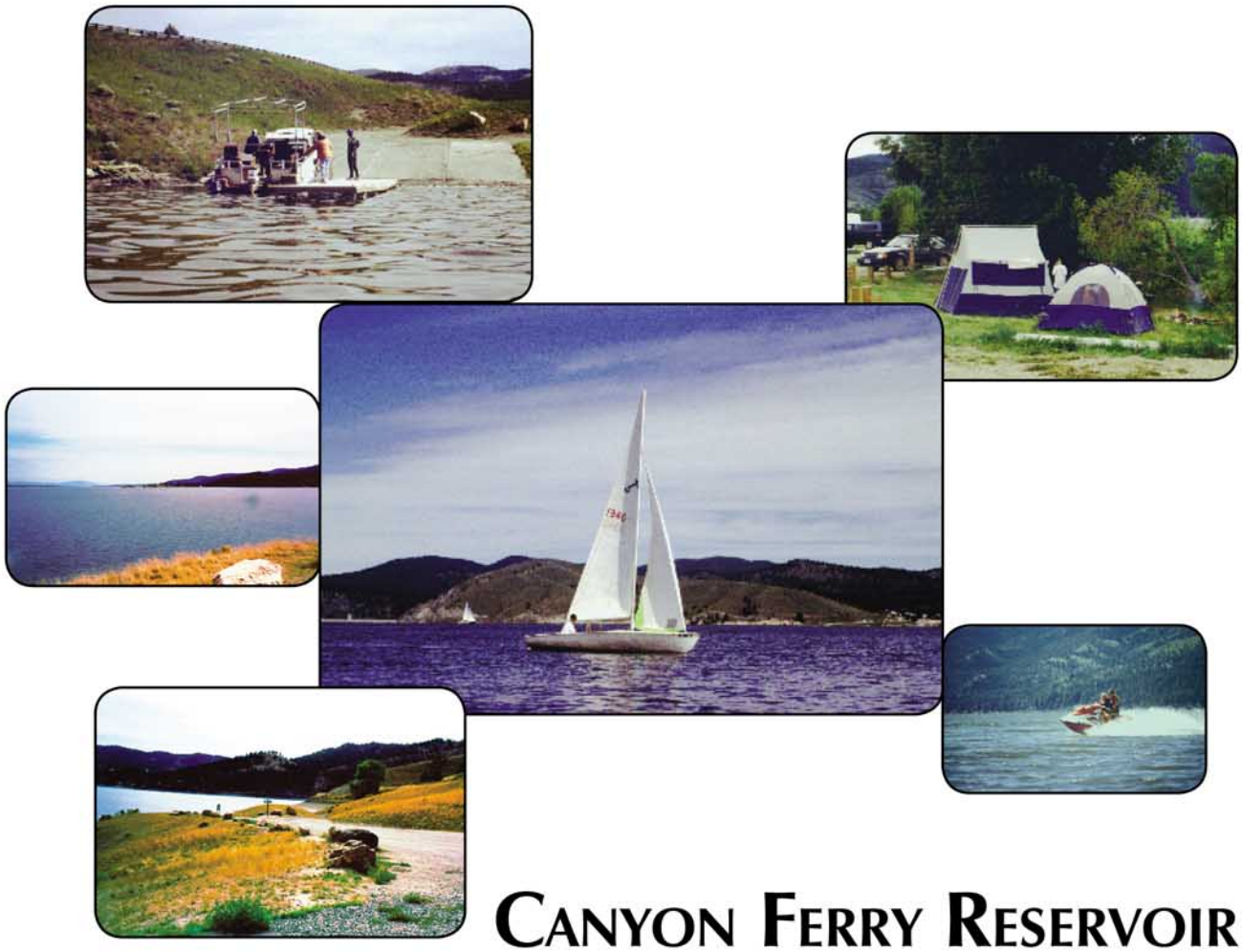


Canyon Ferry Reservoir Resource Management Plan/ Environmental Assessment

Final

February 2003

U.S. Department of the Interior ▪ Bureau of Reclamation

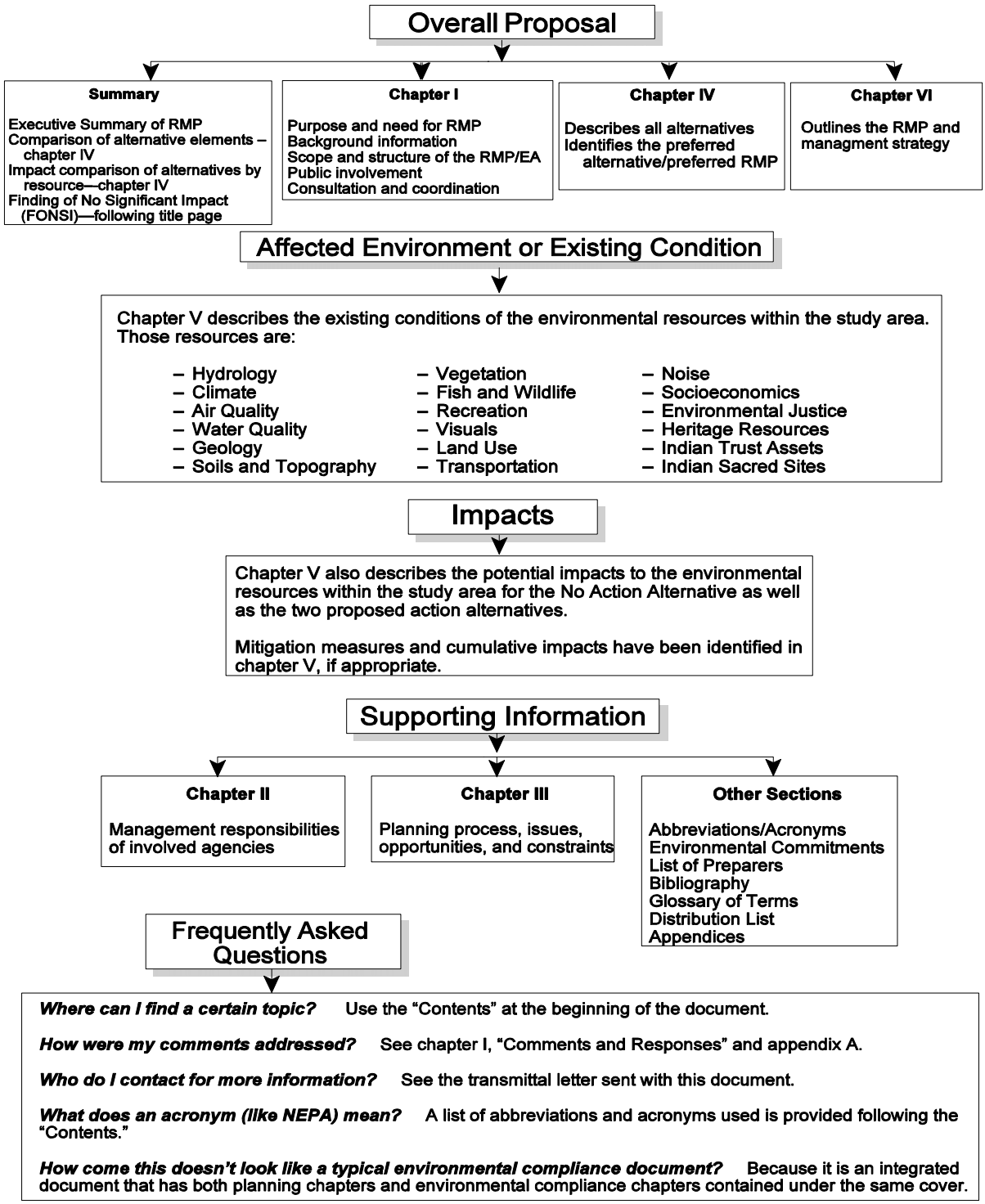
Mission Statements

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.

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.

How to Read This Resource Management Plan/ Environmental Assessment

This Resource Management Plan/Environmental Assessment is an integrated planning and National Environmental Policy Act compliance document. The schematic below serves as a reference tool and will assist you in locating information you are most interested in.



Frequently Asked Questions

Where can I find a certain topic? Use the "Contents" at the beginning of the document.

How were my comments addressed? See chapter I, "Comments and Responses" and appendix A.

Who do I contact for more information? See the transmittal letter sent with this document.

What does an acronym (like NEPA) mean? A list of abbreviations and acronyms used is provided following the "Contents."

How come this doesn't look like a typical environmental compliance document? Because it is an integrated document that has both planning chapters and environmental compliance chapters contained under the same cover.

Canyon Ferry Reservoir Resource Management Plan/ Environmental Assessment

F i n a l

U.S. Department of the Interior
Bureau of Reclamation

February 2003

FINDING OF NO SIGNIFICANT IMPACT

Canyon Ferry Reservoir Resource Management Plan
Pick-Sloan Missouri Basin Program
Canyon Ferry Unit

MT-220-03-04F

BACKGROUND

This Finding of No Significant Impact (FONSI) describes the Bureau of Reclamation's (Reclamation) environmental conclusions regarding a proposal to implement a Resource Management Plan (RMP) for Reclamation resources at Canyon Ferry Reservoir. Environmental effects of three alternatives, including no action, were evaluated under the provisions of the National Environmental Policy Act (NEPA) and are documented in the Canyon Ferry Reservoir RMP/Environmental Assessment (RMP/EA). The RMP/EA is programmatic and contains activities that will require further NEPA prior to implementation and activities that can be implemented without further NEPA.

PURPOSE AND NEED

The purpose of the RMP is to establish a 10-year plan management framework for the conservation, protection, enhancement, development, and use of the physical and biological resources at Canyon Ferry Reservoir. Water operations and power generation were not within the scope of the study.

The RMP is needed to:

- **R** Provide decisionmakers with consistent direction and guidance for the successful management of the environmental resources at the reservoir.

- **R** Ensure that management of the environmental resources will be compatible with authorized purposes of Reclamation's Canyon Ferry Unit of the Pick-Sloan Missouri Basin Program.

- **R** Ensure that development of quality recreation facilities is compatible with other environmental resources and that planned developments are based on public need and the ability of the land and water resources to accommodate such facilities and increased visitor use.

- **R** Resolve resource management issues and concerns identified during the planning process. Issues and concerns were identified through public involvement and internal review of agency laws, regulations, policies, programs, and procedures.

ALTERNATIVES CONSIDERED

Three alternatives were considered in detail: the No Action Alternative (Alternative A), Natural Resource Enhancement with Moderate Recreation Development Alternative (Alternative B), and Natural Resource Protection with Maximum Recreation Development Alternative (Alternative C).

Preferred Alternative

Natural Resource Enhancement with Moderate Recreation Development (Alternative B) was selected as the preferred alternative. Under the preferred alternative, the number of day-use and campgrounds will remain the same; these existing facilities will be evaluated and upgraded as necessary, two multiuse trails will be considered for development, three boat ramps will be replaced and one boat ramp extended, and additional recreation opportunities would be provided to the public. The preferred alternative also includes pursuing actions for conserving, protecting, enhancing, and interpreting the natural resources within the Canyon Ferry Reservoir study area. Actions will be initiated to provide a healthy and safe environment for the visiting public and, in an effort to decrease potential user conflicts, more recreation opportunities will be made available at the southern portion of the reservoir.

Key elements of the preferred alternative include:

- **R** Continuing to manage recreation and other land resources in the absence of a Federal or non-Federal managing partner.

- **R** Establishing a Canyon Ferry Reservoir Working Group to help resolve issues.

- **R** Working cooperatively with Broadwater County to enhance the existing recreation facilities and opportunities at the Silos Recreation Area at the south end of the reservoir.

- **R** Upon expiration of existing concession permits, reissuing permits following Reclamation's *Concession's Policy, Directives, Standards, and Guidelines.*

- **R** Assessing carrying capacity limits during the planning phase of development and basing the number of proposed individual campground and day-use units within each recreation area on user demand and carrying capacity limits (e.g., social, physical, environmental, and facility limits as described in chapter III).

- **R** Assessing and upgrading, as necessary, overnight campgrounds to meet current recreation design standards.

- **R** Assessing and upgrading, as necessary, day-use areas to meet current design standards.

- **R** Evaluating the need for two nonmotorized, multiuse trails to increase public recreation opportunities.

- **R** Closing the entire reservoir area to off-road vehicle use and closing all unauthorized access roads.

- **R** Implementing specific erosion-control measures.

- **R** Coordinating with Montana Fish, Wildlife and Parks (MFWP) to establish "no wake zones" at swim beaches, campgrounds, day-use areas, selected bays, and boat launch sites to delineate those areas that warrant special protection.

- **R** Evaluating the existing procedures for responding to fires, accidents, and other emergencies, and promoting the Crime Witness Program.

- **R** Formulating a dock policy that identifies procedures for authorizing or limiting dock use through the issuance of appropriate land use authorization documents.

- **R** Establishing a policy that will address the public use of shoreline areas between the reservoir and the lease lots and privately owned cabin sites.

- **R** Working with State and local agencies to formulate a policy on the use of the water surface during the winter recreation season.

- **R** Continuing to cooperatively manage the reservoir and lands for fish and wildlife purposes, pursuant to the existing agreement with MFWP.

- **R** Continuing to cooperate with the Montana bald eagle working group, continuing seasonal closure of Eagle Bay Drive for protection of eagle perching sites as eagle use continues above 50 sightings, and considering additional eagle viewing opportunities at Riverside Campground Area below the dam, as necessary.

- **R** Continuing with the weed control efforts within the study area.

- **R** Consulting with the Montana State Historic Preservation Office (SHPO) to assess the adequacy of existing cultural resource inventories and conducting additional surveys of cultural resources in the areas not adequately covered.

- **R** Developing a long-term water quality monitoring program for the reservoir and the Missouri River immediately downstream from the dam. Water quality will be monitored at developed recreation areas and other areas, as necessary.

- **R** Rehabilitating 500 acres of Reclamation land within the study area damaged by the fires of 2000 following the rehabilitation goals established by the Bureau of Land Management (BLM) and Reclamation.

ENVIRONMENTAL COMMITMENTS

The following environmental commitments will be implemented to offset potential effects to the resources within the Canyon Ferry Reservoir area that could occur if the preferred alternative were implemented.

- **R** Any proposed activity will be analyzed and evaluated to minimize erosion.

- **R** Reclamation will protect vegetation and wildlife by restricting users to designated access roads, trails, and public use areas.

- **R** Reclamation will continue to support dust abatement measures which are coordinated by others.

- **R** Degraded landscapes will be reclaimed, and appropriate erosion-control measures will be applied to protect areas where soil exposure is inevitable.

- **R** Disturbed areas will be revegetated.

- **R** Native vegetation will be planted to provide buffer zones (visual screening) between individual camping sites and day-use sites.

- **R** Recreation facility development will complement the surrounding landscape as much as practical and will follow: (1) site-specific recreation master plans; (2) strict design and construction criteria, guidelines, and standards; and (3) development criteria to protect the visual quality of the reservoir area.

- **R** Restrictions will be imposed on activities that may have an unacceptable adverse impact on the natural and social environment.

- **R** Carrying capacity limits and user demand will be determined before major facility development occurs.

- **R** Potential adverse impacts from septic releases will be curtailed.

- **R** Reclamation will monitor water quality at Canyon Ferry Reservoir to ensure that it is not negatively impacted.

- **R** Future concessionaires will be required to install recreational vehicle dump stations as part of their concession operations if determined by Reclamation to be necessary.

- **R** Sanitation facilities and trash receptacles will be added where necessary.

- **R** Fueling facilities will be required to meet State and local codes.

- **R** Enhanced pollution prevention initiatives will be implemented to safeguard water quality.

- **R** Unique geologic features will be protected from construction activity.

- **R** Soil information will be integrated into all future land-use decisions. Prime and sensitive soil areas will be protected, and soils with identified hazards will be avoided.

- **R** Land-use limitations and potential impacts to the environmental resources will be considered when determining the types of uses that will be permitted. Geographic Information System mapping will be used to help eliminate potential impacts to existing resources by identifying environmentally sensitive areas.

- **R** Measures to curb shore erosion by wave action will be implemented to protect Reclamation facilities, public roads, and established recreation facilities.

- **R** All government actions will consider the potential effects on prehistoric and historic resources before implementation.

- **R** All land-use permits will contain specific stipulations to protect existing resources.

- **R** Proper regulatory and informational signing will be posted throughout the reservoir area informing the public of the rules and regulations governing the use of Canyon Ferry Reservoir land and water areas.

- **R** Reclamation will work with law enforcement entities to ensure enforcement of all laws and regulations.

- **R** Reclamation plans to have all treatment actions for the fire management areas completed by the end of 2003.

COORDINATION

National Historic Preservation Act of 1966, as Amended

Reclamation collected information necessary to complete consultations as required by Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 Code of Federal Regulations Part 800). Section 106 consultations with the SHPO and Indian Tribes was completed during the public review periods of the first and second drafts of the RMP/EA. No response was received from Indian Tribes or the SHPO during either review period. When specific ground-disturbing activities discussed in the RMP/EA are going to be implemented, Reclamation will again contact appropriate Indian Tribes and the SHPO to determine if they are aware of archeological sites or Traditional Cultural Properties within the study area and to learn if the Tribes or the SHPO have any related heritage resource management concerns.

Fish and Wildlife Coordination Act, as Amended, and Endangered Species Act of 1973, as Amended

Reclamation consulted with the U.S. Fish and Wildlife Service (Service) as required by the Fish and Wildlife Coordination Act and Endangered Species Act (ESA). For the draft 1993 RMP/EA, the Service provided a list of listed and proposed endangered and threatened species that may be present within the study area. On May 10, 1999, Reclamation requested an updated species list for Canyon Ferry Reservoir from the Service in Helena, Montana. No updated species list has been received from the Service. The 1993 species list provided by the Service was checked against a current species list on the Montana Natural Resource Information System. The check showed no change in the species listing from 1993. Reclamation then evaluated the impacts to the listed species. On the basis of this information, Reclamation has determined that the RMP alternative will not affect listed, proposed, or candidate ESA species.

Because the RMP is programmatic in nature, site-specific NEPA will be required before any of the actions proposed in this RMP can be undertaken. At that time, a new species list will be required from the Service.

Indian Trust Assets

In October 2000, Reclamation sent letters requesting identification of Indian Trust Assets (ITAs) to the associated Bureau of Indian Affairs (BIA) offices and to Native American Tribes who are currently in the area or who historically used the area. On November 9, 2000, the BIA Rocky Mountain Region Office advised that they had no comments from the hunting and fishing rights perspective and Reclamation's inquiry to the Tribes might provide information unknown to them. In March 22, 2001, the Shoshone Tribe in Wyoming indicated that they probably had no ITAs at Canyon Ferry Reservoir. The other Tribes contacted did not reply. No comments were received from mailing the Second Public Draft RMP/EA. When specific ground-disturbing activities discussed in the RMP/EA are going to be implemented, Tribal governments will be notified and asked for their input about ITAs.

Indian Sacred Sites

On July 8, 1997, letters were sent to the six Tribal governments in eastern Montana asking for comments on Executive Order 13007. The Montana Area Office did not receive any responses regarding sacred sites anywhere in Montana at that time. On October 19, 2000, Reclamation requested identification of Indian sacred sites from the Native American Tribes who are currently in the area or who historically used the area. In March, 2001, Reclamation contacted the Tribes again but did not receive any response except from the Shoshone Tribe in Wyoming who indicated they probably had no sacred sites at Canyon Ferry Reservoir. The Second Public Draft RMP/EA was sent to those Tribes, but no comments were received. When specific ground-disturbing activities discussed in the RMP/EA are going to be implemented, Tribal governments will be notified and asked for their input about Indian sacred sites.

Other Coordination

Reclamation is obligated to coordinate its planning efforts with local, city, county, State, and other Federal entities to ensure that its lands are compatible with adjacent land uses (public and private). Information was solicited from BLM, U.S. Forest Service, Broadwater and Lewis and Clark Counties, city of Townsend, Helena Valley Irrigation District, the Aeronautics Division of the Montana Department of Transportation, and MFWP.

SCOPING AND PUBLIC REVIEW

A concerted effort was made to involve interested parties, including agencies, special interest groups, Tribes, and individuals, in the planning process for Canyon Ferry Reservoir.

On November 19, 1998, Reclamation staff attended a public meeting at the Broadwater County Courthouse in Townsend, Montana. Reclamation presented the goals and objectives of the RMP/EA and how the plan would be developed.

Six public open houses were held from June 21 through June 24, 1999. Two open houses each were held in Helena and Townsend and one each in Butte and Bozeman. About 120 people attended those meetings and provided input about the issues at Canyon Ferry Reservoir.

The first draft of the RMP/EA (about 600 copies) was mailed on October 19, 2000. The comment period initially was to end on November 17, 2000, but was extended to February 17, 2001, because of congressional and public concerns. Public information meetings were held on January 23 and 24, 2001, in Helena and Silos Inn near Townsend, Montana. Two meetings were held at each location.

Reclamation revised the draft RMP/EA based on public and internal comments and issued a two-volume Second Public Draft RMP/EA in April 2002. Volume I was the revised RMP/EA, and volume II was the responses to each comment received. The original 90-day comment period was extended to about 135 days (from August 5, 2002, to September 20, 2002) due to congressional concerns. Public information meetings were held May 14, 16, 21, and 23, 2002, in Bozeman, Helena, Townsend, and Butte, Montana, respectively. Public hearings were held on July 30, 2002, in Townsend, Montana, and on August 1, 2002, in Helena, Montana.

The final RMP/EA was prepared based on public and internal comments received during the comment period for the Second Public Draft RMP/EA.

FINDING

Given the analysis of the implementation of the RMP/EA preferred alternative and the environmental commitments proposed by Reclamation, I find that all potentially significant environmental effects associated with the preferred alternative have been identified, evaluated, and resolved or mitigated.

I also make the following specific findings:

Executive Order 11988 – Floodplain Management

> Implementing the proposed action does not encourage development within the flood plain. I therefore find that the proposed action complies with Executive Order 11988.

Executive Order 11990 – Protection of Wetlands

Mitigation measures will be implemented that will ensure no net loss of wetlands. Therefore, I find that the proposed action complies with Executive Order 11990.

Executive Order 12898 – Environmental Justice

There will be no minority nor economically disadvantaged communities disproportionately affected by the proposed action. Therefore, I find that the proposed action complies with Executive Order 12898.

Cultural Resources

The project will adhere to the requirements of the NHPA. Before specific actions are undertaken, consultations will be completed with the SHPO, Tribes, and other parties to comply with Section 106 of the NHPA, and other legislative acts and Executive orders related to heritage resources.

Indian Trust Assets

The proposed action will not adversely affect ITAs. Therefore, I find that the proposed action complies with the Department of the Interior policy for protection of ITAs.

Threatened and Endangered Species

The proposed action would not affect bald eagles.

The commitments contained in the programmatic EA ensure that the proposed action is in compliance with the ESA.

Based on a thorough review of the comments received, an analysis of environmental impacts as presented in the final RMP/EA, and implementation of all environmental commitments, Reclamation has concluded that implementation of the preferred RMP alternative would have no significant impact on the quality of the human environment or the natural resources of the study area. Therefore, an environmental impact statement will not be prepared for this project.

This FONSI has been prepared to document environmental review and evaluation in compliance with the Council on Environmental Quality's regulations for implementation of NEPA.

Approved:

Susan J Kelly
Montana Area Manager

2-7-03
Date

Preface

The purpose of this combined Resource Management Plan/Environmental Assessment (RMP/EA) is to establish a 10-year management framework for the conservation, protection, enhancement, development, and use of the physical and biological resources at Canyon Ferry Reservoir. The RMP/EA does not address water operations or power generation. The Bureau of Reclamation's (Reclamation) planning process and the National Environmental Policy Act (NEPA) process have been integrated into one document to reduce costs and the redundancy that often occurs when a planning document and a NEPA document are prepared separately.

Reclamation wishes to thank Joel A. Shouse Consulting Services and Lisa Bay Consulting for their effort in producing a draft RMP and an associated EA in 1993, from which Reclamation extracted valuable information for the production of this document.

In the early stages of this planning process, it was determined that the Master Advisory Committee would not be reconvened for this effort. The committee, which consisted of interested individuals, special interest groups, and government agencies, was formed to act as a sounding board and identify issues to assist in the development of the 1993 draft RMP/EA. Reclamation determined that the issues previously raised by the committee had not changed and would be valid today.

Public Law 105-277, Title X, was passed in October 1998 to, among other things, establish the terms and conditions under which the Secretary of the Interior would convey to private ownership the lease lot areas surrounding Canyon Ferry Reservoir. The Federal action of conveying Reclamation lands to private parties and the impact of such an action was evaluated as part of a separate NEPA process.

The *Upper Missouri River Reservoir Fisheries Management Plan 2000-2009*, September 1999, prepared by Montana Fish, Wildlife and Parks (MFWP), includes a discussion of Canyon Ferry Reservoir. MFWP is responsible for managing the fisheries at Canyon Ferry Reservoir. The Reclamation management actions detailed in this RMP/EA do not conflict with MFWP's goals, objectives, and management strategies described in the fisheries management plan.

Executive Summary of Alternatives and Description of Resource Management Plan

INTRODUCTION

The Bureau of Reclamation (Reclamation) prepared this combined Resource Management Plan/Environmental Assessment (RMP/EA) to establish a 10-year management framework for conserving, protecting, enhancing, developing, and using the physical and biological resources at Canyon Ferry Reservoir and its surrounding lands (study area) located in south-central Montana. The RMP/EA does not address water operations or power generation.

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. In compliance with NEPA, the EA portions of this document describe three proposed alternatives, including a No Action Alternative; existing resources in the study area; and the potential effects of three alternative resource management plans (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. The NEPA alternative formulation process facilitates the planning process by providing a mechanism by which Reclamation, with 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.

ALTERNATIVE FORMULATION

Reclamation developed two reasonable action alternatives (i.e., alternatives that prescribe a change in resource management). In addition to the action alternatives, NEPA requires consideration of a No Action Alternative (i.e., an alternative describing the management of Canyon Ferry Reservoir without implementing an RMP).

To develop alternatives, a Reclamation interdisciplinary team, through a public involvement process, determined the elements and/or actions that would best address the identified issues. The team then combined the various elements into the two action alternatives. Each alternative would achieve a different desired future condition at Canyon Ferry Reservoir if implemented. The team formulated the following alternatives:

- **R** No Action Alternative (Alternative A)

- **R** Natural Resource Enhancement with Moderate Recreation Development (Alternative B) (Preferred)

- **R** Natural Resource Enhancement with Maximum Recreation Development (Alternative C)

Under **Alternative A**, a minimum number of facilities could be provided to meet basic public health and safety needs and demands. Resource management practices would not change. Management actions would occur on a case-by-case basis to meet Federal, State, and local laws and regulations.

Under **Alternative B**, a moderate number of facilities would be provided, including day-use facilities, some additional overnight camping sites, new boat ramps, and trails. In addition, substantial efforts would be made toward improving existing facilities and recreational opportunities.

Under **Alternative C**, a maximum number of fully developed day-use sites, overnight campground sites, trails, and opportunities would be provided.

Some elements and/or management actions are common to all alternatives, and some elements are unique to a specific alternative. The following elements and/or actions are common to all alternatives:

- **R** Adhering to existing and future Federal, State, and county laws and regulations (in particular, Public Law [P.L.] 105-277).

- **R** Operating the Canyon Ferry Unit of the Pick-Sloan Missouri Basin Program for its authorized purposes.

- **R** Continuing operation and maintenance of Reclamation lands and facilities contingent on the appropriation of funds from the Congress and staffing limitations.

- **R** Continuing existing permitted uses with evaluation of continued use when permits expire.

- **R** Allowing no unauthorized private exclusive use of Reclamation lands and waters.

- **R** Seeking non-Federal or other Federal recreation managing partners pursuant to P.L. 89-72.

- **R** Managing Canyon Ferry Reservoir land and water areas by Reclamation if a managing partner cannot be found.

- **R** Pursuing an agreement with Broadwater County for recreation facility development and management of the Silos Recreation Area pursuant to Title X.

- **R** Working with the Montana Fish, Wildlife and Parks (MFWP) and other entities to identify projects that qualify for cabin sale trust funds pursuant to Title X.

- **R** Continuing to cooperate with MFWP in the management of the Wildlife Management Area (WMA), pursuant to the existing agreement between both entities.

- **R** Reissuing concession contracts pursuant to Reclamation policy.

- **R** Conducting Facilities Condition Assessments of facilities.

- **R** Establishing a concession operation at Silos Recreation Area.

- **R** Continuing to conduct accessibility evaluations of all facilities and programs.

- **R** Continuing to work with a shoreline management committee in developing recommendations for erosion-control methods and locations.

- **R** Continuing to cooperate with the Montana bald eagle working group and continuing the bald eagle viewing program.

- **R** Continuing to cooperate with the Hauser Lake Bald Eagle Committee.

- **R** Implementing the goals of the Buck Snort Fire Rehabilitation Plan prepared by Reclamation and the Bureau of Land Management.

- **R** Continuing to follow the Federal Wildland Fire Management Policy and the Secretary of the Interior's fire policy letter of January 18, 2001, and prepare a Fire Management Plan for Canyon Ferry Reservoir.

- **R** Working with MFWP to cooperatively manage Canyon Ferry Reservoir lands for fish and wildlife species.

- **R** Continuing the 1993 comprehensive weed management plan and updating as necessary.

- **R** Continuing to cooperate with local law enforcement agencies pursuant to signed agreements.

- **R** Ensuring fueling facilities meet fire codes.
- **R** Continuing to operate the Canyon Ferry Visitor Center.
- **R** Requiring powerlines to be buried to protect raptors.
- **R** Repairing and replacing old and deteriorated signs.
- **R** Continuing to work with Broadwater County on developing a nonmotorized trail from Indian Road Recreation Area to Silos Recreation Area.
- **R** Continuing the warning system established by the Coast Guard Auxiliary (CGAUX).
- **R** Cooperating with the Canyon Ferry Recreation Association (CFRA) in establishing a policy for the use of shoreline areas between the reservoir and private lease lots.
- **R** Cooperating with the CFRA and other interested parties in establishing a dock policy.
- **R** Continuing the long-term water quality program for the reservoir and river immediately below the dam.
- **R** Continuing to work with MFWP on their perch habitat program for the south end of the reservoir.
- **R** Closing some areas near the dam for security purposes.
- **R** Keeping existing day-use areas and not converting them to overnight campgrounds.
- **R** Working with Broadwater County to establish an appropriate concession operation at Silos.
- **R** Continuing the weed control agreement with Broadwater County and supply annual funding to the county.
- **R** Working with Lewis and Clark County on formalizing a long-term weed control agreement and supply annual funding to the county.

SUMMARY OF NATURAL RESOURCE ENHANCEMENT WITH MODERATE RECREATION DEVELOPMENT ALTERNATIVE (PREFERRED RMP ALTERNATIVE)

Note: Only the preferred RMP alternative is described here. A detailed description of the remaining alternatives is in chapter IV.

General Actions

The following are general actions identified during the planning process to facilitate management of Canyon Ferry Reservoir and achieve the goals and objectives established for the study area. These actions apply to all lands within the study area. More specific actions are detailed later in this chapter.

- **R** Reclamation will continue to operate Canyon Ferry Reservoir and Reclamation lands adjacent to it for the purposes for which the project was authorized.

- **R** Reclamation will adhere to existing and future Federal, State, and county laws, regulations, and ordinances, including accessibility regulations and guidelines.

- **R** Decisions will be made for the benefit of the project and the general public.

- **R** Reclamation will provide additional on-site staff to manage the land, recreation, and concession activities at Canyon Ferry Reservoir.

- **R** Visitor health and safety will be the primary focus when constructing or upgrading needed facilities and providing visitor use opportunities.

- **R** Reclamation will ensure that public use and facility development is consistent with the goals and objectives of the RMP.

- **R** In cooperation with concerned parties, Reclamation will establish a working group to work with Reclamation to identify potential options to resolve general Canyon Ferry Reservoir issues and implement RMP objectives.

- **R** Reclamation will conduct periodic land management and recreation reviews to ensure that the lands are being managed pursuant to the existing agreements and land use authorizations.

- **R** Reclamation will monitor visitor use to identify user conflicts and investigate corrective measures to prevent further conflicts.

- **R** Reclamation will comply with its policies, directives, and standards.

Specific Actions

Access Management – Actions.—

- **R** Reclamation will establish criteria for closing roads and trails causing environmental resource and habitat damage. In addition, roads that provide access to the reservoir

and that cross private property illegally will be closed to reservoir access. Reclamation will coordinate the development of its road closure criteria with other Federal and State agencies.

R Reclamation will close all off-road vehicle (ORV) use areas pursuant to existing Federal law and Reclamation policy. Exceptions will be made pursuant to 43 CFR Part 420 (Off-Road Vehicle Use).

R Reclamation will evaluate its operation and maintenance program for roads to achieve appropriate standards of public safety and resource protection. Established standards will also be followed if new roads are constructed to provide safe and legal access to the reservoir area.

R Reclamation will identify existing roads that should provide year-round access (i.e., winter access). New roads to provide year-round access will not be constructed.

R Reclamation will identify roads and trails that will remain open for public use. These roads/trails have provided historic public access to the reservoir for individuals who desire a less-confined recreation experience. However, these roads/trails must have legal access across private lands before such roads are allowed to remain open for public use. Roads that are left open will be monitored by Reclamation to determine the degree of use and potential resource damage that could occur.

R Reclamation will seek cooperative partnerships for developing and maintaining public access roads to the reservoir. Reclamation will cooperate with the Federal, State, and county highway departments to evaluate the feasibility of securing funds under the Transportation and Efficiency Act for the 21st Century or other funding sources for paving Jim Towne Road and the 3-mile section between Magpie and the county line, as well as funds for improving access roads to the reservoir and within the study area covered by the RMP/EA. Reclamation will also work with other entities, including the Canyon Ferry working group and the Canyon Ferry Fire Service Areas Board of Trustees, to resolve public safety access issues on East and West Shore Drives.

R Reclamation will work with the Montana Department of Transportation and Lewis and Clark County on improving safety conditions on Highway 284 at the north end of the reservoir near the dam. Emphasis will be given to signing and establishing turning lanes into recreation areas.

R Reclamation will establish procedures which will address potential requests from private subdivisions for access to the reservoir. Generally, Reclamation will not grant additional access to special interest groups or private parties over and above access that is already provided to the public.

R Reclamation will, in cooperation with the adjacent landowner(s), research the ownership of the road that leads to the Hole in the Wall fishing area to determine if the public has legal access to this area.

R Reclamation will provide proper directional and/or warning signs for main access roads and interior roads to guide visitors.

R Reclamation will work cooperatively with other road users and entities to consider new cooperative initiatives for road development and maintenance. The cooperative initiatives may provide cost-share opportunities commensurate with past funding amounts to upgrade East and West Shore Drives beyond the existing condition.

Recreation Management – Actions.—

R Before rehabilitating existing facilities, Reclamation will conduct a Facilities Condition Assessment to determine needed improvements and to assist in the preparation of site-specific recreation master plans. Once the assessment and site planning have been completed, those recreation areas that have immediate needs will be given a higher priority. Those immediate needs are addressed in the actions for specific recreation areas listed below. The amount of rehabilitation work needed at other recreation areas not indicated below will depend on the results of the Facilities Condition Assessment and individual site master plans. See figure S-1 for the process used to develop recreation facilities.

R All recreation facility developments within the Canyon Ferry Reservoir area will be based on public need, enhancing the visitor experience, and the social, physical, environmental, and facility carrying capacity limits as described in chapter III. Reclamation will monitor visitor use to ensure that the above-mentioned capacity limits at Canyon Ferry are not exceeded. Capacity limits will be determined during site planning and before major capital investments are made.

R Special attention will be given to upgrading existing restrooms, individual campsites, and day-use sites to bring the facilities up to current design standards (e.g., proper spacing, turning radii, accessibility, vegetative screening, potable water, and appropriate landscaping and irrigation).

R Reclamation will conduct handicapped-accessibility evaluations of existing facilities and programs, prepare necessary action plans, and schedule modifications to achieve compliance with existing accessibility laws and regulations.

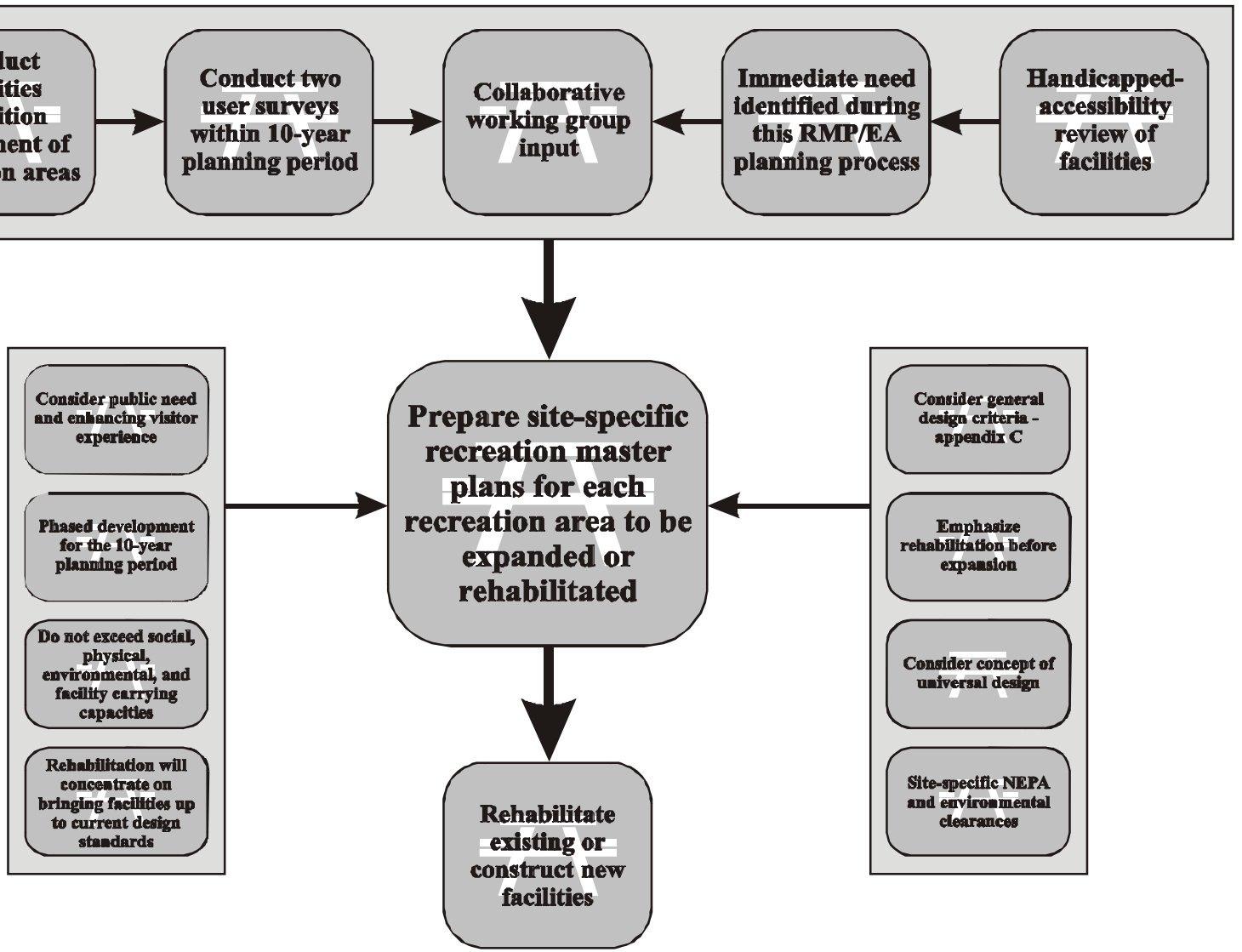


Figure S-1.—Process for rehabilitating existing and developing new recreation facilities.
(Note: Site-specific NEPA and environmental clearances will be obtained prior to construction.)

- **R** The concept of universal design[1] will be the standard when designing and constructing visitor use facilities.

- **R** All trail development will follow the general design criteria described in appendix D and a comprehensive trail plan to be developed.

- **R** Recreation will continue to be managed by Reclamation if a managing partner cannot be found.

- **R** Emphasis will be given to rehabilitating existing recreation areas before initiating expansion efforts at new (proposed) sites.

- **R** New developments will be phased in over the 10-year planning period.

- **R** Reclamation will investigate riparian protection measures within, or immediately adjacent to, all developed recreation areas.

- **R** All recreation facility development will follow the general design criteria as described in appendix C.

- **R** Fee stations will be installed at appropriate locations leading to specific recreation areas. Fees charged for the use of facilities will be comparable to fees charged for the use of the same types of facilities and services at recreation areas other than the Canyon Ferry Reservoir area. A variety of fee structures will be examined to accommodate a wide variety of recreation uses.

- **R** The Golden Age Passport program will be promoted to allow senior citizens to enter and use the facilities at Canyon Ferry Reservoir, as well as other federally managed areas once the passport is purchased.

- **R** Reclamation will investigate the feasibility of establishing one user pass that is good for multiple areas managed by a variety of entities.

- **R** None of the existing day-use areas will be converted into overnight campgrounds.

- **R** Abandoned/unlicensed vehicles and equipment (i.e., campers, boats, tents, trailers, etc.) left in campgrounds for extended periods of time should be removed. A policy addressing this issue should be established and enforced.

[1] For the purposes of this RMP/EA, universal design is defined as facilities and features that will be accessible to persons with disabilities, beyond what is legally required. Once existing laws and regulations have been met, an attempt will be made to follow the principles of total accessibility in constructing the remaining facilities and features.

The volunteer camp host program will continue, but will be evaluated to identify possible improvements. Additional volunteers will be solicited to assist Reclamation in maintaining trails, litter control, and Visitor Center operation.

Recreation facility development for specific recreation areas may consist of the following actions:

R Silos Recreation Area

- **S** Reclamation, in cooperation with Broadwater County, will upgrade and provide new recreation facilities at the Silos Recreation Area. The plan of development will follow a plan being developed by Broadwater County and Reclamation.

- **S** Development will include the construction of a deep water bay and boat ramp.

- **S** Reclamation and Broadwater County are investigating the scope of a concession operation to enhance recreation opportunities.

R White Earth Recreation Area

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in this planning process, consideration will be given to:

  - ¼ Constructing a new campground loop and support facilities (e.g., parking, picnic tables, grills, trash receptacles, and potable water). The existing restroom on the north side of the peninsula will be included in any development of this camping loop.

  - ¼ Developing a short trail along the shoreline on the south side of the peninsula with trail head, signing, and parking.

  - ¼ Developing a trail from White Earth to Crittendon day-use area to the north.

R Hellgate Recreation Area

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to:

  - ¼ Upgrading the existing campsites to meet current design standards (e.g., proper spacing, turning radii, accessibility, vegetative screening, and appropriate landscaping and irrigation).

  - ¼ Upgrading the boat ramp and parking area.

R Indian Road Recreation Area

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to:

  - ¼ Realigning the access road into the campground area. A fee station will be considered, where appropriate, and fees will be collected for the use of the campground and day-use area. (***Note***: The boat launch ramp is owned and operated by MFWP; therefore, Reclamation cannot collect fees for the use of the boat ramp).

  - ¼ Working with Broadwater County and Townsend on establishing a nonmotorized trail from Indian Road Recreation Area to Silos Recreation Area.

  - ¼ Providing signs with interpretive information to inform the public about Canyon Ferry Reservoir and the surrounding area.

  - ¼ Developing a restroom with flush toilets for the campground.

  - ¼ Working with Broadwater County on finding ways to dispose of gravel pile on site.

  - ¼ Coordinating development with the Broadwater Stream and Lake Committee.

  - ¼ Investigating the development of a Memorandum of Understanding with the U.S. Forest Service for constructing and operating an ice-skating rink at the ponds.

R Riverside Recreation Area

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to:

  - ¼ Upgrading the existing campground to current design standards (e.g., proper spacing, turning radii, accessibility, vegetative screening, and appropriate landscaping and irrigation).

  - ¼ Providing electric power to the campground area. (***Note***: Power has already been supplied to the camp host, and a pressurized water system is provided).

  - ¼ Upgrading the existing day-use area.

  - ¼ Constructing a vehicle turnaround and parking area near the south end of the Riverside Recreation Area complex.

  - ¼ Placing riprap at appropriate locations along the riverbank to prevent erosion and protect facilities.

  - ¼ Evaluating the need for providing additional eagle viewing opportunities.

R Confederate Bay Recreation Area

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to:

  - ¼ Closing and revegetating roads that do not lead to developed areas and sites. Physical barriers may be provided, where necessary, to prevent vehicles from leaving developed roads.

  - ¼ Installing direction and entrance signs along State Highway 284.

- ¼ Maintaining at least a 100-foot setback from Confederate Creek when constructing or rehabilitating facilities.

R Jo Bonner Recreation Area

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, a group shelter and parking area may be constructed.

R Cemetery Island

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to:

  - ¼ Improving the existing trail system on Cemetery Island.

  - ¼ Installing appropriate information signs.

  - ¼ Investigating alternatives available for pumping the two existing toilets.

R Court Sheriff

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to separating site developments so that day users and boat ramp users are not negatively impacting each other.

R Chinamen's

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will

be given to widening, lengthening, and leveling of parking spots and the redesign of the boat ramp area so that traffic does not become congested and block the road.

R Other Locations

S The boat ramp at Shannon will be extended to provide access at low water levels.

S Pursue replacing boat ramps at Kims' and Yacht Basin and extend ramp at Shannon. Goose Bay boat ramp will be replaced in 2003.

S Based on the Facilities Condition Assessment and a site-specific recreation master plan, upgrade other boat ramps (including lengthening) to allow for safe access when reservoir is low and when there are high winds.

S Provide adequate boat docks at boat ramps to prevent user conflicts and to address safety concerns, such as high winds.

S Evaluate the need to install a boat ramp and restroom at Duck Creek.

Commercial service actions for Canyon Ferry Reservoir will consist of the following:

R Yacht Basin and Kim's Marina operators will be offered extensions to their concession contracts to allow appropriate time to conduct commercial services planning and public involvement activities prior to the issuance of Requests for Proposals (RFPs).

R Reclamation will prepare and use a Commercial Services Plan (CSP) to assist in preparing a RFP for concession operations. A CSP for the reservoir will provide an analysis of the need for and services required of any new or existing concessions. Any commercial development will be subject to the Reclamation policies and directives and standards in place at the time.

R Public involvement will be an integral part of the CSP process.

R An appropriate level of environmental analysis will be completed for the CSP.

R A concession operation will be developed at Silos Recreation Area subject to plans developed by Reclamation and Broadwater County. The scope of this operation is being investigated by Reclamation and Broadwater County. Reclamation and the county have signed an agreement for Broadwater County to manage the Silos Recreation Area.

- **R** Kim's, Yacht Basin, and Goose Bay Marinas will continue to operate until 2003, 2004, and 2010, respectively, unless an extension is agreed to so planning and public involvement can be accomplished for the CSP. Before expiration of each contract, Reclamation will initiate an RFP process for obtaining a concessionaire(s). The issuance of concession permits will follow Reclamation's *Concessions Policy, Directives and Standards* and associated guidelines. The policy includes, among other things, the requirement to provide for public competition for the right to operate a concession on Reclamation lands.

- **R** Reclamation will identify existing guides and outfitters doing business at Canyon Ferry Reservoir, and they will be required to obtain special use permits pursuant to existing Federal law.

- **R** Reclamation will conduct periodic evaluations of existing concession operations to determine if the terms and conditions of the concession permits are being adhered to; the evaluations will be conducted according to established directives and standards.

- **R** Any proposals to provide new commercial services must first be presented to and evaluated by Reclamation. If approved by Reclamation, the opportunity to provide the new commercial service should be competitively offered to prospective operators.

Proposed actions for historically used undeveloped remote areas are as follows:

- **R** Access to historically used undeveloped areas around the reservoir will remain open if the access roads are not causing damage to the environmental resources within the study area. As stated earlier, roads that do not have legal access to the reservoir and roads causing resource damage will be closed.

- **R** The public use of the historically used remote sites will be monitored to determine the need for sanitation facilities and future closure if such use is negatively affecting the environmental resources.

Reclamation will initiate two public user surveys at Canyon Ferry Reservoir during the RMP 10-year planning period. The results of the visitor use surveys will be used to update information collected from the two previous surveys and fill in data gaps identified during the RMP/EA process. Data to be collected includes:

- **R** Visitation and recreation activity participation levels for sailing, hunting, and jet skiing, in addition to the activities already identified during the previous studies and documented in the RMP/EA.

- **R** Carrying capacity limits (i.e., identify user conflicts and facility overuse, if any). Surveys will assist Reclamation in monitoring visitor use to ensure that carrying capacity limits have not been exceeded.

- **R** Existing studies and planning documents within the region (i.e., identify possible correlations or discrepancies between data it collects and the data contained in other existing studies and regional or local planning reports).

- **R** Possible impacts that private, exclusive use of areas within existing concessions may have on the quality of the public's recreation experience or their use of the reservoir area.

- **R** Overall public satisfaction level with accomplishment of actions identified in the RMP.

- **R** Information which will determine whether to build future planned developments.

- **R** Winter use.

Heritage Resources – Actions.—

- **R** Reclamation will continue to comply with section 106 of the National Historic Preservation Act for all activities conducted at Canyon Ferry Reservoir.

- **R** Reclamation will comply with section 110 of the National Historic Preservation Act for all heritage resources at Canyon Ferry Reservoir as personnel, time, and funding are available.

- **R** In consultation with the Montana State Historic Preservation Office, Reclamation will assess the adequacy of existing heritage resource inventories and conduct necessary surveys in the areas that have not been adequately covered.

- **R** Proposed improvements will be designed to avoid impacts to archeological and historic sites, as well as environmentally sensitive habitats and critical wildlife areas.

Health and Safety – Actions.—

- **R** Reclamation will work with MFWP to improve enforcement of watercraft safety rules and regulations and to enhance their existing programs.

R Rules and regulations governing the use of Reclamation lands, as stated in the public information issue category, will be placed at visitor contact areas.

R The camp host program will be reviewed and monitored to determine if additional guidance should be provided to respective camp hosts so that relations with the public can be improved within the developed recreation areas.

R Trash receptacles will be maintained and placed at campgrounds.

R Restrooms will be maintained at campgrounds and day-use areas.

R Based on the results of the sign inventory, appropriate warning signs will be placed throughout the reservoir area to warn visitors of potential hazards, including signing needs for visitors using the reservoir during the winter (i.e., driving and fishing on the ice).

R Reclamation will ensure existing emergency services (i.e., fire control, search and rescue, and ambulance service) are adequate and that proper notification and response procedures are in place.

R Upon expiration of existing concession contracts, as detailed in the recreation issue category, Reclamation will evaluate the need to have future concessionaires install fish cleaning and recreational vehicle dump stations within their area of operation. Reclamation will evaluate the need for these facilities at other locations within the study area.

R Reclamation will promote the Crime Witness Program in an effort to promote public safety.

R Reclamation will ensure that fueling facilities and trash receptacles are constructed to fire codes.

R Work with the CGAUX in promoting their early warning system and in developing a comprehensive plan to improve boater safety.

R Through the lease lot sale process, Reclamation, the CFRA, and interested parties are addressing the septic system and drain field issues. Reclamation will ensure the appropriate local and State rules and regulations are followed.

R No wake zones will be established and buoys will be installed by Reclamation, in cooperation with MFWP, at swim beaches, boat ramps, developed day-use areas, campgrounds, sheltered fishing bays, environmentally sensitive areas, and other areas, as necessary, to prevent user conflicts and resource damage.

- **R** Reclamation will cooperate with the Montana Department of Environmental Quality in protecting the source water protection zones for the public water systems throughout the reservoir area.

- **R** Some areas above and below the dam will be closed for public safety and facility security purposes. As of October 2002, the following closures have been instituted:

    - **S** No public access in the tail water area just below Canyon Ferry Dam. This area is closed the entire year, prohibiting public access with signage and a visible cable demarcating the closed area. This closure is listed in the Montana fishing regulations.

    - **S** The Canyon Ferry Powerplant areas is a restricted area and has chain link fencing and signs prohibiting public access to this area.

    - **S** The public is prohibited from entering the Helena Valley Pumping Plant area. This area has chain link fencing and signs prohibiting public access.

    - **S** Boat access is not permitted closer than the floating buoy system upstream of the dam.

    - **S** No parking or stopping is permitted on the crest of Canyon Ferry Dam. Reclamation has posted signs and installed jersey barriers restricting public access and parking in this area.

- **R** Install fire hydrants at several locations in cooperation with the Broadwater County Rural Fire District.

- **R** Reclamation has granted space for turnarounds, dry fire hydrants, and future fire stations within the study area and will continue to work with the Canyon Ferry Fire Service Area Board of Trustees to identify and resolve issues related to fire suppression.

Wildlife Resources – Actions.—

- **R** Reclamation will continue to work with Pheasants Forever and other organizations to develop additional habitat along the eastern shore of the reservoir.

- **R** A long-term watchable wildlife program will be considered for the reservoir area.

R Reclamation will cooperate with MFWP and other wildlife agencies to identify and fund projects on reservoir lands that qualify for Montana Fish and Wildlife Conservation Trust Funds.

R Reclamation will cooperate with MFWP to identify opportunities for wildlife enhancement projects on all Reclamation lands within the reservoir area.

R Reclamation will consider developing a new bird species list for the reservoir, including the WMA, which is managed by MFWP.

R Reclamation will continue to cooperate with the Montana bald eagle working group and consider providing improved eagle viewing opportunities at the Riverside Recreation Area. Eagle Bay Drive and Riverside Campground will continue to be closed during certain times of the year to protect eagle perching sites if the eagle count remains above 50.

R Reclamation will coordinate a shorebird survey of the reservoir area with the State piping plover survey and use this information to propose potential shorebird habitat enhancement projects.

R Reclamation will work with MFWP to identify potential new wildlife areas. If additional WMAs are identified, the existing agreement with MFWP will be amended to incorporate provisions for MFWP management. A wildlife management plan for each new area will be prepared by MFWP.

R Reclamation will require that all new powerlines constructed in the reservoir area be buried to provide for protection of raptors.

R Reclamation will cooperate with MFWP to identify opportunities for fisheries enhancement opportunities. Possible cooperative efforts include:

- **S** Requiring setbacks of developed recreation areas
- **S** Closing specific areas for the protection of the reservoir fishery
- **S** Identifying potential fisheries enhancement projects for possible funding by the Montana Fish and Wildlife Conservation Trust Fund
- **S** Placing appropriate signs at visitor contact points (i.e., closure, informational, directional, interpretative, etc.).
- **S** Continuing to work with MFWP on their perch habitat program for the south end of the reservoir.

Public Information – Actions.—

R Reclamation will complete a sign inventory to determine the number and types of signs needed within the study area.

R Signs will be replaced or repaired, as appropriate.

R Signs that provide necessary information regarding boating and the use of boat launch ramps, campgrounds, day-use areas, fish cleaning stations, etc., and rules and regulations governing the use of Reclamation lands and facilities will be provided at public use areas.

R Interpretive signs will be considered for interesting geologic features and other outstanding environmental resources.

R An appropriate number of warning signs will be placed throughout the study area to protect the health and safety of the visiting public.

R Informational signs will be placed at appropriate areas to inform the public of the proper use of the shoreline, including the shoreline below the cabin site areas.

R Reclamation will supply needed maps, brochures, pamphlets, and expanded Internet service to the public.

R Reclamation will proactively educate cabin site lessees, concessionaires, and the general public on the proper use of Canyon Ferry Reservoir lands.

R The Visitor Center will remain open and maintained to provide the public with information and interpretation. Repairs will be made as necessary.

Land Use – Actions.—

R As part of the RMP/EA planning process discussed in this document, Reclamation will implement a land use planning strategy for protecting and expanding resource values while developing a moderate number of new facilities and opportunities for public use.

R Reclamation will continue to investigate the feasibility of having another Federal or non-Federal agency manage the land and recreation resources within the study area.

- **R** Reclamation will consider soil conditions, and other limiting resource factors, when planning for and constructing new facilities and when granting licenses, leases, and permits for the use of Reclamation lands. As an example, prime irrigated land and critical wildlife areas will be avoided when developing facilities.

- **R** Faulty septic systems will be repaired or replaced as deficiencies are identified.

- **R** Reclamation will cooperate with the State to prepare total maximum daily loads of pollutants for Canyon Ferry Reservoir and the basin immediately above it.

- **R** Reclamation will continue its water quality monitoring program for the reservoir. Emphasis will be given to monitoring drinking water supplies at developed recreation areas and other specific sites, as appropriate. Data collected will include nutrient samples, zooplankton, phytoplankton, chlorophyl, and other parameters.

- **R** Reclamation will work with concerned individuals and entities to provide input on shoreline erosion-control methods for Reclamation to consider.

- **R** In cooperation with the CFRA and other interested parties, Reclamation will develop a policy for public use of the shoreline between the reservoir and the lease lot areas. This policy will not conflict with Title X, Public Law 105-277.

- **R** In cooperation with the CFRA and other interested parties, Reclamation will develop procedures that address the existing and future placement of private docks at Canyon Ferry Reservoir authorized by Title X and establish design and construction standards (Title X allows one boat dock for each lease lot owner after privatization). Proper requirements/stipulations to be contained in any such land use authorization or permit will be identified. Reclamation manual directives and standards for use authorization will be followed.

- **R** ORV use should be eliminated to protect areas sensitive to erosion and where impacts to fish and wildlife resources could occur. Closed areas will be revegetated. Erosion-control structures will be placed in areas of ongoing erosion and areas that have the potential for erosion.

- **R** A program will be initiated to identify and control erosion adjacent to public roads, Canyon Ferry Unit Project facilities, and developed recreation areas where there is a public health and safety concern. Gabions and breakwalls or other erosion-control techniques will be used to protect shorelines, where needed. Design, review, and approval from Reclamation, the Corps of Engineers, and the county conservation districts is required before construction begins.

R Reclamation will pursue fencing the exterior boundary of the reservoir area to prevent cattle trespass. Developed campgrounds and other public use areas to be identified may be fenced to prevent resource damage, if necessary. Since the lands in Broadwater County, which are adjacent to Reclamation lands, are within a horse herd district and are considered a fence-in area for horses, Reclamation will work with adjacent land owners on common fencing needs. The Montana Livestock laws Title 70 Property; 70-16-205 Monuments and Fences will be followed accordingly.

R Reclamation will review all integrated pest management practices and make changes if necessary. The 1993 comprehensive weed control program will be followed and updated as necessary. Reclamation will continue the long-term weed control agreement with Broadwater County and supply annual funds to the county. Work with Lewis and Clark County to formalize a long-term weed control agreement and supply annual funding to the county for weed control.

R Placement and construction of utilities will be considered on a case-by-case basis, with emphasis on minimizing impacts to the environment.

R Reclamation will continue to work with the Montana Aeronautics Division, the Montana National Guard, Broadwater County, and the General Services Administration to transfer ownership of Reclamation lands near Silos Recreation Area to an interested entity for the purpose of operating the airport.

R Reclamation will follow the 2001 Federal Wildland Fire Management policy and the January 2001 Secretary of the Interior's policy letter and develop a Fire Management Plan.

R Specific fire rehabilitation treatment actions on 500 acres of Reclamation-managed lands impacted by the year 2000 fires:

- **S** Aerial and mechanical seeding of a native seed mixture on approximately 100 acres.

- **S** Treatment of noxious weeds with herbicide at identified sites.

- **S** Repair and reconstruct the damaged camping areas, facilities, and signs.

- **S** Repair West Shore Drive by grading and cleaning out some culverts. Settling basins may be installed above all culverts throughout the burned area to catch sediment. These will require frequent maintenance.

- **S** Design and construct new culverts on East and West Shore Drives at selected sites.

- **S** Replace some culverts that are undersized as funding allows.

In addition, Reclamation will work with remaining lease holders to permit the removal of slash, underbrush, and dead and downed timber to reduce future fire hazards where determined appropriate by Reclamation.

Reclamation will complete fire rehabilitation efforts by the end of 2003.

