

# RECLAMATION

*Managing Water in the West*

## **Bonny Resource Management Plan and Environmental Assessment**



**October 2018**

**United States Department of the Interior  
Bureau of Reclamation  
Great Plains Region  
Nebraska-Kansas Area Office**

In cooperation with Colorado Parks and Wildlife

U.S. Department of Interior  
Bureau of Reclamation - Bonny RMP/EA Draft – October 2018

## **Mission Statements**

### **Department of the Interior**

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian tribes and our commitments to island communities.

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### **Bureau of Reclamation**

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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### **Colorado Parks and Wildlife**

The mission of Colorado Parks and Wildlife is to perpetuate the wildlife resources of the state, to provide a quality state parks system, and to provide enjoyable and sustainable outdoor recreation opportunities that educate and inspire current and future generations to serve as active stewards of Colorado's natural resources.

## Abbreviations and Acronyms

amsl	above mean sea level
BLM	Bureau of Land Management
CFS	cubic feet per second
CDOT	Colorado Department of Transportation
CPW	Colorado Parks and Wildlife
EA	environmental assessment
FONSI	Finding of No Significant Impact
ITAs	Indian Trust Assets
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NKAO	Nebraska-Kansas Area Office
NRHP	National Register of Historic Places
O&M	operation and maintenance
OHV	off-highway vehicle
PRPA	Paleontological Resources Preservation Act
Reclamation	Bureau of Reclamation
RMP	Resource Management Plan
ROS	Recreation Opportunity Spectrum
SHPO	State Historic Preservation Officer
Stat.	Statute
SWA	State Wildlife Area
USACE	U.S. Army Corps of Engineer
USFWS	U.S. Fish and Wildlife Service
°F	degrees Fahrenheit

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# **Chapter 1: Introduction**

## **1.1 Introduction**

The Bureau of Reclamation (Reclamation), Nebraska-Kansas Area Office (NKAO) prepared this combined Draft Resource Management Plan/Environmental Assessment (RMP/EA) to establish a long term (generally 10-years or more) management framework for conserving, protecting, enhancing, developing, and utilizing the physical and biological resources at Bonny Dam and its surrounding lands (project area) located in east-central Colorado.

Preparation and implementation of an RMP is a Federal action, and the National Environmental Policy Act (NEPA) requires Federal agencies to consider the potential effect(s) of a Federal action on the environment before it can be implemented. An RMP includes much of the same information and analyses that NEPA requires in an environmental compliance document; therefore, this RMP and companion EA are intended to meet the environmental compliance requirements of NEPA, as well as the planning information requirements of an RMP.

The alternatives developed for this draft RMP are general in nature and the draft EA is programmatic in nature. Site-specific impacts will be addressed as part of separate NEPA and National Historic Preservation Act (NHPA) compliance processes prior to the implementation of individual projects proposed in the RMP; those site-specific impacts are not addressed in the EA or RMP.

The EA portion of this document describes three proposed alternatives, including a No-Action Alternative, and two other alternatives with variations on recreation opportunities. The EA describes existing resources in the project area and analyzes the potential effects of the three alternatives on these resources. The RMP portions of this document set forth the alternative formulation process and provide a detailed description of the proposed RMP management actions. NEPA analysis facilitates the planning process by providing a mechanism by which Reclamation, with managing partner, interested agencies and the public can formulate alternatives in response to identified public and agency issues and concerns. The basic goal in formulating alternatives is to identify various combinations of land uses and resource management practices that respond to the issues identified during the planning process.

This RMP will only addresses administration of recreation and management of fish and wildlife resources within the project area. While this RMP includes background information to provide context about water operations, this plan will not address Reservoir water operations, water contracts, or related reservoir operation facilities [refer to Contract between the United States of America (Reclamation) and the State of Colorado for use of Bonny Dam and Reservoir].

## **1.2 Purpose and Need for Action**

Reclamation lands were acquired from private ownership for the construction and operation of the Bonny Dam and Reservoir. The purpose of the dam and reservoir was to serve as a structure for flood control, irrigation, recreation, and fish and wildlife conservation. In 2011, the reservoir was drained by the State of Colorado for Republic River Compact compliance (see Project History, Section 1.7). This

action created a change to the management of natural resources for Bonny Dam and a need to update the 1985 RMP.

The purpose and need for this RMP is to:

- Identify long-term management goals and objectives for managing natural resources on 7,229 acres of Federal properties;
- Identify new management objectives for managing the reservoir bottomlands;
- Determined the desired future condition for Bonny Dam;
- Provide decision makers with consistent direction and guidance to successfully manage the resources and to protect project facilities of Bonny Dam and surrounding lands;
- Ensure that management of the natural and recreational resources is compatible with authorized purposes of Reclamation's Arnel Unit of the Pick-Sloan Missouri Basin Program;
- Serve as a management tool for Reclamation, and other possible managing agencies, that outlines resources, policies, and actions that will guide the agency for long term management.

The RMP provides a coordinated plan for managing, protecting, and enhancing the wildlife habitat, natural resources, visitor services and recreational resources and is consistent with the mission goals identified in the 2018-2022 DOI Strategic Plan goals listed below.

- Mission Area 1: Conserving our Land and Water
  - Goal #1: Utilize science in land, water, species and habitat management supporting decisions and activities
  - Goal #3: Foster Partnerships to achieve balanced stewardship and use of our public lands
  - Goal #4: Inform land use planning processes especially for public use and access
- Mission Area 3: Expanding Outdoor Recreation and Access
  - Goal #1: Expand hunting, fishing, and other recreation on DOI lands and waters
- Mission Area 6: Modernizing Our Organization and Infrastructure for the Next 100 Years
  - Goal #3: Prioritize DOI infrastructure needs and reduce deferred maintenance backlog

The decision to be made by Reclamation's responsible official is whether to implement new management direction Bonny Dam or continue managing as currently identified in the 1985 RMP. The responsible official's decision will identify management actions that will comply with Federal, State and local laws and regulations, identify appropriate mitigation measures to protect natural resources, and establish the goals and objectives for the RMP. The responsible official's decision may select an alternative described in Section 2 of this document or modify an alternative to meet the purpose and need for this project area.

## **1.3 Authority**

The Federal Water Project Recreation Act of 1965, as amended (Public Law 89-72), in addition to the project-specific legislative authority, and Title 28 of P.L. 102-575, Section 2805 (106 Statue 4690, Reclamation Recreation Management Act of October 30, 1992), collectively provides Reclamation authority to plan, develop and manage recreation and fish/wildlife resources with a managing partner.



## **1.4 Management Framework**

Reclamation is the lead agency charged with preparing the RMP document and the companion EA. Other government agencies having resource management responsibilities in the Project Area include Colorado Parks and Wildlife (CPW), Colorado Department of Transportation (CDOT), U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), Yuma County Road and Bridge, and Colorado State Historic Preservation Office (SHPO).

### **1.4.1 Responsibilities of Other Entities in the Project Area**

#### ***Colorado Parks and Wildlife***

Reclamation first entered into an agreement with the State of Colorado in 1952 to manage the reservoir lands for recreation and fish and wildlife opportunities. Updates to the agreement have occurred over the years with the most recent signing of a Memorandum of Understanding (MOU) between Reclamation and Colorado in 2002 for a 25-year term. Colorado has management responsibility for all project lands at Bonny Dam except for Reclamation's Operation and Maintenance (O&M) Area. The agreement obligates Colorado to administer and manage for recreation, fish and wildlife resources and related purposes, uses and facilities.

Colorado has full authority to enforce state fishing and hunting regulations in the Project Area. Hunting is not permitted in designated primitive recreational areas where camping, picnicking, and other activities take place.

Law enforcement and fire suppression activities are primarily provided by Colorado and Yuma County. Colorado personnel respond to emergencies with the assistance of the Yuma County Sheriff's Department and Fire Department.

#### ***U.S. Fish and Wildlife Service***

USFWS provides federal leadership to conserve, protect, and enhance fish and wildlife populations and their habitats for the continuing benefit of the public. Reclamation is responsible for management and recovery of Threatened and Endangered Species in the Project Area under the Endangered Species Act (1973 as amended), with recommendations and consultation provided by the USFWS. USFWS is responsible for working with Reclamation in making recommendations for the protection of fish and wildlife and their habitats in the Project Area under the auspices of the Fish and Wildlife Coordination Act (1958 as amended).

#### ***U.S. Army Corps of Engineers***

The construction of Bonny Dam was authorized under the Flood Control Act of 1944 to serve as a flood control structure. Bonny Reservoir includes a storage capacity for flood waters in case of emergencies. USACE has jurisdictional responsibility to determine releases of water contained in the flood control storage pool of the reservoir. When water reaches the flood pool, Reclamation coordinates with the USACE before releasing any water from the reservoir to protect downstream communities and users from flooding.

USACE has regulatory responsibility for permitting under Section 404 of the Clean Water Act for any activities that discharge dredged or fill material into waters of the United States. For activities that impact water resources, wetlands habitats, or floodplains, permits must be obtained from USACE prior

to implementations.

### ***Colorado Department of Transportation***

CDOT is responsible for maintenance of U.S. Highway 385 which provides access on the west side of the Project Area.

### ***Yuma County Road and Bridge***

There are six county roads; CR 2, CR 3, CR JJ, CR 3.5, CR KK, CR LL.5, that provide access to and through the Project Area and are maintained by the Yuma County Road and Bridge crew.

## **1.5 Scope and Organization of Document**

This RMP and accompanying EA provide a conceptual management framework for natural and recreational resources at Bonny Dam and does not implement any specific projects. This document focuses on a broad scale of impacts associated with the alternatives and their broad levels of proposed development in the Project Area. As previously stated, site-specific NEPA compliance will be completed, and all environmental, cultural resource, and paleontological resource clearances will be obtained before any ground-disturbing activities begin.

The following paragraphs briefly describe, by chapter, the structure of this RMP.

Chapter 1 provides introductory information about the RMP, describes the purposes of and authorization for the RMP, establishes the management framework, describes the location of the Project Area, and provides a brief project history of Bonny Dam, as well as a description of its current uses and land use/management agreements.

Chapter 2 provides an overview of Reclamation's planning process, provides an overview of public involvement activities and coordination efforts with other agencies, identifies management opportunities and constraints, describes specific goals and objectives for the Project Area, and defines Issue Statements. The goals and objectives were formulated as a result of (1) public involvement, (2) agency consultation and coordination, and (3) Reclamation review of programs and policies. The goals and objectives for the desired future condition and the management actions/directions were established to meet the identified issues. This Chapter also describes the plan formulation and the three alternatives, formulated in response to the issues identified by the public, managing entities, and Reclamation.

Chapter 3 describes the existing resources and environmental factors in the Project Area, as documented in the EA.

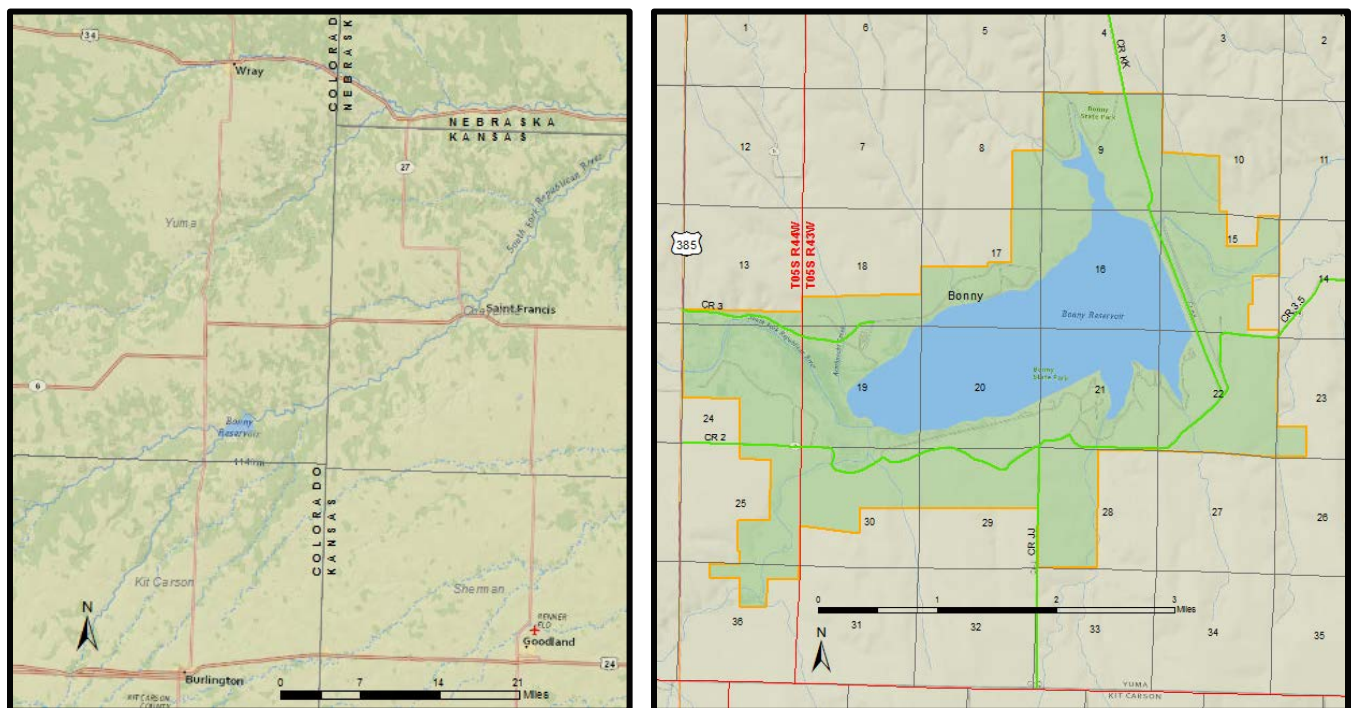
Chapter 4 establishes the implementation schedule of the RMP; including management actions, appropriate timeframes, implementation components, and monitoring plans.

## **1.6 Location and Setting**

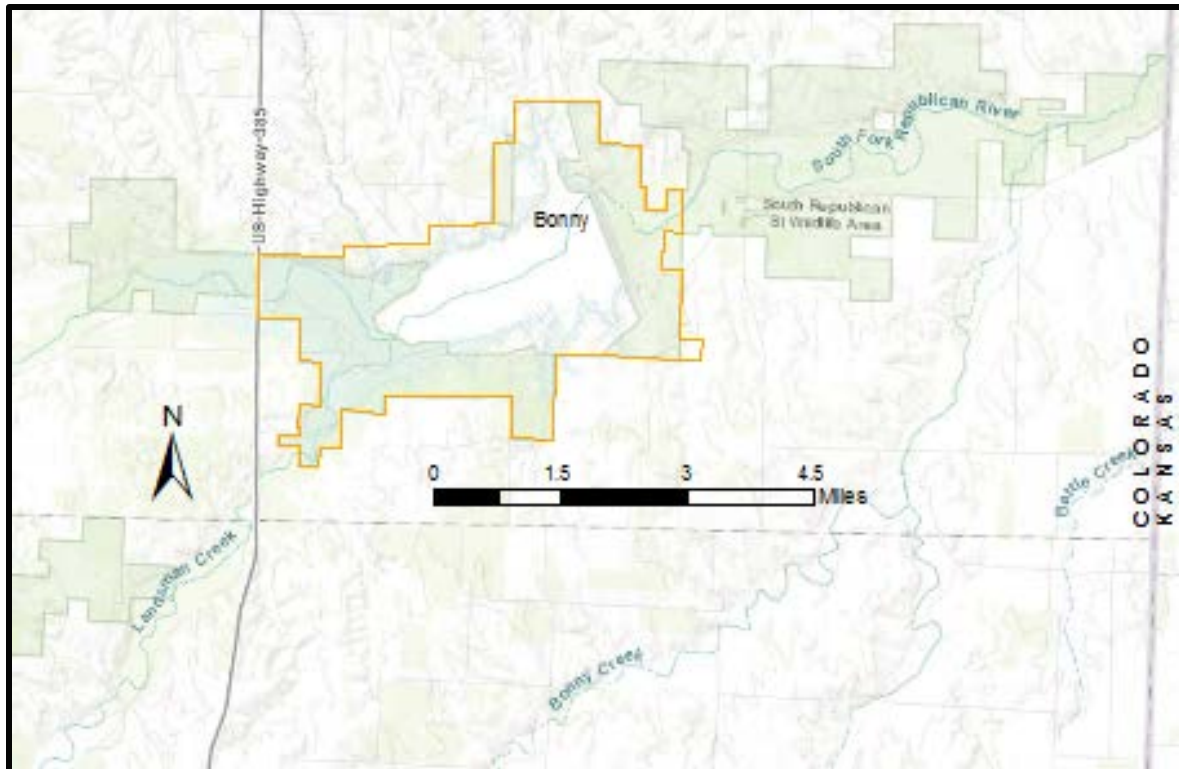
Bonny Dam is located in the southwest corner of Yuma County, in eastern Colorado, on the south fork of the Republican River (Figure 1-1). The dam (and reservoir) are about two miles west of the town of

Hale, approximately nine river miles upstream from the Colorado-Kansas State line, and eighteen miles north of Burlington, Colorado. Reclamation lands total about 7,229 acres. The legal description includes all or portions of sections 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22, 23, 28, 29, and 30 in Township 5 South Range 43 West and sections 24, 25, and 36 in Township 5 South Range 44 West. The RMP planning area does not include private or state-owned lands. The proposed alternatives in the RMP and future management of the Project Area only apply to Reclamation lands (Figure 1-1).

