizations of which LDCD is a member
- ix Seeks funding for natural resource and conservation projects
- xi Strives to improve its ability to provide services and operational programs and to work with Cooperating Agencies, Partners, and Associates
- xii Reviews subdivision site areas and plans and makes recommendations on soil suitability, potential soil erosion during and after construction, potential flooding or wetland concerns to the Johnson County Commissioners/Johnson County Planning Office as clarified in 18-5-306 (a)(xii)(B)(b) of the Wyoming State Statutes.

LAND USE PLANNING

Goal: The Lake DeSmet Conservation District will take an active role in land use planning.

Objectives:

- i. Continue involvement with County boards in the development of land use planning, as they pertain to conservation and natural resources.
- ii. To provide assistance in the education of county residents in the land use planning process.
- iii. To continue the District's role in providing technical information on subdivision reviews to the County Planner and the Johnson County Planning & Zoning Board.
- iv. To continue an outreach effort for partnering entities and agencies who share the common objective of land use planning.
- v. To assist individuals and entities in utility corridor planning, as it pertains to resource issues and future development.
- vi. Continue to participate and provide input to local government, federal and state agencies and resource managers in land use planning efforts.
- vii. Maintain working partnerships with Bureau of Land Management, Wyoming Game & Fish, U.S. Fish & Wildlife Service and other resource and wildlife managers in conservation planning for landscape designs.
- viii. Be an active representative, for our constituents, on state and federal actions affecting natural resources.

CONSERVATION PLANNING

Goal: Provide technical assistance to agriculture producers, developers and planners to ensure proper conservation planning for natural resources.

Objectives:

- i. Reference the "Inventory for Resource Areas & Issues by Watersheds in Johnson County" document to prioritize the direction of the District.
- ii. Provide technical and financial assistance to local producers in conservation planning efforts.
- iii. Work proactively with producers in conservation planning for species at risk and environmental issues.
- iv. Continue outreach efforts in providing technical and financial assistance for producers

enrolled in the sage grouse conservation initiative.

- v. To provide technical assistance to landowners and industry for concerns regarding increasing weed infestations, reclamation efforts and restoration of disturbed sites.
- vi. Work cooperatively with private landowners, stakeholders and Wyoming Water Development Commission (WWDC) in initiation of watershed studies within the District and exploration of opportunities for water storage and water availability.
- vii. Provide technical assistance to initiate conservation planning efforts for Integrated Pest Management (IPM) within the District.
- viii. Maintain the partnership developed with the City of Buffalo and partners in implementation of the management plan for the City's "Green Belt" area and other city properties.
- ix. To provide assistance to private landowners for conservation planning in maintaining grazing lands and rangeland health.
- x. Continue to provide a wide variety of trees, shrubs, and seedlings to the community for windbreaks, shelterbelts and aesthetic value for wildlife and agricultural use.
- xi. Encourage participation of public land managers in farm and ranch planning on intermingled surface ownership of state, federal and private lands.
- xii. Advocate utilization of new technology in management of natural resources.
- xiii. Search alternative energy sources in implementation of conservation efforts.
- xiv. Provide continued support of Geographical Information System (GIS) technology in conservation planning.
- xv. Promote Global Positioning System (GPS) technology in conservation planning and implementation. Train and assist producers and contractors in GPS use.

EDUCATIONAL PROGRAMS

Goal: Provide educational / informational opportunities for private landowners and residents of LDCD.

Objectives:

- i. Hold tours or information and education workshops that will inform the community on natural resource management.
- ii. Provide education and information to the general public on regulatory actions that will affect agriculture producers and the general public.
- iii. Continue education of hazardous waste and recycling opportunities.
- iv. Keep abreast of issues and changes to *Chapter 1, Water Quality Rules and Regulations* affecting water quality / quantity within the District.
- v. Work with small acreage landowners in providing education on natural resource management.
- vi. Continue to provide informational handouts and technical assistance as it pertains to field windbreaks and tree and shrub plantings.
- vii. Continue to support the Wyoming Association of Conservation District (WACD) in their efforts to assist resource managers on conservation actions and issues.
- viii. To keep informed and disseminate information to the general public on air quality issues associated with various land uses.
- ix. Actively participate in the local “Ag Day” educational program.
- x. Utilize local media in providing information and education on District activities, programs and services available.
- xi. Inform constituents in affected watersheds about issues arising on TMDL establishment on streams located within the District.

RANGE AND IRRIGATED LANDS MANAGEMENT

Goal: LDCD will promote Best Management Practices (BMP) for the improvement and continued use of all rangelands and irrigated cropland to sustain agriculture productivity.

Objectives:

- i. Assists and promotes local stakeholders’ continued use of best management practices for erosion control and vegetation management on rangeland and irrigated cropland. LDCD

supports livestock grazing as a tool for the sound management of private, state and federal lands.

- ii. Discourages any action that results in a net loss of irrigated lands which produce food and fiber and affects the economic return of those lands within the district.
- iii. Discourages any action that results in a net loss of open space which is beneficial to wildlife, and vital to maintaining the viewshed and water quality.
- iv. Supports the development and use of new technologies in range and irrigation management practices.
- v. Maintains partnerships with local, state and federal agencies to provide technical assistance and/or funding to local residents

HABITAT/WILDLIFE

Goal: LDCD is committed to proper habitat management by incorporating science, in the planning, programs, and projects.

Objectives:

- i. Works with government agencies, local cooperators, and other interested parties in the management, maintenance and improvement of habitat, emphasizing voluntary and incentive based programs
- ii. Encourages the use of tools such as grazing, plantings, water development, fire, chemical application, and other best management practices for habitat management
- iii. Supports the development and use of new technologies in land use management that are alternatives to permanent reductions in stocking rates
- iv. Supports cooperative effort with State, federal and private land managers to enhance cooperative weed management efforts countywide, coordinated with, and primarily managed by the Johnson County Weed and Pest Control District
- v. Supports and strongly encourages the control of noxious weeds, invasive species, and pests by owners, managers, and users of all private, state and federal lands including easements, right-of-way, and municipalities
- vi. Supports wildlife management objectives and numbers based on what the range conditions and habitat can support. Wildlife habitats should be managed for sustainable wildlife populations that take into account obligations for livestock grazing and competing resource management objectives.
- vii. Supports game herd population objectives and management decisions that will benefit the wildlife resource, while taking into consideration competition between wildlife species and domestic livestock

RECREATION

Goal: LDCD encourages recreational activities that provide opportunities for economic development and maintains the custom and culture of Johnson County, while ensuring conservation of the rangeland, water, and soil resources.

Objectives:

- i. Recognizes that recreation is multiple use of state and federal lands and LDCD supports the historical access on these lands
- ii. Promotes the value of natural resources through education of multiple use ethics (sharing of the land) and good stewardship by recreational users

MINERALS/OIL AND GAS DEVELOPMENT

Goal: LDCD supports minerals and oil and gas production and will provide information and education on the importance of natural resource conservation. The minerals and oil and gas industry is a significant part of the district, and it provides economic opportunity to Johnson County.

Objective:

- i. Encourages mineral, and oil and gas production to be conducted in an environmentally responsible manner and to ensure industries continuance is compatible with the principles of multiple use on public lands.

WATER QUALITY/ WATER QUANTITY

Goal:

LDCD will strive to increase the efficient use of water and maintain and improve the quality and quantity of waters within LDCD, through education, technical assistance, and Best Management Practices (BMPs).

Objectives:

- i. Promotes BMPs that reduce non-point source pollution and promote water conservation
- ii. Supports water development projects that increase water quantities for beneficial use within the district, while considering the traditional custom, culture, ecology, and economy of the area
- iii. Recognizes the importance of irrigation systems that make up a critical part of the water cycle within LDCD and supports the implementation of irrigation BMPs
- iv. Recognizes only credible scientific data in regards to water quality, which examines the biological, chemical, and physical attributes of a watershed within the context of related

historical records. LDCD will collect water quality data if needed as determined by priorities and programs.

- v. Recognizes that many of our perennial, intermittent and ephemeral streams exist within a natural framework of highly erosive soils and strive to define the water cycle to include the natural background's effect on water quality in our jurisdiction

GOVERNMENT AGENCY COOPERATION AND INTERACTION

Goal:

LDCD will continue to represent local natural resource interests in the planning and implementation efforts of local, state, and federal government agencies within its boundaries. LDCD will facilitate efforts to participate in natural resource management planning in order to protect the natural resources, provide for the economic stability and to protect local customs and cultures.

Objectives:

- i. Participates with cooperators and government agencies in making sound natural resource decisions that are scientifically-based, legally defensible, sensitive to natural resource health, and responsive to multiple-interest users
- ii. Works with local, state and federal government to encourage and support state control of water rights and to maintain opportunities for future water right allocations
- iii. Coordinates with local, state and federal government on educating about the eradication of invasive species
- iv. Works to ensure local input on state and federal land management issues to promote multiple use of public lands and protect private property rights
- v. Maintains partnerships with local, state and federal agencies to provide technical assistance and/or funding to local residents
- vi. Develops, promotes and defends viable alternatives to the proposed actions of other government agencies where the proposed action would adversely impact any of the resource or economic bases of LDCD
- vii. Provides comments, coordinates, or seeks to become a Cooperating Agency for federal land use planning affecting LDCD
- viii. Provides local land use policy or plan for consistency review purposes
- ix. Supports traditional multiple land uses as a means to maintain continuity in the local economy and assures the sustainability of existing agricultural, recreational, and industrial interests while maintaining or improving the present environmental quality of life

SPECIAL PROJECTS

Goal: To maintain District activities and address new resource concerns to complete future projects.

Objectives:

- i. To continue the strong partnership with USDA – NRCS for implementation of USDA Farm Bill incentive programs.
- ii.
- iii. Continue to provide technical assistance to landowners within the Clear Creek Hydrologic Unit to address natural resource issues identified during the Clear Creek Rapid Watershed Assessment (RWA).
- iv. Work cooperatively in maintaining partnerships to administer and provide technical assistance to producers involved in USDA Farm Bill programs
- v. Continued utilization of the Technical Service Provider (TSP) program to provide reliable, professional and timely technical assistance.
- vi. Explore opportunities to keep agricultural producers on the land.
- vii. Continue to maintain a strong and up-to-date technology system for assisting landowners / users with resource concerns and conservation planning.
- viii. Utilize financial opportunities to accelerate natural resource conservation available through USDA – NRCS contribution and cooperative agreements.
- ix. Maintain the working partnership with Johnson County Weed & Pest District regarding invasive and noxious weed species.
- x. Provide technical assistance to urban constituents in the development of natural resource areas.
- xi. Work with the Johnson County Buffalo Recycle Board on opportunities to expand recyclable items and continue the District's Hazardous Waste / Pesticide Collection program.

TREE PROGRAM

Goal:

LDCD will help alleviate and manage soil erosion, improve energy flow, improve the water and nutrient cycle within LDCD by providing education to the public on the benefits of trees.

Objectives:

- i. Supports the use of tree plantings and the use of other plant materials to provide for improved natural resource conditions and community aesthetics within LDCD
- ii. Provides stakeholders with information regarding selection of appropriate varieties of trees for the

intended use, proper techniques of tree planting and maintenance, irrigation systems, program funding, wildlife interactions, and sources of trees through LDCD website, printed materials, educational workshops, and such other methods as may be appropriate

- iii. Make weed barrier and other essentials available to the community

COST-SHARE PROGRAM

Goal: Increase opportunities for conservation of natural resources through further development of cost-share program.

Objectives:

- i. Work closely with NRCS and other natural resource agencies to augment their programs.
- ii. Develop and define program criteria in context with the District's mission statement.
- iii. Identify and pursue additional funding that could be used to leverage existing financial resources.
- iv. Educate potential participants about program scope and requirements.
- v. Take an active role in identifying / qualifying natural resource conservation projects.
- vi. Evolve District cost-share program to address changing needs.

RECYCLING/PESTICIDE COLLECTION

Goal: Take an active role in protecting air, soil and water through safe collection and disposal of hazardous wastes.

Objectives:

- i. Partner with the Johnson County Buffalo Recycle Board to assess recycling needs and where the District would assist.
- ii. Encourage local governmental support of recycling.
- iii. Expand and coordinate recycling options within the community.
- iv. Continue with the District's Hazardous Waste / Pesticide Collection program.
- v. Provide education through workshops, educational materials, etc. on recycling benefits, consequences and assistance.

Survey Results

LDCD conducted a community wide survey, within the northern half of Johnson County, to incorporate local input to assist in the development of the LRP. The areas surveyed were broken into community representation that consisted of: City of Buffalo/Urban, Rural Agriculture, Rural Subdivision, Government Entity, and Other.

Survey forms were mailed to 1,700 residents within the four (4) major watersheds within LDCD, Clear Creek, Crazy Woman, Middle Fork Powder River, and Upper Powder River watersheds as well as an Unknown category for those respondents not sure of which watershed they reside in. In addition a “clip & return” survey was published for several weeks in the local newspaper. Eleven (11) percent of the survey forms were completed and returned.

The surveys were first grouped and analyzed by separate watershed. The individual watershed survey results were then incorporated into a combined analysis, results from the combined results were used to derive the top ten (10) Natural Resource Concerns, the top five (5) Customer Target Groups, and the top five (5) Programs, Products, and Services that constituents felt are important. These results have been used to assist in formulating a LRP for the District to use as a directional tool. The survey results are the foundation for the District’s LRP and have been incorporated into this document as an appendix where both individual watershed analyses and the combined results can be found. In addition to natural resource issues, target customer groups, and programs, products, and services community representation was surveyed and included in Appendix A (please refer to Appendix A).

The top 10 natural resource concerns and issues identified consisted of the following;

- Water quality / quantity
- Water availability / conservation
- Grazing Lands/Rangeland Health
- Air Quality
- Noxious/Invasive weeds
- Agricultural land conversion
- Agriculture productivity / viability
- Wildlife/Habitat enhancement
- Soil quality/soil health
- Rural/ Small acreage land use

The top 5 customer groups identified for the District to provide assistance to include;

- Full-time agriculture producers
- Small acreage owners
- Recreation users
- Developers
- Schools/Federal and State agencies/Environmental groups- (Same percentage for each group)

The top 5 products, programs and services identified consisted of;

- Pesticide collection/recycling
- Conservation planning
- District conservation cost-share services
- Recreational opportunities
- Educational programs

The District would like to thank all the participants that completed and returned the survey forms. Your input is extremely vital in providing the residents of the Lake DeSmet Conservation District with a successful conservation program. We invite you to stop by our office or contact any of the Board of Supervisors with comments, questions or items of concern. Thank you for your continued support.

REFERENCES

Bradshaw, Bill. 2001. Basin Management Plan for Fisheries: Crazy Woman Creek Basin. Wyoming Game and Fish Department. Cheyenne, WY.

Bradshaw, Bill and Mike Welker. 2001. Basin Management Plan for Fisheries Middle Fork Powder River. Wyoming Game and Fish Department. Cheyenne, WY.

Bradshaw, Bill. 2001. Basin Management Plan for Fisheries: Powder River. Wyoming Game and Fish Department. Cheyenne, WY.

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Endangered Species Act of 1973, 16 U.S.C. §§ 1531 et seq. Executive Order No. 13,352, 69 Fed. Reg. 52989 (2004).

Federal Land Policy and Management Act of 1976, 43 U.S.C. §§1701-1787 (2014).

Feathers, K.R., Libra, R., Stephenson & Eisen, C. 1981. Occurrence and Characteristics of Groundwater in the Powder River Basin, Wyoming. University of Wyoming, Water Resources Research Institute. Laramie, WY

Harris, Ray E. 1996 Industrial Minerals and Construction Materials Map of Wyoming. State of Wyoming Geological Survey. Cheyenne, WY.

HKM Engineering. February 2002. Powder/Tongue River Basin Plan. Sheridan, WY.

Information for Planning and Conservation (IPaC). (2017). Retrieved from <https://ecos.fws.gov/ipac/location/index>

Johnson County Demographics (2016). Retrieved from http://www.city-data.com/county/Johnson_County-WY.html

National Forest Management Act of 1976, 16 U.S.C. §§ 1600-1604 1612 (2005).

Pedersen Planning Consultants. Johnson County Comprehensive Land Use Plan Final. 2005.

Reedman and Korfanta. Public Opinion on Natural Resource Conservation in Wyoming. 2014.

Stewart, Bud. May 2001. Basin Management Plan for Fisheries: Clear Creek Basin, SN110. Wyoming Game and Fish Department. Cheyenne, WY.

Taylor Grazing Act, 43 U.S.C. § 315 (1954). Retrieved from http://www.blm.gov/wy/st/en/field_offices/Casper/range/taylor.1.html

Taylor, D.T., Lovato, J., Sargent-Michaud, J., and Stevens, D. (2011). Economic Contributions of the Wyoming Wildlife and Natural Resource Trust. Laramie, Wyoming: Ruckelshaus Institute of Environment and Natural Resources.

U.S. Dept. of Agriculture. (2005). Bighorn National Forest Revised Land and Resource Management Plan.

U.S. Dept. of Agriculture. (2001). National Agricultural Statistics Service. Census of Agriculture. Retrieved from https://www.agcensus.usda.gov/Publications/2001/Full_Report/Volume_1,_Chapter_2_County_Level/Wyoming/

U.S. Dept. of Agriculture. (2012). National Agricultural Statistics Service. Census of Agriculture. Retrieved from https://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Wyoming/

U.S. Dept. of Agriculture. (2014). Wyoming 2014 Agricultural Statistics. National Agricultural Statistics Services Cheyenne, WY.

U.S. Dept. of Agriculture. (2015). Wyoming 2015 Agricultural Statistics. National Agricultural Statistics Services Cheyenne, WY.

U.S. Dept. of the Interior. (2005b). Bureau of Land Management, *Land Use Planning Handbook*, Appendix C, Page 27.

U.S. Dept. of the Interior. (2015). Proposed Resource Management Plan and Final Environmental Impact Statement for the Buffalo Field Office Planning Area, Bureau of Land Management.

U.S. Dept. of the Interior. (2015b). National Fishing License Report, U.S. Fish and Wildlife Services. Retrieved from <http://wsfrprograms.fws.gov/Subpages/LicenseInfo/FishingLicCertHistory20042015.pdf>

U.S. Fish and Wildlife Service, (2015). Wildlife and Sport Fish Restoration Program: Historical License Data Index. Retrieved from <http://wsfrprograms.fws.gov/Subpages/LicenseInfo/HuntingLicCertHistory20042015.pdf>

Webster, N. (1961). Webster's third new international dictionary of the English language unabridged.

Wyoming Department of Revenue. (2012) Retrieved from <https://sites.google.com/a/wyo.gov/wy-dor/dor-annual-reports>

Wyoming Oil and Gas Conservation Commission. (2017). Retrieved from <http://wogcc.state.wy.us/>

AFFIDAVIT OF PUBLICATION

Public Notice

PUBLIC NOTICE

The Lake DeSmet Conservation District will be taking public comments of their Long Range Plan. Comments will be taken June 12 through July 27, 2017. Copies of the Long Range Plan can be obtained at 760 West Fetterman, Buffalo, WY 82834 and the Johnson County Public Library.

Publish: June 8, 2017 17-0162

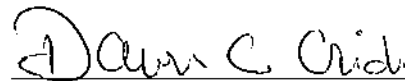
STATE OF WYOMING)
) SS.
County of Johnson)

I Robert H. Hicks, of the Buffalo Bulletin, a newspaper of general circulation, published every week at Buffalo, Wyoming, do solemnly swear that the notice attached hereto and which is a part of this affidavit, was published for **one** consecutive **(1) week(s)** in said newspaper. The first publication having been made in the issue for the week of **June 8, 2017** and that said notice appeared in the regular issue of said newspaper.

In Witness Whereof, I have here unto set my hand this **8th June, 2017**.



Subscribed and sworn to before me this **8th June, 2017**.



Notary Public



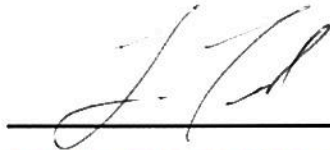
RESOLUTION OF ADOPTION

Recognizing the Lake DeSmet Conservation District as a governmental subdivision of the State of Wyoming, organized to exercise public powers in the conservation of natural resources, the Lake DeSmet Conservation District adopts this Long Range Natural Resource Land Use Plan as a guide to the completion of conservation plans and activities. These actions have been prioritized to conserve the natural resources of the northern half of Johnson County and to improve our quality of life.

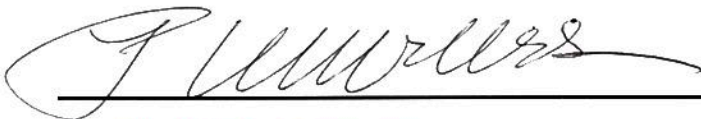
This plan has been adopted on the 15 day of August, 2017 by the Lake DeSmet Conservation District Board of Supervisors.