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Abbreviations and Acronyms

A

ASTs	aboveground storage tanks
ATV	all-terrain vehicles

B

BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management

C

CFR	Code of Federal Regulations
CFRA	Canyon Ferry Recreation Association
cfs	cubic feet per second
CGAUX	United States Coast Guard Auxiliary
Corps	Corps of Engineers
CSP	Commercial Services Plan

D

DEQ	Department of Environmental Quality (Montana)

E

EA	environmental assessment
E.O.	Executive order
EPA	Environmental Protection Agency
ESA	Endangered Species Act

F

FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act

G

GIS	Geographic Information System
GSA	General Services Administration

H

HVID	Helena Valley Irrigation District

I

IPM	integrated pest management
ITAs	Indian Trust Assets

M

MDOT	Montana Department of Transportation
MFWP	Montana Fish, Wildlife and Parks
MOU	Memorandum of Understanding
MPC	Montana Power Company
MTAO	Montana Area Office

N

National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRCS	Natural Resource Conservation Service
NWS	National Weather Service

O

OIG	Office of Inspector General
O&M	operation and maintenance
OPI	Montana Office of Public Instruction
ORV	off-road vehicle

P

P.L.	Public Law
ppb	parts per billion
PWC	personal water craft

R

Reclamation	Bureau of Reclamation
RFP	Request for Proposal
RMP	Resource Management Plan
RMP/EA	Resource Management Plan/Environmental Assessment
RV	recreational vehicle

S

SCORP	State Comprehensive Outdoor Recreation Plan
Secretary	Secretary of the Interior
Service	U.S. Fish and Wildlife Service
SHPO	State Historic Preservation Office
study area	Canyon Ferry Reservoir lands covered by this RMP

T

TEA-21	Transportation Efficiency Act for the 21st Century
Title X	Public Law 105-277, Title X
TMDL	Total Maximum Daily Load
TSP	Total Suspended Particulate

U

USDA	U.S. Department of Agriculture
USFS	United States Forest Service
USGS	U.S. Geological Survey
USTs	underground storage tanks

V

VSC	vessel safety checks

W

WMA	Wildlife Management Area

Symbols

EF	degrees Fahrenheit
µg/L	micrograms per liter
mg/L	milligrams per liter

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Chapter I

Introduction and Overview

INTRODUCTION

Much of the same information and analyses required by the National Environmental Policy Act (NEPA) is included in a Resource Management Plan (RMP); therefore, the RMP for Canyon Ferry Reservoir (figure I-1) is formatted as a combined Resource Management Plan/ Environmental Assessment (RMP/EA) document that meets the requirements of NEPA. Because the alternatives developed for the RMP portion of the document are general, the NEPA portion of the document will be programmatic. Before implementing the RMP, site-specific NEPA analysis will be required.

The RMP portion of the document describes the management framework; the needs, opportunities, and constraints; public issues and concerns; Bureau of Reclamation (Reclamation) goals and objectives; and specific management objectives and actions for the study area. It also provides a history and baseline for measuring the progress and success of proposed management actions.

The EA component of this document sets forth two action alternatives and the No Action Alternative for the Canyon Ferry Reservoir (study area) and identifies the preferred alternative of the three alternatives considered and analyzed in this document. Existing resource and environmental factors are described as well as the potential effects of all the alternatives on these resources and environmental factors. The resources and environmental factors described and analyzed in this document include water, soils, vegetation, fish and wildlife, cultural, recreation, threatened and endangered species, visual, Indian Trust Assets (ITAs), Indian sacred sites, hydrology, climate, air, social, economic, environmental justice, transportation, land use, and noise.

AUTHORITY

Title 28 of Public Law (P.L.) 102-575, Section 2805 (106 Stat. 4690, Reclamation Recreation Management Act of October 30, 1992), provides Reclamation with authority to prepare RMPs. Title X of P.L. 105-277 (Title X) provides Reclamation authority to plan, develop, operate, and maintain recreation and fish and wildlife resources at Canyon Ferry Reservoir.

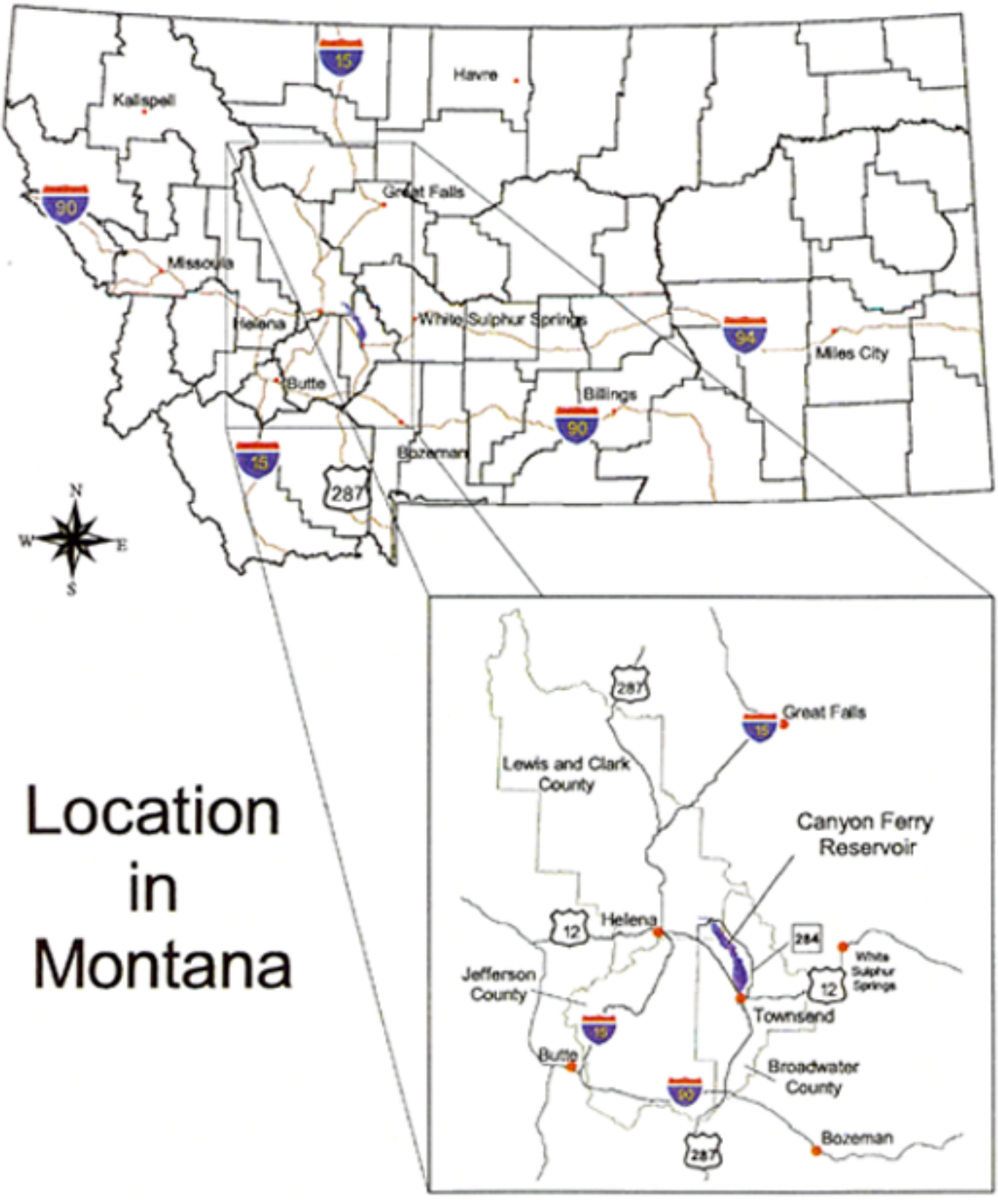
Kalispell
Havre
Great Falls
Missoula
Helena
White Sulphur Springs
Miles City
Butte
Billings
Bozeman
15
90
94
287
N
W
E
S
Location in Montana
Great Falls
Lewis and Clark County
Canyon Ferry Reservoir
Helena
12
284
White Sulphur Springs
Jefferson County
Townsend
Butte
Broadwater County
Bozeman

Figure I-1

PROPOSED FEDERAL ACTION

Preparation and implementation of an RMP is a Federal action that is intended to direct the management of resources within the study area to maximize overall public and resource benefits for the next 10 years. NEPA requires Federal agencies to consider the potential impact(s) of a Federal action on the environment before implementing the proposed action. Therefore, a planning process and an appropriate level of environmental analysis were used to develop this RMP/EA. The RMP/EA will be used as the management framework for the reservoir and surrounding Reclamation lands.

PURPOSE AND NEED

The purpose of this RMP/EA is to establish a 10-year conceptual plan detailing the management framework for the conservation, protection, enhancement, development, and use of the physical and biological resources at Canyon Ferry Reservoir. Water operations and power generation are not within the scope of this study.

The RMP/EA is needed to:

- **R** Provide decisionmakers with consistent direction and guidance for the successful management of the environmental resources at the reservoir

- **R** Ensure that management of the environmental resources will be compatible with authorized purposes of Reclamation's Canyon Ferry Unit of the Pick-Sloan Missouri Basin Program

- **R** Ensure that development of quality recreation facilities is compatible with other environmental resources and that planned developments are based on public need and the ability of the land and water resources to accommodate such facilities and increased visitor use

- **R** Resolve resource management issues and concerns identified during the planning process. Issues and concerns were identified through public involvement and internal review of agency laws, regulations, policies, programs, and procedures

In response to changing conditions and to better meet the increasing demand for public outdoor recreation while protecting and enhancing our natural resources, an RMP/EA is clearly needed. In particular, P.L. 105-277, Title X, authorizes the Secretary of the Interior (Secretary), through Reclamation, to investigate, plan, construct, operate, and maintain public recreation facilities, as well as facilities for the conservation of fish and wildlife resources, and

directs the Secretary to sell 265 lease lots. The RMP/EA will guide decisionmakers in their efforts to accommodate the variety of demands that are being placed on the environmental resources at Canyon Ferry Reservoir.

OBJECTIVES

The overall objectives of the RMP/EA are to:

- **R** Explore ways to enhance and protect the natural, recreational, esthetic, and heritage resources
- **R** Determine the most appropriate uses for Reclamation lands and facilities
- **R** Identify long-term programs that address public health and safety, fish and wildlife, and recreation
- **R** Identify financially feasible opportunities or partnerships to assist in managing the resources
- **R** Identify certain actions for implementation within the 10-year planning period that address the issues and concerns raised by the public

The overall objectives for completing an RMP/EA for Canyon Ferry Reservoir are consistent with the objectives identified in Reclamation's 2000-2005 *Strategic Plan*. Those objectives are to:

- **R** Manage, develop, and protect water and related resources to meet the needs of current and future generations
- **R** Operate, maintain, and rehabilitate facilities safely, reliably, and efficiently to provide project benefits
- **R** Advance Reclamation's organizational effectiveness

Chapter VI contains specific Reclamation goals and accompanying objectives that were formulated as a result of the public involvement process and Reclamation's review of programs and policies.

SCOPE AND STRUCTURE OF THE RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT

The RMP/EA provides a conceptual framework for conserving, protecting, developing, using, enhancing, and managing Canyon Ferry Reservoir resources. The EA portion of this document will focus on broad impacts associated with the alternatives. NEPA compliance will be completed, and site-specific environmental and cultural clearances will be obtained before any ground-disturbing activities begin.

The following briefly describes, by chapter, the scope of the RMP/EA.

Chapter I: Introduction and Overview

Chapter I provides an introduction to and overview of the study area and sets forth the purpose of and need for an RMP/EA, authorities, overall objectives, public involvement process, and consultation and coordination efforts.

Chapter II: Management Framework

Chapter II establishes the management framework by describing the existing land uses at Canyon Ferry Reservoir, adjacent land uses, and the policies and programs affecting and/or influencing the use of Reclamation land and water areas.

Chapter III: Planning Issues, Opportunities, and Constraints

Chapter III summarizes the key factors that influenced the development of the RMP/EA by identifying the planning issues, opportunities, and constraints.

Chapter IV: Alternatives

Chapter IV describes the three alternatives, which includes the preferred alternative and the No Action Alternative, formulated in response to the issues identified by the public and Reclamation.

Chapter V: Affected Environment and Environmental Consequences

Chapter V describes the affected environment (existing condition) of the study area and discusses the expected environmental consequences of implementing each of the proposed alternatives on specific resources and environmental factors.

Chapter VI: Resource Management Plan

Chapter VI describes the RMP, which is the preferred alternative selected by Reclamation. This chapter details the management strategies and directives for the study area for the next 10 years and the management goals and objectives.

OVERVIEW OF THE STUDY AREA AND BACKGROUND

The Canyon Ferry Unit of the Pick-Sloan Missouri Basin Program was authorized by the Flood Control Act of December 22, 1944, P.L. 534, as amended. The Canyon Ferry Unit is a multi-purpose project which makes important contributions to electrical power, flood control, the municipal water supply, and irrigation in the upper Missouri Basin. Located 50 miles downstream from where the Gallatin, Madison, and Jefferson Rivers join to form the Missouri River, Canyon Ferry Dam intercepts the runoff from about 15,904 square miles and stores the water in a 1,891,888-acre-foot reservoir at elevation 3797 feet, the top of the joint use pool. The reservoir allows irrigation development by regulating residual flows of the river to maintain capacity at the powerplant. In addition to providing power for irrigation, Canyon Ferry Powerplant provides low-cost energy for use by farm, residential, and municipal and industrial consumers.

The United States of America, Department of the Interior, Reclamation, holds the water right for water stored in Canyon Ferry Reservoir. Federal legislation authorizes the Secretary to contract to supply water for authorized purposes from Federal storage facilities such as Canyon Ferry Reservoir.

P.L. 89-72 (Federal Water Project Recreation Act of 1965) provides Reclamation with authority to only construct and maintain minimum basic recreation facilities. However, the passage of P.L. 105-277 in 1998 expanded the project purposes of the Canyon Ferry Unit by granting authority to Reclamation to plan, develop, operate, and maintain recreation and fish and wildlife resources in conjunction with the other authorized project purposes.

The primary study area covered in this plan includes all lands surrounding Canyon Ferry Reservoir that are under the jurisdiction and administration of Reclamation (see figure I-2 for the study area boundary). In addition, Reclamation lands and resources immediately downstream from the dam are included. Land adjoining Reclamation property is also considered if its current or known future use will significantly affect, or be affected by, policies and management proposals in this plan.

The study area encompasses about 9,360 land surface acres above reservoir elevation 3797 feet, with 96 miles of reservoir shoreline. The reservoir has about 33,500 water surface acres at

Canyon Ferry Reservoir

Study Area Boundary

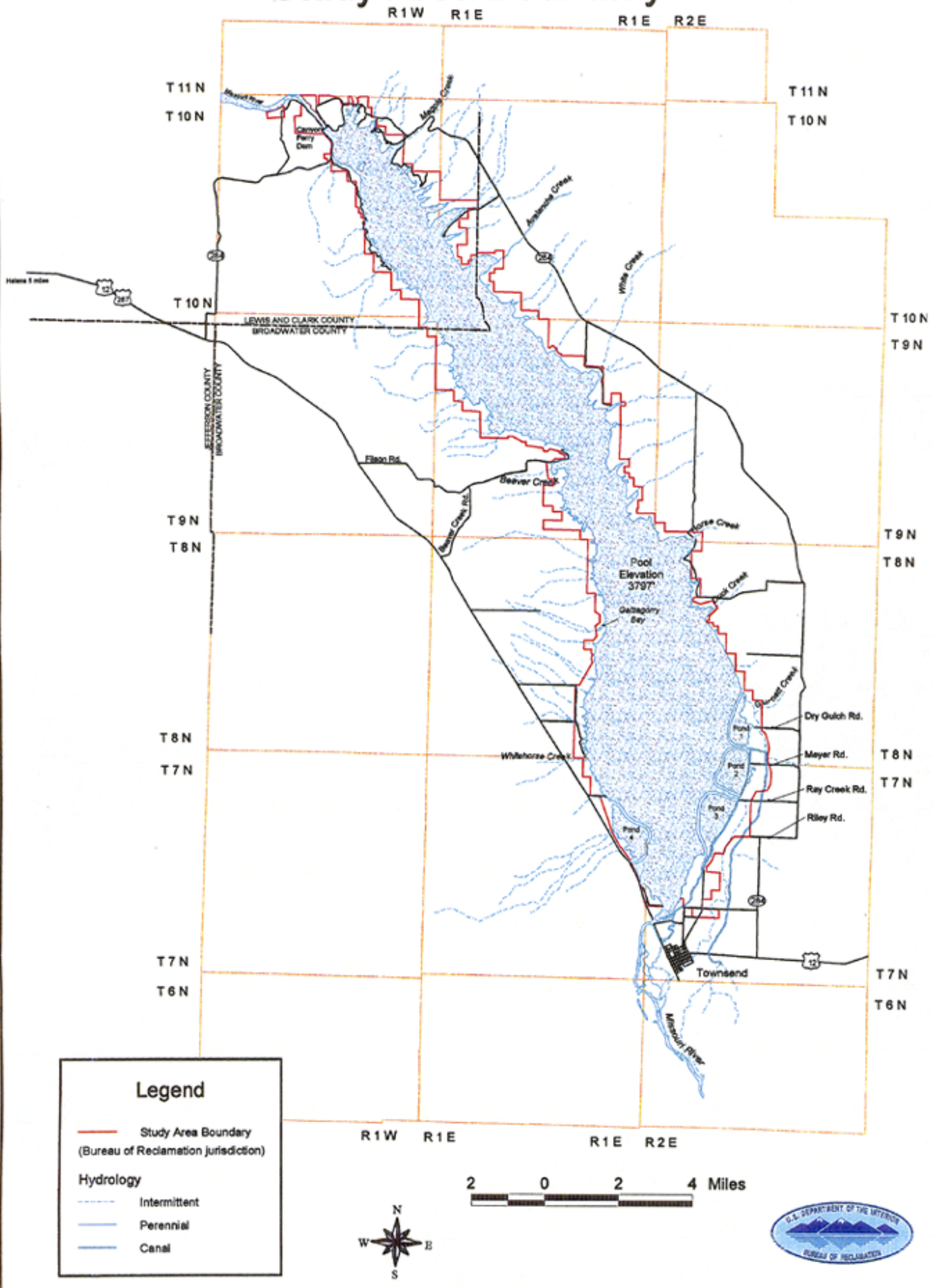

Figure I-2

elevation 3797 feet, extending upstream about 19 miles from Canyon Ferry Dam to a point where the Missouri River enters the reservoir at its southern end. Several side streams also feed the reservoir.

The study area lies in the jurisdiction of two counties—Lewis and Clark to the north and Broadwater to the south (see figure I-2). The nearest population centers are Townsend, about 3 miles south; Helena, about 15 miles northwest; and East Helena, about 12 miles northwest of Canyon Ferry Reservoir. The reservoir serves as a Statewide recreational facility, but most of the visitors come from within a 120-mile radius of the reservoir, including the towns of Great Falls, Butte, Missoula, and Bozeman.

To provide dust abatement and to prevent excessive loss of soil to wind erosion, a dike system and waterfowl development features were completed at the south end of the reservoir. Through a cooperative effort between Reclamation and MFWP, construction of the dike and associated facilities began in 1972 and was completed in 1978. The waterfowl facilities provide habitat for nesting and breeding, supplemental resting and feeding sites for migratory birds, public hunting, and wildlife observation opportunities for the public.

Reclamation's policy is to give preference to Federal, State, and local management agencies where second-party recreation management can be obtained. Consequently, Reclamation signed an agreement with the State of Montana for such management in 1957. For several reasons, the agreement with the State of Montana for recreation management was not renewed in 1994. Since 1995, Reclamation has had total responsibility for, among other things, the management of the recreation resources. Reclamation continues to contract with MFWP to manage the Wildlife Management Area (WMA) at the southern end of the reservoir. MFWP is the lead agency for fisheries management at Canyon Ferry Reservoir.

Both Reclamation and MFWP have prepared previous management plans for the study area—*Reservoir Management Plan, Canyon Ferry Reservoir, Montana, 1958* and *Canyon Ferry Management Plan and Environmental Impact Statement, 1976*, respectively. Although these documents technically stand as the current management framework for the study area, they are outdated. Recognition of this has provided major impetus for the preparation of this RMP/EA.

A draft RMP/EA was prepared by a private consultant in the early 1990s but was never finalized because MFWP returned management of Canyon Ferry Reservoir back to Reclamation. Reclamation had to put its resources toward managing the facilities rather than planning activities until 1998. As part of the 1990 draft, inventories were completed, and other pertinent information that described the existing resource conditions was gathered for all the resources within the study area. When appropriate, the information contained in the 1993 draft RMP/EA has been updated to reflect current conditions and incorporated in this document.

From 1994 through January 2002, the Bureau of Land Management (BLM) assisted Reclamation in the management of the campgrounds and day-use areas within the study area and in the control of noxious weeds. BLM collected user fees, managed the camp host program, operated the Canyon Ferry Visitor Center, and was the lead for the eagle viewing program, volunteer program, interpretation, public outreach, and fire and law enforcement coordination.

PUBLIC INVOLVEMENT

A concerted effort has been made to involve the public in planning for the environmental, land, and recreation resources at Canyon Ferry Reservoir. Public involvement began even before the inception of this RMP/EA and the 1993 draft.

In 1986, the Lewis and Clark County Commission formed a Steering Committee to address interagency management concerns at Canyon Ferry Reservoir. This local Steering Committee was comprised of representatives from the Lewis and Clark County Commission, Broadwater County Commission, Canyon Ferry Recreation Association, Townsend Chamber of Commerce, Helena Chamber of Commerce, BLM, U.S. Forest Service, and an at-large public member. Reclamation and MFWP worked closely with this Steering Committee until the decision was made to prepare the 1993 draft RMP/EA. The concept of such a plan was thoroughly discussed and reviewed with this committee, as were the public involvement needs of such a planning effort.

Once the decision was made to prepare an RMP/EA in the early 1990s, a formal public involvement plan was developed and implemented to ensure public issues and concerns were addressed. In addition, the original Steering Committee was expanded to include additional members of the public, special interest groups, and governmental agencies. The committee was renamed the MFWP Master Advisory Committee and served as a sounding board for the 1990 RMP/EA study. As discussed in the Preface, Reclamation determined that the Master Advisory Committee would not be reconvened for this effort because the issues and concerns raised then are still valid today.

Meetings

On November 19, 1998, Reclamation staff attended a public meeting at the Broadwater County Courthouse in Townsend, Montana. The Broadwater County Commissioners wanted information about the cabin sale legislation and the activities to be undertaken to make the sale possible. The group also discussed the RMP/EA and what implications its implementation would have on recreation around the reservoir.

To begin the public scoping process for this RMP/EA, six public open houses were held during the period from June 21 through June 24, 1999. Two open houses each were held in Helena

and Townsend and one each in Butte and Bozeman. Notice of the open houses was mailed to individuals in the local area and posted in the camping and day-use sites in the study area. A press release announcing the open houses was sent to area media. In addition, paid display advertisements of the open houses were purchased and appeared in local newspapers. Approximately 120 people attended the open houses. Attendees were provided an opportunity to learn about the RMP/EA and provide comments expressing their ideas, issues, and concerns orally and in writing. During the open houses, Reclamation staff recorded comments on flip charts. In addition, 26 written comments were received. As further discussed in chapter IV, these comments were used in the alternative plan formulation process. Issues and concerns raised by the public were also used to establish management goals and objectives, as discussed in chapter VI.

Before the June 1999 public meetings, Reclamation staff met with MFWP staff to ensure the RMP/EA meetings would not conflict with their development of the Upper Missouri River Reservoir Fisheries Management Plan. MFWP was concerned that the RMP/EA process would confuse the public and reduce the amount of public input to the fisheries plan. Reclamation staff ensured that the RMP/EA meetings presented information in such a manner that the fisheries plan would not be adversely impacted.

On June 24, 1999, Reclamation staff met with Lewis and Clark County planners and a county consultant to discuss the progress of the cabin sales and how those activities related to RMP/EA development.

The first draft *Canyon Ferry Reservoir Resource Management Plan/Environmental Assessment* was mailed on October 19, 2000. The initial mailing was to about 300 entities, including Tribes, agencies, local libraries, groups, and individuals. After the initial mailing, other entities requested about 300 more copies, for a total of about 600 copies distributed. The initial comment period was to end on November 17, 2000, but was extended to February 17, 2001, because of congressional and public concerns. Public information meetings were held on January 23 and 24, 2001, in Helena and Silos Inn near Townsend, Montana. Two meetings were held at each location.

On December 13, 2000, the first draft RMP/EA was presented to three classes at Broadwater High School in Townsend, Montana. The classes were studying the government and reviewed and commented on the first draft RMP/EA. Responses were prepared for these comments. The classes also attended a January 2001 public meeting at Silos Inn.

Over 300 agencies, organizations, and individuals provided about 1,000 written comments on the October 2000 draft RMP/EA by the close of the public comment period. Reclamation reviewed the comments, revised the draft RMP/EA, and issued a two-volume Second Public Draft RMP/EA in May 2002. Volume I was the second draft RMP/EA. The written comments and responses to them prepared by Reclamation's Montana Area Office (MTAO) and Denver Office staff were published and distributed as Volume II of the Second Public Draft RMP/EA.

The two-volume second public draft was mailed in early May 2002 to 635 entities, including Tribes, agencies, local libraries, groups, and individuals. In addition, the Executive Summary of the second public draft was mailed to an additional 175 agencies, groups, and individuals. The initial comment period was to end August 5, 2002, but was extended to September 20, 2002, in response to congressional and public concerns. Public information meetings to present and discuss the alternatives were held May 14, 16, 21, and 23, 2002, in Bozeman, Helena, Townsend, and Butte, Montana, respectively. Thirty-three people attended the meetings. Public hearings were held on July 30, 2002, in Townsend, Montana, and on August 1, 2002, in Helena, Montana. Forty people attended the hearings, with 10 individuals providing oral statements.

Notice of the public meetings and public hearings were sent to those on the mailing list (Tribes, agencies, local libraries, groups, and individuals). Press releases announcing the availability of the draft RMP/EA, the public meetings, and the public hearings were sent to local media. In addition, paid advertisements announcing the public meetings and public hearings were purchased and appeared in local area newspapers. The Executive Summary of the Second Public Draft RMP/EA and additional information about the RMP/EA were available on Reclamation's Great Plains Region website.

By the close of the public review and comment period for the Second Public Draft RMP/EA, Reclamation received 9 written public hearing comment documents and 70 written review comment documents in addition to the oral public hearing statements. Reclamation summarized the most important comments of the 330 oral and written comments and provided responses which appear in appendix A of the RMP/EA. The public comments were considered in the preparation of this final RMP/EA.

When public participation activities are deemed necessary during the 10-year life of the RMP, Reclamation will publicize such activities in the local newspaper. Reclamation may provide public notification prior to implementing significant capital improvement projects identified in the RMP or announcements summarizing the activities of the Canyon Ferry Working Group.

Comments and Responses

Unlike the comments and responses to the first public draft, in which Reclamation provided an individual response to each comment, the comments and responses to the second public draft were summarized. Many of the comments received were of a general nature, discussing items already in the RMP/EA, and they did not specifically suggest a revision to the RMP/EA; therefore, no revisions were made. Major comments, which suggested a specific change or clarification to an item in the RMP/EA, are documented in appendix A (a summarized version of similar comments). Responses to these comments and, if appropriate, where the changes were made, are provided for each response. Minor editorial changes have been made to the RMP/EA from the comments received, but the comments/responses have not been formally documented. In some instances, comments have been responded to by written correspondence to the commentor.

AGENCY CONSULTATION AND COORDINATION

National Historic Preservation Act of 1966, as Amended

> Reclamation collected information necessary to complete consultations as required by Section 106 of the National Historic Preservation Act and its implementing regulations (36 Code of Federal Regulations Part 800). Section 106 consultations with the State Historic Preservation Office (SHPO) and Indian Tribes was completed during the public review periods of the first and second drafts of the RMP/EA. No response was received from Indian Tribes or the SHPO during either review period. When specific ground-disturbing activities discussed in the RMP/EA are going to be implemented, Reclamation will again contact appropriate Indian Tribes and the SHPO to determine if they are aware of archeological sites or Traditional Cultural Properties within the study area and to learn if the Tribes or the SHPO have any related heritage resource management concerns.

Fish and Wildlife Coordination Act, as Amended, and Endangered Species Act of 1973, as Amended

> Reclamation consulted with the U.S. Fish and Wildlife Service (Service) as required by the Fish and Wildlife Coordination Act (FWCA) and Endangered Species Act (ESA). For the draft 1993 RMP/EA, the Service provided a list of listed and proposed endangered and threatened species that may be present within the study area. On May 10, 1999, Reclamation requested an updated species list for Canyon Ferry Reservoir from the Service in Helena, Montana. No response has been received from the Service. The 1993 species list provided by the Service was checked against a current species list on the Montana Natural Resource Information System. The check showed no change in the species listing from 1993. Reclamation then evaluated the impacts to the listed species. On the basis of this information, Reclamation has determined that the RMP alternative will not affect listed, proposed, or candidate ESA species.

Because the RMP is programmatic in nature, site-specific NEPA will be required before any of the actions proposed in this RMP can be undertaken. At that time, a new species list will be required from the U.S. Fish and Wildlife Service.

Indian Trust Assets

Letters requesting identification of ITAs for Native American Tribes who are currently in the area or who historically used the area were sent to the 11 Tribal Chairpersons of those Tribes and the associated Bureau of Indian Affairs (BIA) offices. These letters, along with copies of the first draft RMP/EA, were mailed on October 19, 2000. By letter received November 9, 2000, the BIA Rocky Mountain Region Office advised that while they had no comments from the hunting and fishing rights perspective, Reclamation's concurrent inquiry to the 11 Tribes might provide information unknown to them. Followup calls to Tribal Chairpersons were made on March 22, 2001. The Shoshone Tribe in Wyoming indicated that they probably had no ITAs at

Canyon Ferry Reservoir. Other Tribes contacted did not have a reply at the time, and no replies have been received since those calls. A copy of the second public draft RMP/EA was sent to appropriate Tribes to solicit comments concerning trust assets. No comments were received. When specific ground-disturbing activities discussed in the RMP/EA are going to be imple-mented, Tribal governments will be notified and asked for their input about Indian Trust Assets.

Indian Sacred Sites

On July 8, 1997, letters were sent to the six Tribal governments in eastern Montana asking for comments on Executive Order 13007. The MTAO did not receive any responses regarding sacred sites anywhere in Montana at that time. On October 19, 2000, letters requesting identification of Indian sacred sites were mailed to Native American Tribes who are currently in the area or who historically used the area. This letter, addressed to Tribal Cultural Committees or staff, was mailed with copies of the first draft RMP/EA. Followup calls to Tribal contacts were made on March 22, 2001. The Shoshone Tribe in Wyoming indicated that they probably had no sacred sites at Canyon Ferry Reservoir. Other Tribes contacted did not have a reply at the time, and no replies have been received since those calls. A copy of the second public draft RMP/EA was sent to appropriate Tribes to solicit comments concerning sacred sites. No comments were received. When specific ground-disturbing activities discussed in the RMP/EA are going to be implemented, Tribal governments will be notified and asked for their input about Indian sacred sites.

Adjacent Landowners

Reclamation is obligated to coordinate its planning efforts with local, city, county, State, and other Federal entities to ensure that its land uses are compatible with adjacent land uses (public and private). Information was solicited pertaining to the present and future uses of adjacent lands. The following entities were contacted: BLM, U.S. Forest Service, Broadwater and Lewis and Clark Counties, city of Townsend, Helena Valley Irrigation District, and MFWP.

Other Related Activities

Existing/Ongoing.—

R Reclamation is monitoring low dissolved oxygen conditions in the Missouri River immediately below Canyon Ferry Dam.

R Water quality data are collected above Canyon Ferry Reservoir at Toston and in the Missouri River immediately below the dam.

R Reclamation has prepared the Canyon Ferry Unit, Montana, Cabin Lease Lots Sale Final EA and Finding of No Significant Impact (FONSI), February 2002, addressing the sale of the lease lots at Canyon Ferry Reservoir. The FONSI was signed and distributed on February 28, 2002.

R Reclamation has prepared the Broadwater Bay Excavation Project Final EA and FONSI, August 2000, addressing the construction of the deep water bay and boat ramp at Silos Recreation Area.

Future.—

R Future studies will include an analysis of permanent solutions to the low dissolved oxygen conditions which occur below the dam.

R Reclamation will conduct user surveys on a periodic basis.

R Reclamation, in cooperation with others, will be examining the potential for flushing flows on the Missouri River downstream from Canyon Ferry Reservoir.

R Reclamation will complete a Commercial Services Plan to assist in preparing Request for Proposals (bid packages) for concession operations upon expiration of existing concession contracts.

R Reclamation will conduct Facilities Condition Assessments for existing facilities to determine what upgrades should occur.

R Site master planning and site-specific NEPA and environmental clearances will be obtained before facilities are constructed.

Chapter II – Management Framework

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Chapter II

Management Framework

INTRODUCTION

Administration of the land and water areas and associated environmental resources within the study area requires a coordinated effort between several entities that have varying degrees of management responsibility. In addition, several existing land use authorizations have been issued by the Bureau of Reclamation (Reclamation) to third parties for the use of public lands within the study area. Existing land uses, as well as existing environmental conditions, can be described as "limiting factors" to development. Reclamation cannot interfere with the legal rights previously granted to another party. Reclamation has an obligation to coordinate its planning activities with adjacent private and public landowners to ensure that authorized uses of its lands are compatible with adjacent land uses. The purpose of this chapter is to describe the existing policies and management responsibilities of involved agencies that may influence future development – the management framework.

MANAGEMENT RESPONSIBILITIES

Bureau of Reclamation

Reclamation maintains primary jurisdiction of the lands and associated resources within the study area and is responsible for the environmental resources; however, some of the resources, such as oil and gas and the fishery, are the responsibility of other entities, as explained later in this chapter. Reclamation administers all use authorizations for land and water areas at Canyon Ferry Reservoir. Reclamation oversees Montana Fish, Wildlife and Parks (MFWP) operations of the Wildlife Management Area (WMA) within the study area to ensure that the terms and conditions of the agreement are adhered to. Reclamation will work with MFWP to ensure that the fishery is managed according to their fisheries management plan for the Upper Missouri River. In providing proper stewardship of public lands, Reclamation is responsible for implementing and enforcing all Federal laws, regulations, and Executive orders (E.O.) dealing with natural resources, such as the Endangered Species Act; National Historic Preservation Act; Fish and Wildlife Coordination Act; E.O.s 11644 and 11989, Off-Road Vehicles; E.O. 11889, Floodplains; E.O. 11990, Wetlands Protection; E.O. 12962, Recreational Fisheries; E.O. 13007, Sacred Sites; and E.O. 13186, Conservation of Migratory Birds. As such, Reclamation has ultimate responsibility for protecting and managing most of the resources within the study area.

In addition, Reclamation policies and procedures govern the use of its lands and water areas and may affect the way certain lands are managed now and in the future. Some of these policies and procedures are described in the following sections.

Recreation.—Through Public Law (P.L.) 89-72, as amended, Reclamation is encouraged to seek State and local partners in managing the recreation resources on its lands. Throughout the 17 Western States, Reclamation has numerous successful partnerships with non-Federal entities. In other instances and pursuant to P.L. 89-72, Reclamation has transferred jurisdiction of its lands to other Federal agencies as National Recreation Areas, National Wildlife Refuges, or as National Forest lands if the Reclamation project is within or adjacent to a National Forest System. If Reclamation lands are transferred to another Federal agency, all resources, including recreation, are managed using the rules, regulations, and funding sources of that agency. When neither a non-Federal or Federal partner can be obtained, Reclamation manages its lands and resources pursuant to existing laws and regulations and specific Reclamation authorities and limitations. This is currently the case at Canyon Ferry Reservoir. Approximately 21 reservoir areas in the 17 Western States are managed directly by Reclamation in the absence of a managing partner. See Chapter III, Planning Issues, Opportunities, and Constraints, for further discussion of Reclamation efforts to secure managing partners.

Outgrants.—All land-use activities for specific use of Reclamation lands and water areas are authorized and managed under outgrants such as license agreements, lease agreements, right-of-way easements, special use permits, and other legal and binding contracts (see figure V-16, Special Use Permits). Each authorization is subject to specific terms and conditions covering the use of the Federal estate. Lessees are restricted from conveying their permitted use to a another party without the approval of Reclamation. Reclamation's Montana Area Office (MTAO) has copies of all authorized conveyance documents dealing with third-party use of Reclamation lands. Outgrants are to be issued only when they will not interfere with Reclamation project purposes; they are to be, for the most part, temporary in nature and contain restrictive language that protects present and future Federal land interests.

A portion of the Land Use Authorization Directives and Standards states that Reclamation will prohibit any new exclusive/semiprivate use of Reclamation land unless directed otherwise in specific authorizing legislation and that existing private/semiprivate use will be eliminated when the use authorization expires unless a formal planning process determines that there is a significant public need and benefit for the exclusive private/semiprivate use and the land is not needed for other public or project purposes. The Land Use Authorization Directives and Standards discussed here do not apply to private exclusive use, which may exist within concession areas. See "Concessions" discussed later in this chapter for details regarding exclusive use within concession areas.

In addition, Reclamation issues permits for all improvements within easements, such as culverts and bridges, pipelines, and utilities. Special use permits are also considered for rock

collecting, archeological investigation, airports, wells, mineral exploration and extraction (including sand and gravel), fire protection facilities, surface water use, and material storage. Pesticide application on Reclamation lands requires a plan and permit.

Acquisition of Reclamation Lands.—The basis for both acquisition and retention of title to all land and land rights by Reclamation is to protect the authorized project purpose and to comply with related Federal laws, regulations, and Executive orders. The original project purposes of irrigation, flood control, power, and navigation were supplemented later with fish and wildlife conservation and recreation when these latter purposes became pressing national issues.

Canyon Ferry lands were acquired under the authority of the Flood Control Act of December 22, 1944, P.L. 534, by either acquiring fee title to the land from private individuals or entities or by withdrawing land from public domain by Executive or Secretarial order under a "first form" withdrawal, reserving the lands in Federal ownership for the construction and maintenance of irrigation works and other project purposes.

Disposition/Disposal of Reclamation Lands.—Pursuant to Section 204 of the Federal Land Policy and Management Act of October 21, 1976, Reclamation must review all its withdrawn lands to determine if they are needed for project purposes. Withdrawn lands not needed for project purposes should be returned to the public domain for administration by the Bureau of Land Management (BLM) or some other Federal agency that had original jurisdiction.

In the case of acquired lands, Reclamation must make a determination that the acquired lands are no longer needed for project purposes and are excess lands. These lands are reported as excess to the General Services Administration (GSA). GSA first offers the lands for sale to other Federal, State, or local public entities; if these entities do not want the lands, they are put up for sale through public bid at established fair market and competitive prices.

Sale of Lease Lots.—The 1999 Omnibus Appropriations Bill passed in October 1998 as P.L. 105-277. Title X, The Canyon Ferry Reservoir, Montana Act, as amended, requires that the Secretary of the Interior sell the 265 recreational cabin sites at Canyon Ferry Reservoir, Montana, to private parties. The sale of these lease lots began in June 2002 and, as of January 2003, 216 lots have been sold to the current lessees. The remaining lessees have until 2014 to purchase their lots. See appendix B for a complete description of P.L. 105-277.

Off-Road Vehicle Use.—Off-road vehicle (ORV) use policy was formulated in 43 Code of Federal Regulations, Part 420, to protect the land resource, 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. The policy states that, "Reclamation lands are closed to ORV use, except for an area or trail specifically opened to use of ORVs. . ." Areas permitted for ORV use are to be evaluated and the use to be judged compatible with adjacent private and public lands. The policy includes further rules and restrictions for ORVs on permitted lands. E.O.s 11644, February 8, 1972, and 12608, September 9, 1987, provide further guidance on managing ORVs if such lands are officially opened to ORV use.

Concessions.—Reclamation authorizes and manages concessions on its lands pursuant to Reclamation's *Concession Policy, Directives and Standards*. Reclamation and any managing partners will ensure that concessions are developed and managed to meet public needs, protect natural and heritage resources, provide stewardship of all lands and waters, and to provide a variety of goods and services to the public while being consistent with authorized project purposes. All concessionaires make individual business decisions to enter into legal, binding contracts with Reclamation for operating commercial businesses on Federal lands for a specified period of time. Among other things, the right of renewal, fixed assets, trailer lease sites, and the length of a contract are governed by the existing terms and conditions of the contract. The terms and conditions of the existing contract are not changed without mutual consent of both parties. Reclamation policy outlines the procedure to decide who is entitled to the new concession opportunity upon expiration of an existing contract. The existing concessionaire will have to compete with other bidders who officially respond to the bid package (prospectus) sent out by Reclamation. This prospectus will contain enough detailed information to allow each bidder to submit their respective proposal(s) for the operation of a commercial business to Reclamation for evaluation and selection.

Before issuing a concession prospectus and request for proposal, Reclamation will complete a formal Commercial Services Plan (CSP). At a minimum, the CSP must determine the number of concessions necessary to meet the public needs, the type of facilities and services to be provided, the financial feasibility of the concession(s), and the location(s) appropriate for commercial activities. Public involvement will be an integral part of any commercial services planning effort. Public involvement will be initiated early and continued throughout the commercial services planning process. An appropriate level of environmental analysis will also be conducted.

A financial feasibility evaluation will be considered commensurate with the types of facilities, goods, and services to be provided and other factors that may influence the incoming concession operation. Information such as estimated fees to be returned to the United States, justification for the proposed length of the concessions contract, and any underlying assumptions regarding the concessionaire's capital investment in the concession operation should be addressed in the CSP.

Reclamation's Concession's Management Policy states that "Exclusive use[1] of the Federal estate will not be allowed, and existing exclusive use will be removed as soon as possible." Exclusive use, as discussed here, applies only to concession-operated areas. Exclusive private/semi-private use outside of a concession area is addressed in separate Reclamation directives and standards. See "Outgrants," previously discussed in this chapter, for a discussion on exclusive private/semiprivate land use authorizations.

The Office of Inspector General (OIG) has prepared a report, dated May 2000 (Report No. 00-I-376), that addresses all concessions managed by Reclamation. At all Reclamation reservoirs and pursuant to the OIG report, Reclamation has agreed to:

- **R** Establish and implement an oversight process to ensure that concessions comply with existing contract provisions, especially in the areas of building improvements, annual inspections, and prices charged by the concessionaires to the public

- **R** Complete and issue detailed guidance and procedures to fully implement the new policies, directives, and standards

- **R** Develop a formal action plan to assess and correct the health and safety deficiencies and degradation of land and water resources within the concessionaire area

- **R** Establish a review process to ensure that all new concessions and newly issued and reissued contracts are in compliance with Reclamation's policies, directives, and standards

- **R** Develop a formal action plan to bring Reclamation-managed contracts into compliance with its policies, directives, and standards

In addition, the OIG identified the 10 most significant contract provisions that need to be contained in each concession permit. The 10 major contract provisions needed for effective management of concession operations are:

- **R** Contractor default

- **R** Building improvements

- **R** Operation and maintenance (O&M) plans

[1] Exclusive use is any use that excludes other appropriate public recreation use or users for extended periods of time. Exclusive use includes, but is not limited to, boat docks, cabins, trailers, manufactured or mobile homes, structures, roads, or other amenities that are determined by Reclamation to be exclusive use.

- **R** Title to fixed assets
- **R** Franchise fees
- **R** Exclusive use
- **R** Prices charged for services
- **R** Safety program
- **R** Recordkeeping
- **R** Operations review and evaluation

Fire Management.—Pursuant to the Secretary of the Interior's policy letter dated January 18, 2001, Reclamation is required to address the implementation actions contained in the updated 2001 Federal Wildland Fire Management Policy document. The 2001 Wildland Fire Management Policy states, among other things, that every area with burnable vegetation must have an approved Fire Management Plan. Fire Management Plans are strategic plans that define a program to manage wildland and prescribed fires based on the area's approved land management plan. Fire Management Plans must provide for firefighter and public safety; include fire management strategies, tactics, and alternatives; address values to be protected and public health issues; and be consistent with resource management objectives, activities of the area, and environmental laws and regulations. Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring, research, and education will be conducted on an interagency basis with the involvement of cooperators and partners. Accordingly, Reclamation will work with State, Tribal, and non-Federal organizations, as well as other Federal agencies, in implementing the 2001 Federal Wildland Fire Management Policy.

Helena Valley Irrigation District

Canyon Ferry Reservoir provides water for the Helena Valley west of Canyon Ferry Dam for the principle purposes of supplying irrigation and municipal water for Helena, Montana. Features include a supply penstock, pumping plant, discharge line, tunnel, dam and regulating reservoir, canals, laterals, drains, and other facilities necessary to irrigate 16,440 acres and provide water for municipal and industrial purposes. The Helena Valley Irrigation District (HVID) is responsible for O&M of the distribution works beyond the point of delivery by Reclamation. In 1975, HVID began operating and maintaining all constructed facilities, except the supply penstock, Helena Valley pumping plant, and the discharge line. In 1991, the O&M

of all remaining features were transferred to HVID. Reclamation retains oversight of the O&M through periodic inspections and assessments. Refer to "Affected Environment" in the "Hydrology" section of chapter V for a discussion of how the reservoir water supply is managed for irrigation purposes.

The pumping plant, located below the left abutment of the dam, is in an area the bald eagles use to stage in the fall. A staging area is a site where migrating wildlife can rest, eat, and rebuild their body energy for continuing their migration. Since there are seasonal closures in the area, the HVID is interested in opening the stretch of the river that is under the annual closure so they can access the pumping plant for maintenance purposes.

Montana Fish, Wildlife and Parks

Reclamation contracts with MFWP to manage the Canyon Ferry WMA at the southern end of the reservoir. In August 1992, MFWP approved the Canyon Ferry Wildlife Management Plan. The goal of the plan is to provide productive habitat for the diversity of wildlife species that use the area and provide for consumptive and nonconsumptive uses of those resources. The Canyon Ferry WMA includes dust abatement dikes with waterfowl nesting habitat, land for wildlife production, about 1,000 acres of agricultural leases, irrigation canals, and access roads. Reclamation provides the office for MFWP staff at the Canyon Ferry WMA.

MFWP is the lead agency for fisheries management in the State of Montana, including the Upper Missouri River (of which Canyon Ferry Reservoir is an integral part). In January 2000, MFWP issued the *Upper Missouri River Reservoir Fisheries Management Plan, 2000-2009*. This plan addresses the fisheries of Canyon Ferry, Hauser, and Holter Reservoirs, the Missouri River from Toston to Townsend, and between Hauser and Holter Reservoirs. The plan provides a framework for continued public involvement in monitoring and evaluating fisheries management activities and specific goals and strategies for those bodies of water.

MFWP has several divisions within its organization. Each division has differing degrees of responsibility concerning the management and oversight of the fish and wildlife within the State of Montana. MFWP has responsibility for primarily the fish and wildlife resources within the reservoir area as opposed to recreation resources (except for the enforcement of boating regulations on the water surface).

Enforcement Division.—The Enforcement Division is responsible for enforcing all the fish and game laws of Montana, MFWP rules, and MFWP Commission regulations. Division personnel also enforce State boating and snowmobile rules and State park regulations, as well as private property laws and hunting and fishing regulations.

Wildlife Division.—The Wildlife Division is responsible for managing all species of wildlife, including big game, threatened and endangered species, upland game and nongame birds, and waterfowl in the State.

Fisheries Division.—The Fisheries Division is responsible for the management and perpetuation of Montana's fish and other aquatic resources.

Conservation Education Division.—The Conservation Education Division acts as a clearing-house for information on MFWP activities and news items to the media and conducts a variety of educational and recreation-safety programs.

Parks Division.—The Parks Division is responsible for development, maintenance, and operation of all State parks and affiliated sites, with an objective of providing diverse recreational opportunities while preserving important historical and heritage resources within Montana.

Field Services Division.—The Field Services Division is responsible for MFWP's lands program and construction projects as well as its Block Management (public hunting access) and landowner-hunter relations programs.

Administration and Finance Division.—The Helena-based Director's Office staff makes major policy and administrative decisions. Regional supervisors handle on-the-ground implementation of policies and programs. The Administration and Finance Division is responsible for budgeting, accounting, purchasing, personnel, data processing, and administration of MFWP's licensing functions.

Lewis and Clark and Broadwater County Sheriff's Departments

Lewis and Clark and Broadwater County Sheriff's Departments enforce State and local laws on Reclamation-controlled lands at Canyon Ferry Reservoir. Reclamation has entered into agreements with both counties to have the Sheriff's Offices provide extra patrols on Canyon Ferry lands.

Montana Department of Justice Highway Patrol

The Highway Patrol Division is the traffic law enforcement division of the Montana Department of Justice. The Montana Highway Patrol is responsible for highway traffic safety

management for the State of Montana, including investigations, enforcement, and education. Highway Patrol officers patrol highways within the State to ensure that traffic is moving safely, to provide assistance to highway users, and to prevent accidents. In addition, officers respond to requests for assistance from other city, county, State, and Federal law enforcement agencies.

Montana Department of Natural Resources and Conservation, Division of Forestry

Reclamation has entered into an agreement with the Montana Department of Natural Resources and Conservation, Division of Forestry, to provide wildfire protection for the Reclamation-administered lands in Lewis and Clark County.

Broadwater County Silos Recreation Management Agreement

Reclamation has entered into a 10-year agreement with Broadwater County to manage part of the Silos Recreation Area for public recreation and resource uses. Broadwater County will manage, operate, and maintain all public recreation facilities in the area granted to them. Broadwater County can add new facilities, charge and retain fees for use of the facilities, and develop commercial services in their area. Reclamation will retain primary jurisdiction over the area. Any development or changes in management practices will be accomplished in a manner consistent with this Resource Management Plan/Environmental Assessment.

Broadwater County Rural Fire District

Reclamation has an agreement with the Broadwater County Rural Fire District to provide wildland and structural fire protection on Reclamation lands within Broadwater County. Satellite stations at the communities of Winston and Duck Creek can be backed up further by stations at Toston and Radersburg.

Canyon Ferry Volunteer Fire Department

The Canyon Ferry Volunteer Fire Department, under the guidance of the Canyon Ferry Fire Service Area Board of Trustees, provides structural and wildland fire protection within the Canyon Ferry Fire District in Lewis and Clark County. The Canyon Ferry Volunteer Fire Department has two fire stations; one is located on East Shore Drive at Magpie Bay, and the other is near Yacht Basin on West Shore Drive. Equipment staged at these two locations includes two 1,500-gallon tenders, two brush trucks, two engines for structural protection (each

with 800- to 1,000-gallon tanks), six pumps, and two portable tanks with 2,500- to 3,000-gallon capacities. A cistern has been installed opposite the Lewis and Clark Day-Use Area on West Shore Drive, and a second is planned for the south end of East Shore Drive.

As of October 2002, Reclamation set aside four tracts of land for use as fire stations. Two sites are existing fire stations, one on each side of the reservoir. Two sites are for additional, future satellite fire stations, one on each side of the reservoir. Reclamation is working with the General Services Administration to donate these lands to the Canyon Ferry Fire Service Area. In addition, Reclamation has set aside several sites for additional fire and emergency services. On the west shore, there are five emergency service access easements, two future emergency service turnaround areas, two fire department dry hydrant sites, and one future cistern site. On the east shore, there are six future emergency service turnaround areas, two emergency service access easements, two fire department dry hydrant sites, one future cistern site, one future fire station access roadway easement, and one vehicle turnaround area. All of these sites were dedicated for the public services noted above on Certificate of Survey No. 3006402, recorded September 9, 2001, in the Lewis and Clark County records.

Broadwater County Mosquito Abatement District

Broadwater County formed the Broadwater County Mosquito Abatement District to control mosquitos in the area around Townsend, Montana. Reclamation entered into an agreement with the district to provide mosquito control for Reclamation-controlled lands at the south end of Canyon Ferry Reservoir. The agreement covers about 1,920 acres but concentrates on approximately 300 acres on the southwest corner of the reservoir. Typically, mosquito problems occur when there is a full reservoir pool and low-lying areas are flooded. The agreement specifies that a specific larvacide will be used for the spraying and that a report outlining the amount, location, and timing of the application will be prepared.

PPL Montana (Formerly Montana Power Company)

PPL Montana holds the senior water rights on the Missouri River and, thus, has first rights to the Missouri River flow. Those water rights include flows for seven hydroelectric powerplants below Canyon Ferry Dam. These powerplants are: Ryan, Cochrane, Holter, Morony, Rainbow, Black Eagle, and Hauser. Today, Northwestern Energy supplies power to the reservoir area except for the dam, powerplant, and Canyon Ferry Village, which are supplied by Reclamation.

On December 17, 1999, PPL Montana, a subsidiary of PPL Resources of Allentown, Pennsylvania, and the Montana Power Company signed the final agreement to transfer to PPL Montana 11 hydroelectric powerplants (includes the 7 mentioned above), 1 storage reservoir, and interests in 4 coal-fired powerplants and other related assets. Other assets, in part, included inventories associated with the powerplants.

Aeronautics Division, Montana Department of Transportation

The operation of aircraft on Reclamation lands is prohibited, except on landing areas designated by Reclamation's Regional Director. Except in extreme emergencies, the air delivery of any person on land or water is prohibited without written permission from the Regional Director. This provision does not apply to official Reclamation business or emergency or forced landings; however, it does apply to recreational float plane use. In addition, all designated landing areas shall be marked by posting appropriate signs and landing markers and will be included on State aeronautical maps used by private and commercial aircraft pilots. All Federal Aviation Administration and State standards apply.

The use of Canyon Ferry Reservoir water surface by owners of recreational sea planes would require a special use authorization permit issued by Reclamation. The duration of such a permit and other conditions and stipulations would be included in the use authorization document.

The Aeronautics Division of the Montana Department of Transportation has a permit to conduct public airport activities at the Canyon Ferry air strip, located on the west edge of Silos Recreation Area (see "Affected Environment" under the "Land Use" section of chapter V). The division foresees potential for both recreational and private commercial use of the airport, which would benefit aviation, tourism, and aviation infrastructure in the State.

As of January 2003, Reclamation is working with the Aeronautics Division, Broadwater County, and other interested entities to transfer ownership of the land for continued use as an airport. The Aeronautics Division has indicated that they are not interested in owning additional airports or facilities in Montana.

Montana Office of Public Instruction

In December 1996, Reclamation leased about 10 acres of land near the dam to the Montana Office of Public Instruction (OPI) for 20 years. Reclamation also sold the houses, buildings, and boat ramps to OPI. The land and buildings are located at the Government Camp near the Reclamation office at the reservoir. OPI leases the buildings to the Montana Science Institute, which performs public education and research activities.

Corps of Engineers and Conservation Districts

The Corps of Engineers, conservation districts, and MFWP issue permits through a joint application process for modification, alteration, placement, removal, and other activities near

or within the high water mark of Canyon Ferry Reservoir. This includes boat docks, retaining walls, and other erosion-control structures. The applicability of permitting requirements depends on the project.

Lewis and Clark County Health Department

The Lewis and Clark County Health Department has been actively engaged in design review, issuance of septic system permits, and approval of construction for those Reclamation cabin sites that did not have valid septic system permits.

Other Policies

Reclamation policies also exist for the disposal and use of timber; sand, gravel, and other minerals, and building materials; resolution of unauthorized use and trespass; and use and management of flood plains.

Burning permits on Reclamation lands are issued by the appropriate county. Depending on the magnitude of the area to be burned, the Montana State Air Quality Bureau may need to issue a permit.

ADJACENT LAND USE

Most Reclamation land is adjoined by privately owned land. Most of this land is farmland. The principle use is grazing, with some cropland, mainly small grains. Most of the small grains are located on the east side at the south end of the reservoir. The southwest portion of the reservoir is adjoined by grassland. Some private landowners are developing housing on these grasslands.

Federal lands adjacent to and near the study area are administered by BLM and the U.S. Forest Service (USFS). These agencies manage the lands for multiple use and are responsible for the management of a wide variety of renewable and nonrenewable resources. Some of the resources they manage are soils, water, timber, grazing, minerals, wildlife habitat, recreation, and heritage resources. The USFS and BLM are currently doing a travel management plan for the Big Belt Mountains and the Spokane Hills areas.

The State of Montana administers some lands adjoining Reclamation lands. There are several sections of State land within a mile of the Reclamation boundary. This land is leased for grazing or cropland.

Chapter III – Planning Issues, Opportunities, and Constraints

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Chapter III

Planning Issues, Opportunities, and Constraints

INTRODUCTION

This chapter describes the key factors that influenced the development of the Resource Management Plan/Environmental Assessment (RMP/EA). Bureau of Reclamation (Reclamation) land use planning focuses on resolving issues that arise over the use and management of public lands and resources. An established planning process was followed for the preparation of the RMP/EA (see figure III-1). 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. Issues concerning the conflicting demands for consumptive and nonconsumptive uses of the land have been identified. The basic challenge is to protect natural and heritage resource values while allowing uses that have a minimum effect on these resources. The key factors that influenced development of the RMP/EA resulted from the following two areas of investigation:

- Collection and review of existing resource data, including review and update of the information provided by a private consultant for the preparation of a draft RMP/EA in 1993 that was never finalized

- Public involvement and Reclamation review of internal programs and policies to identify issues, goals, and objectives

The planning issues, opportunities, and constraints identified in these investigations allowed Reclamation to formulate the necessary management actions and implementation strategies outlined in Chapter VI, Resource Management Plan. The environmental impacts of implementing the management actions are addressed in Chapter V, Affected Environment and Environmental Consequences.

PLANNING ISSUE IDENTIFICATION

To identify issues pertaining to the management of Canyon Ferry Reservoir, the RMP/EA planning effort incorporated a public involvement process, as described in chapter I. In

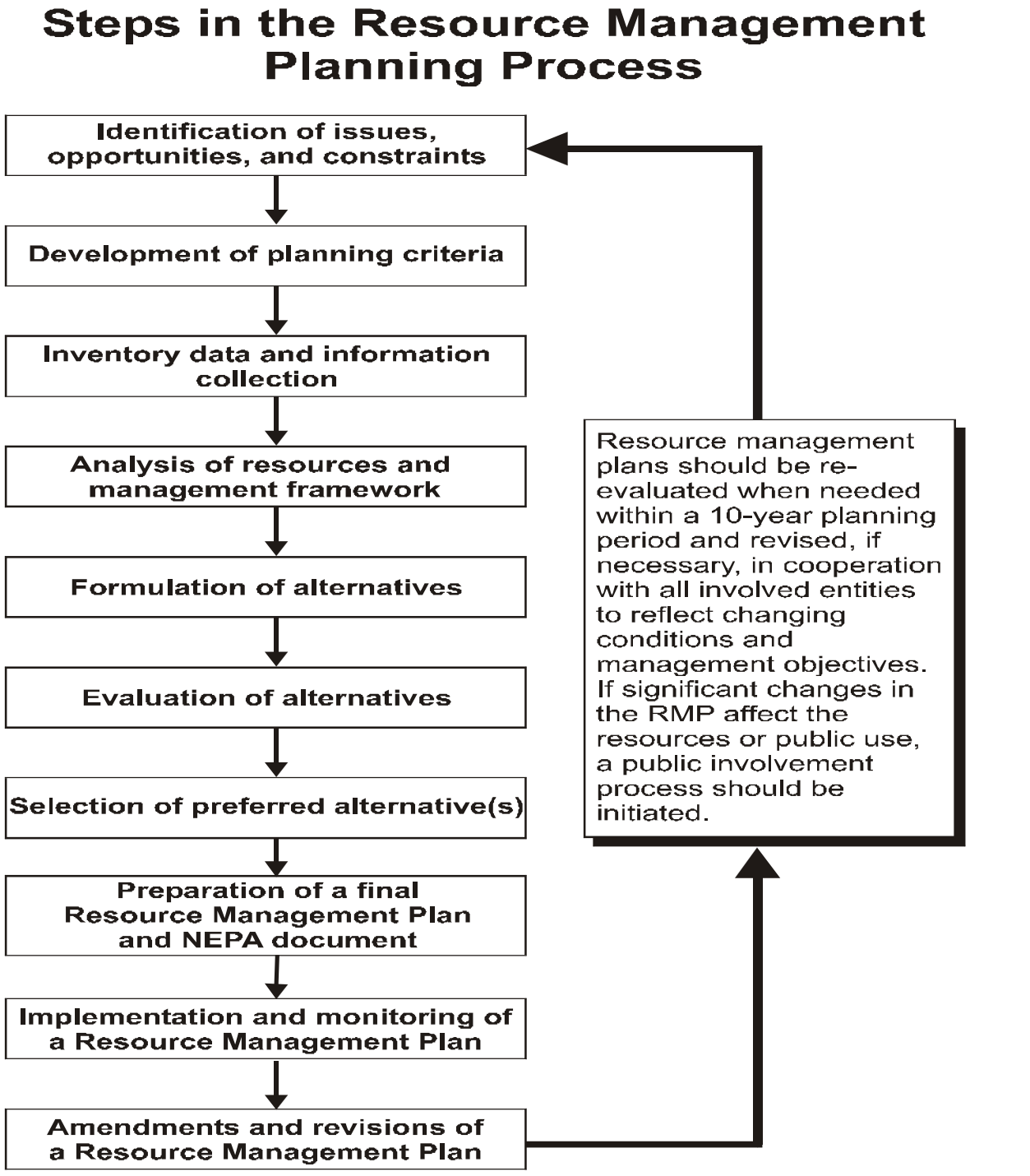

Figure III-1.—Steps in the resource management planning process.

addition, resource specialists and managers also reviewed Reclamation policies and procedures to identify issues and concerns. The variety of issues and concerns identified by Reclamation was similar to the variety of issues and concerns identified by the public. The issues and concerns were then grouped into issue categories. The general issue categories helped to (1) define the scope of each issue and concern and (2) develop specific goals and objectives to address each issue and concern. Eight issue categories were identified. Some issues, concerns, and comments expressed by the public were determined to be outside the scope of this RMP/EA and were not incorporated in an issue category. An explanation of why they were not considered further in this document is provided at the end of chapter IV. The seven issue categories addressed in this RMP/EA are:

- **R** Access management
- **R** Recreation management
- **R** Heritage resources
- **R** Health and safety
- **R** Wildlife resources
- **R** Public information
- **R** Land use

The description of each issue category follows.