Bonny Dam has an elevation of 3,742 feet above mean sea level (amsl). The reservoir is currently empty with an elevation of 3,638 feet amsl. Bonny is surrounded by private lands and the South Republican State Wildlife Area (SWA) (Figure 1-2). The private lands are primarily developed for agricultural, grasslands, and some mining (oil and gas) operations.



**Figure 1-1. Left: Location Map of Bonny Reservoir. Right: RMP Project Area (federal boundary is orange line at right).**



**Figure 1-2. Other public lands surrounding Bonny Dam and Reservoir.**

Colorado Parks and Wildlife (CPW) manages the South Republican SWA. State properties directly border Reclamation’s property on the west and east side along the South Fork of the Republican River. The State manages their lands for a variety of wildlife habitats, warm water fishing opportunities, and primitive recreation activities.

## 1.7 Project History and Uses

Bonny Dam and Reservoir is part of the Armel Unit (formally St. Francis Unit) of the Pick-Sloan Missouri River Basin Projects. Under the Flood Control Act of 1944 and in response to the 1935 flood event on the Republican River, Congress approved the Bonny Dam and Reservoir Project on December 22, 1944 (Public Law 534, 78<sup>th</sup> Congress, 2<sup>nd</sup> Session,). Construction of the project was authorized July 24, 1946 (Public Law 526, 79<sup>th</sup> Congress, 2<sup>nd</sup> Session) and formally began in December 1948 and was completed May 4, 1951.

The authorized purpose for Bonny Dam in 1944 was flood control, irrigation, recreation, and fish and wildlife conservation. A feasibility study completed in 1954 determined that irrigation was not supported locally. In 1969, a second feasibility report was completed which also supported that Bonny was not “economically feasible to support irrigation”; thereby, removing irrigation from its primary purpose. The only irrigation supported by Bonny Dam today is the Hale Ditch irrigation which pre-dates the construction of the dam and reservoir.

In 1966, Bonny Reservoir became one of Colorado's first state parks. Reclamation lands surrounding the state park were managed in conjunction with the State's South Republican State Wildlife Area.

Since there are no irrigation requirements (outside of Hale Ditch) for the reservoir management of Bonny, the State of Colorado in 1982 purchased the use of the reservoir's conservation pool to support water-based recreation for visitors. Water levels had been maintained at an elevation between 3,665-3,670 (35,300 acre-feet) feet amsl until year 2002. However, pre-existing agreements, such as the Republican River Compact between Colorado, Nebraska and Kansas, take precedence over water storage in Bonny. By 2004, the reservoir level began to drop annually, until December 2011 when the dead pool level was reached at an elevation of 3,639 feet amsl (100 acre-feet).

Today, (June 2018) the reservoir essentially remains empty. Any residual water that may be seen is attributed to rainfall and runoff. To meet compliance with the Republican River Compact, in 2011 the Colorado State Engineer ordered the dam gates to remain open as a pass-thru system, meaning all water in the reservoir will eventually flow out. Reclamation continues to maintain Bonny Dam as a flood control structure.

As a result in the change of the reservoir water level and reduction of visitation by the public (Table 1-1), the State of Colorado recommended altering the management of recreation activities from active water based to a passive multiple purpose opportunities in 2011. This resulted in discontinued operation and maintenance of the Bonny State Park facilities. Colorado's decision to change the recreational management of Bonny State Park provided for a dispersed recreation (passive) opportunity with no services such as electricity, water, dump station, or shower houses. Management of all Federal land around Bonny became the responsibility of Colorado wildlife managers.

### **1.7.1 Visitor Populations**

Between 1980-2000, Bonny campground visitation averaged over 200,000 visitors annually during a time when the reservoir was at full capacity and the facilities were open year-round. Beginning around year 2000, visitation at Bonny campgrounds decreased as the reservoir level decreased. With the State Park area being managed as a SWA, no visitation data has been collected since 2011 to determine how much dispersed recreation use has been occurring on Federal lands around Bonny. Today (2018), the visitors to Bonny are generally hunters during the spring and fall hunting season, or local day-use travelers.

### **1.7.2 Reservoir Access Points**

From the north and south Bonny Reservoir is accessed by U.S Highway 385, which borders the property on its west side. Visitors from the east and west access the area from U.S. Highway 34, 34 miles to the north and Interstate 70, 20 miles to the south. In addition, various county roads lead to and through the Federal properties around Bonny (Figure 1-1).

**Table 1-1. Bonny Park Public Visitation and Water Level.**

<b>Year</b>	<b>Annual Visitors (July to June)*</b>	<b>Average Water Level (Elevation)***</b>	<b>Average Water Quantity (acre-feet)***</b>
2000	109,177	3666.10	30,400
2001	83,690	3663.39	25,950
2002	64,488	3660.59	22,080
2003	55,583	3658.64	19,000
2004	49,356	3656.11	15,650
2005	41,010	3654.40	13,500
2006	38,181	3652.27	11,370
2007	33,296	3650.27	9,650
2008	32,352**	3649.13	8,670
2009	38,201**	3651.30	10,600
2010	46,311**	3653.03	12,200
2011		3651.76	6,580
2012	-----	3638.00	30
2013	-----	3638.00	0
2014	-----	3638.00	0
2015	-----	3638.00	0
2016	-----	3638.00	0
2017	-----	3638.00	0

- \*Based on a Reclamation document dated 2009
- \*\*Based on Data from Colorado in 2011
- \*\*\*Based on Reclamation Data in 2018

### **1.7.3 Existing Uses of Reservoir Lands**

Currently, Bonny is managed by two entities; Colorado Parks and Wildlife (CPW) and Reclamation (Figure 1-3). CPW manages the wildlife management area for a variety of public recreation opportunities, while Reclamation oversees the management and operation of the dam and support facilities.

Within the Wildlife Management Area, CPW minimally maintains two undeveloped campgrounds; East Beach (35 camp sites) and North Cove (26 camp sites), for dispersed camping use; each with picnic tables, shade shelters, grills, and vault toilet. Dispersed camping opportunities are not limited to these locations within the wildlife management area. The public can set up dispersed camps off the side or at the ends of roads so long as access is not blocked for others as well as within Wagon Wheel and Foster Grove campgrounds. Habitat improvements, grazing activities, food plots, vegetation treatments, and road improvements also occur within these lands to improve wildlife habitat for a variety of species. The Wildlife Management Area is also open to public hunting for big and small game and waterfowl in accordance to State regulations.





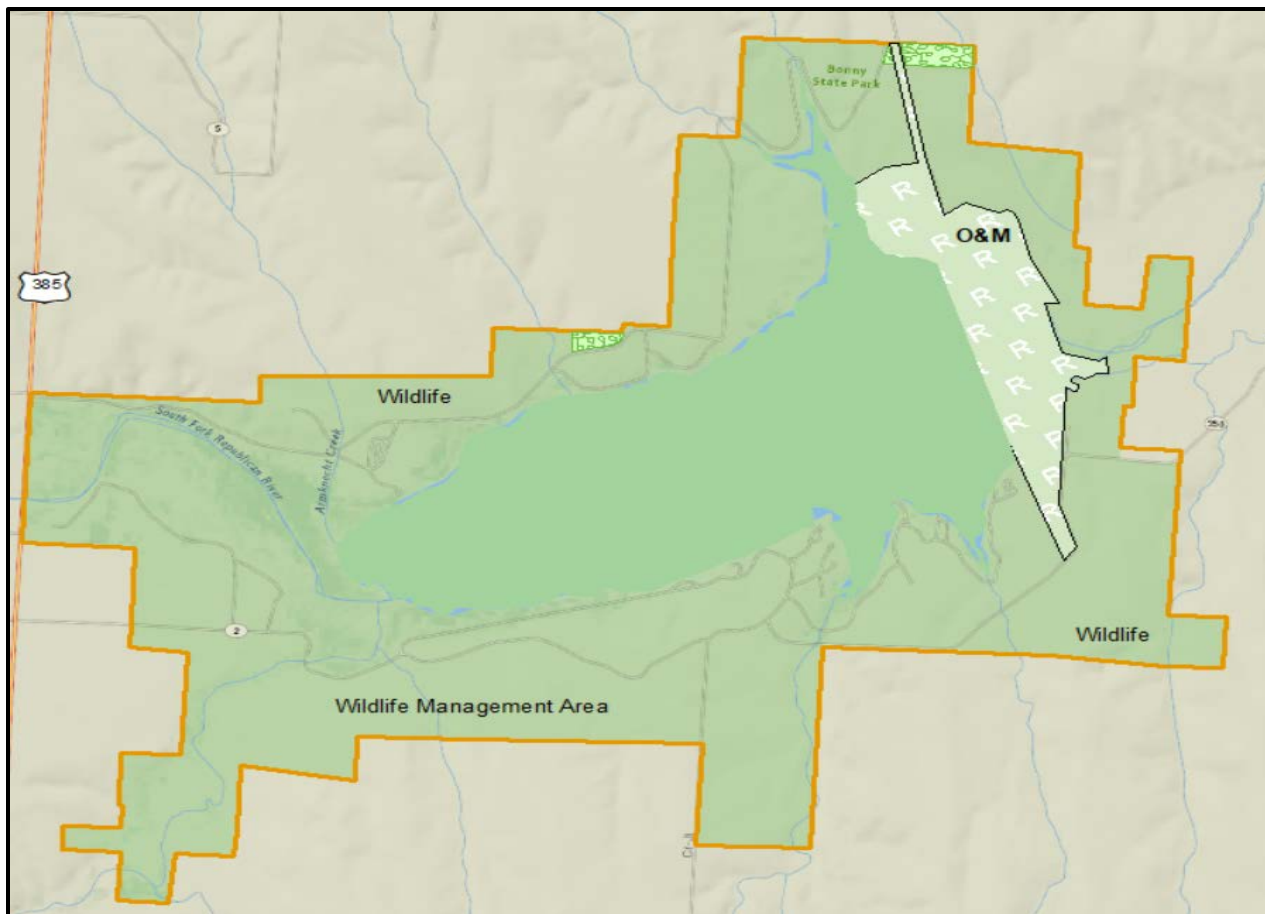
**Photo 1-1. East Beach Primitive Campground (Photo Date 07/02/2018).**



**Photo 1-2. North Cove Primitive Campground (Photo Date 07/02/2018).**

There are no designated trail systems around Bonny for hiking, biking, birdwatching or horseback riding, however, the public is invited to traverse the property on their own for any non-motorized activities. Motorized use of the Federal lands is restricted to designated roads, primarily designed for passenger-type vehicles. There are no designated motorized trails for off-road vehicles.

Reclamation Operation and Maintenance (O&M) Area is restricted to administrative access only. County Road KK across the top of the dam is open to public travel and the area does not restrict non-motorized activities such as hiking. The airfield to the north of the dam is currently closed to public recreational aircraft use.



**Figure 1-3. Management Areas.**

## 1.8 Land Use / Management Agreements

Several agreements are currently active that could influence Reclamation's management of the Project Area. These include:

### **Memorandum of Understanding (MOU) for Administration of Recreation and Management of Fish and Wildlife Resources at Bonny Reservoir Contract No. 02AG601631, Dated 01/2002**

In January 2002, the United States of America renewed the MOU with the State of Colorado for the administration of recreation and management of fish and wildlife resources at Bonny Reservoir for a 25-year term (this updated the 1952 management agreement).

The primary purpose of the agreement was to transfer responsibility from the United States to the State of Colorado for the administration, operation, maintenance, and development of public recreation, recreation facilities, fish and wildlife resource, and related responsibilities, to provide for public use and



enjoyment of the reservoir area consistent with project purposes. The federal land and water areas defined in the agreement are referred to as the Project Area in the RMP and EA (Figure 1-3).

The O&M Area includes the areas surrounding the dam, outlet works, feeder canals, and distribution works. Management within the O&M Area is the responsibility of Reclamation to provide proper operation, maintenance, and protection of project facilities, including but not limited to the dam and appurtenant works.

The agreement states that CPW's management, operation, and maintenance of the reservoir area should follow an approved Resource Management Plan. The RMP should be prepared by Reclamation in cooperation with CPW and other appropriate federal, state, and local entities. This document meets that requirement.

With respect to soil and water conservation, CPW and Reclamation will take all reasonable measures necessary to minimize siltation and erosion; protect land and water resources; prevent and suppress fire; protect against introduction and spread of noxious weeds and other pests detrimental to natural values, agriculture or public health and safety; and will cooperate in soil and water conservation, and fish and wildlife enhancement practices.

With respect to private development and use within the Project Area, the agreement allows CPW to enter into third party contracts to carry out the functions relating to recreation and related administration, operations, maintenance, and development. Such contracts or concession contracts would include clauses that prohibit exclusive use. Any contract with duration longer than one year would need to be approved by the manager of the Nebraska-Kansas Area Office.

#### **Contract Agreement for Acquisition of the Use of the Conservation Capacity in Bonny Reservoir Contract No. 2-07-70-W0556, Dated 06/24/1982**

On June 24, 1982, the United States, represented by Reclamation, entered into a 40-year contract agreement with the State of Colorado Department of Natural Resources on behalf of Colorado's Division of Parks and Outdoor Recreation and Division of Wildlife, for the acquisition of the use of the conservation storage capacity of up to 39,922 acres-feet in Bonny Reservoir for recreation and fish and wildlife purposes.

Since Bonny reservoir was determined to not be "economically feasible to support irrigation", the State of Colorado requested authorization to use and manage the conservation pool pursuant to their 1980 Operating Plan, provisions of the Republican River Compact, senior water right users (Hale Ditch) and any other Land and Water Conservation Fund project obligations that pertain to this agreement. Coordination between Colorado and Reclamation were required before any release of water was made.

#### **Republican River Compact Agreement between Colorado, Nebraska and Kansas Dated December 31, 1942**

The Republican River Compact Agreement pertains to the entire watershed of the Republican River and its tributaries, which includes the South Fork of the Republican River where Bonny Dam resides. The

major purposes of the compact agreement between Colorado, Nebraska, and Kansas is to provide for the most efficient use of the water of the Republican River Basin for multiple purposes; to provide for an equitable division of such waters, to recognize the most efficient beneficial consumptive uses; and to promote joint action by the state and the United States in the efficient use of water and the control of destructive floods. The agreement also identifies the water allocation for beneficial consumptive use for each state.

**Prior Rights and Reservation when Reclamation acquired properties for Bonny construction:**

The Federal lands were acquired by Reclamation subject to any coal or mineral rights reserved to or outstanding in third parties at the time of acquisition. These lands are subject to any existing rights-of-way (ROW) in favor of the public or in third parties of roads, railroads, telephone lines, transmission lines, ditches, conduits, or pipelines on, over, or across these lands.

- **Land Purchase Contract I 103r-434: Gilbert Louis Hamm.** The state of Colorado reserved minerals, ores, metals, oil, gas, etc., with right of ingress and egress for mining in lot 4, section 26, located in the N2 NE4 NW4 of that section, T05S R44W, 6th principal meridian.
- **Land Purchase Contract 103r-59: Henry M. Merriam.** Patent reserves to the state of Colorado any and all minerals with respect to lots 2, 3, 4, 5, 6, 7, 16, 17, 18, 19, 20, 21, and 22 of section 16, T05S R43W, 6th principal meridian.
- **Senior water rights to Bonny construction.** Hale Ditch is a pre-existing water right established in 1904 (1938) for a water delivery to 750 acres of agricultural land. Bonny Dam was constructed on the diversion of this ditch system. The ditch was incorporated into the design for Bonny and water is transferred as requested to the ditch.

# **Chapter 2: Planning Process**

## **2.1 Introduction**

This chapter describes the planning process for the Bonny RMP/EA, including the public involvement, goals and objectives, specific management direction and constraints, issues or concerns for management of resources, and the alternatives considered for implementation.

## **2.2 Public Involvement**

Public participation is an important element of both development of the RMP and the EA. Scoping is an early and open process for determining the issues to be addressed. Several approaches were used to assist with issue development for the management of resources in the Project Area. These included the formation of a Planning Team, public notifications on the NKAO website, and holding a public meeting. A media release was used to inform the public of the scheduled public meeting and opportunity to comment on the development of the RMP.