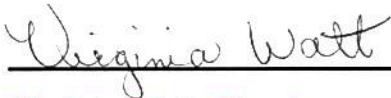
Ryan Fieldgrove, Chairman



Luke Todd, Vice Chairman



Priscilla Welles, Treasurer



Virginia Watt, Member

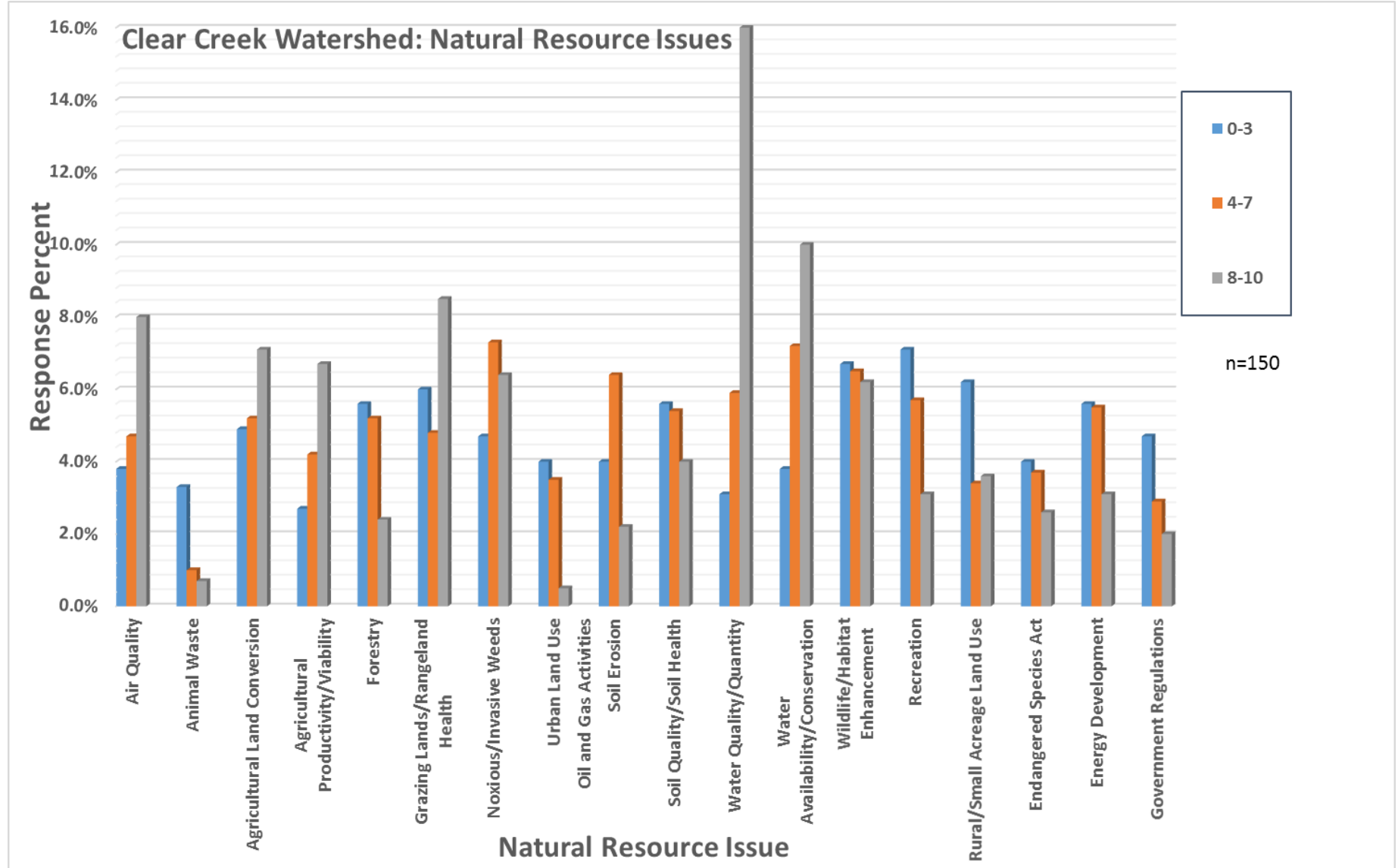


Travis Rule, Member

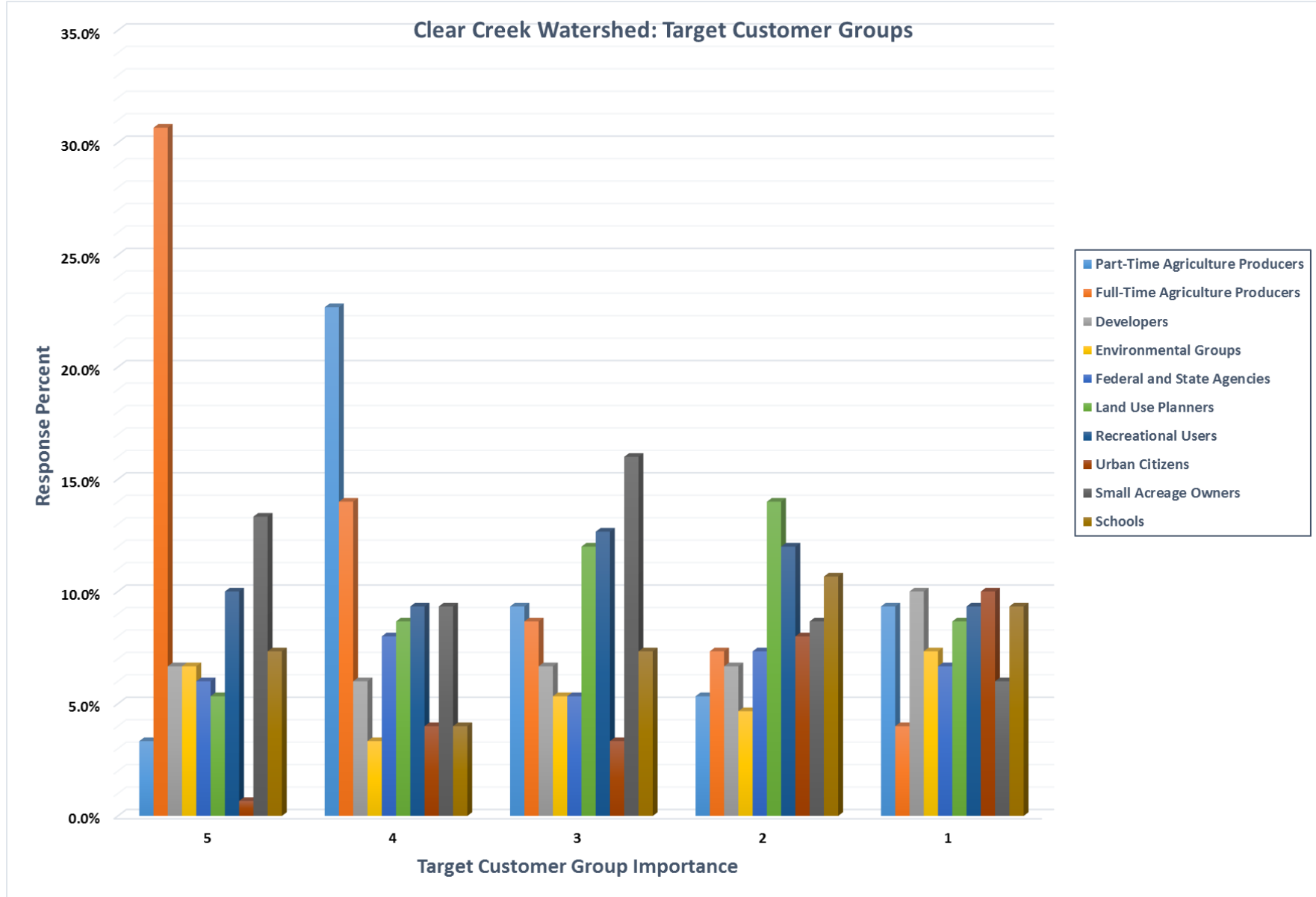
APPENDIX A

Clear Creek Watershed

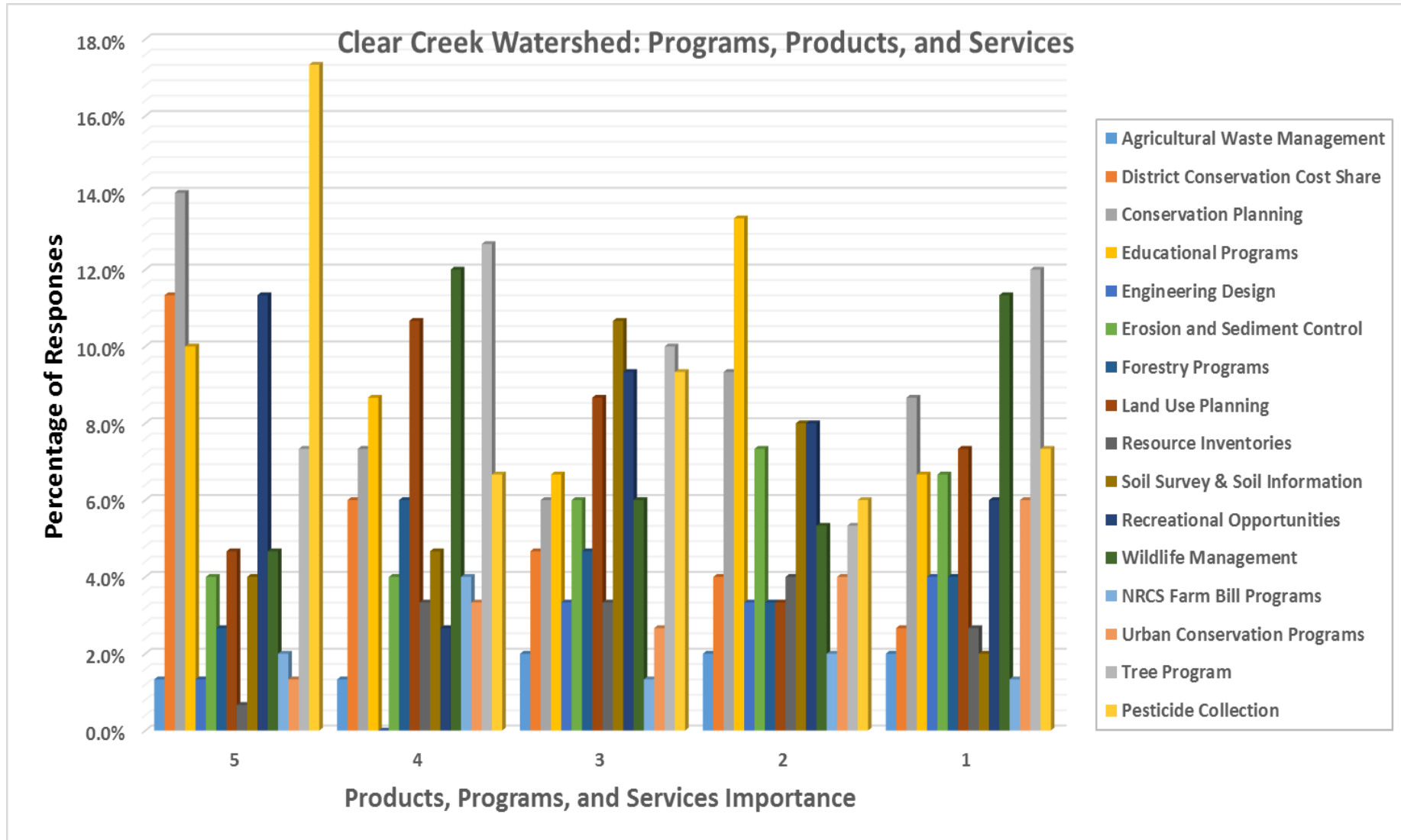
| Natural Resource Issues | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | |
|-------------------------------------|-------------|-------------|-------------|-------------|------------|------------|------------|------------|------------|------------|---------------------|---------------------|----------------------|
| Air Quality | 14 9.3% | 14 9.3% | 8 5.3% | 6 4.0% | 8 5.3% | 9 6.0% | 5 3.3% | 9 6.0% | 3 2.0% | 5 3.3% | 0-3 3.8% | 4-7 4.7% | 8-10 8.0% |
| Animal Waste | | 3 | | 2 | | 2 | 2 | 1 | 4 | 3 | | | |
| | 0.0% | 2.0% | 0.0% | 1.3% | 0.0% | 1.3% | 1.3% | 0.7% | 2.1% | 1.6% | 3.3% | 1.0% | 0.7% |
| Agricultural Land Conversion | 10 6.7% | 8 5.3% | 14 9.3% | 6 4.0% | 8 5.3% | 10 6.7% | 7 4.7% | 9 6.0% | 6 4.0% | 7 4.7% | 4.9% | 5.2% | 7.1% |
| Agricultural Productivity/Viability | 13 8.7% | 14 9.3% | 3 2.0% | 8 5.3% | 8 5.3% | 4 2.7% | 5 3.3% | 2 1.3% | 7 4.7% | 3 2.0% | 2.7% | 4.2% | 6.7% |
| Forestry | 1 0.7% | 2 1.3% | 8 5.3% | 8 5.3% | 9 6.0% | 4 2.7% | 10 6.7% | 4 2.7% | 9 6.0% | 12 8.0% | 5.6% | 5.2% | 2.4% |
| Grazing Lands/Rangeland Health | 10 6.7% | 16 10.7% | 12 8.0% | 3 2.0% | 9 6.0% | 9 6.0% | 8 5.3% | 11 7.3% | 12 8.0% | 4 2.7% | 6.0% | 4.8% | 8.5% |
| Noxious/Invasive Weeds | 11 7.3% | 5 3.3% | 13 8.7% | 11 7.3% | 10 6.7% | 14 9.3% | 9 6.0% | 9 6.0% | 10 6.7% | 2 1.3% | 4.7% | 7.3% | 6.4% |
| Urban Land Use | | 1 | 1 | 3 | 3 | 8 | 7 | 4 | 4 | 10 | | | |
| | 0.0% | 0.7% | 0.7% | 2.0% | 2.0% | 5.3% | 4.7% | 2.7% | 2.7% | 6.7% | 4.0% | 3.5% | 0.5% |
| Oil and Gas Activities | | | | | | | | | | | | | |
| Soil Erosion | 2 1.3% | 4 2.7% | 4 2.7% | 10 6.7% | 9 6.0% | 6 4.0% | 13 8.7% | 5 3.3% | 7 4.7% | 6 4.0% | 4.0% | 6.4% | 2.2% |
| Soil Quality/Soil Health | 2 1.3% | 5 3.3% | 11 7.3% | 7 4.7% | 10 6.7% | 7 4.7% | 8 5.3% | 12 8.0% | 9 6.0% | 4 2.7% | 5.6% | 5.4% | 4.0% |
| Water Quality/Quantity | 41 27.3% | 27 18.0% | 4 2.7% | 9 6.0% | 7 4.7% | 10 6.7% | 9 6.0% | 6 4.0% | 4 2.7% | 4 2.7% | 3.1% | 5.9% | 16.0% |
| Water Availability/Conservation | 12 8.0% | 19 12.7% | 14 9.3% | 14 9.3% | 10 6.7% | 9 6.0% | 10 6.7% | 6 4.0% | 8 5.3% | 3 2.0% | 3.8% | 7.2% | 10.0% |
| Wildlife/Habitat Enhancement | 8 5.3% | 4 2.7% | 16 10.7% | 15 10.0% | 8 5.3% | 11 7.3% | 5 3.3% | 13 8.7% | 7 4.7% | 10 6.7% | 6.7% | 6.5% | 6.2% |
| Recreation | 5 3.3% | 3 2.0% | 6 4.0% | 6 4.0% | 8 5.3% | 11 7.3% | 9 6.0% | 9 6.0% | 10 6.7% | 13 8.7% | 7.1% | 5.7% | 3.1% |
| Rural/Small Acreage Land Use | 4 2.7% | 4 2.7% | 8 5.3% | 4 2.7% | 5 3.3% | 4 2.7% | 7 4.7% | 5 3.3% | 11 7.3% | 12 8.0% | 6.2% | 3.4% | 3.6% |
| Endangered Species Act | 2 1.3% | 5 3.3% | 5 3.3% | 4 2.7% | 3 2.0% | 5 3.3% | 10 6.7% | 6 4.0% | 2 1.3% | 10 6.7% | 4.0% | 3.7% | 2.6% |
| Energy Development | 4 2.7% | 1 0.7% | 9 6.0% | 14 9.3% | 5 3.3% | 8 5.3% | 6 4.0% | 7 4.7% | 6 4.0% | 12 8.0% | 5.6% | 5.5% | 3.1% |
| Government Regulations | 4 2.7% | 2 1.3% | 3 2.0% | 4 2.7% | 7 4.7% | 5 3.3% | 1 0.7% | 7 4.7% | 7 4.7% | 7 4.7% | 4.7% | 2.9% | 2.0% |



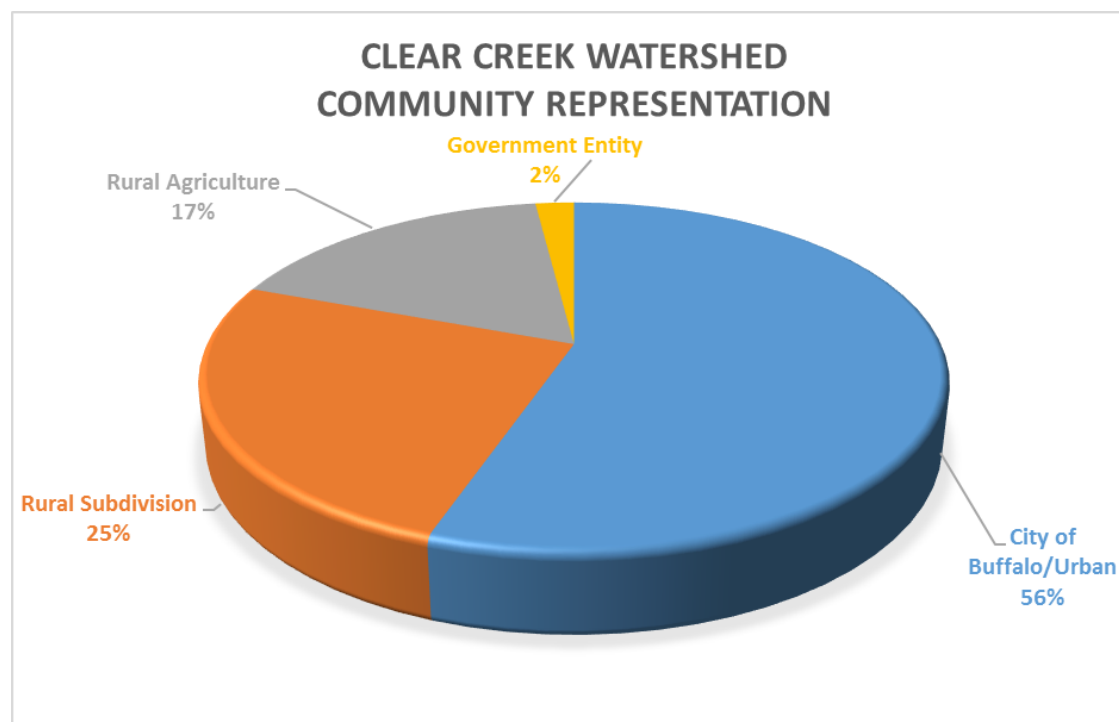
| Target Customer Groups | | | | | |
|---------------------------------|----------|----------|----------|----------|----------|
| | 5 | 4 | 3 | 2 | 1 |
| Part-Time Agriculture Producers | 5 | 34 | 14 | 8 | 14 |
| | 3.3% | 22.7% | 9.3% | 5.3% | 9.3% |
| Full-Time Agriculture Producers | 46 | 21 | 13 | 11 | 6 |
| | 30.7% | 14.0% | 8.7% | 7.3% | 4.0% |
| Developers | 10 | 9 | 10 | 10 | 15 |
| | 6.7% | 6.0% | 6.7% | 6.7% | 10.0% |
| Environmental Groups | 10 | 5 | 8 | 7 | 11 |
| | 6.7% | 3.3% | 5.3% | 4.7% | 7.3% |
| Federal and State Agencies | 9 | 12 | 8 | 11 | 10 |
| | 6.0% | 8.0% | 5.3% | 7.3% | 6.7% |
| Land Use Planners | 8 | 13 | 18 | 21 | 13 |
| | 5.3% | 8.7% | 12.0% | 14.0% | 8.7% |
| Recreational Users | 15 | 14 | 19 | 18 | 14 |
| | 10.0% | 9.3% | 12.7% | 12.0% | 9.3% |
| Urban Citizens | 1 | 6 | 5 | 12 | 15 |
| | 0.7% | 4.0% | 3.3% | 8.0% | 10.0% |
| Small Acreage Owners | 20 | 14 | 24 | 13 | 9 |
| | 13.3% | 9.3% | 16.0% | 8.7% | 6.0% |
| Schools | 11 | 6 | 11 | 16 | 14 |
| | 7.3% | 4.0% | 7.3% | 10.7% | 9.3% |



| Programs, Products, Services | | | | | |
|-------------------------------------|----------|----------|----------|----------|----------|
| | 5 | 4 | 3 | 2 | 1 |
| Agricultural Waste Management | 2 | 2 | 3 | 3 | 3 |
| | 1.3% | 1.3% | 2.0% | 2.0% | 2.0% |
| District Conservation Cost Share | 17 | 9 | 7 | 6 | 4 |
| | 11.3% | 6.0% | 4.7% | 4.0% | 2.7% |
| Conservation Planning | 21 | 11 | 9 | 14 | 13 |
| | 14.0% | 7.3% | 6.0% | 9.3% | 8.7% |
| Educational Programs | 15 | 13 | 10 | 20 | 10 |
| | 10.0% | 8.7% | 6.7% | 13.3% | 6.7% |
| Engineering Design | 2 | 0 | 5 | 5 | 6 |
| | 1.3% | 0.0% | 3.3% | 3.3% | 4.0% |
| Erosion and Sediment Control | 6 | 6 | 9 | 11 | 10 |
| | 4.0% | 4.0% | 6.0% | 7.3% | 6.7% |
| Forestry Programs | 4 | 9 | 7 | 5 | 6 |
| | 2.7% | 6.0% | 4.7% | 3.3% | 4.0% |
| Land Use Planning | 7 | 16 | 13 | 5 | 11 |
| | 4.7% | 10.7% | 8.7% | 3.3% | 7.3% |
| Resource Inventories | 1 | 5 | 5 | 6 | 4 |
| | 0.7% | 3.3% | 3.3% | 4.0% | 2.7% |
| Soil Survey & Soil Information | 6 | 7 | 16 | 12 | 3 |
| | 4.0% | 4.7% | 10.7% | 8.0% | 2.0% |
| Recreational Opportunities | 17 | 4 | 14 | 12 | 9 |
| | 11.3% | 2.7% | 9.3% | 8.0% | 6.0% |
| Wildlife Management | 7 | 18 | 9 | 8 | 17 |
| | 4.7% | 12.0% | 6.0% | 5.3% | 11.3% |
| NRCS Farm Bill Programs | 3 | 6 | 2 | 3 | 2 |
| | 2.0% | 4.0% | 1.3% | 2.0% | 1.3% |
| Urban Conservation Programs | 2 | 5 | 4 | 6 | 9 |
| | 1.3% | 3.3% | 2.7% | 4.0% | 6.0% |
| Tree Program | 11 | 19 | 15 | 8 | 18 |
| | 7.3% | 12.7% | 10.0% | 5.3% | 12.0% |
| Pesticide Collection | 26 | 10 | 14 | 9 | 11 |
| | 17.3% | 6.7% | 9.3% | 6.0% | 7.3% |

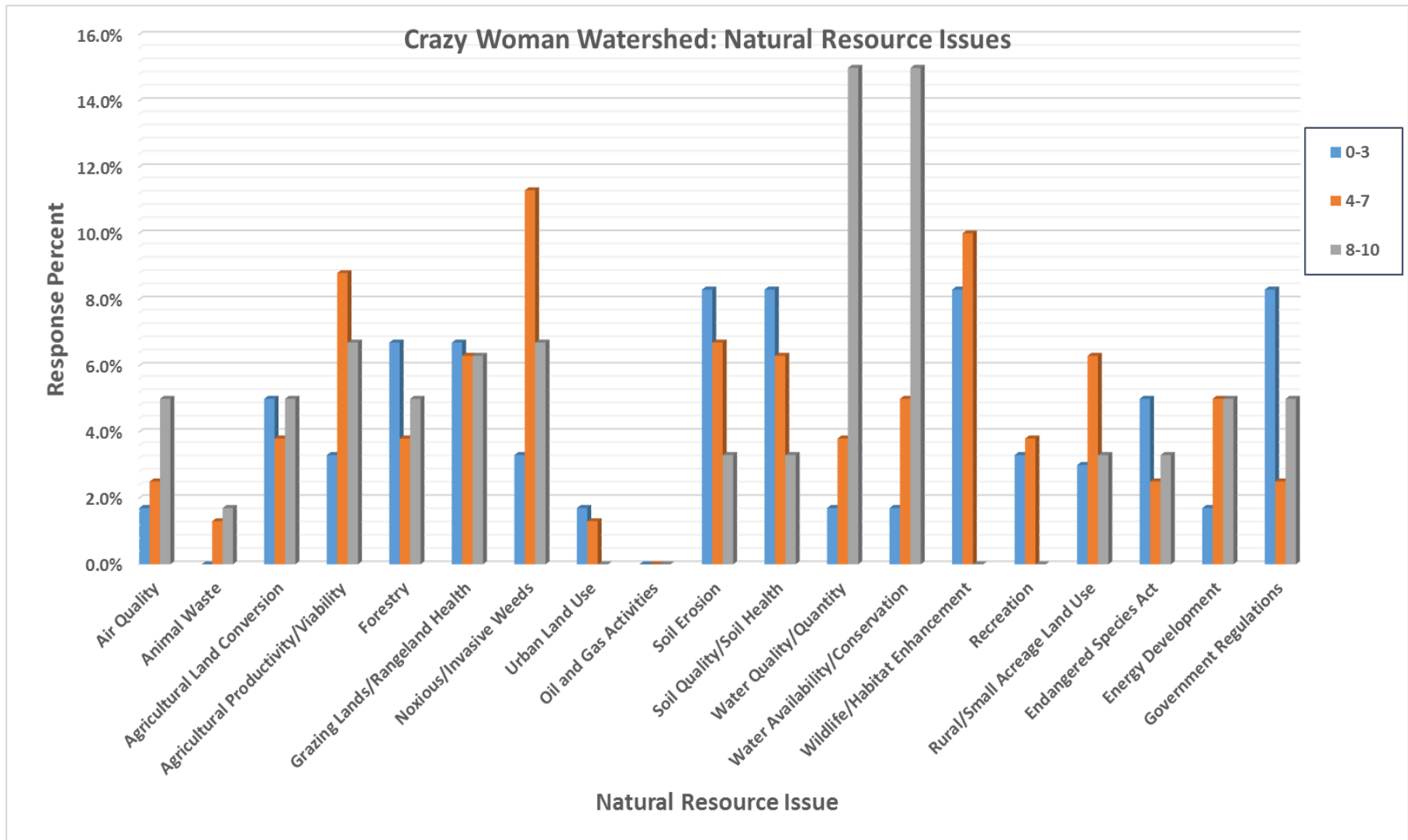


| Community Representation | | % |
|--------------------------|-----|-------|
| City of Buffalo/Urban | 83 | 55.3% |
| Rural Subdivision | 38 | 25.3% |
| Rural Agriculture | 26 | 17.3% |
| Government Entity | 3 | 2.0% |
| Total | 150 | |