Access Management

This issue category pertains to the need to provide better access to the reservoir area, closure of some access points, repair and maintenance of existing access routes, and signing of roads. It is Reclamation's intent to provide access for general public use, not to provide exclusive use for individuals or groups. Reclamation may consider realignment of roads and access to the reservoir from adjacent private lands.

Recreation Management

This issue category pertains to accommodating existing and future recreation demand, decreasing user conflict, dispersing users, and providing quality recreation opportunities, while protecting the environmental resources of the area.

Heritage Resources

This issue category pertains to the need to protect and provide for interpretation of these resources, which include historic, prehistoric, and paleontological sites.

Health and Safety

This issue category pertains to the posting of rules and regulations governing the use of the area; providing a safe, healthy, and enjoyable environment and experience for the visiting public; providing safe and usable facilities; and providing an acceptable level of law enforcement throughout the study area.

Wildlife Resources

This issue category pertains to preserving, protecting, and enhancing wildlife areas and, where appropriate, establishing additional Wildlife Management Areas (WMA) which support some level of recreation use. It also includes information pertaining to the bald eagle viewing program at Canyon Ferry Reservoir.

Public Information

This issue category pertains to providing a variety of public information about reservoir conditions and recreation opportunities through different media (e.g., Internet, brochures, radio, maps, and pamphlets).

Land Use

This issue category pertains to the need for weed control, bank stabilization, and concerns related to Reclamation's land use planning and the implications to adjacent landowners.

MANAGEMENT OPPORTUNITIES

This RMP offers opportunities to provide solutions to the issues and concerns raised by the public. Reclamation has determined that implementation of appropriate management actions is essential for the successful management of Canyon Ferry Reservoir resources. Implementation of an RMP can reverse any downward trends in the quality of natural resources within the study area and can create a positive visitor experience by meeting the needs and desires of the visitors to Canyon Ferry Reservoir.

Opportunities exist to enhance, protect, and interpret the unique historic resources of the area, such as the cemetery on Cemetery Island. There are also opportunities to provide a wide variety of recreation facilities and opportunities throughout the reservoir area, while not harming existing environmental resources.

Isolation from human disturbance is critical to the attractiveness of areas for waterfowl during the brood-rearing stage and spring and fall migrations. Some potential may exist to work with adjacent landowners to make their fields more productive for migrating waterfowl. Habitat for upland game birds could also be enhanced with the cooperation of area landowners.

A wildlife interpretive program, taking into account habitat protection and wildlife needs, could be developed around the reservoir and at the WMA in particular. This could include signing, disabled-accessible sites, naturalist tours, and walking and biking tours. The program could serve to diversify the attractions of the area, especially at the south end of the reservoir.

Cost-sharing opportunities with other Federal, State, and local entities could increase Reclamation's capability to successfully manage Canyon Ferry Reservoir. Public-private partnerships should be considered in future management strategies. Local organizations and citizen groups could directly or indirectly support management of the area. At a time when Federal, State, and local funding for recreation development and operation and maintenance is decreasing, public demand for outdoor recreation is increasing. The leveraging of funds through grants and cooperative agreements is important if land management agencies wish to meet this future demand. Following are three examples of funding and management opportunities available to Reclamation for management of the area.

Federal Assistance to Sport Fish Restoration Program

The Federal Assistance to Sport Fish Restoration Program, which includes the Wallop-Breaux Amendment, provides Federal funds to State game and fish departments to develop fishing access facilities, such as boat ramps, restrooms, courtesy docks, and parking areas. State game and fish departments will accept proposals from other entities to enhance fishing opportunities in the State. Federal funds supplied to the State pay 75 percent of the costs, and the other 25 percent is paid either by the State, another cost-share partner(s), or divided between partner(s). The fact that Reclamation is a Federal agency does not preclude it from requesting funds from the Montana Fish, Wildlife and Parks (MFWP) for fishing access facilities. If the need is justified, the State can fund the total cost of such improvements through the above-mentioned restoration program.

1998 Transportation Equity Act for the 21st Century (TEA-21)

Eligible projects under the Public Lands Highway Discretionary Fund include, but are not limited to, planning for Federal programs that benefit recreation development, parking,

interpretive signage, acquisition of certain lands, trails, roadside rest areas, and sanitary and waste facilities. Efforts to identify proposed projects should be coordinated between Federal, State, and local entities. Specifically, close coordination with the State and Federal highway departments should occur at the early stages of project identification and formulation.

Reclamation Recreation Management Act of 1992, Title 28

The Reclamation Recreation Management Act of 1992 is an amendment to the Federal Project Recreation Act of 1965, Public Law (P.L.) 89-72, that provides up to 50 percent Federal cost sharing for the planning and construction of recreation facilities with non-Federal public entities. It also provides 75 percent Federal cost sharing for fish and wildlife enhancement. Non-Federal public entities that have agreed to manage developed facilities and lands at Reclamation water projects work with local Reclamation offices to identify proposed projects for funding. Congressional funds are appropriated annually and distributed for selected projects.

Section 7(c) of P.L. 89-72 gives Reclamation clear authority to contract with other Federal agencies to manage Reclamation lands. However, the question is whether the other agencies have the inherent authority to do what Reclamation might ask them to do on Reclamation lands. The constraints to another Federal agency managing Reclamation lands are discussed below under "Federal Agency Constraints."

MANAGEMENT CONSTRAINTS

When addressing management changes and other actions, agencies are constrained by their respective legislative authorities, budgets, personnel, current policies, and environmental limitations. The policies affecting management have been discussed in Chapter II, Management Framework. The ability of land management 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. The following discussion addresses the legislative and environmental constraints associated with the study area.

Legislative Constraints

When project planning and/or development are being considered on Federal land, there are rules, laws, and Executive orders that may be triggered. These include, but are not limited to, those previously mentioned in chapter II and the Clean Water Act, Clean Air Act, Americans

with Disabilities Act, and the National Environmental Policy Act (NEPA). For example, if management recommendations involve a Federal action that causes a site disturbance, a heritage resource inventory would have to be conducted before implementing the action. These legislative mandates require Federal land management agencies to consider the effects of its management decisions on endangered or threatened species, water quality, Indian Trust Assets, recreation, fish and wildlife, and heritage resources.

MFWP's management of lands within the WMA is restricted to those State laws, regulations, department policies, and goals and objectives governing the use of such lands. State laws to be considered include the Montana Environmental Policy Act and other State and local laws and ordinances (such as the Streambed Protection Act). Since MFWP operates on Federal lands at the reservoir, it must also comply with all Federal laws, such as NEPA.

Operating Canyon Ferry Reservoir for flood control, irrigation, power generation, and other downstream purposes limits Reclamation's ability to manage exclusively for recreation and for natural resources. Reclamation has a limited opportunity to change the historic operation of the project because of its contractual obligations to the Helena Valley Irrigation District and other users of project water, such as PPL Montana. This RMP/EA does not address changes to project water operations; therefore, existing authorities, as well as operating requirements and contractual obligations, may constrain the development of recreation facilities and the enhancement, development, and protection of natural resources.

Federal Agency Constraints

Generally speaking, the authority for Reclamation and other Federal agencies to function comes from the Property, Commerce, and Tax and Spend for the General Welfare Clauses of the Constitution. That authority, however, is granted to the Congress, not to the Executive Branch. Thus, the various agencies function on the basis of delegation of authority from the Congress in the form of statutes. The Reclamation Act of 1902, BLM's Federal Land Policy Management Act of 1976, and the USFS's National Forest Management Act of 1976 are examples of acts which delegate congressional authority to the Executive Branch. As discussed above, Section 7(c) of P.L. 89-72 is clear in delegating Reclamation authority to contract with other Federal agencies to manage Reclamation land; however, the other agency must have congressional authority and the expertise necessary to perform the responsibilities Reclamation may wish to convey. In addition, the disposition of the fees collected on Reclamation land by another Federal agency would have to be addressed. Certain fees may have to be deposited in Reclamation's treasury account, as opposed to another Federal agency's account, or deposited in the Reclamation fund as a credit to the project. In either case, the fees collected by another Federal agency would not be available for on-site use to defer the costs of operation and maintenance. Before another Federal agency can assume management responsibilities of Canyon Ferry Reservoir, certain legal questions will have to be resolved.

Environmental Constraints

Limiting factors, such as slopes, soils, wetlands, critical habitat, and the lack of an adequate land base, can constrain future development. (See figures V-7, V-8, and V-9 for areas that have limitations to development.) Facilities should not be located on unstable soils, extreme slopes, on or near wetlands and critical habitat areas, or within land areas that do not have a sufficient land base to accommodate such development (e.g., the physical carrying capacity of the land may be exceeded). The existence of any one of the following factors would make an area less suitable for recreation development:

- **R** Presence of a wetland or riparian vegetation or habitat
- **R** Sensitive habitat for certain wildlife species
- **R** Poor soils for constructing foundations and installing septic systems
- **R** Reservoir inundation zones (e.g., 100-year flood plain)
- **R** Slopes greater than 10 percent
- **R** Shoreline erosion areas, especially cliffs that are undercut by wave action
- **R** Hazardous geologic conditions, such as a fault zone

Carrying Capacity Constraints

Carrying capacity can be described as the ability of a resource to accommodate a user population at a reasonable threshold without the user population negatively affecting the resource. Carrying capacity levels for Canyon Ferry Reservoir have not been determined. Even though some public comments suggest that carrying capacity limits for some areas and facilities at certain times of the year are near their tolerable limits, the management actions to moderately increase facilities and opportunities identified in this RMP/EA should not cause any carrying capacity limitations to be exceeded within the 10-year planning period. Proper site planning, site-specific NEPA compliance, and use of Geographic Information System (GIS) mapping should identify any potential social, physical, facility, and environmental carrying capacity issues. Studies to be conducted by the University of Montana within the 10-year planning period and described later in this document will assist Reclamation in monitoring capacity levels. This monitoring will allow for corrective measures to be implemented, if necessary.

Carrying capacity can be subdivided into four categories: (1) social, (2) physical, (3) environmental (or ecological), and (4) facility.

Social Carrying Capacity: Social carrying capacity can be described as the impacts that resource users have on one another. The number, type, and location of recreation users encountered sometimes affect the recreation experience. The social carrying capacity differs among users and depends on the type of experience sought and the tolerance of the individuals or groups using the resource. For example, a recreationist seeking a wilderness experience will not tolerate the sights and sounds of other recreationists, while a user of an urban environment not only tolerates but expects to encounter other users. Social carrying capacity also depends on the availability, size, use, and management of the resource. Canyon Ferry Reservoir has a sufficient land base and adequate vegetative and topographic screening to alleviate some of the conditions that would lead to social carrying limits being reached. The challenge is to accommodate increased visitor use by dispersing users throughout the reservoir area, providing a quality recreation experience, and decreasing user conflicts. If dispersing use does not prevent user conflicts, then actions to limit use in certain areas may have to be implemented.

Physical Carrying Capacity: Physical carrying capacity can be described as the area that is available to a recreationist for a specific recreation activity. The large size of the study area should accommodate a wide variety of recreational development, activities, and users. The challenge is to provide adequate access to the public, while optimizing the number and variety of recreational opportunities within the available land base.

Environmental Carrying Capacity: Environmental (or ecological) carrying capacity can be described as the effects that a level of recreation use will have on resources such as vegetation, fish, wildlife, soils, water, and air. Activities with high impact, such as off-road vehicle use, can have a detrimental effect on natural resources. The challenge is to provide an adequate number of facilities and opportunities to meet existing and future demand without negatively impacting the environmental resources at Canyon Ferry Reservoir.

Facility Carrying Capacity: Facility carrying capacity can be described as the ability of an existing facility to accommodate the current level of recreation use. User conflicts can result if a facility has reached its carrying capacity limits. As visitation continues to increase at Canyon Ferry Reservoir, the challenge is to provide an adequate number of additional facilities within the study area to prevent existing facilities from being abused by overuse. Construction of additional facilities would also prevent future user conflicts that would likely occur as facilities reach their capacity limits.

When the social, physical, environmental, and facility carrying capacities are exceeded, the natural and human resources can be negatively affected, and the users can be displaced to substitute areas or to other recreation or nonrecreation activities. Except for peak holiday weekends, Canyon Ferry Reservoir's 9,360 land acres and 33,500 water surface acres at elevation 3797 provide an adequate area to accommodate facility expansion to meet existing and future recreation demand without exceeding the above-mentioned capacity limits. Reclamation does not plan to develop facilities to accommodate peak holiday use during the summer recreation season because those facilities would be underutilized during other times of

the year. However, it would be prudent to monitor public use to identify potential impacts and ensure that the capacity limits mentioned above are not exceeded. If negative impacts are identified, management strategies, other than those outlined in this document, will have to be considered.

Geographic Information System Constraints Mapping

GIS mapping has been used to delineate specific environmental resources within the study area. With GIS mapping, it is possible to identify areas that have constraints or limitations for development. It provides a tool to determine if suggested management actions might be compatible with the existing use of the land.

Constraints Mapping.—There are various naturally occurring phenomena and conditions that may limit or influence human activity within the study area. Although more than one management alternative will be developed for this plan, each must take into account potential associated environmental impacts. For these reasons, and for the benefit of making daily management decisions, natural constraints are mapped in figure V-9 and discussed below.

100-year flood plains. Per Executive Order 11988, these are estimated 100-year flood plains based on Federal Emergency Management Administration data. Building in flood plains is generally avoided; however, if it is not avoided, the builder must adhere to flood plain rules administered by the county. Septic tank drain fields are prohibited in flood plains, and structures must be elevated above the flood plain. Many recreational improvements, such as roads, picnic tables, and landscaping, are compatible with flood plain management.

Prime soils if irrigated. Most soil types in this designation are prime if irrigated. Soils information is taken from the Natural Resource Conservation Service soils surveys for Broadwater and Lewis and Clark Counties.

Wetlands. A vegetation survey prepared by OEA Research, 1991, showed that many shoreline areas around the reservoir meet Federal jurisdictional wetland criteria. Wetlands are not necessarily wet at all times but exhibit a combination of soils and vegetation that is influenced by water. Wetlands can be extremely productive habitat, and their uniqueness has prompted Federal regulations preventing their conversion to other uses.

Bald eagle use area. Bald eagles, which are a threatened species under the Endangered Species Act (ESA), concentrate below Canyon Ferry Dam because of spawning kokanee salmon concentrations. Eagles congregate here from October through December. The ESA protects threatened and endangered species. The Hauser Dam Bald Eagle

Management Strategy defines use restrictions for the concentration area; human activity here has been managed by a USFS-MFWP-BLM-Reclamation-Fish and Wildlife Service-PPL Montana-Lewis and Clark County management team.

Bald eagle nesting area. An active nest site in this vicinity could restrict human activity from February 15 through August 15. Cooperating agencies maintain some flexibility to change dates and strategies as more is learned about each specific situation. Recreation improvements will need to be compatible with the eagles' territorial needs to minimize disturbance of the young.

Bald eagle spring use area. From March 1 through April 15, the spring migration of bald eagles congregates to feed and rest in this area. Generally, recreation uses here, such as ice fishing and ice boating, would not conflict since the eagles would not use the area until after the ice thaws.

Bald eagle potential nesting habitat. Area wildlife managers agree that the Missouri River delta appears to be the most suitable habitat remaining on the reservoir for attracting nesting pairs of bald eagles. If bald eagles did expand into this area, use restrictions could be considered between February 15 and August 15.

Noise-sensitive areas. Use of loud recreational or other mechanized equipment, in combina-tion with the narrow topography at Magpie, Cave, and Canyon Ferry Village Bays, results in noise conflicts between recreationists and cabin site users as well as recreationists using campgrounds and day-use areas.

Critical mule deer winter range. Mule deer depend on this area from about mid-November to mid-March. Critical winter range provides preferred forage and is often open when other areas are snow covered. Area managers propose that recreational development be restricted to those uses that are compatible with winter range and that minimize disturbance to deer.

Waterfowl staging areas. Staging is the phenomenon of waterfowl gathering before spring and fall migrations. On Canyon Ferry Reservoir, major staging bays are at Avalanche and Duck Creeks. In the spring, birds are present from the time the ice leaves the reservoir until about mid-April. In the fall, staging takes place from early-September until freezeup. Wildlife managers are concerned that these areas may need seasonal use restrictions for onshore and offshore uses and prefer that the shoreline remains roadless, when possible.

Waterfowl brooding areas. Brooding (raising of young) takes place at Beaver Creek and on the WMA. The critical waterfowl brooding period is from the first of May until mid-July, when the young birds take flight.

Trout spawning habitat. MFWP has made considerable investment in maintaining adequate spawning habitat in Confederate Bay and Creek. The tailrace of the powerplant and both sides of the shoreline below the dam in the study area are spawning areas for kokanee salmon and rainbow and brown trout. Potential trout spawning habitat exists at Beaver, Duck, and Magpie Creeks. Concerns in these areas pertain to damage to riparian vegetation, diminished water quality, and providing inadequate enforcement to stop illegal killing of spawning trout. Any dredging near shallow stream inlets should be avoided.

Critical antelope range. Antelope depend on this area year round. As habitat has diminished, due to both residential and recreational development, undeveloped areas have become more critical to antelope survival. The prime considerations of area managers are that Silos Recreation Area be defined and motorized vehicle use be restricted to maintain as much open space as possible within the range.

Increased rural development has caused conflicts, especially between antelope hunters and rural residents. With antelope herds on both sides of the reservoir and the potential for increased development on adjacent private lands, these conflicts are expected to worsen. Increased development on public lands has the potential to displace wildlife from those areas to private lands. Although this would decrease the safety concerns on public lands during the hunting season, it increases the concerns of private landowners, removes public lands from the habitat base, and makes it more difficult to manage antelope populations.

Chapter IV – Alternatives

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Chapter IV

Alternatives

INTRODUCTION

This chapter discusses the process used to formulate alternatives, describes the alternatives in detail, and provides summary comparisons of the alternatives and their impacts on resources at Canyon Ferry Reservoir.

ALTERNATIVE FORMULATION

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.

As discussed in chapter I, the proposed Federal action is to prepare and implement a Resource Management Plan (RMP) for Canyon Ferry Reservoir. The NEPA alternative formulation process facilitates the planning process by providing a mechanism by which the Bureau of Reclamation (Reclamation), with 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 document details Reclamation's planning and NEPA processes for developing the Resource Management Plan/Environmental Assessment (RMP/EA).

Planning criteria were established to assist in formulating and selecting combinations of land uses and management actions that could reasonably be implemented. Using the planning criteria as a guide, Reclamation developed two reasonable action alternatives (i.e., alternatives that prescribe a change in resource management). In addition to the action alternatives, NEPA requires consideration of a No Action Alternative (i.e, an alternative describing the management of Canyon Ferry Reservoir absent implementation of an RMP). Based on the following criteria, each action alternative would:

- **R** Meet the public need as expressed during the planning and NEPA process (i.e., during open houses, public meetings, and in correspondence) and meet the goals and objectives formulated in response to the issues and concerns identified

- **R** Comply with applicable Federal, State, and county laws, regulations, and policy, while not interfering with authorized project purposes

- **R** Provide the public with a variety of recreational opportunities, yet reduce user conflicts

- **R** Protect and enhance Canyon Ferry Reservoir's environmental resources

- **R** Provide for the rehabilitation or replacement of existing facilities to correct deficiencies before construction of new facilities is considered

- **R** Provide for construction of new facilities pursuant to Title X of Public Law (P.L.) 105-277 (Title X), as amended

- **R** Balance expansion efforts with user needs, environmental protection, and anticipated funding and personnel limitations

- **R** Provide for partnership opportunities and shared responsibilities

- **R** Plan for sufficient funding for operation and maintenance (O&M) of constructed facilities

The alternatives formulated include the following:

- **R** No Action Alternative (Alternative A)

- **R** Natural Resource Enhancement with Moderate Recreation Development (Alternative B) (Preferred)

- **R** Natural Resource Enhancement with Maximum Recreation Development (Alternative C)

To develop these alternatives, a Reclamation interdisciplinary team determined the elements and/or management actions that would best address the identified issues. The team then combined the various elements into the two action alternatives. Each alternative would achieve a different desired future condition at Canyon Ferry Reservoir, if implemented. Specific RMP goals and objectives and management actions for achieving the desired future condition are contained in Chapter VI, Resource Management Plan.

Under **Alternative A**, a minimum number of facilities could be provided to meet basic public health and safety needs and demands. Resource management practices would not change. Management actions would occur on a case-by-case basis to meet Federal, State, and local laws and regulations.

Under **Alternative B**, a moderate number of facilities would be provided, including day-use facilities, some additional overnight camping sites, new boat ramps, and trails. In addition, substantial efforts would be made toward improving existing facilities and recreational opportunities.

Under **Alternative C**, a maximum number of fully developed day-use sites, overnight campground sites, trails, and opportunities would be provided.

Table IV-1 compares the elements or actions contained in each alternative. The elements or actions will be accomplished solely by Reclamation or by Reclamation in cooperation with other entities. Additional information about each alternative follows table IV-1.

Table IV-1.—Comparison of alternative elements

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Access for People With Disabilities	Continue to conduct accessibility evaluations of all facilities and programs (to include evaluation of offices).	Same as Alternative A, plus develop an adequate number of accessible day-use and campground sites. Make all or portions of new trails accessible to people with disabilities. Make interpretive displays/information accessible to people with disabilities. All upgrades and/or new developments will meet Americans with Disability Act standards.	Same as Alternative B.
Airport	Reclamation will continue to work with the Montana Aeronautics Division and other interested parties on the disposition of the Silos area airport. Reclamation will determine the need to retain the airport lands for Reclamation project purposes before any land transactions occur.	Same as Alternative A.	Same as Alternative A.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Boat Ramps	Construct boat ramp at Silos pursuant to Broadwater County's development plan and Title X. Pursue replacing boat ramps at Kim's and Yacht Basin and extend ramp at Shannon. Goose Bay boat ramp will be replaced in 2003.	Same as Alternative A, plus based on the Facilities Condition Assessment and site-specific recreation master plan, upgrade certain boat ramps (including lengthening) to allow for safe access when reservoir is low and when there are high winds. Consider upgrading the boat ramp and parking area at Hellgate Recreation Area. Provide adequate boat docks at boat ramps to prevent user conflicts and to address safety concerns, such as high winds. Evaluate the need to install a boat ramp at Duck Creek.	Same as Alternative B, plus construct boat ramps at the new Scooter Bay recreation site. Install a boat ramp in the Confederate Bay area on east side of reservoir to improve safety conditions during storms, etc., and to disperse users. Install boat ramp at Duck Creek.
Buoys (also see "Health and Safety")	The number and location of existing buoys will be maintained at the 2002 level.	Install buoys at designated swim beaches, boat launch areas, and other places, as needed, and comply with MFWP regulations for designating no wake zones.	Same as Alternative B.
Campgrounds	Develop new (and upgrade existing) overnight camp-sites at Silos Recreation Area, pursuant to Broadwater County's development plan and Title X. Continue O&M of other campgrounds at the existing level.	Same as Alternative A, plus Reclamation will rehabilitate and/or expand existing campgrounds based on the results of the Facilities Condition Assessment and after a site-specific recreation master plan has been pre-pared for each campground needing changes. Appropriate setbacks from streams and lakes will be maintained when camp-ground developments occur.	Same as Alternative B, except for development of new campground at Scooter Bay. Develop a new full-service campground loop at Hellgate Recreation Area. Develop additional camping loop east of existing sites at Indian Road recreation site. Confederate Bay will be upgraded to a full-service campground.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Campgrounds (continued)		Based on the results of the Facilities Condition Assessment and the recreation master plan, Reclamation will first look at rehabilitating and/or expanding the campgrounds at White Earth, Hellgate, Indian Road, Riverside, Jo Bonner, Court Sheriff, and Chinamen's Gulch. An immediate need to focus on these recreation sites first was identified during the planning process used to prepare this RMP/EA. Based on the results of the Facilities Condition Assessment and completion of the site master plan for Confederate Bay, consideration will be given to closing and revegetating roads, installing vehicle barriers, and signing needs along State Highway 284. The scope of rehabilitation and/or expansion efforts at other recreation sites will be assessed on a case-by-case basis and after conducting a Facilities Condition Assessment and preparing individual site master plans.	
Carrying Capacity Limitations	Capacity limits would be determined prior to major capital investments.	Same as Alternative A, plus initiate two University of Montana studies to identify social and facility carrying capacity issues and to assist in monitoring capacities.	Same as Alternative B.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Carrying Capacity Limitations (continued)		Use Geographic Information System mapping to avoid exceeding environmental capacities and to aid proper site planning to address physical carrying capacity issues.	
Concessions	Any proposals to provide new commercial services must be presented to, and evaluated by, Reclamation. If approved by Reclamation, the opportunity to provide the new commercial service should be competitively offered to prospective operators. Work with Broadwater County to establish an appropriate concession operation at Silos. Reissue existing concession contracts pursuant to Reclamation policy. Kim's and Yacht Basin Marina will be offered extensions on their concession contracts to allow Reclamation time to complete a Commercial Services Plan.	Same as Alternative A, plus identify existing guides and outfitters doing business at Canyon Ferry Reservoir and issue special use permits, if appropriate.	Same as Alternative B. Establish capacity limits for identified guides and outfitters.
Day-Use Areas	Develop new day-use facilities at Silos Recreation Area pursuant to Broadwater County's development plan. Continue O&M of other day-use areas at the existing level. No existing day-use areas will be converted to overnight campgrounds.	Same as Alternative A, plus existing day-use areas would be upgraded and/or expanded based on the results of a Facilities Condition Assessment and preparation of individual site master plans. Expand and improve the day-use site below the dam at Riverside based on the results of the Facilities Condition Assessment and site master plan.	Same as Alternative B, plus develop other potential sites based on demand and site suitability.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Day-Use Areas (continued)		Based on the results of the Facilities Condition Assessment and after completion of a site master plan for Cemetery Island, consideration will be given to improving the existing trail, installing information signs, and investigating alternatives for pumping the existing toilets. Appropriate setbacks from streams and lakes will be maintained when day-use developments occur.	
Deep Water Bay	Develop the deep water bay at Broadwater Bay (Silos).	Same as Alternative A.	Same as Alternative A.
Eagles	Continue cooperating with the Montana bald eagle working group. Continue with the seasonal closure of Eagle Bay Drive during bald eagle migration if the eagle count is above 50. Continue to cooperate with the Hauser Lake Bald Eagle Committee.	Same as Alternative A, plus consider providing improved eagle viewing facilities at Riverside Recreation Area, as needed.	Same as Alternative B.
Erosion Control	Continue current soil erosion-control methods. As part of implementing Title X, continue working with a shoreline manage-ment committee of concerned individuals and entities on developing input on erosion-control methods for Reclamation to consider.	Same as Alternative A, plus enforce off-road vehicle (ORV) closures, particularly in areas sensitive to erosion and where impacts to fish and wildlife could occur. Implement program to control shore erosion adjacent to public roads, Canyon Ferry Unit Project facilities, and developed recreation areas where there is a public health and safety concern. Gabions and breakwalls or other erosion-control techniques will be used to protect shorelines, where needed.	Same as Alternative B, except develop an agency comprehensive program to control erosion damage for the entire reservoir shoreline.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Erosion Control (continued)		Reclaim areas closed to ORV use and to prevent unauthorized access. Reclamation will initiate riparian protection measures at developed recreation areas.	
Fees	Establish fees based on those at similar sites in the area that offer similar services. Evaluate a variety of fee structures to accommodate a wide variety of users.	Same as Alternative A, plus evaluate the type of use at Indian Road Campground to determine if a fee station is needed for the use of the campground and day-use facilities. Promote the Golden Age Passport Program. Investigate the feasibility of establishing one user pass that is good for multiple areas managed by a variety of entities.	Same as Alternative B, except install a fee station at Scooter Bay at proposed new recreation area and at the full-service campgrounds to be developed at Confederate Bay.
Fire Rehabilitation Efforts	Reclamation will implement the goals set forth in the Buck Snort Fire Burned Area Rehabilitation Plan and EA prepared by Reclamation and BLM. Reclamation will initiate management actions to achieve the goals of the plan. Rehabilitation efforts will be completed by the end of 2003. Continue to follow the 2001 Federal Wildland Fire Management Policy and the January 2001 Secretary of the Interior's policy letter and develop a Fire Management Plan. Work with remaining lease holders to permit the removal of slash, under-brush, and dead and downed timber to reduce fire hazards.	Same as Alternative A.	Same as Alternative A.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Fisheries	Work with MFWP to identify areas needing closure. Continue to work with MFWP on their perch habitat program for the south end of the reservoir.	Same as Alternative A, plus work with MFWP to identify opportunities for fisheries enhancement such as: – Montana Fish and Wildlife Conservation Trust Fund fishery enhancement projects – Setbacks for recreation areas – Area closure signage	Same as Alternative B, with the addition of participating with the trust to identify opportunities off Reclamation project lands.
Habitat Improvement on Lands Other Than WMAs	Identify opportunities for habitat enhancement around the reservoir.	Same as Alternative A, plus fund and develop sites identified. Consult with MFWP on potential habitat improvement programs on lands outside the WMA.	Same as Alternative B.
Health and Safety (also see "Warning Systems")	Continue to post rules and regulations in campgrounds, at boat ramps, and at other visitor contact areas. Provide sanitation facilities and trash receptacles, as needed. Promote the Crime Witness Program. Some areas above and below the dam will be closed for public safety and facility security purposes.	Same as Alternative A, plus health and safety concerns will be a high priority when implementing future management actions detailed in the RMP. Work with MFWP to establish no wake zones by placing buoys at swim beaches, developed recreation areas, boat ramps, and other areas that need special protection. Work with MFWP and the CGAUX to improve enforcement of watercraft safety rules and regulations and to enhance their existing programs. Review monitoring procedures at campgrounds (camp hosts, etc.) Post appropriate warning signs to warn visitors of potential hazards.	Same as Alternative B, plus pave roads with serious dust and safety problems. Increase law enforcement by entering into new law enforcement agreements with local entities or amend existing agreements. Install additional recreational vehicle (RV) dump stations and fish cleaning stations at designated campgrounds and boat launch areas.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Health and Safety (also see "Warning Systems") (continued)		Ensure that existing emergency services are adequate and proper notification and response procedures are in place. Repair or replace faulty septic systems when deficiencies are identified. Establish policy and "no shooting" areas to protect visitors and capital improvements. Install dry fire hydrants at several locations in cooperation with the Broadwater County Rural Fire District.	
Heritage Resources	Continue National Historic Preservation Act compliance for Federal actions. Continue to conduct opportunistic inspection of sites and locales as personnel and time are available.	Same as Alternative A, plus, in consultation with the Montana State Historic Preservation Office, assess adequacy of existing heritage resource inventories and conduct intensive surveys in areas not adequately covered.	Same as Alternative B, except develop a public archeology program to enhance visitor experience and implement a program to interpret heritage resources with outdoor exhibits. Develop systematic process for site and locale monitoring and implement systematic reporting of damages. Develop and implement a heritage resource management plan. Conduct periodic and systematic inventories for paleontological resources.
Hunting	Work with MFWP at the current level.	Develop plan for more WMAs to enhance habitat for game species.	Eliminate some hunting opportunities on Reclamation lands to protect facilities and the public.
Integrated Pest Management	The comprehensive weed management plan established in 1993 will be followed and updated as necessary.	Same as Alternative A, plus review all integrated pest management practices with customers and partners.	Same as Alternative B.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Integrated Pest Management (continued)	Will continue the weed control agreement with Broadwater County and supply annual funding to the county. Work with Lewis and Clark County on formalizing a long-term weed control agreement and supply annual funding to the county.		
Law Enforcement (also see "Health and Safety")	Continue to provide law enforcement pursuant to signed and current agreements with local agencies.	Same as Alternative A, plus under the terms of the signed and current agree-ments, work with local law enforcement agencies to increase their law enforcement efforts.	Same as Alternative B, except renegotiate agree-ments to increase the number of personnel patrolling the area.
Management of Reservoir Lands	Continue to investigate the feasibility of having a non-Federal or another Federal partner manage the recreation resources on reservoir lands. In lieu of a non-Federal or another Federal manage-ment partner, Reclamation will manage recreation and other land resources. Reclamation will provide additional on-site staff to manage the land, recreation, and concession activities and programs. Continue to propose an agreement with Broadwater County for the development and future management of the Silos Recreation Area.	Same as Alternative A.	Same as Alternative A, except request increased funding from the Congress to support an increased level of O&M.
Nongame Birds	Reclamation may consider updating the bird species list of the Canyon Ferry area to include WMAs.	Same as Alternative A.	Same as Alternative A.
Pheasant Habitat Improvement	Continue working with Pheasants Forever to develop additional habitat along east shore.	Same as Alternative A.	Same as Alternative A.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Policy Development and Land Use Strategy	Existing land use strategies would continue. Conduct Facility Condition Assessment of existing facilities. In cooperation with the Canyon Ferry Recreation Association (CFRA) and other interested parties, Reclamation will establish a policy for the public use of the areas between private lease lot lands and the water surface. As provided in the Canyon Ferry Unit, Montana, Cabin Lease Lots Sale Final EA and FONSI, February 2002, in cooperation with the CFRA and other interested parties, Reclamation will establish procedures for authorizing docks authorized by Title X and for establishing design and construction standards.	Same as Alternative A, plus based on review and evaluation of existing facilities, rehabilitation will be emphasized before development of new facilities. Consider soil conditions and other limiting factors when placing future facilities. Reclamation will conduct two user surveys during the 10-year planning life of the RMP. Reclamation will establish a working group to assist in resolving Canyon Ferry issues that may occur. Reclamation will work with the Broadwater Stream and Lake Committee, Broadwater County, and Townsend on potential developments at Indian Road Recreation Area. Reclamation will investigate the possibility of entering into a Memorandum of Understanding with the U.S. Forest Service for operating an ice-skating rink on the ponds at the Indian Road Recreation Area. Based on the results of the Facilities Condition Assessment and other factors, prepare site-specific recreation master plans for each recreation area needing changes. Placement and construction of utilities will be considered on a case-by-case basis. Emphasis will be placed on minimizing impacts to the environment.	Same as Alternative B, except develop a land use planning strategy that maximizes recreational opportunities afforded by area resources, while enhancing existing environmental resource values, where feasible.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Policy Development and Land Use Strategy (continued)		Abandoned/unlicensed vehicles and equipment left in campgrounds for extended periods of time should be removed. A policy addressing this issue should be established and enforced.	
Pollution Control (also see "Health and Safety")	On Reclamation lands, repair or replace faulty septic systems as deficiencies occur. Ensure fueling facilities are constructed to meet fire codes.	Same as Alternative A, plus investigate the feasibility of requiring future concession-aires to install RV dump stations and fish cleaning stations. If feasible, implement the action. (*Note*: Kim's and Goose Bay concessionaires currently have dump stations).	Same as Alternative B, plus develop a comprehensive waste management plan for reservoir environs. Provide boat dump stations at all marinas and other areas, as necessary.
Prime Irrigated Soils	Development sites would continue to be selected using the same consideration for the soil conditions.	Locate development areas to avoid concentrations of prime farmlands.	Same as Alternative B.
Public Education and Information and Visitor Center	Continue at current level.	Same as Alternative A, plus proactively educate cabin site owners, concessionaires, campers, boat users, and other visitors on the appropriate use of Federal lands. Supply needed maps, brochures, pamphlets, and expanded Internet information services to the public. Continue to operate and maintain the Visitor Center.	Same as Alternative B.
Raptors	Require burying powerlines as a condition to issuing special use permits on Reclamation lands.	Same as Alternative A.	Same as Alternative A.
Remote Areas	Remote public use areas would continue to be managed at the current level.	Same as Alternative A, plus maintain sufficient access to existing remote areas with legal access. Monitor public use at remote sites to determine the need for providing sanitation facilities or other improve-ments and restrictions.	Same as Alternative B.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Restrooms	No change in the number of restrooms.	Install restrooms at new trail-heads. The need for facilities will be evaluated at Duck Creek and other campgrounds. Investigate methods of pumping existing toilets on Cemetery Island. Provide sanitary facilities at historical remote use sites, as needed. Upgrade existing restrooms at Hellgate and Riverside Recreation Areas and at other areas based on the results of the Facilities Condition Assessment and the site-specific recreation master plan. Incorporate the existing restroom on the north side of White Earth Campground into any campground expansion efforts.	Same as Alternative B, plus additional restrooms at newly developed campgrounds and day-use areas.
Shorebirds	Coordinate shorebird survey with State piping plover survey.	Same as Alternative A, plus use information from the survey to help identify and propose potential shorebird habitat enhancement projects for funding.	Same as Alternative B.
Signs	Repair and/or replace old and deteriorated signs. In cooperation with the CFRA, provide signs to identify public use areas between private lots and the water surface.	Same as Alternative A, plus inventory signs and identify all signing needs, including those for all roads and recreation sites. Provide signs with rules and regulations governing use of Reclamation lands and facilities such as camp-grounds, boat ramps, and shoreline areas, including cabin areas.	Same as Alternative B, plus develop a comprehensive sign program for the entire reservoir area.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Signs (continued)		Signs will state the process used to identify and remove abandoned vehicles from the reservoir area. Consider placing interpretive signs in areas with interesting geologic features and at locations with outstanding environmental resources. Consider providing informational and directional signage to improve traffic flow and facility use. Provide warning signs to protect visitors.	
Trails	Reclamation will continue to work with Broadwater County on establishing a nonmotorized trail from Indian Road to Silos.	Same as Alternative A, plus consider improving existing trail on Cemetery Island. Consider developing a nonmotorized, multiuse trail connecting White Earth and Crittendon (includes horses, hikers, nonmotorized bikes, cross-country skiing, and wheelchairs). Consider developing a small trail at White Earth on the south side of the peninsula.	Same as Alternative B, except construct Missouri River Nature Trail and Spring Creek Bay Trail. Construct needed support facilities and features such as restrooms, parking lots, and interpretive signs along trails, as necessary. Construct trail to connect Confederate Bay with Hellgate Recreation Area. Pave portions of existing and new trails.
Vehicular Access and Roads (also see “Remote Areas”)	Vehicular access would remain the same. Reclamation will continue to maintain East and West Shore Drives in a manner consistent with the level of service and funding levels used in the past.	Reclamation will establish criteria for the closure of roads that cause damage to environmental resources and habitat. Close roads on Reclamation lands that provide reservoir access but do not have legal access across private lands.	Same as Alternative B, except new or improved access will be provided to newly developed trail heads, campgrounds, and day-use areas. Some roads would be paved.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Vehicular Access and Roads (also see "Remote Areas") (continued)	Depending on eagle counts during migration periods, maintain closures of Eagle Bay Drive and Riverside Campground.	Provide improved existing public access to areas identified by the public. Provide sufficient year-round access for winter recreation activities. Maintain existing access to remote sites. Investigate alternatives to provide legal access to Hole in the Wall Bay (Galzagorry Road). Evaluate O&M program for roads to achieve standards of safety and resource protection. Seek cooperative partner-ships for developing and maintaining roads. Work with Federal, State, and county highway departments on improving or paving roads using TEA-21 funds. Work with the Montana Department of Transportation and Lewis and Clark County on ways to improve safety on Canyon Ferry Dam Road (Highway 284). Close all ORV areas pursuant to existing regulations. Depending on the results of the Facilities Condition Assessment and site-specific recreation master plans, consider realigning the access road into Indian Road Recreation Area.	

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Vehicular Access and Roads (also see "Remote Areas") (continued)		Reclamation will work cooperatively with other road users and entities to consider new cooperative initiatives for road development and maintenance. The cooperative initiatives may provide cost-share opportunities commensurate with past funding amounts to upgrade East and West Shore Drives beyond the existing condition.	
Volunteers	Volunteer campground host program would continue.	Same as Alternative A, except additional volunteers would be solicited by Reclamation to assist in trail O&M, litter cleanup, and Visitor Center operations. Camp host program will be evaluated to identify possible improvements.	Same as Alternative B.
Warning Systems	Continue the warning system established by the CGAUX.	Same as Alternative A, plus work with the CGAUX to establish additional warning systems in the reservoir area.	Same as Alternative B.
Watchable Wildlife	Continue the bald eagle viewing program.	Same as Alternative A, plus a long-term watchable wildlife program for the Canyon Ferry area may be considered.	Same as Alternative B.
Water Quality Monitoring Program	Continue the long-term water quality monitoring program.	Same as Alternative A, plus work with the State of Montana to prepare a total maximum daily load plan for Canyon Ferry Reservoir and the river immediately above the reservoir. Monitor water quality at recreation sites and other areas, as appropriate. Data collected will include nutrient samples, zooplankton, phytoplankton, chlorophyl, and other parameters.	Same as Alternative B.

Table IV-1.—Comparison of alternative elements (continued)

Alternative elements	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Water Quality Monitoring Program (continued)		Source Water Protection Areas being developed by Montana Department of Environmental Quality will be considered when imple-menting the management actions. These areas will be designated as environ-mentally sensitive areas.	
Wildlife	Work with MFWP and other wildlife entities to identify projects on Canyon Ferry lands that qualify for Montana Fish and Wildlife Conservation Trust funds.	Same as Alternative A.	Same as Alternative A.
Wildlife Management Areas	No additional areas developed.	Work with MFWP to identify potential new management areas. Determine if land should be added to MFWP WMA. Amend existing agreements to include new areas, if appropriate. Wildlife management plans will be prepared for specific areas identified for manage-ment by MFWP if new areas are identified.	Same as Alternative B,

Some elements and/or management actions are common to all alternatives, and some are unique to a specific alternative. The following are elements and/or actions common to all alternatives.

- **R** Adhering to existing and future Federal, State, and county laws and regulations (in particular, P.L. 105-277).

- **R** Operating the Canyon Ferry Unit of the Pick-Sloan Missouri Basin Program for its authorized purposes.

- **R** Continuing O&M of Reclamation lands and facilities contingent on the appropriation of funds from the Congress and staffing limitations.

- **R** Continuing existing permitted uses with evaluation of continued use when permits expire.

- **R** Allowing no unauthorized private exclusive use of Reclamation lands and waters.

- **R** Seeking non-Federal or other Federal recreation managing partners pursuant to P.L. 89-72.

- **R** Managing Canyon Ferry Reservoir land and water areas by Reclamation if a managing partner cannot be found.

- **R** Pursuing an agreement with Broadwater County for recreation facility development and management of the Silos Recreation Area pursuant to Title X.

- **R** Working with the Montana Fish, Wildlife and Parks (MFWP) and other entities to identify projects that qualify for cabin sale trust funds pursuant to Title X.

- **R** Continuing to cooperate with MFWP in the management of the Wildlife Management Area (WMA), pursuant to the existing agreement between both entities.

- **R** Reissuing concession contracts pursuant to Reclamation policy.

- **R** Conducting Facilities Condition Assessments of facilities.

- **R** Establishing a concession operation at Silos Recreation Area.

- **R** Continuing to conduct accessibility evaluations of all facilities and programs.

- **R** Continuing to work with a shoreline management committee in developing recommendations for erosion-control methods and locations.

- **R** Continuing to cooperate with the Montana bald eagle working group and continuing the bald eagle viewing program.

- **R** Continuing to cooperate with the Hauser Lake Bald Eagle Committee.

- **R** Implementing the goals of the Buck Snort Fire Rehabilitation Plan prepared by Reclamation and the Bureau of Land Management (BLM).

- **R** Continuing to follow the Federal Wildland Fire Management Policy and the Secretary of the Interior's fire policy letter of January 18, 2001, and prepare a Fire Management Plan for Canyon Ferry Reservoir.

- **R** Working with MFWP to cooperatively manage Canyon Ferry Reservoir lands for fish and wildlife species.

- **R** Continuing the 1993 comprehensive weed management plan and updating as necessary.

- **R** Continuing to cooperate with local law enforcement agencies pursuant to signed agreements.

- **R** Ensuring fueling facilities meet fire codes.

- **R** Continuing to operate the Canyon Ferry Visitor Center.

- **R** Requiring powerlines to be buried to protect raptors.

- **R** Repairing and replacing old and deteriorated signs.

- **R** Continuing to work with Broadwater County on developing a nonmotorized trail from Indian Road Recreation Area to Silos Recreation Area.

- **R** Continuing the warning system established by the Coast Guard Auxiliary (CGAUX).

- **R** Cooperating with the Canyon Ferry Recreation Association (CFRA) in establishing a policy for the use of shoreline areas between the reservoir and private lease lots.

- **R** Cooperating with the CFRA and other interested parties in establishing a dock policy.

- **R** Continuing the long-term water quality program for the reservoir and river immediately below the dam.

- **R** Continuing to work with MFWP on their perch habitat program for the south end of the reservoir.

- **R** Closing some areas near the dam for security purposes.

- **R** Keeping existing day-use areas and not converting them to overnight campgrounds.

- **R** Working with Broadwater County to establish an appropriate concession operation at Silos.

- **R** Continuing the weed control agreement with Broadwater County and supply annual funding to the county.

- **R** Working with Lewis and Clark County on formalizing a long-term weed control agreement and supply annual funding to the county.

ALTERNATIVES CONSIDERED IN DETAIL

No Action Alternative (Alternative A)

Alternative A (figure IV-1) includes actions necessary for Reclamation to manage recreation resources in the absence of a non-Federal managing partner. Reclamation will also continue to manage all land resource management activities, such as processing and managing all licenses, leases, and permits. Reclamation will provide additional on-site staff to manage the land, recreation, and concession activities and programs.

Additional facilities would be provided to protect the health and safety of visitors. The project would continue to be operated for authorized project purposes pursuant to established Reclamation operating criteria and contingent on appropriations from the Congress. Reclamation would continue to implement the provisions of Title X and conform with other Federal, State, and county laws, rules, and regulations as it has in the past.

Current recreational pursuits such as hunting, camping, fishing, motor boating, ice boating, sailing, wind-surfing, and jet skiing will be allowed to continue. No new opportunities will be provided, and no new facilities will be planned or constructed (e.g., no new trails will be provided, and no new day-use or campground areas will be constructed unless facilities are constructed pursuant to Title X). No day-use sites will be converted to overnight campgrounds. If minimum basic recreation facilities are needed, site selection criteria now in place will be used to determine location (i.e., consideration will be given to slopes, prime if irrigated soils, and other environmental limitations). Carrying capacity limitations will be assessed before any major capital developments occur.

Reclamation will continue to cooperate with local law enforcement entities pursuant to existing agreements, cooperate with the CGAUX and promote their early warning system, and promote the Crime Witness Program. Sanitation facilities and trash receptacles will be provided as needed. Reclamation will also continue to post rules and regulations at visitor contact areas such as boat ramps and campgrounds.

Reclamation will continue to ensure that fueling facilities are constructed to meet fire codes. On Reclamation lands, faulty septic systems will be repaired or replaced as deficiencies occur.

Reclamation will conduct a Facilities Condition Assessment of existing facilities to determine rehabilitation and modification needs and requirements.

Reclamation will work with MFWP to cooperatively manage the reservoir and lands for fish and wildlife purposes, pursuant to the existing agreement between both agencies, and to meet regional and State management goals. MFWP will continue to have the primary responsibility for managing the fishery and WMAs at the south end of the reservoir, and Reclamation will have primary responsibility for managing the remainder of land areas at

Canyon Ferry Reservoir. Reclamation will consult with MFWP on a regular basis for guiding management of wildlife species and habitats for areas outside the WMAs. In cooperation with MFWP or other wildlife entities, Reclamation will continue to:

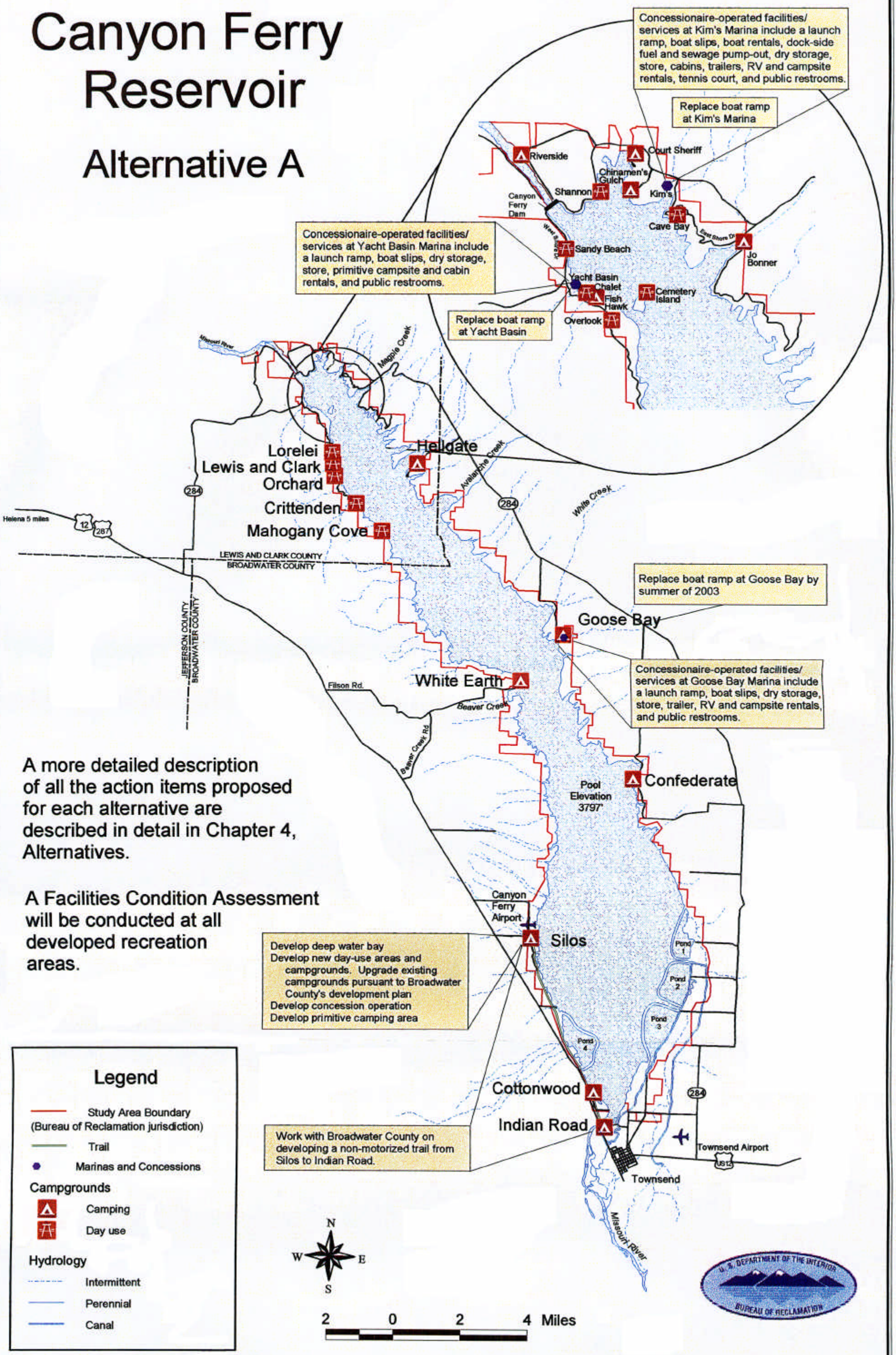
- **R** Continue bald eagle viewing program
- **R** Identify projects on Canyon Ferry Reservoir lands that qualify for cabin sale trust funds
- **R** Identify opportunities for habitat enhancement
- **R** Update the inventory of bird species at the reservoir
- **R** Coordinate the shorebird survey with the State piping plover survey
- **R** Identify areas around the reservoir that could be closed to benefit fish and wildlife species
- **R** Continue to cooperate with the Hauser Lake Bald Eagle Committee
- **R** Cooperate with the Montana bald eagle working group
- **R** Work with the Pheasants Forever organization to develop additional pheasant habitat on the east side of the reservoir
- **R** Continue to work on MFWP's perch habitat program
- **R** Implement policy requiring powerlines to be buried on Reclamation lands to protect raptors and as a condition for issuing permits

No new WMAs will be designated or developed at the reservoir; however, areas for potential future management by MFWP could be identified.

Pursuant to P.L. 89-72, Reclamation will continue to seek a non-Federal or another Federal managing partner to manage recreation within the study area and to operate and maintain recreation facilities. Since passage of Title X, Reclamation and Broadwater County Commissioners have been working together to develop recreation at the Silos Recreation Area. In Title X, the Broadwater County Trust was authorized in the amount of $3,000,000, of which $500,000 of the principal could be used to deepen Broadwater Bay. As required in Title X, Reclamation offered management of Silos Recreation Area to the Commissioners. The Commissioners declined the offer at that time. Deepening Broadwater Bay is a priority for the Commissioners to provide a safe harbor for boaters during high winds and storms and to provide access to the reservoir during periods of low water elevations. This will encourage tourism and economic development at the southern end of the reservoir.

Canyon Ferry Reservoir

Alternative A



A more detailed description of all the action items proposed for each alternative are described in detail in Chapter 4, Alternatives.

A Facilities Condition Assessment will be conducted at all developed recreation areas.

Legend

- Study Area Boundary (Bureau of Reclamation jurisdiction)
- Trail
- Marinas and Concessions

Campgrounds

- Camping
- Day use

Hydrology

- Intermittent
- Perennial
- Canal

Figure IV-1

In 2001, Reclamation, in cooperation with the Commissioners and other local individuals, worked on the design and specifications for deepening Broadwater Bay, constructing a boat ramp, parking lot, and other facilities at the Silos Recreation Area. The Commissioners, interested local individuals, and Reclamation looked at several options to providing safe harbor and low water elevation access. Excavating Broadwater Bay, developing an emergency boat ramp at Duck Creek, and enhancing access at Hole in the Wall were options selected for further analysis. The design of the excavation of Broadwater Bay, the boat ramp, and other pertinent activities were completed by Reclamation in 2001. Broadwater County has agreed to oversee construction and maintenance of the boat ramp and other recreation features at the Silos Recreation Area. On September 19, 2002, Broadwater County hosted a public information meeting to explain the project and the schedule for completion. Boat ramp construction is tentatively scheduled for the spring of 2003 if the reservoir levels can be lowered to an appropriate level.

Reclamation has entered into a 10-year agreement with Broadwater County to manage part of the Silos Recreation Area for public recreation and resource uses. Broadwater County will manage, operate, and maintain all public recreation facilities in the area granted to them. Broadwater County can add new facilities, charge and retain fees for use of the facilities, and develop commercial services in their area. Reclamation will retain primary jurisdiction over the area. Any development or changes in management practices will be accomplished in a manner consistent with this RMP/EA

Reclamation will continue to work with Broadwater County on establishing a nonmotorized trail from Indian Road Recreation Area to Silos Recreation Area.

When a commercial concession is developed at Silos Recreation Area, potential increased maintenance costs associated with environmental factors, such as wind, ice jams, and silting, will be evaluated. Impacts to existing concessionaires will also be evaluated. Any new concessions considered at Silos should not interfere with the ability of other concessionaires or nearby private enterprises to make a reasonable profit. All concession-related activities will follow Reclamation's *Concession Policy, Directives and Standards* and associated guidelines. Upon expiration of existing concession contracts (Kim's Marina in 2003, Yacht Basin Marina in 2004, and Goose Bay in 2010), issuance of future contracts will be based on Reclamation policy. Contract extensions will be offered to Yacht Basin and Kim's Marina to allow Reclamation adequate time to prepare a Commercial Services Plan (CSP) for Canyon Ferry Reservoir. Reclamation will work with existing and future concessionaires to determine the feasibility of installing recreational vehicle (RV) dump stations and fish cleaning stations. New commercial services should be competitively offered to prospective operators.

Programs such as integrated pest management, erosion control, public education, O&M, handicapped access, off-road vehicle (ORV), water quality monitoring, and signage will continue at present levels. The Canyon Ferry Visitor Center will continue to be operated to transfer information, inform the public, and promote the available opportunities within the

study area. Current funding levels for these programs will continue. The heritage resources program (i.e., National Historic Preservation Act compliance) will continue on a case-by-case basis for specific Federal actions. Reclamation will continue to inventory such resources as personnel and funding allow.

The public will be allowed to continue to use all existing roads to access the reservoir. No additional effort will be initiated to identify and close illegal roads that cross private lands or close areas now being used by the public for ORV activities. Remote public use areas will continue to be managed at the current levels.

As a result of the fire in the summer of 2000, BLM and Reclamation prepared the Buck Snort Fire Burned Area Rehabilitation Plan and EA and established the following fire rehabilitation goals:

- **R** Minimize soil loss caused by water erosion on the burn area
- **R** Retain or regain site productivity; emphasize ecosystem function in upland areas and associated drainages
- **R** Restore to pre-fire conditions the recreational facilities, signs, and roads damaged by fire
- **R** Minimize the invasion or spread of noxious weeds into burned areas

To achieve these fire rehabilitation goals, Reclamation will initiate specific rehabilitation treatment actions on Reclamation-managed lands (500 acres). Rehabilitation efforts will be completed by the end of 2003. These actions are:

- **R** Aerial and mechanical seeding of a native seed mixture on approximately 100 acres.
- **R** Treatment of noxious weeds with herbicide at identified sites.
- **R** Repair and reconstruct the damaged camping areas, facilities, and signs.
- **R** Repair West Shore Drive by grading and cleaning out some culverts. Settling basins may be installed above all culverts throughout the burned area to catch sediment. These will require frequent maintenance.
- **R** Design and construct new culverts on East and West Shore Drives at selected sites.
- **R** Replace some culverts that are undersized.

Reclamation will also continue to follow the updated 2001 Federal Wildland Fire Management Policy and the January 2001 Secretary of the Interior's policy letter and prepare a Fire Management Plan for the Canyon Ferry Reservoir study area.

Reclamation will work with remaining lease holders to permit the removal of slash, underbrush, and dead and downed timber to reduce fire hazards.

Reclamation will continue to follow the 1993 comprehensive weed management plan and update, as necessary, to control weeds in a manner that protects riparian habitat and water resources and prevents the spreading of noxious weeds to adjacent lands. Reclamation will continue the weed control agreement with Broadwater County and supply annual funding and work with Lewis and Clark County on formalizing a long-term weed control agreement and supply annual funding to the county.

Reclamation will continue the long-term water quality monitoring program for the reservoir and the river immediately below the dam.

In cooperation with the CFRA and other interested parties, Reclamation will establish a policy that will address the public use of shoreline areas between the reservoir and the lease lot areas. This will be initiated concurrently with implementation of Title X, which authorizes conveyance of the lease lot areas to private parties. Reclamation and the CFRA will work together in establishing signage which will identify the public use area between the lease lots and the water surface.

As provided in the Canyon Ferry Unit, Montana, Cabin Lease Lots Sale Environmental Assessment and FONSI, February 2002, Reclamation will formulate procedures for authorizing docks authorized by Title X (intended for cabin lessees who were provided the right to one dock per site under Title X). Reclamation will coordinate this activity with the CFRA and other interested parties. The policy will establish design and construction standards.

Reclamation will continue to maintain East and West Shore Drives in a manner consistent with past levels of service and funding. Other roads within the area will be maintained as they have been in the past. Reclamation has dedicated land on both East and West Shore Drives for use in fire suppression activities. This land will be used for turnarounds, cisterns, fire stations, and dry fire hydrants. On the west shore, there are five emergency service access easements, two future emergency services turnaround areas, two fire department dry hydrant sites, and one future cistern site. On the east shore, there are six future emergency service turnaround areas, two emergency service access easements, two fire department dry hydrant sites, one future cistern site, one future fire station access roadway easement, and one vehicle turnaround area.

Reclamation will continue to maintain closures of Eagle Bay Drive and Riverside Campground when eagle counts remain above 50 during the migration period.

Reclamation will continue to conduct accessibility evaluations, prepare action plans, and develop cost estimates for needed modifications.

Reclamation will continue to collect user fees at already designated areas. Reclamation will evaluate a variety of fee structures to accommodate various users. Fees will be based on those at similar sites in the area that offer similar services.

Reclamation will continue with the shoreline management committee of concerned individuals and entities to look at developing recommendations for erosion-control methods and locations.

Reclamation will continue to work with the Montana Aeronautics Division and other interested parties on the disposition of the Silos area airport. Reclamation will determine if the lands should be retained in Federal ownership for Reclamation project purposes before any land transactions occur.

Reclamation will close some areas above and below the dam for public safety and facility security purposes.

Reclamation will continue its camp host program.