### ***Public Meetings***

A public open house meeting was held in Wray, CO to inform the public of development of the RMP on February 26, 2018. This meeting solicited responses from the public about their needs and values as they pertain to the management of Federal lands at Bonny Reservoir. The public meeting included interested individuals, organizations, agencies, and governmental entities in the decision-making process. A news release was published in the Wray Gazette on February 21, 2018 to further inform the public of opportunities to comment. Reclamation received 193 comments for Bonny resource management.

A second public meeting is being scheduled when this draft RMP/EA is available for public review.

### ***Planning Team***

An important phase of public involvement includes coordination with managing entities and stakeholders. The accuracy of the RMP and EA depend highly on input provided from all interested parties. Planning Team members consisted of representatives from Reclamation and CPW.

Several Planning Team meetings were held throughout the development of the RMP. Their purpose was to compile available documents; discuss issues, opportunities and constraints; and develop the project alternatives identified in the EA. The Planning Team was given the opportunity to review the RMP and EA documents prior to public release.

## **2.3 Issue Statements**

The following Issue Statements provide detailed discussions of the primary issues and/or opportunities identified above through the public comments and Planning Team meetings. The Issue Statements are intended to clarify the scope of each concern, but some may reflect “perceptions” rather than factual

data due to the process of representing both public and partners' opinions. The Issue Statements provide the foundation for the development of RMP goals and objectives.

A planning issue can be defined as an unrealized opportunity, an unresolved conflict or problem, an effort to implement a new management program as a result of new initiatives or laws and regulations, an issue raised by the public, or a value being lost. Not all issues are related to resource management, therefore, not all issues are planning issues that can be resolved through an RMP/EA. Some issues must be resolved administratively. The basic challenge is to protect natural and heritage resource values while allowing uses that have minimum effect on these resources.

From the public scoping effort in February 2018 (193 comments received), a variety of issues and concerns were identified and grouped into categories (see Appendix E). The general issue categories (below) help to define the scope of each issue and concern and develop specific goals and objectives to address them. Some issues, concerns, and comments expressed by the public were determined to be outside the scope of this RMP/EA and not incorporated into an issue category.

**Recreation Resources:** The issue category pertains to both developed and dispersed recreation opportunities, including motorized and non-motorized uses. Public comments include restoring the developed campgrounds, building trails for a variety of dispersed recreation uses, repurposing the visitor center, building new facilities, opening the airfield to public use, and maintaining access to the area. Developed recreation is defined as areas that provide improvements such as electricity, fresh water, dump stations, toilets, parking areas, picnic tables, etc. and generally associated with campgrounds and picnic areas. Dispersed recreation is defined as areas that provide few improvements, if any at all, and generally associated with trail activities but can be used for campgrounds and picnic areas where little to no improvements exist. Primitive is another recreation term where no improvements are provided.

**Heritage Resources:** This issue category pertains to the need to protect and interpret these resources.

**Vegetation Resources:** The issue category pertains to managing vegetation to eliminate or reduce invasive species, including noxious weeds and undesirable woody vegetation while protecting native and sensitive species such as the Prairie Moonwort (*Botrychium campestre*).

**Water Resources:** This issue category pertains to restoring or reestablishing a functioning stream channel along the South Fork of the Republican River by eliminating woody vegetation and eliminating phreatophytes.

**Fish and Wildlife Resources:** This issue category pertained to improving the habitat by creating wetlands, small ponds, and prairie areas to benefit a variety of species, including waterfowl and fishing, and eliminating invasive species.

## **2.4 Management Opportunities and Constraints**

### **2.4.1 Opportunities**

Opportunities exist in the Project Area to enhance, protect, and interpret the natural resources of the area, and to provide a range of dispersed recreation opportunities while avoiding significant adverse effects to existing natural resources. As a result of the public involvement process and Planning Team meetings, the following opportunities for the Project Area were identified:

- Providing recreation opportunities that have minimal operation and maintenance costs.
- Developing new opportunities appropriately budgeted and consistent with the area's natural aesthetics.
- Maintaining the area's natural landscape and visual resources.
- Providing educational opportunities and fostering public awareness for natural resources conservation and protection.
- Conserving wildlife habitat values in accordance with Reclamation's existing mitigation commitments.
- Protecting federally-listed threatened and endangered species and conserving habitat for other species of special concern.
- Protecting against the introduction and spread of noxious weeds and invasive aquatic species.
- Protecting wetlands values.
- Protecting, preserving, restoring, recognizing, and interpreting cultural and paleontological resource sites.
- Developing and providing access to Federal lands.

### **2.4.2 Constraints**

As explained in other sections of this report, the primary purpose of Bonny Reservoir is for flood control and irrigation. Secondary purposes include recreation, fish and wildlife resources. Therefore, management opportunities identified in this RMP cannot affect these constraints:

- Protect the primary purpose of the Bonny Project to deliver water and restrict flood waters;
- Protect the secondary purposes of the Bonny Reservoir, which include recreation, fish and wildlife;
- Protect water quality;
- Honor existing contracts and agreements, including but not limited to water delivery, flood control, and
- Protect the ability of Reclamation and/or CPW to enter into future contracts with third-party entities to enhance the primary and secondary project purposes within Reclamation law and the scope and authorization of the Bonny Project.

Agencies are constrained by their respective legislative authorities, budgets, personnel, current policies, and environmental limitations when addressing management changes and other actions. The ability of agencies to manage environmental and recreational resources will always depend on maintaining sufficient personnel, and on the ability of the agencies to obtain adequate funding to operate and maintain facilities and programs, as well as to protect and enhance existing opportunities and resources.

## 2.5 Desired Future Condition

Reclamation will coordinate and cooperate with other agencies to manage the Bonny Project Area. The area will be managed to provide for public recreation opportunities while protecting, enhancing and maintaining natural resources in accordance with laws and regulations. Facilities provided for recreational use will meet environmental, accessibility, and safety regulations. Sights and sounds of visiting public may be prevalent, particularly in more of the developed settings such as designated camp sites. Lands will be rehabilitated for wildlife habitat and defunct recreation facilities will be removed.

Bonny's natural grassland characteristics would dominate the landscape, while sustaining a tree cover along the rivers and creeks within the riparian zone. Exposed soils would be minimized, to the extent practicable, by retaining an appropriate ground cover to reduce erosion and weed infestations. The pre-existing reservoir boundary would be retained with minimal infrastructure impacts for future water retention possibilities. Enhancement of the reservoir bottomland, to the extent practicable, is encouraged for the benefit of waterfowl and wetland habitats. Mineral resources could be developed, as appropriate, in an environmentally sensitive manner.

## 2.6 Goals and Objectives

Goals and objectives were developed for the RMP in direct response to the Issue Statements detailed in Chapter 2. However, each Issue Statement may not require a specific set of goals and objectives and, in some cases, a set of goals and objectives may address several Issue Statements. In all cases, an effort was made to incorporate the issues and opportunities identified in the Issue Statements into the goals and objectives for the RMP.

Each goal describes a desired future condition in the Project Area. Along with each goal is a set of objectives that describe management actions/directions that must be completed in order to accomplish each goal. When the objectives are implemented, the goal will be reached. A detailed discussion of the goals and objectives for each of the Goal Categories are described further in this chapter and include (A) Partnerships, (B) Water Resources, (C) Recreation Resources, (D) Natural, Cultural, and Paleontological Resources, (E) Public Health and Safety, (F) Land Management, and (G) Project Facilities.

### 2.6.1 Goal Category A: Partnerships

**A.1 Goal:** Support Agreements and Contracts and Encourage Partnerships that Pursue Best Resource Management Practices to meet the desired future conditions established through this RMP.

#### *Objectives:*

- A.1.1 Evaluate proposed use activities against project purposes, contracts, and agreements.
- A.1.2 Maintain and support partnerships and agreements to achieve the goals of the RMP.

### 2.6.2 Goal Category B: Water Resources

**B.1 Goal:** Operate Bonny Reservoir to meet Project Purposes

***Objectives:***

B.1.1 Continue to operate Bonny Reservoir to meet primary project purposes of flood control and irrigation, and secondary project purposes of recreation, fish and wildlife resources, by honoring all existing and future contracts and agreements with respect to water deliveries and operations.

**2.6.3 Goal Category C: Recreational Resources**

**C.1 Goal:** Provide for recreation opportunities consistent with desired future conditions and management setting within Reclamation's and managing partner authorities, to afford a quality visitor experience consistent with natural and cultural resource management objectives.

***Objectives:***

C.1.1: Maintain the natural setting, while providing for recreation opportunities and the continued protection of natural and cultural resources in accordance with Federal, State and local laws and regulations.

C.1.2: Maintain opportunity for flat water recreation in the event substantial water is available for water-based recreation.

C.1.3: Ensure appropriate recreational facilities at designated locations meet or exceed Federal, State and local laws and regulations.

C.1.4: Identify motorized and non-motorized public access opportunities

C.1.5: Evaluate special recreation event requests that are open to the public for resource protection and permit accordingly.

**2.6.4 Goal Category D: Natural, Cultural, and Paleontological Resources**

**D.1 Goal:** Conserve, restore, and enhance natural ecosystems.

***Objectives:***

D.1.1: Address vegetation issues associated with Bonny's reservoir bottomland.

D.1.2: Where appropriate, remove unneeded infrastructure and restore the land to native vegetation to enhance wildlife habitat.

D.1.3: Utilize natural processes; i.e. grazing or prescribed burning, to enhance or maintain habitat for a variety of native species.

D.1.4: Identify sensitive riparian and wetland habitats and protect those habitats in accordance with the Federal Clean Water Act and Executive Order 11990

D.1.5: Restore or enhance habitat, where appropriate, for waterfowl species and fishery opportunities.

**D.2 Goal:** Protect Federal or State listed endangered and threatened species and their designated critical habitat in accordance with the Endangered Species Act, and Bald and Golden Eagle habitat.

**Objectives:**

D.2.1: Maintain records on locations of species listed under Federal or State endangered, threatened or species of concern lists that require additional management considerations.

D.2.2: Consult with U.S. Fish and Wildlife Service if management actions impact Federally-listed endangered or threatened species or their designated critical habitat.

D.2.3: Protect known nesting trees for Bald and Golden Eagles in accordance with Federal laws.

**D.3 Goal: Control or Manage the Introduction and Spread of Invasive Species**

**Objectives:**

D.3.1: Identify locations and extent of where state-listed noxious weeds, invasive exotics, and other plants are a problem requiring action.

D.3.2: Follow direction and guidance in Reclamation's 2016 Integrated Pest Management Plan, and amendments.

**D.4 Goal: Protect and Manage Cultural and Paleontological Resources**

**Objectives:**

D.4.1: Identify the present integrity and eligibility of cultural resources, including historic, prehistoric, and paleontological resource, where development is proposed

D.4.2: Protect, preserve, restore, recognize, and interpret historic, prehistoric, and paleontological resource sites as appropriate for each individual site in accordance with Federal laws and regulations.

**D.5 Goal: Management of Mineral Resources**

**Objectives:**

D.5.1: Where reserved mineral rights are to be exercised by the previous or former owner(s), Reclamation will require an exploration or mining plan to be prepared and submitted for review and approval. Exploration and mining plans are subject to the environmental review process (NEPA). Written approval by the Reclamation will be required prior to the commencement of any related work.

**2.6.5 Goal Category E: Public Health and Safety**

**E.1 Goal: Provide appropriate, accessible, and safe access to Public Use Areas**

**Objectives:**

E.1.1: Evaluate services and facilities provided at designated recreation public use area to meet Federal, State, and local laws and regulations.

**2.6.6 Goal Category F: Land Management**

**F.1 Goal: Provide public non-exclusive use of Federal lands**



***Objectives:***

F.1.1: Identify appropriate land uses that serve a public purpose and are non-exclusive.

F.1.2: Evaluate and permit accordingly long-term land uses in accordance with Reclamation policy.

**2.6.7 Issue Category G: Reclamation Project Facilities**

**G.1 Goal:** Ensure Safety of Reclamation's Operation and Maintenance Zone

***Objectives:***

G.1.1: Protect the facilities within Reclamation's Operation and Maintenance Area to prevent dam failure

G.1.2: Restrict public access that would compromise the security and purpose of Bonny Dam.

**2.7 Resource Management Plan Alternatives**

The National Environmental Policy Act (NEPA) calls for the consideration and evaluation of a range of reasonable alternatives which meet the purpose of and need for a proposed Federal action while minimizing or avoiding environmental impacts.

Planning criteria were established to assist in formulating and selecting combinations of land uses and management action that could reasonably be implemented. Using the planning criteria as a guide, Reclamation developed two reasonable action alternatives. In addition to the action alternatives, NEPA requires consideration of a No Action Alternative, which is represented by the continued implementation of the existing 1985 Bonny RMP.

The planning criteria utilized in formulating the alternatives considered:

- Issues, opportunities, and constraints for management and project development;
- Goals and Objectives for the project area;
- Comments from the Planning Team throughout the project;
- Public Comments;
- The action complies with federal, state, and county planning, zoning, and building requirements;
- The action meets public health/safety standards and regulations;
- The action complies with laws, regulations, and policies of the natural environment;
- The action is reasonable and financially feasible;
- The action can be implemented;
- The action is contained within the Project Area (Figure 1-1) and is consistent with Reclamation policies and authorities.

Inclusion of these management actions does not ensure funding, staff, or equipment will be available to implement these actions nor does it obligate Reclamation to implement actions in the future.

Reclamation does not have direct authority to undertake certain recreation improvements without the assistance of a managing partner.

### **2.7.1 No Action Alternative**

The No Action Alternative represents a continuation of the 1985 RMP management practices. This alternative would retain the three management boundaries: Parks (1,929 acres), Wildlife (2,807 acres) and O&M (453 acres) areas (see Figure 2-1). Bonny Reservoir (2,040 acres) did not specifically have any management description for a dry reservoir bed in the 1985 RMP.

#### ***Park Management***

In October 2011, Colorado State Parks turned the management of the park area over to the Wildlife Division resulting in shutting down or removing all developed recreational facilities, including but not limited to; bathrooms, electrical service, and water systems. All four campgrounds, remained available to the public for dispersed recreation.

Under the No Action Alternative, expected management activities within the park management area would be limited to primitive, dispersed opportunities only, such as hiking, horseback riding, bird-watching, picnicking, and camping. All developed facilities would remain boarded and closed to public use, including the visitor center (Photo 2-3) and marina. Other infrastructure, such as tables, shade shelters, light poles, asphalt roads, grills, would continue to deteriorate due to environmental exposure and lack of maintenance. The three private cabins (Photo 2-4), abandoned in 2011, will not be permitted. Some weed management would be expected to control and reduce the spread of noxious weeds in accordance with an approved pest management plan.

In accordance with the master lease agreement, Colorado Parks and Wildlife may continue to look for a third-party concessionaire to manage park facilities.