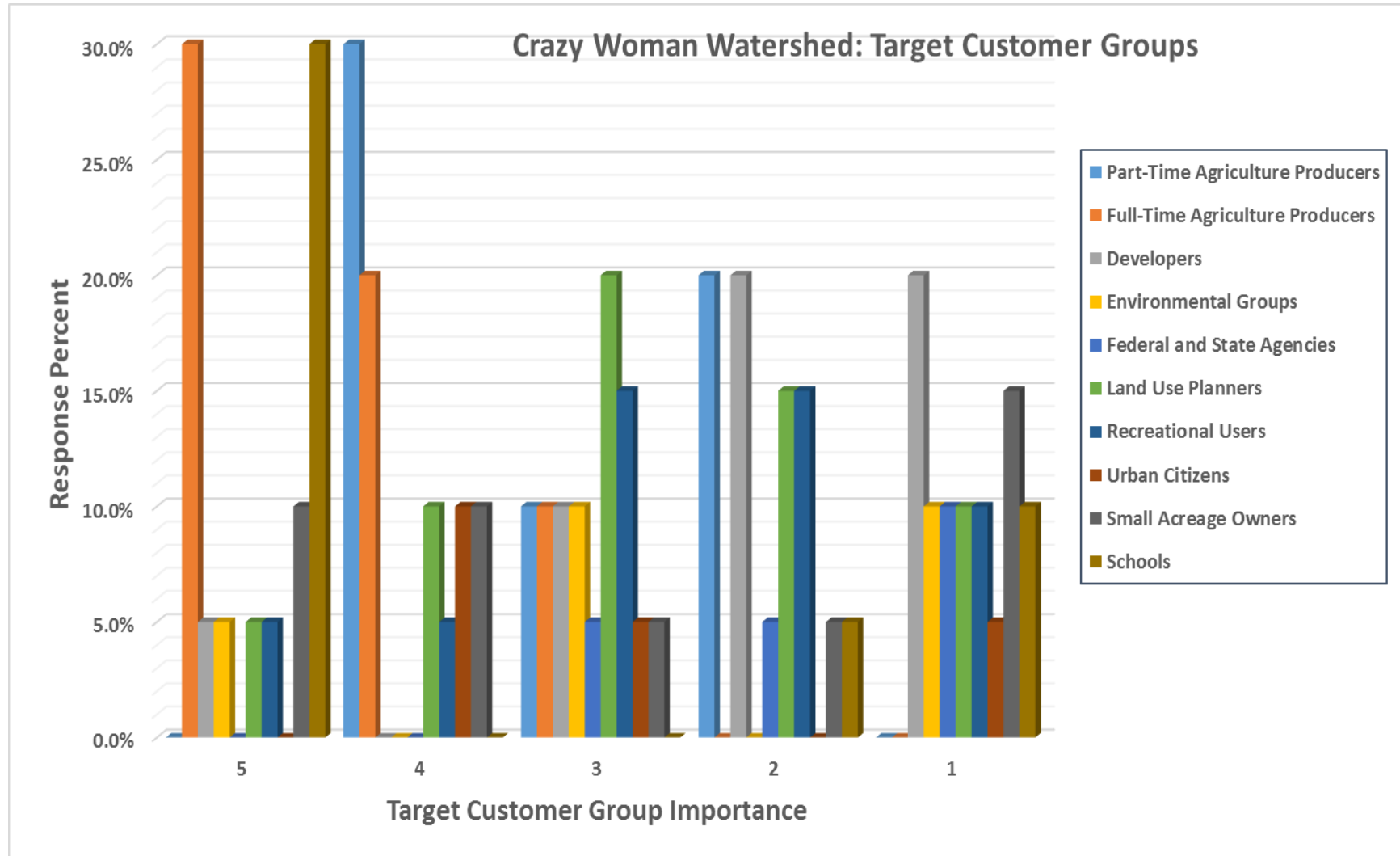


Crazy Woman Watershed

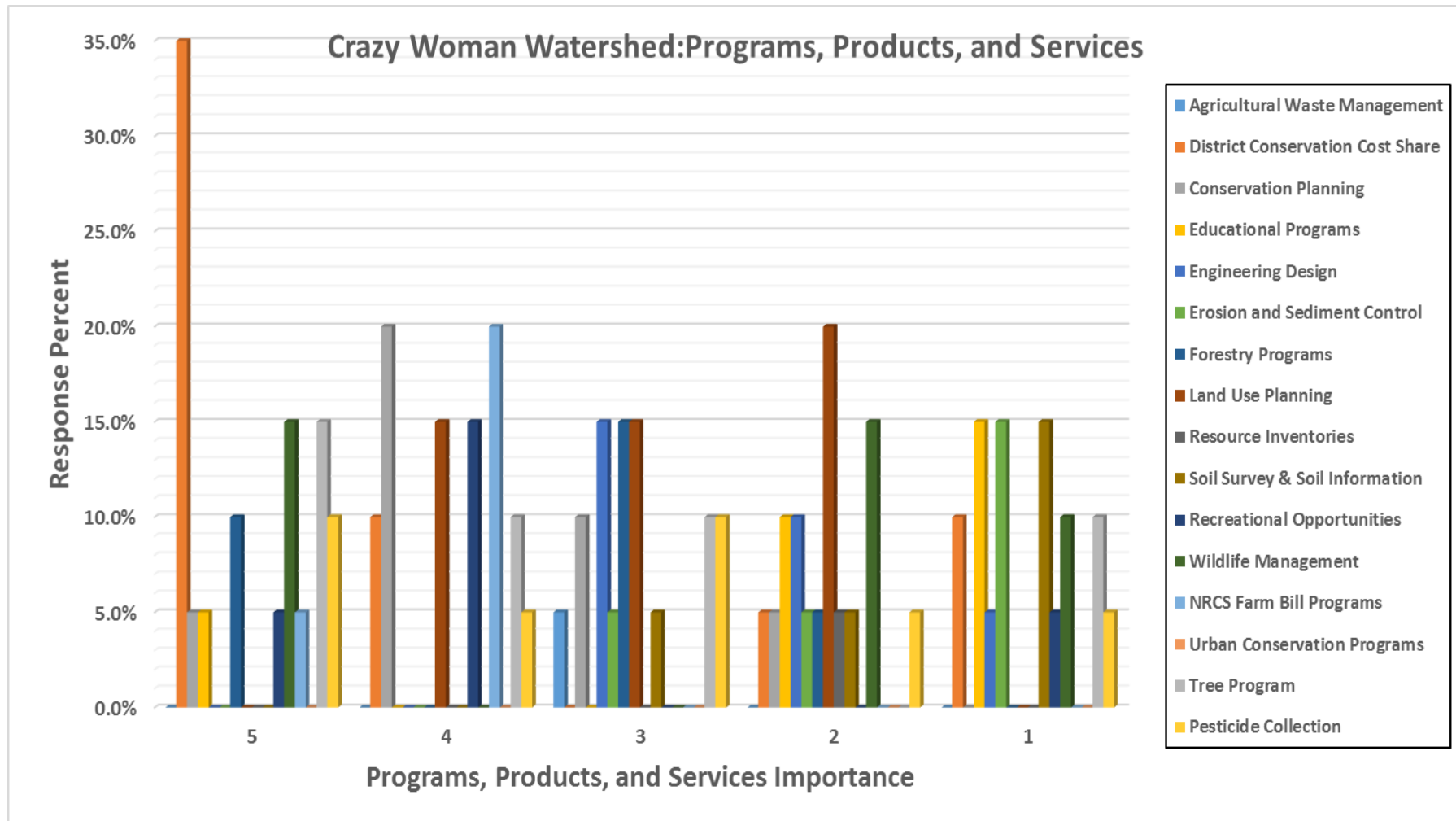
| Natural Resource Issues | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0-3 | 4-7 | 8-10 |
|-------------------------------------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|--------------|--------------|
| Air Quality | 2 | | 1 | 1 | | 1 | | 1 | | | | | |
| | 10.0% | 0.0% | 5.0% | 5.0% | 0.0% | 5.0% | 0.0% | 5.0% | 0.0% | 0.0% | 1.7% | 2.5% | 5.0% |
| Animal Waste | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 5.0% | 0.0% | 5.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.3% | 1.7% |
| Agricultural Land Conversion | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 0 | | | |
| | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 0.0% | 5.0% | 10.0% | 0.0% | 5.0% | 3.8% | 5.0% |
| Agricultural Productivity/Viability | 1 | 3 | 0 | 3 | 2 | 0 | 2 | 1 | 0 | 1 | | | |
| | 5.0% | 15.0% | 0.0% | 15.0% | 10.0% | 0.0% | 10.0% | 5.0% | 0.0% | 5.0% | 3.3% | 8.8% | 6.7% |
| Forestry | 1 | 0 | 2 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | | | |
| | 5.0% | 0.0% | 10.0% | 5.0% | 5.0% | 0.0% | 5.0% | 0.0% | 15.0% | 5.0% | 6.7% | 3.8% | 5.0% |
| Grazing Lands/Rangeland Health | 1 | 1 | 2 | 1 | 3 | 0 | 1 | 2 | 0 | 2 | | | |
| | 5.0% | 5.0% | 10.0% | 5.0% | 15.0% | 0.0% | 5.0% | 10.0% | 0.0% | 10.0% | 6.7% | 6.3% | 6.3% |
| Noxious/Invasive Weeds | 1 | 0 | 3 | 5 | 0 | 3 | 1 | 1 | 1 | 0 | | | |
| | 5.0% | 0.0% | 15.0% | 25.0% | 0.0% | 15.0% | 5.0% | 5.0% | 5.0% | 0.0% | 3.3% | 11.3% | 6.7% |
| Urban Land Use | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 5.0% | 0.0% | 0.0% | 5.0% | 0.0% | 1.7% | 1.3% | 0.0% |
| Oil and Gas Activities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | | | | | | | | | | 0.0% | 0.0% | 0.0% |
| Soil Erosion | 0 | 2 | 0 | 0 | 2 | 1 | 1 | 1 | 2 | 2 | | | |
| | 0.0% | 10.0% | 0.0% | 0.0% | 10.0% | 5.0% | 5.0% | 5.0% | 10.0% | 10.0% | 8.3% | 6.7% | 3.3% |
| Soil Quality/Soil Health | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 2 | 2 | 1 | | | |
| | 0.0% | 5.0% | 5.0% | 0.0% | 5.0% | 10.0% | 10.0% | 10.0% | 10.0% | 5.0% | 8.3% | 6.3% | 3.3% |
| Water Quality/Quantity | 3 | 3 | 3 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | | | |
| | 15.0% | 15.0% | 15.0% | 0.0% | 0.0% | 10.0% | 5.0% | 0.0% | 0.0% | 5.0% | 1.7% | 3.8% | 15.0% |
| Water Availability/Conservation | 4 | 4 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | | | |
| | 20.0% | 20.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 0.0% | 0.0% | 5.0% | 1.7% | 5.0% | 15.0% |
| Wildlife/Habitat Enhancement | 0 | 0 | 0 | 2 | 1 | 1 | 4 | 2 | 1 | 2 | | | |
| | 0.0% | 0.0% | 0.0% | 10.0% | 5.0% | 5.0% | 20.0% | 10.0% | 5.0% | 10.0% | 8.3% | 10.0% | 0.0% |
| Recreation | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | | | |
| | 0.0% | 0.0% | 0.0% | 5.0% | 5.0% | 5.0% | 0.0% | 0.0% | 5.0% | 5.0% | 3.3% | 3.8% | 0.0% |
| Rural/Small Acreage Land Use | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 0 | 1 | | | |
| | 0.0% | 5.0% | 5.0% | 5.0% | 10.0% | 5.0% | 5.0% | 10.0% | 0.0% | 5.0% | 3.0% | 6.3% | 3.3% |
| Endangered Species Act | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 1 | 0 | 2 | | | |
| | 0.0% | 0.0% | 10.0% | 0.0% | 5.0% | 5.0% | 0.0% | 5.0% | 0.0% | 10.0% | 5.0% | 2.5% | 3.3% |
| Energy Development | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | | | |
| | 15.0% | 0.0% | 0.0% | 0.0% | 0.0% | 15.0% | 5.0% | 5.0% | 0.0% | 0.0% | 1.7% | 5.0% | 5.0% |
| Government Regulations | 1 | 2 | 0 | 1 | 0 | 1 | 0 | 1 | 4 | 0 | | | |
| | 5.0% | 10.0% | 0.0% | 5.0% | 0.0% | 5.0% | 0.0% | 5.0% | 20.0% | 0.0% | 8.3% | 2.5% | 5.0% |



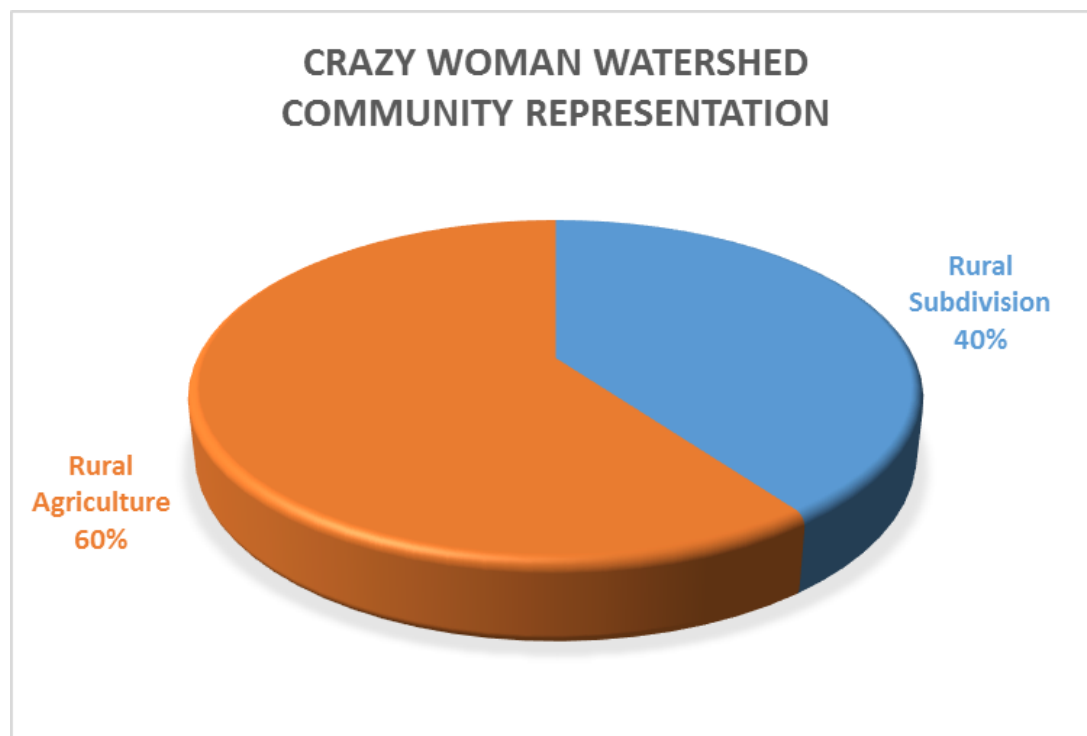
| Target Customer Groups | | | | | |
|---------------------------------|----------|----------|----------|----------|----------|
| | 5 | 4 | 3 | 2 | 1 |
| Part-Time Agriculture Producers | 0 | 6 | 2 | 4 | 0 |
| | 0.0% | 30.0% | 10.0% | 20.0% | 0.0% |
| Full-Time Agriculture Producers | 6 | 4 | 2 | 0 | 0 |
| | 30.0% | 20.0% | 10.0% | 0.0% | 0.0% |
| Developers | 1 | 0 | 2 | 4 | 4 |
| | 5.0% | 0.0% | 10.0% | 20.0% | 20.0% |
| Environmental Groups | 1 | 0 | 2 | 0 | 2 |
| | 5.0% | 0.0% | 10.0% | 0.0% | 10.0% |
| Federal and State Agencies | 0 | 0 | 1 | 1 | 2 |
| | 0.0% | 0.0% | 5.0% | 5.0% | 10.0% |
| Land Use Planners | 1 | 2 | 4 | 3 | 2 |
| | 5.0% | 10.0% | 20.0% | 15.0% | 10.0% |
| Recreational Users | 1 | 1 | 3 | 3 | 2 |
| | 5.0% | 5.0% | 15.0% | 15.0% | 10.0% |
| Urban Citizens | 0 | 2 | 1 | 0 | 1 |
| | 0.0% | 10.0% | 5.0% | 0.0% | 5.0% |
| Small Acreage Owners | 2 | 2 | 1 | 1 | 3 |
| | 10.0% | 10.0% | 5.0% | 5.0% | 15.0% |
| Schools | 6 | 0 | 0 | 1 | 2 |
| | 30.0% | 0.0% | 0.0% | 5.0% | 10.0% |



| Programs, Products, Services | | | | | |
|-------------------------------------|----------|----------|----------|----------|----------|
| | 5 | 4 | 3 | 2 | 1 |
| Agricultural Waste Management | 0 | 0 | 1 | 0 | 0 |
| | 0.0% | 0.0% | 5.0% | 0.0% | 0.0% |
| District Conservation Cost Share | 7 | 2 | 0 | 1 | 2 |
| | 35.0% | 10.0% | 0.0% | 5.0% | 10.0% |
| Conservation Planning | 1 | 4 | 2 | 1 | 0 |
| | 5.0% | 20.0% | 10.0% | 5.0% | 0.0% |
| Educational Programs | 1 | 0 | 0 | 2 | 3 |
| | 5.0% | 0.0% | 0.0% | 10.0% | 15.0% |
| Engineering Design | 0 | 0 | 3 | 2 | 1 |
| | 0.0% | 0.0% | 15.0% | 10.0% | 5.0% |
| Erosion and Sediment Control | 0 | 0 | 1 | 1 | 3 |
| | 0.0% | 0.0% | 5.0% | 5.0% | 15.0% |
| Forestry Programs | 2 | 0 | 3 | 1 | 0 |
| | 10.0% | 0.0% | 15.0% | 5.0% | 0.0% |
| Land Use Planning | 0 | 3 | 3 | 4 | 0 |
| | 0.0% | 15.0% | 15.0% | 20.0% | 0.0% |
| Resource Inventories | 0 | 0 | 0 | 1 | 0 |
| | 0.0% | 0.0% | 0.0% | 5.0% | 0.0% |
| Soil Survey & Soil Information | 0 | 0 | 1 | 1 | 3 |
| | 0.0% | 0.0% | 5.0% | 5.0% | 15.0% |
| Recreational Opportunities | 1 | 3 | 0 | 0 | 1 |
| | 5.0% | 15.0% | 0.0% | 0.0% | 5.0% |
| Wildlife Management | 3 | 0 | 0 | 3 | 2 |
| | 15.0% | 0.0% | 0.0% | 15.0% | 10.0% |
| NRCS Farm Bill Programs | 1 | 4 | 0 | 0 | 0 |
| | 5.0% | 20.0% | 0.0% | 0.0% | 0.0% |
| Urban Conservation Programs | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Tree Program | 3 | 2 | 2 | 0 | 2 |
| | 15.0% | 10.0% | 10.0% | 0.0% | 10.0% |
| Pesticide Collection | 2 | 1 | 2 | 1 | 1 |
| | 10.0% | 5.0% | 10.0% | 5.0% | 5.0% |

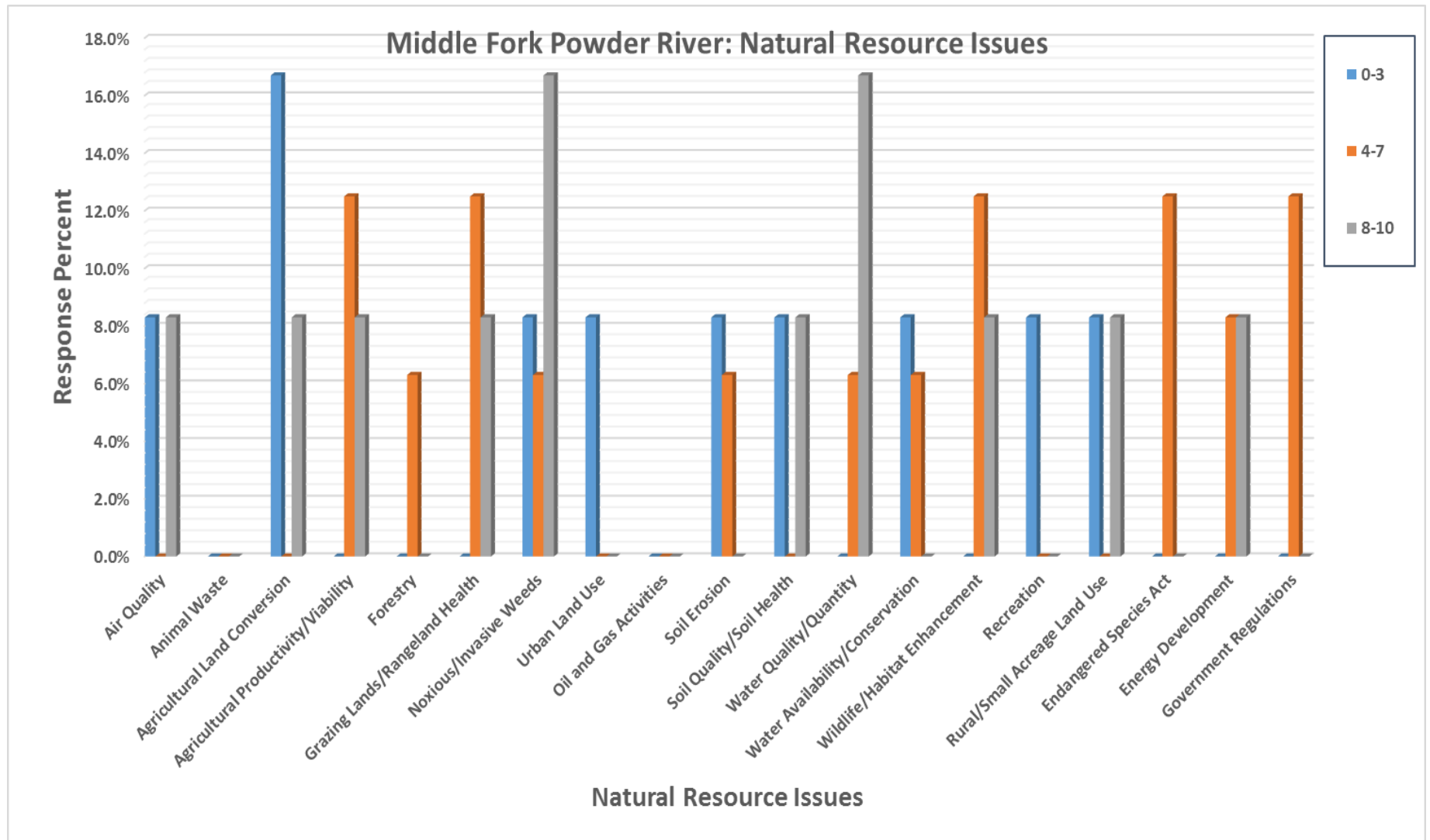


| Community Representation | | |
|--------------------------|----|-------|
| City of Buffalo/Urban | 0 | % |
| Rural Subdivision | 8 | 40.0% |
| Rural Agriculture | 12 | 60.0% |
| Government Entity | 0 | 0.00% |
| Total | 20 | |