Natural Resource Enhancement with Moderate Recreation Development (Alternative B) (Preferred)

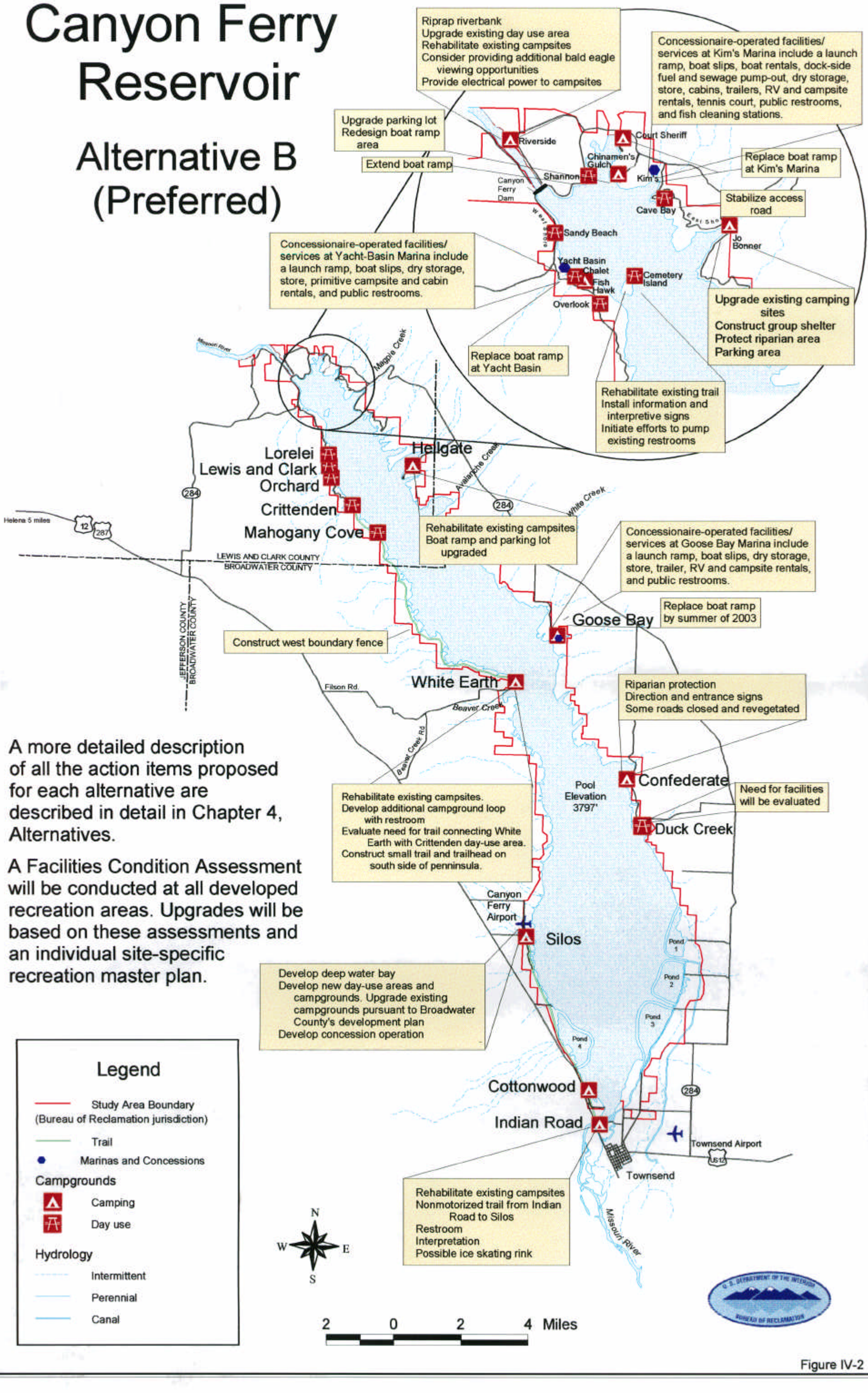
In addition to the elements and actions common to all alternatives, Alternative B includes actions for developing a moderate number of day-use and camping facilities, developing a multiuse trail system, and upgrading existing facilities and opportunities (figure IV-2). Alternative B also includes implementing actions for conserving, protecting, enhancing, and interpreting the natural resources within the study area. Reclamation will continue to manage recreation and other land resources in the absence of a Federal or non-Federal managing partner. Reclamation will provide additional staff to manage the land, recreation, and concession activities at Canyon Ferry Reservoir. In an effort to decrease possible user conflicts, actions will be initiated to provide recreation opportunities at other areas of the reservoir. Actions will be implemented for providing a healthy and safe environment for the visiting public.

Pursuant to P.L. 89-72, Reclamation will continue to seek a non-Federal or another Federal managing partner to manage recreation within the study area and to operate and maintain recreation facilities. Since passage of Title X, Reclamation and Broadwater County Commissioners (Commissioners) have been working together to develop recreation at the Silos Recreation Area. In Title X, the Broadwater County Trust was authorized in the amount of $3,000,000, of which $500,000 of the principal could be used to deepen Broadwater Bay. As required in Title X, Reclamation offered management of the Silos Recreation Area to the Commissioners. The Commissioners declined the offer at that time. Deepening Broadwater Bay is a priority for the Commissioners to provide a safe harbor for boaters during high winds and storms and to provide access to the reservoir during periods of low water elevations. This will encourage tourism and economic development at the southern end of the reservoir.

In 2001, Reclamation, in cooperation with the Commissioners and other local individuals, worked on the design and specifications for deepening Broadwater Bay, constructing a boat

Canyon Ferry Reservoir

Alternative B (Preferred)



A more detailed description of all the action items proposed for each alternative are described in detail in Chapter 4, Alternatives.

A Facilities Condition Assessment will be conducted at all developed recreation areas. Upgrades will be based on these assessments and an individual site-specific recreation master plan.

Legend

- Study Area Boundary (Bureau of Reclamation jurisdiction)
- Trail
- Marinas and Concessions

Campgrounds

- Camping
- Day use

Hydrology

- Intermittent
- Perennial
- Canal

Figure IV-2

ramp, parking lot, and other facilities at the Silos Recreation Area. The Commissioners, interested local individuals, and Reclamation looked at several options to providing safe harbor and low water elevation access. Excavating Broadwater Bay, developing an emergency boat ramp at Duck Creek, and enhancing access at Hole in the Wall were options selected for further analysis. The design of the excavation of Broadwater Bay, the boat ramp, and other pertinent activities were completed by Reclamation in 2001. Broadwater County has agreed to oversee construction and maintenance of the boat ramp and other recreation features at the Silos Recreation Area. On September 19, 2002, Broadwater County hosted a public information meeting to explain the project and the schedule for completion. Boat ramp construction is tentatively scheduled for the spring of 2003 if the reservoir levels can be lowered to an appropriate level.

Reclamation has entered into a 10-year agreement with Broadwater County to manage part of the Silos Recreation Area for public recreation and resource uses. Broadwater County will manage, operate, and maintain all public recreation facilities in the area granted to them. Broadwater County can add new facilities, charge and retain fees for use of the facilities, and develop commercial services in their area. Reclamation will retain primary jurisdiction over the area. Any development or changes in management practices will be accomplished in a manner consistent with this RMP/EA.

The number of proposed individual campground and day-use units allowed within each recreation area will be based on user demand and carrying capacity limits (e.g., social, physical, environmental, and facility limits as described in chapter III). Carrying capacity limits will be assessed during the planning phase of any developments. Geographic Information System (GIS) mapping will be used to avoid exceeding environmental capacities and to aid in determining physical capacity limitations. Facility developments will follow development criteria established by Reclamation. (See appendix C for general facility development criteria). Soil conditions and other environmental factors will be taken into consideration when developing facilities within the study area. Riparian habitat protection should be initiated for developed recreation areas at the reservoir. NEPA compliance will be completed and environmental clearances will be obtained before commencing any construction activities.

A Facilities Condition Assessment of existing recreation facilities will be conducted, uses evaluated, and a site-specific recreation master plan prepared for those areas needing changes. Rehabilitation of existing units will be emphasized before moderate expansion of existing sites. New developments will be phased in over the 10-year planning period. Health and safety concerns will be a high priority when implementing actions such as constructing or rehabilitating campgrounds.

Through this planning process (i.e., public scoping, observation, and investigation and evaluation of previous studies), certain recreation areas have already been identified as needing upgrades. Therefore, consideration will first be given to upgrading the overnight campgrounds at White Earth, Hellgate, Chinamen's, Riverside, Court Sheriff, Confederate Bay,

Jo Bonner, and Indian Road Recreation Areas to provide for, among other things, proper spacing, turning radii, accessibility, vegetation screening, modern restrooms, and appropriate landscaping and irrigation. When upgrades occur at Confederate Bay, consideration will first be given to closing and revegetating roads, installing vehicle barriers, and signing needs along State Highway 284. When upgrades occur, the day-use and boat launch area at Court Sheriff should be separated from the overnight campground. An additional overnight camping loop and restroom should be provided at White Earth. Facility development at Indian Road will be coordinated with the Broadwater Stream and Lake Committee, Broadwater County, and the city of Townsend. Reclamation will investigate the possibility of entering into a Memorandum of Understanding with the U.S. Forest Service (USFS) for operating an ice-skating rink on the ponds at the Indian Road Recreation Area. Other existing overnight campground areas will be upgraded and evaluated to assess the need for additional campsites within each area.

Based on the results of the Facilities Condition Assessment and site master plans, upgrades to existing boat ramps should be completed, if necessary. Where necessary, boat docks should be provided to reduce user conflicts and to address safety concerns. Boat ramps at Kim's and Yacht Basin will be replaced, and the ramp at Shannon will be extended. The boat ramp at Goose Bay will be replaced by the end of 2003. As stated earlier, a new boat ramp will be constructed at the Silos Recreation Area as part of Title X development. Details of individual recreation site developments are contained in chapter VI.

Based on the results of the Facilities Condition Assessment and site master plans, day-use areas will be upgraded to meet current design standards. The existing day-use site will be expanded and/or improved at Riverside Recreation Area and Cemetery Island. Existing day-use sites will not be converted to overnight campgrounds. At Riverside Recreation Area, as well as other sites, serious consideration will be given to the placement of facilities to protect the safety of visitors. An upgraded day-use area with additional parking and a group shelter will be considered at Jo Bonner Recreation Area.

Several nonmotorized, multiuse trails should be considered to increase public recreation opportunities (including use by hikers, nonmotorized bicycles, horses, cross-country skiers, and wheelchairs). Reclamation will evaluate the need for a nonmotorized, multiuse trail that parallels the reservoir on the west side from White Earth to the Crittendon day-use area. Reclamation will continue to work with Broadwater County on constructing a trail that parallels the reservoir from Indian Road to Silos. A small trail, trail head, and parking area should be considered at White Earth Recreation Area. Once the exact trail locations are known, every effort will be made to make portions of the trail accessible to people with disabilities.

Consideration will be given to improving the trail on Cemetery Island. (See appendix D for trail design and development criteria that will be followed in planning and constructing trails at Canyon Ferry Reservoir). Proper facilities, such as a loading area, parking, staging area, etc., should be provided to accommodate trail use.

To protect water quality, environmentally sensitive areas, and environmental resources on lands under the jurisdiction of Reclamation and within the immediate drainage basin, the entire reservoir area will be closed to ORV use, and roads that provide access to the reservoir and that cross private property illegally will be closed to reservoir access. Reclamation will sign these areas and enforce all closures. Reclamation will develop criteria for closing roads that damage environmental resources. Some areas of the reservoir will be provided with year-round access for winter recreation activities. There are no restrictions in place prohibiting vehicles from driving on the ice surface, provided vehicles use designated roads to access the ice surface. Historic access roads and trails to the reservoir with legal access will be retained for visitors who wish to experience an unconfined recreation experience. These roads and trails will remain open unless safety, environmental, or erosion problems occur. Each site will be monitored to determine the degree of use and potential resource damage that could be caused by unconfined and uncontrolled use. Reclamation will maintain roads to achieve standards of safety and resource protection and work with Federal, State, and county highway departments on improving or paving roads using TEA-21 or other funds. This includes roads within the study area. Reclamation will continue with the closure of Eagle Bay Drive and Riverside Campground during eagle migration periods when individual eagle counts are above 50. Reclamation will investigate alternatives to provide legal access to Hole in the Wall (Galzagorry Road).

Reclamation will work with the Montana Department of Transportation and Lewis and Clark County to improve safety conditions on Highway 284 at the north end of the reservoir near the dam. Emphasis will be given to signing and establishing turning lanes into recreation areas.

Reclamation will establish a working group to work with Reclamation to identify issues and concerns at Canyon Ferry Reservoir. This group will work with Reclamation to identify potential options to resolve existing and future water quality, recreation, and erosion issues, as well as user conflicts, including measures to increase enforcement of boating and ORV rules and regulations. Once the RMP/EA is finalized, Reclamation will contact potential working group members to assess their availability and willingness to participate.

Reclamation will initiate two public user surveys at Canyon Ferry Reservoir during the RMP 10-year planning period. The results of the visitor use surveys will be used to update information collected from the two previous surveys and fill in data gaps identified during the RMP/EA process. Data to be collected includes:

- **R** Recreation activity participation levels for sailing, hunting, and jet skiing, in addition to the activities already identified during the previous studies and documented in the RMP/EA.

- **R** Carrying capacity limits (i.e., identify user conflicts and facility overuse, if any). Surveys will assist Reclamation in monitoring visitor use to ensure that carrying capacity limits have not been exceeded.

- **R** Existing studies and planning documents within the region (i.e., identify possible correlations or discrepancies between data it collects and the data contained in other existing studies and regional or local planning reports).

- **R** Possible impacts that private, exclusive use of areas within existing concessions may have on the quality of the public's recreation experience or their use of the reservoir area.

- **R** Overall public satisfaction level with accomplishment of actions identified in the RMP.

- **R** Information which will determine whether to build future planned developments.

- **R** Winter use.

As a result of the fire in the summer of 2000, BLM and Reclamation prepared the Buck Snort Fire Burned Area Rehabilitation Plan and EA and established the following fire rehabilitation goals:

- **R** Minimize soil loss caused by water erosion on the burn area

- **R** Retain or regain site productivity; emphasize ecosystem function in upland areas and associated drainages

- **R** Restore to pre-fire conditions the recreational facilities, signs, and roads damaged by fire

- **R** Minimize the invasion or spread of noxious weeds into burned areas

To achieve these fire rehabilitation goals, Reclamation will initiate specific rehabilitation treatment actions on Reclamation-managed lands (500 acres). Rehabilitation efforts will be completed by the end of 2003. These actions are:

- **R** Aerial and mechanical seeding of a native seed mixture on approximately 100 acres.

- **R** Treatment of noxious weeds with herbicide at identified sites.

- **R** Repair and reconstruct the damaged camping areas, facilities, and signs.

- **R** Repair West Shore Drive by grading and cleaning out some culverts. Settling basins may be installed above all culverts throughout the burned area to catch sediment. These will require frequent maintenance.

- **R** Design and construct new culverts on East and West Shore Drives at selected sites.

- **R** Replace some culverts that are undersized.

Reclamation will also continue to follow the updated 2001 Federal Wildland Fire Management Policy and the January 2001 Secretary of the Interior's policy letter and prepare a Fire Management Plan for the Canyon Ferry Reservoir study area.

Reclamation will work with remaining lease holders to permit the removal of slash, under-brush, and dead and downed timber to reduce fire hazards.

Reclamation will consider specific erosion-control measures, which include but are not limited to:

- **R** Controlling shoreline erosion adjacent to public roads, Canyon Ferry Unit Project facilities, and developed recreation areas where there is a public health and safety concern

- **R** Initiating riparian protection efforts at developed recreation areas

- **R** Fencing and designating areas used primarily by the public

- **R** Preventing livestock grazing from adjacent lands by fencing the exterior boundary of Reclamation lands where feasible

- **R** Reclaiming closed ORV use areas and roads determined to be illegal access routes to the reservoir

- **R** Enforcing ORV closures

Reclamation will structure its fee collection system for the use of its lands and facilities based on fees charged at other sites in the areas that offer similar facilities and services. The fee structure will be designed to accommodate a wide variety of uses. Reclamation will evaluate the need to collect an entrance fee at Indian Road Recreation Area for the use of the camp-ground and day-use areas. If fees are charged, it will not be for the use of the boat ramp because it is owned and operated by the MFWP. Reclamation will promote the Golden Age Passport Program and will investigate the feasibility of establishing one user pass that is good for multiple areas managed by a variety of entities.

Reclamation will provide an appropriate number of restroom facilities and trash receptacles at developed areas. The volunteer camp host program would continue but would be reviewed to determine if it should be expanded into other developed recreation areas. Reclamation would solicit additional volunteers to assist in trail O&M, litter cleanup, and Visitor Center operations.

In cooperation with MFWP, buoys to establish no wake zones will be installed at swim beaches, campgrounds, day-use areas, selected bays, and boat launch sites to delineate those areas that warrant special protection. No wake zones will help to protect the public, decrease potential user conflicts, and increase the quality of the recreation experience. In addition, Reclamation will cooperate with MFWP and the CGAUX to develop a comprehensive plan to improve boater safety and to enhance weather monitoring and additional warning systems, as well as to enforce boating regulations. Reclamation will cooperate with the CGAUX on promoting warning systems already in place.

Reclamation will ensure existing emergency services (i.e., fire control, search and rescue, and ambulance service) are adequate and that proper notification and response procedures are in place. The Crime Witness Program will be promoted by posting appropriate signs listing the number to call to report crimes.

When a commercial concession is developed at Silos Recreation Area, potential increased maintenance costs associated with environmental factors, such as wind, ice jams, and silting, will be evaluated. Impacts to existing concessionaires will also be evaluated. Any new concessions considered at Silos should not interfere with the ability of other concessionaires or nearby private enterprises to make a reasonable profit. All concession-related activities will follow Reclamation's *Concession Policy, Directives and Standards* and associated guidelines. Upon expiration of existing concession contracts (Kim's Marina in 2003, Yacht Basin Marina in 2004, and Goose Bay in 2010), issuance of future contracts will be based on Reclamation policy. Contract extensions will be offered to Yacht Basin and Kim's Marina to allow Reclamation adequate time to prepare a CSP for Canyon Ferry Reservoir. Reclamation will work with existing and future concessionaires to determine the feasibility of installing recreational vehicle (RV) dump stations and fish cleaning stations. New commercial services should be competitively offered to prospective operators. In addition to issuing new concession contracts upon expiration of existing contracts pursuant to Reclamation policy, Reclamation will identify existing guides and outfitters doing business at Canyon Ferry Reservoir and require each to obtain a special use permit, if appropriate.

Reclamation will identify areas that should be closed to shooting to protect the public, Canyon Ferry Reservoir recreation facilities and use areas, project facilities, administrative sites, as well as adjacent landowners. Any shooting restrictions will be coordinated with MFWP so that closures can be adopted and legally enforced by MFWP.

Abandoned/unlicensed recreation vehicles and equipment (e.g., campers, boats, tents, and trailers) left in campgrounds for extended periods of time should be removed. A policy addressing abandoned recreational equipment should be established and enforced. Placement and construction of utilities will be considered on a case-by-case basis, with emphasis on minimizing impacts to the environment.

Reclamation will conduct a sign inventory of the reservoir area to determine all signing needs, including sign location, size, type, height, color, and wording. Signs will be provided to warn,

direct, and inform the public. Interpretive signs may be placed at appropriate locations to inform the public of the outstanding environmental resources of the reservoir. Signs will be provided to display the reservoir rules and regulations governing the public use of Reclamation lands and facilities.

Reclamation will work with MFWP to cooperatively manage the reservoir and lands for fish and wildlife purposes, pursuant to the existing agreement between both agencies, and to meet regional and State management goals. MFWP will continue to have the primary responsibility for managing the fishery and WMAs at the south end of the reservoir, and Reclamation will have primary responsibility for managing the remainder of land areas at Canyon Ferry Reservoir. Reclamation will consult with MFWP on a regular basis for guiding management of wildlife species and habitats for areas outside the WMAs. In cooperation with MFWP or other wildlife entities, Reclamation will continue to:

- **R** Continue bald eagle viewing program
- **R** Identify opportunities for habitat enhancement
- **R** Update the inventory of bird species at the reservoir
- **R** Coordinate the shorebird survey with the State piping plover survey
- **R** Identify areas around the reservoir that could be closed for the benefit of fish species
- **R** Continue to cooperate with the Hauser Lake Bald Eagle Committee
- **R** Cooperate with the Montana bald eagle working group
- **R** Work with the Pheasants Forever organization to develop additional pheasant habitat on the east side of the reservoir
- **R** Continue to work on MFWP's perch habitat program
- **R** Implement policy requiring powerlines to be buried on Reclamation lands to protect raptors and as a condition for issuing permits
- **R** Identify projects on lands within the study area that qualify for Montana Fish and Wildlife Conservation Trust funds
- **R** Identify areas around the reservoir shoreline that could be closed for the benefit of fish species and lands that could be closed to provide secure habitat for a variety of wildlife

- **R** Identify opportunities for habitat enhancement projects and develop identified areas as funding allows

- **R** Develop a long-term watchable wildlife program for the entire reservoir area

- **R** Improve enforcement of watercraft safety rules and regulations and to enhance its existing programs

Reclamation will cooperate with MFWP and other entities to identify opportunities for fisheries enhancement by:

- **R** Establishing setbacks for recreation areas

- **R** Identifying opportunities to use Montana Fish and Wildlife Conservation Trust funds to enhance fisheries projects

- **R** Providing area closures and signage, if appropriate

As part of this RMP process, no new areas have been identified as potential WMAs. Reclamation will work with MFWP to identify potential new wildlife areas. If areas are identified, the existing contract between the agencies will be modified to include the selected areas. A Wildlife Management Plan will be prepared for each area targeted for management by MFWP.

In consultation with the Montana State Historic Preservation Office, Reclamation will assess the adequacy of existing heritage resource inventories and conduct additional surveys of heritage resources in the areas not adequately covered.

Water quality will be monitored at developed recreation areas and other areas, as necessary. Data collected will include nutrient samples, zooplankton, phytoplankton, chlorophyl, and other parameters. Reclamation will work with the State of Montana to prepare a total maximum daily load assessment for Canyon Ferry Reservoir and the basin above the reservoir. Source water protection zones identified by the Montana Department of Environmental Quality (DEQ) will be designated as environmentally sensitive areas to protect water quality. The long-term water quality program will continue.

Reclamation will continue to ensure that fueling facilities are constructed to meet fire codes. On Reclamation lands, faulty septic systems will be repaired or replaced as deficiencies occur.

Reclamation will continue to follow the 1993 comprehensive weed management plan and update, as necessary, to control weeds in a manner that protects riparian habitat and water resources and prevents the spreading of noxious weeds to adjacent lands. Reclamation will continue the weed control agreement with Broadwater County and supply annual funding and

work with Lewis and Clark County on formalizing a long-term weed control agreement and supply annual funding to the county. Reclamation will continue the Montana DEQ programs to reduce nonpoint source pollution and continue the long-term water quality monitoring program for the reservoir and the river immediately below the dam.

Reclamation will continue its integrated pest management program.

Reclamation will operate the Canyon Ferry Visitor Center to transfer information, inform the public, and promote the available opportunities within the sturdy area. Appropriate repairs will be made to the Visitor Center. In addition, Reclamation will expand its public education and information efforts by proactively educating cabin site owners, concessionaires, campers, boaters, and other publics in the proper use of Federal lands. Maps, brochures, pamphlets, and expanded Internet services will be provided to the public by Reclamation.

Reclamation will seek the assistance of volunteers to help in Reclamation's management of the study area (e.g., volunteers can be used to help with the Visitor Center, O&M trails, litter cleanup, etc.)

Reclamation will conduct accessibility evaluations to determine if facilities and programs are accessible to persons with disabilities. Reclamation will then:

- **R** Prepare action plans
- **R** Develop cost estimates
- **R** Ensure that upgrades and new developments meet appropriate accessibility standards
- **R** Develop an adequate number of accessible day-use and campground sites
- **R** Make all or portions of new trails accessible
- **R** Make interpretive displays and information accessible

In cooperation with the CFRA and other interested parties, Reclamation will establish a policy that will address the public use of shoreline areas between the reservoir and the lease lot areas. This will be initiated concurrently with implementation of Title X, which authorizes conveyance of the lease lot areas to private parties. Reclamation and the CFRA will work together in establishing signage which will identify the public use area between the lease lots and water surface.

As provided in the Canyon Ferry Unit, Montana, Environmental Assessment and FONSI, February 2002, Reclamation will establish procedures for authorizing docks authorized by

Title X (intended for cabin lessees who were provided the right to one dock per site under Title X). Reclamation will coordinate this activity with the CFRA and other interested parties. The policy will establish design and construction standards.

Reclamation will work cooperatively with other road users and entities to consider contributing funds commensurate with amounts used in the past for road maintenance towards new cooperative initiatives. The cooperative initiatives may provide cost-share opportunities to upgrade East and West Shore Drives beyond the existing condition. Other roads within the area will be maintained as they have been in the past. Reclamation has dedicated land on both East and West Shore Drives for use in fire suppression activities. This land will be used for turnarounds, cisterns, fire stations, and dry fire hydrants. On the west shore, there are five emergency service access easements, two future emergency service turnaround areas, two fire department dry hydrant sites, and one future cistern site. On the east shore, there are six future emergency services turnaround areas, two emergency services access easements, two fire department dry hydrant sites, one future cistern site, one future fire station access roadway easement, and one vehicle turnaround area.

Reclamation will continue with the shoreline management committee of concerned individuals and entities to look at developing recommendations for erosion-control methods and locations.

Reclamation will continue to work with the Montana Aeronautics Division and other interested parties on the disposition of the Silos area airport. Reclamation will determine if the lands should be retained in Federal ownership for Reclamation project purposes before any land transactions occur.

Install dry fire hydrants at several locations in cooperation with the Broadwater County Rural Fire District.

Some areas above and immediately below the dam will be closed for public safety and facility security purposes.

Natural Resource Protection with Maximum Recreation Development (Alternative C)

In addition to the elements and actions common to all alternatives, and in addition to all the elements and actions that are described in Alternative B, Alternative C prescribes actions for developing a maximum number of expanded day-use and camping facilities and recreation opportunities and actions for conserving, protecting, enhancing, and interpreting the natural resources within the Canyon Ferry Reservoir study area (figure IV-3). The primary difference between the two action alternatives is the number and type of recreation opportunities provided.

Canyon Ferry Reservoir

Alternative C

Riprap riverbank
Install restroom at eagle viewing area
Realign access road to eagle viewing parking area
Rehabilitate existing campsites
Develop additional day-use area
Consider providing additional bald eagle viewing opportunities
New boat ramp

Concessionaire-operated facilities/ services at Kim's Marina include a launch ramp, boat slips, boat rentals, dock-side fuel and sewage pump-out, dry storage, store, cabins, trailers, RV and campsite rentals, tennis court, public restrooms, and fish cleaning stations.

Upgrade parking lot
Redesign boat ramp area

Replace boat ramp at Kim's Marina

Extend boat ramp

Stabilize access road

Concessionaire-operated facilities/ services at Yacht Basin Marina include a launch ramp, boat slips, dry storage, store, primitive campsite and cabin rentals, and public restrooms.

Upgrade existing camping sites
Construct group shelter
Protect riparian area
Parking area

Replace boat ramp at Yacht Basin

Rehabilitate existing trail
Install information and interpretive signs
Initate efforts to pump existing restrooms

Rehabilitate existing campsites
Additional campground loop
Trail from Hellgate to Confederate Bay with restrooms, signs, and parking
Boat ramp and parking lot upgrade

Scooter Bay
3 - loop campground
Boat Ramp
Restrooms
Parking

Spring Creek Bay Trail Head
Parking
Restrooms
Signs

Goose Bay
Replace boat ramp by summer of 2003

Replace boat ramp

Construct west boundary fence

Concessionaire-operated facilities/ services at Goose Bay Marina include a launch ramp, boat slips, dry storage, store, trailer, RV and campsite rentals, and public restrooms.

Rehabilitate existing campsites
Develop additional campground loop with restroom
Evaluate need for trail connecting White Earth with Crittenden day-use area
Construct small trail and trail head on side of pennisula

Upgrade campground to full service
Develop day-use area
Restrooms
Parking
Construct new boat ramp
Construct trail from Confederate Bay to Hellgate

Construct boat ramp and restroom

Develop deep water bay
Develop new day-use areas and campgrounds. Upgrade existing campgrounds pursuant to Broadwater County's development plan
Develop concession operation
Develop primitive camping area

Rehabilitate existing campsites
Additional campground loops
Nonmotorized trail from Indian Road to Silos
Restroom
Interpretation
Possible ice skating rink

Missouri River Nature Trail
Trail Head
Parking
Restrooms
Signs

Riverside
Court Sheriff
Chinamen's Gulch
Shannon
Kim's
Canyon Ferry Dam
Cave Bay
East Shore Dr
Sandy Beach
Jo Bonner
Yacht Basin
Chalet
Fish Hawk
Cemetery Island
Overlook
Missouri River
Magpie Creek
Lorelei
Lewis and Clark
Orchard
Crittenden
Mahogany Cove
Hellgate
Avalanche Creek
284
Helena 5 miles
12
287
LEWIS AND CLARK COUNTY
BROADWATER COUNTY
JEFFERSON COUNTY
BROADWATER COUNTY
Filson Rd.
Beaver Creek
Beaver Creek Rd
White Earth
Goose Bay
Confederate
Pool Elevation 3797'
Duck Creek
Canyon Ferry Airport
Silos
Pond 1
Pond 2
Pond 3
Pond 4
Cottonwood
Indian Road
Townsend Airport
US 12
Townsend
Missouri River

A more detailed description of all the action items proposed for each alternative are described in detail in Chapter 4, Alternatives.

A Facilities Condition Assessment will be conducted at all developed recreation areas. Upgrades will be based on these assessments.

Legend

- Study Area Boundary (Bureau of Reclamation jurisdiction)
- Trail
- Marinas and Concessions

Campgrounds

- Camping
- Day use

Hydrology

- Intermittent
- Perennial
- Canal

N W E S

2 0 2 4 Miles

Figure IV-3

In addition to the heritage resource actions mentioned in Alternative B, Reclamation will:

- **R** Develop a public archeology program to enhance visitor experience by implementing an outdoor interpretive signage program for archeology
- **R** Develop a systematic process for site and locale monitoring and implement a systematic process for reporting damage to sites
- **R** Develop and implement a heritage resource management plan
- **R** Conduct periodic and systematic inventories for paleontological resources

In addition to the actions described in Alternative B concerning signing of Reclamation lands, Reclamation will develop a comprehensive sign program for the entire Canyon Ferry Reservoir area. The program will follow Reclamation's sign guidelines. Interpretive signs will be installed at appropriate locations along the trail system, as well as at other sites and locations that offer the opportunity to interpret the natural environment of the reservoir area.

In addition to the health and safety actions in Alternative B, Reclamation will pave many of the interior roads to address dust control and safety problems. Reclamation will amend or enter into new agreements with local law enforcement agencies to provide increased law enforcement personnel at the reservoir. Additional RV dump stations, sanitation facilities, and fish cleaning stations will be provided, as needed.

Measures to control access to the reservoir will be the same as Alternative B, except new and partially paved access roads will be provided to new trail heads, campgrounds, and day-use areas.

Campground improvements and expansions determined feasible under Alternative B will be accomplished under this alternative. In addition, a new camping area, associated infrastructure, and support facilities such as restrooms, fish cleaning stations, a fee station, and potable water will be developed at Scooter Bay, on the east side of the reservoir. A full-service campground loop will be provided at Hellgate Recreation Area. Confederate Bay will be upgraded to a full-service campground. Fee stations will be installed at the proposed Scooter Bay and Confederate Bay Recreation Areas. An additional east side camping loop will be provided at Indian Road Recreation Area. All new camping loops and overnight campgrounds will have adequate parking, restroom facilities, potable water, and informational and interpretive signing.

In addition to the expanded and upgraded day-use facilities described in Alternative B, new boat launch ramps with appropriate sanitation facilities, parking, and other amenities will be provided at Scooter Bay and Confederate Bay. A boat ramp will be developed at Duck Creek. Reclamation will upgrade other existing boat launch sites and provide additional paved ramps, based on demand and need.

Additional day-use areas and support facilities will be developed, based on demand, need, and site suitability. Reclamation will continue to upgrade existing sites, as needed.

In addition to establishing nonmotorized, multiuse trails at White Earth, and possibly between White Earth Campground and the Crittendon day-use area, a nonmotorized, multiuse trail will be provided to connect Confederate Bay Recreation Area with Hellgate Recreation Area. A Missouri River Nature Trail, located near the inlet to the reservoir, will be developed. A trail head with parking will be developed at Spring Creek Bay on the east side of the reservoir. Portions of all trails will be paved and accessible to people with disabilities. The roads to the north and south from Spring Creek Bay will be closed to motorized vehicles. Overnight camping will not be allowed in this area. Trail heads will have adequate restroom facilities and parking. Informational and interpretive signs will be constructed.

Contingent on appropriations from the Congress, Reclamation will increase its funding for the planning, construction, and future O&M of Canyon Ferry Reservoir facilities and will increase the number of personnel to manage the recreation facilities and lands.

All the fish and wildlife actions described in Alternative B will be accomplished under this alternative, plus Reclamation will work with MFWP to identify and promote development of projects outside the study area that qualify for Montana Fish and Wildlife Conservation Trust Funds. Reclamation will work with MFWP on eliminating some of the hunting opportunities within the study area to protect visitors and prevent vandalism of facilities.

In addition to the erosion-control methods detailed in Alternative B, Reclamation will develop a comprehensive program which provides guidelines and standards to control erosion damage to the entire reservoir shoreline. The program will include installation of erosion-control structures such as gabions or breakwalls.

In addition to the pollution control measures identified in Alternative B, Reclamation will develop a comprehensive waste management plan and provide boat dump stations at all marinas and other areas, as necessary.

In addition to concession actions listed in Alternative B, Reclamation will establish capacity limits for outfitters and guides at Canyon Ferry Reservoir and limit future authorizations, if necessary.

ALTERNATIVE ELEMENTS ELIMINATED FROM CONSIDERATION

Several suggestions and comments for the use of Canyon Ferry Reservoir lands were made by the public and considered by Reclamation, but they were eliminated from further consideration. The suggestions and comments received and the reason(s) for their elimination from further consideration are as follows:

R *Lease lots should be added to the GIS to include lease lot numbers, lease lot holders, and their numbers*: The lease lot transfer is outside the scope of this Federal action and is covered by a separate NEPA public process. However, the general location of the lease lot area has been added to the land ownership map. The final survey with all the pertinent lease lot information will be added to the GIS mapping. The lease lot overlay will then be available as a tool for making management decisions or for other purposes.

R *Money received from the sale of lease lots should be used to develop campgrounds and other recreation improvements and opportunities and to purchase access or additional lands for Canyon Ferry Reservoir*: Fulfilling all the requirements of P.L. 105-277 is beyond the scope of this Federal action and is being handled separately. Title X does not authorize the expenditure of funds from the sale of the lease lots for recreation purposes at the reservoir; however, the law stipulates the establishment of a $3 million Canyon Ferry-Broadwater County Trust to be used to improve access to the reservoir and improve existing facilities or to create new recreational areas, all within Broadwater County. Pursuant to Title X, the Trust shall be managed by a nonprofit foundation or other independent trustee to be selected by the Broadwater County Commissioners. An Advisory Committee established by the Broadwater Commissioners will also help to determine how the disbursement of funds from the trust will occur.

R *Establish a fund to increase public access to other Federal lands in the State of Montana and reduce the Pick-Sloan Missouri Basin Project debt for the Canyon Ferry Unit*: Title X already provides language that addresses these two items. Two of the primary purposes of Title X are to reduce the debt owed to the Federal Government for the Canyon Ferry Unit of the Pick-Sloan Missouri Basin Project and to provide funds for acquiring fee title interests in lands or easements in the State of Montana for recreation and fish and wildlife purposes. Ten percent of the money received from the sale of the lease lots at fair market value would be applied to the Pick-Sloan Missouri Basin, Canyon Ferry Unit debt, and 90 percent would be used for recreation and fish and wildlife purposes in the State. It is not the purpose of this RMP to implement the above-mentioned stipulations of the Public Law.

R *The new appraisal rates for the lease lots are inflated and are forcing lease holders from their homes. There are no covenants to restrict, monitor, or set any standards for existing or proposed lakeshore and lakeview developments*: Lease rates are determined in accordance with the May 18, 1998, Settlement Agreement which was agreed to and signed by the Canyon Ferry Recreation Association, who represents the cabin lessees. In accordance with Title X, covenants for the 265 cabin site lots have been established and will be implemented upon sale of the cabin sites and upon renewal of the current leases. Reclamation has no authority to establish covenants on other existing private lands around the Reservoir. It is not the intent of this RMP to resolve disputes or to interpret the stipulations already contained in the legislation.

R *Senate Bill 1913 calls for total Federal administration of the area, with no representation for the CFRA and only token "advisory representation" by the State and county agencies*: The preparation of the RMP/EA is not intended to implement the provisions of Title X. It was not the intent of the Public Law to give rights to the homeowners' association beyond those given to other citizens of the State of Montana.

R *BLM's 5-year funding request includes $20 million for Missouri River projects to prevent the resources from being degraded by the increase in the number of visitors, which is expected from the upcoming bicentennial. In addition, already this year, BLM is receiving $135,000 to protect riparian areas and is asking for $5 million for land acquisition, easements, and facility improvements*: It is not the intent of this RMP/EA to determine BLM's budget or suggest how to expend congressionally appropriated funds that were made available, or will be made available, to BLM for use on lands they administer. BLM and Reclamation are both agencies within the Department of the Interior and, basically, have the same goals and objectives related to resource management and the same philosophy for using cooperative partnerships for conserving and protecting environmental resources on lands each administers. The RMP/EA outlines Reclamation's goals and objectives for the management of Canyon Ferry Reservoir lands and associated environmental resources for the next 10 years.

Reclamation management goals and objectives and associated management actions have been formulated to respond to all other issues and concerns raised by the public. The proposed management actions are described in detail in each alternative's respective description in this chapter. Also see chapter VI for a comprehensive list of goals and objectives and management actions.

Table IV-2 summarizes the impacts for each alternative.

Table IV-2.—Impact comparison of alternatives

Environmental factors	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Hydrology	Unchanged.	Same as Alternative A.	Same as Alternative A.
Climate	Unchanged.	Same as Alternative A.	Same as Alternative A.

Table IV-2.—Impact comparison of alternatives (continued)

Environmental factors	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Water Quality	Would be unchanged, or potential for pollution might increase.	Water quality monitoring would help identify water quality problems. Adverse impacts from septic release would decrease. Algae blooms would continue. Protecting groundwater sources will enhance water quality.	Same as Alternative B.
Geology	Unchanged.	Same as Alternative A.	Same as Alternative A.
Soils and Topography	Erosion, sedimentation, and dust would continue. Soils negatively impacted by recreation use.	Erosion from ORV use would decrease. Shore erosion would decrease. Prime soils would be protected.	Same as Alternative B.
Vegetation	Vegetation would continue to be negatively impacted by ORV and uncontrolled recreation use. Upland shrub, grassland, and riparian areas would be negatively impacted. Weeds would decrease.	Implementation of the management actions would have a positive effect on vegetation. The closure of roads and curtailment of ORV use would have a positive effect on vegetation. Weeds would decrease.	The positive effects experienced with Alternative B would be reduced as a result of increased recreation development. Weeds would decrease.
Fish and Wildlife	Natural increase in visitation will increase fishing pressure. Continued loss of habitat from ORV use. Increases in recreation use will negatively affect upland game habitat.	Fisheries enhancement projects will benefit fisheries. A decrease in ORV use will have a positive effect on wildlife habitat.	The fisheries should not be affected through increased harvest because Canyon Ferry is stocked. Increased use would displace wildlife.

Table IV-2.—Impact comparison of alternatives (continued)

Environmental factors	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Recreation	Uncontrolled recreation use would continue. No new recreation opportunities would be provided. ORV use would continue at the same level or increase. The goods and services provided by concessionaires will not change. Visitor health and safety would be compromised by lack of sanitary facilities, signage, law enforcement, and proper O&M of facilities. Quality of recreation experience would gradually decrease as visitation increases without the benefit of additional facilities and opportunities. Visitors would gradually feel a sense of overcrowding as visitation increases. Visitor conflicts would increase. Fee system would remain the same	Implementing the RMP would gradually displace visitors who prefer a more uncontrolled and unconfined recreation experience. Visitor use would gradually increase over time as a result of increased development. Visitors would have increased opportunities and facilities to enjoy. The goods and services provided by concessionaires will not change. ORV users would be displaced from traditional areas at the reservoir to areas outside the study area that allow ORV use. Visitor health and safety would increase because of RMP management actions. Quality of visitors' recreation experience would increase because of increased facilities and opportunities. Dispersion of recreational activities would alleviate some potential feeling of overcrowding. If an additional concession is established at Silos, visitors would be provided with additional commercial opportunities to acquire needed goods and services.	Same as Alternative B, except increased recreation development will cause visitor use to increase. The quality of the visitors' recreation experience may decrease for some historic users. The closure of some areas to hunting because of increased visitation and facility development may displace hunters to other areas outside the study area. The goods and services provided by concessionaires will not change.

Table IV-2.—Impact comparison of alternatives (continued)

Environmental factors	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Recreation (continued)		The Silos concession will not be authorized if it negatively affects existing concessionaires; therefore, there should be no impact to existing concession operators. Visitors opposed to fees would be displaced to areas where recreation fees are not charged. Increasing opportunities on Cemetery Island would increase the sewage problem if restrooms are not pumped on a regular basis.	
Visuals	Visual quality would decrease.	Visual quality would improve due to implementation of quality design standards for facilities and creation of buffer zones and good landscaping practices.	Maximum recreation development may negatively affect the visual quality.
Land Use	Land uses would be maintained at current levels. Land use permits would be issued on a case-by-case basis without regard to comprehensive land use planning strategy. Existing uses would continue to cause conflicts with adjacent land uses and between land uses within the study area. Cattle trespass and illegal access to the reservoir would continue without fencing, proper signing, and controlled access.	Land use conflicts would decrease because of the comprehensive land use planning strategy. Land use limitations would be taken into consideration before authorizing land use permits to protect existing resources. Upon expiration of concession permits and issuance of new permits, the general public may enjoy additional opportunities to use these areas. Fencing will eliminate cattle trespass. Illegal access to reservoir will be eliminated.	Same as Alternative B.

Table IV-2.—Impact comparison of alternatives (continued)

Environmental factors	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Land Use (continued)		Closing some areas above and below the dam would protect public health and project facilities. Installation of dry fire hydrants would help protect the public, land resources, and facilities.	
Transportation	Access would remain at the existing level; therefore, the public will be confined to existing roads. Traffic will continue to increase. Signing of roads would not be initiated. Present levels of funding will not allow adequate maintenance of roads; therefore, roads will deteriorate.	Safety of visitors using roads would increase through signing and proper road maintenance. Closing of roads having no legal access would decrease access to reservoir. Visitation may increase, causing congestion on roads, but only on weekends and holidays. Some users may be displaced to other areas because historical access to certain areas may be eliminated.	Same as Alternative B.
Socioeconomics	Total industrial output, number of jobs, and labor income would remain approximately the same as the current condition based on recreation-related expenditures of $13,177,200. Level of user satisfaction would decline. Level of use might decline for some user groups (e.g., families, senior citizens).	With a 5-percent and 10-percent increase in visitor use, total industrial output, number of jobs, and labor income would increase based on recreation-related expenditures of $13,835,900 and $14,494,700, respectively. User conflicts would decrease.	With a 20-percent increase in visitor use, total industrial output, number of jobs, and labor income would increase based on recreation-related expenditures of $15,812,400. User conflicts may increase as less space is available.

Table IV-2.—Impact comparison of alternatives (continued)

Environmental factors	Alternative A No Action Alternative	Alternative B (Preferred) Natural Resource Enhancement with Moderate Recreation Development Alternative	Alternative C Natural Resource Enhancement with Maximum Recreation Development Alternative
Socioeconomics (continued)	Increased use by less law-abiding groups could occur.	Increased use by some user groups, while other users would likely go to other areas to meet their recreation needs.	
Environmental Justice	Activities would continue as before; therefore, no adverse environmental justice impacts will occur.	Positive environmental justice impacts on minority and low-income workers. Percentage of population in poverty would likely not change.	Same as Alternative B, except slightly more employment opportunities for minority and low-income workers.
Heritage Resources	Heritage resources would continue to be managed in accordance with the National Historic Preservation Act and other statutes.	Degradation of heritage resources would be slowed by stabilization of erosion and public awareness enhanced by interpretive exhibits. Identification of heritage resources will allow for proper management and protection.	Same as Alternative B, but with increased interpretive opportunities.
Indian Trust Assets	Reclamation will continue to consult with Tribes in accordance with NEPA and Indian Trust Asset policies.	Same as Alternative A.	Same as Alternative A.
Indian Sacred Sites	Reclamation will continue to consult with Tribes in accordance with Reclamation's Indian Sacred Sites Guidelines.	Same as Alternative A.	Same as Alternative A.

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Chapter V

Affected Environment and Environmental Consequences

INTRODUCTION

This chapter discusses the existing physical, biological, and socioeconomic resources in the study area (affected environment) and the Federal action's anticipated environmental effects (environmental consequences) on specific resources. All the resources within the study area are described in the affected environment portion of this section; however, only the resources that may be potentially affected by the three alternatives are analyzed in the environmental consequences portion. 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.

The environmental analysis of the potentially affected resources is based on professional judgment and the experience of Bureau of Reclamation (Reclamation) staff specialists, discussions with other experts and professionals, literature review, and field trips to the study area by resource personnel.

It is the goal of this chapter to quantify, to the extent possible, impacts of each alternative on the analyzed resources. However, if quantitative estimates are not possible, qualitative estimates are provided to facilitate comparison between alternatives needed for the planning process.

It is assumed for the environmental analysis portion of this report that recreational use at Canyon Ferry will occur, regardless of which alternative is chosen. Impacts to the affected (existing) environment are discussed from a programmatic standpoint because exact construction activities are not known at this time; all that is known is that a particular activity might occur.

HYDROLOGY

The Resource Management Plan (RMP) is not intended to address reservoir or powerplant operation issues. Operations included in the RMP are the current operations criteria and are intended only to set the stage for recreation and other natural resources planning activities.

Affected Environment

Reclamation completed construction of Canyon Ferry Dam in 1954. The reservoir is operated to provide flood control in cooperation with the U.S. Army Corps of Engineers (Corps); to provide a water supply for power generation in coordination with PPL Montana (formerly Montana Power Company [MPC]), irrigation, and municipal and industrial uses; and to enhance recreation, fish, and wildlife benefits (figure V-1).

The United States of America, Department of the Interior, Reclamation, holds the water right for water stored in Canyon Ferry Reservoir. The water right, 411-W-040923-00, has been listed in a temporary preliminary decree issued by the Montana Water Court. The water right did not receive any objections during the initial Water Court process, so the water right will essentially appear unchanged in a final decree for the river basin. Federal legislation authorizes the Secretary of the Interior (Secretary) to contract to supply water for authorized purposes from Federal storage facilities such as Canyon Ferry Reservoir. The only authorized water use from Canyon Ferry Reservoir is for those water uses that are covered by a contract with Reclamation.

Reclamation water rights for Canyon Ferry Reservoir are either storage type rights or direct diversion rights. Reclamation has a storage right for 1,952,059 acre-feet, and PPL Montana has a storage right for 47,500 acre-feet at elevation 3800 feet, the storage capacity of the original Canyon Ferry Dam, which was replaced by the current reservoir. The direct diversion rights, totaling 7,190 cubic feet per second, include flows for the Helena Valley Irrigation District pumps, pump turbines, and the Canyon Ferry powerplant turbines.

There are water rights that are senior to the water rights Reclamation has claimed for Canyon Ferry. PPL Montana owns six hydropower dams downstream from Canyon Ferry and one hydropower dam upstream from Canyon Ferry, all with water rights senior to Canyon Ferry. These prior rights are satisfied through compliance with the terms in the 1972 Coordination Agreement between PPL Montana (then Montana Power Company) and Reclamation.

Canyon Ferry Dam is 225 feet high (172 feet above streambed), 1,000 feet long at the crest, and 173 feet wide at its base. The reservoir has a storage capacity of 1,891,888 acre-feet at elevation 3797 feet, normal operating full pool. There are four methods of releasing water from the reservoir: (1) through the spillway, (2) through the river outlets, (3) through the turbines, and (4) through the Helena Valley Pumping Plant. (Figure V-2 shows Canyon Ferry Dam and Reservoir design criteria.) The average discharge from the reservoir is 5,400 cubic feet per second (cfs). December-February discharges average 4,945 cfs, and June-August discharges average 6,400 cfs. Actual discharges are primarily determined by inflows and reservoir content. When the reservoir is at elevation 3800, the spillway has a maximum discharge capacity of 150,000 cfs, controlled by four radial gates. The dam has four river outlets that have a maximum combined discharge capacity of 9,400 cfs. However, restrictions placed on the operation of the river outlet gates has limited the maximum discharge to 2,000 cfs unless there is an emergency.

Canyon Ferry Dam and Reservoir Operational Objectives

Power Generation Benefits

Flood Control Benefits

Irrigation Benefits

Municipal Benefits

Industrial Use Benefits

Fish and Wildlife Benefits

River and Lake Recreation Benefits

Water Quality Benefits

Figure V-1.—Canyon Ferry Dam and Reservoir operational objectives.

Canyon Ferry Dam and Reservoir
Design Criteria

Dam:
Concrete gravity structure
Structural height = 225 feet; hydraulic height = 172 feet
Length = 1,000 feet
Volume = 414,400 cubic yards of concrete

Powerplant:
Three 13.5-foot-diameter penstocks through dam at right of spillway section
Three 23,500-horsepower hydraulic turbines
Nameplate capacity = 50 megawatts = three generators rated at 16.667 megawatts each
Powerplant capacity = 5,800-6,000 cubic feet per second at maximum head of 160 feet

River Outlets:
Four 2.0-foot-diameter conduits, each controlled by 77.0-inch regulating gates
Capacity at elevation 3800 = 2,350 cubic feet per second for a total of 9,400 cubic feet per second

Spillway:
Overflow section in center of dam controlled by four 51.0 x 34.5-foot radial gates
Capacity at elevation 3800 = 150,000 cubic feet per second

Helena Valley Penstock:
One 13.0-foot-diameter penstock through dam at left of spillway section
Capacity = 780 cubic feet per second

Canyon Ferry Reservoir:
Maximum water surface: elevation = 3800; storage = 1,992,997 acre-feet
Normal operating full pool: elevation = 3797; storage = 1,891,888 acre-feet
Surface area: at elevation 3800 = 33,535 acres; at elevation 3797 = 32,798 acres

Figure V-2.—Canyon Ferry Dam and Reservoir design criteria.

A 50,000-kilowatt powerplant is located on the right bank of the river adjacent to the spillway basin at the toe of the dam. The powerplant houses three turbines that have a total discharge capacity of 6,400 cfs. During years when no spills are required to control the fill of Canyon Ferry Reservoir, about 93 percent of the water leaving the dam is released through the turbines, producing an average of 405 million kilowatthours of energy annually. The remainder of the water is released for Helena Valley Irrigation District irrigation needs. Power from Canyon Ferry is transmitted by PPL Montana to the Western Area Power Administration grid, which then markets the power.

Irrigation water is being supplied to about 15,000 acres on the Helena Valley Unit. A pumping plant located below the dam has two pumps powered by hydraulic turbines. When operating at capacity, the pumps deliver about 350 cfs to the Helena Valley Canal, and the turbines discharge an additional 350 cfs back to the river. Actual flow in the canal varies with irrigation demand.

Stored water for irrigation is also supplied to upstream irrigators by exchange contract. Under such a contract, the junior priority upstream irrigator can divert natural flows as necessary to meet irrigation needs. Stored water is then released from the reservoir to supply the senior natural flow water rights of PPL Montana downstream from Canyon Ferry. Since 1989, Reclamation has imposed a moratorium on the further issuance of water service exchange contracts upstream from Canyon Ferry. Temporary (1-year) water service contracts are issued below Canyon Ferry on a case-by-case basis. The moratorium will remain in force, pending the outcome of a water quality study that will determine the impacts that additional depletions will have on arsenic concentrations.

Water users pay a proportionate share of the capital and operation and maintenance (O&M) costs of Canyon Ferry. There is adequate water storage for additional private and Federal irrigation development, but no projects are planned.

The city of Helena receives a portion of its municipal water supply from Canyon Ferry. Water is delivered via a canal and tunnel system to the Helena Valley regulating reservoir and is then piped to the city's treatment plant. The service contract with Reclamation entitles the city to 5,680 acre-feet, but annual use by the city depends on the availability of water from other sources.

Canyon Ferry Dam stabilizes the flow of the Missouri River. Snowpack in the 15,760-square-mile drainage area above the reservoir is measured each winter. Based on monthly water supply forecasts, releases are scheduled from the dam in amounts sufficient to prevent flooding, while ensuring an adequate storage supply for irrigation, power generation, recreation, fisheries, and wildlife needs later in the season. (Figure V-3 shows Canyon Ferry Reservoir operating criteria.)

Canyon Ferry Reservoir Operating Criteria

Whenever an adequate water supply is available, operate Canyon Ferry Reservoir to maintain a minimum flow of 4,100 cubic feet per second in the Missouri River immediately below Holter Dam to protect the quality and quantity of the river fishery. When an adequate water supply is not available, the next critical flow levels are 3,000 cubic feet per second and 2,800 cubic feet per second.

During a series of dry years, filling the reservoir is restricted to maintain the minimum flow levels.

Based on monthly forecasts prepared from January through June, releases are adjusted to allow storage to fill to elevation 3797 (top of joint-use pool) by the end of June.

Attempt to release all water through Canyon Ferry Powerplant and avoid spilling any water past the powerplant, except during times of unusually heavy inflow or scheduled powerplant maintenance.

For downstream flood control purposes, avoid making releases that would cause flows in the Missouri River to exceed 20,000 cubic feet per second at Cascade, 25,000 cubic feet per second at Ulm 6E, or 77,000 cubic feet per second at Fort Benton.

After storage has peaked, usually in June or July, releases are adjusted to evacuate storage and provide adequate space to control the next season's snowmelt runoff.

Avoid dropping Canyon Ferry Reservoir below elevation 3785 from Memorial Day weekend, in late May, through the Labor Day weekend, in early September, to protect flat water recreation interests.

Maintain releases to the Missouri River at minimum desired flows during October and early November to protect brown trout spawning through the fall and winter.

Avoid dropping the reservoir level during April and May to protect fish spawning in the reservoir.

Maintain the reservoir elevation no higher than elevation 3794 during December through March to reduce the potential for ice-jam flooding near the upper end of the reservoir.

All operations are closely coordinated with Montana Power Company to maximize all the benefits provided by Canyon Ferry and the seven downstream Montana Power Company powerplants.

Coordinate all flood control operations with the Corps.

Avoid dropping the reservoir below elevation 3774 to prevent exposing reservoir lakebed.

Figure V-3.—Canyon Ferry Reservoir operating criteria.

The top 3 feet of the reservoir's water storage, between elevations 3797 and 3800 feet (99,460 acre-feet), is allocated exclusively to flood control.[1] In addition, the next 27 feet of storage space, between elevations 3797 and 3770 feet (795,135 acre-feet), is joint-use[2] space available for both flood control and conservation purposes. The storage between elevations 3728 and 3770 feet (711,462 acre-feet) is active conservation.[3] The storage between elevations 3635.5 and 3728 feet (445,462 acre-feet) is dead and inactive.[4] (Figure V-4 shows Canyon Ferry reservoir allocations.)

At the end of each water year, Reclamation prepares an annual report summarizing climatic and hydrologic conditions and events of the past year that are principal factors governing the pattern of reservoir operations (figure V-5). Figure V-5a shows the reservoir level that could be expected at Canyon Ferry using operating criteria discussed in the previous pages and utilizing inflows that are equal to median inflows or flows that can be expected 50 percent of the time. Actual reservoir levels could vary widely from these shown depending on the runoff conditions and existing reservoir levels being experienced at that time. Figure V-5b shows the surface area that could be expected at Canyon Ferry using the operating criteria discussed on the preceding pages and utilizing inflows that are equal to median inflows or flows that can be expected to occur 50 percent of the time. The actual surface area of the reservoir could vary widely from these shown depending upon the runoff conditions and existing reservoir levels being experienced at that time. Annual operating plans are also prepared for the new water year. Except for special operations, the reservoir is generally managed under the following criteria and limitations:

R The top 3 feet, between elevations 3797 and 3800 feet, are used exclusively for downstream flood control. When storage rises into this pool, operation of the reservoir is directed by the Corps. This storage is generally evacuated as fast as downstream conditions permit.

[1] Flood control capacity is the reservoir capacity assigned for the sole purpose of regulating flood inflows to reduce downstream flood damage.

[2] Joint-use space is a portion of the total conservation capacity assigned to flood control purposes during certain periods of the year and to conservation during other periods of the year. Normally, these are established by a flood control agreement between Reclamation and the Corps, whereby Reclamation agrees to keep the joint-use pool available to control high runoff.

[3] Active conservation is the reservoir capacity assigned to regulate reservoir inflows for irrigation, power, municipal and industrial use, fish and wildlife, navigation, recreation, water quality, and other purposes. It does not include exclusive flood control or joint-use capacity.

[4] Inactive storage is the reservoir capacity, exclusive of and above the dead capacity, from which stored water is normally not available because of physical restrictions or operating agreements. Usually, inactive capacity is established for two purposes: (1) to provide minimum operating head on a powerplant and/or (2) to provide minimum head on canal or river outlets to maintain a desired discharge. Dead capacity is the reservoir capacity from which stored water cannot be evacuated by gravity.