#### ***Wildlife Management***

The 1985 RMP wildlife management actions that would continue within the No Action Alternative include, but are not limited to:

- Grazing leases (permits) for habitat management;
- Prescribed burning program;
- Vegetation treatment for habitat management through removal of undesirable trees or shrubs;
- Dispersed camping along roadsides with no camping fees or facilities;
- Invasive species management through chemical, biological, or cultural treatments;
- Road maintenance on existing infrastructure;
- Management for native non-game species, such as chubs, darters, shiners, or minnows within the South Fork of the Republican River and Landsman Creek;
- Identifying State hunting areas for big game species

#### ***Reclamation O&M Management***

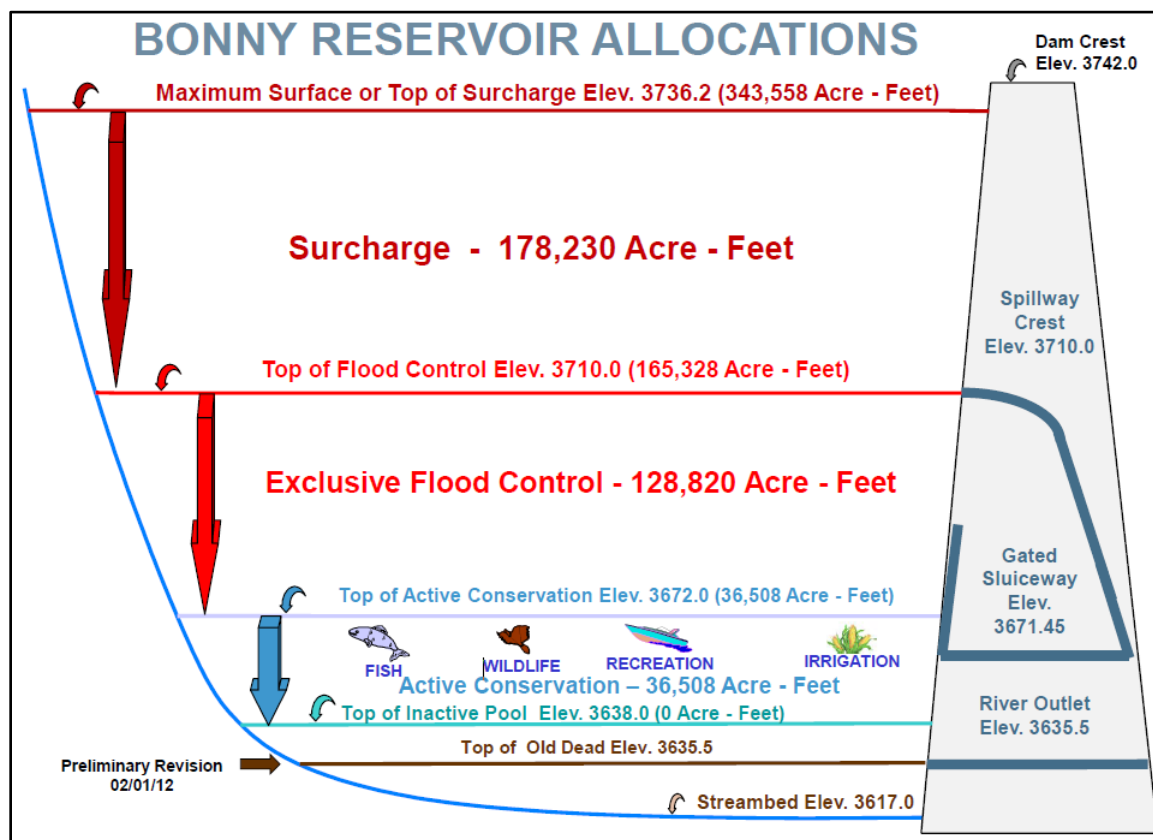
Regardless of the chosen alternative, the Reclamation O&M administrative management area would continue to be managed as mandated by Congress to protect the structure of Bonny Dam and associated facilities for the project purpose of flood control and providing water for Hale Ditch and the Republican River. These activities may include, but are not limited to:

- reconstruction of facilities such as replacement of spillway or outlet works, weed and vegetation management on dam surface,

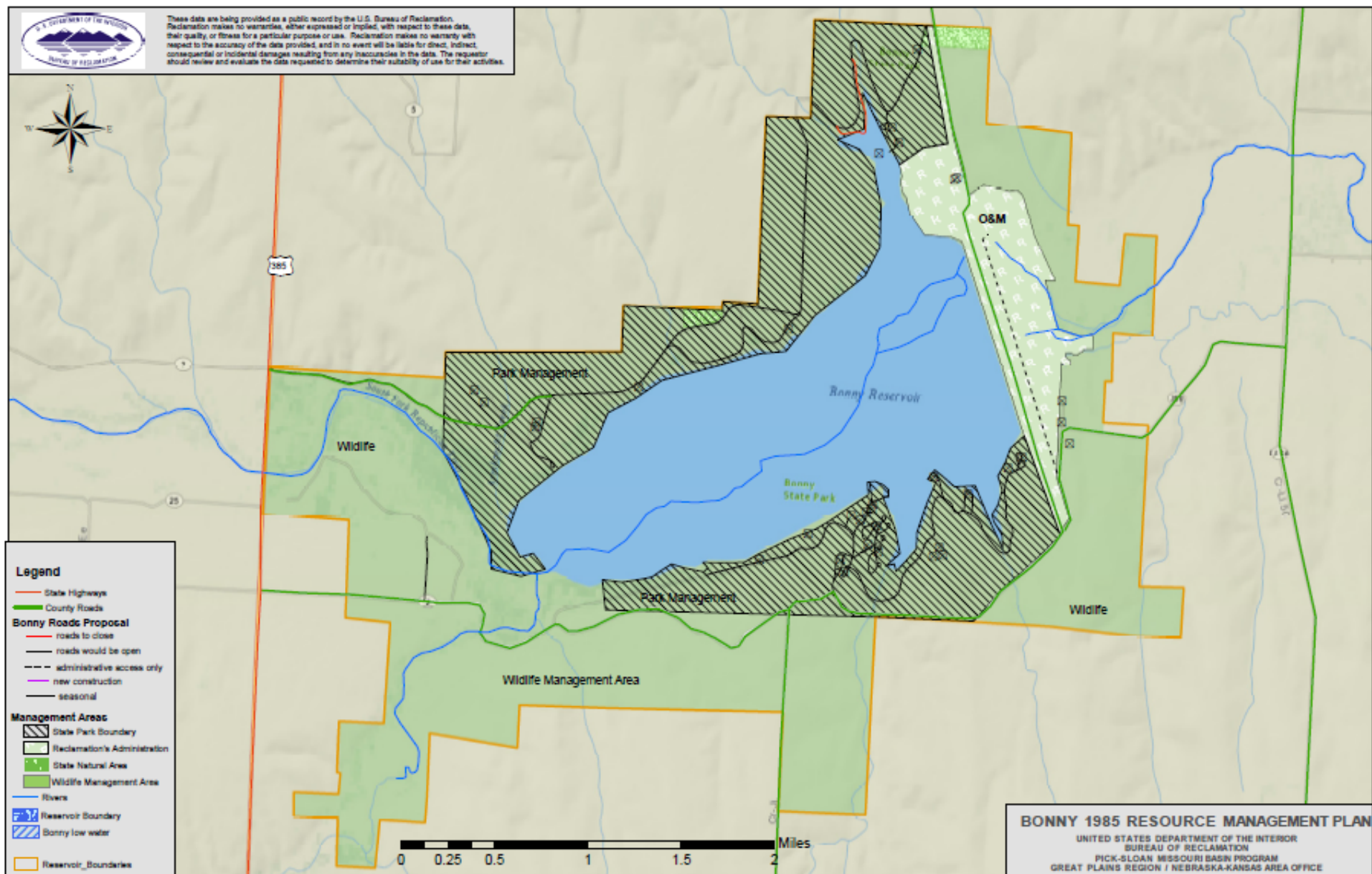
- rodent control for dam surface, and
- general maintenance of outlet works from woody debris or sedimentation buildup.

Reclamation continues to conduct annual inspections, while also performing maintenance as needed. In addition, instrumentation monitoring continues for in-flows and out-flows of water as well as seepage.

Reservoir water allocations were re-evaluated in 2012 to update elevation levels and amount of water should the reservoir ever return. These levels are shown in Figure 2-2:



**Figure 2-1. Bonny Reservoir Water Allocations, revised February 2012.**



**Figure 2-2. No Action Alternative - 1985 Bonny Resource Management Plan.**

## 2.7.2 Alternative A

Reclamation in cooperation with Colorado Parks and Wildlife, would manage the entire Bonny area (6,829 acres) with a wildlife management designation, with the exception of a reduced O&M area (400 acres) for the dam. Under Alternative A, resource management activities would include, but are not limited to:

- Vegetation management using a variety of different management techniques such as tree thinning, prescribed burning, grazing, food plots, and noxious weed treatments to enhance habitat for a variety of game and non-game species;
- Road management, including maintenance of access roads and removal of obsolete roads that fragment habitat areas. Construction of a new access route to East Beach campground along the dam;
- Undeveloped non-motorized recreation opportunities such as hunting, hiking, horseback riding, bird-watching, picnicking and primitive camping;
- Two designated free primitive camping areas, East Beach (15 camp sites) and North Cove (10 camp sites) (Photos 1-1 and 1-2), would include an accessible vault toilet, picnic tables, shade shelters, and fire grills;
- Cultural resource protection;
- Protection of the 50-acre State designated Bonny Prairie Natural Area (see Section 3.4);
- Land uses authorized by special use permits;
- Special events authorized by Reclamation or managing partner;
- Dam infrastructure management (described under the No Action Alternative) to maintain the facilities (spillway, outlets, dam) associated with the Project for long-term future.

Alternative A includes a considerable amount of restoration activities to remove structures and facilities no longer in use due to the draining of Bonny Reservoir which resulted in the change in management of the Bonny State Park area. These include, but are not limited to:

- Reducing the number of vault toilets (14) around Bonny to about 4 or 5. Any bathroom unit that had running water would be removed. Toilets that do not meet accessibility standards would be removed, while toilets that do meet accessible standards would be salvaged or relocated to the designated primitive campgrounds.
- Removal of the Visitor Center (Photo 2-3), dump station, water treatment facility and sewage lagoon systems.
- Complete removal of all infrastructure associated with the marina, Wagon Wheel (87 camp sites) and Foster Grove (42 camp sites) campgrounds, including picnic tables, grills, shade shelters, camp pads, concrete sidewalks and overhead security lights. East Beach and North Cove campgrounds would reduce the designated camp sites by half or two-thirds.
- Removal of three private abandoned cabins (Photo 2-4).
- Restoring unneeded access routes to habitat by removing all asphalt roads, converting some to gravel (1 mile) and others to native vegetation (8.57 miles). Maintain a seasonal access (open Memorial Day to Labor Day) on 6.18 miles of the north road.
- Removal of boat ramps and restore the shoreline. Wagon Wheel boat ramp would be retained for future opportunities.

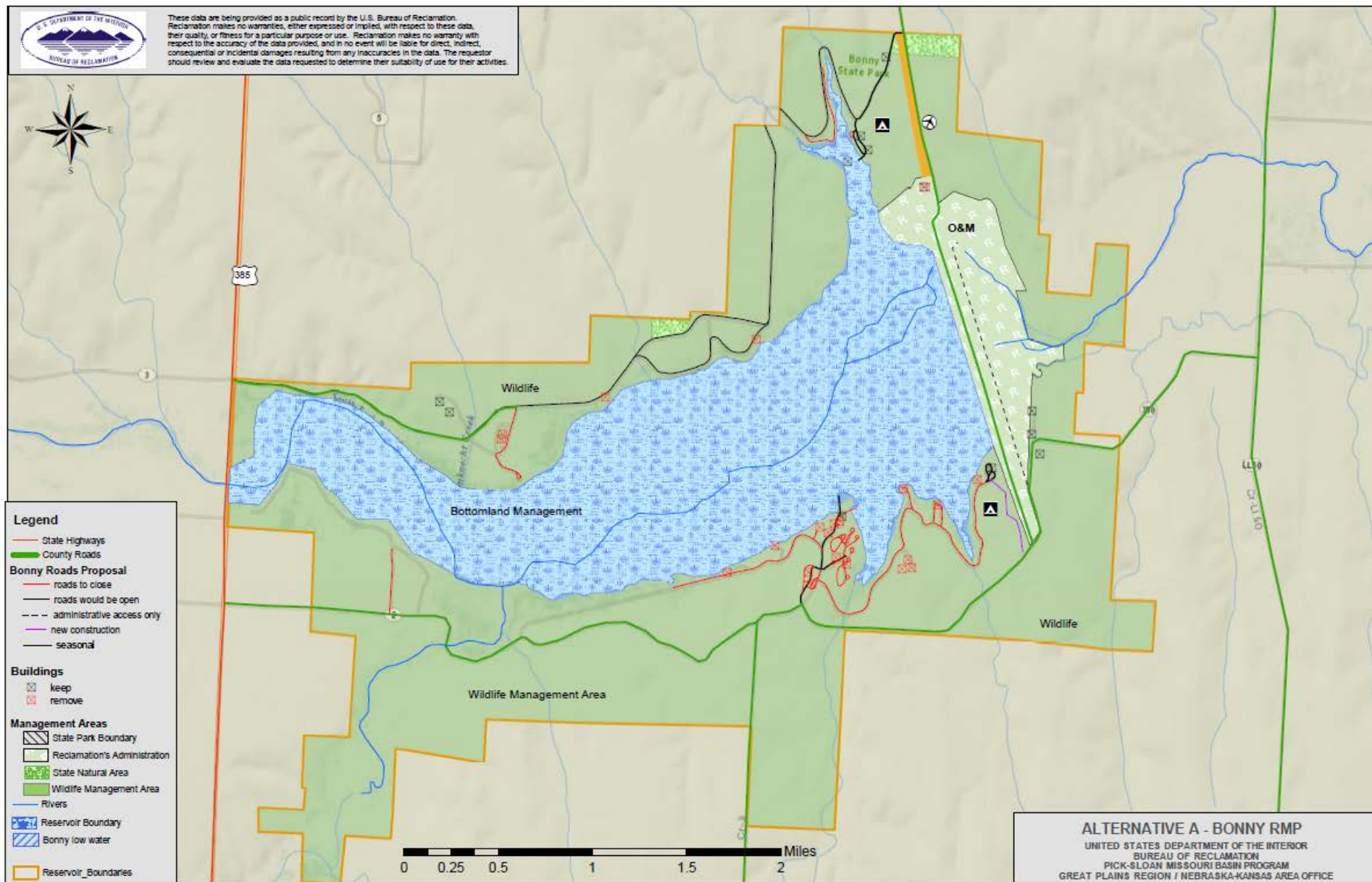




**Photo 2-1. Left: Visitor Center. Right: Wagon Wheel Campground (Photo Date 11/07/2017).**



**Photo 2-2. Two of the Three Abandoned Private Cabins, (Photo Date 11/07/2017).**



**Figure 2-3. Alternative A Resource Map.**



### ***New Opportunities under Alternative A***

**Off-Road Vehicle Use:** Reclamation is considering an option to allow off-road vehicle travel on designated existing roads within the Federal property boundary of Bonny Reservoir. To ensure a viable OHV program, Reclamation would consult with Yuma County about designating County roads CR 2, CR 3, and CR KK that cross Federal property within Bonny Project area open to motorized travel. This opportunity entails about 16 miles of existing open motorized roads that may be designated for ORV use. Reclamation is not proposing any cross-country off-road motorized activities under this alternative.

Both Reclamation and Colorado have specific regulations for managing ORV use to protect land resources, promote the safety of all users, minimize conflicts among land users, and ensure that any permitted use would not result in significant adverse environmental impacts or cause irreversible damage to existing ecological balances. Reclamation's policy is in 43 CFR Part 420, while Colorado's authority is from 2 Code of Colorado Regulations 405-5. Both agencies require that the managing entity designate a road, trail or route open to ORV use. All Federal, State and local regulations must be adhered to including, but not limited to; ORV registration, appropriate equipment, sound limitations, and licensed drivers. Areas permitted for ORV use are to be evaluated and the use compatible with adjacent private and public lands.

**Bonny's Airfield:** Under this alternative Reclamation would consider and investigate the reauthorization of the native surface airfield north of the dam, along County Road KK for landing, takeoff, and short-term parking of small recreational single engine aircraft. The airfield is completely fenced and is roughly 200 feet wide by 3,800 feet long. This proposal would allow public use of the airfield, but no facilities would be provided. Wind socks may be placed to identify wind direction and speed.



***Photo 2-5. Bonny Native Surface Airfield (Photo Date 07/02/2018).***

**Bottomland Management:** This alternative would retain the boundaries of Bonny Reservoir at full water capacity as a separate management area for bottomland management. The bottomland management area was expanded to the Reclamation property boundary on the west side (Highway 385) to capture all of the South Fork of the Republican River. Management opportunities would include, but are not limited to; stream enhancement activities, small water impoundments for fish habitat, and



wetland developments for waterfowl habitat enhancement. Activities may require removal of vegetation by chemical or mechanical activities, dredging of stream channel using heavy equipment, prescribed burning, controlling invasive species, and would be subject to USACE 404 permitting. Limitations within the bottomland management area would be related to structures or facilities in case the reservoir is restored to full levels.

### **2.7.3 Alternative B**

Alternative B offers primarily the same opportunities as Alternative A, but to differing degrees. Since the future water management of the reservoir is still unknown, Alternative B maintains some development components if water is restored to Bonny Reservoir. Even at low water levels, the boat ramp at Wagon Wheel campground was still operable for public use. Alternative B focuses on maintaining facilities and campsites around Wagon Wheel campground for future opportunities. Eventually, Alternative B may require new partnerships, private developers, or concessionaire as well as more funding to construct, redevelop, and maintain facilities.

The changes between the Alternatives A and B include:

- Only one designated free primitive campground would be available and located within the Wagon Wheel campground. East Beach, North Cove, and Foster Grove would be eliminated, and the facilities removed. Wagon Wheel camp sites would be reduced from 85 camp sites to 24 camp sites.
- The Visitor Center and shower house buildings would be retained for future opportunities. They would remain boarded and closed until a decision is made to repurpose the buildings.
- Sanitation (vault toilets) facilities would reduce to 3 toilets; one for the designated primitive campground and two others scattered around the property.
- The native surface airfield would be repurposed to wildlife management as a grassland habitat and not be available as a public airfield. Division fences may be removed at the discretion of the land manager.
- Restoration activities would also remain the same as Alternative A except for the above-mentioned items. Restoration of unneeded access routes would include 2 miles to native vegetation and alter 6.6 miles from year-round access to a seasonal access.