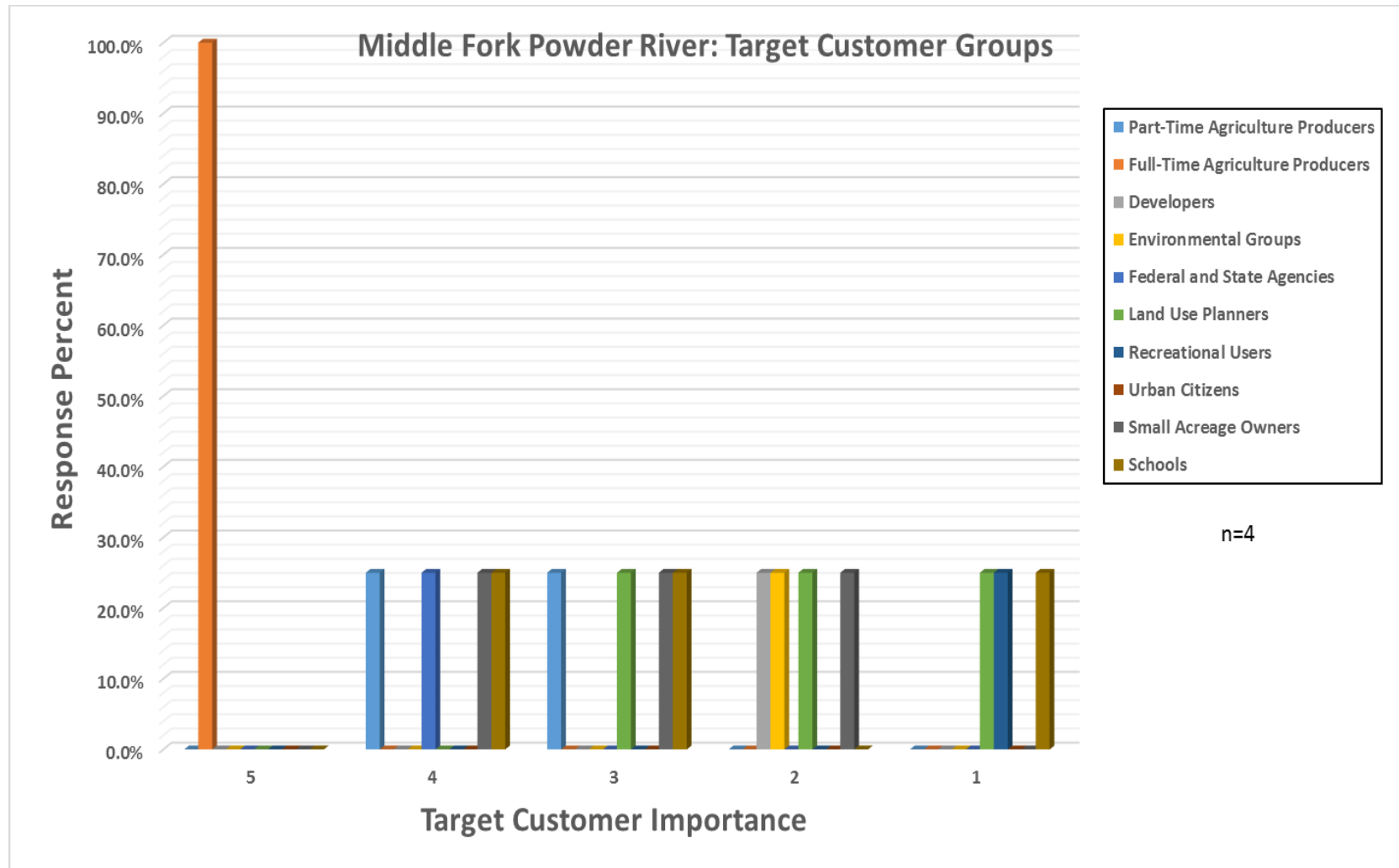


Middle Fork Powder River

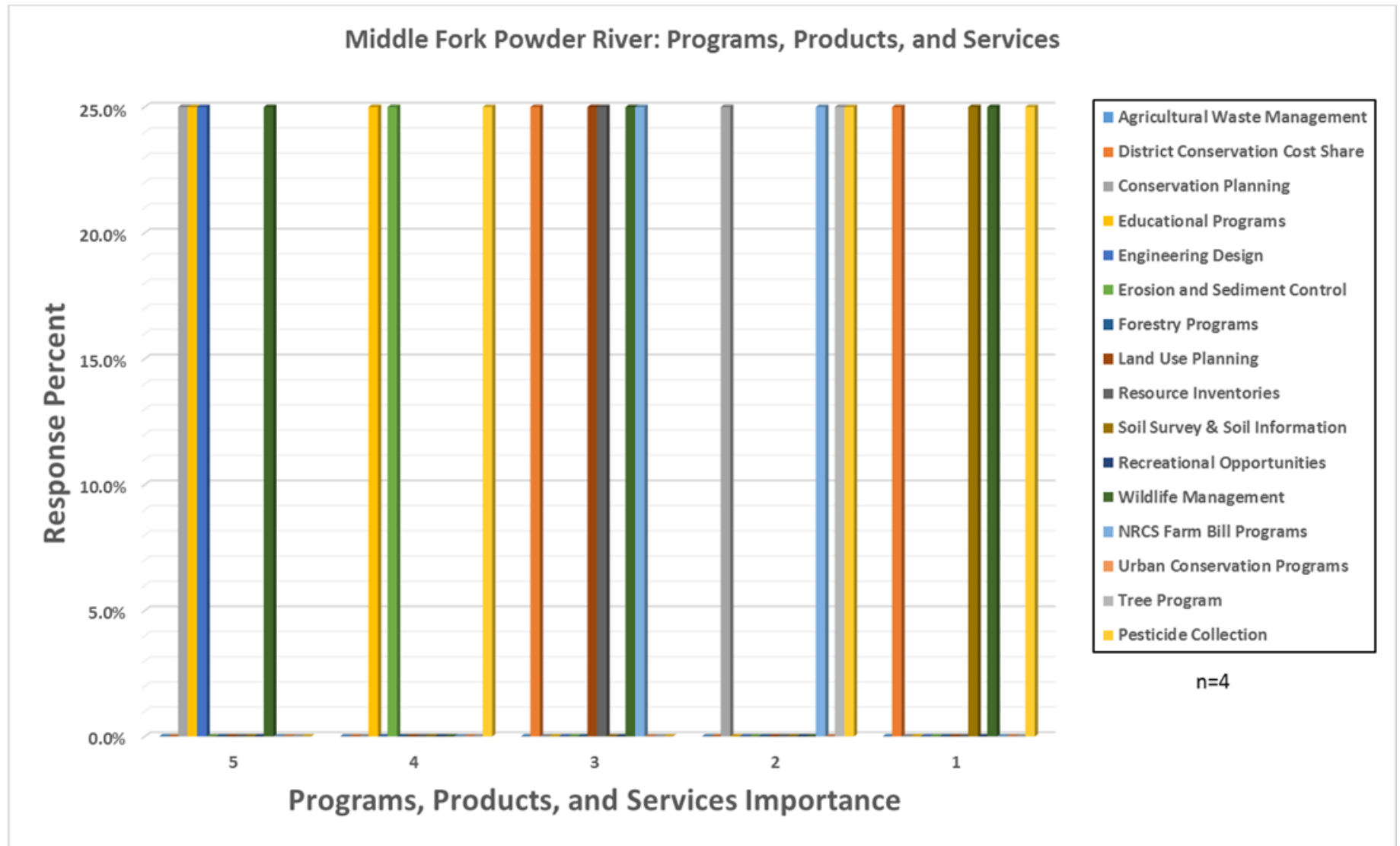
| Natural Resource Issues | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0-3 | 4-7 | 8-10 |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|--------------|--------------|
| Air Quality | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | | |
| | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% | 0.0% | 8.3% | 0.0% | 8.3% |
| Animal Waste | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Agricultural Land Conversion | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | | | |
| | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 50.0% | 0.0% | 0.0% | 16.7% | 0.0% | 8.3% |
| Agricultural Productivity/Viability | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | | | |
| | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 8.3% |
| Forestry | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 6.3% | 0.0% |
| Grazing Lands/Rangeland Health | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | | | |
| | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 8.3% |
| Noxious/Invasive Weeds | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | | | |
| | 0.0% | 25.0% | 25.0% | 0.0% | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 25.0% | 8.3% | 6.3% | 16.7% |
| Urban Land Use | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% | 0.0% | 8.3% | 0.0% | 0.0% |
| Oil and Gas Activities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Soil Erosion | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% | 25.0% | 0.0% | 0.0% | 8.3% | 6.3% | 0.0% |
| Soil Quality/Soil Health | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | | |
| | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 8.3% | 0.0% | 8.3% |
| Water Quality/Quantity | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 25.0% | 25.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 6.3% | 16.7% |
| Water Availability/Conservation | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | | | |
| | 0.0% | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% | 8.3% | 6.3% | 0.0% |
| Wildlife/Habitat Enhancement | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 25.0% | 0.0% | 0.0% | 25.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 8.3% |
| Recreation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% | 8.3% | 0.0% | 0.0% |
| Rural/Small Acreage Land Use | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | | |
| | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% | 0.0% | 8.3% | 0.0% | 8.3% |
| Endangered Species Act | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 25.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 0.0% |
| Energy Development | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | |
| | 25.0% | 0.0% | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 8.3% | 8.3% |
| Government Regulations | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 25.0% | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 0.0% |



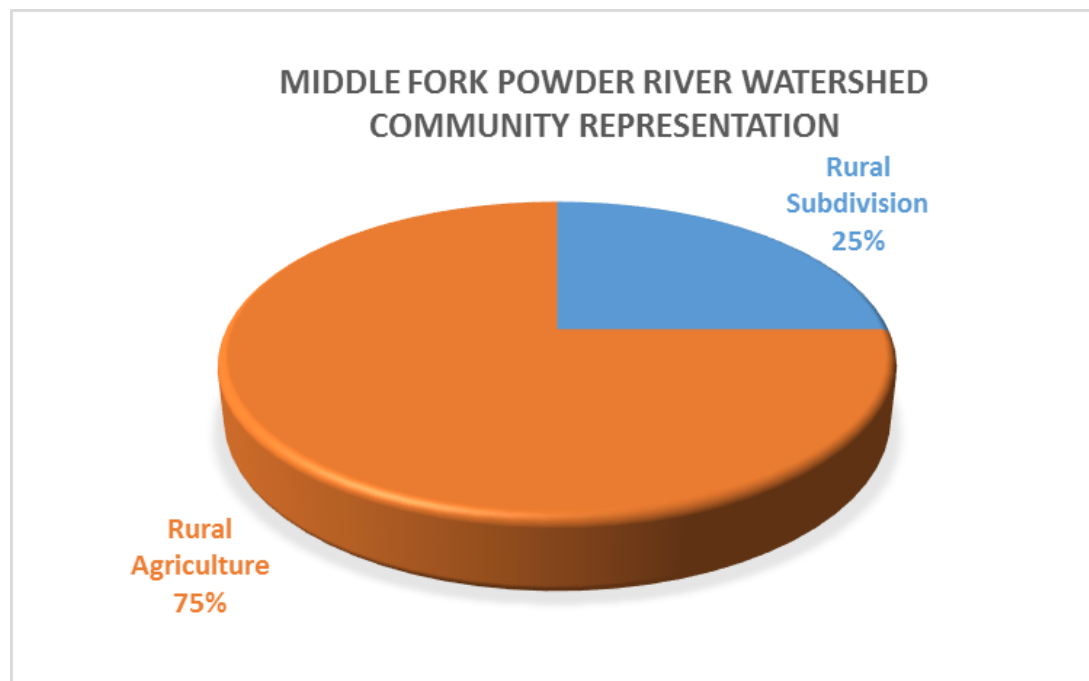
| Target Customer Groups | | | | | |
|---------------------------------|----------|----------|----------|----------|----------|
| | 5 | 4 | 3 | 2 | 1 |
| Part-Time Agriculture Producers | 0 | 1 | 1 | 0 | 0 |
| | 0.0% | 25.0% | 25.0% | 0.0% | 0.0% |
| Full-Time Agriculture Producers | 4 | 0 | 0 | 0 | 0 |
| | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Developers | 0 | 0 | 0 | 1 | 0 |
| | 0.0% | 0.0% | 0.0% | 25.0% | 0.0% |
| Environmental Groups | 0 | 0 | 0 | 1 | 0 |
| | 0.0% | 0.0% | 0.0% | 25.0% | 0.0% |
| Federal and State Agencies | 0 | 1 | 0 | 0 | 0 |
| | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% |
| Land Use Planners | 0 | 0 | 1 | 1 | 1 |
| | 0.0% | 0.0% | 25.0% | 25.0% | 25.0% |
| Recreational Users | 0 | 0 | 0 | 0 | 1 |
| | 0% | 0% | 0% | 0% | 25% |
| Urban Citizens | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Small Acreage Owners | 0 | 1 | 1 | 1 | 0 |
| | 0.0% | 25.0% | 25.0% | 25.0% | 0.0% |
| Schools | 0 | 1 | 1 | 0 | 1 |
| | 0.0% | 25.0% | 25.0% | 0.0% | 25.0% |



| Programs, Products, Services | | | | | |
|---|----------|----------|----------|----------|----------|
| | 5 | 4 | 3 | 2 | 1 |
| Agricultural Waste Management | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| District Conservation Cost Share | 0 | 0 | 1 | 0 | 1 |
| | 0.0% | 0.0% | 25.0% | 0.0% | 25.0% |
| Conservation Planning | 1 | 0 | 0 | 1 | 0 |
| | 25.0% | 0.0% | 0.0% | 25.0% | 0.0% |
| Educational Programs | 1 | 1 | 0 | 0 | 0 |
| | 25.0% | 25.0% | 0.0% | 0.0% | 0.0% |
| Engineering Design | 1 | 0 | 0 | 0 | 0 |
| | 25.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Erosion and Sediment Control | 0 | 1 | 0 | 0 | 0 |
| | 0.0% | 25.0% | 0.0% | 0.0% | 0.0% |
| Forestry Programs | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Land Use Planning | 0 | 0 | 1 | 0 | 0 |
| | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% |
| Resource Inventories | 0 | 0 | 0 | 0 | 1 |
| | 0.0% | 0.0% | 25.0% | 0.0% | 0.0% |
| Soil Survey & Soil Information | 0 | 1 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 25.0% |
| Recreational Opportunities | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Wildlife Management | 1 | 0 | 1 | 0 | 1 |
| | 25.0% | 0.0% | 25.0% | 0.0% | 25.0% |
| NRCS Farm Bill Programs | 0 | 0 | 1 | 1 | 0 |
| | 0.0% | 0.0% | 25.0% | 25.0% | 0.0% |
| Urban Conservation Programs | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Tree Program | 0 | 0 | 0 | 1 | 0 |
| | 0.0% | 0.0% | 0.0% | 25.0% | 0.0% |
| Pesticide Collection | 0 | 1 | 0 | 1 | 1 |
| | 0.0% | 25.0% | 0.0% | 25.0% | 25.0% |

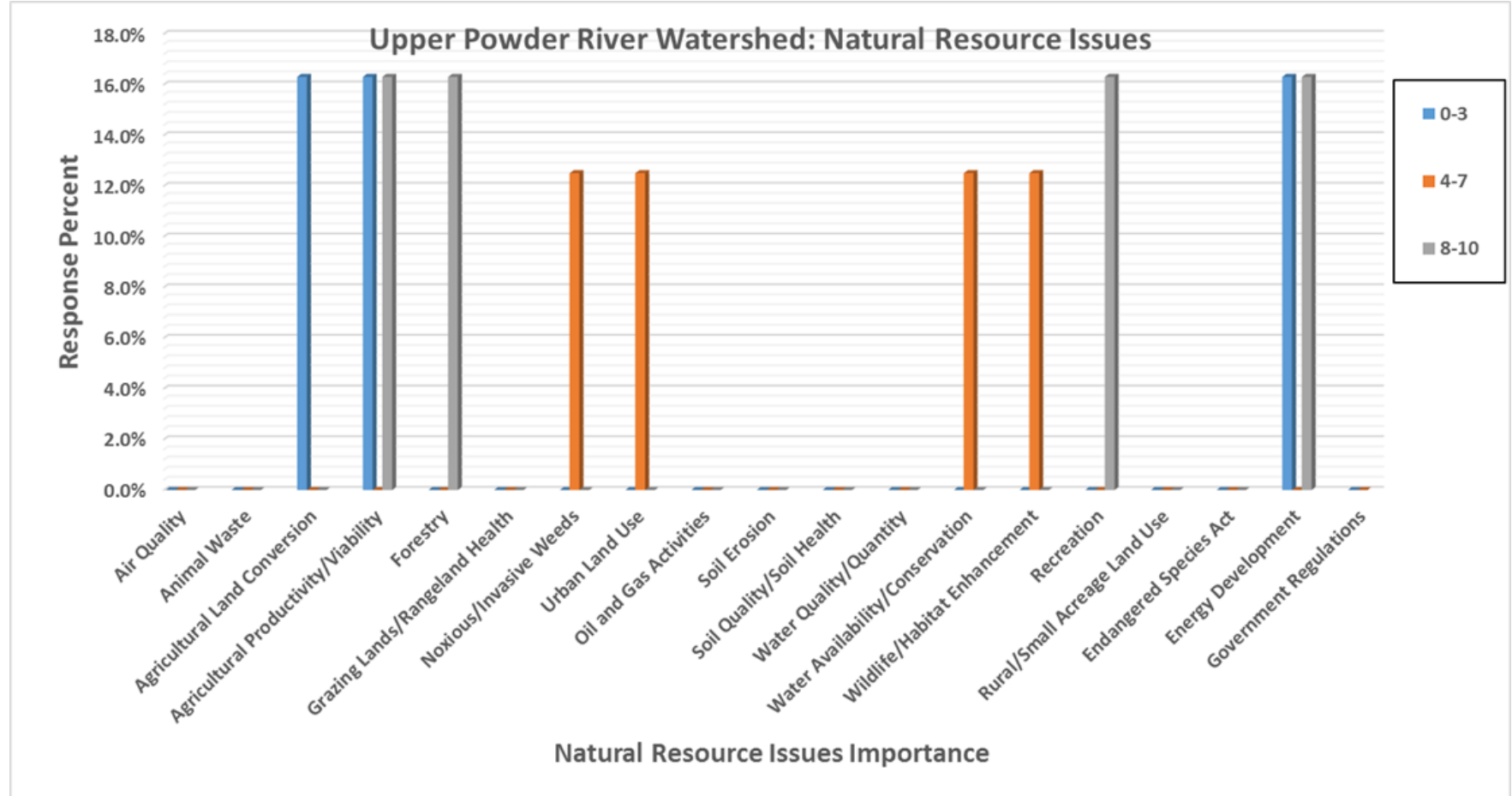


| Community Representation | | % |
|---------------------------------|---|----------|
| City of Buffalo/Urban | 0 | 0.0% |
| Rural Subdivision | 1 | 25.0% |
| Rural Agriculture | 3 | 75.0% |
| Government Entity | 0 | 0.0% |
| Total | 4 | |