CANYON FERRY RESERVOIR ALLOCATIONS

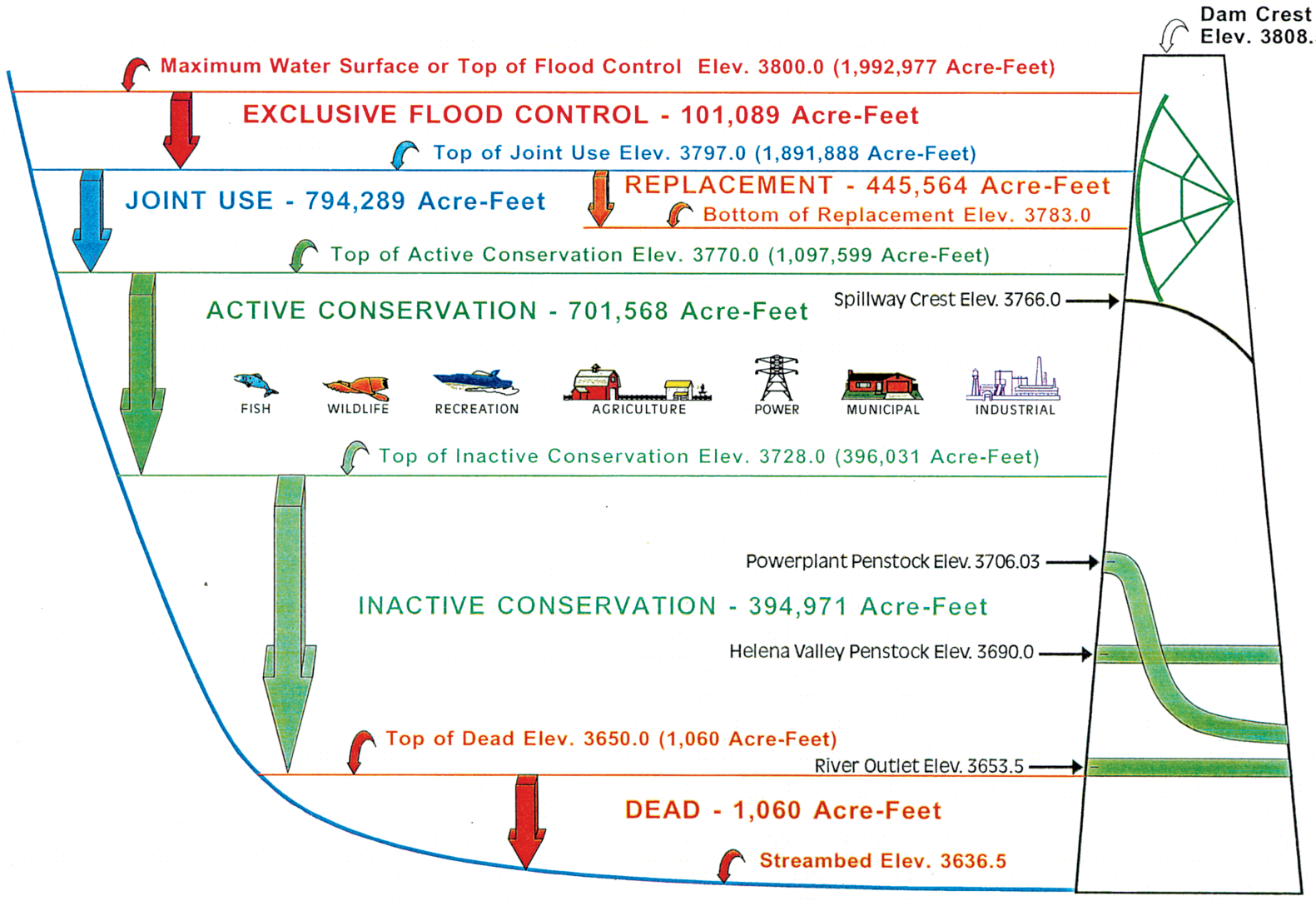


Figure V-4

CANYON FERRY RESERVOIR
Plans Based on 1967-1999 Historic Inflows
FIGURE V-5A

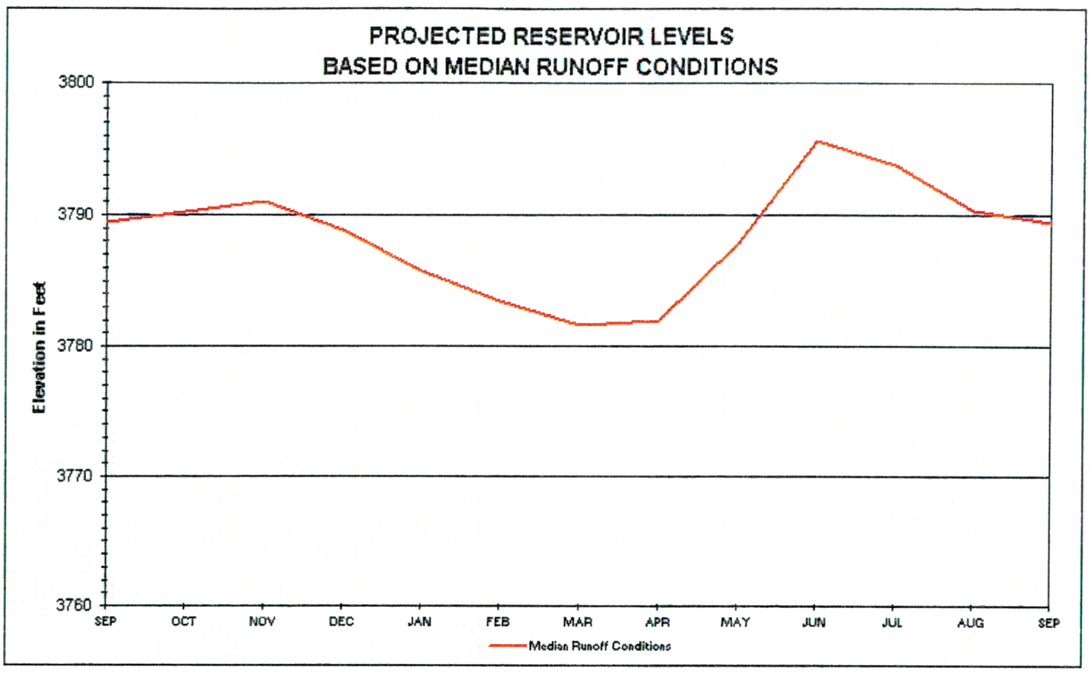


FIGURE V-5B

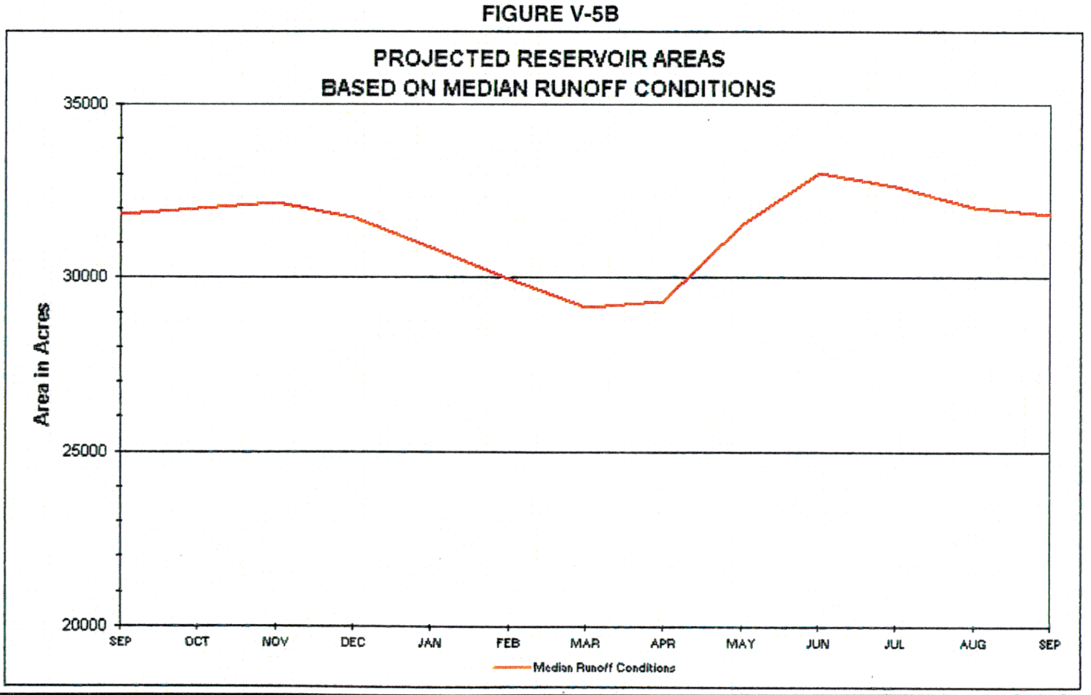


Figure V-5

R As soon as storage has peaked, usually in June or July, power releases are adjusted so that the pool will be drawn down to near elevation 3783 feet (1,510,000 acre-feet) by the following March 1. Each month, inflows to Canyon Ferry Reservoir are re-evaluated, and releases are adjusted accordingly. Releases to meet desired reservoir elevations are limited to powerplant capacity. Generally, water is not spilled to provide this drawdown.

R Most of the stored water that will be released from Hebgen Lake is spilled in October and November. Storage of this water in Canyon Ferry Reservoir may cause the reservoir to rise slightly in these months. However, PPL Montana will try to limit the Hebgen drawdown during these months in an effort to maintain the Canyon Ferry Reservoir pool below elevation 3794 feet after December 1 of each year. Storage below elevation 3794 feet, prior to winter freezeup, is desired to prevent ice-jam problems at the head of the reservoir.

R Beginning near the first of January, and at least monthly thereafter through June, water supply forecasts are prepared from snow cover and precipitation measurements to estimate the amount of spring runoff expected to flow into Canyon Ferry Reservoir. As these forecasts become available, operational mitigations are sometimes required. Releases are set, based on the most probable spring inflow forecast, to allow the reservoir to fill to the target elevation of 3797 feet (1,952,000 acre-feet) near the end of June.

R After April 1, if forecasts indicate that releases in excess of powerplant capacity must be made, the amount of spill is based on more refined inflow estimates. Releases are limited to 15,000 cfs as long as space is available.

R Depending on when the spring runoff starts, the release of water, based on inflow forecasts, may draw the pool as low as elevation 3770 feet (1,157,000 acre-feet). In a series of dry years, the pool may be drawn down as low as elevation 3728 feet (445,000 acre-feet) to meet firm power generation requirements and satisfy PPL Montana's prior rights. If storage is drawn down below elevation 3728 feet, the powerplant becomes inoperable.

R The runoff predictions take into account snowpack conditions and other variables. The Resource Management Plan/Environmental Assessment (RMP/EA) is not intended to address reservoir or powerplant operations issues. The discussion about operations in the RMP/EA describes the current operating criteria used at Canyon Ferry. The operating criteria are used as guidelines to balance water supply for all competing interests, including recreation.

In addition, input on reservoir operations is provided by recommendations from the Upper Missouri Advisory Council, a working group that is concerned with the effect that reservoir operation has on fish and wildlife resources, both within and below the reservoir. This group is coordinated by Montana Fish, Wildlife and Parks (MFWP) and includes representation from MFWP, anglers, marina operators, the Helena Valley Irrigation District, the Canyon Ferry Recreation Association (CFRA), Reclamation, PPL Montana, and outfitters. The council meets to discuss streamflow, reservoir levels, and fishery and wildlife management. The group monitors hydrologic and climatic conditions and makes recommendations on dam releases, particularly during spring and summer months when storage for power generation and irrigation may substantially affect downstream releases.

Environmental Consequences

Alternative A.—The hydrology would not be impacted under Alternative A.

Alternative B.—Same as Alternative A.

Alternative C.—Same as Alternative A.

Cumulative Impacts

No cumulative impacts have been identified under any of the alternatives.

Mitigation

No mitigation measures have been identified.

CLIMATE

Affected Environment

The climate of the study area is modified continental. It is influenced by Pacific Ocean air masses, drainage of cool air from the surrounding mountains, and protection by mountains in all directions. These modifiers make temperature changes less dramatic than those of a true continental climate.

The temperature in the area varies greatly from summer (average 66 degrees Fahrenheit [EF]) to winter (average 25 EF). The extreme temperatures are 106 EF to -36 EF. These extremes can have a big impact on reservoir facility use; there will be increased visitation in the summer and decreased visitation in the winter.

Precipitation can have an impact on visitation as well as the overall health of the habitat around the reservoir. Average precipitation is about 11 inches, with the extremes being from about 7 inches to about 20 inches. Most of the precipitation comes from March through August in the form of rain.

The temperature and precipitation data were found on the Western Regional Climate Center website.

According to the National Weather Service, the prevailing wind for the Helena Valley area (measured at the Helena airport) is from the west, with an annual average velocity of 9 to 13 miles per hour. This is considered highly representative of reservoir winds. Frequent storm fronts move along the slope of the mountains with high-velocity winds (20 to 35 miles per hour). These winds switch direction as storm fronts pass.

According to local residents and recreation managers, there are microclimates and weather phenomena that affect distinct portions of the study area. The northeast shore is more wind-prone, yet sunnier and less subject to snow accumulation than the west shore. Wind vulnerability has discouraged many of the northeast-shore residents from building boat docks. Snow and ice removal from roads is a greater problem on the west shore.

The south end of the reservoir has, in the past, been subject to severe duststorms caused by cultivation and lakebed exposure to drying during low-water flow periods. The dust has been reduced by dikes, built by Reclamation, that capture water to inundate the exposed lakebed. Some duststorms still occur, particularly during spring when winds are strong and cultivated fields are still devoid of vegetation. The south end of the reservoir is also subject to severe winter storms and ice accumulations partially because the water is shallow here. Managers reported that iceflows have sheared off dock poles. The south end's windier conditions are an attraction to more experienced sailors and windsurfers, but the wind causes management concern about providing safe mooring and water skiing docks.

Environmental Consequences

Alternative A.—The climate would not change under Alternative A.

Alternative B.—Same as Alternative A.

Alternative C.—Same as Alternative A.

Cumulative Impacts

No cumulative impacts have been identified under any of the alternatives.

Mitigation

No mitigation measures have been identified.

AIR QUALITY

Affected Environment

Air quality in the study area is assumed to be typical of background levels for western Montana. Although no monitoring was conducted during the course of this study, two environmental assessments, prepared within the local air basin, were reviewed. These documents addressed the Continental Indian Creek Lime Plant's operation, west of Townsend, and the Chartain Company's operation at Winston.

The studies documented that there were no major sources of air pollution in the northern portion of the study area. In the southern portion, the Continental Indian Creek Lime Plant contributes to the total suspended particulate (TSP) levels in the immediate study area. As part of their operating permit stipulation, the Continental Indian Creek Lime Plant submitted 4 years of TSP monitoring data, from 1981 through 1984. These data showed that, while there were particulate emissions, there were no violations of the Montana 24-hour standard.

Monitoring for the Chartain Project was conducted for a year (1986), both at the mine site and at the Highway 287 site near Winston. Monitoring results showed that TSP levels were well within State and Federal ambient air quality standards. Sample filters also showed low levels of heavy metals, such as arsenic and lead.

The ASARCO lead smelter in east Helena may contribute minor amounts of sulfur dioxide and particulate (metals or trace elements). However, the plant's distance from the study area lessens potential air quality impacts from this source.

Minor sources of air pollution in the study area include vehicular traffic, home heating, and mine exploration activities. On occasion, the east shore, in particular, is subject to duststorms because of the exposure of highly erodible soil to winds, especially in the spring. These exposed areas include roads and plowed fields.

By the mid-1960s, the frequency and magnitude of duststorms at the south end of the reservoir prompted Reclamation to consider construction of the now-flourishing wildlife ponds near Townsend. The exposure of flats in the delta area during low water periods, combined with high winds, subjected Townsend area residents to health risks and reduced visibility from duststorms. The State Air Quality Bureau no longer receives complaints about dust from this area.

Magnesium chloride was applied to the road surfaces within the recreation sites and on access roads adjacent to the recreation areas before 1994 and on selected roads during the fires of 2000. Magnesium chloride reduces dust by holding moisture on the road surface.

Environmental Consequences

Alternative A.—Air quality would not change under Alternative A.

Alternative B.—Additional O&M of access roads would slightly improve air quality as compared to Alternative A. However, any improvement in air quality from additional O&M of roads may be offset by increased vehicle pollution, campfires, etc.

Alternative C.—Additional O&M and paving some roads would improve the air quality beyond what would be anticipated under Alternative B.

Cumulative Impacts

No cumulative impacts have been identified.

Mitigation

No mitigation measures have been identified.

WATER QUALITY

Affected Environment

This section of the report provides an overview of the groundwater and surface water resources of Canyon Ferry Reservoir and the Missouri River reach above the reservoir. Water quality

studies conducted by Reclamation and the Montana Science Institute are briefly discussed. This section concludes with a short synopsis of some of the current initiatives relating to water quality in the reservoir area.

Groundwater.—A large, confined aquifer composed of Quaternary and Tertiary deposits underlies the Townsend Valley and supplies water drawn principally for domestic and irrigation use. Deep percolation from rainfall and snowmelt recharges the aquifer in the mountain ranges bordering the valley, while perennial streams, irrigation canals and laterals, and seepage from irrigation water recharge groundwater in the valley.

Well record data available from the Montana Department of Environmental Quality (DEQ), show that wells on the east shore serving the cabin sites are generally 100 feet deep or less. Yields of these wells generally range from 10 to 40 gallons per minute. On the bench farther to the east, well depths are much greater, up to 400 feet. On the west shore, drill logs show that well depths range from 100 to 400 feet, and yields are between 10 and 45 gallons per minute. Well depths in the vicinity of the recreation sites are generally less than 100 feet, except for Hellgate, where two wells exceed 100 feet. At least two additional wells have been drilled on the east shore at depths of 490 and 500 feet, which yield as little as 2 gallons per minute.

Water quality records for recreation areas around the reservoir include information for Silos, White Earth, Lewis and Clark, Jo Bonner, Riverside, Ponderosa, Hellgate, Indian Road, Chinamen's, and Court Sheriff Recreation Areas, and the Canyon Ferry shop building. These wells are considered noncommunity, public water supplies and are required to be tested monthly for bacterial contamination. Currently, wells are sampled monthly by Reclamation personnel, but only when the facilities are open to the public (typically mid-May to early September). Over the period of record, various wells at the recreation sites have shown occasional evidence of high levels of coliform bacteria. The problem has been remedied either by disinfecting (chlorinating) or shutting down the affected well. At present, State law requires abandoning a well if the well is unused.

Two groundwater quality concerns related to septic system failure have been identified by the Lewis and Clark County Health Department. First, it is conjectured that fractured bedrock, in combination with shallow soils on the west shore, form a ready conduit between septic tank drain fields and groundwater supplies. This has lead the health department to require some cabin site lessees to install holding tanks for on-site sewage disposal. The pumped contents are periodically transported to the city of Helena sewage treatment system for disposal. Second, there is concern that the density of development and the trend toward year-round occupation of the cabin sites, especially on the east shore, may eventually degrade groundwater quality because of malfunctioning septic tank drain fields. The cabin sites are small—having been created before State law required a 1-acre minimum lot size for having both a septic tank and a

well—and the small size may preclude adequate treatment or replacement of drain fields. Health department staff believe that work should commence immediately on a long-range master plan for replacing individual on-site septic systems with alternative processes.

Surface Water.—The Missouri River drains 15,904 square miles of land above Canyon Ferry Reservoir, and the drainage area above the Toston gaging station is about 14,699 square miles. The annual inflow, measured at the Toston gaging station, upstream from the reservoir, averaged about 3.8 million acre-feet from 1942 through 1997, but the average annual computed inflow into Canyon Ferry Reservoir is about 3.9 million acre-feet. Annual volumes have ranged from a minimum of 2.4 million acre-feet in 1989 to a maximum of 5.8 million acre-feet in 1997.

The Missouri River is the primary source of inflow to the reservoir. Eleven perennial streams also feed the reservoir. In the spring and summer months, however, much of the water in these creeks is diverted for irrigation, and only a small amount of water reaches the reservoir from these sources. Some inflow to the reservoir is contributed from gravel aquifers beneath the reservoir, but the amount of inflow is unknown.

Water quality in the reservoir is generally suitable for propagation of cold-water fish, safe for water sports, and potable after filtration and treatment. Historical water quality data for the Missouri River, recorded at the Toston gaging station, show that the water flowing into the reservoir is a productive, calcium-bicarbonate type; hard and nutrient rich; and has a high phosphorous level. The pH, dissolved oxygen content, and water temperature produce conditions amenable to cold-water fisheries. Salinity is low and, aside from arsenic, heavy metals are not a concern because of their low concentration and the high alkalinity of the reservoir water (a neutralizer) (U.S. Department of the Interior, various dates).

Phosphorous and arsenic, both of which occur naturally, are two primary contaminants in Canyon Ferry. Phosphorous enters the reservoir largely from natural sources in the Missouri River Basin; soil and water in southwest Montana are particularly rich in this nutrient. Although this natural fertility sets the stage for blue ribbon trout streams, it also contributes significantly to the nutrient load in Canyon Ferry Reservoir. The combination of phosphorous and nitrogen with hot, dry, still conditions in summer months has served to promote algal blooms in the reservoir, some of them toxic.

A toxic blue-green algal bloom in 1984 first focused public attention on the reservoir's water quality and signaled the need for a closer assessment of potential sources of reservoir contamination. In a 1986 investigation by the Montana State University Water Resources Center at Bozeman, Montana, it was found that the same blue-green algae species have been present at about the same levels and seasonal periods since the reservoir was filled. Blue-green algal dominance in the reservoir is attributed to high natural phosphorus concentrations, a low nitrogen-to-phosphorous ratio (caused, in part, by the deep-water discharge of nitrogen via the

dam), and warm, still water conditions. Aside from periodic decreases in esthetics along the shoreline, the major water quality problem caused by the algae is its periodic toxicity (for further discussion, see "Health Considerations" in the "Land Use" section).

Arsenic is carried to the Missouri River via the Madison River, a tributary that receives large volumes of arsenic-bearing thermal water from Yellowstone National Park. Arsenic is a semi-metal known for its poisonous, acute, and chronic health effects in humans; it is also a carcinogen. Long-term contact or ingestion of untreated water could pose a hazard for human health, possibly an increase in cancer risk. Total recoverable arsenic concentrations measured in the Missouri River near Toston have typically ranged from 10 to 50 micrograms per liter (µg/L)[5], exceeding the State's ambient water standard for human health of 20 µg/L approximately half the time but below the State's maximum acute arsenic level of 340 µg/L and maximum chronic level of 150 µg/L for aquatic life.[6] Typical background levels for arsenic in stream water are 2 to 5 µg/L. In the reservoir, arsenic averaged over 20 µg/L at several stations sampled from 1997 through 1998 (Horn and Boehmke, 1998). In the Missouri River, below Canyon Ferry Dam, arsenic concentrations have ranged from 20 to 35 µg/L.

In 1998, the State of Montana listed Canyon Ferry Reservoir, and the Missouri River above it, as water quality impaired stream reaches under Section 303(d) of the Federal Clean Water Act. Noxious aquatic plants, nutrients, and pathogens were identified as water quality parameters of concern for the reservoir. Streamflow alteration, metals, nutrients, and suspended solids were designated as parameters of concern for the Missouri River above Canyon Ferry. Several tributaries draining directly into the reservoir were also listed as impaired, including Boulder Creek, White Gulch Creek, Avalanche Creek, Hellgate Gulch, Magpie Creek, and Beaver Creek.
Designating a water body as impaired requires the State to set a priority for determining the total maximum daily load (TMDL) of a pollutant that the water body can receive and still meet water quality standards set for the designated uses of the water body. The State has set a low priority for developing TMDLs for Canyon Ferry and tributary stream reaches but will be developing a comprehensive program for the prevention, abatement, and control of water pollution, as mandated under the Federal Clean Water Act and the Montana Water Quality Act.

Special Water Quality Studies.—In 1991-93, Reclamation studied the fate and transport of arsenic in the Madison and Upper Missouri River Basins (Reclamation, 1994). Arsenic concentrations were measured in main channels, irrigation diversion canals, irrigation return flows, shallow groundwater zones, and various soil types. Study results indicated that soils in the investigation area retained (adsorbed) most of the arsenic from Missouri River water used

[5] Median dissolved arsenic level at Toston for 1980-95 was 28 µg/L (U.S. Geological Survey data).
[6] WQB-7, Montana Numeric Water Quality Standards. The State of Montana water quality standard for aquatic life defines a maximum acute arsenic level of 340 µg/L and a maximum chronic level of 150 µg/L.

for irrigation. Moreover, because there was no apparent significant buildup of arsenic in the soils, it was concluded that arsenic was being removed from the soils by volatilization or plant uptake.

As part of the study, eight wells were sampled in the Toston to Townsend area. Six of the eight wells had arsenic concentrations of 3 µg/L or less. The other two wells had arsenic concentrations of 17 and 18 µg/L. With an average arsenic concentration of 30 µg/L in the Missouri River at Toston, it was concluded that irrigation return flows from Missouri River diversions apparently were not significantly impacting arsenic levels in groundwater in the vicinity of the sampled wells.

An additional product of the study was the development of a conservative, monthly, time-step water quality model that could be run to determine arsenic concentrations in the Madison and Upper Missouri Rivers, including Canyon Ferry Reservoir. Because of the large time-step increment (1 month) used in the model, it is limited in its ability to simulate arsenic levels in situ. The model is better suited to evaluating impacts caused by different hydrologic operation schemes for Canyon Ferry Reservoir.

In 1997, Reclamation initiated a water quality monitoring program on Canyon Ferry Reservoir. Sample data collected from various sites around the reservoir were compared to historical data to determine if ecological conditions in the reservoir had changed over time. Results of that study (Horn and Boehmke, 1998) showed that:

- **R** Canyon Ferry receives a high nutrient load, in particular phosphorus, which results in an extremely productive reservoir. Almost every year, nutrient loading leads to large, blue-green algal blooms. It appears that no significant changes in productivity have occurred since reservoir impoundment.

- **R** Deep reservoir withdrawals by the power penstocks limit the buildup of nutrients. The deep withdrawals, however, also result in low dissolved oxygen releases, which could adversely impact downstream fisheries. Historical data indicate that low dissolved oxygen levels in releases are common; however, in more recent years, the problem has become worse.

- **R** Arsenic levels in the reservoir are high, but not significantly different from the expected range for the area. Arsenic concentrations in water samples averaged greater than 20 µg/L. Mercury levels were not high in sediments or water. There was no significant contamination from pesticides. Oil and gas contamination from marinas was nondetectable. Bacterial problems were minimal. There were no obvious adverse impacts from septic releases during the period of study.

Low dissolved oxygen, 4 to 5 milligrams per liter (mg/L), has been identified in the stretch of the Missouri River between Canyon Ferry Dam and Hauser Reservoir. These conditions begin

in mid to late August and remain below 6 mg/L for about 90 days. A study was initiated in 1999 to identify low dissolved oxygen locations and methods which can be employed to raise the oxygen level downstream from Canyon Ferry Dam. An additional study was completed in September 2000 to determine if spillway releases change the dissolved oxygen levels. A study has been initiated to determine if turbine(s) can be modified to increase the dissolved oxygen levels. These methods may be operational or mechanical.

For the past decade, the Montana Science Institute has collected water quality data in the study area. Their findings show that the extensive drainage area of the Missouri River above the reservoir greatly increases the likelihood that agricultural contaminants will enter the reservoir.

With this in mind, the Lake and Stream Subcommittee of the Headwaters Resource Conservation and Development District recently voted to cease using herbicides to control weeds on canals and ditches associated with the reservoir.

Aware that shellfish are known to concentrate heavy metals in their body parts, in 1990 the Montana Science Institute investigated the concentrations of arsenic in crayfish inhabiting the reservoir. For the samples tested, the study showed that the concentration of arsenic in crayfish was 41.9 times greater than the water from which they were taken. While this data signaled a possible health concern, authors of the study acknowledged the need for further study, not only of crayfish, but of other species in the food chain. The institute continues to monitor arsenic at four sites along the Missouri River, above and below the dam.

Current Conditions and Programs in Place.—Apart from arsenic and nutrients, a variety of other pollutants may be reaching the reservoir, but their sources and quantities are unknown.

Compliance with State and Federal environmental regulations resulted in significant changes in the 1990s regarding underground storage tanks (USTs). The USTs at Kim's Marina were replaced in 1993 with a new system to meet State and Federal standards (effective December 1998). Yacht Basin Marina replaced the UST with an aboveground storage tank (AST). The UST at Goose Bay Marina has been removed and will likely also be replaced by an AST.

In 1990, Reclamation removed 20 USTs in the Canyon Ferry Government Camp and one in Broadwater County. Most of these were for heating oil, but two were for gasoline. The gasoline tanks were replaced with a concrete-encased AST.

A number of USTs and ASTs have been removed within the cabin site areas to comply with either environmental regulations and/or fire code. Montana DEQ requires soil sampling to ensure any contamination from leaking USTs is remediated. In-service USTs for home heating oil are now exempt (since 1998) from the Montana UST regulations. However, fire code requires removal of out-of-service USTs.

Because of steep slopes, excessively permeable soils, and shallow depth to bedrock, the Lewis and Clark County Health Department is requiring sewage holding tanks instead of drain fields on what is anticipated to be approximately 28 west-shore sites. On the east shore, holding tanks may be required on about 10 sites because of impermeable soils, short distances to surface water, and potential well contamination. Holding tanks are allowed only by variance, only on existing sites where there are physical limitations that prevent alternative measures, and only where occupancy is limited to 120 days a year. To monitor the condition of the tanks, owners are required to submit pumping records to the health department. If these records are not received on an annual basis, the owner is required to allow tank pumping tests by the health department. Potential ingestion or contact with untreated waste water is a primary concern of the health department.

There are several ongoing county, State, Federal, and State-administered initiatives that will serve to protect and enhance water quality, both in the reservoir and in the local aquifers. At the county level, Article 12 of the cabin site leasing permits issued by Reclamation provides that, "All cabin site septic systems must be inspected by the Lewis and Clark County Health Department to ensure that applicable waste water disposal standards are being met and to ensure that untreated effluent is not seeping into the reservoir." Article 12 goes on to state that, "After September 1, 2000, no cabin site permit will be approved for renewal unless an approved waste water system is in operation." To meet the requirements of Article 12 of the permit and to facilitate the sale of the cabin sites, as required by the Canyon Ferry Reservoir, Montana Act (November 29, 1999), Reclamation has allowed the use of additional Reclamation lands for a waste water treatment system where no on-site option is available. These additional lands will become part of the sale of the cabin sites.

At the State level, several programs support the preservation and improvement of water quality in Montana. House Bill 546, passed by the 1997 State legislature, established a TMDL program for Montana. Under the TMDL program (specifically Section 75-5-703(8) of the Montana Codes Annotated), the Montana DEQ is called upon to "support a voluntary program of reasonable land, soil, and water conservation practices to achieve compliance with water quality standards for nonpoint source activities for water bodies that are subject to a TMDL. . ." Through the
319 Grant Program of the Federal Clean Water Act, the Montana DEQ is able to fund watershed projects that address water quality and TMDL development.

Additionally, the permitting division of the Montana DEQ is charged with conducting plan reviews of wells and associated facilities for public drinking water supply and facilities for waste disposal. Under the plan review process, new campground and concessionaire facilities, or modifications to existing facilities in the Canyon Ferry management area, would be checked for compliance with minimum design standards that are set by the State. Before issuing an approval or a permit for a proposed new or expanded wastewater system (as required by the Montana Water Act), the Montana DEQ must perform a nondegradation analysis to ensure that unacceptable degradation of surface water or groundwater will not occur. Within the next 3 years, Montana DEQ will be delineating source water protection areas. Pursuant to the

Federal Safe Drinking Water Act, each of these public drinking water sources shall be delineated. Typically, the protection area is the land area overlying the capture zone of the well that extends a distance based on a 3-year time of travel or 1,000 feet (the greater of). The surface water intake will have a "spill response region" delineated that extends 1,000 feet into the lake from the intake at the dam and ½ mile in an upland direction. The purpose of the delineation is to identify areas where spills, leaks, discharges, or other man-induced events could likely impact the drinking water source. (Table V-1 shows locations of existing well sites on Reclamation lands.) These source water protection areas should be designated as environmentally sensitive to protect water quality.

Table V-1.—Location of well sites on Reclamation lands

Name	Public water supply identification number	Source type and number	Notes
Canyon Ferry Village	00243	Groundwater	
Riverside	42941	– 1	
Kim's Marina	02857	Groundwater – 1	
Court Sheriff	41439	Groundwater – 1	
Chinamen's	51443	Groundwater – 1	
Jo Bonner	41438	Groundwater – 1	
Hellgate	41445	Groundwater – 1	
Goose Bay	00967	Groundwater – 1	
Yacht Basin	00427	Groundwater – 1	
White Earth	42421	Groundwater – 1	
Silos	40963	Groundwater – 1	
Indian Road	42422	Groundwater – 1	
Montana Science	03923	Groundwater – 1	Currently inactive
Institute	00241	Groundwater	
City of Helena		! 2 Surface water	

At the Federal level, the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), is currently assessing water quality and quantity and related riparian issues in the Beaver/Pole/Staubach drainage. In conjunction with the 1985 Food Security Act, the agency continues its work with local area operators to improve management of crop residues, irrigation water, nutrients, and pesticides.

Two water quality monitoring programs are currently in place in the vicinity of Canyon Ferry Reservoir. PPL Montana samples the Missouri River at the old Toston Bridge at Toston (upstream from the reservoir) as well as reservoir discharge. Sampling is conducted quarterly at both sites for an array of chemical and physical water quality parameters, including cations and anions, nutrients (total and dissolved), low level total and dissolved arsenic, dissolved oxygen, pH, temperature, and specific conductivity. Plans are to continue quarterly sampling for approximately 4 years and revert to monthly sampling for the succeeding 3 years. The

Montana DEQ has a joint water sampling program in place with the U.S. Geological Survey (USGS). Quarterly samples are taken at the USGS Toston gauge (Station No. 06054500) for total suspended solids, nutrients, metals, and biological constituents. Future plans are to sample sediments for metals analysis and, possibly, to collect macroinvertebrates, algae, and chlorophyll samples. USGS has a real-time recorder for water temperature and river stage at this site.

Reclamation, Technical Service Center, published a report in December 1998 entitled, *The Limnology of Canyon Ferry Reservoir, Montana,* that analyzed data collected in 1997 and 1998. Water quality data collected during this period included nitrates, phosphorous, ammonia, nitrogen, orthophophates, zooplankton, phytoplankton, chlorophyl, coliform bacteria, pesticides, petroleum residues, arsenic, and mercury. Water column profiles were completed to sample pH, conductivity, dissolved oxygen, and water temperature. The report found the reservoir to be a nitrogen-limited eutrophic system which would allow algal blooms to occur, dominated by the nitrogen fixing blue-green algae. Levels of coliform bacteria were below Environmental Protection Agency (EPA) requirements for body contact averaging 22/100 milliliters. Water samples for pesticides were found to contain no target analytes at a detection limit of 1 part per billion (ppb). Analysis for petroleum products showed no detectable presence at the detection level of 1 milligram per liter. Arsenic levels were relatively high, averaging greater than 20 ppb. Although high, this is not significantly different from values expected for the area. Mercury samples were below detectable limits.

An additional report will be published by the Technical Service Center in December 2001 which will cover data collected from 1999 through 2001. This report will cover data collected on nutrient samples, zooplankton, phytoplankton, chlorophyl, water column profiles, as well as hydroacoustic samples to determine fish numbers and sizes.

Environmental Consequences

Alternative A.—As a result of the ongoing cabin site septic system inspection and permitting program being implemented by the Lewis and Clark County Health Department, reservoir water quality and shoreline groundwater quality would remain unchanged or be improved under this alternative. The two primary contaminants in the reservoir, phosphorus and arsenic,
will not be affected. The high nutrient load entering the reservoir will continue to spawn algal blooms during hot, dry, still conditions in the summer. Some of the blooms might be toxic. Dissolved oxygen levels in reservoir releases will continue to be low until the analysis is complete and recommended actions are implemented. Increased visitation and year-round occupation of the cabin sites will escalate the potential for pollution from motorboat fuels, runoff from roads and parking areas, and disposal of unregulated substances in the reservoir. Ongoing programs administered by State and Federal agencies and initiatives undertaken by other groups and associations will improve water quality. Water use for domestic and recreational purposes and landscape irrigation would increase slightly under this alternative.

Alternative B.—Nutrient loading, elevated arsenic levels, low dissolved oxygen discharges, and the occurrence of algal blooms historically associated with the reservoir would continue. Low dissolved oxygen discharges would occur until the analysis is complete and the recommendations are implemented. Potential adverse impacts from septic releases would be curtailed. Water quality monitoring initiatives under the "Water Quality Monitoring Program" and "Pollution Control" alternative elements would provide a safety net to detect isolated contaminant events and adverse water quality trends.

Under the "Health and Safety" and "Water Quality Monitoring Program" alternative elements, water quality would be protected by:

- **R** Requiring all future concessionaires to install recreational vehicle (RV) dump stations
- **R** Adding sanitation facilities and trash receptacles
- **R** Ensuring fueling facilities meet EPA standards

Water use for domestic, recreational, and landscape irrigation purposes would increase slightly under this alternative.

Alternative C.—Impacts would be the same as under Alternative B.

Cumulative Impacts

There would be no cumulative impacts resulting from implementation of any of the alternatives. Pollution prevention initiatives under the action alternatives would safeguard water quality under enhanced recreation scenarios.

Mitigation

There are no negative impacts associated with any of the alternatives, and no mitigating measures would be required.

GEOLOGY

Affected Environment

Area Geology.—Canyon Ferry Dam is located on the main stem of the Missouri River, about 58 miles north of the confluence of the Jefferson, Madison, and Gallatin Rivers that form the

Missouri River. Helena, the capitol of Montana, lies 17 miles southwest of the dam site. The Canyon Ferry Unit, which includes the dam, Canyon Ferry Reservoir behind the dam, and the surrounding land administered by Reclamation, occupies a portion of the intermountain basin known as Townsend Basin, a northwest-southeast-trending valley between the Big Belt and Elkhorn Mountains (see figure V-8). These mountains are considered to be subsidiary ranges of the Rocky Mountains.

The extreme northeastern shore of the reservoir in the vicinity of the dam abuts the west flank of the Big Belt Mountains. The oldest exposed rocks are the pre-Cambrian sedimentary formations of the Big Belt Series. The remainder of the eastern shore, which extends south to the reservoir terminus at the town of Townsend, occupies coalescing alluvial fans that rise gently eastward to their source in the Big Belt Mountains. The northwestern shore of the reservoir, from the dam site approximately to the Lewis and Clark/Broadwater County line, lies along a complexly faulted, synclinal structure known as the Spokane Hills. This merges with the east flank of the range of mountains known as the Casey Peaks or Elkhorn Range. Numerous large, granitic rock outcrops are in this section.

The Townsend Basin lies in a structural depression formed by the down warping of pre-Cambrian and Cambrian sedimentary formations. These ancient sedimentary rocks have been intruded by masses of granitic rocks. The basin is partially filled with water-lain Tertiary volcanics and Quaternary alluvium.

The geology of the land bordering Canyon Ferry Reservoir is shown in figure V-6. As seen in this figure, four major geological units are found in the area: Tertiary lake beds, igneous formations, Quaternary alluvium, and sedimentary formations. The characteristics of these units are detailed below.

Tertiary Lakebeds.—Tertiary lakebed deposits cover most of the northeast and southwest portions of the Canyon Ferry area. These deposits overlie eroded surfaces of folded and faulted older rocks and underlie most of the younger sediments in the Townsend Valley. Tertiary lakebed deposits have been identified mostly on the gently sloping plains, characteristic of the eastern shore below the Big Belt Mountains, and the western shore below the Spokane Hills and Elkhorn Mountains. They range in thickness from 4,000 to 6,000 feet.

Tertiary lakebed deposits offer a variety of appearances. East of the Spokane Hills, the Tertiary deposits are composed of conglomerates interbedded with red shales and some bentonitic materials. Southwest of the Big Belt Mountains, Tertiary deposits are composed of reworked tuffaceous material without bentonite. Tertiary deposits of Miocene age, which are poorly exposed in bluffs between Confederate Gulch and Canyon Ferry Reservoir, are light buff sandy clay and sand and gravel beds overlain by conglomerate.

Canyon Ferry Reservoir

General Geology

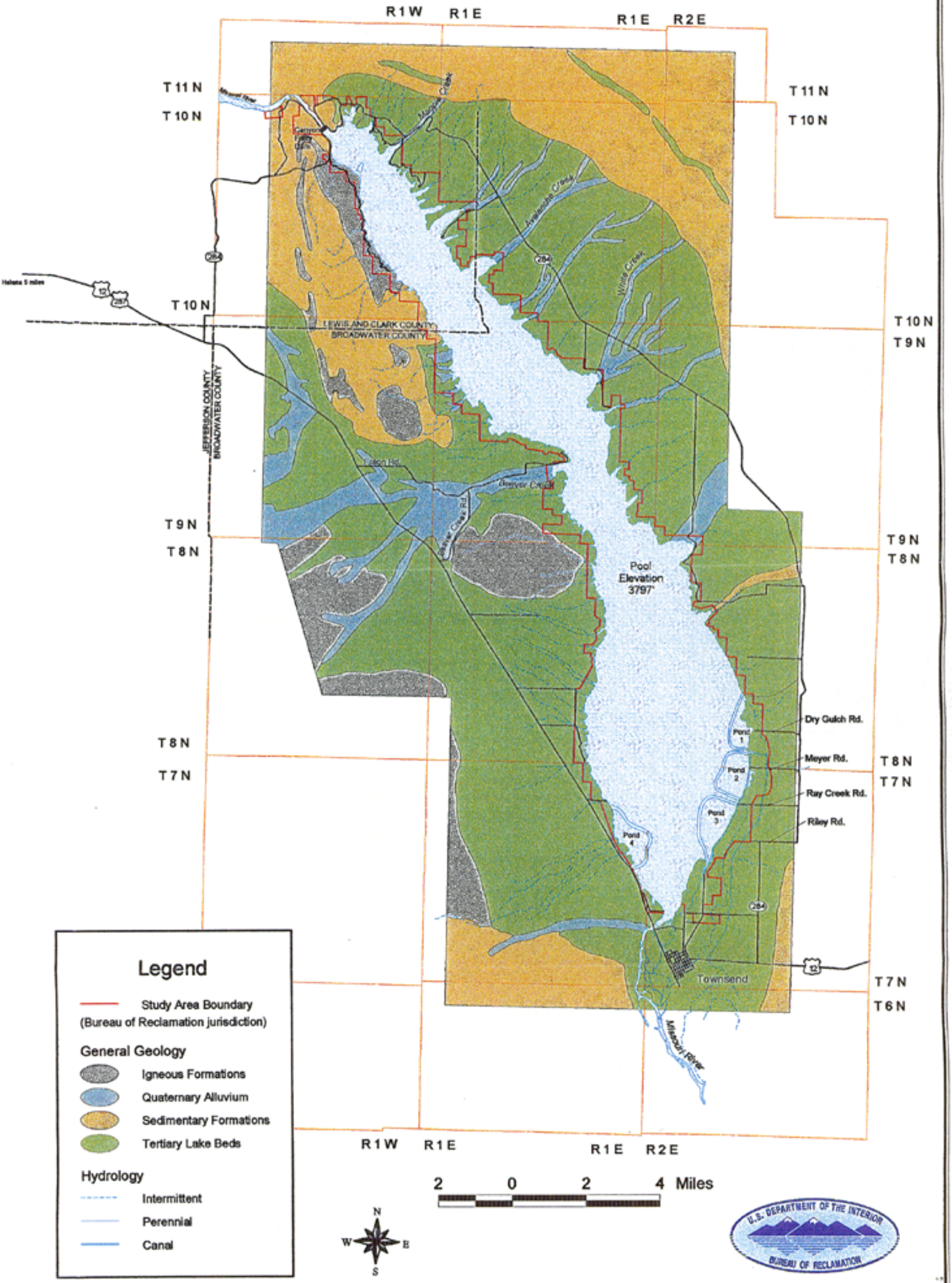


Figure V-6

Igneous Formations.—Igneous rocks intrude the sedimentary deposits in the Townsend Valley as dikes, stocks, sills, and small plugs. Outcrops have been identified on the west shoreline from Yacht Basin to Crittendon Recreation Area. For the most part, however, igneous rocks intrude as relatively thin sills between beds of other rock. Although classified as five principal types, the igneous rocks are basically fine- to coarse-textured rocks consisting of different mineral mixtures.

Quaternary Alluvium.—Alluvium of Quaternary age is found in the bottom land of the southeastern part of the reservoir, in drainageways on the eastern shore of the reservoir, and in gently sloping drainageways on the western shore of the reservoir. Alluvium deposits on folded and eroded surfaces of Tertiary and older rocks are composed of granite, quartzite cobbles, sand, silt, and gumbo clay or bentonite not more than 60 feet thick. Thicker and coarser textured alluvium is found near the mountains, whereas thinner and finer textured material may be found toward the valley.

Sedimentary Formations.—Sedimentary rocks comprise the oldest rocks in the Big Belt Mountains and Spokane Hills. These rocks formed from mud and sand that lay at the bottom of a sea that covered this area more than 1 billion years ago. Younger sedimentary rocks composed of sandstone, limestone, and shale overlie the older strata.

Environmental Consequences

Alternative A.—Except for possible disturbance from site leveling or road construction and the lost opportunity to provide the public with a worthwhile educational experience, geology in the study area would remain unchanged.

Alternative B.—Except for possible disturbance from earth-moving activity, study area geology would not be impacted. The interpretive geology program component of this alternative might identify certain geologic features worthy of protection from site construction activity.

Alternative C.—Impacts would be the same as under Alternative B.

Cumulative Impacts

No cumulative impacts have been identified.

Mitigation

There are no mitigating actions under any of the alternatives.

SOILS AND TOPOGRAPHY

Affected Environment

Information used to develop this section of the report was obtained from the USDA, NRCS (formerly the Soil Conservation Service). At the time of this printing, the soil survey of Lewis and Clark County was unpublished, and information for study area soils located in the county was obtained verbally and in draft manuscript from the NRCS Helena, Montana, field office.

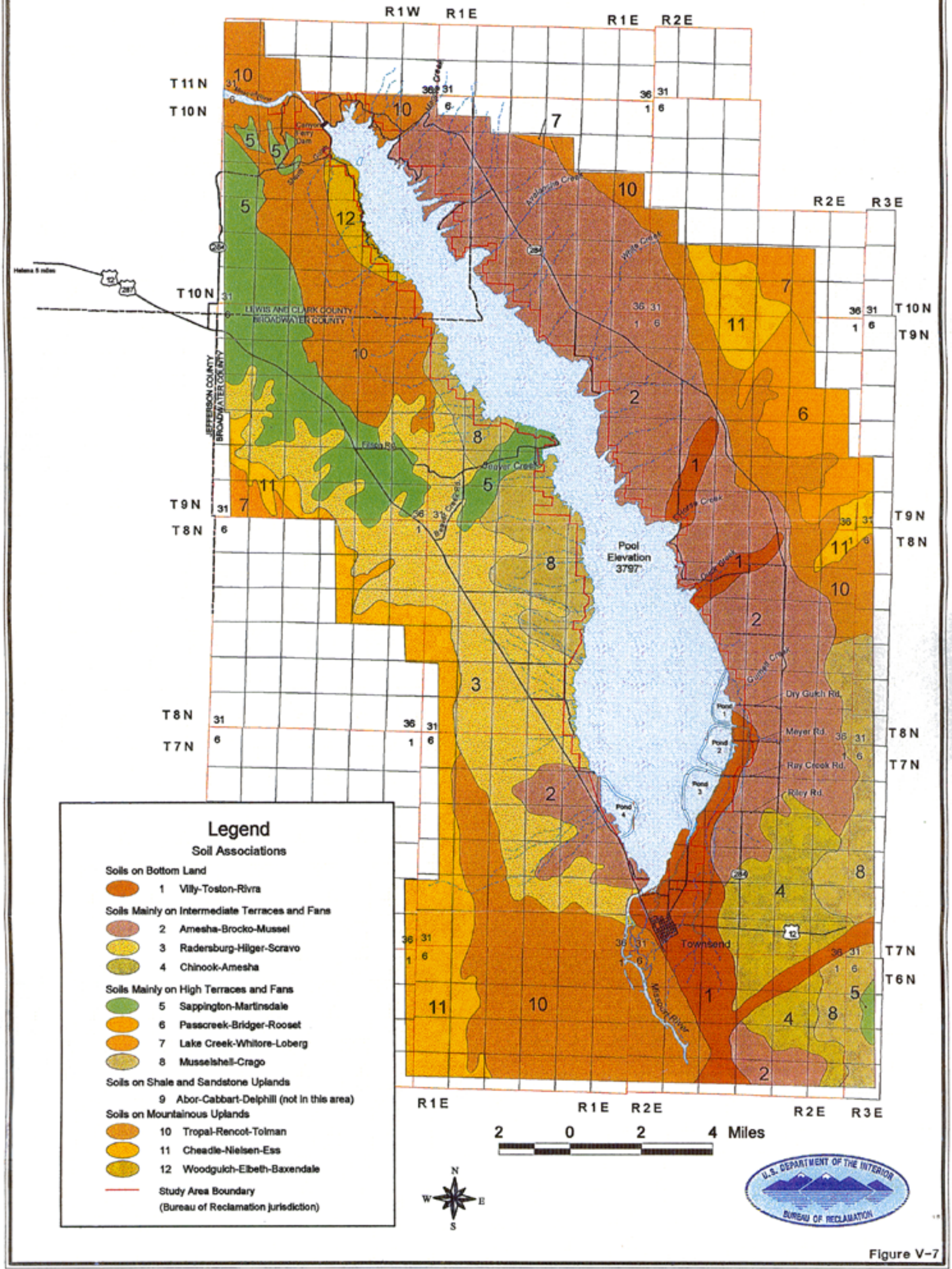
The soil survey of Broadwater County, on the other hand, was complete, and soil information for that portion of the study area in Broadwater County was obtained from *Soil Survey of Broadwater County Area, Montana* (Soil Conservation Service, April 1977). The reader is encouraged to investigate these sources if supplemental information is needed.

Soils.—An overview of the soils in the study area is depicted in figure V-7. This figure shows the location of soil associations in the study area and adjoining land as configured by the NRCS. A soil association is a landscape that has a distinctive proportional pattern of soils. Each association normally consists of one or more major soils and at least one minor soil and is named for the major soil(s). Any particular soil may be found in more than one soil association.

Soils within an association share a common landscape position and type of parent material and, thus, a common management capability. For this reason, a soil association map is useful as a general guide for managing a watershed or wildlife area and in planning engineering structures, recreational facilities, and community developments. Because soils within an association may differ in slope, depth, stoniness, drainage, and other characteristics that affect their management, a soil association map is not well suited for site-specific planning.

Figure V-7 shows 12 soil associations within the study area vicinity. Of the 12 associations, 7 impinge directly on the Canyon Ferry management area. For interpretive purposes, the soil associations in the descriptive legend in figure V-7 are divided into five general landscape positions (i.e., soils on bottom lands, soils mainly on intermediate terraces and fans, soils mainly on high terraces and fans, soils on shale and sandstone uplands, and soils on mountainous uplands). Interestingly, because the study area is so narrow, the predominant soils in several areas are actually minor components of the parent soil association and,

Canyon Ferry Reservoir
Soil Associations



Legend
Soil Associations

Soils on Bottom Land
- 1 Villy-Toston-Rivra

Soils Mainly on Intermediate Terraces and Fans
- 2 Amesha-Brocko-Mussel
- 3 Radersburg-Hilger-Scravo
- 4 Chinook-Amesha

Soils Mainly on High Terraces and Fans
- 5 Sappington-Martinsdale
- 6 Passcreek-Bridger-Rooset
- 7 Lake Creek-Whitlore-Loberg
- 8 Musselshell-Crago

Soils on Shale and Sandstone Uplands
- 9 Abor-Cabbart-Delphill (not in this area)

Soils on Mountainous Uplands
- 10 Tropal-Rencot-Tolman
- 11 Cheadle-Nielsen-Ess
- 12 Woodgulch-Elbeth-Baxendale

Study Area Boundary
(Bureau of Reclamation jurisdiction)

U.S. DEPARTMENT OF THE INTERIOR
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Figure V-7

consequently, not included in the association name. In the narrative that follows, the soil associations located in the management area are described as they occur sequentially around the reservoir in a clockwise direction starting at the north end.

The Tropal-Rencot-Tolman association (No. 10 in figure V-7) caps the north end of the reservoir and extends to the Magpie Creek drainage on the east shore. The soils in this association were formed in material weathered from limestone alluvium (water transported material); argellite, granite, or igneous bedrock or colluvium (material that has moved downslope); or semi-consolidated loamy sedimentary beds. The soils are loam, gravelly loam, and stony loam, gently sloping to very steeply sloping soils on mountainous uplands that range from shallow to very deep and well drained to somewhat excessively drained. The association is dissected by a branching pattern of smooth, grassed drainageways. Areas of rock outcrop are common. Soil units on steeper slopes in this area include the Crago-Musselshell gravelly loams, Delpoint Cabbart loams, Hauz-Sieben-Tolman channery loams, Castner-Holter-Rock outcrop, and Woodgulch-Elbeth-Rock outcrop. These soils are minor components of the soil association and, thus, not included in the association name. Runoff is very rapid on the Castner-Holter-Rock outcrop unit and rapid on the balance of the soils. The hazard of wind blowing is slight on the Woodgulch-Elbeth-Rock outcrop soils; moderate on the Delpoint Cabbart, Hauz-Sieben-Tolman, and Castner-Holter-Rock outcrop units; and severe on the Crago-Musselshell gravelly loams. Gently sloping to sloping landscapes are occupied principally by the Musselshell-Crago complex. These soils are minor components of the soil association and, thus, not included in the association name. Runoff is slow on these soils, and the hazard of soil blowing is severe. Campgrounds in the area, including Jo Bonner, Cave Bay, Court Sheriff, Shannon, Chinamen's Gulch, and Sandy Beach, are located on toe slopes or alluvial terraces.

From the Magpie Creek drainage south along the east shore of the reservoir to the Gurnett Creek drainage, the study area lands are occupied by the Amesha-Brocko-Mussel association (No. 2 in figure V-7). This association is crossed by two lobes of the Villy-Toston-Rivra association (No. 1 in figure V-7), where Horse Creek and Duck Creek enter the reservoir. Amesha loam and cobbly sandy loam soils and Scravo cobbly loam soil (a minor, un-named component of the association) occupy the fan and terrace positions that slope gently westward toward the reservoir in this area. Amesha soils consist of deep, well-drained soils formed in strongly calcareous, stratified alluvium. Permeability is moderate, and runoff is medium to slow. Where the surface soil is loam or silt loam, the hazard of soil blowing is rated as severe; otherwise, it is moderate. From sheet 10 of the soil survey report, Confederate Campground lies on the very edge of a neck of Amesha soil. Scravo soil differs from the more extensive Amesha soil in that it is somewhat excessively drained, more gravelly, and the hazard of erosion is only slight. As depicted on sheet 5 of the soil survey report, the Goose Bay Campground appears to be located on a narrow band of Scravo cobbly loam soil on the north shore of the bay. Amesha soils are used for dryland winter wheat, some irrigated cropping, and range. Scravo soils are used mostly for range. Typically, the Amesha soils transition to the steeply sloping Musselshell-Crago channery loam soils (another minor, un-named component

of the soil association) on terrace edges along the reservoir shore. In this landscape position, runoff is rapid, and the hazard of erosion is severe. From unpublished soil map information received from the NRCS, it would appear that Hellgate Campground is located on this soil unit.

As mentioned, the Villy-Toston-Rivra association (No. 1 in figure V-7) occupies the small area of land where Horse Creek and Duck Creek enter the reservoir. The main extent of the association, however, lies just south of Gurnett Creek and extends to the east bank of the Missouri River at the southern terminus of the reservoir just above Townsend. Brocko silt loam and Brocko silt loam-wet soils (both minor, un-named components of the soil association) are the predominant soils in the management area. Brocko silt loam soil formed in windblown sediments (loess) on broad alluvial fans or stream terraces. This nearly level, deep, well-drained soil has medium runoff and a severe hazard of wind erosion. The wet phase of the soil is found on nearly level, low stream terraces. A seasonal high water table exists at a depth of 3 to 5 feet. Here again, the hazard of soil blowing is severe, and the seasonal high water table imposes a severe limitation for placement of septic tank absorption fields. The Brocko soils are used for irrigated alfalfa, sugar beets, corn silage, spring wheat, dryland small grains, and pasture.

Proceeding up the west shore of the reservoir, a second area of the Amesha-Brocko-Mussel association (No. 2 in figure V-7) occupies the management area from the west shore of the Missouri River, where it enters the south terminus of the reservoir, to approximately where the duck pond No. 4 embayment dike connects to the shore. Brocko silt loam - wet (described above), the Musselshell-Crago channery loams (previously discussed), and Thess silt loam (a minor, un-named component of the association) are the principal soils in the association. The Thess soil formed in strongly calcareous, gravelly, and cobbly alluvium of mixed origin on nearly level to gently sloping broad terraces and fans. The soil is deep and well drained, with a severe hazard of blowing. Runoff is medium. The soil is used mainly for winter wheat and range, although some areas are irrigated. Cottonwood Campground is located on bottom lands adjacent to the Missouri River.

Continuing north, the next 3 miles of the management area are occupied by the Radersburg-Hilger-Scravo association (No. 3 in figure V-7). The Radersburg very cobbly loam occupies almost the entire area within the study boundary in this vicinity. The Radersburg soil formed in gravelly and cobbly old alluvium on gently sloping fans and terraces. The soil is deep and well drained. Runoff is medium, and the hazard of erosion is slight. The soil is used mostly for range. Silos Campground is situated on this soil.

The next soil association encountered along the western reservoir shore is the Musselshell-Crago association (No. 8 in figure V-7). It extends to the Broadwater-Lewis and Clark County line and is crossed by a segment of the Sappington-Martinsdale association (No. 5 in figure V-7) at the Beaver Creek inlet. South of the Beaver Creek inlet, within the study area, the Musselshell-Crago association is composed principally of the Musselshell-Crago channery loam soils (previously described), on steep banks adjacent to the reservoir, and Musselshell

gravelly loam soil, on bench tops trending back from the reservoir shore. The Musselshell gravelly loam soil consists of deep, well-drained, gently sloping soil on smooth fans and stream terraces. The soil formed in strongly calcareous gravelly and cobbly alluvium. Runoff is medium, and the hazard of soil blowing is moderate. The portion of the association ranging from north of the Beaver Creek inlet to the Broadwater-Lewis and Clark County line is composed principally of the Cabbart complex soil. The Cabbart complex consists of shallow, moderately steep to steep, well-drained soils on ridges, sides of eroded terraces, and sides of drainageways. The soils of the complex formed in material weathered from platy, soft siltstone and sandstone of Cretaceous or Tertiary age. As might be expected, runoff is rapid, and the hazard from erosion is severe. Both the Musselshell gravelly loam soil and the Cabbart complex are used mainly for range.

The Sappington-Martinsdale association (No. 5 in figure V-7) occupies the land around the Beaver Creek inlet. Soils in this association are gently sloping, deep, and well drained. They lie on terraces, fans, and benches. According to sheet 9 of the soil survey report, it would appear that White Earth Campground is positioned on a neck of Brocko silt loam soil, a minor, un-named component of the association. As previously described, this soil lies on rolling fans formed from loess. Runoff is medium, and the hazard of soil blowing is severe.

North of the Broadwater-Lewis and Clark County line on the west shore, the Tropal-Rencot-Tolman association (No. 10 in figure V-7) extends to a point just above Mahogany Cove Campground. As at the north end of the reservoir (described initially), this association forms hilly to very steep, shallow, well-drained soils on ridgetops and side slopes in mountainous terrain. Mahogany Cove Campground lies on a toe slope coming off the Spokane Hills.

The Woodgulch-Elbeth-Baxendale association (No. 12 in figure V-7) picks up north of the Tropal-Rencot-Tolman association and extends to about where the Sheriff Gulch drainage enters the reservoir. Steep slopes are occupied by the Woodgulch-Elbeth-Rock outcrop soil unit, while lesser slopes are occupied by Brocko silt loam soil (previously described). Woodgulch and Elbeth soils are very deep, well to somewhat excessively drained soils formed in coarse-grained granite rock on foot and back slopes in mountainous areas. Runoff is medium on the Woodgulch soil and rapid on the Elbeth soil. The hazard of soil blowing is slight on both. The Chalet, Fish Hawk, Lorelei, Lewis and Clark, Orchard, and Crittendon Campgrounds, which are in this area, are located on toe slopes of the Spokane Hills on the Woodgulch-Elbeth-Rock outcrop soil unit; Overlook Campground is situated on a rolling upland expanse of Brocko silt loam.

In summary, the management area surrounding the reservoir encompasses a complex array of soils that reflect the variety of geologic materials and landforms common to the area. In general, soils on the east shore of the reservoir are more highly wind erosive than soils on the west shore. Their high lime content produces the dust evident during windy days that necessitates the use of dust abatement measures on area roads. Within the management area, dust is a problem on the access road to Hellgate Campground, on the east shore road in the

Magpie Creek drainage, and on the west shore road, where dust is held in the road corridor by timber. Dusty conditions are particularly prevalent during extended dry periods and when there is little or no wind present to move the dust off the roads. Additionally, to counter soil blowing from the exposure of about 9,000 acres of bottomland during low-flow periods, Reclamation was prompted to construct water embayment areas at the south end of the reservoir in 1973.

Steep slopes, shallow depth to bedrock, and susceptibility to erosion, common to the soils in the area, have presented problems in past development and will continue to do so. Soil conditions will need to be factored into future development plans and management programs.

Erosion.—The four primary agents of soil erosion at Canyon Ferry Reservoir are wave action along the shoreline, exposure of bare ground from off-road vehicle (ORV) use, wind, and runoff from storm events.

Erosion due to wave action is evident around most of the shoreline, except in areas where the shoreline is gently sloping (figure V-8). No studies have been conducted to determine the rate of shoreline erosion. In some instances, the loss of shoreline materials has prompted remedial action, such as safety fencing at Lorelei and retaining walls and riprapping below the cabin sites.

ORVs remove the vegetation cover essential for soil protection. Since most of the soils around Canyon Ferry are moderately to highly erosive, loss of vegetation cover quickly results in rill and gully erosion when storms occur. This type of erosion is prevalent around the camp-grounds on the north shore, where dirt bikes have been used for hill climbing, and at Hellgate, where recreationists have driven along the shoreline to the north.

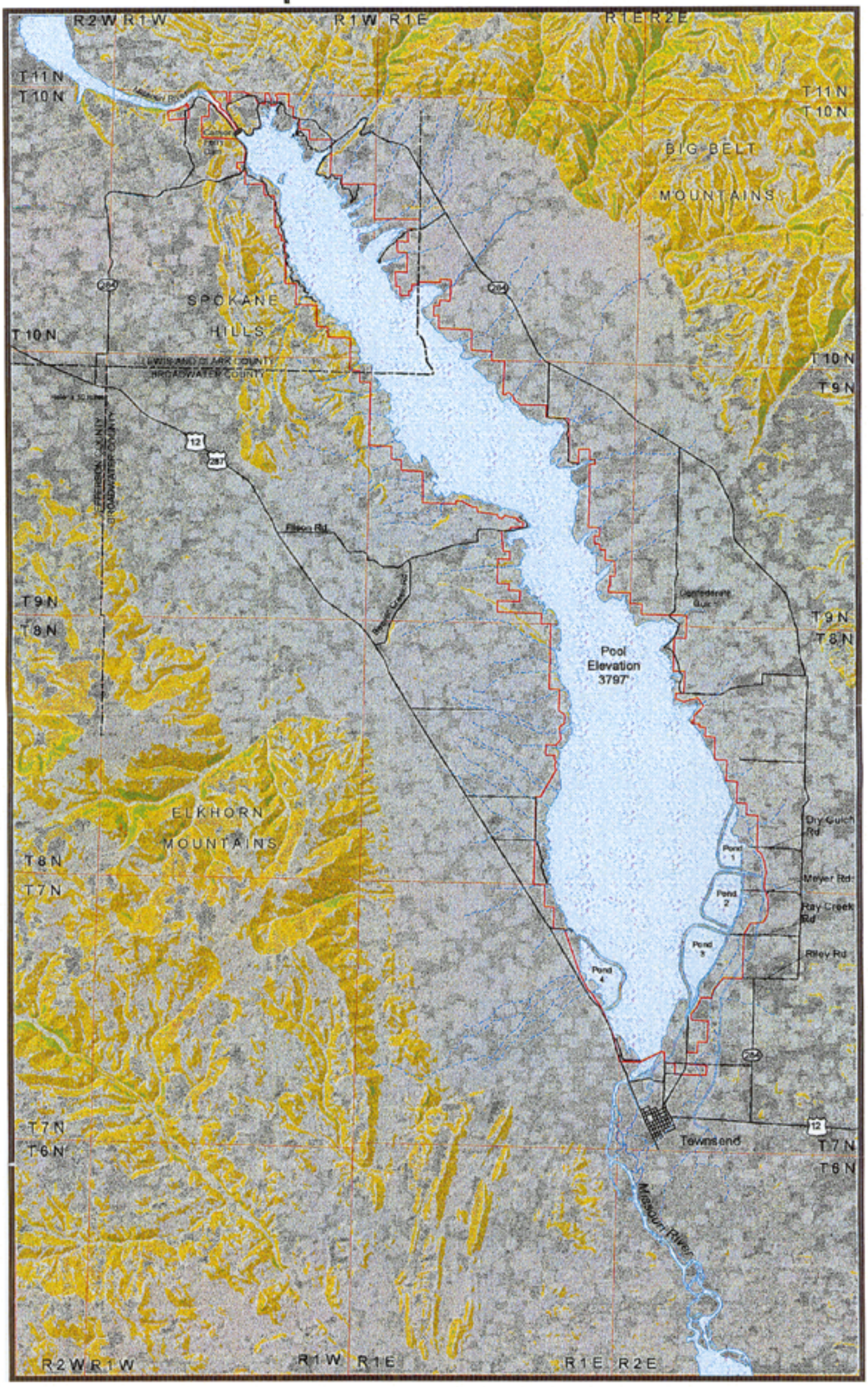
Wind and precipitation are continually acting to reshape the landscape. Factors such as (1) the frequency, duration, and intensity of wind and precipitation; (2) length and steepness of slope; (3) slope aspect; (4) inherent soil erodibility; and (5) ground cover condition determine the volume and rate of soil loss.