#### ***New Opportunities under Alternative B***

**Multiple Use Trails and Routes:** Alternative B would expand Alternative A's ORV opportunity to include more existing Reclamation roads and potential development of new trails. The construction of a multiple use trail would be required to adhere to all the environmental laws and regulations, including but not limited to; National Environmental Policy Act, National Historic Preservation Act, Endangered Species Act, and Clean Water Act. The opportunity may expand the route system to more than 29 miles using a combination of existing roads and trails. Reclamation is not proposing any cross-country off-road motorized activities in this alternative.

**Bottomland Management:** Alternative B is the same as Alternative A but expands the management opportunities to include the potential development of cross trails for motorized and non-motorized activities. Structures, such as bridges, culverts or boardwalks, may be necessary to cross the river for

trail activities to protect wetlands and water resources. As with Alternative A, no permanent buildings would be permitted within the potential reservoir boundary area if water was to be restored.

## **2.7.4 Alternatives Eliminated from Detail Analysis**

### **2.7.4.1 New Managing Partner for a State Park**

Colorado Parks and Wildlife (CPW) has been the managing entity on the Federal lands at Bonny Reservoir for Reclamation since 1952. Bonny's entire Federal land base, except the O&M Area, was included in the original 1952 agreement which was last modified in 2002. For Reclamation to entertain a new managing partner, CPW would need to renegotiate their master lease agreement with Reclamation and turn back portions of the land they are no longer interested in managing. This process could take several years to accomplish.

This Alternative was eliminated from detail analysis because there was no indication from either Federal managers or CPW of a desire to alter the master lease agreement at this time. CPW's current master agreement does provide opportunities for CPW to enter into third-party agreements (concessionaire), with Reclamation's approval, for the management of a State Park.

### **2.7.4.2 Transfer of Title**

An Alternative for Reclamation to transfer the title of all the Federal lands associated with the Bonny Project to CPW was explored in 2011. The process of transferring title requires multiple steps that takes several years and extensive coordination with other agencies, including but not limited to; Congressional approval, determination that the lands are no longer required for the purposes which the project was built, appraisal of the lands, environmental compliance, surveys/inspections, legal documentation, etc. The title transfer was determined to be cost prohibited to both parties.



**Table 2-1. Comparison of Alternatives.**

<b>Issues</b>	<b>No Action</b>	<b>Alternative A</b>	<b>Alternative B</b>
<u><b>Recreation Resources</b></u>  	<p>Maintains the 1985 park management boundary which included 4 campgrounds. Recreation infrastructure; i.e. buildings, tables, grills; would be retained with no maintenance. Dispersed recreation opportunities continue.</p> <p>Roads open to motorized travel is 24 miles, plus 7 miles seasonally.</p> <p>No ORV designated roads or trails</p> <p>No public use of Reclamation's airfield</p> <p>Hunting limited to the wildlife area (2,807 acres)</p>	<p>No specific park management boundary.</p> <p>Dispersed recreation only. Two designated primitive camps are identified, East Beach and North Cove.</p> <p>No developed facilities such as water or electric.</p> <p>Removal of structures and all asphalt/concrete roads</p> <p>Roads open to motorized travel is 16 miles, plus 6 miles seasonally.</p> <p>22 miles of ORV designated County and Reclamation roads</p> <p>Opportunity for public use of Reclamation's airfield by single engine aircrafts.</p> <p>Hunting expanded to 6,776 acres</p>	<p>No specific park management boundary.</p> <p>Dispersed recreation only. One designated primitive camp is identified, Wagon Wheel reduced to 24 camp sites.</p> <p>No developed facilities such as water or electric.</p> <p>Retains the visitor center and comfort station building for future opportunities</p> <p>Roads open to motorized travel is 15.5 miles, plus 13.5 miles seasonally.</p> <p>29 miles of ORV designated County and Reclamation roads, plus opportunity for connector trails as funding is available.</p> <p>Reclamation's airfield removed and incorporated into wildlife management area</p> <p>Hunting expanded to 6,829 acres</p>
<u><b>Heritage Resources</b></u> Protect and interpret resources	All the alternatives protect heritage resources in accordance with Federal and State laws. Interpretation of heritage resources is at the discretion of the resource manager and available funding.		
<u><b>Vegetation Resources</b></u> Managing native vegetation and eliminating invasive species	All the alternatives manage vegetation for native species and include utilizing integrated pest management practices to eliminate invasive species, including woody species such as Russian olives or noxious weeds. The State designated natural area is maintained in each alternative.		

**Table 2-2. Comparison of Alternatives (continued).**

<b>Issues</b>	<b>No Action</b>	<b>Alternative A</b>	<b>Alternative B</b>
<u><b>Water Resources</b></u> Restoring a function stream channel	No specific direction in the 1985 resource management plan.	Identifies the reservoir area as a bottomland habitat and provides opportunities for various resource activities.	Same as Alternative A, but adds possibility for developing multiple use trails for recreation
<u><b>Fish and Wildlife Resources</b></u> Improving habitat for a variety of species	<p>While the 1985 resource management plan included management activities for fisheries, there is no water to maintain a game population.</p> <p>Wildlife resource are managed under current practices; grazing, habitat improvements, etc.</p>	<p>Non-game fish populations would be managed as opportunities and funding allows.</p> <p>Wildlife resource would be managed as identified in the No Action Alternative.</p> <p>As funding is available and supported by current water agreements, small pond management for wetlands, waterfowl, or game fisheries may be available.</p>	Same as Alternative A

## **Chapter 3: Affected Environment and Environmental Consequences**

This chapter discusses the existing physical, biological, and socioeconomic resources in the project area. The Bonny Reservoir RMP establishes only a conceptual framework for managing resources at Bonny Reservoir and does not implement any specific projects. As such, the scope of this RMP focuses on a broad scale of resource impacts associated with the array of alternatives and their broad levels of proposed development within the project area. Site-specific impacts will be addressed as part of separate NEPA, NHPA, and Paleontological Resources Preservation Act (PRPA) compliance processes prior to the implementation of individual projects proposed as part of the selected RMP.

The No Action Alternative is the basis of comparison for the two action alternatives. The No Action Alternative describes future conditions if neither of the action alternatives is implemented. The depth of analysis corresponds to the scope and magnitude of the potential environmental impact. If a resource may be adversely affected, appropriate mitigation measures are presented.

### **3.1 Physical Resources**

#### **3.1.1 Geology**

The land at Bonny Reservoir consists primarily of upland dune sand and valley areas. The dune sands form a series of low, northwest sloping hills and terraces that rise about 200' above the valley floor. The entire area is underlain by the Ogallala (sandstone) Formation and is underlain by the impervious Pierre Shale Formation.

The valley area at Bonny characterizes the southeastern part of Yuma County along the Republican River and averages 400' in width. The river cuts through the Ogallala Formation and into the Pierre Shale. Following this period, alluvium was deposited in the Republican River.

#### ***Alternative Analysis:***

None of the alternatives propose activities would impact the geology of the project area. There are no cumulative impacts to the geology resource from any of the alternatives.

#### **3.1.2 Mineral Resources**

Mineral resources fall into three categories; locatable (gold or silver), leasable (oil and gas) or salable (sand and gravel). Federal lands at Bonny are not subject to open public entry for mineral resources since the lands were purchased by the Federal Government. However, some mineral rights at the time of Federal acquisition are still held by individuals, corporations, or State as identified in Section 1.8.

Active mining is currently not occurring on Federal lands and Reclamation does not anticipate any changes during the life of this RMP. Mineral rights held by Reclamation will not be developed. There is oil and gas mining occurring directly north of Bonny reservoir on private lands in Yuma County.

Based on visual observation and review of aerial photographs, no sand and gravel pits or quarries are located within the Project Area.

***Alternative Analysis:***

None of the alternatives proposed activities would impact the mineral resource of the project area. There are no cumulative impacts to the mineral resource from any of the alternatives.

**3.1.3 Soils**

The soils comprising the area around Bonny Reservoir are varied (USDA, Natural Resource Conservation Service web soil survey database). The uplands include deep well-drained sandy and silt loam soils formed in loess and shallow soils formed in alluvium, eolian sand, and/or limestone outcrop of the Ogallala Formation. Because the sandy soils are relatively porous, most of the precipitation percolates downward and is carried to the river valley as groundwater.

Alluvium soils, classified as Las Animas fine sandy loam, are deep, nearly level and associated with the bottomlands adjacent to the Republican River and Landsman Creek. These soils are occasionally or frequently flooded for brief periods.

Rock outcrops are more common along the southern boundary of the project area. There is also a 60-acre area classified as pits that may have been used as the fill material during the construction of the dam. Runoff and erosion potential varies some across the RMP Project area. Most of soils tend to have a low to moderately low runoff potential due to infiltration rates with low erosion hazards.

*Prime Farmlands:* Prime farmland is a designation assigned by the USDA defining land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these land uses. For the Bonny project area, the soils were classified into three categories; not prime farmland (86%), farmland of state-wide importance (10%), and prime farmland if irrigated (4%). Bottomland soils (reservoir base) were classified as not prime farmland, while some upland sites had potential if irrigated. About 40 acres of the RMP project area is currently being planted for crops in areas classified as not prime farmland or farmland of state-wide importance. Soils defined as “farmland of state-wide importance” possess the properties and qualities for suitable farmland, however, do not meet the criteria to be classified as prime or unique farmland (USDA, web soil survey).

***Alternative Analysis:***

Effects to the soil resource from management activities proposed in the alternatives would include, but not limited to, compaction, erosion, or changes to soil organic matter and nutrient content.

Compaction would occur from heavy equipment that may be used for crop planting or harvesting or vegetation control projects.

Erosion may happen through a variety of processes; natural or man-made. Wind (and wave action) can cause erosion issues when soils are exposed. Man-made process such as tilling or construction projects,



i.e. restoration of concrete surfaces or building removals, may loosen soil particles that erode by wind and rain actions. The volume and rate of soil loss is determined by several factors including frequency and intensity of the weather event, length and steepness of slope, soil erodibility and ground cover condition.

Changes to the soil organic matter or nutrient content may occur from grazing activities or prescribed burning. Both actions can be positive or negative depending on the intensity of either action. Over grazing can be detrimental, exposing soil resources to natural processes such as wind and rain. Prescribed burning can be beneficial by increasing the rate of depositing material and releasing nutrients into the soil, however, fires that are too hot can be detrimental and eliminate vegetation growth.

No Action Alternative: The 1985 resource management activities that may impact soil resources include grazing, prescribed burning, and road maintenance. Since the park management boundary is not actively managed for recreational activities, very little impacts to the soil resource would be expected. Since 2012, the developed campgrounds and any exposed soil surface from public travel are naturally being reclaimed by vegetation. Without water in the reservoir, shoreline erosion would be limited to wind and rain events on exposed surfaces. As these exposed soil areas become naturally vegetated, erosion would be reduced.

Alternative A: Impacts to the soil resources would be similar to the No Action Alternative from grazing, prescribed burning, and road maintenance. Primitive camping activities in the designated campgrounds or dispersed throughout the project area may create small pockets of compacted or exposed soil areas from repetitive public use.

The restoration proposal to remove paved roads, buildings, sidewalks, sewage lagoons, water treatment, picnic tables, shade shelters, overhead security lights, and reduce the camping sites would temporarily (6 months) increase exposed soils until they are revegetated.

The proposal for a public native surface airfield would have minimal impacts on the soil resource from compaction during landing and takeoff. Other public native surface airfields reviewed during analysis (google earth aerial analysis) did not indicate any defined tracks for aircraft wheels suggesting that soil exposure from repeated actions is limited.

The proposal to include ORV travel on existing roads would not increase soil impacts any more than general road maintenance or public motorized travel activities.

The proposal to enhance wetland habitat may have greater impacts on the soil resource than any other management action depending on the scale of the proposed activities. The bottomland soils consist of Las Animas fine sandy loam and exhibit a greater component of wetland characteristics making them more sensitive to heavy equipment and more susceptible to erosion. Additional analysis would be required for management actions within this soil type to protect the resource.

Alternative B: Impacts to the soil resources would be similar to Alternative A. Greater soil resource impacts within the bottomland soils may result from the development of multiple use trails through the area.

Cumulative Impacts: The soil resource cumulative analysis boundary extended 1 mile beyond the Federal ownership boundary for Bonny. Additional soil exposure is occurring on private or state lands resulting from agricultural practices. Exposed soils may be impacted by weather events for a short period of time (2 months) until revegetation occurs. Some mineral development is occurring north of Bonny federal lands which expose soils from repeated equipment travel.

Mitigation Measures: To reduce loss of soil from erosion, best management practices are recommended to include, but not limited to;

- Silt fences, straw bales, or other devices that reduce or minimize soil erosion at the work area
- Planting weed-free native seed to vegetate any exposed soils more quickly to prevent soil losses
- Mulching or fertilizing soils as necessary to enhance vegetation growth
- No till drilling on food plots and leased farm ground or residue management after harvest, prescribed rotational grazing

## **3.2 Water Resources**

Bonny Reservoir is part of the Missouri hydrologic unit. Within the State of Colorado, Bonny falls within the South Platte River basin (Division 1) and the Republican River water district (#49).

### ***Water Rights***

According to the Colorado Division of Water Resources web site, there are several senior water rights on Federal lands that predate the construction of Bonny Dam in 1951 that are still in operation; Hale Ditch, established in 1938, and Foster wells, established in 1935; all of which are used for irrigation. Reclamation holds the water right for the Foster wells, while Hale Ditch is held in private ownership. Reclamation also obtained the water right for water storage of up to 351,460 acre-feet in Bonny Reservoir in 1948.

The Colorado web site also identified several (5) well construction projects by the CPW on the Federal lands after Bonny dam construction. These wells were for managing the Federal lands such as irrigation, wildlife development, or domestic wells. Two stock wells have been closed, plugged and abandoned according to state requirements.

### ***Water Contracts***

The Republican River Compact Agreement of 1942 pertains to the entire watershed of the Republican River and its tributaries, which includes the South Fork of the Republican River where Bonny Dam resides. The compact agreement between Colorado, Nebraska, and Kansas identifies the water allocation for beneficial consumptive use for each state.

### ***Stream Flow***

The water stored in Bonny Reservoir comes from the South Fork of the Republican River and its smaller tributaries; Landsman Creek and Arikaree Creek. The watershed basin above Bonny Dam is about 1,495 square miles.

Today, the South Fork of the Republican River continues to flow through the bottom of the Reservoir and through the outlet structure. The flows in recent years have been on the decline and the stream has gone completely dry during the summer months. Data obtained from Reclamation water operations indicate the annual average monthly flow for the stream to be as high as 19.56 cfs in 1991 and as low as 2.49 cfs in 2013. Since the draining of the reservoir in December 2011, the monthly average flow is 1.68 cfs, with occasional increases during rain events.

### **Groundwater**

Bonny is part of the Ogallala formation. The Ogallala Aquifer is the largest aquifer in the United States, underlying much of the High Plains region. The aquifer consists of sand, gravel, clay and silt and has a maximum thickness of 800-1000 feet. Freshwater saturated thickness averages 95 feet.

At Bonny, according to USGS maps, the Ogallala Formation has a saturated thickness between 50 to 100 feet and is the major source of water in the area. The Ogallala aquifer is recharged by precipitation on the outcrop or from percolation through the dune sand. The water quality is considered good according to data from the USGS and State of Colorado.



**Figure 3-1: Map of Ogallala Aquifer**

The five (5) wells mentioned above are within the Ogallala formation to provide for irrigation, wildlife development, and domestic use (campgrounds).

### **Reservoir Storage Capacity (Figure 2-1)**

The reservoir has a total capacity of 343,558 acre-feet at elevation 3736.2 ft. amsl (Bureau of Reclamation, February 2012) (Dam crest resides at elevation 3742.0 ft amsl). Normal reservoir pool (prior to 2011) was 36,508 acre-feet at an elevation of 3672.0 ft amsl at the top of conservation pool. Any level above the conservation pool is considered within the flood pool. The multiple-purpose dam is modified homogeneous earthfill structure with a height of 158' above the streambed and a crest length of 9,200 feet.

By order of the Colorado State Engineer's Office (Aug 2011), Bonny Reservoir does not actively store water. Currently, accumulation of water in the reservoir is generally temporary in nature resultant from rain events and/or water that cannot physically be drained and released. If Bonny returns to storing water, and reservoir water reaches flood pool stage, releases would be directed by the Corps of Engineers under the flood control regulations (Republican River Basin Lake Regulation Manual, dated January 1974) and the Field Working Agreement dated August 18, 1950.

### ***Alternative Analysis:***

None of the alternatives would have any impacts on the water resources identified on Federal lands around Bonny Reservoir. Currently, there are no proposals identified for additional water wells for purposes of irrigation, wildlife developments or stock ponds. The water wells that once served the developed campgrounds would be recommended for closure or repurposed under Alternatives A and B in accordance with State regulations if they are no longer planned to provide a service to the public.

Contractual water obligations will continue under all the alternatives, therefore, as water is available in the reservoir, senior water rights would be honored as well as Republican River compact agreement. None of the resource management activities proposed would have any effect on water rights or water contract obligations.