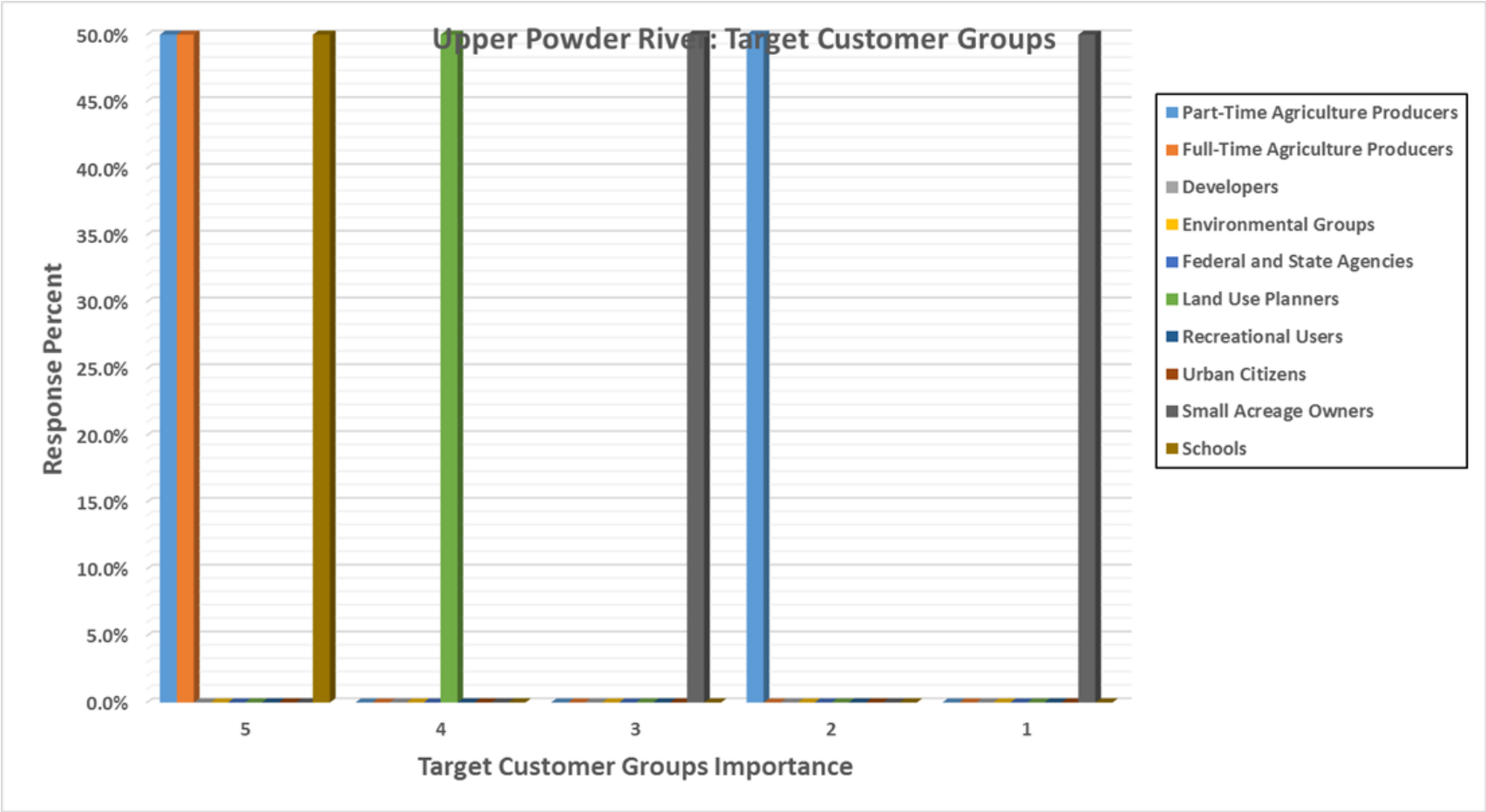


Upper Powder River Watershed

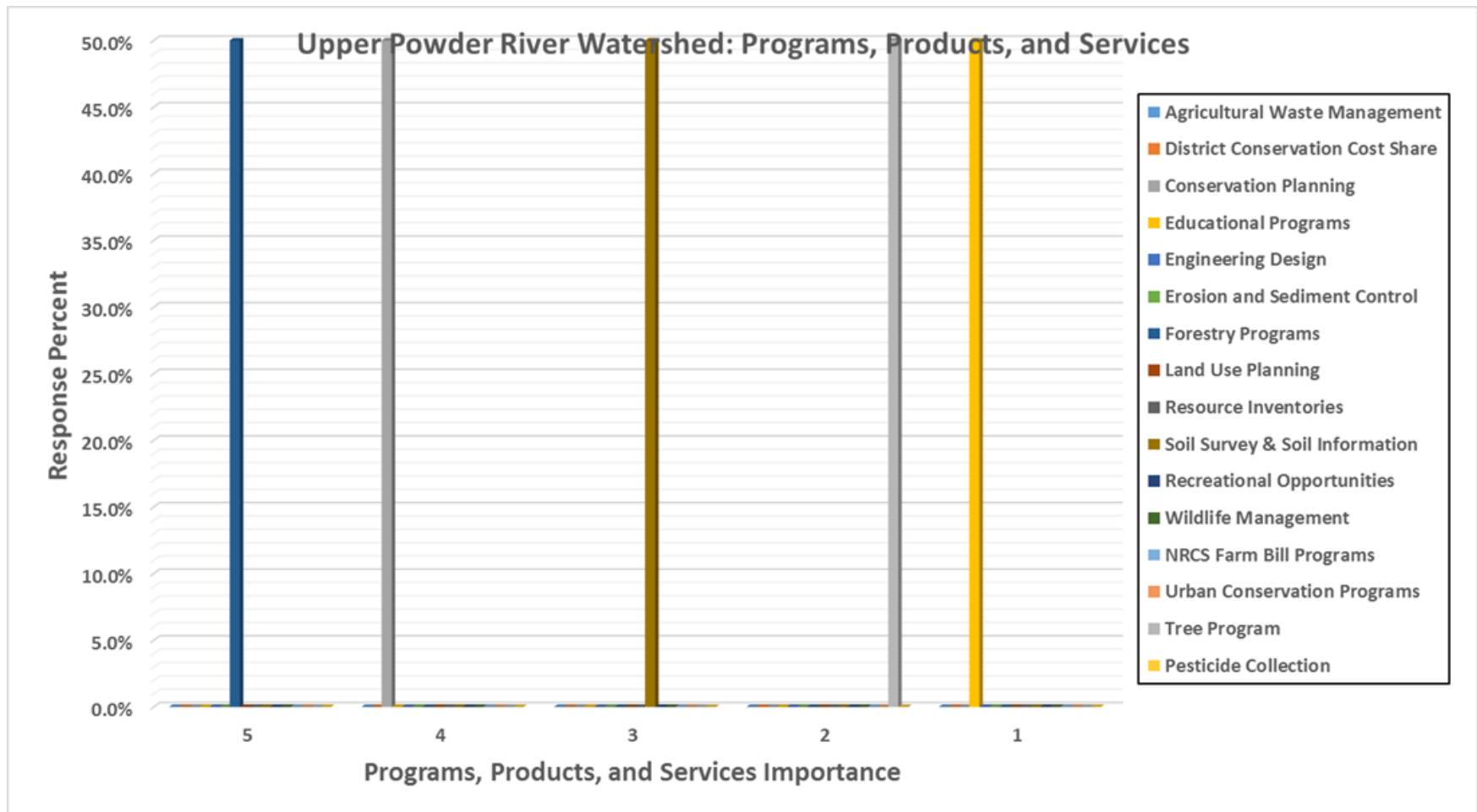
| Natural Resource Issues | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Air Quality | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0-3 | 4-7 | 8-10 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Animal Waste | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Agricultural Land Conversion | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 50.0% | 16.3% | 0.0% | 0.0% |
| Agricultural Productivity/Viability | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 50.0% | 0.0% | 0.0% | 16.3% | 0.0% | 0.0% |
| Forestry | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 16.3% |
| Grazing Lands/Rangeland Health | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 16.3% |
| Noxious/Invasive Weeds | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 0.0% |
| Urban Land Use | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 0.0% |
| Oil and Gas Activities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Soil Erosion | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Soil Quality/Soil Health | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Water Quality/Quantity | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Water Availability/Conservation | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 0.0% |
| Wildlife/Habitat Enhancement | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 0.0% |
| Recreation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Rural/Small Acreage Land Use | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 16.3% |
| Endangered Species Act | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Energy Development | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 50.0% | 0.0% | 16.3% | 0.0% | 0.0% |
| Government Regulations | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 16.3% |



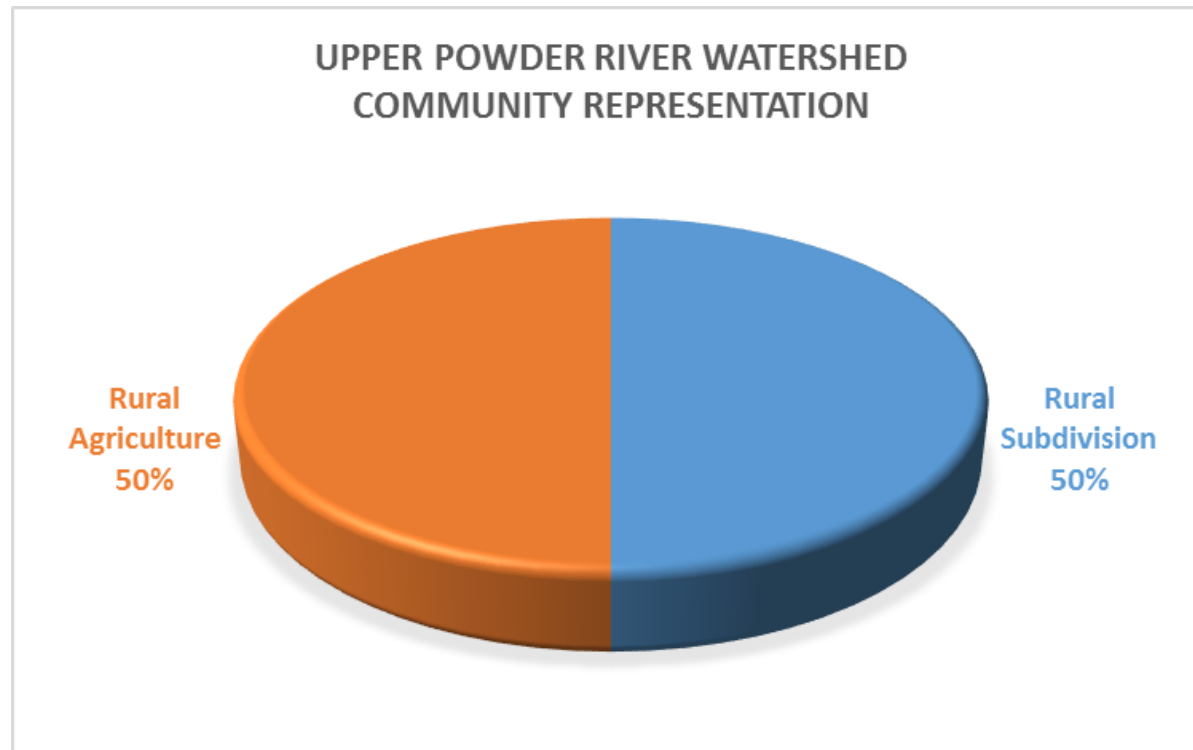
| Target Customer Groups | | | | | |
|---------------------------------|----------|----------|----------|----------|----------|
| | 5 | 4 | 3 | 2 | 1 |
| Part-Time Agriculture Producers | 1 | 0 | 0 | 1 | 0 |
| | 50.0% | 0.0% | 0.0% | 50.0% | 0.0% |
| Full-Time Agriculture Producers | 1 | 0 | 0 | 0 | 0 |
| | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Developers | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Environmental Groups | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Federal and State Agencies | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Land Use Planners | 0 | 1 | 0 | 0 | 0 |
| | 0.0% | 50.0% | 0.0% | 0.0% | 0.0% |
| Recreational Users | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Urban Citizens | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Small Acreage Owners | 0 | 0 | 1 | 0 | 1 |
| | 0.0% | 0.0% | 50.0% | 0.0% | 50.0% |
| Schools | 1 | 0 | 0 | 0 | 0 |
| | 50.0% | 0.0% | 0.0% | 0.0% | 0.0% |



| Programs, Products, Services | 5 | 4 | 3 | 2 | 1 |
|-------------------------------------|------------|------------|------------|------------|------------|
| Agricultural Waste Management | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| District Conservation Cost Share | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| Conservation Planning | 0 0.0% | 1 50.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| Educational Programs | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 1 50.0% |
| Engineering Design | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| Erosion and Sediment Control | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| Forestry Programs | 1 50.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| Land Use Planning | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| Resource Inventories | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| Soil Survey & Soil Information | 0 0.0% | 0 0.0% | 1 50.0% | 0 0.0% | 0 0.0% |
| Recreational Opportunities | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| Wildlife Management | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| NRCS Farm Bill Programs | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| Urban Conservation Programs | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |
| Tree Program | 0 0.0% | 0 0.0% | 0 0.0% | 1 50.0% | 0 0.0% |
| Pesticide Collection | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% | 0 0.0% |

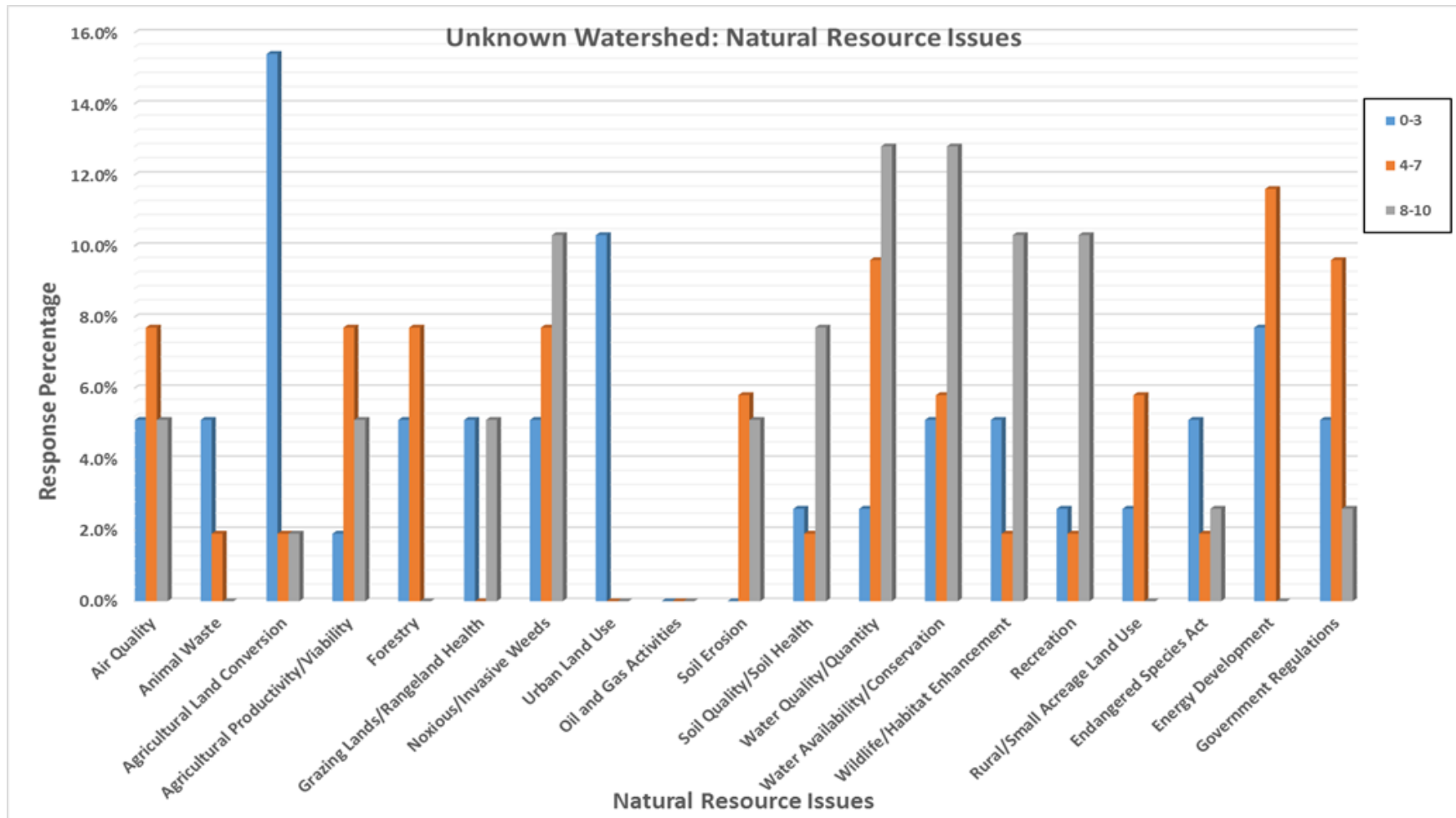


| Community Representation | | % |
|---------------------------------|---|----------|
| City of Buffalo/Urban | 0 | 0.0% |
| Rural Subdivision | 1 | 50.0% |
| Rural Agriculture | 1 | 50.0% |
| Government Entity | 0 | 0.0% |
| Total | 2 | |

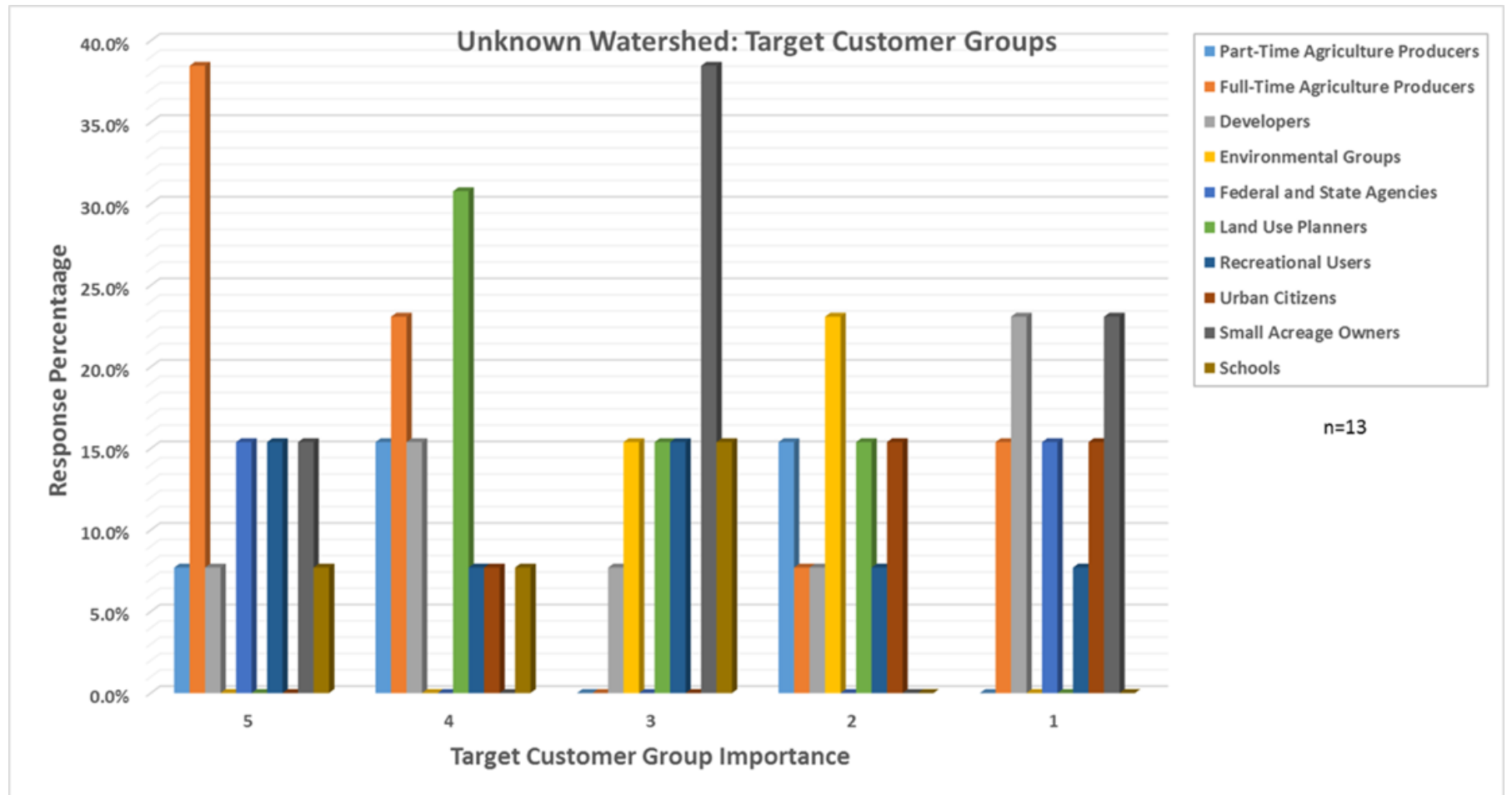


Unknown Watershed

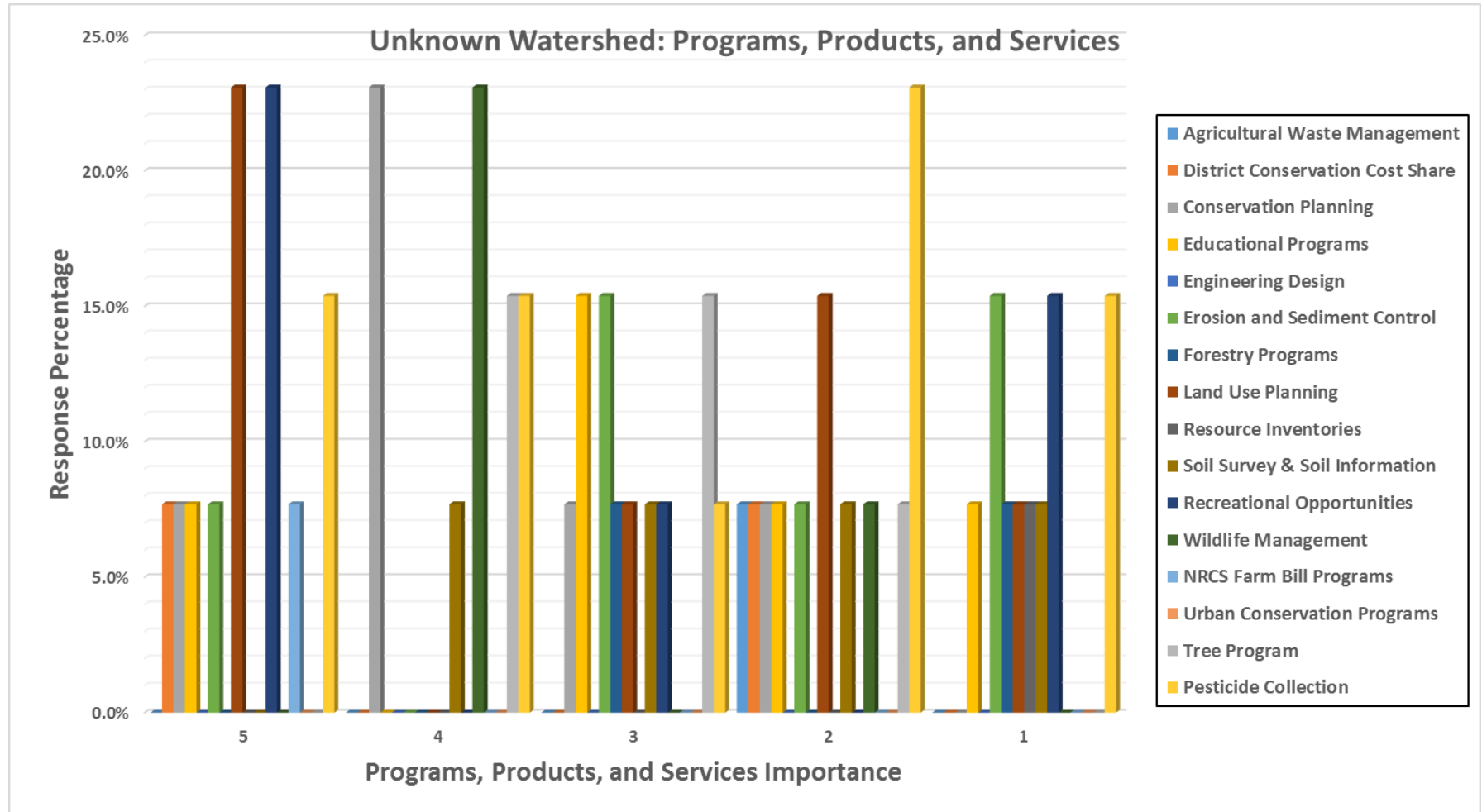
| Natural Resource Issues | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | | | | | | | | | 0-3 | 4-7 | 8-10 |
| Air Quality | 1 | 1 | 0 | 1 | 0 | 2 | 1 | 2 | 0 | 0 | | | |
| | 7.7% | 7.7% | 0.0% | 7.7% | 0.0% | 15.4% | 7.7% | 15.4% | 0.0% | 0.0% | 5.1% | 7.7% | 5.1% |
| Animal Waste | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 7.7% | 0.0% | 7.7% | 7.7% | 5.1% | 1.9% | 0.0% |
| Agricultural Land Conversion | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | | | |
| | 7.7% | 0.0% | 0.0% | 7.7% | 0.0% | 0.0% | 0.0% | 15.4% | 15.4% | 15.4% | 15.4% | 1.9% | 1.9% |
| Agricultural Productivity/Viability | 2 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | | | |
| | 15.4% | 0.0% | 0.0% | 7.7% | 7.7% | 7.7% | 7.7% | 0.0% | 7.7% | 0.0% | 1.9% | 7.7% | 5.1% |
| Forestry | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 2 | | | |
| | 0.0% | 0.0% | 0.0% | 15.4% | 0.0% | 0.0% | 15.4% | 0.0% | 0.0% | 15.4% | 5.1% | 7.7% | 0.0% |
| Grazing Lands/Rangeland Health | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | | | |
| | 0.0% | 7.7% | 7.7% | 0.0% | 0.0% | 0.0% | 0.0% | 7.7% | 7.7% | 0.0% | 5.1% | 0.0% | 5.1% |
| Noxious/Invasive Weeds | 0 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 0 | 0 | | | |
| | 0.0% | 15.4% | 15.4% | 15.4% | 15.4% | 0.0% | 0.0% | 15.4% | 0.0% | 0.0% | 5.1% | 7.7% | 10.3% |
| Urban Land Use | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 7.7% | 15.4% | 7.7% | 10.3% | 0.0% | 0.0% |
| Oil and Gas Activities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Soil Erosion | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 15.4% | 0.0% | 15.4% | 7.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 5.8% | 5.1% |
| Soil Quality/Soil Health | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | | | |
| | 0.0% | 7.7% | 15.4% | 0.0% | 7.7% | 0.0% | 0.0% | 0.0% | 0.0% | 7.7% | 2.6% | 1.9% | 7.7% |
| Water Quality/Quantity | 4 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 1 | | | |
| | 30.8% | 0.0% | 7.7% | 15.4% | 23.1% | 0.0% | 0.0% | 0.0% | 0.0% | 7.7% | 2.6% | 9.6% | 12.8% |
| Water Availability/Conservation | 1 | 2 | 2 | 0 | 0 | 2 | 1 | 0 | 2 | 0 | | | |
| | 7.7% | 15.4% | 15.4% | 0.0% | 0.0% | 15.4% | 7.7% | 0.0% | 15.4% | 0.0% | 5.1% | 5.8% | 12.8% |
| Wildlife/Habitat Enhancement | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | | | |
| | 7.7% | 15.4% | 7.7% | 0.0% | 0.0% | 0.0% | 7.7% | 15.4% | 0.0% | 0.0% | 5.1% | 1.9% | 10.3% |
| Recreation | 1 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | | | |
| | 7.7% | 15.4% | 7.7% | 0.0% | 7.7% | 0.0% | 0.0% | 0.0% | 0.0% | 7.7% | 2.6% | 1.9% | 10.3% |
| Rural/Small Acreage Land Use | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 7.7% | 0.0% | 0.0% | 15.4% | 0.0% | 7.7% | 0.0% | 2.6% | 5.8% | 0.0% |
| Endangered Species Act | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | | | |
| | 0.0% | 0.0% | 7.7% | 0.0% | 0.0% | 7.7% | 0.0% | 0.0% | 7.7% | 7.7% | 5.1% | 1.9% | 2.6% |
| Energy/Development | 0 | 0 | 0 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | | | |
| | 0.0% | 0.0% | 0.0% | 7.7% | 15.4% | 7.7% | 15.4% | 7.7% | 7.7% | 7.7% | 7.7% | 11.6% | 0.0% |
| Government Regulations | 0 | 1 | 0 | 0 | 0 | 4 | 1 | 1 | 1 | 0 | | | |
| | 0.0% | 7.7% | 0.0% | 0.0% | 0.0% | 30.8% | 7.7% | 7.7% | 7.7% | 0.0% | 5.1% | 9.6% | 2.6% |