Prime Farmlands.—It is estimated that soils on about 1,200 acres of the study area are considered "prime if irrigated"[7] (figure V-9). Of these soils, about 1,000 acres are located in the Wildlife Management Area (WMA) at the south end of the reservoir, and there are scattered parcels of prime if irrigated soils on the southwest and east-central sides of the reservoir. Prime if irrigated soils in the management area include: Amesha loam, Brocko silt loam, Brocko silt loam - wet, Thess silt loam, and the Delpoint and Crittendon soils on 2 to 8 percent slopes.

[7] USDA, NRCS, Great Falls, Montana, February 14, 2000. Prime farmland lists for Lewis and Clark and Broadwater Counties are tentative and subject to change.

Canyon Ferry Reservoir

Slope Classifications



Legend

Study Area Boundary
(Bureau of Reclamation jurisdiction)

Hydrology

- Intermittent
- Perennial
- Canal

Slope Classification

- 0 - 5%
- 5% - 10%
- 10% - 15%
- 15% - 20%
- above 20%

2 0 2 4 Miles

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Figure V-8

Canyon Ferry Reservoir

Environmental Constraints

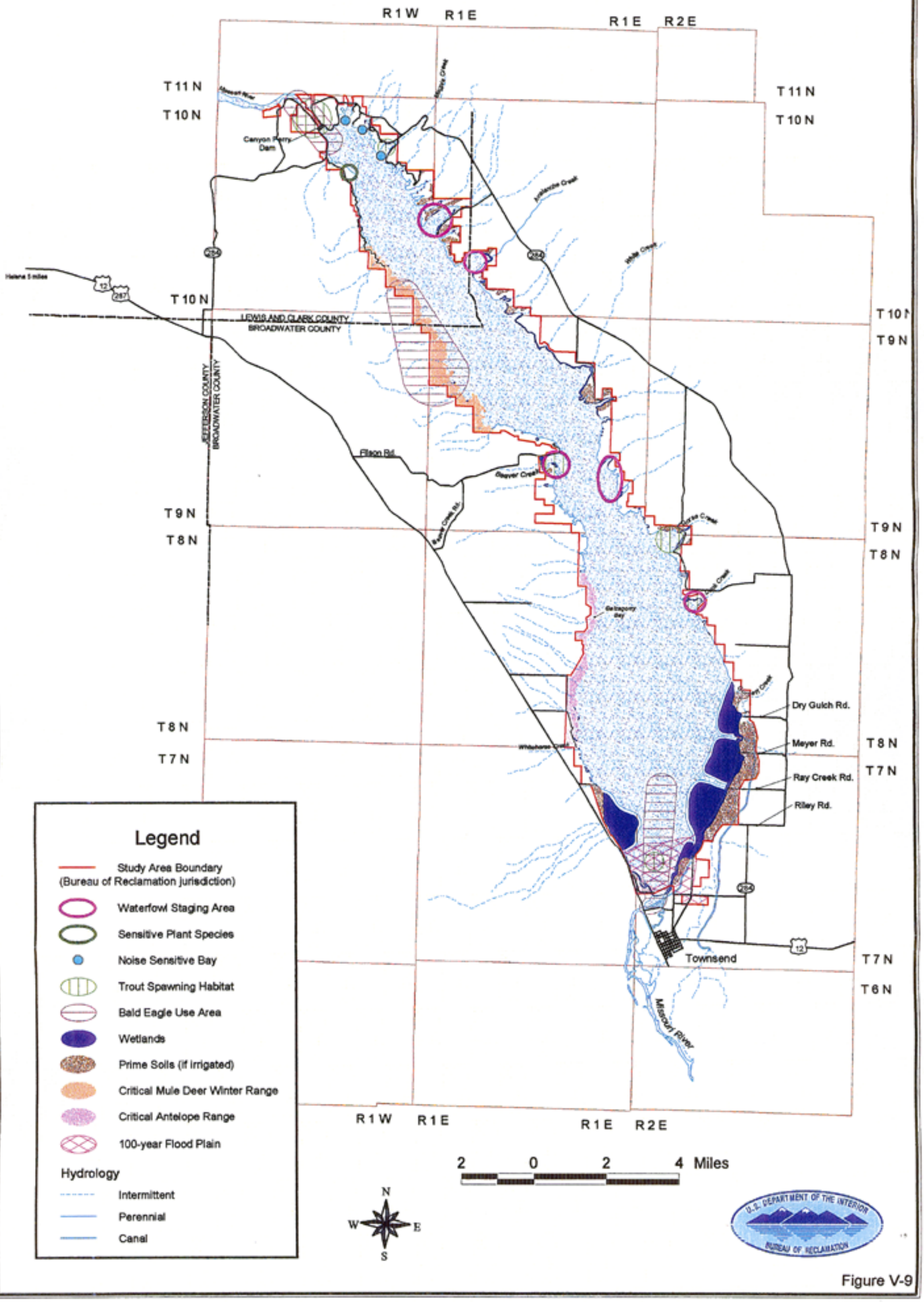


Figure V-9

Topography.—The northwest shore, from Yacht Basin to about 6 miles south, is steeply sloping, often forming along sheer, rocky cliffs. Most Reclamation lands, however, are moderately sloped (5-10 percent) toward the reservoir. Gentle slopes of less than 5 percent are located mid-reservoir on both the east and west shores (see figure V-8).

Environmental Consequences

Alternative A.—Since boundary and internal fencing would not be completed, livestock and ORV trespass would continue, resulting in erosion, sedimentation, and dust generation. Efforts to curb erosion from shoreline wave action would follow policies developed by a committee established through the Canyon Ferry Unit, Montana, Cabin Lease Lots Sale Final EA and FONSI, February 2002. Soil information would be used on a case-by-case basis for implementing site development, but not as a general planning tool. Some soil impacts from general recreational use and natural causes would be unavoidable. Overall, current soil erosion trends in the study area would continue.

Alternative B.—Under the "Policy Development and Land Use Strategy" and "Prime if Irrigated Soils" alternative elements, soil information would be integrated into all future land use decisions. Prime and sensitive soil areas would be protected, and soils with identified hazards would be avoided, where practicable.

Consistent with the "Erosion Control"and "Vehicular Access and Roads" alternative elements, exposure of soils to wind and water erosion would be reduced by strict limitation of ORV access and by better designation of human use areas. Degraded landscapes would be reclaimed, and appropriate erosion-control measures would be applied to protect public roads, Reclamation facilities, and developed recreation facilities where there is a public safety health concern.

Alternative C.—Measures to curb shore erosion by wave action would be implemented according to an established agency program. Impacts would be the same as under Alternative B.

Cumulative Impacts

As a consequence of anticipated recreational use of the study area, not implementing the RMP/EA would result in increased soil erosion and increased sedimentation from reservoir tributaries. Without a comprehensive land use planning strategy, opportunities might be lost to make the best use of available soil for designated uses (e.g., recreation areas, septic systems, wildlife areas, and trails). Implementing either of the action alternatives would reduce residual impacts and ensure that soil evaluation would be integrated into managerial decisions.

Mitigation

Careful design and proper maintenance of roads, trails, and public use areas would minimize erosion under either action alternative. Erosion-control measures would be used to avoid erosion during ground disturbance.

VEGETATION

Affected Environment

Vegetation information included in this plan was excerpted from a vegetation report prepared for the study area in the fall of 1991 by OEA Research, Helena, Montana. (*Canyon Ferry Reservoir Vegetation, Wetlands, and Weed Inventory* is available at MFWP or Reclamation's Montana Area Office [MTAO].)

Habitat Types.—Four distinct vegetation groups, based on life form and species composition, are present around the perimeter of Canyon Ferry Reservoir. The vegetation groups are grassland, upland shrub, coniferous forest, and riparian vegetation (figure V-10). Within these four groups are several distinct habitat or dominance types that correlate to those described by Pfister (1977), Mueggler and Stewart (1980), and Hansen et al. (1988). Additionally, vegetation types are described that are composed primarily of introduced species and do not correspond to a classification system.

Grassland.—The grassland component is composed of two habitat types, one vegetation type, and two pasture types. Most of the grassland area is composed of the needle-and-thread, blue grama habitat type. This habitat type dominates the central and southern portions of the study area. Meadows at the north end of the reservoir are primarily of the blue-bunch wheatgrass habitat type. Both habitat types correspond well to those described by Mueggler and Stewart (1980). The introduced grassland vegetation type is present around the reservoir in drainage bottoms at the interface between riparian corridors and upland vegetation types. The two pasture types are primarily at the south end of the study area, within or adjacent to the WMA.

Upland Shrub.—The study area encompasses two upland shrub types, both of which are restricted to the northern portion of the reservoir. They abut the needle-and-thread habitat type to the south and the coniferous forest types to the north. The upland shrub types are the big sage-brush/bluebunch wheatgrass habitat type and the mountain mahogany/ bluebunch wheatgrass habitat type.

Canyon Ferry Reservoir
Vegetation Groups

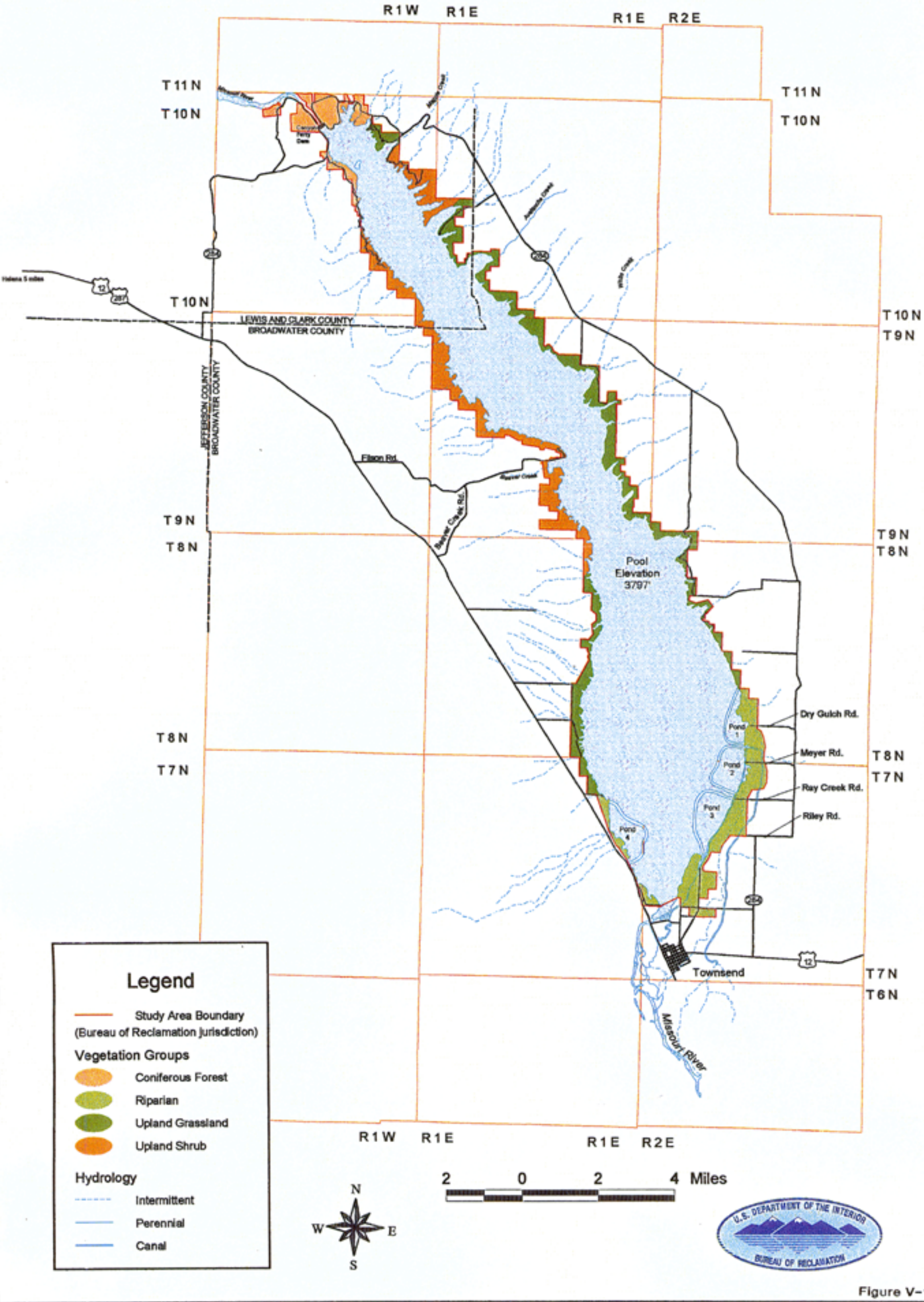


Figure V-10

Coniferous Forest.—Two coniferous forest habitat type are present at Canyon Ferry Reservoir: the Ponderosa Pine/bluebunch wheatgrass habitat type and the Douglas-fir/rough fescue habitat type. They occupy the north and northwest portions of the shoreline from Magpie Bay on the east to the Lewis and Clark-Broadwater County line on the west.

Riparian Vegetation.—There is an intermittent riparian zone around Canyon Ferry Reservoir. The largest riparian area is at the south end, where the Missouri River forms a delta as it flows into Canyon Ferry Reservoir. Other zones of riparian vegetation include the larger drainages of Confederate Gulch and Beaver, Duck, and Magpie Creeks. Shoreline riparian vegetation is evident in the vicinity of Goose Bay. The artificial ponds and associated islands on the east and west sides of the southern portion of the reservoir also support riparian vegetation.

There are two dominance types that occupy most of the riparian zones around the reservoir: narrow-leaved cottonwood and sandbar willow. Three types that occupy small areas are quaking aspen, cattail, and bulrush. All the riparian areas around the reservoir are highly disturbed, as seen by the abundance of introduced pasture grasses and noxious weeds.

Rare and Endangered Species.—No rare or endangered plant species were observed during the vegetation reconnaissance. One sensitive plant, rabbit crazyweed (*Oxytropis lagopus* var. *conjugens)*, is known in the study area. The Montana Natural Heritage Program ranks it as globally secure but imperiled in Montana (G4T2, S2). It is found on the west shore of the reservoir, in the Ponderosa Pine habitat type. The plant was not observed during the reconnaissance survey.

Wetlands.—Aside from the reservoir itself, most of the individual wetland sites found in the study area are associated with the fringe of Canyon Ferry Reservoir and, thus, have become established only since dam construction and reservoir filling in the early 1950s (see figure V-9). More recently established wetlands are associated with the diked ponds completed in 1978. Annual fluctuations promote the presence of drawdown wetlands typified by nonpersistent, often weedy, hydrophytic (water-loving) vegetation. Long-term drawdowns encourage the development of more stable communities, typified by pioneer species such as sandbar willow.

Wetlands are also associated with the Missouri River, at the south end of the reservoir, and perennial tributaries such as Duck Creek. These wetlands have existed for a long time, although natural successional processes, the introduction of non-native plants, and human activities, such as farming, have caused vegetation changes.

Wetland dominance types have been grouped according to location around the reservoir. Each of the dominance types listed below may be found within an appropriate grouping.

The "Wetlands Classification" section of the Canyon Ferry Reservoir Vegetation, Wetlands, and Weed Inventory is available at MFWP and Reclamation's MTAO.

Narrow-Leaved Cottonwood Dominance Type.—This community was described above in the "Vegetation" section; however, only a portion of this riparian community meets jurisdictional wetlands criteria. Typically, where upland plants (such as Kentucky bluegrass, snowberry, and juniper) dominate the understory, the soils are not hydric (water associated). When species such as dogwood or sandbar willow are present, the areas meet the wetlands criteria.

Sandbar Willow Dominance Type.—The sandbar willow dominance type is present along the shoreline, in bays, and in the complex of ponds and islands. It is also the most extensive wetland type identified. It commonly occupies an area of minimal soil development between the high water mark and the beginning of the narrow-leaved cottonwood dominance type.

Drier shoreline and pond areas dominated by this type include primarily introduced grasses and weedy forbs such as smooth brome, Kentucky bluegrass, redtop, Canada thistle, musk thistle, spotted and Russian knapweed, whitetop, and broadleaf pepperweed.

Common Cattail Dominance Type.—During a field survey, the common cattail dominance type was observed at locations around the reservoir from Riverside, along the Missouri River at the north end of the study area, to the ponds and delta area at the south end. This dominance type is limited to small patches along the Missouri River at all but the southern end of the reservoir. Within the ponds, it is occasionally present along the inner shore of the dike. It is more prevalent along the shore of the ponds, although still occurs intermittently. Adjacent drier communities range from reed canarygrass to seeded stands of tall wheatgrass and weedy forbs.

Softstem Bulrush Dominance Type.—Stands of softstem and hardstem bulrush were observed during a field survey along the shoreline of ponds 2 and 3 (see figure V-9). Most stands were very small, in water right at the shoreline, and basically a monoculture. One stand was located adjacent to a cattail stand. Also, bulrush was planted in a few places within the diked wildlife/waterfowl ponds. Adjacent dryland species include reed canarygrass, tall wheatgrass, Canada thistle, and a variety of weedy forbs.

Reed Canarygrass Dominance Type.—Stands of reed canarygrass are found throughout the study area along streambanks and near the shoreline of the reservoir, where the water table is

at or near the ground surface. This type is extensive. The heavy sod formed by this species usually excludes other plants. The sandbar willow dominance type usually borders this type.

Common Spikerush Dominance Type.—Common spikerush dominance type is found along the fringes of side channels and the delta of the Missouri River, where water is slow moving and seasonal fluctuations are small. Associated species include common mint, silverweed cinquefoil, and sedges. Reed canarygrass often neighbors this type.

Needle Spikerush Dominance Type.—Needle spikerush dominance type is found in exposed pond bottoms and is typical of widely fluctuating water tables. It forms dense sods. Associated species include water grounsel and dock. Adjacent communities include those dominated by aggressive pioneers of the exposed mudflats described below.

Seasonal Mudflat Dominance Type.—This type includes a number of early, successional species that are aggressive invaders of very shallow water and exposed mudflats of the ponds and a few backwater bays of the reservoir that are exposed yearly as the lake levels drop. Typically, these plants form narrow bands as sites dry out over the summer. Included in this type are Ladysthumb knotweed, golden dock, and common cocklebur. Adjacent wetter communities include needle spikerush. Drier sites are dominated by sandbar willow.

Sedge Dominance Type.—Pure sedge types are very limited in the study area. Sedges are usually found as components of other types. However, knot-sheath sedge occurs in nearly pure stands in wet meadows at Bedford and in a few spots adjacent to common spikerush communities.

Common Reed Dominance Type.—This dominance type was noted in only one spot at the south end of the reservoir and covered less than one-tenth of an acre. Reed canarygrass and sedge communities surround the stand.

Watercress/American Speedwell Dominance Type.—The watercress/American speedwell dominance type was found in a small perennial stream at Bedford. These floating aquatic plants, which form dense mats, depend on cold, flowing, shallow water. Cattail and knot-sheath sedge communities border the stream.

Open Water Dominance Type.—The open water dominance types occur near the Missouri River and other tributaries to the reservoir, the shallow and deep water habitat of the reservoir

itself, the waterfowl ponds at the south end of the reservoir, and in a number of perennial ponds. The latter are often occupied by dense algal communities and, to a lesser extent, occupied by water milfoil.

Weeds.—A Canyon Ferry Lake Vegetation, Wetlands, and Weed Inventory was prepared by OEA Research (October 29, 1991) for inclusion in the Canyon Ferry RMP/EA that was scheduled for completion in the spring of 1993. Every recreation area around the lake, except those accessible only by boat, were visited during the inventory process. Additionally, several west side bays accessible only by boat were visited. Historic agricultural, recreational, and grazing uses of the study area are evident in the presence and abundance of introduced species, particularly pasture grasses and weedy forbs. Noxious weeds (Montana Department of Agriculture designated category I weeds) are present in virtually all vegetation communities around the lake and are most abundant in the mesic and riparian communities.

Since the initial weed inventory completed in 1991, additional mapping was done in 1996, 1997, 1998, and 1999. Weed infestations have been mapped on nearly all of the Reclamation lands around the lake. The weed species found during mapping include Spotted knapweed, Russian knapweed, Diffuse knapweed, Dalmation toadflax, Leafy spurge, Whitetop, Canada thistle, Musk thistle, Bull thistle, Field bindweed, Hound's tongue, Common mullein, and Perennial pepperweed. Most of these weeds take over native grasses and forbs and reduce the forage available to wildlife. Hound's tongue is toxic to animals, especially horses, if eaten at certain times of the year and in sufficient quantities. Studies have shown that some of these weeds, especially Spotted knapweed, cause increased soil movement as the native species are displaced.

Spotted knapweed can be found around the lake, with the heaviest infestations found on the north and south ends. Russian knapweed, Whitetop, and Perennial pepperweed are found more commonly on the deeper soils along the east and south shore of the lake, often in mixed stands in the Avalanche Bay area and south towards White Bay. Leafy spurge is well established in many drainages and moist areas around the lake and is expanding outward from these sites. Dalmation toadflax is well established along the west shore, in the Spokane Hills area, and in the Eagle Bay Drive and Riverside Campground areas. Dalmation toadflax has a very high rate of spread and can invade a wide range of soil types. Hound's tongue is currently not present in large infestations, but more plants are becoming evident each year. Field bindweed is present at Goose Bay and along the lower reaches of Eagle Bay Drive. Canada thistle is well established in the more mesic, disturbed areas, and Musk thistle occupies a similar niche as Canada thistle but is not as prevalent. The largest infestation of Musk thistle was near Hellgate Campground and has been well controlled since 1998.

Canyon Ferry Reservoir is one of the most heavily used reservoirs in Montana and draws people from throughout the Nation. Many of the visitor's vehicles and equipment have weed seeds stuck on them; therefore, new weed infestations commonly occur in the campgrounds and roads. Not only do visitors bring in weed seeds from other parts of the country, but they also take weed seeds from Canyon Ferry Reservoir to other places they visit. ORVs also

introduce and distribute weed seeds along trails and along cross-country travel routes. Other vectors for weed seed dispersal include birds, wildlife, livestock, wind, and water. The combination of all these dispersal mechanisms contributes to the rapid spread of weed infestations found at Canyon Ferry.

Many infestations are starting along roads and areas with motorized use. In cooperation with Broadwater and Lewis and Clark Counties, a considerable effort has been made to curb further spread of weeds from these travel corridors. Weed seeds are also being transported by water to the shoreline. The use of chemicals has been avoided in the riparian fringe that exists around the reservoir shorelines because of the risk of eliminating the desirable vegetation that is important to wildlife and shoreline stability. In addition, the use of chemicals near open water has the potential to contaminate surface and groundwater resources. An effort is underway to establish viable populations of insects to control weeds in these riparian areas; however, this will take considerable time to achieve and will probably not totally eliminate the target weed species. A continued effort will be needed to ensure that the weeds are not allowed to re-invade the lands beyond the riparian fringe.

As the weed infestations at Canyon Ferry rapidly grew, recreationists, landowners, and agency managers became concerned. Many adjacent landowners were concerned that large weed infestations were spreading from Reclamation lands to private lands used for agriculture. In August 1993, Reclamation completed a comprehensive weed management plan for Canyon Ferry Reservoir and, in a 5-year interagency agreement, the Bureau of Land Management (BLM) agreed to take the lead in weed control. During that time, approximately $158,200 was spent on the Canyon Ferry Weed Program. This is part of a larger weed control effort that also involved the surrounding private, National Forest, and BLM lands, and this does not include the work
done by MFWP in the WMA. Work accomplished included weed mapping, spraying, use of biological control agents, education efforts, administration, and monitoring. 1,930 acres of land were treated with chemicals and 111,541 insects released during 44 releases. Weeds have been mapped on nearly all Reclamation lands around Canyon Ferry Reservoir. Some areas have been searched three times to identify plants that were missed the year before or that germinated that spring. In addition, all of the developed recreation sites are mowed two or three times a year, which reduces the weed's seed production. Many large infestations at Canyon Ferry have been reduced to scattered individual plants, or clumps of plants, and a continued effort is needed to "wear out" the seed source stored in the soil.

Additional Weedy Species.—Several weedy species, in addition to those previously mentioned, occur around the lake. Bindweed is present, primarily in the vicinity of Goose Bay. It occupies several acres on the north shore of the bay. Hound's tongue is present intermittently throughout much of the study area, primarily in drainage bottoms. Populations are locally small (less than 100 plants). Musk thistle is present in habitat similar to Canada thistle, but is not as widespread.

Sartorius (1988) reported that yellow sweetclover was sprayed as part of Reclamation's weed control program. It is, however, planted by MFWP for cover in the WMA.

Although broadleaf pepperweed is not classified as a category I noxious weed, it is widespread around the lake. Broadleaf pepperweed occupies habitat similar to whitetop and Russian knapweed and was observed in the mixed infestation in Avalanche Bay and along the east shore north of Goose Bay. It is also found on the west side of the lake in bays accessible only by boat.

Weed Control.—The State's noxious weed law requires private property owners to control weeds on private land or face penalties and potential control by the county weed district.

Weed control on the WMA is conducted differently. This effort is funded with MFWP and Reclamation funds; Reclamation pays for chemicals, and MFWP pays labor costs.

About $4,000 to $5,000 is spent annually on weed control in the WMA, with Reclamation spending $2,000 to $3,000.

Reclamation has set policy on pesticide and herbicide application. If a cabin site owner or concessionaire wishes to apply chemicals to Reclamation lands, a plan must first be submitted to, and approved by, Reclamation.

BLM assisted Reclamation and coordinated the weed control program at Canyon Ferry Reservoir pursuant to an Interagency Agreement, as amended, through January 2002. This was done through an integrated pest management (IPM) program. BLM, as an active cooperator, worked with managers of neighboring land and waters to protect the land-based resource. Reclamation and BLM worked to implement a cohesive and broad range of coordinated programs involving research, monitoring, education, and control to develop an effective weed management program.

Reclamation will continue to implement the weed management plan to control noxious weeds through prevention, eradication, suppression or reduction, containment, and tolerance. The plan has the goal of developing an integrated noxious weed management plan to utilize the latest technology to significantly manage and reduce the noxious weed populations with minimum environmental impacts to the area.

The scope of the plan includes all State noxious weeds on Reclamation lands immediately adjacent to Canyon Ferry Reservoir. The plan describes three categories of weeds in Montana:

- **R** Category 1: Weeds that are currently established and generally widespread in many counties of the State.

- **R** Category 2: Weeds that have been recently introduced into the State or are rapidly spreading from their current infestation sites.

- **R** Category 3: Weeds that have not been detected in the State or may be found only in small, scattered, localized infestations.

Reclamation will use the appropriate methods to manage the weed infestations on the lands around Canyon Ferry. More information can be found in the plan.

The IPM uses a combination of chemical, biological, mechanical, cultural, and integrated methods to control invasive species. The first three methods are probably the most widely used, with cultural control practices (i.e., environmental restoration or ecosystem management) being recently recognized as a viable means for control.

Chemical control is one of the most widely known and effective short-term management options. There are hundreds of different chemicals and adjuvants, each useful for a specific target plant and/or situation. Because of growing environmental concerns by the general public, there has been a trend toward decreased use of chemical applications for the control of noxious plant species whenever possible. The Montana DEQ requires that pesticide and herbicide applicators be certified by attending classes and taking tests to prove they know how to apply those chemicals.

Biological control is the introduction by man of any parasite, predator, or pathogenic micro-organism into the environment for the suppression of some target plant of animal pest. The use of biocontrol typically does not mean the complete eradication or elimination of some target from a specific area. Instead, biocontrol operates by reducing a target population to lower, more realistic, levels. Biocontrol is typically a long-term, environmentally acceptable approach for the control of a target plant species; however, observable impacts may take up to 10 years.

Mechanical methods, such as hand harvesting, mower, and harvester, represent a environmentally compatible option and can be used readily by nontechnical personnel. Mechanical methods are often the most expensive and can become cost prohibitive very quickly. The use of large mechanical machinery often fragments the plants, causing them to disperse across larger regions more readily.

A variety of environmentally acceptable weed control practices and techniques are aimed at preventing or reducing the entry or spread of noxious plant species. Inspections may be made at State borders to ensure that no undesirable species are imported. Another type of control is using native plant species to prevent the spread or introduction of noxious vegetation in a particular area; however, there can never be 100-percent prevention of the entry of noxious plants into the country or a specific locality. Also, the use of native plants to prevent the spread or introduction of noxious plants is often cost prohibitive and, in many cases, techniques for planting and cultivating the natives are unknown.

Integrated control is the use of all available management practices in as compatible a manner as possible. Integration is the single most important overall management technique available for controlling noxious plant species. By applying all available techniques to a specific noxious plant problem, more cost-efficient, environmentally compatible long-term management is typically achieved.

Environmental Consequences

It is assumed for the environmental analysis portion of this report that recreational use at Canyon Ferry will occur regardless of which alternative is chosen. Impacts to the affected (existing) environment are discussed from a programmatic standpoint because exact construction activities are not known at this time. All that is known is that a particular activity might occur.

Alternative A.—Except for the Broadwater Bay recreational facilities proposed for Silos, no other construction activities are anticipated under this alternative. Most of the Silos area, where Broadwater Bay recreational facilities would be constructed, is grassland. The grassland is currently adversely impacted by recreationists and ORV use. ORV and all-terrain vehicle (ATV) use around the reservoir would continue to expand under this alternative. Most of the effects would be on upland shrub and grassland, although riparian areas along the margins of bays could be adversely impacted. Reclamation will continue to implement the weed management plan to control noxious weeds through prevention, eradication, suppression, or reduction. Continuing with the 1993 comprehensive weed management plan, the weed control agreement with Broadwater County, and finalizing a long-term weed control agreement with Lewis and Clark County should help to reduce the presence of noxious weeds within the study area.

Alternative B.—In addition to the development proposed in Alternative A, this alternative would include trail construction, new restrooms, new day-use areas, rehabilitation of existing campgrounds and day-use areas, moderate expansion of facilities at White Earth and Confederate Bay, and a boat ramp. Trail construction proposed in this alternative would directly affect upland shrub vegetation. This would be a slight increase over the affects of Alternative A. The net effect on vegetation would be positive because this alternative would include the development and implementation of a comprehensive land use planning strategy. Additionally, road closure and development of access roads, which are a part of this alternative, would limit future impacts to vegetation because ORV use would be curtailed. Reclamation will continue to implement the weed management plan to control noxious weeds through prevention, eradication, suppression, or reduction. Continuing with the 1993 comprehensive weed management plan, the weed control agreement with Broadwater County, and finalizing a long-term weed control agreement with Lewis and Clark County should help to reduce the presence of noxious weeds within the study area. The weeds should be better controlled through the land use planning strategy by limiting vehicular access to certain areas or trails and improving the monitoring of the lands.

Alternative C.—Similar to Alternative B, additional campground, day-use, and trail construction under this alternative would directly affect upland shrub vegetation. This would be an increase over Alternative B. It is still expected that the net affect on vegetation would be positive because of the development and implementation of a comprehensive land use planning

strategy coupled with road closures. Reclamation will continue to implement the weed management plan to control noxious weeds through prevention, eradication, suppression, or reduction. Continuing with the 1993 comprehensive weed management plan, the weed control agreement with Broadwater County, and finalizing a long-term weed control agreement with Lewis and Clark County should help to reduce the presence of noxious weeds within the study area. The weeds should be better controlled through the land use planning strategy by limiting vehicular access to certain areas or trails and improving the monitoring of the lands.

Cumulative Impacts

Vegetation resources would continue to decline as use increases. Grassland and upland shrub vegetation would be affected most, but none of the alternatives would radically alter any of the existing vegetation types.

FISH AND WILDLIFE

Affected Environment

The State of Montana maintains management responsibility for fish and wildlife resources in the State. Information was taken from the *Upper Missouri River Reservoir, Fisheries Management Plan 2000-2009* (MFWP, Fisheries Division, January 2000), which established fisheries management at the reservoir.

Fish.—

Existing Fisheries.—The sport fishery of the Canyon Ferry Reservoir, as well as the Missouri River system, consists primarily of rainbow trout, brown trout, yellow perch, mountain white-
fish, burbot, and walleye. Nongame species in this system are abundant but not particularly diverse. The four primary nongame species include carp, longnose sucker, white sucker, and Utah chub.

Anglers at Canyon Ferry Reservoir have historically fished for rainbow trout and yellow perch during ice-free months of the year. Yellow perch are particularly popular during the winter ice-fishing season. Burbot are also a popular sport fish during the winter and early spring season. The burbot population appears to be increasing in Canyon Ferry Reservoir, and there was a corresponding increase in angler interest in the species during the 1990s. Yellow perch and burbot sustain populations entirely through natural reproduction. Rainbow trout in Canyon Ferry Reservoir are primarily sustained through hatchery plants. Natural reproduction accounts for less than 10 percent of the total population of rainbow trout.

Brown trout populations are typically sustained by natural reproduction, but supplemental imprint stocking of brown trout occurred between 1992 and 1997. Brown trout have provided

an important trophy component to the fishery in the past, but low numbers of brown trout have resulted in low catch rates in Canyon Ferry Reservoir and the Missouri River upstream to Toston Dam since the mid-1990s.

Walleye have become a significant component of the Canyon Ferry fishery in the past few years. This newly established population has rapidly expanded to reach catchable numbers. Before 1996, no walleye were observed in the standard roving creel census, and reports of walleye caught by anglers were uncommon. During 1998, the walleye population was numerous enough that nearly 50 percent of the summer anglers were seeking walleye exclusively or in combination with other species such as perch and trout.

Angling pressure at Canyon Ferry typically ranks near the top of the Statewide angling pressure survey, averaging about 86,000 angler days per year from 1982 through 1997. However, angling pressure has increased to approximately 94,000 angler days from 1993 to 1997, the last reported visitation figures.

Fisheries Management.—The Montana Consensus Council conducted public involvement throughout 1998, leading to acceptance of the goal to manage the upper Missouri reservoir system, consisting of Canyon Ferry, Holter, and Hauser Reservoirs, within the State as a multispecies fishery.

The goal for managing the Canyon Ferry-Missouri River fishery outlined in the plan is to maintain a cost-effective, multispecies fishery that sustains the current level of angler use during both the open-water and ice-fishing seasons. Management of the multispecies fishery will attempt to maintain historically desirable species (rainbow trout, yellow perch, brown trout, and burbot), while adopting management strategies to integrate the expanding walleye population.

Specific management goals and objectives, rationale, and strategies, by species, is contained in the *Upper Missouri River Reservoir Fisheries Management Plan.*

Wildlife.—The reservoir provides a variety of wildlife habitats, but can generally be divided into two groupings: (1) the reservoir shoreline and surrounding uplands and tributaries coming into the reservoir and (2) the south end of the lake supporting the Canyon Ferry WMA. The WMA is managed by MFWP. These two areas are distinct in the types of habitat they provide and
the species present.

The goal for the WMA, as stated in the Wildlife Management Plan, is to provide productive habitat for the diversity of wildlife species that use the area and provide for consumptive and nonconsumptive use of those resources. Since dike construction, management emphasis has been on improving habitat associated with the dike/island complex to maximize waterfowl

production and to provide for hunter recreation. The area has become a popular spot for waterfowl and upland bird hunters. As vegetation communities develop over time, more nongame species are beginning to use the project.

Management by MFWP outside the WMA has consisted mainly of constructing boundary fences (primarily on the east side of the reservoir) to control ORV travel, trespass livestock grazing, and other uses inconsistent with management for wildlife. Because of the diverse opportunities, management has focused on developing and enhancing wildlife habitats of the WMA.

Antelope.—Antelope use both sides of the reservoir (figure V-11). The area on the east side of the reservoir is a portion of Antelope Hunting District 390, while the west side of the reservoir is included in Hunting District 380. Populations in both districts were relatively low through the 1960s and began to show increases in the mid- to late 1970s. Habitat on the west side of the reservoir tends to be less fragmented than on the east side and is considered more available to antelope. Habitat for antelope in both districts exists mainly on private land. A large portion of the east side has been put into agricultural production, fragmenting much of the
habitat left in this area. Conflicts between antelope and these operations have occurred periodically in the past. Land use on the west side is primarily livestock grazing, and concern by landowners over the increase in antelope numbers surfaced in the mid-1980s. Areas of public land important to antelope on the west side of the reservoir include the whole shoreline from the WMA to Beaver Creek. Areas of antelope concentration on the east side of the reservoir include Goose Bay, Avalanche Creek, and the Hellgate Gulch area.

Hunting permits for antelope in both areas have been adjusted periodically to address the concerns of landowners and reduce the number of antelope to a level more consistent with their shrinking habitat base.

Some of the antelope in each hunting district are associated with the reservoir. To more realistically address the animals associated with the reservoir, antelope on the west side (Hunting District 380) were divided into two groups: those east or west of Highway 287. The highway acts as a dividing line for the two main herds in this district. Based on total counts made since 1972, approximately 60 percent of antelope in this hunting district are associated with the reservoir. This currently amounts to around 250 antelope. The same holds true for antelope on the east side (Hunting District 390) of the reservoir. Antelope were considered to be associated with the reservoir if they were north of Highway 12, just east of Townsend. Since 1984, surveys indicate that approximately 78 percent of antelope in this area were associated with, or in close proximity to, the reservoir. This amounts to approximately 100 antelope.

The antelope harvest for the period 1980-90 has averaged 136 in Hunting District 380 and 25 animals in Hunting District 390, respectively. The population objective in both districts is to stabilize numbers at current levels. Harvest levels are set such that the total antelope

population is maintained at about 350 animals. This appears to be consistent with the decrease in the amount of habitat that has occurred over time and the increasing variety of land uses in this area. Further development on public and private land will make it difficult to maintain the current population at 350 animals.

Deer.—Mule deer and white-tailed deer inhabit almost the entire area around the reservoir (see figure V-11). The population of each species varies, depending on habitat quality and quantity. Very little actual deer survey work has been accomplished in this immediate area. Much of the area surrounding the reservoir is a prairie environment with either a sagebrush/grassland or a grassland/forb community with associated shrubby draws. In these areas, there are typically fewer than five deer of either species per square mile. Some habitats more typical of the intermountain region around the reservoir support higher densities of both species. The WMA supports a high-density, white-tailed deer population.

Elk.—Elk infrequently use the lands around the reservoir and frequently use the Hellgate area during hard winters (see figure V-11). A growing herd of elk use the Spokane Hills area and are commonly seen along the west shore between White Earth Campground and the Crittendon day-use site. This area has limited vehicle access and provides the elk with a secure area year round.

Moose.—Three to four moose are found in the WMA at the south end of the reservoir and, occasionally, in the Confederate Bay Area (see figure V-11).

Waterfowl.—The number of geese observed during the nesting period in the WMA has increased significantly since 1961. This is the result of nesting habitat created by the pond/island complex. The number of nests has increased almost annually. A total of 523 nests were located by MFWP in 1991. The number of nests in the delta adjacent to the WMA has stabilized between 20 and 30. An annual summer goose banding program initiated in 1974 has shown that geese hatched on the WMA have traveled as far south as California and as far north as Canada.

Monitoring duck nesting has shown that ducks have responded more slowly to the WMA primarily because they have specific nest cover requirements that are lacking on many islands and because of predation. A variety of species are located in the WMA, with mallards, redheads, and gadwalls the most numerous. Both ducks and geese gather in the WMA before spring and fall migrations.

Areas at the reservoir that are outside the WMA serve mainly as staging areas to attract waterfowl during spring and fall. There is a limited amount of Canada goose nesting around

Canyon Ferry Reservoir

Wildlife

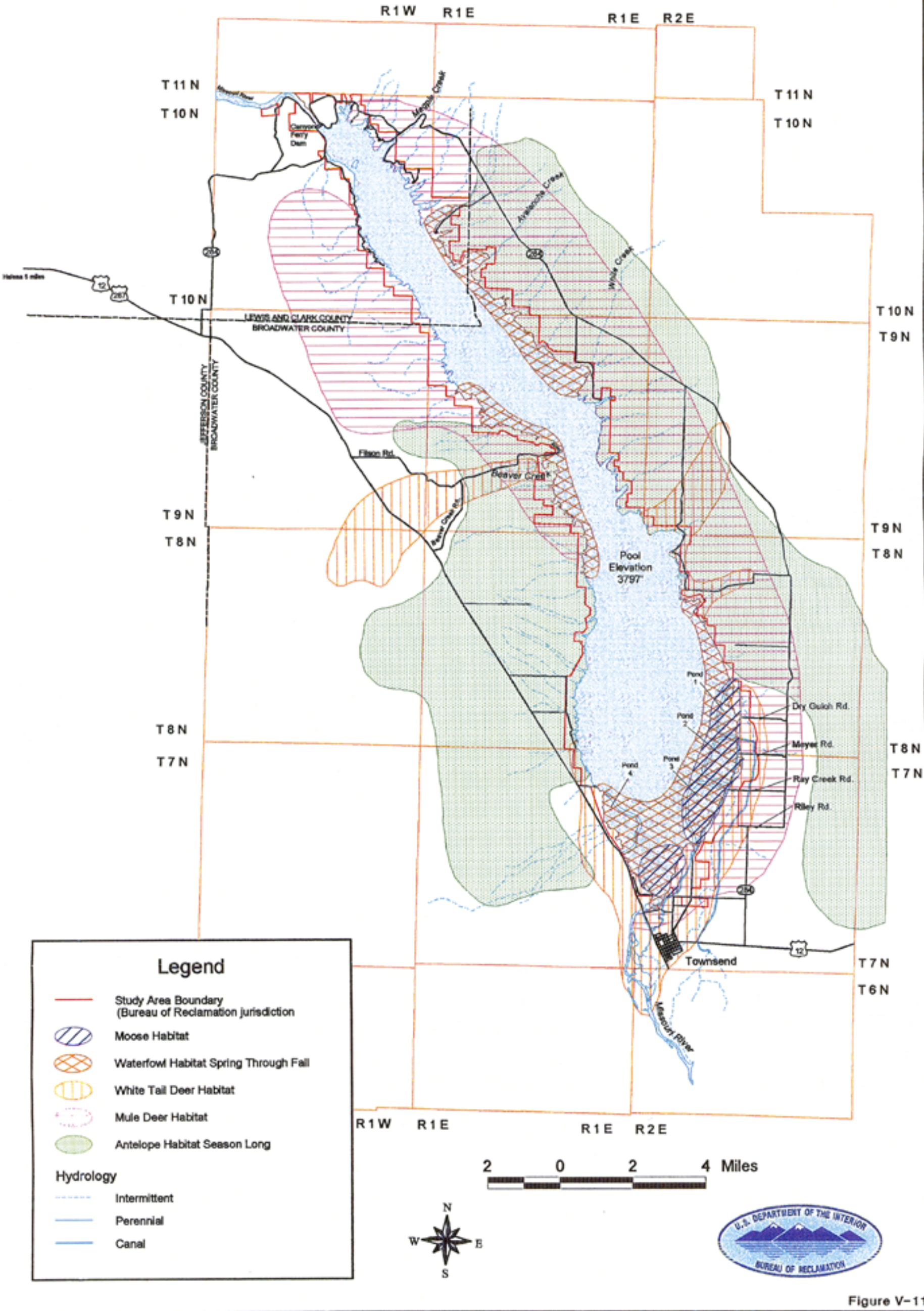


Figure V-11

the north end of the reservoir, where rock islands protrude above the water line. Backwaters and isolated bays provide secure loafing areas to waterfowl during spring and fall migration. These areas are attractive mainly because grain fields adjacent to the reservoir provide a food source. Such areas include the mouths of Duck, Avalanche, and Beaver Creeks. Concentrations of geese during the fall can occasionally be found in other isolated bays and shorelines around the reservoir. As is true of most species of Canada geese throughout North America, the number of geese associated with Canyon Ferry Reservoir have increased over time.

While there is limited nesting by Canada geese on the reservoir proper, certain areas provide attractive brood rearing habitat. The inlet to Beaver Creek, on the west side of the reservoir, is used consistently by geese for brood rearing, and over 100 geese have been observed during some years. Duck Creek Bay is also used for brood rearing by geese. Some geese in each area are probably birds that have nested on the WMA and moved off the project to raise their broods. As with staging areas, seclusion and minimal human disturbance make brood areas attractive. Also, succulent grass for forage is available, especially at Beaver Creek. A population of Canada geese rest and rear their young at Magpie Bay.

In January, MFWP annually conducts its aerial midwinter waterfowl survey, which includes the reservoir area. However, all but the north end is typically frozen over by this time. Generally, a few Goldeneyes are observed on the north end of the reservoir, while just below the dam, several hundred Goldeneyes, mallards, and up to 300 Canada geese are observed.

A heron/cormorant rookery, located on an island in the river within the WMA, was deserted in 1987 for no apparent reason. Cormorants shifted nesting activities to the pond system, while the fate of the herons is unknown. There are six osprey nesting structures on the WMA, and, generally, two or three are used annually. Terns, pelicans, and avocets also use the area for nesting.

A rich variety of avian fauna also uses the reservoir. In addition, common loons and western grebes occupy the reservoir during summer months. Pelicans and cormorants can be seen catching fish along the reservoir shoreline throughout the spring and summer. A variety of shorebirds is common during spring and fall migrations. To date, no specific management has been undertaken for these nongame species.

Upland Game Birds.—Pheasants are declining on the WMA apparently due to loss of habitat, changes in farming practices, and increased predation.

Pheasants, while not numerous, are found around the reservoir where there is suitable habitat. No surveys have been conducted to quantify pheasants in this area, but birds have been observed in the better riparian zones such as Duck Creek, Confederate Gulch, and Beaver

Creek. A local Pheasants Forever chapter, with permission from Reclamation, began developing pheasant habitat along the east shore of the reservoir in 1999. If successful, the chapter plans to increase the habitat.

Hungarian partridge and sharptail grouse occur sporadically around the reservoir. Habitat more attractive to partridge (Weigand, 1980) is found away from the reservoir in association with grain fields on the east side of the reservoir.

Merriam's wild turkeys were transplanted into the Spokane Hills by the Montana Fish and Game Department in 1964 (10 toms and 16 hens). These birds, or their descendants, evidently moved north, and a small population now exists near the town of York. A graduate student tracked the movement of wild turkeys in the Canyon Ferry Reservoir area by monitoring radio-banned birds and documented the results in a study report (Holzer, 1989). Some turkeys came as far south as Cave Gulch, on the north end of the reservoir. Habitat along the reservoir in this area would be considered suitable turkey habitat (Ponderosa Pine/grassland); however, most of this area is now leased cabin sites and private housing developments, both of which decrease available habitat.

Raptors.—In 1990, a project funded by several agencies sought to survey and inventory raptors along the Upper Missouri River (Harmata, 1990). The survey area ran along the Missouri River watershed from Three Forks to Wolf Creek, which includes Canyon Ferry Reservoir. The main emphasis of the survey dealt with peregrine falcons and bald eagles, but one of the objectives of the study was to survey and record all possible diurnal raptor and great-horned owl breeding areas, with emphasis on woodland raptors. The results of this survey indicate that a variety of raptors are associated with the reservoir complex (table V-2). "Occupied territories" were areas where adult raptors were located between May 15 and August 30, and the behavior of the birds indicated a long-term presence in the area. An "Occupied territories with a nest" was based on the presence of adults associated with a nest or recently fledged young. Raptors, regardless of age, not associated with a territory or nest, were recorded as incidental observations.

A census of osprey associated with Canyon Ferry Reservoir was conducted by Grover (1983). A total of 52 osprey nests were located during the two survey years (1981-82). Grover also found that the reservoir supported a higher density of nesting osprey (0.54 occupied nests per kilometer) than the free-flowing river portion of the study area (0.03 occupied nests per kilometer). A yet-to-be published survey of osprey use of the reservoir has been completed by Harmata (Harmata, unpublished data, personal communication, 2000) The survey identified 32 active osprey nests.

Bald eagle use in the 14-mile reach below Canyon Ferry Dam peaked at 302 eagles during the first week in December 1991. Since 1991, bald eagle use of this reach has steadily declined, with

Table V-2.—Species and number of raptors associated with Canyon Ferry Reservoir, 1990

Species	West side of reservoir			East side of reservoir		
	OBS[1]	OT[2]	OTN[3]	OBS	OT	OTN
Bald eagle			1			
Golden eagle			1			
Red-tailed hawk					1	7
Prairie falcon		1				
Osprey		3	5		1	5
Ferruginous hawk	1		1	1	1	1
Swainson's hawk						1
Turkey vulture	1					
Great-horned owl						1
Cooper's hawk			1			
Sharp-shinned hawk	1		1			
Northern harrier	1	1		1		
American kestrel	1		1	2		
Total	5	5	11	4	3	15

Source: MFWP, 1991.
[1] Observed.
[2] Occupied territory
[3] Occupied territory nest.

a peak use of 54 in 1999 (table V-3). The decline has been attributed to the drop in the numbers of spawning kokanee salmon in this reach. MFWP has been planting kokanee salmon in Hauser Reservoir in hopes of restoring the kokanee salmon population.

Furbearers, Small Mammals, Reptiles, and Amphibians.—Beaver and otter are common on the WMA. Recreational trapping of beaver occurs along the river. A bat house was erected along a side channel in 1992 and is monitored for use. An inventory of mammals, reptiles, and amphibians, conducted by MFWP in 1983, revealed a total of 81 vertebrate species.

Table V-3.—Bald eagle census
Canyon Ferry Dam to Hauser Dam (approximately 14 miles)

Month/week	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
September											
Last week							4	19	5		
October											
1st week	10			18	15	18	15	48	8	40	
2nd week	9	19	11	32	25	38	33	53	23	53	
3rd week	12	17	14	N/A	21	42	69	104	46	103	52
4th week	20	25	13	47	25	65	59	139	44	143	29
5th week	N/A	28	19	52	52				81		
November											
1st week	6	31	19	62	111	67	81	225	137	97	71
2nd week	13	54	48	53	129	115	194	258	200	121	145
3rd week	[1]	38	30	54	109	137	242	200	235	164	190
4th week	[1]	20	52	34	66	122	225	65	160	184	197
5th week	6	N/A		N/A	64	80				220	
December											
1st week	12	31	34	25		21	237	56	101	302	203
2nd week		8		15			162	49	81	169	132
3rd week							111	42	69	73	
4th week							70	12	24	29	
5th week							53				

Note: The census is conducted every Thursday at approximately the same time of day (depending on the weather). Data outlined in this table indicate past arrival and departure times for bald eagles in the Canyon Ferry/Hauser Dam area.

[1] The third and fourth weeks in November were inconclusive because of heavy amounts of fog.

Quantitative surveys of furbearers or small mammals have not been conducted in the WMA or the reservoir. Beaver are known to inhabit areas of suitable habitat, which include Duck Creek, Confederate Gulch, Magpie Creek, and Beaver Creek. Other mammals common to these same areas are raccoons and mink. Coyote populations are stable, while fox have increased with the advent of agricultural development and human control of coyotes.

Species of Special Concern.—The bald eagle is the only federally listed threatened or endangered species associated with Canyon Ferry Reservoir. In addition to nesting, which occurs at one area on the west shore of the reservoir, bald eagles concentrate in the 14-mile reach of the Missouri River between Canyon Ferry Dam and Hauser Dam. Bald eagle use of both shores of Canyon Ferry Reservoir has also been documented through the use of radio-tagged eagles. The seasonal closure of Bald Eagle Drive during eagle migration will be maintained when bald eagle populations are numerous enough to justify such closure.

Reclamation prepared a report about bald eagles to facilitate informed decisions about land use and to promote conservation of the species and its habitat. The report, *Montana Bald Eagle Management Plan, July 1994*, was a cooperative effort among eight Federal agencies, the State of Montana, and the Confederated Salish and Kootenai Tribes. The management goal for the State of Montana is to facilitate growth of the eagle population until the number of viable bald eagle breeding peaks. Then, the goal is to provide secure habitat to maintain a viable, healthy, and self-sustaining population, as close to peak levels as possible, in perpetuity. To reduce disturbance to concentrations of bald eagles, selected areas have been closed during the period that these concentrations exist. Riverside Viewing Area was established to limit conflicts with eagles and to provide interpretive information. Riverside Campground and Eagle Bay Drive are closed from October 15 to December 15, with the closure extending to December 31 if the eagle count remains above 50 individual eagles. Restrictions on the use of the river are also in place. Eagle numbers in this area have recently fallen in response to a decline in kokanee salmon stocks. The land closures will be lifted when the eagles are not concentrated in the area, and eagles numbers will be monitored to determine if seasonal concentrations again occur. In this case, access will again be restricted to allow the migratory populations to feed undisturbed on the salmon runs. Figure V-12 shows bald eagle closure areas.

MFWP has been planting kokanee salmon in Hauser Reservoir in hopes of restoring its population.

Ferruginous hawks are a State of Montana species of special concern. They inhabit both sides of Canyon Ferry Reservoir.

Environmental Consequences

It is assumed, for the environmental analysis portion of this report, that recreational use at Canyon Ferry will increase, regardless of which alternative is chosen. Impacts to the affected (existing) environment are discussed from a programmatic standpoint because exact construction activities are not known at this time. All that is known is that a particular activity might occur.

Fish.—Fisheries resources within Canyon Ferry are managed by the State of Montana. Fisheries management changes, other than those recommended by the State in its recently released *Montana Warmwater Fisheries Management Plan, 1997-2007*, were not addressed in this RMP.

Alternative A.—Alternative A would have no impact on the fisheries within Canyon Ferry Reservoir. Although this alternative does not include new boat ramps or upgrades to existing boat ramps, increases in fishing pressure are expected. The State's management plans through the year 2007 account for potential increases in fishing pressure.

Alternative B.—Implementing this alternative would lead to increased fishing pressure. The installation of new boat ramps would disperse existing and future use over a larger area. Fisheries enhancement projects, if undertaken, would have a positive effect.

Alternative C.—Same as Alternative B, except for potential off-reservoir development, which would be addressed in separate National Environmental Policy Act (NEPA) documents when locations are known.

Wildlife.—Any of the three alternatives would affect primarily grassland and upland shrub areas. Thus, species such as antelope and deer that use this habitat would be affected most. Waterfowl, shorebirds, and other wildlife that use wetland and riparian areas would be affected least. Cooperative efforts with a local Pheasants Forever chapter would continue under all the alternatives. These efforts will benefit pheasant and songbird populations over the long term.

None of the alternatives would affect either federally listed threatened or endangered species. This is a programmatic document, and specific actions are not known at this time. When specific actions are planned and designed, site-specific NEPA compliance will be accomplished. Compliance will include the Endangered Species Act, Migratory Bird Treaty Act, and other acts and Executive orders, as applicable.

Alternative A.—Except for the Silos area, this alternative proposes no new construction around the reservoir. This alternative has both positive and negative impacts. Impacts associated with construction of new campgrounds would be less than those associated with the preferred alternative, but, on the other hand, this alternative does not provide for any increase in levels of use. When the level of recreational use exceeds the carrying capacity of recreation facilities, use will overlap into adjacent areas. This will negatively affect upland areas and associated wildlife. In addition, this alternative does not address erosion control and ORV use, which will continue to affect wildlife through loss of habitat.

Canyon Ferry Reservoir
Bald Eagle Land Closure

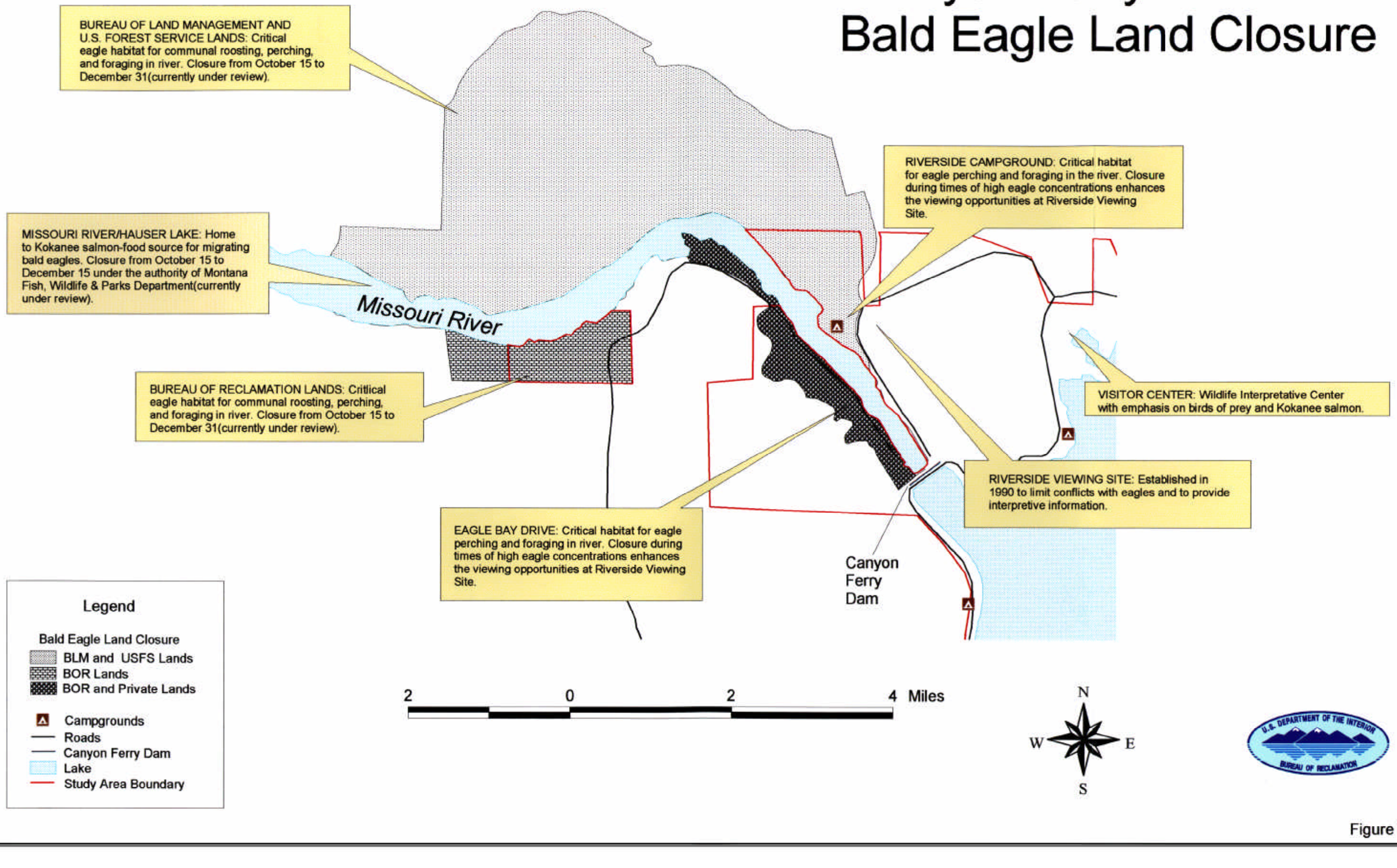


Figure V-12

Alternative B.—Overall, the effects of this alternative would be positive from a wildlife perspective. This alternative would reduce habitat by a very small amount. The loss of habitat is associated with the day-use and overnight camping area to be constructed at Silos, the area affected by construction of trails, moderate campground expansion at White Earth, development of campgrounds and day-use areas at Confederate Bay, and the installation of a boat ramp. The Silos area is already being used by recreationists, so the net loss of habitat to wildlife would be negligible. The trails and boat ramps can be constructed to minimize habitat damage. Overall, an ORV policy and an erosion-control program would have positive effects on vegetation and, thus, wildlife habitat in general.

Maintaining the closure of Eagle Bay Drive during the fall migration will ensure that the eagles will continue to feed and perch in the areas adjacent to the road.

This alternative includes identifying opportunities for wildlife enhancement.

Alternative C.—The effects of this proposal would be similar to those addressed in Alternative B.

Cumulative Impacts

Fish.—There would be no cumulative impacts to the fisheries over the long term.