Cumulative Impacts: The water resource cumulative analysis boundary considers the watershed boundary above the dam and 9 miles below the dam to the Colorado state line. There are additional private and State wells within this boundary for purposes of domestic and irrigation on agricultural lands. In addition, there are more senior water rights to Bonny Dam that likely contribute to reduce water flows into Bonny Reservoir. Activities proposed under any alternative on the Federal lands around Bonny would not likely affect water resources.

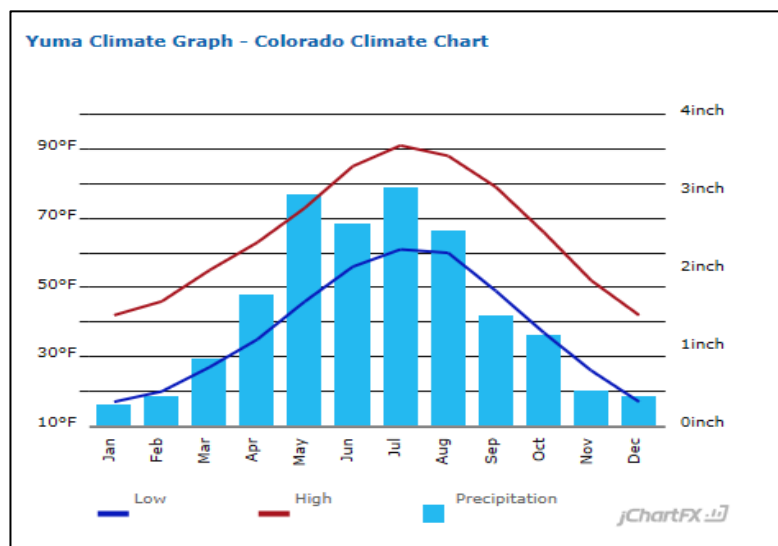
## **3.3 Air Quality, Climate**

Air quality within the Project Area can be affected by weather patterns, natural airborne pollutant emission sources such as dust or smoke, and emissions from both stationary and mobile manmade sources. This section discusses the existing climatic conditions, air quality, and sources of emissions in the project vicinity, as well as describes laws and regulations that may be applicable to the RMP.

### **3.3.1 Climate**

The project area lies in a region of moderate semiarid climate and is similar to the climatic features of eastern Colorado and western Kansas. According to US climate data for Yuma County, the annual average temperatures were a high of 65.2 degree F and a low of 37.6 degree F with a total precipitation of 17.87 inches and an average snow fall of 29 inches ([www.usclimatedata.com](http://www.usclimatedata.com), 2018).

Normally, about 71 percent of the precipitation comes during the growing season of May through September. The coldest month is January and the warmest is July. The growing season generally



**Figure 3-2. Climate Chart for Yuma County, Colorado.**

lasts 167 days. Prevailing winds are generally from the northwest in the winter and from the south during the rest of the year.

### ***Alternative Analysis:***

None of the proposed activities for any of the alternatives would have any measurable effect on the climate associated with Bonny federal lands.

### **3.3.2 Regional and Local Air Quality**

Air quality is monitored by the Colorado Department of Public Health and Environment (CDPHE), and the results are stored in a U.S. Environmental Protection Agency (EPA) database. Air quality for Bonny presently meets the standards established by the EPA for all criteria pollutants. The Clean Air Act identifies six common air pollutants that are found all over the United States and can injure health, harm the environment or cause property damage.

These pollutants include:

- Carbon Monoxide
- Lead
- Nitrogen Dioxide
- Particulate Matter (PM10) and (PM2.5)
- Ozone
- Sulfur Oxides

The EPA has established National Ambient Air Quality Standards (NAAQS) for each of these pollutants. If the air quality in a geographic area meets NAAQS, it is called an attainment area. Areas that do not meet the NAAQS are called nonattainment areas and must develop a comprehensive state plan to reduce pollutant concentrations to a safe level. Neither, Yuma County or Kit Carson County, is listed as a nonattainment area for any of the parameters above.

### ***Alternative Analysis***

The minor source of air pollution in the project area is suspended particulates from non-point sources such as motor vehicle exhaust, agriculture, animal management operations, prescribed burning, and airborne dust. Dust is created by agricultural operations and by vehicles on unpaved as well as paved roads. Because of the low traffic volumes and lack of industrial sources, CDPHE does not gather regular air quality information for the Bonny area. The primary potential for air quality effects is expected to originate from outside of the project area, including vehicular traffic on unpaved roads and agricultural activities.

**Cumulative Impacts:** The air quality cumulative analysis boundary considers a 200 mile boundary from Bonny Reservoir. The analysis area is primarily an agricultural and rangeland region with farming, livestock, and communities. Several Interstate systems lie within the 200 mile boundary with the closest one I-70 20 miles south of Bonny as well as Denver and Colorado Springs, CO. Impacts to air quality within the cumulative boundary are the same as alternative analysis and results from vehicles, agriculture, burning including wildfires, and industrial sources. Wildfires are common in the mountain



range just west of the cumulative boundary and prevailing winds can carry smoke and ash clouds over the project area that may be noticeable to the public for a short period of time (days). Impacts from industrial, vehicles or agricultural are more localized and generally would not have any noticeable impacts on air quality around Bonny.

### 3.4 Vegetation, Wetlands, Noxious Weeds

This section discusses the existing vegetation conditions of the upland, riparian and wetland habitats that occur in the Project Area. It also identifies the noxious weed species that may be found in the Project Area and discusses the management programs that are in place to control the introduction and spread of noxious weeds in the Project Area.

#### ***Riparian Woodland and Shrubland***

Woodland vegetation in the reservoir area occurs mainly along the south fork of the Republican River. Trees common to the floodplain include cottonwood, box elder, ash, and willow species. Trees and shrubs are also found in the upland areas and wood draws. Common species include Russian olive, locust, chokecherry, plum, and silverberry. Some livestock grazing may extend into the woodland areas to provide shade for the animals.



**Photo 3-1. Bonny Woodland Vegetation (Photo Date 07/02/2018).**

#### ***Grassland***

The majority of native plant species in the area are widely distributed. Existing upland vegetation in the area consists of interspersed grass and forb species including blue grama grass (*Bouteloua gracilis*), buffalo grass (*Buchloe dactyloides*), little bluestem (*Andropogon scoparius*), Indiangrass (*Sorghastrum nutans*), sunflower (*Helianthus* spp.), yucca (*Yucca glauca*), sagebrush (*Artemisia* spp.), and prickly pear (*Opuntia polyacantha*). Bonny Reservoir is within the grama-buffalo grass (*Bouteloua-Buchloe*) plains



**Photo 3-2. Bonny Grasslands (Photo Date 07/02/2018).**

grassland. The grassland areas are used extensively for livestock grazing management activities permitted through CPW. There is also about a 55-acre crop field planted around Foster Grove.

### **Bonny Prairie Natural Area**

Colorado designated 50-acres of federal lands as a natural area in 1988. The natural area supports a remnant of the loess prairie community. Loess, the key element of this prairie, is a fine rock powder that results from the grinding of rocks beneath glaciers. Upland loess prairies are typically dominated by warm-season grasses of medium height, such as little bluestem (*Schizachyrium scoparium*) and sideoats grama (*Bouteloua curtipendula*).

The Bonny Prairie Natural Area is one of the few fragments of remaining intact loess prairie known in Colorado. Bonny Prairie was designated to recognize and protect this unusual biological community and to provide a critical ecological baseline area for the loess region of the Great Plains. (Colorado Natural Area website, 2018).



**Photo 3-3. Bonny Prairie Natural Area (Photo Date 07/02/2018).**

### **Riparian Vegetation and Wetlands**

Aquatic vegetation at Bonny occurs in areas that are seasonally flooded or areas subject to brief flooding. Areas seasonally flooded consist of bulrushes (*Blysmus*), cattails (*Typha*), common reed (*Phragmites australis*), and smartweed (*Polygonum*) species, while briefly flooded areas may be covered in grasses, rushes (*Juncaceae*), spikerush (*Eleocharis*), and sedges (*Cyperaceae*). Aquatic areas are predominately within the bottomland of the reservoir and along the creeks and river. The main source of water for these areas comes directly from the creeks and rivers and weather events. Occasionally flooding may be experience. Some small pooling may occur in the reservoir bottom resulting from lower elevations but are generally drained through natural process such as percolation or evapotranspiration.



**Photo 3-4. Bonny Riparian Community (Photo Date 07/02/2018).**

Data from the U.S. Fish and Wildlife Service National Wetlands Inventory database indicates the bottomland area of Bonny,



including the south fork of the Republican River and Landsman Creek to consist of freshwater forested/shrub wetland variety. There are also small areas of freshwater emergent wetlands present upstream on these creeks near the project area. Downstream of Bonny the south fork of the Republican River is mapped in the same wetland types.

### ***Federal or State Listed Threatened, Endangered, and Candidate Plant Species***

Information regarding the possible occurrence of threatened or endangered species in the RMP Project area was obtained from CPW and U.S. Fish and Wildlife Service IPaC (Information for Planning and Consultation web site) service. Currently there are no federally listed, or state listed plant species occurring within the project area. No formal critical habitat designation has been made within Bonny's federal lands for any species.

### ***Noxious Weeds***

Noxious weeds are those vegetative types, either herbaceous, shrubs, or trees, that are invasive and non-native to the landscape of Bonny. These species impact habitats, roadways, buildings, and dam structures. Common noxious weeds at Bonny include a variety of thistle, salt cedar, Russian olives, and phragmites. Some noxious weeds are aquatic and spread with the help of water, others spread by seed through wind, birds, and animals. A variety of management techniques are used to help control the spread of noxious vegetation such as mechanical, chemical and cultural practices.

### ***Alternative Analysis***

All the alternatives have similar effects from the proposed activities. Each alternative incorporates management opportunities to improve wildlife habitat that may require the removal of vegetation by thinning or prescribed burning. These actions would help to maintain the vegetative communities present at Bonny. Each alternative also incorporates a noxious weed program to control the spread of weeds on the landscape. An Integrated Pest Management was written for Bonny in 2006 and updated in 2016 to address the management opportunities for controlling invasive species and would be made a part of the RMP.

Alternatives A and B identify opportunities to enhance wetland communities. Management actions may include construction of small ponds or dredging along the stream channel. These actions may expose soils, but through best management practices such as planting weed-free seeds, opportunities to reduce the spread of invasive species in these areas could be reduced. The overall objective of these actions is to improve the habitat conditions for fisheries and waterfowl species.

Bottomland management within the reservoir boundary may include removal of invasive species including trees by either mechanical or chemical methods. Prescribed burning to control vegetation within the bottomlands is also recommended. Livestock grazing and construction of food plots may also occur. Alternative B identifies opportunities to construct multiple use trails through the bottomland to provide recreational opportunities. Trails may create additional opportunities for the spread of invasive species which would increase the time and costs to prevent the weed infestation.

Cumulative Impacts: The vegetation, wetland, and noxious species cumulative analysis boundary is the Federal lands around Bonny. The management actions proposed in the alternatives combined with the past and foreseeable future actions would not create any additional impacts to these resource communities at Bonny. Bonny lands have been managed since 1952 and continued management is expected into the future.

Mitigation Measures: Best management practices are recommended to reduce the spread of invasive species any time when bare mineral soil is exposed. This includes, but not limited to:

- Planting weed-free native seed to vegetate any exposed soils
- Mulching or fertilizing soils as necessary to enhance vegetation growth
- Monitoring exposed soil areas for a minimum of 3 years and applying treatment as needed to any invasive species to prevent spread.
- When utilizing equipment for vegetation management practices, inspect and clean equipment prior to use on the lands to remove any debris and prevent distribution of weed seeds.
- Reclamation policy LND-P03 is to protect, restore and enhance wetlands and ensure no overall net loss of wetlands. Depending on the individual project goals, wetlands at Bonny could be mitigated by avoidance, minimizing impacts, or compensating for any loss; or enhanced to improve and add more habitat. As individual projects are identified additional analysis may be required to ensure Reclamation policy on wetland management is achieved.

### **3.5 Fish and Wildlife Resources**

In 2011, the Bonny Reservoir was drained and as a result the reservoir maintains some moisture in the soils and periodic pooling of water, providing phreatophytes (willows, cottonwood, salt cedar) with ideal growing conditions. The periodic pooling may provide temporary aquatic habitat for some species, including waterfowl. The reservoir no longer holds water for any length of time.

#### ***Fish***

Within the Republican River Basin are several species of minnows and other small sized fish could occur including: stone cat (*Noturus flavus*), central-stone roller (*Camptostoma anomalum*), brassy minnow (*Hybognathus hankinsoni*), red shiner (*Notropis lutrensis*), sand shiner (*Notropis stramineus*), and orange throat darter (*Etheostoma spectabile*) (Woodling 1985). Survey records have also identified black bullhead (*Ameiurus melas*), plains killifish (*Fundulus zebrinus*), green sunfish (*Lepomis cyanellus*), and white sucker (*Catostomus commersonii*). No particular management activities have occurred for these non-game species, allowing natural processes to maintain habitat.

Sports fishing is no longer available at Bonny since the draining of the reservoir in 2011.

#### ***Wildlife***

Wildlife habitat focuses on high quality deer and turkey hunting opportunities in addition to other quality hunting opportunities for pheasant, quail, and dove. Management consists of maintaining and enhancing native habitats and grasses, supplementing habitats with tree and shrub plantings, food plots, and continued dryland and irrigated farming that helps wildlife by providing food source and cover.

Colorado Parks and Wildlife have conducted surveys of game species that occur in the project area. White-tailed deer and mule deer are counted by helicopter post-hunting season. Their sightings have included white-tailed deer (*Odocoileus virginianus*), mule deer (*Odocoileus hemionus*), ring-necked pheasants (*Phasianus colchicus*), mourning doves (*Zenaida macroura*), bobwhite quails (*Colinus virginianus*), cottontail rabbits (*Sylvilagus* spp.), turkeys (*Meleagris gallopavo*), and fox squirrels (*Sciurus niger*).

Annual roadside surveys are conducted for male pheasants in the spring. Waterfowl surveys are conducted mid-winter. These aerial fixed-wing surveys are conducted during the first full week of January and are used to track relative abundance and distribution of waterfowl during the winter as part of Central Flyway surveys. Mid-winter waterfowl surveys were conducted annually from 1989–2011; however, following the draining of Bonny Reservoir, annual counts were discontinued due to lack of waterfowl and the distance to other major count areas. Waterfowl are typically lumped into general categories of ducks and geese during the survey. Annual surveys of raptor nest condition and species occupancy also occur within the South Republican SWA.

Other wildlife species known to occur at Bonny include mammals such as raccoon (*Procyon lotor*), skunk (*Mephitidae*), weasel (*Mustela* spp.), and swift fox (*Vulpes velox*). Coyotes (*Canis latrans*) are numerous and are believed to be the primary carnivorous species. CPW survey for swift foxes in the shortgrass prairie habitat. Typically, infrared cameras and calling stations are used to detect swift foxes in eastern Colorado. The last survey conducted was in 2016.

### **Federal or State Listed Threatened, Endangered, and Candidate Species**

Threatened and endangered species are listed for protection under the federal Endangered Species Act (16 U.S.C. 1531 et seq.). Information regarding the possible occurrence of threatened or endangered species in the Project Area was obtained from CPW and U.S. Fish and Wildlife Service IPaC (Information for Planning and Consultation web site) service. Currently there are no federally listed, or state listed species that occur within the project area. No formal critical habitat designation has been made within Bonny's federal lands for any species.

### **Alternative Analysis**

All the alternatives have similar effects from the proposed activities. Each alternative incorporates a variety of management opportunities to improve wildlife habitat for a variety of species. All alternatives have opportunities for hunting activities as determined by State regulations. No off-road vehicle opportunities (cross-country opportunities) are proposed. Some designated routes and/or trails are proposed under Alternatives A and B, but ORV use would be limited to the route or trail only. The increased use of ORVs on designated routes/trails in the project area may increase noise levels causing game to flee the area and disrupting hunts of visitors.

Bottomland management opportunities under Alternatives A and B would improve habitat opportunities for a variety of game and non-game species. The development of small ponds, if deemed sustainable under the water contracts, would enhance waterfowl habitat and provide areas for possible game fishing. Establishing crop fields within the bottomland would improve wildlife habitat.

Proposed road closures under Alternatives A and B would decrease fragmentation of habitat and limit motorized public access to the Federal lands. Reducing the open road density would improve hunting opportunities for non-motorized hunters.