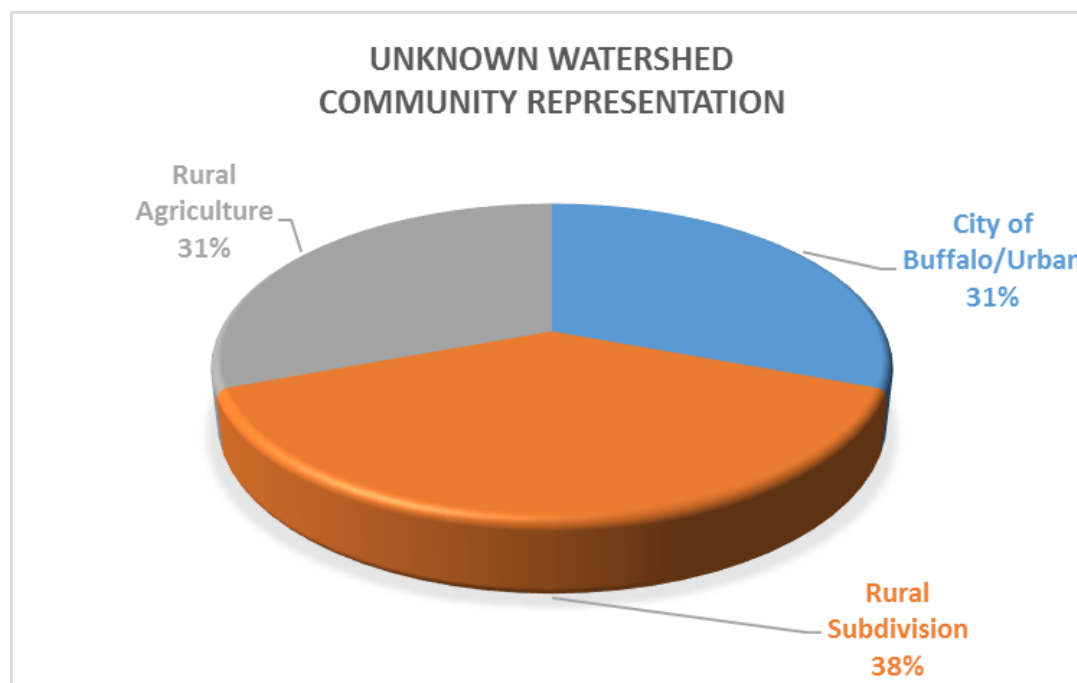
| Target Customer Groups | | | | | |
|---------------------------------|----------|----------|----------|----------|----------|
| | 5 | 4 | 3 | 2 | 1 |
| Part-Time Agriculture Producers | 1 | 2 | 0 | 2 | 0 |
| | 7.7% | 15.4% | 0.0% | 15.4% | 0.0% |
| Full-Time Agriculture Producers | 5 | 3 | 0 | 1 | 2 |
| | 38.5% | 23.1% | 0.0% | 7.7% | 15.4% |
| Developers | 1 | 2 | 1 | 1 | 3 |
| | 7.7% | 15.4% | 7.7% | 7.7% | 23.1% |
| Environmental Groups | 0 | 0 | 2 | 3 | 0 |
| | 0.0% | 0.0% | 15.4% | 23.1% | 0.0% |
| Federal and State Agencies | 2 | 0 | 0 | 0 | 2 |
| | 15.4% | 0.0% | 0.0% | 0.0% | 15.4% |
| Land Use Planners | 0 | 4 | 2 | 2 | 0 |
| | 0.0% | 30.8% | 15.4% | 15.4% | 0.0% |
| Recreational Users | 2 | 1 | 2 | 1 | 1 |
| | 15.4% | 7.7% | 15.4% | 7.7% | 7.7% |
| Urban Citizens | 0 | 1 | 0 | 2 | 2 |
| | 0.0% | 7.7% | 0.0% | 15.4% | 15.4% |
| Small Acreage Owners | 2 | 0 | 5 | 0 | 3 |
| | 15.4% | 0.0% | 38.5% | 0.0% | 23.1% |
| Schools | 1 | 1 | 2 | 0 | 0 |
| | 7.7% | 7.7% | 15.4% | 0.0% | 0.0% |



| Programs, Products, Services | | | | | |
|-------------------------------------|----------|----------|----------|----------|----------|
| | 5 | 4 | 3 | 2 | 1 |
| Agricultural Waste Management | 0 | 0 | 0 | 1 | 0 |
| | 0.0% | 0.0% | 0.0% | 7.7% | 0.0% |
| District Conservation Cost Share | 1 | 0 | 0 | 1 | 0 |
| | 7.7% | 0.0% | 0.0% | 7.7% | 0.0% |
| Conservation Planning | 1 | 3 | 1 | 1 | 0 |
| | 7.7% | 23.1% | 7.7% | 7.7% | 0.0% |
| Educational Programs | 1 | 0 | 2 | 1 | 1 |
| | 7.7% | 0.0% | 15.4% | 7.7% | 7.7% |
| Engineering Design | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Erosion and Sediment Control | 1 | 0 | 2 | 1 | 2 |
| | 7.7% | 0.0% | 15.4% | 7.7% | 15.4% |
| Forestry Programs | 0 | 0 | 1 | 0 | 1 |
| | 0.0% | 0.0% | 7.7% | 0.0% | 7.7% |
| Land Use Planning | 3 | 0 | 1 | 2 | 1 |
| | 23.1% | 0.0% | 7.7% | 15.4% | 7.7% |
| Resource Inventories | 0 | 0 | 0 | 0 | 1 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 7.7% |
| Soil Survey & Soil Information | 0 | 1 | 1 | 1 | 1 |
| | 0.0% | 7.7% | 7.7% | 7.7% | 7.7% |
| Recreational Opportunities | 3 | 0 | 1 | 0 | 2 |
| | 23.1% | 0.0% | 7.7% | 0.0% | 15.4% |
| Wildlife Management | 0 | 3 | 0 | 1 | 0 |
| | 0.0% | 23.1% | 0.0% | 7.7% | 0.0% |
| NRCS Farm Bill Programs | 1 | 0 | 0 | 0 | 0 |
| | 7.7% | 0.0% | 0.0% | 0.0% | 0.0% |
| Urban Conservation Programs | 0 | 0 | 0 | 0 | 0 |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Tree Program | 0 | 2 | 2 | 1 | 0 |
| | 0.0% | 15.4% | 15.4% | 7.7% | 0.0% |
| Pesticide Collection | 2 | 2 | 1 | 3 | 2 |
| | 15.4% | 15.4% | 7.7% | 23.1% | 15.4% |

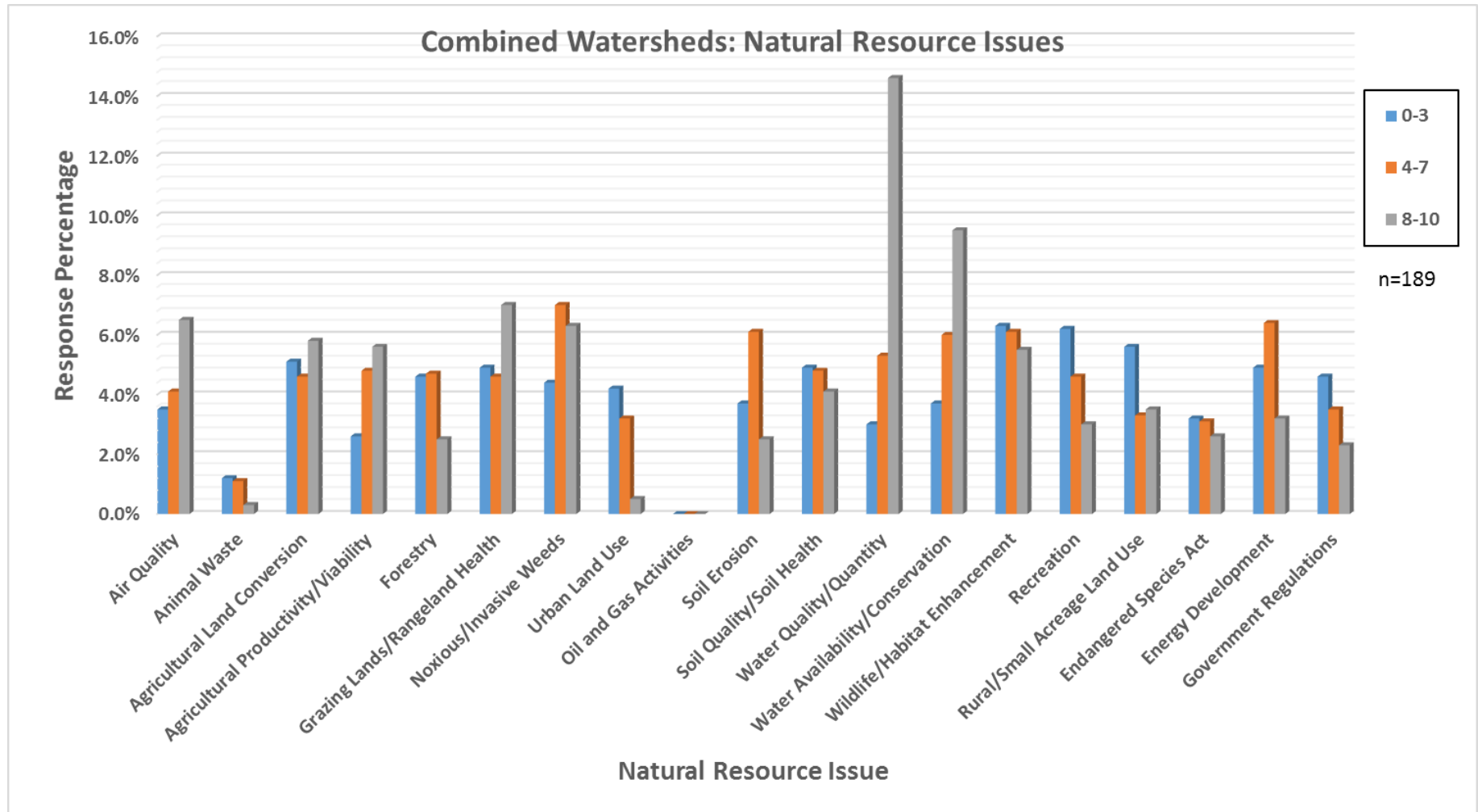


| Community Representation | | % |
|---------------------------------|-----------|----------|
| City of Buffalo/Urban | 4 | 30.8% |
| Rural Subdivision | 5 | 38.5% |
| Rural Agriculture | 4 | 30.8% |
| Government Entity | 0 | 0.0% |
| Total | 13 | |

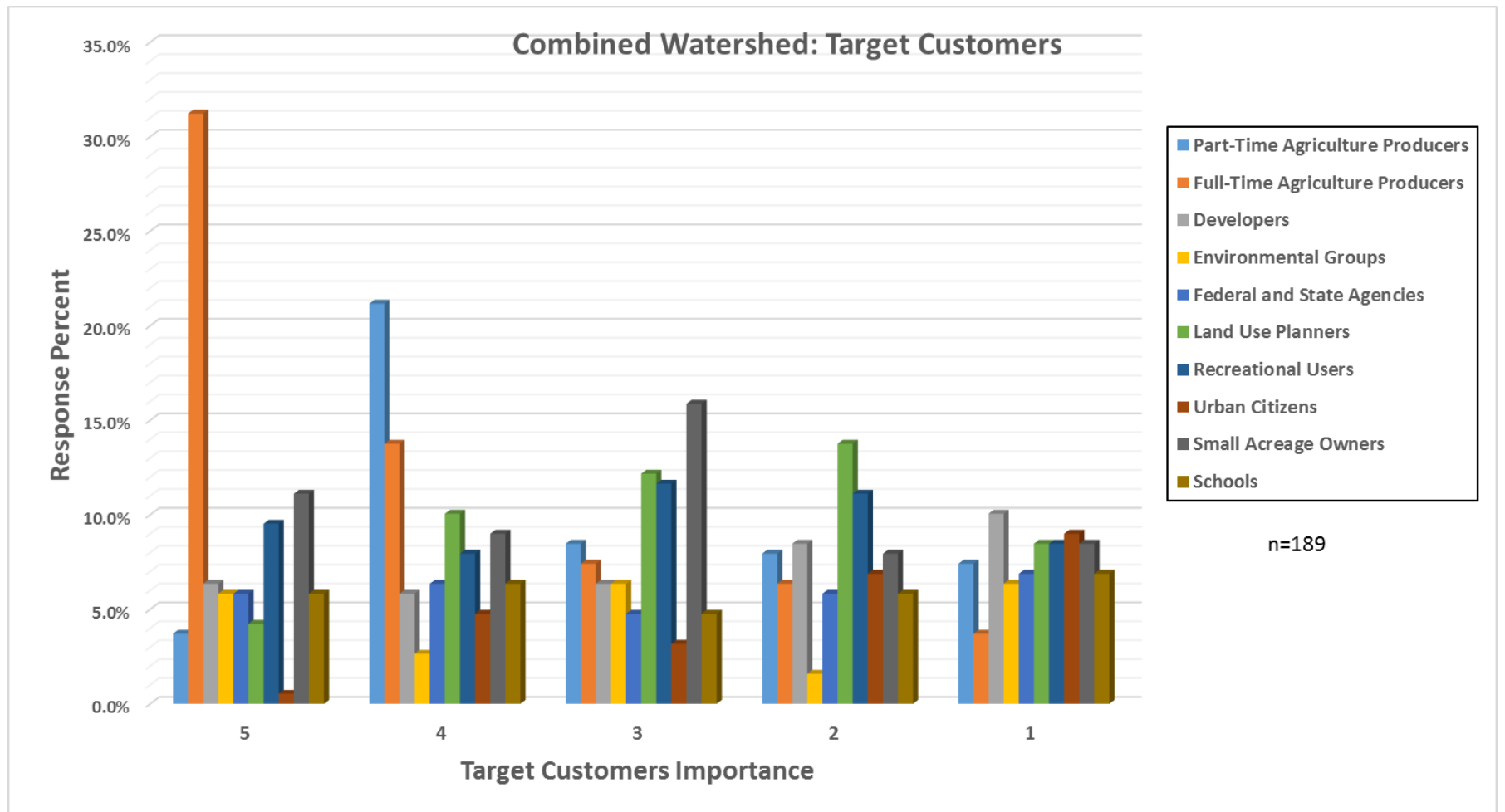


COMBINED WATERSHEDS

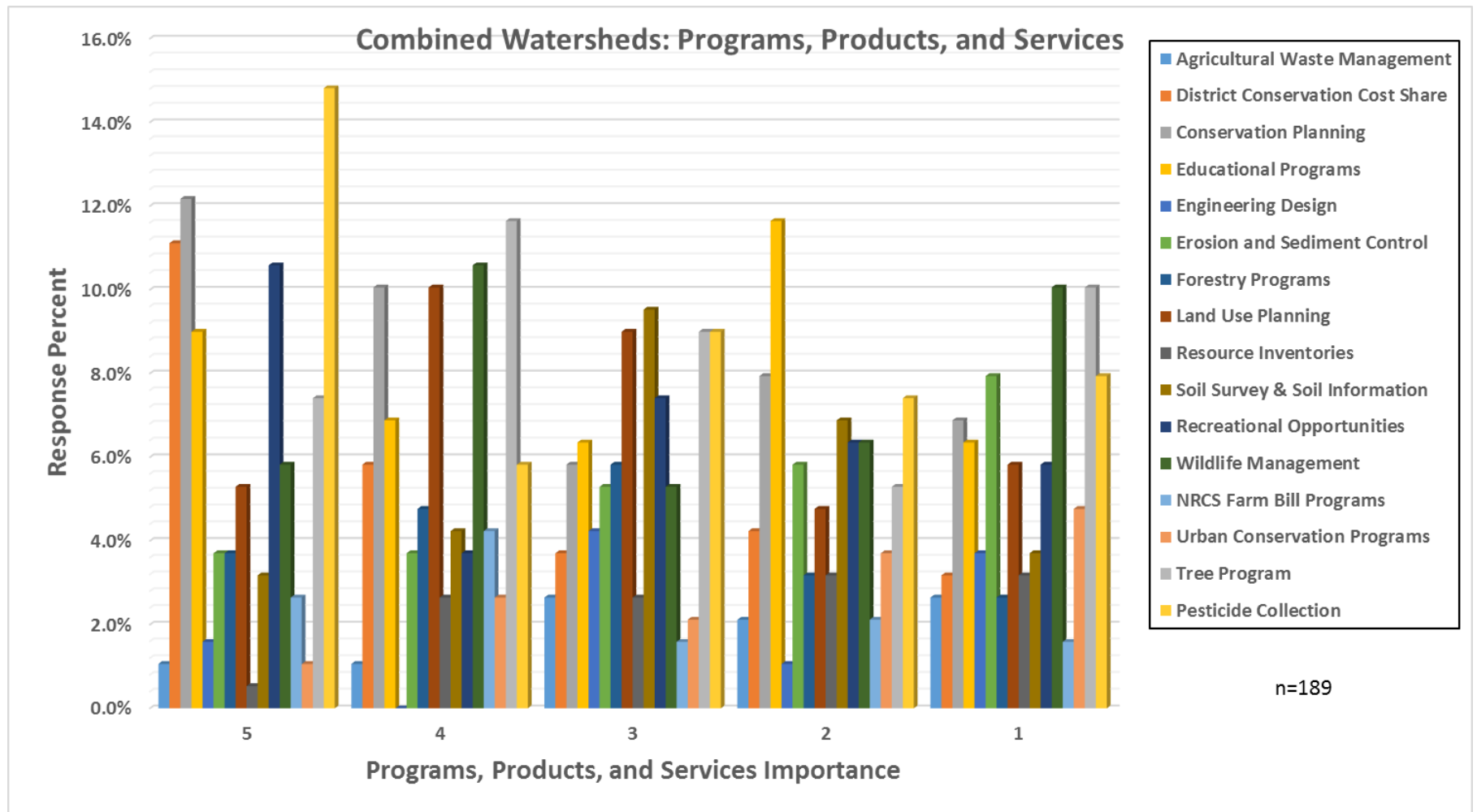
| Natural Resource Issues | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0-3 | 4-7 | 8-10 |
|-------------------------------------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|-------------|--------------|
| Air Quality | 16 | 14 | 7 | 7 | 8 | 10 | 6 | 10 | 5 | 5 | | | |
| | 8.5% | 7.4% | 3.7% | 3.7% | 4.2% | 5.3% | 3.2% | 5.3% | 2.6% | 2.6% | 3.5% | 4.1% | 6.5% |
| Animal Waste | 0 | 1 | 1 | 2 | 1 | 2 | 3 | 1 | 5 | 1 | | | |
| | 0.0% | 0.5% | 0.5% | 1.1% | 0.5% | 1.1% | 1.6% | 0.5% | 2.6% | 0.5% | 1.2% | 1.1% | 0.3% |
| Agricultural Land Conversion | 10 | 9 | 14 | 8 | 9 | 11 | 7 | 11 | 9 | 9 | | | |
| | 5.3% | 4.8% | 7.4% | 4.2% | 4.8% | 5.8% | 3.7% | 5.8% | 4.8% | 4.8% | 5.1% | 4.6% | 5.8% |
| Agricultural Productivity/Viability | 15 | 14 | 3 | 11 | 10 | 7 | 8 | 3 | 8 | 4 | | | |
| | 7.9% | 7.4% | 1.6% | 5.8% | 5.3% | 3.7% | 4.2% | 1.6% | 4.2% | 2.1% | 2.6% | 4.8% | 5.6% |
| Forestry | 3 | 2 | 9 | 10 | 10 | 2 | 13 | 4 | 11 | 11 | | | |
| | 1.6% | 1.1% | 4.8% | 5.3% | 5.3% | 1.1% | 6.9% | 2.1% | 5.8% | 5.8% | 4.6% | 4.7% | 2.5% |
| Grazing Lands/Rangeland Health | 11 | 17 | 12 | 4 | 11 | 11 | 9 | 12 | 10 | 6 | | | |
| | 5.8% | 9.0% | 6.3% | 2.1% | 5.8% | 5.8% | 4.8% | 6.3% | 5.3% | 3.2% | 4.9% | 4.6% | 7.0% |
| Noxious/Invasive Weeds | 12 | 6 | 18 | 17 | 10 | 15 | 11 | 12 | 10 | 3 | | | |
| | 6.3% | 3.2% | 9.5% | 9.0% | 5.3% | 7.9% | 5.8% | 6.3% | 5.3% | 1.6% | 4.4% | 7.0% | 6.3% |
| Urban Land Use | 0 | 2 | 1 | 4 | 3 | 9 | 8 | 5 | 8 | 11 | | | |
| | 0.0% | 1.1% | 0.5% | 2.1% | 1.6% | 4.8% | 4.2% | 2.6% | 4.2% | 5.8% | 4.2% | 3.2% | 0.5% |
| Oil and Gas Activities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Soil Erosion | 2 | 6 | 6 | 11 | 11 | 9 | 15 | 5 | 8 | 8 | | | |
| | 1.1% | 3.2% | 3.2% | 5.8% | 5.8% | 4.8% | 7.9% | 2.6% | 4.2% | 4.2% | 3.7% | 6.1% | 2.5% |
| Soil Quality/Soil Health | 2 | 8 | 13 | 7 | 11 | 9 | 9 | 15 | 7 | 6 | | | |
| | 1.1% | 4.2% | 6.9% | 3.7% | 5.8% | 4.8% | 4.8% | 7.9% | 3.7% | 3.2% | 4.9% | 4.8% | 4.1% |
| Water Quality/Quantity | 45 | 29 | 9 | 12 | 8 | 11 | 9 | 6 | 5 | 6 | | | |
| | 23.8% | 15.3% | 4.8% | 6.3% | 4.2% | 5.8% | 4.8% | 3.2% | 2.6% | 3.2% | 3.0% | 5.3% | 14.6% |
| Water Availability/Conservation | 15 | 22 | 17 | 16 | 12 | 12 | 10 | 6 | 10 | 5 | | | |
| | 7.9% | 11.6% | 9.0% | 8.5% | 6.3% | 6.3% | 5.3% | 3.2% | 5.3% | 2.6% | 3.7% | 6.0% | 9.5% |
| Wildlife/Habitat Enhancement | 7 | 7 | 17 | 17 | 9 | 11 | 9 | 16 | 8 | 12 | | | |
| | 3.7% | 3.7% | 9.0% | 9.0% | 4.8% | 5.8% | 4.8% | 8.5% | 4.2% | 6.3% | 6.3% | 6.1% | 5.5% |
| Recreation | 6 | 5 | 6 | 7 | 9 | 11 | 8 | 9 | 10 | 16 | | | |
| | 3.2% | 2.6% | 3.2% | 3.7% | 4.8% | 5.8% | 4.2% | 4.8% | 5.3% | 8.5% | 6.2% | 4.6% | 3.0% |
| Rural/Small Acreage Land Use | 4 | 5 | 11 | 4 | 7 | 4 | 10 | 7 | 13 | 12 | | | |
| | 2.1% | 2.6% | 5.8% | 2.1% | 3.7% | 2.1% | 5.3% | 3.7% | 6.9% | 6.3% | 5.6% | 3.3% | 3.5% |
| Endangered Species Act | 2 | 5 | 8 | 2 | 4 | 7 | 10 | 5 | 2 | 11 | | | |
| | 1.1% | 2.6% | 4.2% | 1.1% | 2.1% | 3.7% | 5.3% | 2.6% | 1.1% | 5.8% | 3.2% | 3.1% | 2.6% |
| Energy Development | 8 | 1 | 9 | 14 | 16 | 10 | 8 | 9 | 8 | 11 | | | |
| | 4.2% | 0.5% | 4.8% | 7.4% | 8.5% | 5.3% | 4.2% | 4.8% | 4.2% | 5.8% | 4.9% | 6.4% | 3.2% |
| Government Regulations | 5 | 6 | 2 | 6 | 8 | 10 | 2 | 8 | 11 | 7 | | | |
| | 2.6% | 3.2% | 1.1% | 3.2% | 4.2% | 5.3% | 1.1% | 4.2% | 5.8% | 3.7% | 4.6% | 3.5% | 2.3% |