Wildlife.—As stated earlier, it is assumed that recreation use at Canyon Ferry will increase in the future regardless of which alternative is selected. Wildlife may be negatively impacted, not only as a result of direct loss of habitat (facility construction, trails, etc.), but increased human presence may tend to push certain wildlife to the foothills and mountains outside the management area.

Mitigation

This RMP/EA is not intended to cover site-specific impacts. Once specific plans are known, additional NEPA compliance will be completed. At that time, specific mitigation will be developed.

RECREATION

Affected Environment

Reclamation has jurisdiction over and manages, among other things, public recreation on land and water within the study area, pursuant to Public Law (P.L.) 105-277. At elevation

3797 feet, the area within the take-line[8] consists of 33,500 water surface acres and 9,360 land acres. This area is available for recreation use. Of the 9,360 land acres, 1,000 acres have been developed for public use, and 141 acres have been reserved for cabin lease lots. The remaining acres are undeveloped and used for unconfined and dispersed recreation such as hunting and hiking. Canyon Ferry Reservoir is approximately 19 miles long and has a shoreline of 96 miles. The MFWP, which manages the WMAs in the southern part of the reservoir, is responsible for recreation management within the WMAs.

According to a 1999 travel fact sheet prepared by the University of Montana (http://www://forestry.umt.edu), the State of Montana hosted 9.4 million out-of-State visitors. This was up 2 percent from 1998. A 1998 report published by the University of Montana entitled, *Nonresident Summer Travelers to Montana: Tourism Region Report*, stated that 49 percent of the nonresident travelers visited the Gold West Country Region concurrently with other regions within the State. Canyon Ferry Reservoir and the surrounding area is within the Gold West Country Region.

The reservoir area offers both residents and nonresidents a wide variety of recreation facilities and opportunities. There are a total of 13 designated campgrounds and 12 designated day-use areas located primarily in the northern end of the reservoir. Table V-4 shows the designated public use recreation areas managed by Reclamation and the facilities and services available within each developed area. The facilities managed and paid for by private concessionaires are not included in table V-4. A list of facilities, goods, and services provided by concessions is documented later in this section. Figure V-13 shows developed recreation areas at Canyon Ferry Reservoir. There are a total of 233 campsites at the 13 designated campgrounds. There are a total of 133 day-use sites at the 12 designated day-use areas.

Canyon Ferry Reservoir is the largest of a series of three reservoirs located on the Missouri River in the vicinity of Helena, Montana. The other two reservoirs, Holter and Hauser, are both located downstream from Canyon Ferry Dam. Depending on local reservoir conditions (e.g., reservoir elevation and crowding), recreationists travel to either of these reservoirs to find the best environment for their recreation activities. Although the water-based recreation opportunities at each reservoir are similar, Canyon Ferry Reservoir offers substantially more public recreation facilities than either Hauser or Holter. Canyon Ferry has adequate recreational access to its shoreline, while Hauser and Holter have limited public access.

According to a 1999 Statewide boater survey conducted by MFWP, the Canyon Ferry/Hauser/Holter series of reservoirs, as well as Flathead and Fort Peck Reservoirs, receive the

[8] Take-line refers to the lands immediately adjacent to and under Canyon Ferry Reservoir that the Federal Government acquired for the Canyon Ferry Unit of the Pick-Sloan Missouri Basin Program.

Table V-4.—Existing recreation facilities

Facilities	White Earth	Silos	Riverside	Jo Bonner	Indian Road	Hellgate	Goose Bay	Fish Hawk	Court Sheriff	Cottonwood	Confederate	Chinamen's	**Campgrounds**	Shannon	Sandy Beach	Overlook	Orchard	Mahogany Cove[1]	Lorelei	Lewis and Clark	Crittendon[2]	Chalet	Cemetery Island[1]	Cave Bay	**Day-use areas**	Total
Campgrounds																										
Marked campsites		52	38			72			42			45														249
Unmarked campsites	38	11		28	32	27	43	5		8	16							3								211
Shelters		2	3			8																				13
Picnic tables	36	68	36	28	21	94	9		44	1		45						2								384
Fire rings/grills	47	63	25	29	18	96		1	42			45														366
Picnic sites																										
Picnic sites			1			10		5	2					8	3	14	7		6	10	15	1		3		85
Group picnic sites		1				2																1				4
Picnic shelters																2				2						4
Picnic tables		5	3			18			1							2	7		5	5		6	3	3		58
Fire rings/grills		2				7													2	2		3		1		17
Solid waste																										
Garbage cans		10		9	4	7								2								4				36
Dumpsters	2	3	2			5			2			3										1				18
Sewage and water																										
Flush toilets						1																				1
Vault toilets	4	8	6	2	2	13	2	1	6	2	2	5		2	1	2	1	1	1	2	1	2	1	1		68
Water – hand pumps		1																								1
Water – spigots	3	5	3	1		4			5			3														24
Sanitary dump stations[3]																										0
Boating/swimming																										
Boat docks	1	2	1	1		2						1		1												9
Surfaced boat ramps	1	3	1			2								1												8
Dirt surface boat ramps		1		1			1		1			1														5
Designated beaches				1		1			1			1					1		1	1						7
Undesignated beaches	3	4	1			3	5				2			1	1			1		1	2	1	2	1		28
Handicapped																										
Boat ramps			1																							1
Fishing platforms			1		1																					2
Walkways		2	1		1									1												5
Toilets	4	7	2	2	2	7	2		4		2	4		2						2						40
Parking spaces		2												1												3

[1] Denotes boat access only.
[2] Most facilities at Crittendon were burned in the Buck Snort fire.
[3] Dump stations are provided by private concessions at Kim's and Goose Bay Marinas.

heaviest boating use in the State. Canyon Ferry Reservoir is in MFWP Region 3, which encompasses the southwestern portion of the State. This region receives 21 percent of the total motorized boating use in the State.

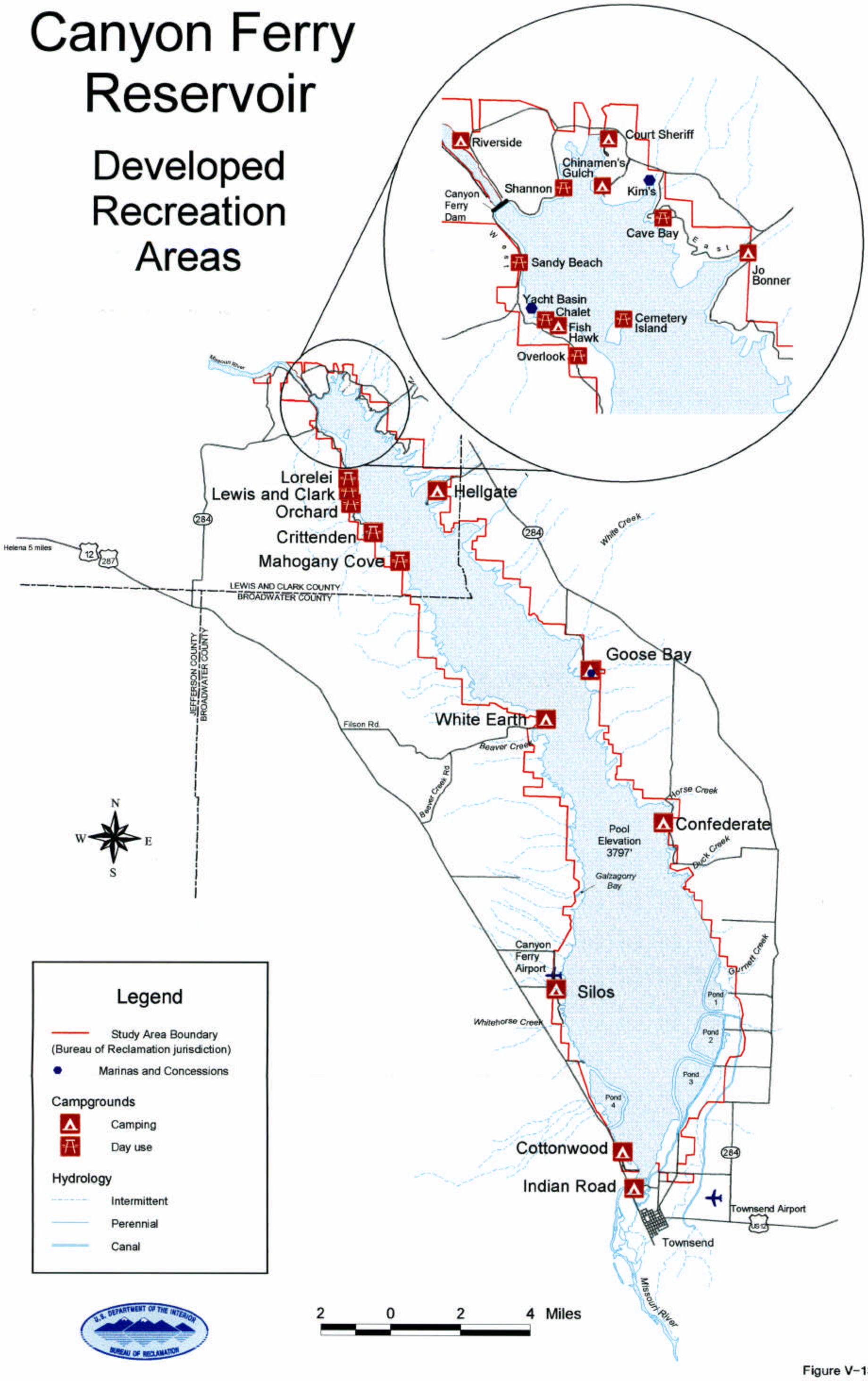
The reservoir has three commercial concession operations that provide a variety of services to the public. Figure V-13 shows locations of concession operations. The three concessions are Yacht Basin Marina, located in the northwestern portion of the reservoir; Kim's Marina, located in the northeastern portion of the reservoir, near Cave Bay; and Goose Bay Marina, located between the north and south ends of the reservoir on the eastern shore. The concessionaires offer a wide variety of services, including boat and motor rentals; mooring spaces; boat and trailer storage; boat launch ramps; public marina and docking; fueling; public campgrounds for RV, tent, and trailer camping; sales and rental of outdoor sporting equipment; and food service. A list of improvements made to the respective concession operations is included as appendix F. Reclamation has oversight responsibility to ensure that the terms and conditions of the concession permits are adhered to and that the concessions are operated pursuant to Reclamation's *Concessions Policy, Directives and Standards*. Reclamation will develop a Commercial Services Plan (CSP) for Canyon Ferry Reservoir. The CSP will assist Reclamation in preparing bid packages for the issuance of new concession operations upon expiration of existing concession contracts.

The Coast Guard Auxiliary (CGAUX) routinely patrols Canyon Ferry Reservoir from Memorial Day through Labor Day, although search and rescue activities may be authorized outside this time period. During the summer recreation season of 2000, the CGAUX conducted 33 patrols, resulting in 23 assists. These assists included towing disabled boats, righting sail boats, searching for a lost personal watercraft (PWC) operator at night, and assisting country, State, and Federal agencies during the fires of 2000. This experience gives the CGAUX valuable insight concerning boating use on the reservoir and associated safety concerns. The CGAUX has installed a VHF radio base station at Yacht Basin Marina. This provides coverage from Yacht Basin to Silos Recreation Area. However, many boats do not have radios; therefore, this system is not completely effective. See appendix G for a list of initiatives which the CGAUX has implemented or participated in to support boating safety at Canyon Ferry Reservoir.

To assist in determining the overall affected recreation environment (existing baseline condition), it is important to understand what the public perceives the existing environment to be. Based on the public information collected during the planning and NEPA process, the public identified certain issues and concerns which can be considered their perceptions of the present conditions at Canyon Ferry Reservoir. The public believes that the reservoir lacks a sufficient number of quality recreation facilities and opportunities and that the existing facilities are in need of repair. In addition, some of the existing facilities need to be redesigned because the buffer area between individual day-use and campground sites is not adequate to avoid the sights and sounds of others using the area. Some user conflicts were identified by the public.

Canyon Ferry Reservoir

Developed Recreation Areas



Legend

- Study Area Boundary (Bureau of Reclamation jurisdiction)
- Marinas and Concessions

Campgrounds

- Camping
- Day use

Hydrology

- Intermittent
- Perennial
- Canal

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Figure V-13

The public expressed a concern that there were not enough no wake zones to reduce user conflicts at swim beaches, developed day-use and campground areas, boat launch ramps, and fishing bays. The public is concerned that there are not enough improved, adequately maintained, and signed access roads to the various developed areas, especially to the southern part of the reservoir. The public is concerned about the safety of boaters on the reservoir during inclement weather.

The normal summer recreation season typically runs from Memorial Day to Labor Day. The heaviest recreation use occurs on these holiday weekends, the Fourth of July weekend, and other weekends throughout the summer. Several factors may influence the visitation at the reservoir and include, but are not limited to, water surface elevations, viewing watchable wildlife, fees, fishing opportunities, conflicts and crowding, construction activities, economy, and weather conditions. Visitation numbers that have been collected for Canyon Ferry Reservoir have been inconsistent and incomplete. Visitation at the 12 nonfee day-use areas located around the reservoir usually has not been counted. In addition, the historic visitor counts have not included winter visitation (i.e., ice fishing and other winter-related activities). Appendix E contains several bar graphs that depict annual visitation at seven of the campground areas at Canyon Ferry Reservoir over a 7-year period; a summary graph depicting annual visitation at campground and group-use areas over a 7-year period; a bar graph depicting fees collected and expenditures related to recreation; and supporting data, which was used to create the bar graphs.

MFWP estimates that there was a total of 94,510 angler visitor days to Canyon Ferry Reservoir in 1997 (last reporting year). This figure includes only licensed anglers and does not include anglers below 12 years of age because licenses are not required for this age group. Visitor use estimates are calculated only from licensed anglers. An angler day is considered to be one visit by one angler per day at a specific location for the specific purpose of fishing (i.e., it does not matter if a person stays for 1 hour or 18 hours, it still would be counted as one angler day). Of the 94,510 visitors reported in 1997, 89,247 were residents of Montana, and 5,263 were nonresidents. Of the total, 39,036 angler days were attributed to winter fishing. Of the 39,036 winter visitors, 38,830 were residents, and 206 were nonresidents.

In a 1998 Recreation Economics Analysis prepared by Reclamation, it was estimated that the visitation at Canyon Ferry Reservoir was 220,000 visitors annually. Since the figure does not include winter fishing visitation, Reclamation has added 39,036 angler days to the 220,000 estimated visitation to arrive at a total of 259,036 visitors. Therefore, baseline annual visitation for this RMP/EA is estimated to be 259,000 (rounded to the nearest thousand) for all activities.

According to a 1999 Canyon Ferry Recreation Study conducted by the University of Montana's Institute for Tourism and Recreation Research during the 1999 summer recreation season, the most popular activities of the 774 people interviewed at Canyon Ferry Reservoir were

swimming, sunbathing, picnicking, walking, hiking, boat fishing, bank fishing, photography, wildlife observation, power boating, jet skiing, camping (RV/automobile and tent), tubing, and water skiing. The public also participates in hunting, sailboarding, canoeing/kayaking, sailing, studying nature, horseback riding, biking, using ORVs, and visiting historic sites. Even though sailing is a popular activity in the northern part of the reservoir, the 1999 recreation study did not specifically identify sailing in its report. Sailing was not identified because the university limited its survey to visitors to 19 of the 25 day-use or campground areas. Sailors primarily moor their sailboats at either Yacht Basin or Kim's Marina; therefore, they were not counted. Table V-5 shows the 15 most popular recreation activities, average participation levels for all sites combined, and the recreation areas where the specific activity is the most popular.

Table V-5.—Activities, average participation levels at all sites combined, and area where the activity is the most popular

Activity	Average participation level (%)	Most popular area	Use at most popular area (%)
Swimming	52.11	All day-use areas	
Auto/RV camping	47.72	Hellgate	71.0
Sunbathing	43.21	All day-use areas	
Boat fishing	40.08	Goose Bay	74.0
Sightseeing	36.84	Kim's Marina	64.7
Picnicking	35.70	Confederate Bay	50.0
Walking	33.80	Chinamen's Gulch	45.3
Power boating	32.74	Kim's Marina	62.7
Bank fishing	26.69	Confederate Bay	58.3
Wildlife viewing	26.38	Chinamen's Gulch	35.8
Tubing	22.40	Hellgate	31.0
Photography	21.97	Court Sheriff	28.8
Water skiing	21.13	Kim's Marina	37.3
Tent camping	19.60	Hellgate	36.0
Jet skiing	11.51	Hellgate	17.0

Source: University of Montana, Institute for Tourism and Recreation Research, 1999.

Although certain activities are more popular at day-use areas than at campground areas (e.g., swimming and sunbathing), the table reflects the average participation levels at both 100 percent because of the multiple responses of individuals (i.e., someone who was swimming at a site may also have been sunbathing, walking, camping, sightseeing, etc.). It is assumed that the participation levels for each of the activities at the other six recreation areas are essentially the same.

As stated above, the participation level percentages represent multiple activity responses from each individual visiting the reservoir. The 1999 study did not distribute the total visitation by activity. The *1998 Canyon Ferry Recreation Economics Analysis Report*, prepared by Reclamation, used a 1986 Montana on-site survey to show activity percentage shares. The assumption has been made that the percentage shares have not changed over time. Table V-6 shows the percentage shares for several of the activities shown in table V-5.

Table V-6.—Percentages of recreation activities at Canyon Ferry Reservoir (1986)

Recreation activities	Percentage share
Fishing	13.2
Camping	10.7
Relaxing (other)	11.1
Power boating	9.1
Picnicking	8.1
Swimming	6.9
Sunbathing	6.3
Scenic viewing	5.8
Walking/hiking	5.3
Water skiing	4.8
Photography	2.3
Visit historic sites	1.5
Other activities	14.9
	100.0

Source: Reclamation Recreation Economics Analysis, 1998.

The 1999 study involved the collection of data from recreationists who visited 1 of the 19 day-use or designated campgrounds at the reservoir. Only 19 of the 25 recreation areas were surveyed. Among other things, the study objectives were to determine:

- **R** Sociodemographic characteristics of on-site users
- **R** On-site activity participation levels
- **R** Satisfaction with existing facilities and identification of needed facilities

- **R** Potential and existing conflicts

- **R** Estimates of current use levels at the 19 recreation areas surveyed

More importantly, the results of the 1999 study were compared to a similar study completed by the University of Montana in 1995. Both studies revealed the areas where the site attributes[9] were high, but the satisfaction levels were low. Studies of this nature allow managers to focus on correcting identified problems at those areas that visitors feel have enough attributes for them to make return visits. Once problems are corrected, visitor satisfaction for the area increases. The 1999 study revealed that the visitors were more satisfied with the sites they visited in 1999 than those same sites when visited in 1995.

There are a total of 18 developed or unimproved boat ramps located at the reservoir. The usability of the boat ramps throughout the recreation season has to do with the elevation of the reservoir, the types of boats being launched from trailers, wind and wave action, topography, and soil composition below the toe of the ramp. Taking into consideration the factors just mentioned, the usability of the boat ramps will decrease as the elevation of the lake falls below a level that is 3 feet[10] above the end of the ramp. An elevation that is 3 feet above the end of the ramp is considered the minimum depth needed to safely launch watercraft from trailers. Below that elevation, boaters increasingly have a harder time launching their boats. The historic average lake elevation on Memorial Day is 3787.17 feet; Fourth of July, 3793.68 feet; and Labor Day, 3788.51 feet. Table V-7 shows several boat ramp elevations. By referencing the following table, it can be seen that the listed boat ramps are usable throughout the summer recreation season when compared to the historical reservoir elevations. However, during dry water years, these ramps may become unusable as water is released downstream for other purposes sometime during the season. The degree to which the usability of the boat ramps is affected depends on how severe the water shortages are. In addition, in April and May, which is before the normal recreation season, the boat ramps may be unusable because of the early spring drawdown of the reservoir for flood control purposes. The proposed Broadwater Bay Deepening Project construction at the Silos Recreation Area will provide boating access to the reservoir when the water elevation is at 3779 feet. This will provide boating access 90 percent of the time.

The lands within the study area are closed to ORV use, pursuant to 43 Code of Federal Regulations (CFR), Part 420. According to regulations, all Reclamation lands are closed to ORV use unless otherwise designated open. No formal process has ever been initiated for legally opening Canyon Ferry Reservoir lands for use by ORVs; therefore, all lands are closed. Visitors are illegally using ORVs and ATVs on reservoir lands, especially along the eastern shore from Confederate Bay north to Canyon Ferry Dam, as well as along the western shore north of Silos

[9] For the purposes of this document, an attribute can be defined as a site condition that users feel is important to have a quality recreation experience (e.g., shower/restroom, scenery, solitude, and boat ramp).

[10] *Recreation Facility Design Guidelines*, U.S. Department of the Interior, Bureau of Reclamation, September 2002.

Table V-7.—Canyon Ferry concrete boat ramp elevations

Location	End of concrete	Usable elevation
Yacht Basin Marina	3776	3779
White Earth Recreation Area	3776	3779
Kim's Marina ramp	3776	3779
Silos, north ramp	3778	3781
Shannon Recreation Area	3782	3785
Goose Bay Marina	3781	3784
Silos, south ramp	3781	3784
Kim's Marina docks (water just entering bay at 3776)	3776	3779
Hellgate Recreation Area	3784	3787

Source: Bureau of Reclamation, MTAO.

Recreation Area. There is a significant concentration of ATV use near Hellgate Recreation Area. Figure V-14 shows locations where illegal ORV and ATV use is occurring. Uncontrolled ORV and ATV use is causing severe soil erosion and undue damage to vegetation, heritage resources, wildlife, and wildlife habitat. ORV and ATV use can also indirectly affect the water quality of the reservoir and may cause user conflicts between ORV and ATV users and other recreation visitors.

As stated earlier, the public has identified user conflicts associated with the use of the reservoir by PWCs. Traditional boaters using the reservoir for sailing, fishing, canoeing, etc., have voiced concerns about the noise and safety problems created by PWC users. In addition, camping and day-use visitors have complained about PWCs coming too close to swim beaches, boat ramps, and camping and day-use sites, and PWC users not respecting quiet hours. In addition to the conflicts between PWC users and other users, PWCs may negatively impact wildlife populations by affecting their nesting success. PWC users at Canyon Ferry adamantly defend their sport and wish to work with legislators, law enforcement agencies, and managing entities to find solutions to these identified or perceived problems. They state that more rules, regulations, and law enforcement could help significantly to control the PWC users that give the sport a bad name. In addition, the PWC industry is currently becoming more active in promoting safety and educating the public about their products.

Environmental Consequences

Alternative A.—Under the No Action Alternative, Reclamation would continue to manage facilities and public activities in accordance with its ability and authority. In the event Reclamation receives additional law enforcement authorities, or authority to impose and enforce additional rules and regulations or policies, Reclamation will do so as necessary and

appropriate. Except for the proposed recreation development at Silos Recreation Area, no new recreation facilities are expected to be developed within the study area, and future demand would not be met.

Existing management practices would allow dispersed and uncontrolled recreation use to continue. Only minimum basic visitor health and safety services would be provided. Conflicts among the various user groups would continue. As visitation increases naturally over time, and existing facilities reach their capacity limits, the quality of the recreation experience for most users will decline.

Kim's, Yacht Basin, and Goose Bay Marinas will continue to offer commercial services into the future. Upon expiration of the three existing concession contracts, issuance of new contracts will be based on Reclamation policy. Except for the possibility of developing a concession operation at Silos, commercial services to the public will probably not change. The visitor experience may gradually deteriorate as increasing numbers of visitors compete for the same use areas, especially in the northern portion of the reservoir. The southern and southwestern portions of the reservoir would continue to be underused; however, if it is determined that a small-scale commercial development is feasible at the Silos Recreation Area, services to the public would be enhanced from that development. Since a commercial operation at Silos will not be constructed if it negatively impacts existing concessionaires or other commercial operations in the immediate vicinity, there should be no financial impact to existing commercial operators.

Maintenance costs associated with a potential marina operation at Silos may be high because of high winds and other environmental factors, such as ice jams. Maintenance costs associated with construction of a deep water bay at Silos may increase over time because of the probability of silting. Siltation is caused by waves eroding the points of land on either side of Broadwater Bay. The waves may take material from the points of land and deposit it in the mouth of the bay. This can be controlled by protecting the points of land by various methods, including but not limited to, riprap, gabions, or slope modification. This erosion is now occurring at some of the bays on the reservoir, but the amount of siltation depends on how protected the shoreline is from wave action and the material composition of the shoreline.

Alternative B.—A moderate increase in the number of recreation opportunities and facilities could be provided under this alternative as compared to no new developments and opportunities described in Alternative A. Restrictions on the types of activities allowed within the study area would be imposed, and the areas where authorized activities could take place would be identified.

Implementing a comprehensive planning strategy, such as closing certain roads and fencing the exterior boundary of the reservoir, would prevent uncontrolled vehicle access and some dispersed recreation use. Those individuals who desire this type of unconfined and

Canyon Ferry Reservoir

Unauthorized Vehicle Use of Reclamation Lands

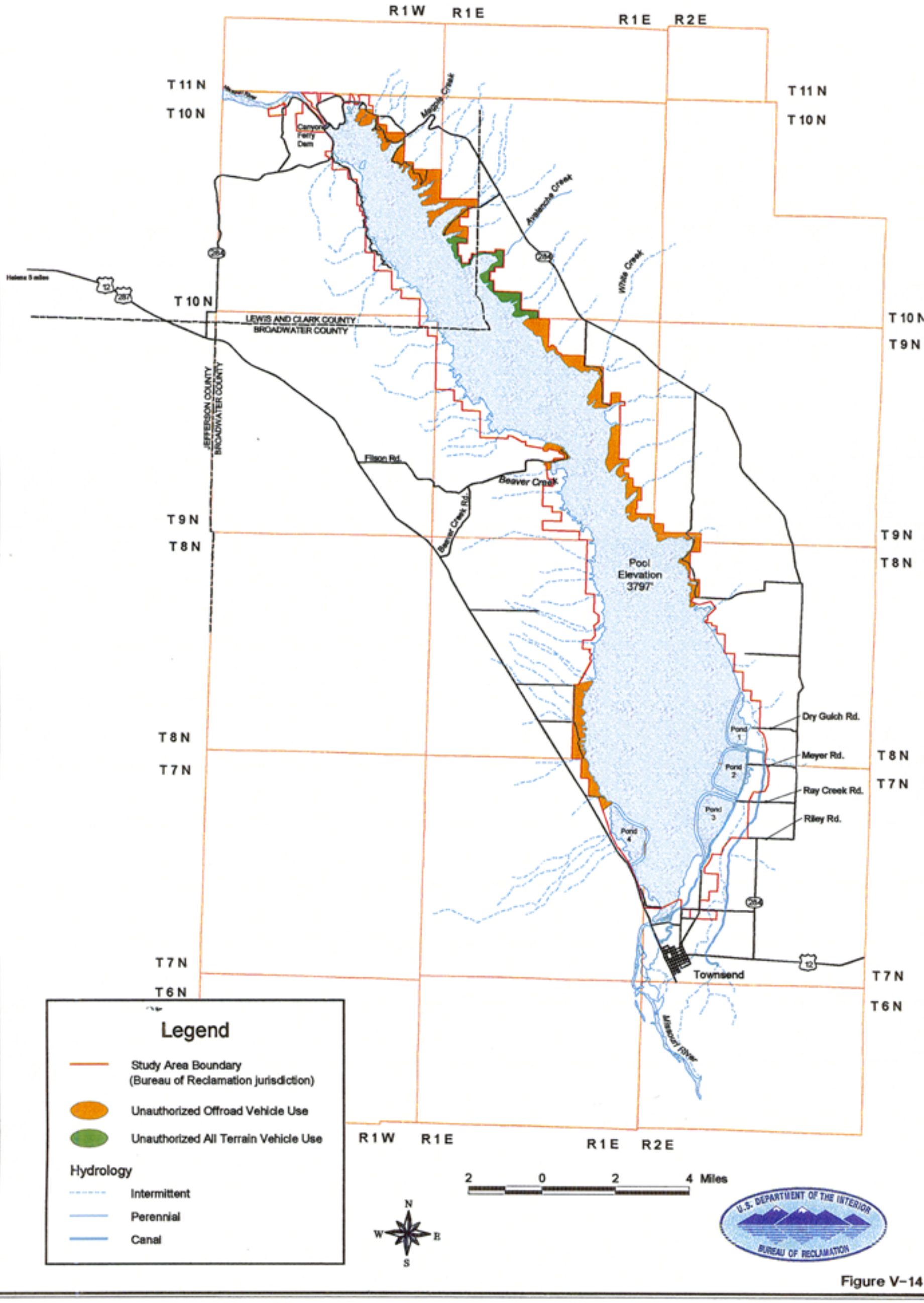


Figure V-14

unregulated experience would be displaced to areas where those opportunities are available outside the study area or to other areas within the reservoir area that can be accessed by vehicles on roads that remain open.

Redesigning and upgrading existing recreation areas, constructing new facilities, developing trails, interpretation of the natural environment, and fish and wildlife enhancement efforts would increase the recreational opportunities available to the public. Providing additional facilities and opportunities would help alleviate the feeling of overcrowding that may occur in the future as the social, physical, environmental, and facility carrying capacity levels are reached or exceeded. Providing an adequate number of new facilities and opportunities will have a positive effect on the quality of the visitor experience.

By providing signs, sanitary facilities, and campground and day-use security, and by controlling access, the health and safety of visitors will be protected. By controlling the various recreation uses, user conflicts will decrease.

Construction of trails and other developments may displace hunters to other areas; however, closing areas to ORV and ATV use, closing certain roads, and controlling visitation use would probably offset any negative impacts to hunters.

Because of the increase in the number and types of recreation facilities and opportunities, visitor use and satisfaction would probably increase. However, as visitor use increases, the number of visitors experiencing a feeling of overcrowding may increase, especially among historic users of the reservoir. Dispersing user groups to the various recreation sites within the reservoir area may minimize the feeling of overcrowding. In addition to dispersing users, the vast land and water areas within the study area will accommodate increased visitor use without creating a feeling of overcrowding for most visitors.

Closing Canyon Ferry Reservoir to ORV and ATV use would decrease user conflicts between those users and other recreationists. ORV and ATV users would be restricted to designated access roads or displaced to areas outside the study area that legally allow those uses to occur.

Providing no wake zones near campgrounds, boat ramps, fishing bays, day-use areas, swimming areas, and environmentally sensitive areas would deter PWC and other watercraft from speeding in these areas. This would reduce user conflicts and displace certain watercraft users from these areas to other areas on the reservoir and to water bodies outside the study area.

A new concession operation may be established at Silos Recreation Area based on the feasibility of constructing facilities that may be needed to meet a certain level of public demand. Since a commercial operation at Silos will not be allowed if it negatively impacts existing concessionaires or other commercial operations in the immediate vicinity, there should be no financial impacts to existing commercial operators. Construction of a deep water bay at Silos would provide additional opportunities for the public and a safe harbor for boats. Maintenance costs

associated with a marina operation at Silos may be high because of high winds and other environmental factors, such as ice jams. Maintenance costs associated with construction of a deep water bay at Silos may increase over time because of the high probability of silting.

Kim's, Yacht Basin, and Goose Bay Marinas will continue to offer commercial services into the future. Upon expiration of the three existing concession contracts, issuance of new contracts will be based on Reclamation policy that includes a competitive bid process. Except for the possibility of developing a concession operation at Silos, commercial services to the public will probably not change. Increased recreation opportunities and facilities should increase visitation over time and enhance the opportunity for a concessionaire to make a profit.

Interpretive and educational information would be made available to the public; therefore, the public would have a safer and more enjoyable recreation experience.

If fees are charged, they would be comparable to fees charged at other areas offering the same amenities. Some individuals who do not desire to pay fees for use of facilities will be displaced to other nonfee areas.

Because the toilets cannot be pumped at this time, upgrading existing facilities and providing additional recreation opportunities on Cemetery Island will indirectly increase the sewage problem associated with public use of the two restrooms.

Alternative C.—A maximum number of recreation facilities and opportunities would be provided under this alternative as compared to the number of facilities and opportunities described in Alternatives A and B. Impacts expected under this alternative are similar to those for Alternative B, except for the possible increased impacts directly related to the construction of additional campgrounds, day-use sites, trails, and the Silos concession.

By maximizing recreation facility development and providing increased recreational opportunities, carrying capacity limits may be exceeded and reach the point that user conflicts increase. The quality of the recreation experience may, therefore, decrease for some users. As visitor use increases, the health and safety of visitors may be compromised by overcrowding, competition for available space, and overuse and abuse of existing facilities.

However, environmental resources protection and public health would improve with the installation of fish cleaning and sewage effluent pump-out stations throughout the reservoir area.

Some users who desire a more unconfined and uncontrolled recreation experience may be displaced to other areas outside the study area, but the loss of those users will be offset by increases in visitors attracted to increased opportunities and facilities.

By providing signs, sanitary facilities, and campground and day-use security and controlling access, the health and safety of visitors will be protected. By controlling the various recreation uses, user conflicts will decrease.

Closing Canyon Ferry Reservoir to ORV and ATV use would decrease user conflicts between those users and other recreationists. ORV and ATV users would be restricted to designated access roads or displaced to other areas outside the study area.

Providing no wake zones near campgrounds, boat ramps, fishing bays, day-use areas, swimming areas, and environmentally sensitive areas would deter PWC and other watercraft from speeding in these areas. This would reduce user conflicts and displace certain watercraft users from these areas to other areas on the reservoir or other water bodies outside the study area.

Kim's, Yacht Basin, and Goose Bay Marinas will continue to offer commercial services into the future. Upon expiration of the three existing concession contracts, issuance of new contracts will be based on Reclamation policy that includes a competitive bid process. Except for the possibility of developing a concession operation at Silos, commercial services to the public will probably not change. Increased recreation opportunities and facilities should increase visitation over time and enhance the opportunity for a concessionaire to make a profit.

Interpretive and educational information would be readily available; therefore, the public would have a more enjoyable recreation experience.

The fees charged would be comparable to fees charged at other areas offering the same amenities. Some individuals who do not desire to pay fees for the use of facilities will be displaced to other nonfee areas.

Closure of certain areas to protect the safety of other users will displace hunters to areas outside the study area.

Cumulative Impacts

The cumulative impacts of controlling unauthorized uses and restricting public access to designated areas might be the displacement of users who desire an unconfined and uncontrolled recreation experience. Therefore, visitation at recreation areas other than Canyon Ferry may increase. Visitor use is likely to increase at Canyon Ferry Reservoir, which would possibly increase visitor conflicts and resource damage if use is not controlled and monitored.

Mitigation

No mitigation is needed for closing ORV roads and ATV areas, controlling unconfined and uncontrolled recreation use, dispersing recreation use, and enhancing recreation opportunities.

Recreation facility development would complement the surrounding landscape, as much as practical, and would follow strict design and construction criteria, guidelines, and standards. Carrying capacity limits and user demand would be properly determined before major facility development occurs. Proper regulatory and informational signage would be posted throughout the area, informing the public of the rules and regulations governing the use of the federally owned lands surrounding Canyon Ferry Reservoir.

Seasonal closures of newly constructed trails may have to be initiated if trail use is determined to have a negative effect on hunters or if conflicts between hunters and other users occurs.

VISUALS

Affected Environment

Canyon Ferry Reservoir appears remote and, for the most part, undeveloped. This is partially because it is visually separated from Helena by the Spokane Hills and because it is defined to the east and west by the grass- and tree-lined slopes of the Big Belt and Elkhorn Mountains.

As visitors descend to the shoreline roads from the north into Yacht Basin, they are greeted by Ponderosa Pine-studded hills. The hills vary in their height and shape. The reservoir stretches serenely from the foreground to the distant background.

Driving from Yacht Basin along the west shore, the viewer winds along a tree-lined road, catching occasional glimpses of the reservoir and hills on the east shore. From many of the recreation sites, the cabin sites and development along the north shore are visible. The views of development at Canyon Ferry are fairly unobtrusive partly because development is masked by topography and vegetation. Views from most of the west shore looking east are of low-lying hills against the backdrop of the Big Belt Mountains.

Traveling north and east from Yacht Basin, the first major physical interruption to the character of the area is the dam itself. Even from the dam, the surrounding hillsides are largely undisturbed. Between Canyon Ferry Village and Magpie Bay, the viewer is confronted with the most heavily developed area along the shoreline.

Continuing south along the east shoreline, the viewshed is relatively undeveloped, with a broad agricultural valley stretching south and the low-lying plains and Elkhorn Mountains rising in the west. The sharply incised cliffs at White Earth are visible from the east shore. In addition, second homes, cabin sites, and large lot developments, as well as burnt areas from the Buck Snort fire, are visible from the access roads, the water, and from some of the recreation sites located on the east side.

At the south end of the reservoir, the landscape closes in around the ponds and shoreline, focusing the viewer on the water and the wildlife's abundant activity during certain times of the year. Riparian vegetation, such as willows, dominates the foreground.

Continuing along the west shore, the Big Belt and Elkhorn Mountains can be viewed from the recreation sites. The foreground is prairie grassland. Between White Earth and the end of West Shore Drive, lands descending to the reservoir are undeveloped and inaccessible. Cabin sites, Yacht Basin Marina, as well as the burnt areas from the fire of 2000, are visible from both land and water along the northwest shore.

At the time of this study, visual concerns are most evident at individual recreation sites, where a lack of vegetative and topographic screening reduces privacy and/or the recreation experience. For instance, at Jo Bonner, the maintenance yard is on an unscreened hill in full view of the recreation site. At Goose Bay Marina, lack of vegetation and other visual screening around mobile homes and trailers reduces the visual attraction of the adjacent recreation site.

From the water, retaining walls serve to detract from the natural visual quality of the reservoir. The variety of construction techniques and assortment of materials used for retaining walls has resulted in a myriad of structures.

Environmental Consequences

Alternative A.—The visual quality of the landscape surrounding Canyon Ferry Reservoir would continue to decrease because of continued ORV and ATV use of the area and because of the lack of comprehensive development criteria that would include standards that protect the visual quality of the area. Rehabilitating the burnt areas by following the Buck Snort Fire Burned Area Rehabilitation Plan and EA (see chapter VI, "Land Use – Actions" section for fire rehabilitation goals and treatment projects) will return the affected areas to pre-2000 conditions, thereby increasing the visual quality. The visual landscape as a result of the fire will affect the visual quality over the short term, but may even improve over the long term as revegetation occurs (the mosaic visual pattern left by the fire may be more appealing to the eye than the continuous forest canopy). The timeframe needed to realize a significant recovery is dependent on "mother nature" and the treatment methods used.

Alternative B.—The visual quality of the landscape surrounding Canyon Ferry Reservoir would improve because illegal ORV and ATV use would be eliminated, and a comprehensive facilities development plan would be established that protects the visual resources. Revegetation of disturbed areas, such as ORV roads, and planting vegetation that provides buffer zones (visual screening) between individual camping and day-use sites would improve the visual quality of the area. Rehabilitating the burnt areas by following the Buck Snort Fire Burned Area Rehabilitation Plan and EA (see chapter VI, "Land Use – Actions" section for fire rehabilitation goals and treatment projects) will return the affected areas to pre-2000 conditions, thereby

increasing the visual quality. The visual landscape as a result of the fire will affect the visual quality over the short term, but may even improve over the long term as revegetation occurs (the mosaic visual pattern left by the fire may be more appealing to the eye than the continuous forest canopy). The timeframe needed to realize a significant recovery is dependent on "mother nature" and the treatment methods used.

Alternative C.—The impacts under this alternative would be similar to Alternative B, except visual quality, for some users, might decrease as the ability of some specific land areas to absorb development is exceeded. However, proper site planning, before development, may offset any potential adverse impacts that increased facility development could cause.

Cumulative Impacts

No cumulative impacts have been identified.

Mitigation

Recreation facility development would complement the surrounding landscape as much as is practical and would follow development criteria that would protect the visual quality of the reservoir area.

Reclamation plans to have all treatment actions for the fire management areas completed by the end of 2003.

LAND USE

Affected Environment

Current Land Use.—The land use study area includes all Reclamation lands and adjacent parcels that could significantly affect, or be affected by, public use. Figure V-15 shows land ownership patterns.

Although the ball fields and golf course located at the south end of the reservoir, near Townsend, are on Reclamation lands, they are considered autonomous and, as such, are not included in the study area. These lands are leased to the city of Townsend and do not influence Canyon Ferry management (Rick Blaskovich, Reclamation, personal communication, September 19, 2000).

Land within the study area is primarily used for public recreation and open space (figure V-16). The exceptions are:

Canyon Ferry Reservoir
Ownership

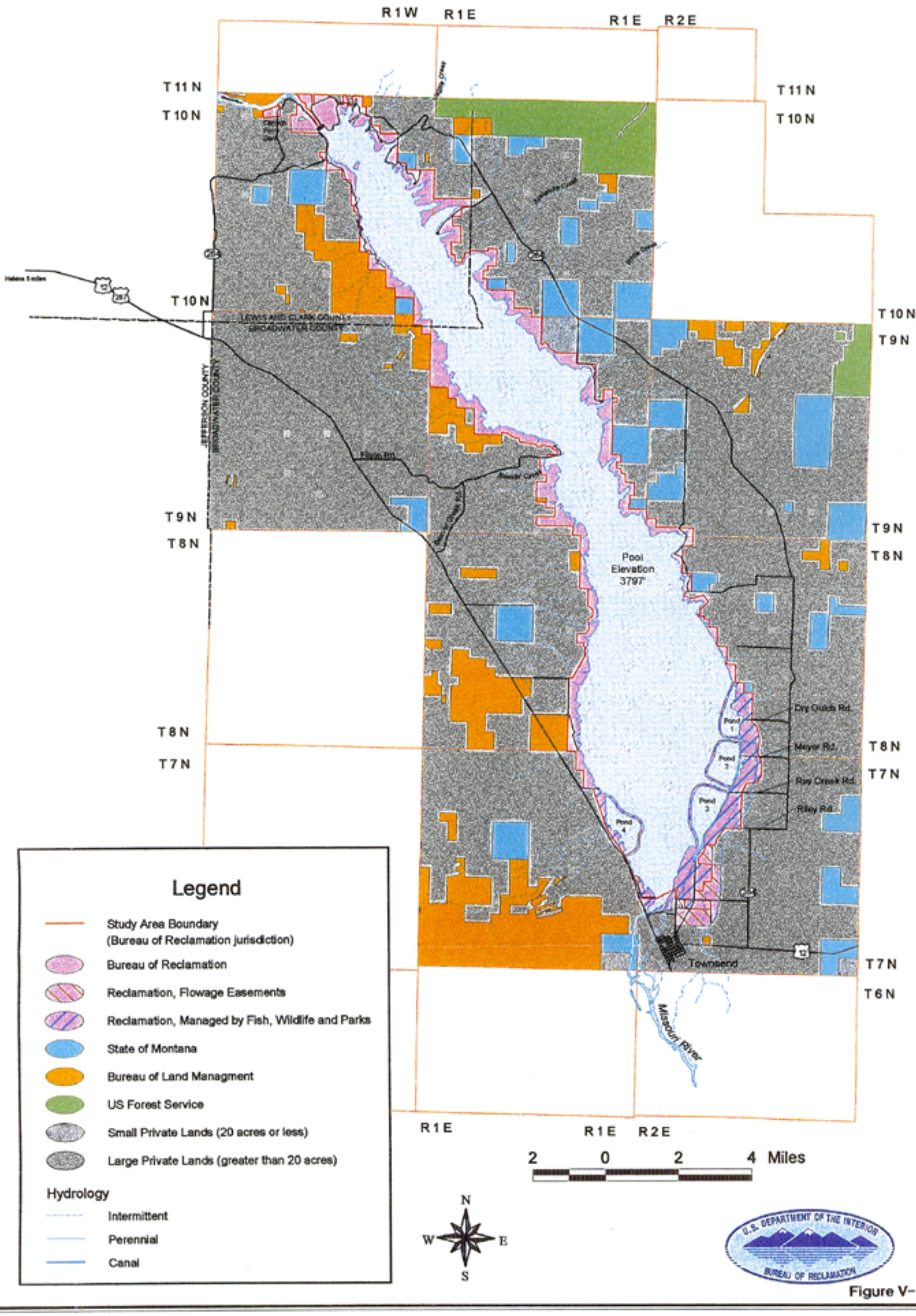
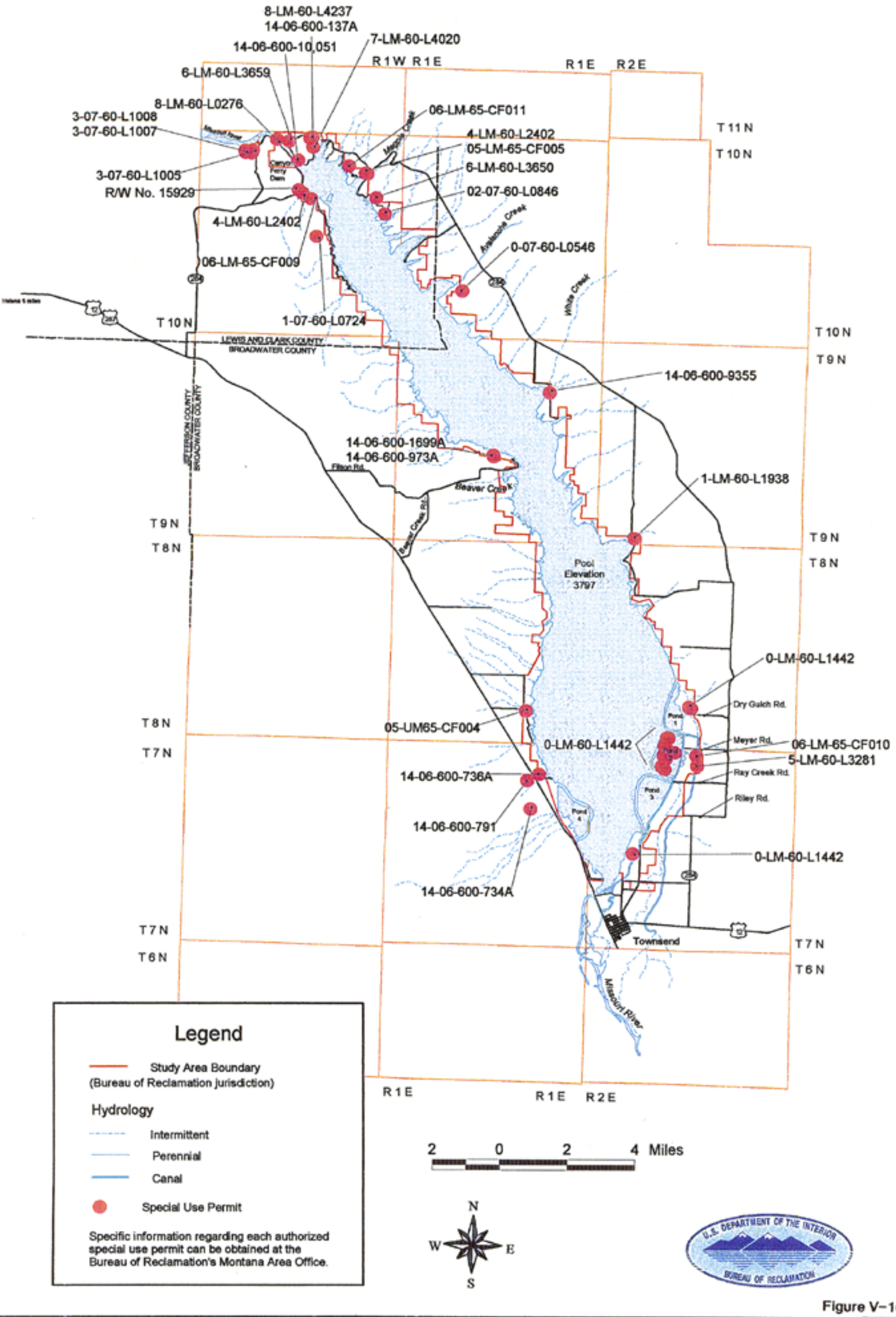


Figure V-15

Canyon Ferry Reservoir

Special Use Permits



Legend

Study Area Boundary
(Bureau of Reclamation jurisdiction)

Hydrology

- Intermittent
- Perennial
- Canal

Special Use Permit

Specific information regarding each authorized special use permit can be obtained at the Bureau of Reclamation's Montana Area Office.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

Figure V-16

- **R** Cabin lease sites
- **R** Dams and powerplants
- **R** Offices and residential buildings at Canyon Ferry Village
- **R** Incidental buildings associated with area management
- **R** Areas where special use permits have been authorized

Private lands adjacent to the study area support primarily residential uses at the north end of the reservoir. O'Malleys, the restaurant and tavern above Yacht Basin Marina, and the Silos RV Park and Campground near Silos Campground, are commercial uses on adjacent lands. On both the east and west shores, some second home development is evident on adjacent lands, but ranching operations predominate. At the south end, ranching again gives way to more dense suburban development on adjacent lands.

Residential development along Canyon Ferry Road has dramatically increased since the late 1970s. Figure V-17 shows rural and residential areas. Development has been more limited on the east shore because of the demand for the location and the availability of water. Ultimately, as private land develops, some impacts may occur. The visual character of the reservoir will change to one that is more suburban in nature. Transportation conflicts may arise between residents wishing to get to work and slower-driving recreational traffic. There may be more unauthorized use of vehicles on Reclamation lands.

Cabin Sites.—There are 265 cabin site leases at Canyon Ferry: 167 along the northeast shore and 98 along the northwest shore. Recreation home site leases were first issued by the State in 1958. Reclamation's *1958 Management Plan* for the area states that, "Because of the scenic values of Canyon Ferry, with unusually good topography and tree cover, it is believed that this reservoir offers logical sites for public use and development, organized camping, club sites, and seasonal cabin sites." It further states that, "Although it is not known what the demands will be for private cabin sites, it is expected that a moderate number of requests will be received from individuals in the nearby communities." In his August 1987 thesis on the cabin site leases, Steven Clark (August 1987) concludes that, while no agency policy for initiating a lease program can be found, the following information may provide some reasoning. Cabins were being built on Reclamation land prior to the issuance of leases. This may have precipitated a lease program, since Reclamation was not opposed to cabin sites at the time but, rather, was concerned about the lack of a managing agency and orderly development. At the time the dam was built, there was resistance to a lease program from the local farming community whose lands were to be flooded. The early position of Reclamation was for leasing and for subsequent rapid development of the sites with structures that complied with codes and covenants.

The State of Montana managed the cabin lease lots as part of its agreement with Reclamation to manage all the recreation and lands at Canyon Ferry. This agreement was in effect from

February 1969 to January 1994, when management was turned back to Reclamation. Reclamation, with assistance from BLM, assumed management of the recreation area, including the 265 cabin sites. Under the cabin site leasing program administered by the State of Montana, lessees were granted the right to have a recreational cabin on Reclamation land for a 10-year renewable term and pay a lease amount based on fair market value.

In May 1995, the Office of the Inspector General (OIG) examined the cabin site leasing program and made several recommendations for improvement: (1) raise rents to fair market value, (2) develop a fair process to determine when a particular cabin site should be converted to public use, and (3) develop a process to allow cabin owners to amortize their investment in improvements on the sites in the event that sites be converted to public use. After the OIG report, Reclamation began phasing in a rent increase for the 1995-96 lease period, raising the average rental from about $430 per year to about $572 per year. The lease lot fees collected by Reclamation are turned over to the Treasury, and 15 percent can be used by Reclamation for administrative purposes.

An appraisal contract to determine fair market lease value was completed in the fall of 1995. The CFRA then went to the Congress and garnered support for legislation to sell the lease lots and take them out of public ownership. A bill was then passed that would allow these lots to be sold to private parties, with public access being maintained via the shoreline. See appendix B for a discussion of Title X of the Canyon Ferry Reservoir, Montana Act. As of January 2003, 216 of these lots have been purchased by the current lessees. The remaining lessees have until August 2014 to purchase their lots. Any lots unsold after that date are to be vacated, and the lands will remain in Federal ownership.

Sewage Disposal.—Aside from a community sewage treatment system at Canyon Ferry Village, all domestic sewage disposal at Canyon Ferry is handled by septic tanks and drain fields. Outhouses, with sealed tanks requiring pumping and disposal, are the method of sewage disposal used at the recreation sites, with the exception of the flush toilet at Hellgate. There is one public sewage dump station for recreational vehicles located at Kim's Marina. There is also a private dump station at Goose Bay, for which there is a charge.

The use of septic tanks and drain fields at the cabin sites has been a lingering concern of the Lewis and Clark County Health Department. Some of the smaller lots do not meet current State minimum lot-size standards and are often too small for replacement drain fields. Geology also limits this method of disposal. The cabin site lessees have expressed interest in finding offsite replacement areas for sites experiencing problems. One idea is to have a community off-site system to help solve the problem. Reclamation has allowed lands near the cabin sites to be reserved for potential septic systems, either individual or community.

Water Supply.—The water supply is provided by wells and hand pumps at recreation sites. There is a water pressure system for the bathroom at Hellgate and for irrigation at Silos. Canyon Ferry Village and Riverside receive their water supply from a well.

Canyon Ferry Reservoir
Residential Areas

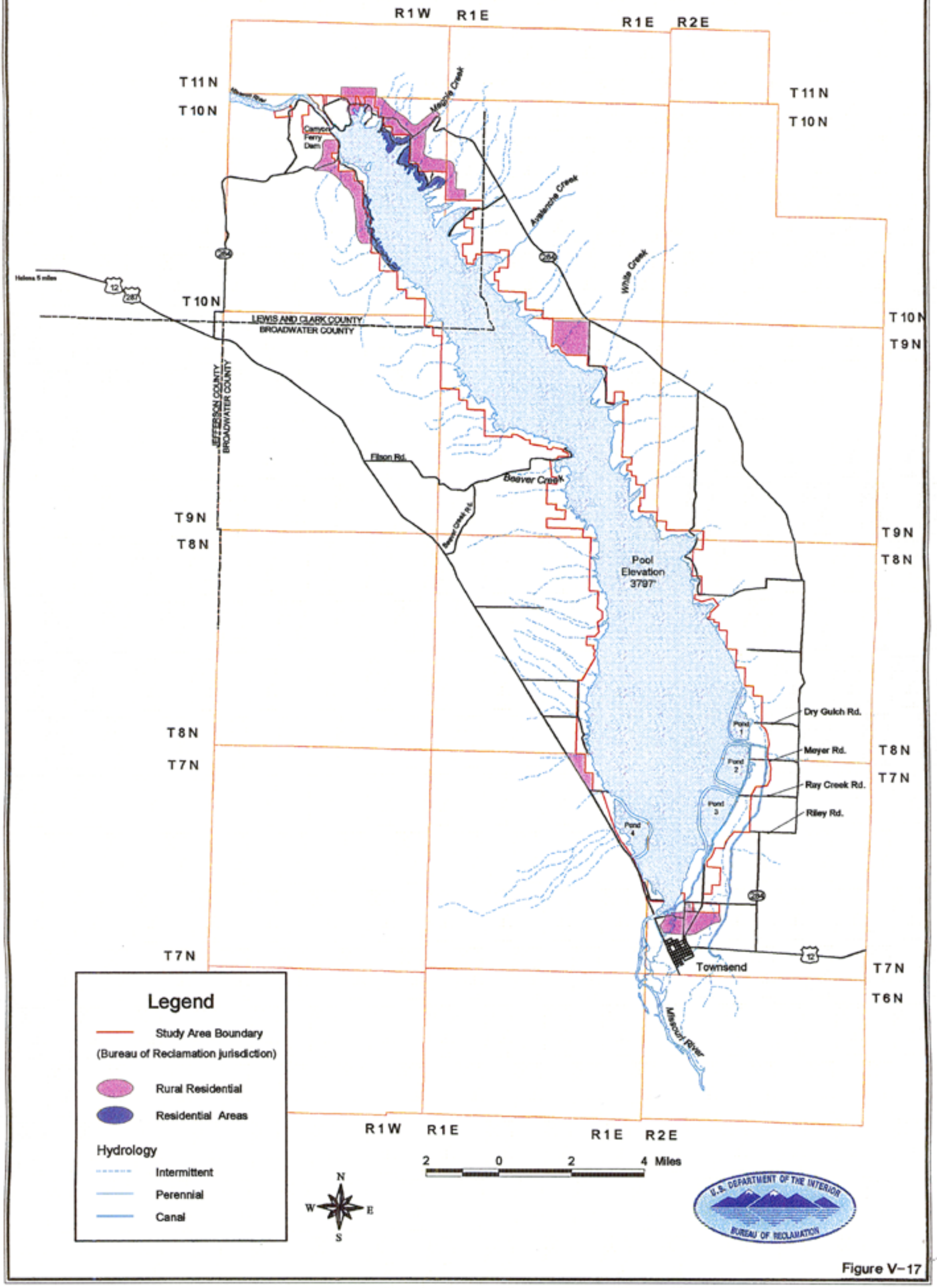


Figure V-17

Solid Waste.—There are two methods by which solid waste is removed at Canyon Ferry Reservoir: garbage transport and disposal. This has been confusing for many people. Garbage transport is provided to MFWP, Reclamation, and some of the cabin site lessees by a private vendor; city-county sanitation dumpsters are leased, and a monthly fee paid for weekly pick-up. Some cabin site lessees choose to haul their own garbage to county landfills.

Safety Considerations.—There are safety issues related to recreation, traffic, fire protection, and law enforcement at Canyon Ferry. Since other sections of this report will address the latter three topics, this section will cover recreation-related safety concerns.

Safety issues on Canyon Ferry Reservoir are related to motorboating, operating PWCs, sailing, fishing, sailboarding (windsurfing), swimming, and conflicts between these different recreationists. As the use of Canyon Ferry Reservoir increases, so will the opportunities for conflict.

Ice fisherman can create safety issues by not properly assessing ice conditions before driving onto the frozen reservoir. The vehicles are usually recovered but can be rendered inoperable, and they lose fluids in the water, causing environmental concerns.

Other hazards occur when motorboaters fail to yield right-of-way or ignore posted no wake or swimming areas. No wake areas are intended to protect marina visitors, sensitive environmental resource areas, and wildlife species. No wake zones are also intended to enhance visitor experience by separating visitor uses. Six areas on the reservoir are buoyed off as swimming areas. Boaters often infringe on these, creating a major safety problem. Boaters who encroach on posted swimming areas are fined as much as $500, as determined by the courts.

Winds and storms create a safety problem for boaters and swimmers. Swimmers can drift offshore in high winds. High winds and storms can capsize boats and cause groundings. Small boats and night anglers are in special danger in these conditions. In some instances, when boats or sailboards are caught in severe storms, search and rescue efforts can be life-threatening to rescuers.

High winds at the south end of the reservoir, near Silos, attract many sailboarders. Since few motorboaters use that end of the reservoir, sailboarders who get into difficulty with sudden storms have less chance of being rescued.

Conflicts between sailboarders and other recreationists also create safety concerns. Novice sailboarders can be capsized by motorboat wakes if boats come too near. There have been increasing numbers of close encounters between motorboats and sailboarders. Sailboards are particularly difficult to see when they capsize. Some novice sailboarders choose swimming areas to learn sailboarding. This can create a hazard for swimmers because it is sometimes difficult for novices to control their boards.

Many sailboarders do not wear lifejackets because they believe they restrict movement. The inland Navigation Rules contain a very general definition of "vessel," which has been construed to include sailboards. Sailboards are required to comply with applicable portions of the Navigation Rules (CGAUX, 2001.)

Enforcement has helped to keep water-related accidents to a minimum. U.S. Coast Guard records indicate that there have been four boating-related deaths from 1999-2000. The decrease in deaths coincides with increased CGAUX participation at the reservoir (Captain W.W. Peterson, Chief, Search and Rescue Branch, U.S. Coast Guard, letter dated January 29, 2001). The CGAUX may also conduct courtesy boat inspections for all safety equipment.

Only a few boat hazards in main traffic areas have been marked under the private-aids-to-navigation regulations and in cooperation with the CFRA.

Permits must be obtained from Reclamation for organized group recreational activities. Safety is considered before permits are granted.

Health Considerations.—The Lewis and Clark County Health Department is aware of individuals using water directly out of the reservoir and recommends against drawing water from the Missouri River system for culinary purposes. Ingesting Missouri River water is believed to increase health risks because of relatively high arsenic levels, the intermittent occurrence of toxic algae blooms, and other possible contaminants.

Boaters sometimes lack toilet facilities once they are on the water, resulting in raw sewage being dumped overboard.

Emergency Services.—Ambulance services are available from both St. Peter's Community Hospital in Helena and Broadwater Health Center in Townsend. Although there is no official policy in place, St. Peter's is usually called in case of an emergency because it has a broader spectrum of treatment facilities. Emergency Medical Technicians with local fire departments also respond to emergencies.

Schools.—In Lewis and Clark County, elementary students are served by School District No. 9, in east Helena. High school students are bused to Helena High School.

School buses travel as far as Jo Bonner to pick up students, stopping at Canyon Ferry Village, O'Malleys, and Jim Towne Road.

In Broadwater County, students attend Broadwater County High School and Townsend Elementary, both in Townsend. School buses travel on the east side of Canyon Ferry Reservoir (Highway 284), turning around at Goose Bay, and along the west side (Highway 287), turning around at the Broadwater County line.