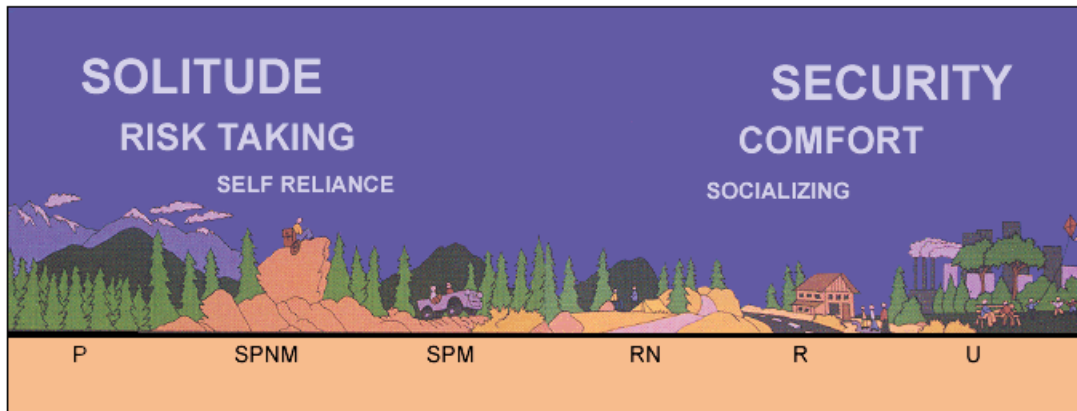
Cumulative Impacts: The fish and wildlife cumulative analysis boundary extends outward 5 miles from the federal lands around Bonny. Private land within this analysis area consists of agricultural, rangeland, one feed lot, State wildlife management area, community of Hale, CO, and mining activities. Wildlife utilize private lands as habitat and food sources. The presence of humans and equipment would make wildlife leave an area, but they typically return when disturbance has been minimized. Ponds created on private or State lands provide habitat and opportunities for sports fishing. Future opportunities for sports fishing may be possible if water can be retained in the reservoir for an indefinite length of time.

### **3.6 Recreation**

Table 1-1 provides details of visitation use at Bonny State Park between 2000 and 2018. Since the draining of the reservoir in 2011, no records have been kept on visitor use on Bonny lands. Hunting and occasional overnight camping have been seen, but no visitation numbers can be provided. Colorado Division of Parks between 2008 and 2011 attempted to develop new management activities to improve park visitation, such as ORV and horseback trails, but these activities were not able to sustain the financial operation for the State Park. In October 2011, the developed campgrounds (where services such as electricity and fresh water were provided) of Bonny State Park were no longer operated or maintained and the management of all the federal lands was given to the Division of Wildlife (now referred to as Colorado Parks and Wildlife).

Today (2018), the recreation activities at Bonny are opportunities such as hunting, primitive camping, driving for pleasure, and occasional day-users for hiking or bird-watching.

Recreation Opportunity Spectrum (ROS, Figure 3-5) is a recreational analysis tool used by managers to define the recreation opportunities of an area. ROS has 6 classification criteria; primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, rural, and urban. Each classification has specific guidelines for analysis that defines anticipated experience levels of a visitor (for a description of each classification see Appendix D). Using this tool, the analysis for Bonny indicates the ROS classification is defined as a roaded natural experience based on the amount of roads in the area.



**Figure 3-5. Recreation Opportunity Spectrum analysis tool.**

A roaded natural setting is characterized by predominately a natural or natural-appearing environment with moderate evidence of the sights and sounds of people. Interaction between users may be moderate to high, with evidence of other users prevalent. Resource modification and utilization practices are evident but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities.

### **Visual Resources**

Visual resources include undisturbed and more natural appearing areas, as well as both temporary and permanent man-made features. Visual quality is subjective, and it is recognized that certain visible features that may be considered appealing or valuable to one set of viewers may be considered distracting or displeasing to others. Although, in general, natural resources are considered less visually intrusive or adverse, man-made features can also be considered to have a beneficial visual quality depending on their design and form, and whether they are consistent or contrast with the setting in which they are located.

The complexity and variety of natural resources at Bonny contribute to a pleasing overall landscape. Offsite views generally include a landscape scenery with colors varying from green to brown, depending upon the season. Sunlight and shade help create interest and enhance the aesthetic experienced of the recreation areas. Overall, Bonny offers the visitor with a pleasant and inviting visual experience that varies with the season throughout the reservoir.

### **Transportation and Access**

Bonny Reservoir is readily accessible by several major highways. U.S. Highway 385 brings travelers from the north and south to within four miles west of Bonny. U.S. Highway 34 is located to the north about 34 miles and Interstate 70 is located 20 miles to the south which brings visitors from the east and west. In addition, various county roads; CR 2, CR 3, CR JJ, CR 3.5, CR KK, CR LL.5, lead to and through the Federal boundary around Bonny (Figure 1-1).

Reclamation roads within the project area vary from paved roads (3.5 miles) within Wagon Wheel campground to gravel (or dirt) road base (11.3 miles). There is also about 4 miles of roads classified as two-track within the project area. No specific inventory of native surface roads was conducted. These

routes provide connection to the environment, allow visitors to access other areas of the land, and provide other scenic viewing opportunities. Some are seasonally open from Memorial Day to Labor Day, while others provide year-round enjoyment. Seasonal routes are generally lower quality roads as indicated in Photo 3-5 on the right.



**Photo 3-5. Left: Reclamation Two-track road. Right: Reclamation Dirt/Gravel road (Photo Date 07/02/2018).**

### ***Alternative Analysis:***

No Action Alternative: Under the No Action Alternative, developed facilities such as bathrooms, visitor center, shower houses; would remain closed to public use but retained for potential future needs. All four campgrounds would be available for dispersed recreation, but no electricity or water services would be provided. Where available, vault toilets would be open for public use. It is likely that recreational buildings would continue to deteriorate and conditions within the designated State Park would worsen over time creating an unattractive place to visit and degrading the visual resource of the area. Minimal maintenance to facilities would be expected with the designated park management boundary. It is unlikely that hunting opportunities would be expanded if the park management boundary (1,929 acres) is to be retained in this alternative.

In the wildlife management area (2,807 acres), recreation activities would continue.

There are no changes proposed in the No Action Alternative for any of the roads within the project area. General road maintenance would continue as funding allows. No special designation for ORV use is proposed; therefore, all roads as well as general land area within the project area would be closed to ORVs.

Alternative A: There is no park management boundary within Alternative A. The proposal includes managing the entire Bonny Federal lands (except the O&M area) with a wildlife emphasis. Therefore, the recreational activities would consist of opportunities with minimal services (vault toilets only). Two campgrounds; East Beach and North Cove, would be retained with reduced camp sites and Wagon Wheel and Foster Grove would be restored to natural conditions. Wagon Wheel boat ramp would be retained while the other two boat ramps at Foster Grove and North Cove would be removed. Expanded

hunting opportunities would include the former park management area as well as the reservoir bottomlands, adding about 3,969 acres of Federal lands open to new hunting opportunities in accordance with State regulations.

Alternative A considers two new opportunities: an ORV program and a public airfield. The ORV proposal is restricted to available roads for access. Alternative A proposes restoring about 8.5 miles of roads, generally within the Wagon Wheel campground and along the south side of the reservoir which would limit the opportunity to designate the routes for ORV use. The ORV program is also dependent on County roads within Bonny's federal land boundary. Without the 13 miles of County roads, the program would be limited to about 9 miles of Reclamation routes. There is no proposal for off-road motor vehicle use. The ORV program is subject to State laws and regulations and any ORV would be required to obtain the recreational sticker and be licensed drivers.

Bonny's airfield was deactivated in 2002. To consider re-opening the airfield to public use, registration with the FAA would be required.

Alternative A opportunities would continue to meet the ROS classification of roaded natural. Visual quality may be impacted in the short term (6 months) from prescribed burning activities or vegetation treatments to improve wildlife habitat.

Alternative B: Alternative B proposal is similar to Alternative A, however, offers an increased emphasis on recreation opportunities through the development of a multiple use trails program. The ORV proposal would not be limited to only available roads as identified in Alternative A but provides opportunities for expansion through trails. Some roads (6 miles) proposed for restoration under Alternative A may be converted to seasonal status (Memorial Day through Labor Day) and be available for ORV activities. ORV road base access may include about 15 miles of Reclamation routes and 13 miles of County roads (yet to be determined), plus additional constructed trails as funding is available.

Bonny's airfield would be converted to wildlife habitat under Alternative B and not be available for public aircraft use.

Alternative B proposes moving the designated primitive camp to Wagon Wheel campground and retaining about 24 camping sites with camping pads, picnic tables, picnic shelters, and a vault toilet. All other campgrounds would be restored to natural conditions by removing all infrastructure (picnic tables, shelters, toilets, and roads). Dispersed camping opportunities (no facilities) are still available through the project area so long as access is not block on open roads. No off-road travel is proposed in Alternative B. Available vault toilets throughout the project area would be reduce to three; one for the primitive campground and two scattered within the project area. All three boat ramps would be retained for opportunities as trail connectors through the bottomland. The visitor center and comfort station building would also be retained for future opportunities.

Alternative B opportunities would continue to meet the ROS classification of roaded natural. Visual quality may be impacted in the short term (6 months) from prescribed burning activities or vegetation treatments to improve wildlife habitat.



Cumulative Impacts: The recreation resource cumulative analysis boundary extends outward 100 miles from Bonny. Other recreational opportunities within the cumulative boundary include dispersed and developed recreation opportunities on State management lands, private campgrounds with full hookups, local community recreation programs, and public community airports. Without intimate knowledge of each of the facilities, it's difficult to know whether ORV use is acceptable or not. All other recreation opportunities identified for Bonny can be located within the cumulative analysis boundary. A few lake complexes are also available that provide a water-based recreation opportunity. The community airports would provide more services for small recreational aircraft such as access to rental vehicles or overnight facilities that are not conveniently available at Bonny.

The ORV program consideration under Alternative A and B may be the only aspect of the proposal that would be unique for visitors in the cumulative analysis boundary. While the ORV proposal under both alternatives is still relatively small (less than 50 miles), it does offer an opportunity for licensed drivers in accordance with the State ORV program to ride outdoors and view the scenery.

## **3.7 Cultural Resources**

Cultural resources encompass historical, archeological, architectural, scientific, and paleontological resources. The first mandate to protect cultural resources was the Antiquities Act of 1906. Subsequent legislation includes the National Historic Preservation Act (NHPA) of 1966, the Archaeological Resources Protection Act of 1979, the Native American Graves Protection and Repatriation Act of 1990, and other applicable Federal laws, regulations and executive orders listed in Appendix C.

The locations of cultural resource sites on federal lands are not public information (not subject to the Freedom of Information Act). Any request for information on the location or nature of sites should be directed to the Bureau of Reclamation or the Colorado Office of Archaeology and Historic Preservation.

### **3.7.1 Cultural History Overview**

The Bonny Dam and Reservoir area lies on the South Fork Republican River in the High Plains physiographic region of northeastern Colorado. A general cultural history of the High Plains in Colorado is outlined in Jeffrey L. Eighmy's "*Colorado Plains: Prehistoric Context*," and Steven F. Mehls' "*Colorado Plains Historic Context*," both published in 1984 by the Colorado Historical Society.

Time periods of prehistoric human occupation on the Colorado Plains are as follows (Eighmy 1984):

- The Paleoindian Stage (+12,500–7,500 years before present, or BP) includes the pre-Clovis Period (+12,000 BP), the Clovis Period (12,500–11,000 BP), the Folsom Period (11,000–10,000 BP), and the Plano Period (10,000–7,500 BP).
- The Archaic Stage (7,500–2,000 BP) includes the Early Archaic Period (7,500–5,000 BP), Middle Archaic Period (5,000–3,000 BP), and Late Archaic Period (3,000–2,000 BP).
- The Ceramic Stage (2,000–450 BP) includes the Early Ceramic Period (2,000–1,000 BP) and Middle Ceramic Period (1,000–450 BP).
- The Protohistoric/Historic Stage (450–200 BP) includes the Dismal River Aspect (450–275 BP) which is associated with the Plains Apache, followed by horse nomadism. Other cultural groups

migrating into the area include the Ute and Comanche around 300 BP, and the Arapaho and Cheyenne around 200 BP.

The Historic Period started with Euro-American expansion and settlement into the area around 160 years ago (Eighmy 1984; Mehls 1984). A combination of events stimulated the historic westward expansion into Colorado, including the 1858 discovery of gold in Colorado; the 1851 Treaty of Fort Laramie and the 1861 Treaty of Fort Wise between the U.S. Government and the Arapaho, Cheyenne, and other plains tribes; and the Homestead Act of 1862. In the 1860s, railroads connected the Missouri River Basin to the Rocky Mountain Front Range, providing reliable transportation. Pioneers would also follow more dangerous river trails from Kansas and Nebraska in order to reach Colorado. These trails exposed the traveler to extreme weather, starvation, lack of water, and Native American bands.

### ***Cultural Resource Status***

A literature review of the Nebraska-Kansas Area Office cultural resources database occurred on September 18, 2018 to identify any previously conducted cultural resource inventories and recorded cultural resource sites within or near Bonny Dam and Reservoir. Additionally, files accessed through the History Colorado *Compass* database and the General Land Office Records were examined on September 19, 2018. Presently, the Bonny Project Area and its vicinity within one mile have no historic properties listed or eligible for listing on the National Register of Historic Places (NRHP criteria defined in 36 CFR part 60.4).

The literature review found fourteen previous cultural resource surveys within the Bonny Dam and Reservoir federal boundary (cited in references). These previous investigations recorded 9 archeological sites consisting of 6 prehistoric open camps, 1 prehistoric kill or butcher site, 1 historic homestead, and 1 post-1940s trash scatter. Six isolated finds of lithic material are also recorded within the project area. Reclamation is aware of 5 additional unrecorded historic sites in need of evaluation.

### ***Native American Cultural Resources***

The six Native American, or prehistoric, sites recorded within the Bonny Project Area include lithic scatters of flaking debris and stone tools, fire affected rocks, and bone fragments. A lack of ceramic artifacts suggests an early age of occupation, either Paleoindian or Archaic for these sites. The presence of flaked stone artifacts indicates hunting or camping activities. One prehistoric site contained ceramic fragments, denoting a later time period. The similar character and location of these sites on overlooks near the South Fork Republican River could contribute to the overall understanding of prehistory in the Colorado plains (Dorsey 1996).

There are no additional prehistoric cultural resources recorded within one-mile of the Project Area. The closest recorded prehistoric site is 4 miles east and is eligible for listing on the NRHP (Gilmore et al 1999).

### ***Historic Period Cultural Resources***

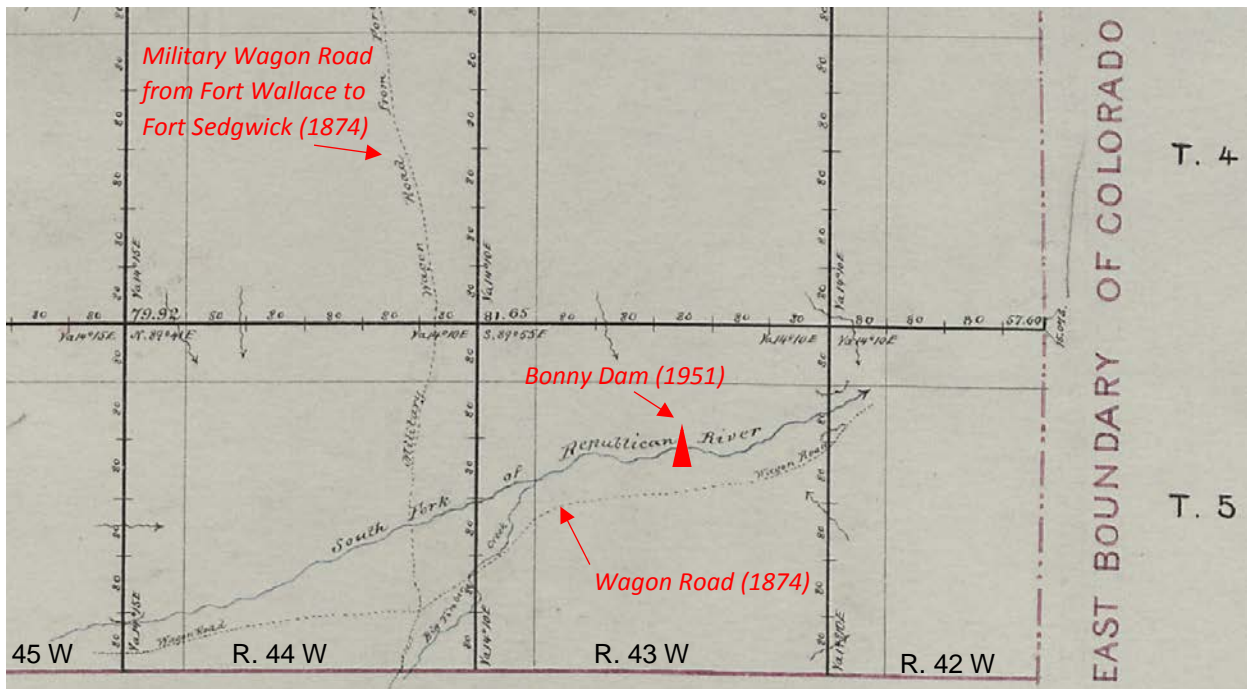
The two historic period sites recorded within the Bonny Project Area include the ruins of an historic homestead, and one post-1940s trash scatter. The earliest land patent for the homestead site dates to

1820 (GLO BLM Serial No. COCOAA 097339) and was later purchased by the Bureau of Reclamation in 1902 (GLO BLM ID No. COC 008286). The more recent 1940s trash scatter is likely associated with the Bureau of Reclamation and the construction of Bonny Dam (Simonds 1994). The earliest land patents for this area date to 1862 (GLO BLM Serial No. COCOAA 099560; COS 0003837) and were later purchased by the Bureau of Reclamation in 1902 and 1950 (GLO BLM ID No. COC 026634 02; COCOAA 099589).