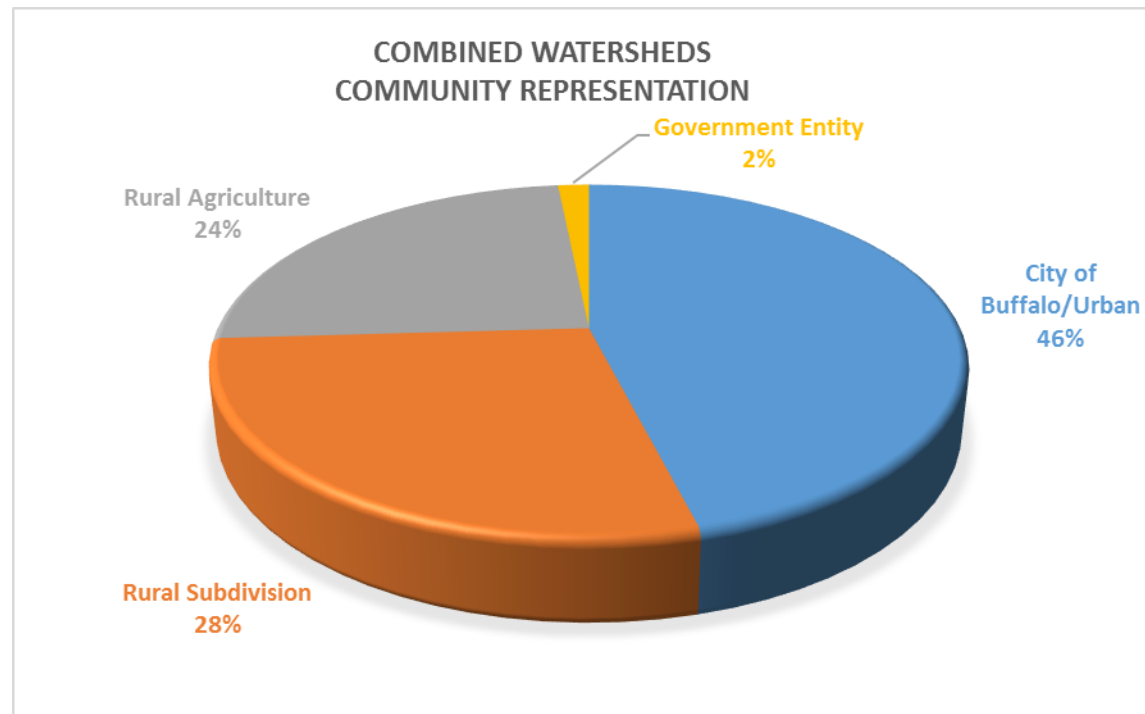
| Target Customer Groups | | | | | |
|---------------------------------|----------|----------|----------|----------|----------|
| | 5 | 4 | 3 | 2 | 1 |
| Part-Time Agriculture Producers | 7 | 40 | 16 | 15 | 14 |
| | 3.7% | 21.2% | 8.5% | 7.9% | 7.4% |
| Full-Time Agriculture Producers | 59 | 26 | 14 | 12 | 7 |
| | 31.2% | 13.8% | 7.4% | 6.3% | 3.7% |
| Developers | 12 | 11 | 12 | 16 | 19 |
| | 6.3% | 5.8% | 6.3% | 8.5% | 10.1% |
| Environmental Groups | 11 | 5 | 12 | 3 | 12 |
| | 5.8% | 2.6% | 6.3% | 1.6% | 6.3% |
| Federal and State Agencies | 11 | 12 | 9 | 11 | 13 |
| | 5.8% | 6.3% | 4.8% | 5.8% | 6.9% |
| Land Use Planners | 8 | 19 | 23 | 26 | 16 |
| | 4.2% | 10.1% | 12.2% | 13.8% | 8.5% |
| Recreational Users | 18 | 15 | 22 | 21 | 16 |
| | 9.5% | 7.9% | 11.6% | 11.1% | 8.5% |
| Urban Citizens | 1 | 9 | 6 | 13 | 17 |
| | 0.5% | 4.8% | 3.2% | 6.9% | 9.0% |
| Small Acreage Owners | 21 | 17 | 30 | 15 | 16 |
| | 11.1% | 9.0% | 15.9% | 7.9% | 8.5% |
| Schools | 17 | 7 | 14 | 16 | 17 |
| | 5.8% | 6.3% | 4.8% | 5.8% | 6.9% |



| Programs, Products, Services | | | | | |
|-------------------------------------|----------|----------|----------|----------|----------|
| | 5 | 4 | 3 | 2 | 1 |
| Agricultural Waste Management | 2 | 2 | 5 | 4 | 5 |
| | 1.1% | 1.1% | 2.6% | 2.1% | 2.6% |
| District Conservation Cost Share | 21 | 11 | 7 | 8 | 6 |
| | 11.1% | 5.8% | 3.7% | 4.2% | 3.2% |
| Conservation Planning | 23 | 19 | 11 | 15 | 13 |
| | 12.2% | 10.1% | 5.8% | 7.9% | 6.9% |
| Educational Programs | 17 | 13 | 12 | 22 | 12 |
| | 9.0% | 6.9% | 6.3% | 11.6% | 6.3% |
| Engineering Design | 3 | 0 | 8 | 2 | 7 |
| | 1.6% | 0.0% | 4.2% | 1.1% | 3.7% |
| Erosion and Sediment Control | 7 | 7 | 10 | 11 | 15 |
| | 3.7% | 3.7% | 5.3% | 5.8% | 7.9% |
| Forestry Programs | 7 | 9 | 11 | 6 | 5 |
| | 3.7% | 4.8% | 5.8% | 3.2% | 2.6% |
| Land Use Planning | 10 | 19 | 17 | 9 | 11 |
| | 5.3% | 10.1% | 9.0% | 4.8% | 5.8% |
| Resource Inventories | 1 | 5 | 5 | 6 | 6 |
| | 0.5% | 2.6% | 2.6% | 3.2% | 3.2% |
| Soil Survey & Soil Information | 6 | 8 | 18 | 13 | 7 |
| | 3.2% | 4.2% | 9.5% | 6.9% | 3.7% |
| Recreational Opportunities | 20 | 7 | 14 | 12 | 11 |
| | 10.6% | 3.7% | 7.4% | 6.3% | 5.8% |
| Wildlife Management | 11 | 20 | 10 | 12 | 19 |
| | 5.8% | 10.6% | 5.3% | 6.3% | 10.1% |
| NRCS Farm Bill Programs | 5 | 8 | 3 | 4 | 3 |
| | 2.6% | 4.2% | 1.6% | 2.1% | 1.6% |
| Urban Conservation Programs | 2 | 5 | 4 | 7 | 9 |
| | 1.1% | 2.6% | 2.1% | 3.7% | 4.8% |
| Tree Program | 14 | 22 | 17 | 10 | 19 |
| | 7.4% | 11.6% | 9.0% | 5.3% | 10.1% |
| Pesticide Collection | 28 | 11 | 17 | 14 | 15 |
| | 14.8% | 5.8% | 9.0% | 7.4% | 7.9% |



| Community Representation | | % |
|--------------------------|-----|-------|
| City of Buffalo/Urban | 87 | 46.0% |
| Rural Subdivision | 53 | 28.0% |
| Rural Agriculture | 46 | 24.3% |
| Government Entity | 3 | 1.6% |
| Total | 189 | |



APPENDIX B

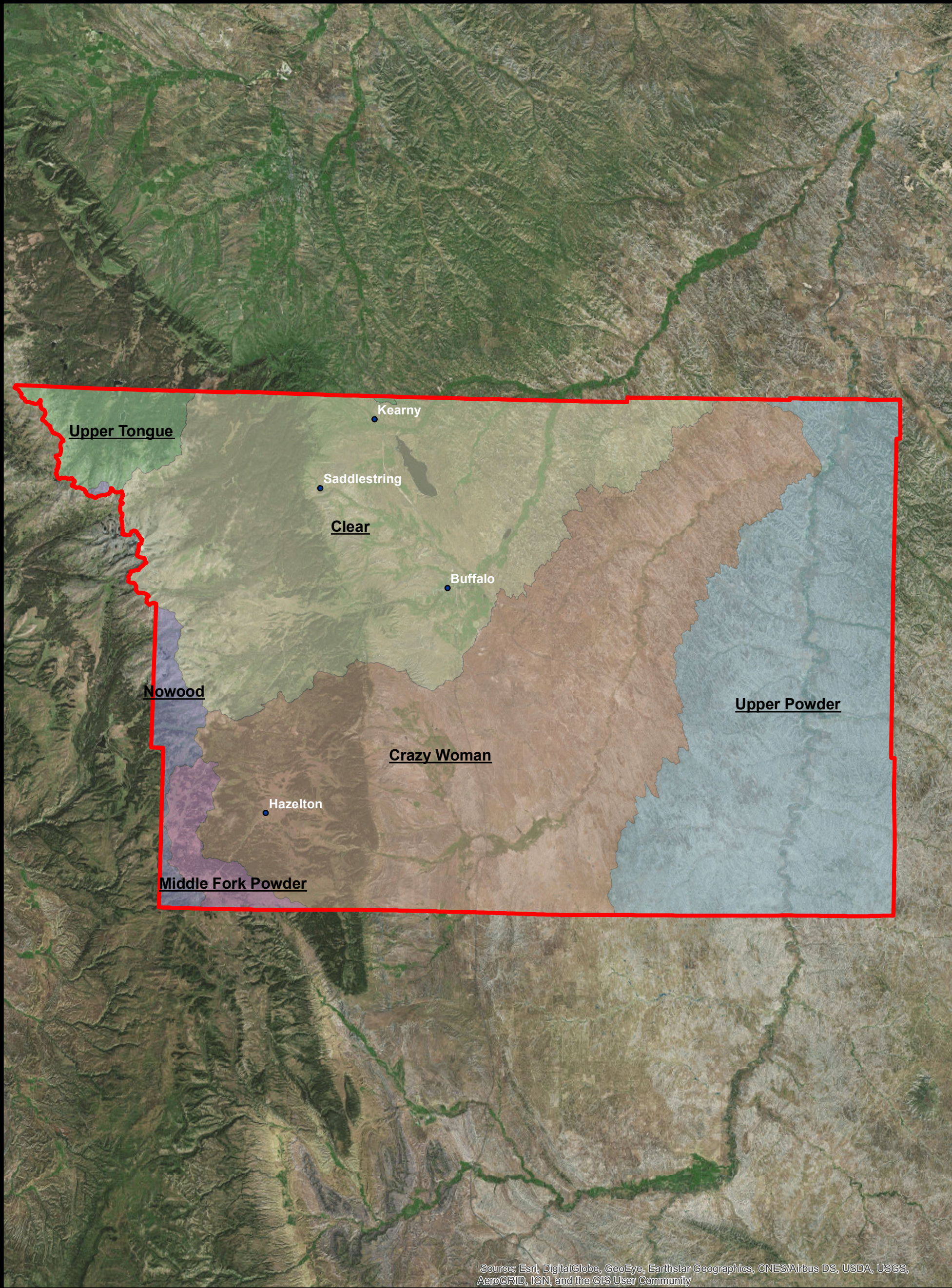
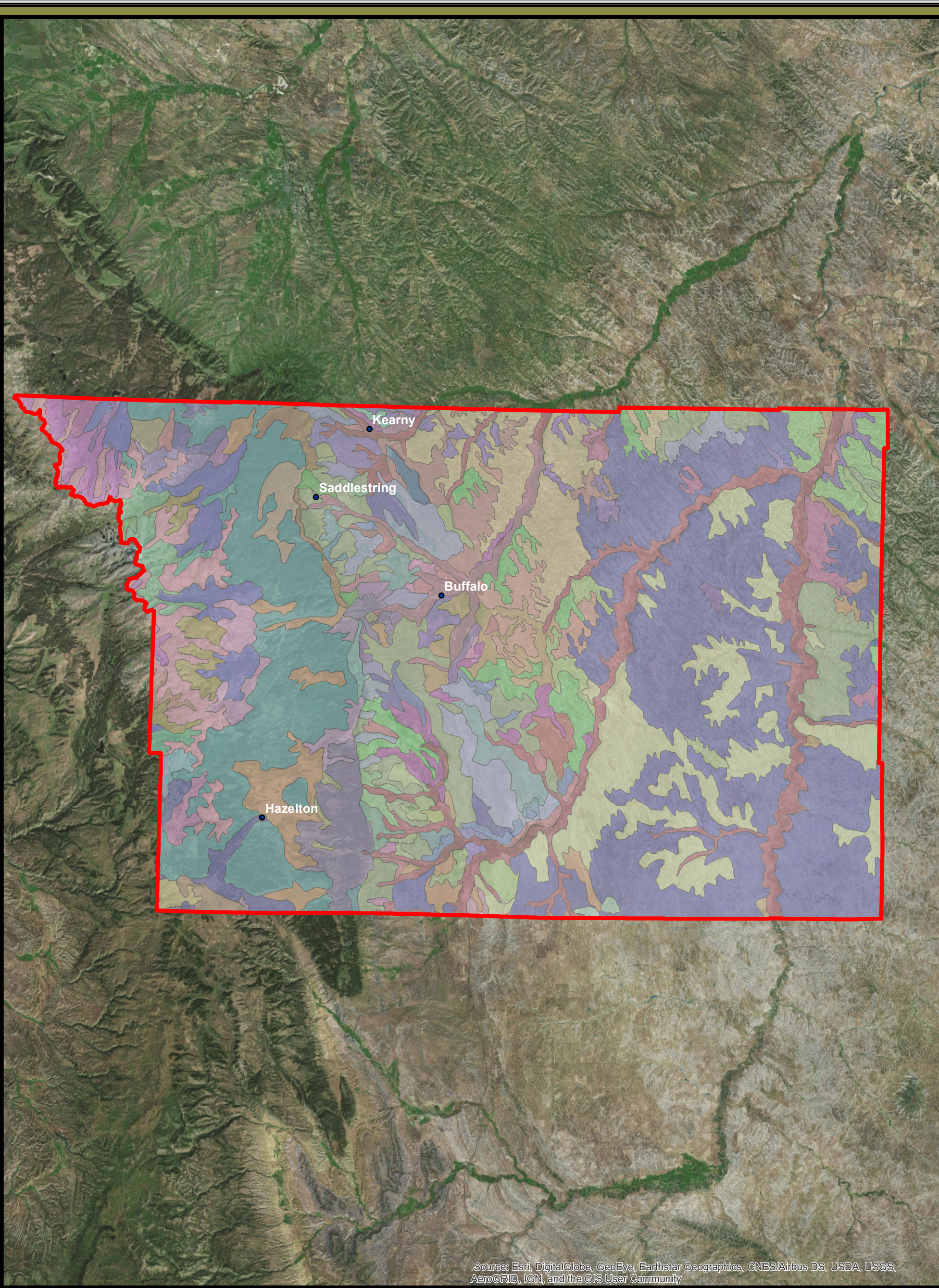


Figure 1: Lake DeSmet Conservation District: Watersheds

- | | | |
|---------------|-------------------------------------|-------------------------------|
| • Communities | <div>Clear Creek</div> | <div>Nowood Creek</div> |
| | <div>Crazy Woman Creek</div> | <div>Upper Powder River</div> |
| | <div>Middle Fork Powder River</div> | <div>Upper Tongue River</div> |

Coordinate System: UTM meters
Projection: NAD 83 Zone 13N
Scale: 1:450000
Created By: ZJB
Date: 5/30/2017
Filename: LDCC Rivers_Streams





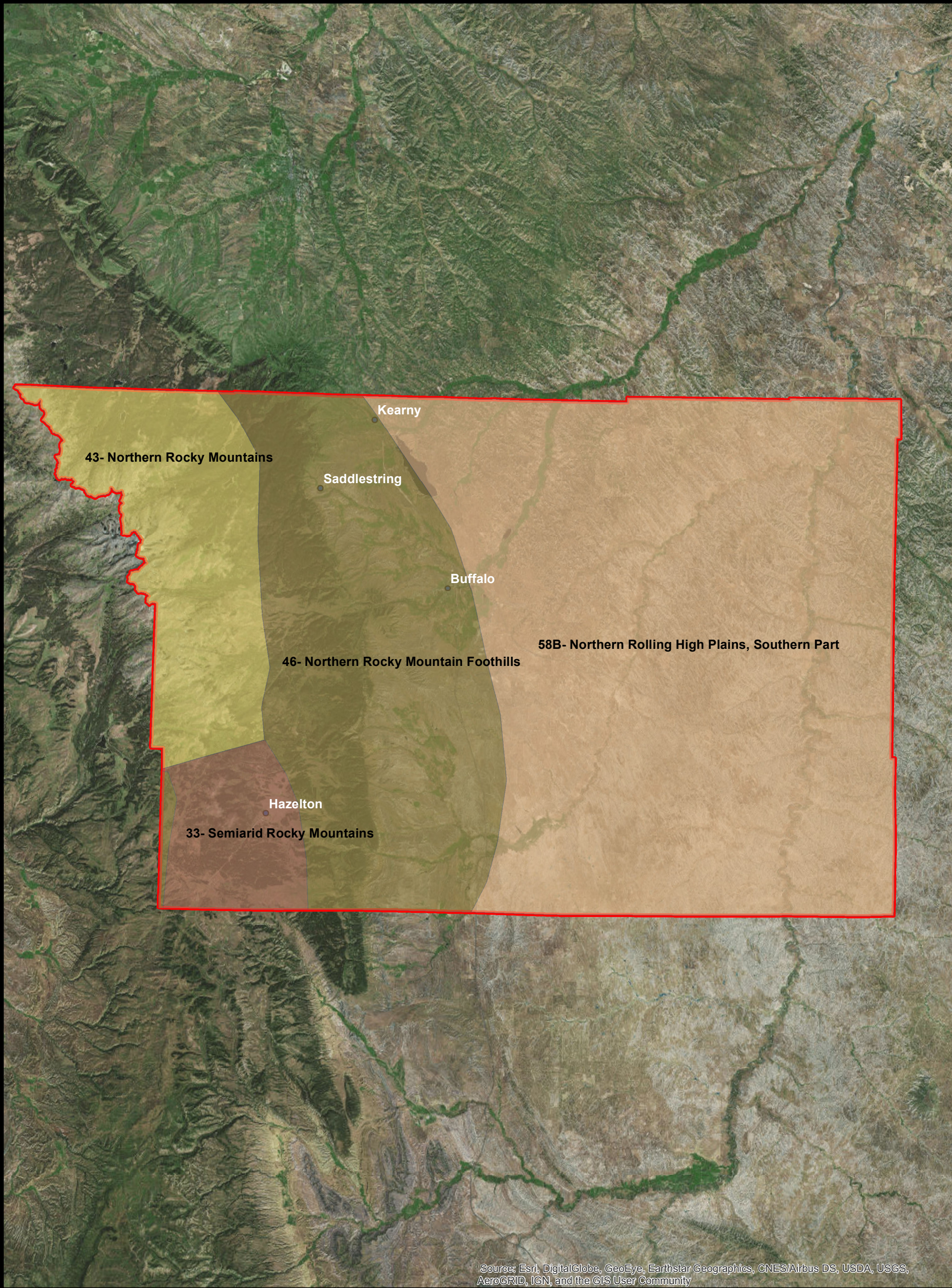
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 2: Lake DeSmet Conservation District: Geology

| | | | | | | | | | | |
|-----------------------|------|-------|------|------|------|-----|------|-----|------|------|
| <div></div> LDCD Area | t | srR | sauR | rsa | rR | gGc | csgR | asr | Rcu | Gcg |
| • Communities | ta | srRk | sf | rsaR | rRs | gs | fa | at | Rsr | Gucg |
| | td | srRkl | sfR | rscR | raR | gsG | fb | b | Rsrk | Gucq |
| | ts | sra | sfa | rsk | ras | gsR | fd | bd | Ruc | LAKE |
| | usR | sraR | sfr | sagR | rs | gsa | ft | bdl | Rucq | Rcr |
| | usaR | srcR | sft | sar | rsR | kr | ftd | bds | ag | Rcs |
| | usgR | suRg | sgR | sarR | rsRk | l | g | csR | ars | Rcsr |







Coordinate System: UTM meters
Projection: NAD 83 Zone 13N
Scale: 1:450000
Created By: ZJB
Date: 5/30/2017
Filename: LDCD Geology





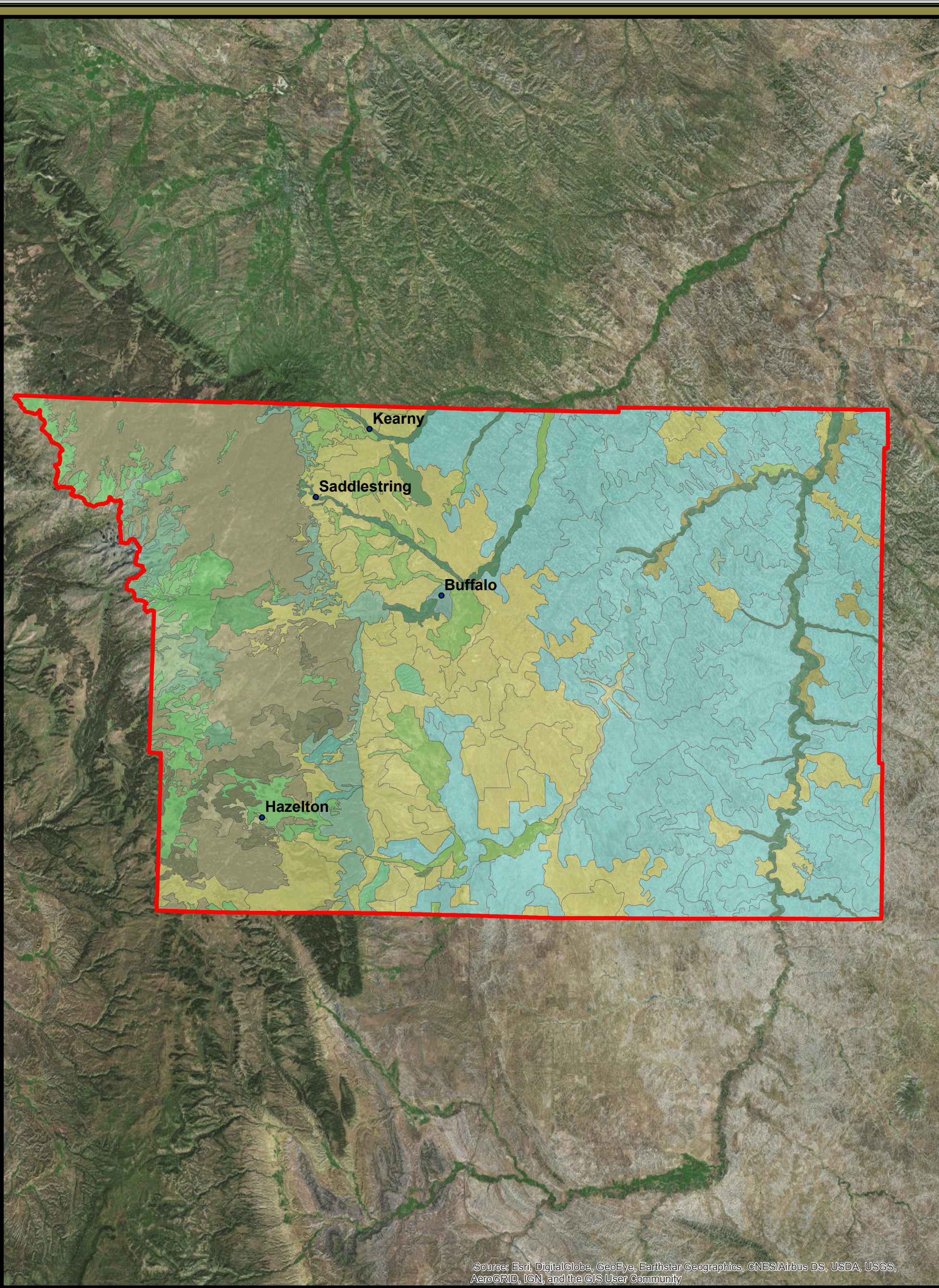
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 3: Lake DeSmet Conservation District: General Soils (MLRA)

- | | | | |
|---|-------------|---|--|
|  | LDCD Area |  | 33- Semi Arid Rocky Mountains |
|  | Communities |  | 43- Northern Rocky Mountains |
| | |  | 46- Northern Rocky Mountain Foothills |
| | |  | 58B- Northern Rolling High Plains, Southern Part |























Coordinate System: UTM meters
Projection: NAD 83 Zone 13N
Scale: 1:450000
Created By: ZJB
Date: 5/30/2017
Filename: LDCD MLRA Soils





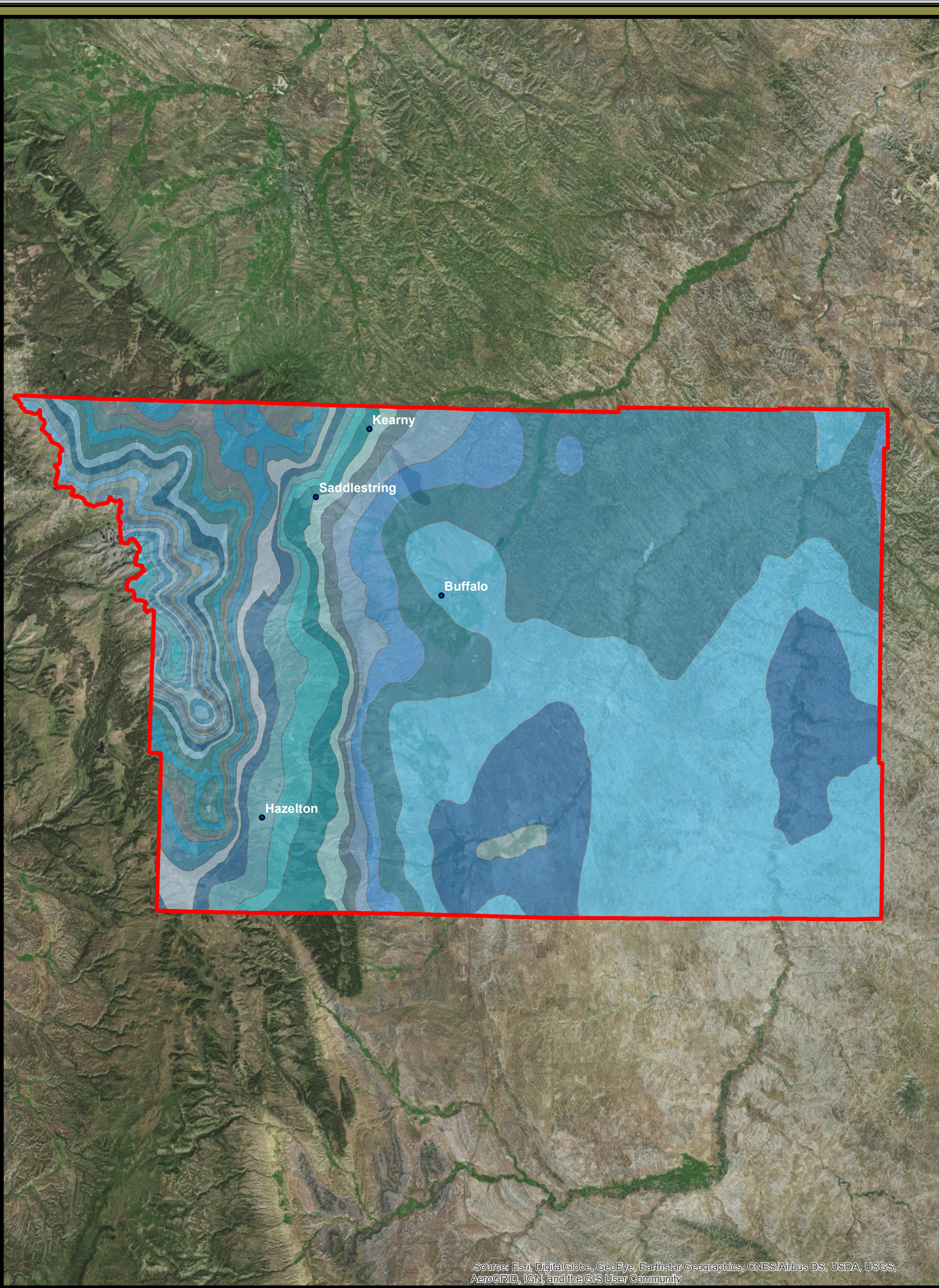
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 4: Lake DeSmet Conservation District: Land Cover

| | | | | | | | | | |
|---|--------------------------|---|---------------------------|---|---------------------------|---|-------------------|---|---------------------|
|  | LDCD Area |  | Alpine exposed rock/soil |  | Clearcut conifer |  | Human settlements |  | Mixed grass prairie |
|  | Communities |  | Aspen forest |  | Dry-land crops |  | Irrigated crops |  | Open water |
|  | Douglas fir |  | Burned conifer |  | Forest-dominated riparian |  | Lodgepole pine |  | Permanent snow |
|  | Shrub-dominated riparian |  | Greasewood fans and flats |  | Meadow tundra |  | Ponderosa pine | | |
|  | Wyoming big sagebrush |  | Subalpine meadow |  | Xeric upland shrub | | | | |

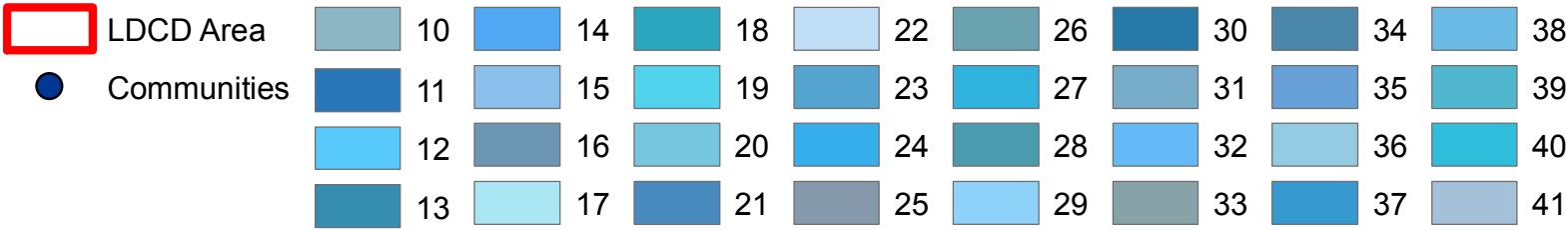
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Projection: NAD 83 Zone 13N
Scale: 1:450000
Created By: ZJB
Date: 5/30/2017
Filename: LDCD Land Cover





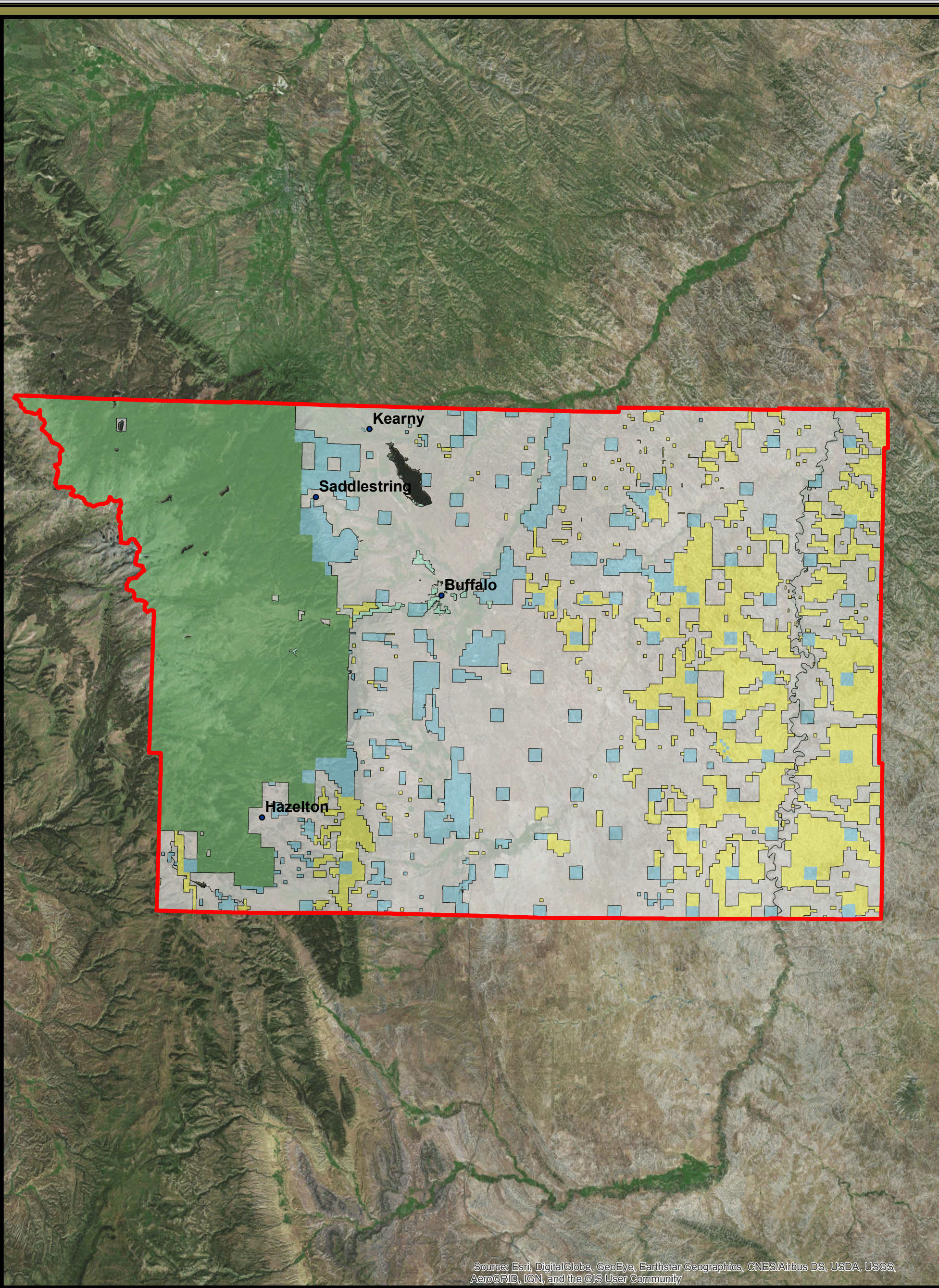
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 5: Lake DeSmet Conservation District: Annual Precipitation (Inches)





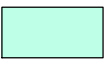




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Scale: 1:450000
Created By: ZJB
Date: 5/30/2017
Filename: LDCD Precipitation





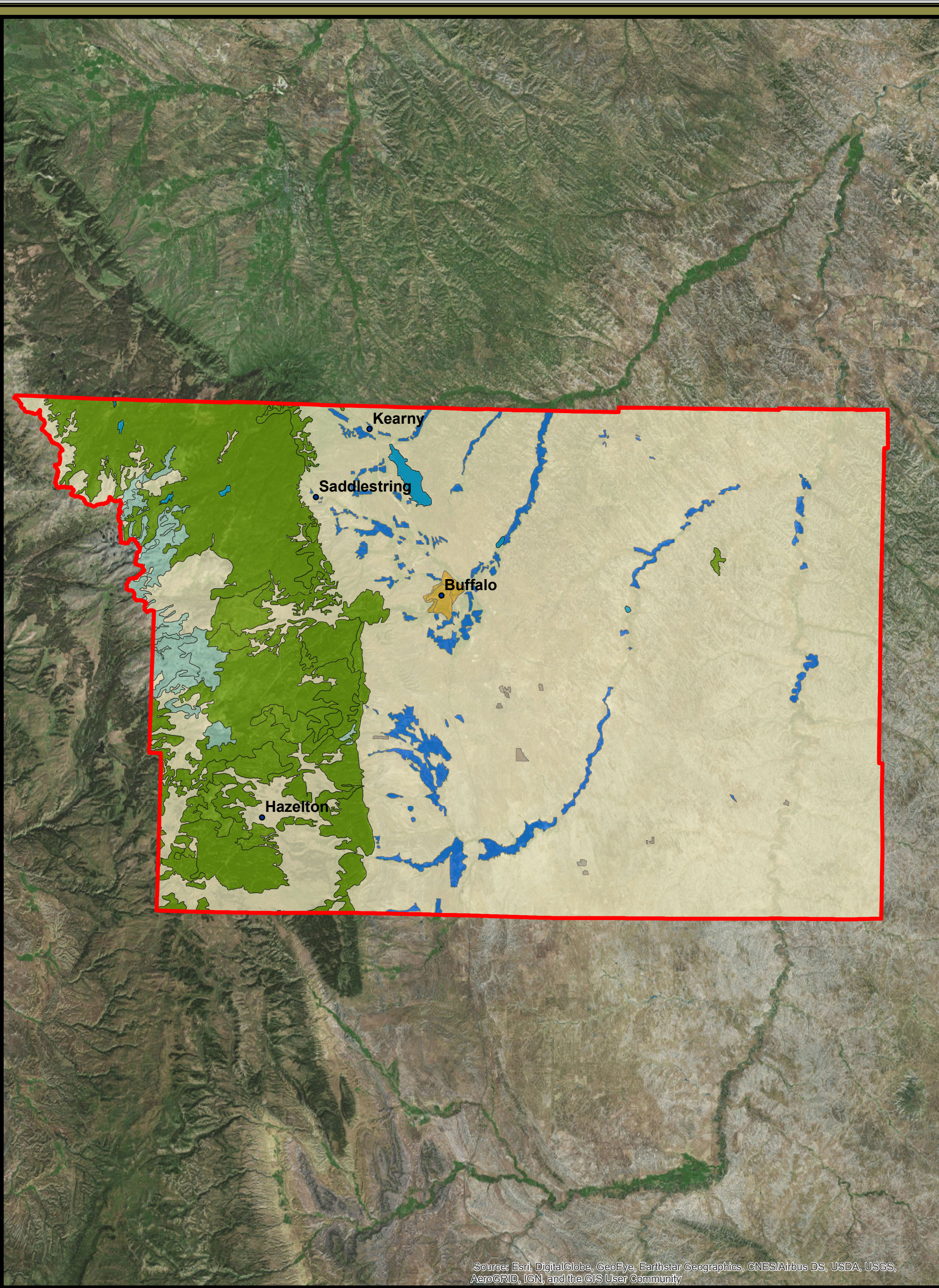
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 6: Lake DeSmet Conservation District: Surface Ownership

- | | | |
|---|---|--|
|  LDCD Area |  Bureau of Land Management |  Local Government |
|  Communities |  Forest Service |  Private |
| |  State | |

Coordinate System: UTM meters
Projection: NAD 83 Zone 13N
Scale: 1:450000
Created By: ZJB
Date: 5/30/2017
Filename: LDCD Surface Ownership





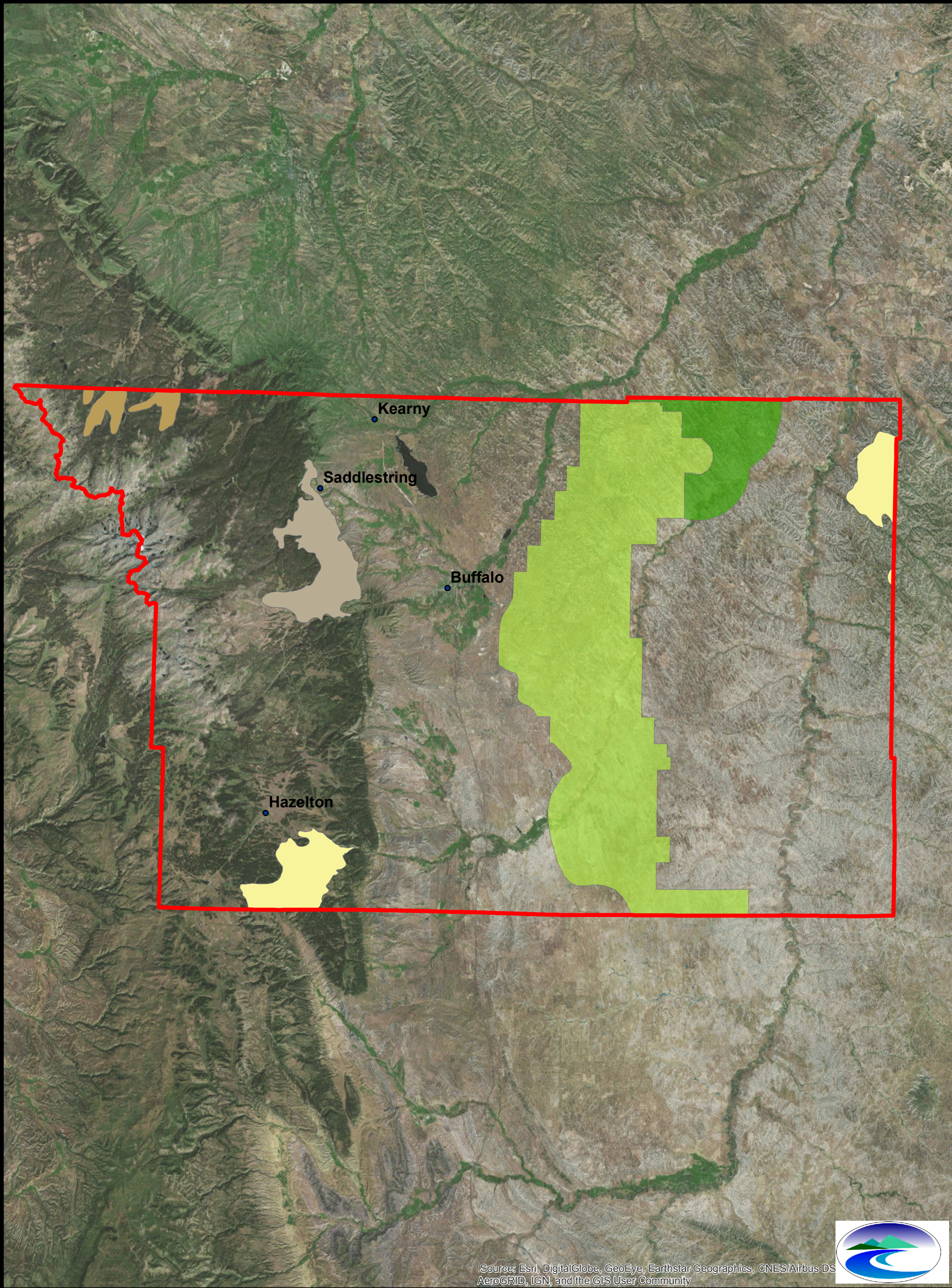
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 7: Lake DeSmet Conservation District: Land Use



Coordinate System: UTM meters
Projection: NAD 83 Zone 13N
Scale: 1:450000
Created By: ZJB
Date: 5/30/2017
Filename: LDCD Land Use












Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS
AeroGRID, IGN, and the GIS User Community



Figure 8: Lake DeSmet Conservation District: Wildlife Crucial Habitat

- | | | |
|---|--|---|
|  LDCD Area |  Elk Crucial Winter Range |  Sage-grouse Core Area |
|  Communities |  Elk Crucial Yearlong Range |  Sage-grouse Connectivity Area |
| |  Moose Crucial Yearlong Range | |

Coordinate System: UTM meters
Projection: NAD 83 Zone 13N
Scale: 1:450000
Created By: ZJB
Date: 5/30/2017
Filename: LDCD Crucial Range



APPENDIX C

JOHNSON COUNTY PROFILE**Population**

8,573 (51% urban, 49% rural)

Population density: 2 people per square mile

Median resident age: 44

White Non-Hispanic Alone: 94.4%

Hispanic or Latino: 3.2%

Two or more races: 0.9%

American Indian and Alaska Native Alone: 0.8%

Asian alone: (0.4%)

Income

Median household income of \$55,327

6.3% of population at or below poverty level

Unemployment 3.6%

Cost of Living Index 82.5

Type of workers: Private wage or salary: 63%, Government: 10%, Self-employer, not incorporated: 28%

Most Common Occupations:

Construction and extraction

Management

Installation, maintenance and repair

Transportation

Sales and related

Farming, fishing and forestry

Production

Source: http://www.city-data.com/county/Johnson_County-WY.html

Top Employers Based on Annual Payroll:

Healthcare and social assistance

Construction

Retail trade

Professional, scientific and technical services

Accommodation and food services

Finance and insurance

Source: <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>

Revenue

County taxes levied 2016: \$6,177,734 (12 mills)

Municipal taxes levied 2016: \$357,492

Assessed Valuations

Total Agricultural Lands: \$18,165,278

Total Commercial Land, Improvements & Personal Property: \$17,989,698

Total Residential Land, Improvements & Personal Property: \$79,511,406

Total Industrial Property: \$113,640,579

Total Locally Assessed: \$229,306,961

Source: <https://sites.google.com/a/wyo.gov/wy-dor/dor-annual-reports>

Agriculture

Market Value of Ag Products sold (annual) \$51,710,000

358 farms in county

2,035,591 acres of land in farms (95.5% of county area)

Average size of farms: 5686 acres

Average total farm production expenses per farm: \$110,325

Harvested cropland as a percentage of land in farms: 1.52%

Irrigated harvested cropland as a percentage of land in farms: 84.87%

Average market value of all machinery and equipment per farm: \$88,916

The percentage of farms operated by a family or individual: 78.68%

Average age of principal farm operators: 56 years

Average number of cattle and calves per 100 acres of all land in farms: 2.79

Milk cows as a percentage of all cattle and calves: 0.02%

Source: http://www.city-data.com/county/Johnson_County-WY.html#ixzz4j9WUaK9j

https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Wyoming/cp56019.pdf

Oil & Gas

2015 Taxable Valuation: \$278,736,362 – 2.636% of statewide total (includes oil, gas, uranium, bentonite, sand & gravel)

Barrels of oil produced (2016): 1,279,837

Million cubic feet of gas produced (2016): 102,653,027

Source: Wyoming Oil & Gas Conservation Commission & <https://sites.google.com/a/wyo.gov/wy-dor/dor-annual-reports>