The Bureau of Reclamation is aware of four additional historic period sites within the Project Area. These sites are unrecorded and unevaluated for historical significance. Three abandoned private cabins (post-1950) and a segment of Hale Ditch, which pre-dates the construction of Bonny Dam, are located on federal lands. This historic irrigation ditch starts on the downstream side of the dam and continues about one mile east across state and private lands (Simonds 1994). Hale Ditch is an active irrigation system delivering water to senior water-rights users.

Historic maps show the South Fork Republican Trail crossed through the project area. This historic wagon road followed the Republican River through southwest Nebraska, northwest Kansas, and ultimately connected to the Smoky Hill Trail in Hugo, Colorado (Scott 1989 and 2004). The Leavenworth Pike's Peak Express used the South Fork Republican Trail in 1859 for one season. The Bonny Reservoir area is located between the old express route's Stations 20 and 21 (Root and Hickman 1944). Yuma County survey plats from 1874, 1878 and 1881 show the South Fork Republican Trail marked as "Wagon Road to Hugo," and a separate north-south military trail marked as "Military Wagon Road from Fort Wallace to Fort Sedgwick" (Figure 3-6; GLO DM IDs: 187210; 187211; 170766; and 170921). No evidence of these historic trails are recorded within the project area.

Outside the Bonny Reservoir area are several recorded historic sites. Directly west of Bonny are several privately-owned historic "Centennial Farms and Ranches" along US Highway 385. Historic structural bridges are present on Highway 385, however are not eligible for listing on the NRHP (Fraser 2000). Lastly, an NRHP nominated historic battlefield site, the Battle of Beecher Island, is located 16 miles north at the junction of the Arikaree River and County Road KK. The battle was fought in 1868 between the U.S. Army and a band of Northern Cheyenne, Arapaho, and Lakota or Oglala Sioux warriors. The closest town to Bonny Reservoir is the community of Hale, located 2 miles to the east. There are no recorded historic properties in Hale.



**Figure 3-6. Historic wagon roads mapped on an 1874 Survey Plat (GLO Record DM ID 187211).**

### 3.7.2 Paleontological Resources

Section 6302 of the Paleontological Resources Preservation Act (PRPA) of 2009 requires the Secretary of the Interior to manage and protect paleontological resources on federal land using scientific principles and expertise. Paleontological resources are defined as any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth.

#### ***Paleontological Resource Status***

Prior to the construction of Bonny Dam, an appraisal of paleontological resources occurred (White 1947: Wray Reservoir). Paleontologist T.E. White noted the sloping valley walls of the Bonny Reservoir area have exposed Ash Hollow and Pleistocene gravels. These sediments belong to the upper part of the Ogallala Group of the Upper Pliocene geological epoch. Channels cut into the Ash Hollow formation contain sands and gravels of lower Pleistocene age. Pleistocene sediments can produce fossil mammals belonging to both living and extinct genera.

No paleontological sites are recorded within the project area, however, in 1950 during dam construction, White observed bone fragments in a borrow pit area. White noted wave action and low water may expose more material (White 1953). The floor of the valley is composed of recent alluvium. The Ash Hollow formation is steep on the south valley wall and will not be affected by reservoir waters. The north wall has a gentle slope with a thick mantle of loess material (Bauxar, Bliss, and White 1948:36).

### ***Alternatives Analysis:***

No Action Alternative: This alternative retains the management components of the 1985 Bonny RMP. No new opportunities would be developed with this alternative. Minimal to no impact is expected for sub-surface cultural and paleontological resources in the Project Area. A greater impact is likely to the standing structures discussed below.

#### *Private Cabin Abandonment*

Under the No Action Alternative, the three private cabins will not be maintained or permitted for public use and will continue to deteriorate. Future removal of these abandoned structures is likely due to health and safety concerns. In accordance with the master lease agreement, the managing partner is responsible for third-party agreement(s) with Reclamation approval. Maintenance and improvements to the private cabins is under CPW's discretion and authority.

Alternatives A and B: These alternatives could affect cultural and paleontological resources. The proposed removals and/or future use of existing facilities such as toilets, campgrounds, the visitor center, and airfield will create minimal to no effects to the cultural sites in the area. Also, the proposed road closures, road removals, and/or conversion of roads to native surface vegetation will create minimal to no effects to cultural sites in the area.

Greater impact to cultural and paleontological resources is expected for the three opportunities discussed below.

#### *Removal of Abandoned Private Cabins*

Under Alternatives A and B, wildlife habitat restoration activities could include removal of the three abandoned cabins. Prior to removal, the private cabin area will undergo appropriate mitigation measures such as a historic resources survey, documentation, recommendations of NRHP eligibility, and consultation with the State Historic Preservation Office.

#### *Off-Road Vehicle Use*

If the ORV recreational opportunity is implemented under Alternatives A or B, there is a high potential for unauthorized user-created trails in sensitive archeological areas. This potential to affect cultural sites must be addressed and mitigated.

#### *River Channel, Bottomland, and Pond Restorations*

If the river channel, bottomland and pond restorations are implemented under Alternative A or B, there is potential for impacts to sensitive areas including archeological and paleontological sites. Pleistocene-age deposits are reported within the channel environments. Excavating the bottomland environment has a potential to expose both extinct and extant faunal remains. The bottomland environment also has more recent sedimentation accumulated from previous reservoir inundations and stream flows. Prior to the implementation of a bottomland restoration project, testing and mitigation measures could be extensive to ensure compliance with environmental, cultural, and paleontological regulations.

Mitigation Measures: Bureau of Reclamation Policy LND P01 “*Cultural Resources Management*” requires Reclamation to comply with the laws, regulations, executive orders, policies, and directives that constitute the Federal Cultural Resources Management Program. Guidance on the roles and responsibilities of Reclamation’s Cultural Resources Management program are also discussed in Directive LND 02-01.

Reclamation is responsible for identifying and protecting historical, archeological, architectural, scientific, and paleontological resources affected by federal undertakings. This authority was first mandated by the Antiquities Act of 1906. Subsequent legislation includes the National Historic Preservation Act (NHPA) of 1966, the Archaeological Resources Protection Act (ARPA) of 1979, the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990, the Paleontological Resources Preservation Act (PRPA) of 2011, and other applicable Federal laws, regulations and executive orders listed in Appendix C.

Under Section 106 of the NHPA (54 U.S.C. 306108), a federal undertaking must undergo review to assess the potential to cause effects on historic properties. The Advisory Council on Historic Preservation defines a federal undertaking as

“a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval” [36 CFR 800.16(y)].

Federal undertakings can include actions promulgated by Reclamation or by a partnering land manager, such as all maintenance, operations, and development at the reservoir. This also includes activities undertaken through permits and agreements.

The Section 106 review process includes consultation with the State Historic Preservation Office, Tribal Historic Preservation Offices, and interested parties. Reclamation must be notified far enough in advance of any proposed undertaking so that those consultations can be completed. The review and consultation process could require several months or more depending on the nature of the project and affected resources.

### **3.8 Indian Trust Assets**

Indian Trust Assets (ITAs) are legal interests in property held in trust by the United States for Indian tribes or individuals. The DOI’s policy is to recognize and fulfill its legal obligations to identify, protect and conserve the trust resources of federally recognized Indian tribes and tribal members, and to consult with tribes on a government-to-government basis whenever plans or actions affect tribal trust resources, trust assets, or tribal safety (please refer to Departmental manual, 512 DM 2). Under this policy, as well as Reclamation’s ITA policy, Reclamation is committed to carrying out its activities in a manner that avoids adverse impacts to ITAs when possible, and to mitigate or compensate for such impacts when it cannot. All impacts to ITAs, even those considered non- significant, must be discussed in the trust analyses in NEPA compliance documents and appropriate compensation or mitigation must be implemented.

Trust assets may include lands, minerals, hunting and fishing rights, traditional gathering grounds, and water rights. Impacts to ITAs are evaluated by assessing how the action affects the use and quality of ITAs. Any action that adversely affects the use, value, quality or enjoyment of an ITA is considered to have an adverse impact to the resources.

### **3.8.1 Indian Trust Asset Status**

Reclamation has determined there are no Indian Trust Assets (ITAs) associated with the Bonny Dam and Reservoir project area, features, or facilities. In the mid-1990s, Reclamation undertook an investigation of potential ITAs within the Republican River Basin. During this investigation, more than 40 treaties, Executive Orders, and legislative documents regarding the Kansa, Pawnee, Northern Cheyenne, Northern Arapaho, Potawatomi, Wyandot, Delaware, Chippewa, Seneca, Mixed Seneca, Shawnee, and Quapaw Tribes were reviewed to determine whether potential ITAs were present in the Republican River Basin. Based upon this investigation, Reclamation determined that there are no ITAs in or affected by the Republican River Basin or its reservoirs, including the Bonny Dam and Reservoir (Reclamation 1996).

## **3.9 Socioeconomic Factors (Environmental Justice)**

The public lands in this area provide opportunities for the public to enjoy wildlife and recreational opportunities on Colorado's Eastern Plains. In addition to providing public access and enjoyment to public lands, the area serves as important habitat for game and non-game species. As such, Bonny Dam (Reclamation-owned lands), in addition to other lands along the South Fork of the Republican River, have been designated by CPW as the South Republican State Wildlife Area (South Republican SWA).

In total, the South Republican SWA is comprised of 20,374 acres, of mixed land ownership, including Reclamation fee title lands and State lands with conservation and access easements. While this RMP applies only to Reclamation-owned lands, it is important to note that Reclamation is responsible for collaborative planning with public and adjacent jurisdictions to consider the effects of its actions on resources and lands in the area.

The nearest communities to the Project Area is Idalia, CO (8 miles northwest); Burlington, CO (18 miles south); Wray, CO (33 miles north); and St. Francis, KS (34 miles east) that provide full services such as gas, restaurants, food and motels. Idalia is the smallest community with a population of 88 (2010 U.S. Census) and Burlington is the largest with a population of 4,254 (2010 US Census). The community of Hale, CO is 2 miles from the project area and has no services. Within about a mile of the project area is a small convenience store along US Hwy 385 that provides limited items for local travelers except for fuel. It also provides full service camp spaces for RVs.

### ***Alternative Analysis:***

No Action Alternative: This alternative retains the management components of the 1985 Bonny RMP. Since no new opportunities would be developed with this alternative, it is unlikely to provide any positive or negative benefits towards local economy. The State Parks and related facilities would remain



status quo, with no guarantee of future opportunities. In accordance with the master lease agreement, the managing partner may enter into third-party (concessionaire) agreement(s) with Reclamation approval. These agreements may create opportunities for the local economy.

Alternatives A and B: These alternatives may have opportunities for seasonal job(s) through the managing partner. If additional recreational opportunities are implemented, the managing partner may determine that a seasonal workforce is needed to support programs. As mentioned in the No-Action alternative, third party agreements through the managing partner may also be opportunities for new business ventures to benefit the local economy.

Cumulative Impacts: It is unlikely that any of the alternatives would have noticeable impacts to the socioeconomic resources of the area. Bonny Federal lands represents 0.4% of Yuma County and the Southwest Republic SWA represents 1.3%. While seasonal workforce opportunities may occur depending on the work activities and funding availability, the short-term job(s) would not likely create lasting effects on socioeconomic resources. The limited land base for both Federal lands and other public lands does not contribute to the economic well-fare of the communities or counties. Seasonal improvements to local businesses may occur during hunting season that likely bring the majority of visitors to the area.

# **Chapter 4: Plan Implementation**

## **4.1 Implementation**

Reclamation's Nebraska-Kansas Area Office has primary responsibility for implementation and monitoring of the RMP. A cooperative relationship between Reclamation and the managing partners is necessary, which includes commitment by all of the entities to seek financial, program, and staffing resources necessary to implement the proposed management actions. During implementation of this RMP, DOI, Reclamation, and its managing partners will be guided by existing and future laws, regulations, policies, and guidelines. The RMP is designed to supplement existing direction provided by these sources.

By following the RMP, Reclamation will protect and maintain the congressionally authorized Bonny Project purposes, such as ensuring water integrity, to provide direction for contracts, permits, leases, and license agreements and to meet the requirements of the Reclamation Act of June 17, 1902 (32 Stat. 388, 43 U.S.C. 391), and the following acts amendatory thereof and supplementary thereto: Federal Water Project Recreation Act (PL 89-72, 79 Stat. 213, 16 U.S.C. 460) and Reclamation Recreation Management Act of 1992, (PL 102-575, Title 28, 16 U.S.C. 460L). In implementing, Reclamation will adhere to and be guided by other federal laws, including the Fish and Wildlife Coordination Act (PL 85-624, U.S.C. 661, 662); Endangered Species Act (PL 93-205, 16 U.S.C. 1531 et seq.); National Historic Preservation Act of 1966 (80 Stat. 915, 16 U.S.C. 470) as amended; National Environmental Policy Act of 1969 (PL 91-190, Stat. 852); Clean Water Act (PL 95-217 33 U.S.C. 466 et seq.); National Safe Drinking Water Act (PL 93-523 S. 433; and other applicable environmental, cultural and paleontological resources, fish and wildlife, mineral, disabilities, conservation, real property, and pesticide statutes, executive orders, Code of Federal Regulations, and Departmental policies.

Effective cooperation and coordination with administering entities is necessary for successful implementation of the RMP. Entities include: Reclamation, Yuma County and other local governments, CPW, USFWS, permittees, users, interested public, and others.

## **4.2 Monitoring**

Periodic monitoring will be conducted by Reclamation on an on-going basis throughout the life of the RMP to track progress in implementing the RMP, track the effectiveness of management actions, track progress toward a desired condition, and detect unacceptable effects. It is recommended that monitoring should occur every 3 years or more often as needed. Monitoring activities may be reduced when goals and objectives have been reached. On-going evaluation of the monitoring program will allow Reclamation to make modifications in timing of improvements, timing of mitigation implementation, and changes in the RMP that should be considered for visitation needs or other alterations in site conditions.

### **4.3 Plan Revision or Amendment**

In the administration of Bonny Reservoir, CPW or Reclamation may find that certain conditions or situations have developed which requires a revision to this Resource Management Plan (RMP). The preparation and acceptance of this plan is based upon mutual approval of purposes and objectives of the agencies responsible for management of the area. Likewise, changes approved by Reclamation require agreement by all agencies affected.

A revision of the plan may be proposed by any agency directly involved in the administration and management of the area. The suggested revision should be submitted to Reclamation in a letter and should contain a statement outlining the problem and the revision or addition to offset or correct the deficiency. To ensure uniformity and simplicity in handling the revisions or supplements to the RMP, all proposals should be sent to Reclamation. Reclamation will then forward proposals to CPW and will seek their approval. Upon approval of a revision or supplement to the RMP, Reclamation will furnish copies of revisions or supplements to all agencies that have been furnished copies of the RMP.

### **4.4 Implementation of Plan**

This RMP is projected to provide management direction for greater than 10 years. However, it is recognized that unforeseen natural and human caused events, regulatory or organizational changes, agency budgets, shifts in user needs and interests, or other factors may necessitate review of the plan in order to prepare a new plan that is responsive to conditions at that time. If needed, the decision to amend the RMP will be determined by Reclamation as issues arise. A plan revision may be needed based on the following factors:

- Plan implementation that substantially alters the goals of the RMP
- Changes necessitated by changed social, physical, and/or environmental or conditions
- Changes needed to accommodate changed conditions that occur during implementation of the plan
- Uses that require authorization from permits, contracts, and cooperative agreements that is not consistent with the RMP

This RMP responds to 2018 circumstances, information, and managerial roles and relationships. Amendments may be necessary over time to maintain a viable, workable RMP for management of Bonny resources. The need for a plan amendment will likely be identified during implementation or monitoring by Reclamation or managing partners if there are resource, use changes, and/or new issues that need to be addressed. The public or interested agencies may also identify deficiencies, problems, or issues that need to be addressed. It is recommended that a process employed in the development of this RMP be used to prepare RMP amendments. The level of NEPA compliance necessary for an amendment or revision will be determined by Reclamation.

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