Communications.—The CGAUX routinely patrols Canyon Ferry Reservoir from Memorial Day to Labor Day. The CGAUX is authorized to conduct any Coast Guard mission except military action. In 1999, the CGAUX installed a VHF marine radio base station at Yacht Basin Marina. This station provides radio coverage from Yacht Basin to the Silos Recreation Area. In 1998, MFWP provided the CGAUX with radios programmed to local law enforcement agencies for emergency use. In 2000, the CGAUX worked with the National Weather Service to install a station to monitor wind speed and direction. This allows pertinent weather information to be available for broadcast over the VHF radio system.

There are seven telephones available to the public for emergency use. One phone is located at the campground host facility at Hellgate and one each at Court Sheriff, Silos, White Earth, Chinamen's, Riverside, and Jo Bonner Campgrounds. There are also pay phones at the concessions. The phone companies are reluctant to provide pay phones in remote areas where use is low and the potential for vandalism is high. All fee campgrounds have a phone at the host site.

Electric Utilities.—Electricity is available at Court Sheriff, Hellgate, Silos, Chalet, Riverside, Chinamen's, White Earth, and Jo Bonner Campgrounds, and to cabin site residents on West and East Shore Drives.

Status of Reclamation Lands.—On July 23, 2000, the Buck Snort Fire started on private lands and spread to lands managed by Reclamation, BLM, and the Department of Natural Resources and Conservation. The fire burned about 15,000 acres along the west shore of the reservoir and the Spokane Hills before it was declared controlled on August 7, 2000. The fire demonstrated extreme fire behavior, which includes intense ground fire, with numerous flareups and torching and crowning of timber. Recreation sites, including day-use and camping areas, sustained damage, including six cabins on Reclamation-leased land. These cabins were completely destroyed. Damage to Reclamation recreation sites included picnic tables, toilets, and shelters. In August 2000, the following areas were temporarily closed:

Day-use areas	*Campgrounds*
Chalet	Confederate
Crittendon	Cottonwood
Lewis and Clark	Fish Hawk
Lorelei	Goose Bay
Orchard	Mahogany
Overlook	Cove

Out of 508 total acres affected, only 208 acres were severely burned and will require reseeding. The remaining acreage will recover on its own, with precipitation. The Buck Snort fire acreage breakdown is as follows:

Reclamation	508
BLM	3,472
State lands	755
Private	10,575
Total	15,310 acres

The Cave Gulch fire also started on July 23, 2000. The fire burned about 29,000 acres before being declared controlled on August 25, 2000. This fire started northeast of the reservoir and did not affect any Reclamation-managed lands. The fire moved northeast from Canyon Ferry into Helena National Forest.

While the Cave Gulch fire did not directly affect Reclamation-managed lands, Hellgate Campground was used as the Incident Command Post. An Incident Command Post is the staging area where the fire crews sleep, eat, and acquire new equipment and supplies. After a few weeks of closure, Hellgate Campground was reopened to the public before the Labor Day weekend. Some parts of the campground will be reseeded as part of the fire rehabilitation effort. See chapter VI, "Land Use Specific Management Actions," for fire rehabilitation goals and treatment projects.

Flood Easements.—Reclamation has designated a flood easement up to elevation 3808.5 feet in the vicinity of East and West Shore Drives as part of the cabin lease lot sale process. At the time that lands were acquired for construction of the reservoir, flood easements were acquired on private lands where the potential for flooding was anticipated. Reclamation is not liable for property damage caused by flooding on lands where there are flood easements. These lands are located at the south end of the reservoir, near Townsend.

Federal Flood Plain Designations.—The Federal Emergency Management Agency has mapped flood hazard boundaries for two tributaries to the reservoir: Missouri River and Duck Creek (see figure V-9). Flood hazard boundaries are approximate limits of a 100-year flood event, based on historical flood events and ground elevations, rather than a detailed study. Other tributaries to Canyon Ferry may flood but have not been mapped.

Encroachments.—Private encroachments on Reclamation lands at Canyon Ferry include the following:

Retaining Walls.—Because the visual and structural quality of retaining walls around the reservoir varies, the CFRA has recently initiated efforts to develop standards for construction of retaining walls and is interested in working with Reclamation and the Lewis and Clark County Conservation District Board. Most retaining walls have been privately constructed and are in various stages of disrepair. In addition, Reclamation has constructed walls or placed riprap to protect against shoreline erosion, where public access or health and safety are of concern.

Boat Docks and Other Land-Based Facilities.—Title X of P.L. 105-277, the Canyon Ferry Reservoir, Montana Act, requires that the Secretary sell the 265 recreational cabin sites at Canyon Ferry Reservoir, Montana, to private parties. Also, the act allows each cabin site owner to have a boat dock in the reservoir. Because the act does not give the land between the cabin site and the reservoir to the cabin site owner, the land remains part of Federal property.

Private Landscaping and Irrigation Systems.—In some cases, elaborate landscaping projects and irrigation systems have been installed at considerable private expense on public shorelines and outside cabin site lease boundaries. These areas are open to public use and sometimes generate misunderstandings between the lessee and the public when the public attempts to use the shoreline areas.

Cattle.—At times, cattle graze on Reclamation lands without the benefit of a grazing lease. This occurs, for the most part, on the west shore between the cabin sites and Silos Campground, where the fences are in need of repair. The fences on the east side, from Confederate Bay to Goose Bay, are in need of repair to prevent cattle grazing.

Canyon Ferry Village.—Canyon Ferry Village consists of an office building, warehouses and garages, parking for the office, and a Visitor Center with parking, tennis courts, a boat dock, 15 houses, and 15 storage sheds. All the structures in the village, except the Visitor Center, were built in the 1940s and 1950s for construction of the dam and powerplant. The Visitor Center was a school house located in the Missouri River Valley before the current dam was constructed.

The Visitor Center is used as a natural history and heritage interpretive and information center for visitors. It is also used as a community center, for holding elections, and as a class and dining room by the Montana Science Institute. In 1998 and 1999, it was reviewed for life safety code compliance, and with some relatively minor changes, was approved for occupancy.

In 1996, Reclamation sold the houses, sheds, and the boat dock facility to the Montana Office of Public Instruction (OPI). This office, in turn, lets the Montana Science Institute use the facilities for its science camps. Reclamation retained ownership of the land where the houses are located, but leased the land to OPI for 20 years, starting in 1996.

Montana Science Institute.—The Montana Science Institute will continue to study water quality at Canyon Ferry. The Montana Science Institute is a nonprofit corporation, covering expenses through grants and tuition. Although the Montana Science Institute is currently administered as a summer program, its directors are ultimately working toward the creation of a year-round water study institute, replete with an all-encompassing data base on water throughout the United States, an ongoing data base for the Missouri River drainage, acquisition of sophisticated water analysis equipment, field staff, and creation of a unique learning resource available to the Nation.

The Montana Science Institute has applied for grants from various foundations. Grant awards would enable the establishment of an annual water congress at Canyon Ferry, the development of a multiple-grade-level curriculum centered around water quality and aquatic ecology, and purchase of computers and other analytical equipment essential to such a learning center.

Canyon Ferry Airport.—Montana Aeronautics Division of the Montana Department of Transportation has a use permit to conduct public airport activities at Canyon Ferry Airport, located just north of Silos Recreation Area. In the fall of 1986, Reclamation became concerned over the construction of two new hangars on the airport property, and discussions were held between MFWP, Reclamation, and the division. All parties agreed to delay any further construction until Reclamation had time to study the long-term plans for the property.

Reclamation will work with the Montana Aeronautics Division and other interested parties on the disposition of the Silos area airport lands. The Montana Aeronautics Division has indicated they are not interested in owning more airport property or facilities in Montana. The Broadwater County Commissioners and the Montana National Guard have indicated an interest in operating the airport. The Montana Aeronautics Division, the Montana National Guard, and the Broadwater County Commissioners, as well as adjacent land developers, would like to have the airport remain open.

For a transfer of land ownership to take place, Reclamation would have to make a formal determination that the land in question is no longer needed for project purposes and report the lands as excess to GSA. Reclamation is in the process of making a formal determination on the lands and preparing the Report of Excess Lands to submit to GSA. GSA then must conduct a screening process, with the lands first being offered to other Federal agencies. If there is no interest identified in this screening process, the lands are then made available to other public entities (i.e., the State and counties). An environmental review would have to be prepared to assess the impacts on nearby recreation facilities and residential subdivisions. This issue is yet to be resolved.

The use of Canyon Ferry Reservoir water surface by owners of recreational sea planes would require a special use authorization permit issued by Reclamation. The duration of such a permit and other conditions and stipulations would be included in the use authorization document. This type of permit would be administered by Reclamation and not a concessionaire.

Wildlife Management Area.—The agricultural leases are all located within the WMA and are written for 5 years and were renewed in 1999. There are seven leases, with a total of 758 farmed acres. All leases, except one, consist of a hay/grain rotation with no grazing and incorporate blocks of nesting and winter cover. Winter cover consists of shelter belts for upland birds. One lease is a preferential lease dating back to the time of construction of the dam. When the lands required for the reservoir were acquired, some lands not inundated by the reservoir were leased back to the original owner. This owner grazes livestock on that lease during the nongrowing season and moves the livestock to private lands during the growing season.

MFWP has also made improvements at the WMA. These improvements are listed below. The parking lot item for pond 4 includes a boat ramp and a handicapped-accessible viewing deck.

Interpretive signs will also be installed.

The "Wildlife Management Area" information was taken from a letter from Tom Carlsen, MFWP, dated September 14, 2000.

Project	Area	Year completed	Cost ($)
Parking lot	Riley Road	2000	6,000
Parking lot[1]	Pond 4	1999	35,000
Parking lot	Riley Road	1998	2,250
Parking lot	Ray Creek	1998	13,115
Road maintenance	WMA system roads	2000	6,000
Septic system	MFWP office	2000	10,000
Pivot irrigation	Parcel 45A	1997	23,500

[1] The parking lot for pond 4 includes a boat ramp and a handicapped-accessible viewing platform. Interpretive signs will also be installed.

Irrigation.—There are currently two long-term (40-year) contracts for irrigation water from Canyon Ferry Reservoir. These contracts will expire after the RMP/EA term of 2010. Reclamation sells water to irrigators near Beaver Creek and on the north end of pond 4 in the WMA. Additional water may be available for irrigation. Water is also being supplied via a tunnel and canal to the district to irrigate about 15,000 acres.

Fencing.—Since Montana is an open range State, or a fence-out State, Reclamation is responsible to fence the land it controls. The entire land around Canyon Ferry Reservoir is considered open range for cattle; therefore, it is a fence-out area, and Reclamation must fence

cattle out of its land. But, the land on the east side of the reservoir in Broadwater County is within a horse herd district and is a fence-in area (for horses). The Montana livestock laws, under TITLE 70 PROPERTY; 70-16-205 Monuments and fences – mutual obligation of adjoining landowners, describes how adjacent landowners are required to install and maintain common fences.

The reservoir is fenced down to Townsend on the east side of the reservoir. On the west shore, fencing is complete from Townsend north to Canyon Ferry Airport. From the airport north, Reclamation lands are unfenced until Orchards day-use site, where fencing resumes again and continues north to the dam.

At present, lack of a boundary fence has allowed cattle to trespass onto Reclamation lands. There have been complaints about cattle grazing between White Earth and Silos because cattle diminish the recreation experience of the visitors.

Other Land Use Issues.—

Timber Sales.—No sales are planned by the Helena National Forest over the next 10 years; however, salvage operations near Magpie and Sulfur Bays may occur within the next 5 years as a result of the fires in 2000.

The Forest Plan recognizes the need for view and watershed protection relative to Canyon Ferry. Watershed protection includes the mandatory use of Best Management Practices and keying mitigations to maintain fishery quality in trout streams such as Deep Creek.

Signing.—Directional signing for tourists consists of highway signs at the turnoff onto Canyon Ferry Road from Highway 287, from Highway 12 onto Highway 284 near Townsend, and along Canyon Ferry Road between Canyon Ferry Dam and Helena. Signs are also located near turnoffs to recreation sites along the roadways. Private commercial signs also signal tourists along Interstate 90, Highway 287, and on Canyon Ferry Road.

Regulatory signing appears at individual recreation sites.

Commercial signs associated with private vendors and concessions are located both on and off Reclamation lands.

Access.—Access to Hole in the Wall fishing area needs to remain open to provide access to this popular fishing place. Reclamation will work with adjacent landowners in an attempt to secure legal access. However, if public access as it is today cannot be established, Reclamation will establish new access across Reclamation lands to the south of the existing access road.

Landscaping.—Landscaping for purposes of replacing wildlife habitat that was inundated by the dam was first attempted in the late 1950s at the river inlet to the reservoir. Since then, many sites have been landscaped for esthetics, dust control, and privacy. One of the most limiting factors to the successful establishment of vegetation has been a lack of consistent O&M of existing irrigation systems and personnel to maintain plantings. Water could be taken from the reservoir for such irrigation purposes, but, to date, this has not been done.

Future Land Use.—Private residential development will continue adjacent to the reservoir.

Future commercial development at the reservoir will be examined in light of the policies developed by this plan and a CSP, as described in chapter II. One suggestion has been the opening of a commercial marina at Silos and the possible development of a destination resort. There is no zoning in either Lewis and Clark or Broadwater Counties that would preclude such development on private land.

The opening of additional recreation sites has been suggested, as has the re-opening of day-use camping sites on the west shore. Until 1979, the west-shore sites were open to camping, but camping was discontinued because of poor road conditions, associated night travel, and the difficulty of managing yet another area on a 24-hour basis. Sites were considered too small, too steep, and too close to the cabin sites and, thus, were determined to be more appropriate for day use.

Landownership Patterns.—The landownership pattern immediately adjacent to Canyon Ferry Reservoir was determined when the reservoir was first constructed and filled. Private properties were bought in aliquot parts from affected landowners.

The entire shoreline is open for public use. These lands are administered by Reclamation for authorized project purposes. The amount of shoreline adjacent to cabin sites and available for public use varies, depending on topography and the size of the lot leased to the cabin site owners.

At the north end of the reservoir, adjacent to Reclamation lands, the ownership pattern is of relatively smaller, privately owned parcels (20 acres or less). Within Lewis and Clark County, most parcels within 1-1/2 miles of the reservoir fit this 20-acre pattern, although there are a couple of exceptions, including a large BLM parcel at Crittendon Gulch.

Along the midsections of the reservoir in Broadwater County, most adjacent land within 1-1/2 miles of the boundary of Reclamation lands is in large private ranch holdings, with the exception of some smaller parcels of land, and State School Trust lands, BLM parcels, and several 20-acre divisions of land.

At the southeast end of the reservoir, near Townsend, private ownership of parcels of 100 acres or less predominates.

Environmental Consequences

Alternative A.—Land use permits would be issued on a case-by-case basis, without regard to a comprehensive land use planning strategy. Under this alternative, the same types of recreation activities would continue; therefore, negative impacts to existing land resources and user groups would probably continue. Exclusive use of some Canyon Ferry Reservoir lands would probably continue, to the exclusion of the general public. Cattle trespass and unauthorized access to the reservoir would continue to cause damage to environmental resources and provide conflicts with adjacent landowners. Implementing the fire rehabilitation actions established by Reclamation, pursuant to the fire rehabilitation goals formulated by Reclamation and BLM, will return the impacted area to its pre-2000 condition.

Alternative B.—Land use permits would be issued only if they do not conflict with adjacent land uses or other land use authorizations within the study area. Land use limitations and potential impacts to the environmental resources would be taken into consideration when determining the types of uses that will be permitted. Geographic Information System mapping will help to eliminate potential impacts to existing resources by identifying environmentally sensitive areas. Implementing a comprehensive land use planning strategy (e.g., signing, fencing, vegetative screening, and controlling vehicular access) will decrease the number of conflicts within the reservoir area. Implementing the fire rehabilitation actions established by Reclamation, pursuant to the fire rehabilitation goals formulated by Reclamation and BLM, will return the impacted area to its pre-2000 condition.

Alternative C.—Same as Alternative B.

Cumulative Impacts

No cumulative impacts have been identified.

Mitigation

Under the action alternatives, all land use permits would contain specific stipulations to protect existing resources, decrease potential conflicts with adjacent landowners, and prevent land use conflicts within the study area.

TRANSPORTATION

Affected Environment

Access.—The major highways serving the region are Interstates 15 and 90. These interstates connect Helena and Great Falls and intersect Highway 12-287.

Highway 287, between Helena and Townsend, serves the east side of Canyon Ferry. Highway 287 is paved all the way. The northwest end and the east side of the lake are served by Highway 284 between its junction with 287, near East Helena, and its junction with Highway 12 on the southeast end of the lake. All of Highway 284 is paved, except for a 3-mile section between Magpie Gulch and the Lewis and Clark County border just north of Hellgate Gulch. The State assumed maintenance responsibilities of Highway 284 from Broadwater and Lewis and Clark Counties. Lewis and Clark County will do the road grading on the 3-mile section that is not paved.

At the Canyon Ferry Road intersection, Highway 284 continues northeasterly across Canyon Ferry Dam, passing around the northern end of the reservoir and down the east shore, where it rejoins Highway 12-287. Recreation sites on the east shore are accessed by feeder roads off Highway 284.

From the west and north, Canyon Ferry Reservoir is accessed locally by Canyon Ferry Road. This is a major arterial that begins 4 miles east of Helena.

Two minor arterials that access cabin sites and recreation areas are East and West Shore Drives. East Shore Drive begins at Canyon Ferry Road at Jo Bonner Recreation Area. It forks, winding along the shoreline about 2.5 miles to the southeast and about 1.5 miles to the northwest. East Shore Drive accesses most of the reservoirs's cabin sites and Cave Bay and Jo Bonner Recreation Areas. West Shore Drive begins at Canyon Ferry Road at Yacht Basin, curving along the rather precipitous west side, accessing cabin sites and seven public day-use areas. Jim Towne Road connects the Canyon Ferry area with the York Lake and Hauser Lake areas, going from Riverside Campground north to York Road.

Road Condition and Maintenance.—Canyon Ferry Road is paved from its junction with Highway 284 to Magpie Gulch. All of Spokane Creek Road/Highway 287 is paved. With minor exceptions, all the remaining access and interior roads, about 38.5 miles of road, are gravel surfaced. Highway 287 between Helena and Townsend serves the east side of Canyon Ferry Reservoir. The northwest end and the east side of the reservoir is served by Highway 284 between its junction with 287, near East Helena, and its junction with Highway 12 on the south end of the reservoir.

The State of Montana has assumed management of Highway 284 and Canyon Ferry Road. A large portion of Highway 284 was resurfaced in 2000. All of Highway 284 is paved except for a 3-mile section between Magpie Gulch and the Lewis and Clark County line just north of Hellgate Gulch.

The State of Montana maintains Highway 284 to the Lewis and Clark County line, about three-quarters of a mile of Hellgate Road from the turnoff at Highway 284 to the cattleguard at the entrance to the recreation area, as well as all roads accessing the reservoir on the east side up to Reclamation land boundaries. The only exception to this is that Lewis and Clark County performs the maintenance on the 3-mile section that is not paved, as mentioned above. On the west shore, the county maintains the access roads from White Earth and Silos Recreation Areas to the Reclamation land boundaries.

The State of Montana maintains Highway 287, a Federal aid primary road. All the remaining roads accessing the reservoir are maintained by Reclamation.

Reclamation maintains about 4.5 miles of West Shore Drive from Yacht Basin Marina to its terminus and about 4 miles of East Shore Drive. The maintenance schedule calls for watering and blading both drives once in the spring and once in the fall. Roads maintained as interior access to recreation sites total about 30 miles. Until 1994, maintenance also included the application of magnesium chloride to control dust on all unpaved roads. Magnesium chloride was applied to selected roads during the fires of 2000.

The U.S. Forest Service maintains roads leading up many of the gulches to its lands on the northeast side of the reservoir.

Traffic Volumes.—Traffic is generated primarily by two groups: residents (seasonal and permanent) and recreationists (in the summer).

Safety Issues.—Many of the roads in the study area are narrow and winding. Narrow, winding roads, together with graveled surfaces, mean road hazards are inevitable. Road hazards have been a lingering concern of area managers. Some area roads are built above steep embankments that have no guardrails (e.g., East Shore Drive). Such construction creates a safety hazard.

There are no paths or trails set aside exclusively for pedestrians or bicyclists, except for the handicapped-accessible trails to restrooms. Walking and bike riding have been cited as potential hazards on the area's narrow, winding roads, specifically along West Shore Drive and along Canyon Ferry Road between Yacht Basin and the dam.

Proposed Improvements.—Lewis and Clark County has listed the reconstruction of about 9.5 miles of Canyon Ferry Road east of Helena as a priority for funding. The estimated cost of this project is $2.5 million, and the date of completion is estimated some time after 2001. The road was cold patched and chip sealed during the summer of 2000.

The county also has an improvement priority list for low-cost mitigations of existing traffic hazard areas. Two of the top priority improvements have been for signing and painting portions of Canyon Ferry Road: on curves and at the intersection of Canyon Ferry Road and Valley Drive.

The paving of about 2.5 miles of Highway 284, from Avalanche Creek to the Lewis and Clark County line, was completed in 1992.

Unauthorized ORV Use.—A proliferation of roads and trails resulting from the use of ORVs has damaged vegetation and soils in the study area. ORV use can also contribute to the introduction and spread of weeds. Vehicle use is allowed only on roadways. No ORV use areas have been officially designated at Canyon Ferry Reservoir. Resource damage can be seen on steep hillsides above the campgrounds on the north shore.

Reclamation staff have been only partially successful in deterring ORV use by fencing off access because, during reservoir drawdown, low water exposes land below the fence line, which then becomes accessible to vehicles. Where terrain prevents accessibility by some larger vehicles, it remains open to ATVs. Where roads are built inside the boundary fence, they provide access to the remainder of the shoreline.

Handicapped Access.—Handicapped-accessible facilities are a recent addition. In 1991, accessible parking pads, trails to restrooms, and accessible restrooms were added to Silos, Shannon, and Riverside Recreation Areas. In addition, Riverside Recreation Area maintains a handicapped-accessible boat dock. Accessibility improvements to the Canyon Ferry Visitor Center were completed in 1995. Starting in 2003, handicapped-accessible surveys and action plans will be prepared.

Other Concerns.—Reclamation has an easement on Eagle Bay Drive for access to maintain Canyon Ferry Dam and Helena Valley Pumping Plant. The area below the west side of the dam has been managed for fishing access.

Environmental Consequences

Alternative A.—Under this alternative, public safety would continue to be compromised because road O&M procedures would not be established, proper signing would not be installed, and

funding levels for road improvements would not change. The number and type of access roads to the reservoir would remain the same as it is today. Except for a gradual increase in visitation, traffic volumes on roads within and outside the study area would remain essentially the same.

Alternative B.—Under this alternative, roads would be improved, year-round access would be provided, signing would be installed, and an O&M program for maintaining all roads would be evaluated to achieve standards of safety and resource protection. Public safety would increase. The closure of roads that provide illegal access to the reservoir, and the expected increase in visitation attributed to this alternative, will increase the volume of traffic on the remaining roads. However, measures to enhance public safety will more than offset any potential negative impacts to the safety of visitors that may be caused by increased vehicular traffic.

Alternative C.—The scale of development contemplated under this alternative will increase visitation and the volume of traffic on interior and exterior roads above what would be anticipated under Alternative B. Paving of some interior roads would help to protect public safety; however, increased vehicular traffic resulting from increased visitation may create some safety concerns for the general public.

Cumulative Impacts

Both Alternatives B and C would increase visitor use at the same time the human population of the surrounding area is increasing because of residential development. Increases in visitation at Canyon Ferry Reservoir, combined with an increase in permanent residences in the area, would increase traffic and congestion on the surrounding roads. Traffic problems would probably occur only during the recreation season (June to September), with the heaviest concentrations occurring on weekends and holidays.

Mitigation

No mitigation has been identified.

NOISE

Affected Environment

Noise conflicts at Canyon Ferry Reservoir center primarily around the use of a variety of motor vehicles in proximity to recreation sites or cabins. No noise measurements have been taken in conjunction with the management of Canyon Ferry, so current sound levels have not been established.

The primary area of conflict is the north end of the reservoir, where about 80 percent of the recreational use occurs and where the cabin sites are located. Sounds are also magnified in certain areas by echoes off nearby canyon walls (see figure V-9).

The use of jet skis in confined bays, such as Magpie, Court Sheriff, and Hellgate, has raised complaints from both cabin site lessees and recreationists. The machines are commonly driven in a circular pattern within the bay, generating a continuous source of noise. This conflict has not been resolved despite communication between the two groups.

In 1991, the State legislature passed HB 833, establishing noise standards for all vessels, including jet skis at 90 decibels at 1 meter from the point of exhaust.

At the six open houses held in June 1999, the use of jet boats at Canyon Ferry was documented as an issue. Once again, the boats are able to meet noise requirements if properly operated. However, they can be operated in such a fashion (violating equipment standards) that noise limits are grossly exceeded, which has often been the case in the past. Six comments from the six open houses concentrate on the need to regulate jet skis; in particular, the need to use stock water boxes (exhaust). Other comments, some of which indirectly related to jet skis, included the need to enforce no wake zones for boat ramps, swim beaches, and campgrounds (4 comments) and provide an appropriate level of law enforcement to enforce speed limits and boating regulations (15 comments).

In general, noise "infractions" at Canyon Ferry Reservoir have been remedied by the presence of enforcement personnel and through policy adoption. A prohibition of particular vehicles or sources of noise is not likely; enforcement and control will focus on existing noise standards and nuisance laws instead.

Environmental Consequences

Alternative A.—Under this alternative, no restrictions would be imposed on the types of activities that would be allowed or on where certain recreation activities could take place. Noise conflicts between ORV users and other recreationists would continue. Noise conflicts between watercraft users, both PWC and motorboat users, and other users would continue in the cove areas of the reservoir and, especially, in the northern portion of the reservoir near the lease lot areas.

Alternative B.—Visitation is expected to increase because of the planned increase in the number of recreation facilities and opportunities. Therefore, noise levels in developed areas would probably increase. Signing, improved roads, elimination of ORV and ATV use, increased law enforcement, and the establishment of no wake zones in coves and at swim beaches, boat

ramps, and campground and day-use areas may offset any increased noise levels that might be attributed to an increase in facilities and opportunities. Planting vegetation to create visual buffer zones will also help muffle noise.

Alternative C.—Same as Alternative B, except for a slight increase in noise levels at developed recreation areas because of an anticipated increase in visitation.

Cumulative Impacts

No cumulative impacts have been identified.

Mitigation

Proper signs will be posted throughout the reservoir area, informing the public of the rules and regulations governing the use of Canyon Ferry Reservoir land and water areas. The penalties for violation of established rules and regulations will also be posted. Reclamation will work with law enforcement entities to encourage adequate enforcement of the laws and regulations.

SOCIOECONOMICS

Affected Environment

As stated earlier, Canyon Ferry Reservoir is situated on the Missouri River in west-central Montana. Part of the reservoir is located in the far southeastern portion of Lewis and Clark County, and the remainder of the reservoir lies within the northern part of Broadwater County. The city of Helena, State capitol of Montana, is approximately 15 miles west of the reservoir, and the town of Townsend is located at the southernmost end of the reservoir. Table V-8 shows the 1990 population and the projected population of the counties and the region. The region's 1990 population of 50,813 is projected to increase approximately 63 percent, to 82,910, in 2020.

Table V-9 lists total income and earnings for the two counties in the study area for 1980, 1990, and 1996. For both counties, total income changed significantly during the 1980 to 1990 period. There was a total increase of approximately 80 percent and an average annual increase of about 7.9 percent in Lewis and Clark County. For Broadwater County, there was an increase of approximately 89 percent, which is about an 8.9-percent average annual increase. The average annual increase of 8.0 percent in total income for the two counties is more than the national estimate (7.5 percent) and the Rocky Mountain region (6.8 percent) for the 1980 to 1990 period.

Table V-8.—1990 population and 2000/2020 projections[1]

		Projected population	
	1990 census	2000	2020
Broadwater County	3,318	4,230	5,550
Lewis and Clark County	47,495	55,110	77,360
Region	50,813	59,340	82,910

[1] http://commerce.state.mt.us/ceic/demog/project/npa99mt.htm

Table V-9.—Income[1]
($ million)

	Lewis and Clark County			Broadwater County			Two-county region
	1980	1990	1996	1980	1990	1996	1996
Total personal income	$431.5	$773.4	$1,123.3	$23.4	$44.32	$64.9	$1,056.7
Earnings by industrial sector							
Farm	2.3	1.9	0.1	0.8	3.6	3.3	7.60
Agricultural services, forestry, fishing, and other	0.6	1.3	2.3	0.1	NA[2]	0.3	3.20
Mining	3.2	3.5	4.8	0.3	NA	2.9	8.90
Construction	17.3	21.3	54.7	1.3	1.3	2.2	41.00
Manufacturing	26.9	25.1	35.7	2.6	2.8	6.6	39.40
Transportation, utilities, and communications	46.1	38.3	43.2	0.3	2.7	3.4	48.10
Wholesale trade	14.3	17.4	26.8	1.0	0.9	1.6	26.20
Retail trade	33.9	64.2	84.9	2.0	2.0	2.6	86.70
Financial, insurance, and real estate	21.0	35.4	63.9	0.5	0.5	1.1	55.00
Services	64.4	148.9	254.0	0.9	3.4	4.7	215.10
Government							
Federal	25.2	49.1	63.9	0.7	0.9	1.4	66.47
State and local	84.7	149.1	211.5	2.2	2.8	3.9	192.30
Total earnings by place of work (labor income)	341.8	557.9	848.4	12.7	22.4	34.2	790.00

[1] U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information Systems, 1969-96, 1997, Washington, DC 20230.
[2] Not available.

For the 1990 to 1996 period, total income increased by more than 45 percent each in Lewis and Clark and Broadwater Counties. The average annual increase for each county during this period was less than the 7.5-percent national average and less than the Rocky Mountain region's 6.8-percent increase.

Earnings by industrial sector are displayed for the two counties in table V-9. For 1996, services (30 percent) and State and local government (25 percent) had the largest share of total earnings for Lewis and Clark County. For the government sector, the percentage is high because the State capitol is in this county.

For Broadwater County, manufacturing (19 percent) and services (14 percent) had the largest percentage share of earnings, followed by State and local government (11 percent) and transportation, utilities, and communications (10 percent).

Employment is listed in table V-10 for the two counties within the study area. The largest employers in Lewis and Clark County for 1996 are in the service sector (34 percent of total employment) and the State and local government sector (19 percent), followed by retail trade (17 percent). In Broadwater County, the largest employers are in services (21 percent), retail trade (16 percent), and manufacturing (13 percent).

The trend in employment during the past 16 years for Lewis and Clark and Broadwater Counties has been a decline in agriculture and a rise in services, which follows national and regional trends.

Most of the expenditures (approximately 65 percent) by nonarea visitors at Canyon Ferry Reservoir are made in the retail trade sector (eating and drinking, gas and other transportation, and food stores) and the service sector (hotel and lodging).[11] The remaining expenditures were for licenses, fees, etc.

As discussed in the "Recreation" section, the public identified social issues and concerns about the present conditions at Canyon Ferry Reservoir and identified actions and activities they would like changed in the future.

Environmental Consequences

To identify the effects that changes in recreational use at Canyon Ferry Reservoir may have on the regional economy (Broadwater and Lewis and Clark Counties), a regional impact analysis

[11] The percentage of expenditure data was derived from expenditures of non-Montana residents who visited Canyon Ferry Reservoir and responded to the 1995 Canyon Ferry Recreation Survey, Institute of Tourism and Recreation Research, University of Montana, page 38, August 1996.

Table V-10.—Employment by industrial sector[1]
(Number of jobs)

	Lewis and Clark County			Broadwater County		
	1980	1990	1996	1980	1990	1996
Employment by industrial sector						
Farm	547	592	516	333	323	289
Agricultural services, forestry,	117	191	398	16	NA[2]	60
fishing, and other	107	184	152	12	NA	66
Mining	1,031	1,005	1,925	93	72	147
Construction	1,286	1,075	1,325	153	148	257
Manufacturing	1,974	1,267	1,318	29	109	98
Transportation, utilities, and	746	768	927	64	44	42
communications	4,019	5,155	6,422	246	217	320
Wholesale trade	2,184	2,310	2,667	65	82	97
Retail trade						
Financial, insurance, and real	6,575	9,352	12,634	184	267	439
estate	1,544	1,791		70	69	66
Services	5,781	6,409	1,637	208	164	161
Government			7,174			
Federal						
State and local						
Total employment (Number of jobs)	25,911	30,099	37,095	1,473	1,495	2,042

[1] U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information Systems, 1969-96, 1997, Washington, DC 20230.
[2] Not available.

was done. A regional impact analysis makes use of an Input-Output model (IMPLAN 1999[12]) to describe the interdependency of individual industrial sectors as consumers and producers and, thus, depict the structure of the regional economy. The model examines the interactions between 528 separate industries. In this regional impact analysis, the changes in recreation use of Canyon Ferry Reservoir, caused by implementing the action alternatives, are examined to determine the effects on total output, employment, and labor income.

For this analysis, it is important to identify changes in recreation-related expenditures that are attributable to individuals living outside the two-county region. These changes measure the flow of dollars into the region or out of the region caused by the action alternatives. Local residents' expenditures are not counted because it is assumed that if local expenditures for recreation are not made at Canyon Ferry, then they would be made somewhere else within the local economy for other goods and services. It follows that changes in local expenditures would not cause a change in impacts on the regional economy.

[12] Minnesota IMPLAN Group, Inc., *1999 IMPLAN Professional Version 2.0 Social Accounting and Impact Analysis Software*, April 1999. Stillwater, Minnesota.

The following economic analysis shows the impacts to the regional economy from a range of potential visitation increases from outside Lewis and Clark and Broadwater Counties. The analysis was developed using assumptions of a 5-percent, 10-percent, and 20-percent increase in visitation, which could result from implementing one of the action alternatives. Since the actual increases in visitation cannot be accurately estimated, these percentages represent a probable range of visitation increases. The economic benefits resulting from development of one of the alternatives will likely fall within this 5- to 20-percent range. The format of this section is different than the other environmental consequences sections so that the impacts can be described for the potential percentage increases in visitation.

These economic impacts are of concern to various people and firms in the region because they are measures of the general economic well-being of the region. The information provided by a regional analysis can be used in decisionmaking by individuals, firms, and various levels of government.

In July 1998, a study was completed on the potential contribution to the regional economy (Lewis and Clark and Broadwater Counties) of recreation activities at Canyon Ferry Reservoir (Borda 1998).[13] This study estimated the annual recreation visitors from outside the study area to be 73.65 percent of total visitor use. Total visitor use, including winter use, has been estimated at 259,000 recreation visits. Thus, the number of visits by people from outside the study area would be 190,750. This figure was multiplied by expenditure data, indexed to 1996, for various sectors of the economy related to recreation. The total recreation-related expenditures for 1996 were $13,177,200 (table V-11). (The year 1996 was chosen as the base year because this was the data year for the available IMPLAN model that was used to establish the baseline recreation impacts.) The minor economic changes would not affect regional population.

Alternative A.—In this analysis, the present condition is used to represent the No Action Alternative. All action alternatives were compared to the No Action Alternative to determine changes in conditions.

Total recreation-related expenditures were input into the IMPLAN model to estimate the total impact of recreation on the local economy.[14] The baseline for this two-county economic impact

[13] Borda, Charles, *Recreation Economic Analysis, Canyon Ferry Reservoir*, July 1998, U.S. Department of the Interior, Bureau of Reclamation, Technical Service Center, Denver, Colorado.

[14] Total impacts are made up of direct, indirect, and induced impacts. Direct impacts are the result of the initial changes in primary inputs that occur. In this case, those changes in visitor expenditures that occur within the sectors of the economy (sporting and athletic goods, transportation services, other retail purchases, groceries and beverages, purchases of food and drink, lodging, gas/oil and repairs, and guide services/other recreation) that relate to recreation at Canyon Ferry Reservoir. Indirect impacts are the increased economic activity of firms that provide goods and services to those businesses directly serving visitors. Induced impacts are the result of changes in house-hold expenditures due to changes in household income resulting from direct and indirect effects.

analysis was $18.4 million (1996 dollars) in total industrial output, 390 full- and part-time jobs, and $6.6 million in labor income, all based on recreation-related expenditures of $13,177,200 by visitors from "outside the local area" (tables V-11 and V-15).

Table V-11.—Alternative A, present condition
Recreation expenditure data for impact analysis for 1996[1]

IMPLAN sector number	IMPLAN sector description	Average 1988 expenditures ($) Per-person trip	Average 1988 expenditures ($) Indexed to 1996	Total expenditures ($) Based on 190,753 visits
421	Sporting and athletic goods	5.40	7.16	1,365,800
440	Transportation services	6.05	8.02	1,529,800
449	Other retail purchases	3.90	5.17	986,200
450	Groceries and beverages	7.70	10.21	1,947,600
454	Purchases of food and drink	5.70	7.56	1,442,100
463	Lodging	7.10	9.41	1,795,000
479	Gas/oil and repairs	14.60	19.36	3,693,900
488	Guide services/other recreation	1.65	2.19	417,700
	Total	52.10	69.08	[2]13,177,200

[1] Borda, Charles, July 1998, *Recreation Economic Analysis, Canyon Ferry Reservoir*, U.S. Department of the Interior, Bureau of Reclamation, Technical Service Center, Denver, Colorado.
[2] Rounded figure.

The increase in the number of recreation facilities and the improvements to recreation facilities desired by the public would not happen. User conflicts would continue, and the level of satisfaction of users would likely decline. Levels of use might decline by some user groups (e.g., families, senior citizens), and use by other groups (e.g., ORV and PWC users) could increase.

Alternative B (5-Percent Increase in Recreation Use).—For Alternative B, the recreation-related expenditures from table V-12 were input into the IMPLAN model to estimate the impact of an increase in recreation use on the local economy. The results for a 5-percent increase in visitor use, due to implementing Alternative B, were $19.3 million (1996 dollars) in total industrial

Together, the magnitude of the combination of all impacts circulating and recirculating within the regional economy is referred to as the "multiplier effect." The "multiplier" is the ratio of direct impacts to total impacts. The multiplier in this case is 1.4.

output, 410 full- and part-time jobs, and $6.9 million in labor income. The results were based on recreation-related expenditures of $13,835,900 by visitors from "outside the local area" (tables V-12 and V-15).

Table V-12.—Alternative B, 5-percent increase in visitor use
Recreation expenditure data for impact analysis for 1996[1]

IMPLAN sector number	IMPLAN sector description	Average 1988 expenditures ($) Per-person trip	Average 1988 expenditures ($) Indexed to 1996	Total expenditures ($) Based on 200,288 visits
421	Sporting and athletic goods	5.40	7.16	1,434,100
440	Transportation services	6.05	8.02	1,606,300
449	Other retail purchases	3.90	5.17	1,043,500
450	Groceries and beverages	7.70	10.21	2,044,900
454	Purchases of food and drink	5.70	7.56	1,514,200
463	Lodging	7.10	9.41	1,884,700
479	Gas/oil and repairs	14.60	19.36	3,877,600
488	Guide services/other recreation	1.65	2.19	438,600
	Total	52.10	69.08	13,843,900

[1] Borda, Charles, July 1998, *Recreation Economic Analysis, Canyon Ferry Reservoir*, U.S. Department of the Interior, Bureau of Reclamation, Technical Service Center, Denver, Colorado.

Expansion and/or improvement of existing recreation facilities, and provisions of additional oversight, would lessen user conflicts. Increased attractiveness of the area would likely result in increased use of the area by some individuals. Those preferring less-developed and structured recreation experiences would probably go to other areas to meet their recreation needs.

Alternatives B and C (10-Percent Increase in Recreation Use).—To provide a range of expected economic impacts for Alternatives B and C, the recreation-related expenditures from table V-13 were entered into the IMPLAN model to estimate the impact of a 10-percent increase in recreation use on the local economy. If implementing Alternative B or C would increase visitor use by 10 percent, $20.2 million (1996 dollars) in total industrial output, 429 full- and part-time jobs, and $7.2 million in labor income would be the result—all based on recreation-related expenditures of $14,494,700 by visitors from "outside the local area" (tables V-13 and V-15).

Alternative C (20-Percent Increase in Recreation Use).—Alternative C was also analyzed to indicate the high end of the range of expected economic impacts that could occur if Alternative C resulted in a 20-percent increase in visitor use at the lake. For Alternative C,

Table V-13.—Alternatives B and C, 10-percent increase in visitor use
Recreation expenditure data for impact analysis for 1996[1]

IMPLAN sector number	IMPLAN sector description	Average 1988 expenditures ($) Per-person trip	Average 1988 expenditures ($) Indexed to 1996	Total expenditures ($) Based on 209,825 visits
421	Sporting and athletic goods	5.40	7.16	1,502,300
440	Transportation services	6.05	8.02	1,682,800
449	Other retail purchases	3.90	5.17	1,084,800
450	Groceries and beverages	7.70	10.21	2,142,300
454	Purchases of food and drink	5.70	7.56	1,586,300
463	Lodging	7.10	9.49	1,974,500
479	Gas/oil and repairs	14.60	19.36	4,062,200
488	Guide services/other recreation	1.65	2.21	459,500
	Total	52.10	69.18	14,494,700

[1] Borda, Charles, July 1998, *Recreation Economic Analysis, Canyon Ferry Reservoir*, U.S. Department of the Interior, Bureau of Reclamation, Technical Service Center, Denver, Colorado.

the recreation-related expenditures from table V-14 were input into the IMPLAN model to estimate the impact of an increase in recreation use on the local economy. The results for a 20-percent increase in visitor use, due to implementing Alternative C, were $22.0 million (1996 dollars) in total industrial output, 468 full- and part-time jobs, and $7.9 million in labor income. These changes were based on recreation-related expenditures of $15,812,400 by visitors from "outside the local area" (tables V-14 and V-15).

User conflicts may increase because less space per individual is available.

Table V-15 shows a summary of the expected total economic impacts caused by changes in expenditure patterns resulting from implementing the action alternatives at Canyon Ferry Reservoir. Total impacts are made up of direct, indirect, and induced impacts. Recreation-related expenditures are the direct impacts associated with a particular alternative. Total industrial output includes recreation-related expenditures and indirect and induced impacts. Alternative A serves as the baseline for comparison purposes.

Table V-16 displays the changes in the four economic indicators, which were compared to the baseline condition. Changes in recreation use bring about proportional changes in these indicators. However, the effects of these changes are relatively minor. For example, the changes in labor income—or earnings by place of work in table V-13—range from $0.33 million to $1.32 million. These potential changes are minimal (0.04 percent to 0.17 percent) compared to the total earnings for Lewis and Clark County, which was $759.6 million in 1996.

Table V-14.—Alternative C, 20-percent increase in visitor use
Recreation expenditure data for impact analysis for 1996[1]

IMPLAN sector number	IMPLAN sector description	Average 1988 expenditures ($) Per-person trip	Average 1988 expenditures ($) Indexed to 1996	Total expenditures ($) Based on 228,900 visits
421	Sporting and athletic goods	5.40	7.16	1,638,900
440	Transportation services	6.05	8.02	1,835,800
449	Other retail purchases	3.90	5.17	1,183,400
450	Groceries and beverages	7.70	10.21	2,337,100
454	Purchases of food and drink	5.70	7.56	1,730,500
463	Lodging	7.10	9.41	2,153,900
479	Gas/oil and repairs	14.60	19.36	4,431,500
488	Guide services/other recreation	1.65	2.19	501,300
	Total	52.10	69.08	15,812,400

[1] Borda, Charles, July 1998, *Recreation Economic Analysis, Canyon Ferry Reservoir*, U.S. Department of the Interior, Bureau of Reclamation, Technical Service Center, Denver, Colorado.

Table V-15.—Comparison of alternatives
Range of economic impacts due to increase in recreation use from visitors living outside the local area
(1996 dollars)

Unit of measure	Alternative A	Alternative B (+5 percent)	Alternatives B and C (+10 percent)	Alternative C (+20 percent)
Recreation-related expenditures	$13,177,200	$13,835,900	$14,494,700	$15,812,400
Total industrial output	$18,387,000	$19,306,100	$20,225,000	$22,064,000
Number of jobs	390	410	429	468
Labor income	$6,583,400	$6,912,500	$7,241,700	$7,900,000

Source: Bureau of Reclamation and IMPLAN, 1999.

Broadwater County, a much smaller economy, had earnings of $30.4 million for the same year. Yet, the total changes in labor income would still be relatively small (1.1 percent to 4.4 percent), even if the entire change was allocated to Broadwater County.

While a few individuals and firms may benefit from the increases in jobs (20 to 78 jobs), these increases would have little impact on the region's overall economy (39,137 jobs) (table V-10).

Table V-16.—Comparison of alternatives
Net changes in economic impacts due to increase in recreation use
from visitors living outside the local area
(1996 dollars)

Unit of measure	Alternative A	Alternative B (+5 percent)	Alternatives B and C (+10 percent)	Alternative C (+20 percent)
Recreation-related expenditures	No change	$658,678	$1,317,494	$2,635,195
Total industrial output	No change	919,095	1,838,381	3,677,050
Number of jobs	No change	20	39	78
Labor income	No change	$329,081	$658,230	$1,316,564

Source: Bureau of Reclamation and IMPLAN, 1999.

Similar comparisons hold true for industrial output. While total output may increase by $0.9 million to $3.7 million, such increases would be important only for those individuals and firms that are directly involved in recreation-related services. Such increases would have very little effect on the $2,190 million economy of the two counties (Industry Output, IMPLAN 1996 Canyon Ferry).

The impacts presented above represent the conditions that would have been in place had the alternatives been in effect in 1996, a sort of snapshot of annual impacts. Over the 10-year life of the project, the recreation-related expenditures, total industrial output, and labor income impacts would occur each year. The increase in the number of jobs attributable to the alternatives would occur during the first year—assuming the alternative is fully implemented during the first year. After that, no new jobs would be created, but the original increases in jobs would continue to be supported by the higher levels of recreation-related expenditures.

ENVIRONMENTAL JUSTICE

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, dated February 11, 1994, requires agencies to identify and address disproportionately adverse human health or environmental effects of their actions on minorities and low-income populations and communities, as well as the equity of the distribution of the benefits and risks of their decisions. Environmental justice addresses the fair treatment of people of all races and incomes with respect to actions affecting the environment. Fair treatment implies that no group of people should bear a disproportionate share of negative impacts from an environmental action. To comply with the environmental justice policy established by the Secretary, all Department of the Interior agencies are to identify and evaluate any anticipated effects, direct or indirect, from the proposed project, action, or decision

on minority and low-income populations and communities, including the equity of the distribution of the benefits and risks. Accordingly, this section examines the anticipated distributional equity of alternative-associated impacts with respect to potentially affected minority and economically disadvantaged groups.

Affected Environment

The Broadwater and Lewis and Clark County region has a low minority population and a low percentage of population in poverty.

Minority population data for the counties in the study area, Broadwater and Lewis and Clark Counties, Montana, are shown in table V-17. In 1997, the minority population of the region was 4.4 percent, up from 4.3 percent in 1990. Neither county has a large minority population.

American Indian/Eskimo Aleut are the largest minority group in the region and both counties, followed by those of Hispanic origin, Asian/Pacific Islander, and Black.

In 1993, the percent of population below poverty in Broadwater (14.7) and Lewis and Clark (12.2) Counties was less than in the State of Montana (15.2).

Per capita income by Hispanic origin and race for 1989 is shown in table V-18. In Broadwater County, per capita income for the Hispanic and White groups was lower than for the same groups for the State of Montana, while per capita income for the American Indian/Eskimo Aleut and Asian/Pacific Islander groups was greater. Except for the Black group, each group in Lewis and Clark County had more per capita income than the same groups in the State of Montana. Overall, the per capita income for Broadwater and Lewis and Clark Counties is less than for the State of Montana.

Environmental Consequences

Alternative A.—There would be no adverse environmental justice impacts because activities would continue as before.

Alternative B.—As discussed in the "Socioeconomics" section, there would be some increase in economic activities in the region, including increases in income and employment. Positive impacts to the recreation-related sectors could have positive environmental justice impacts on minority and low-income workers. Because of the increase in recreation-related production, these individuals might be able to find new or additional work in the local area. The overall increase in regional income would probably not change the percentage of population in poverty in the region.

Table V-17.—Population, 1990 and 1997

Broadwater County	Total	Hispanic	%	Non-Hispanic White	%	Black	%	Amer Ind Esk/Aleut	%	Asian Pac Islander	%	Minority (non-White)	%
1990[1]	3,336	33	0.99	3,232	96.88	1	.03	65	1.95	5	.15	104	3.12
1997[2]	4,095	43	1.05	3,970	96.95	1	.02	74	1.81	6	.17	125	3.05

Lewis and Clark County	Total	Hispanic	%	Non-Hispanic White	%	Black	%	Amer Ind Esk/Aleut	%	Asian Pac Islander	%	Minority (non-White)	%
1990[3]	47,625	645	1.35	45,539	95.62	160	.33	1,016	2.13	265	.55	2,086	4.38
1997[4]	53,329	700	1.31	50,934	95.51	87	.16	1,302	2.45	306	.57	2,395	4.49

Region	Total	Hispanic	%	Non-Hispanic White	%	Black	%	Amer Ind Esk/Aleut	%	Asian Pac Islander	%	Minority (non-White)	%
1990	50,961	678	1.33	48,771	95.70	161	.32	1,081	2.12	270	.53	2,190	4.30
1997	57,424	743	1.29	54,904	95.61	88	.15	1,376	2.40	313	.55	2,520	4.39

[1] http://govinfo.library.orst.edu/cgi-bin/...e=nm&county=Broadwater&table=Summary+Report
[2] http://govinfo.library.orst.edu/cgi-bin/pe-list?map=01-053.nmc
[3] http://govinfo.library.orst.edu/cgi-bin/...te=nm&county=Lewis & Clark&table=Summary+Report
[4] http://govinfo.library.orst.edu/cgi-bin/pe-list?map=01-051.nmc

Table V-18.—1989 per capita income ($)[1]

	All persons	Hispanic	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Amer Ind Esk/Aleut	Non-Hispanic Asian Pac Islander
Broadwater County	10,125	5,380	10,063	0	15,656	13,000
Lewis and Clark County	12,342	8,654	12,495	5,695	7,278	9,990
State of Montana	14,741	6,021	11,634	7,657	5,422	8,443

[1] http://govinfo.library.orst.edu/cgi-bin/

Alternative C.—Environmental justice impacts associated with this alternative would probably be positive and similar to Alternative B, with slightly more employment opportunities for which minority and low-income individuals could compete.

Cumulative Impacts

No cumulative impacts have been identified.

Mitigation

No adverse impacts are expected; thus, mitigation is not needed.

HERITAGE RESOURCES

Affected Environment

Background.—Since the mid-1940s, both intensive and nonintensive heritage resource surveys have been conducted at Canyon Ferry Reservoir. Most, but not all, of these studies have been carried out to comply with one or more of the many Federal laws and regulations. Most of these laws and regulations direct Federal agencies to manage heritage resources and consider the effects of their projects on prehistoric and historic remains. Other laws (the Archeological Resources Protection Act, for example) are applicable to the general public and prohibit excavation of, or collection of, artifacts from any and all federally owned lands without permission from the Federal agency having jurisdiction.

Federal laws are designed to protect heritage resources for future generations and to promote the scientific study of these resources. Without such study, we would not know of the abiding richness of prehistoric and historic resources associated with Canyon Ferry Reservoir.

In the 1940s, the Smithsonian Institution River Basin Survey, the National Park Service, and Montana State University in Missoula (now the University of Montana) conducted reconnaissance level (nonintensive) archeological surveys of the location of the proposed Canyon Ferry Reservoir. Subsequent to the survey, Montana State University tested and/or excavated at selected sites that would be inundated by the reservoir. This research revealed 22 prehistoric Indian sites, ranging from extensive campsites to caves and rock shelters, tipi rings, and petroglyphs. Some of these sites probably date back several thousand years, while others may have been used by Tribes in more recent prehistoric or early historic times.

During the 1970s and 1980s, several archeological surveys sponsored by the National Park Service and Reclamation were conducted at Canyon Ferry. In addition, an intensive inventory of the Federal land (about 8,500 acres), including the shoreline belt above and below maximum pool level, was carried out under contract with Reclamation (Grieser et al., 1983). Numerous historic, prehistoric, and Paleontological sites were recorded around the reservoir. Many of these sites are now inundated. Also in the 1980s, Reclamation contracted for the analyses of a large collection of artifacts from the reservoir (Grieser, 1987). The analyses indicated that this stretch of the Missouri River has been inhabited or used intermittently for at least 10,000 years.

Since those early surveys, heritage resource inventories have focused on specific projects or problem areas. For example, one survey (Pfaff, 1996) concentrated on historic resources that were not previously recorded. Numerous Class II heritage resource surveys have been completed on or near the cabin sites. Large heritage resource surveys in 1950 and 1987 included the cabin sites. The presence or absence of heritage resources on the cabin sites and immediate area has been well documented.

Prehistoric Period Resources.—All this research has revealed prehistoric sites and use areas that demonstrate the rich heritage of the area. Artifact scatters, fire hearths, caves and shelters, kill sites, and pictographs indicate an intensive use during prehistoric times, although there was no permanent habitation, and there were sites containing tipi rings. Many of the prehistoric sites at Canyon Ferry have been determined to be eligible for the *National Register of Historic Places* (*National Register*). Because of the fragile nature of prehistoric sites, it is extremely important for information to be gathered from these resources before they are destroyed by development or erosion. Such a step will yield information important to our understanding of the prehistory of the region.

Historic Period Resources.—In the 1990s, Reclamation conducted an additional survey of Canyon Ferry, focusing on sites of the historic period. Most of these sites are associated with Reclamation's history at the reservoir, although some are homestead period sites.

During the historic period, Blackfeet, Gros Ventre, and Shoshone Indians are reported to have used the Canyon Ferry area. Early oral history speaks of a major Native American crossing of

the river just north of Townsend, near the mouth of Spring Creek (Greiser, 1987). Indians were reported on the Missouri River bottomlands at the mouth of Beaver Creek, near the mouth of Avalanche Gulch, and at Dry Creek. Most of these groups were trapping and hunting parties.

Although there was some horse stealing from the mining camps, and concern about Indian attacks lingered though the mid-1800s, no major conflicts have been recorded in this area. By the 1870s, Indian traffic through this portion of the valley had virtually ended.

In 1805, Lewis and Clark made three camps in the area. The first was just above the old town of Canyon Ferry, on July 21; the second was on 1 of 10 islands near the mouth of Duck Creek, on July 22; and the third camp was near Townsend, on July 23. On their entry to the area, they describe the mountains suddenly falling away and a beautiful and extensive plain 10 or 12 miles wide, extending as far upriver as the eye could see. As part of the expedition's return trip the following year, Sergeant John Ordway floated downstream through this area.

After the Lewis and Clark expedition, and until the mid-1860s, trappers, traders, and surveying expeditions shared the valley with the Indians.

About that time, gold was discovered in Last Chance Gulch, in Helena. Discoveries were subsequently made on French Bar, just below the current dam site; Cave Gulch; White City, in White Gulch; and Diamond City, in Confederate Gulch, near the crest of the Big Belt Mountains. Cave Gulch was named for the common collapse of its mine shafts. Canyon Ferry Village lies on part of the former site of Cavetown, a village of about 30 hewn-log houses that were abandoned by 1876 (Mattes, 1949). Diamond City was once the most prosperous mining town in Montana. Confederate prisoners, exiled to Montana in 1864, made the first strike here, giving the gulch its name and producing the richest mine on record in the United States. "One day's cleanup netted 700 pounds of gold, amounting to $114,800, taken out by 20 men using wheelbarrows to dump the dirt in sluice boxes."

These discoveries led to a tremendous influx of gold seekers, causing many new mines to be opened in the late 1860s and 1870s—mines and gulches that bear the names of present-day recreation sites at Canyon Ferry—Confederate, White, Cave, Avalanche, Hellgate, and Magpie. At one time during the peak of the gold rush, an estimated 10,000 people were mining the gulches around Canyon Ferry. Silver mining also contributed an influx of miners at this time. Hard-rock mining continued in the area until the early 1900s, but was less lucrative. Those who could not make a living mining turned to the land as a means of survival. This agricultural base proved essential in the early 1890s, when the placer mines were exhausted and the silver market collapsed.

Transportation between the early-day settlements became essential. Diamond City and White Sulphur Springs were connected with Helena by a stage road, a trip of about 2-1/2 hours. The crossing of the Missouri River was by a ferry, established by John Oakes in 1865 and named Canyon Ferry because it was at the point where the river narrowed at Black Rock Canyon. A man by the name of Court Sheriff eventually assumed the ferry operation and held land upon

which a small town grew, associated with the ferry. Remnants of this town were visible until the reservoir was flooded. The Sheriff residence was saved and moved to a site just north of present Canyon Ferry Village, where it serves as a residence. The present Canyon Ferry Village Visitor Center once served as the school house at the old town of Canyon Ferry.

On the east shore, about 6 miles north of Townsend, was the town of Canton, once a supply center for farms and nearby mining communities. Canton was located in the middle of the flat river plain, surrounded by farms. St. Joseph Church, now standing along Highway 284, south of Duck Creek Road, is one of the oldest surviving church structures in Montana, dedicated near Canton in 1876 (Helena Independent Record, July 3, 1949).

Not to be ignored is the relative abundance of agriculture in this Missouri River valley before inundation by the reservoir. Thomas P. Roberts, who made a reconnaissance trip from Three Forks to Great Falls in 1872, recognized this section as "one of the best grazing and agricultural districts of this mountainous territory."

During the 1880s, attempts were made to navigate the upper Missouri River for freight and passenger business. Considerable trade was established by W.F. Wheeler and Judge N. Hilger before undependable revenue and the hazardous conditions of the river halted the endeavors.

Steamboats were also unable to compete with the railroads that served the region by the mid-1880s. Agriculture and small enterprises had an economic base strong enough to keep the region growing, and, in 1894, Helena became the State capitol.

In the early 1890s, several businessmen from Helena proposed a dam at Stubbs Ferry, 10 miles below the present Canyon Ferry Dam, but plans were unsuccessful. Helena Water and Electric Power Company, the second group wanting to use the waters of the Missouri River, started dam construction just above old Canyon Ferry in 1896. The wood and earth dam and powerplant were finished in October 1898, creating Lake Sewell, 7 miles long and 2 to 3 miles wide. The lake submerged portions of the Sheriff property, other ranch property, and portions of the old stage line. The river below the dam was so rough that the ferry had to be abandoned, and the river had to be crossed in rowboats, upstream, until a bridge was built in 1899. Electrical power was supplied from the dam to the smelter in east Helena. The newly formed Missouri River Power Company purchased the dam and power station in December 1900. Because of financial problems, the company merged with United Missouri River Power Company in 1911, becoming Missouri River Electric and Power Company later that year. In 1912, the dam and powerplant was again sold, this time becoming property of the new MPC.

The dam and powerplant remained in the control of MPC until early 1950, when Reclamation purchased it. The purchase of the old dam and powerplant was to make way for a new dam that had been started in July 1949, in spite of protest from farm families whose lands would by flooded by the project. The purchase was made as part of the Missouri River Basin Project, authorized by the Flood Control Act of December 1944. The project was finished in April 1954, when the plant began to produce electricity.

Other remnants of history exist in the area's cemeteries. The reservoir inundated the former Beaver Creek Cemetery and separated Canyon Ferry Cemetery from the shore on what is now Cemetery Island. The Beaver Creek graves were moved to Helena, Townsend, and Winston, according to the wishes of families. The oldest grave at the Beaver Creek site was that of young Alice Wimpey, who, according to hearsay, died on a wagon train en route to Helena in 1867 (Helena Independent Record, November 24, 1949). About 50 graves remain on Cemetery Island. Many of the graves are from the late 1800s, the oldest dating back to 1874. Vandalism and neglect of the cemetery have prompted citizen groups to initiate a program to recognize, preserve, and maintain the site.

Construction of Canyon Ferry Dam and Reservoir resulted in numerous changes to the cultural landscape. Most of the historic homesteads were either obliterated, reclaimed, or inundated, and are no longer visible. Those above the reservoir usually contain no architecture today but show only the foundations of structures. The history of the families who inhabited these sites remains to be written, and the archeological information contained in these sites may help to write that history.

Reclamation is also responsible for historic remains associated with the construction of the dam. Among these are the Government Camp buildings. Within the Government Camp is one of the most significant historic sites at Canyon Ferry. This is the Canyon Ferry School House, now a Visitor Center and museum. This historic structure is one of the best preserved turn-of-the-century school houses in the area. Although it was moved from the town of Canyon Ferry to its present location in the camp in 1949, it has been determined to be of *National Register* significance for its architectural value. Although many other historic sites at Canyon Ferry have been evaluated as potentially eligible for the *National Register,* none are currently listed.

Future Heritage Resources Focus.—The Federal Government is required by law and regulations to protect and preserve significant heritage resources. To this end, all Federal undertakings are subject to compliance with the process required by the National Historic Preservation Act and its regulations in 36 CFR Part 800. These mandates require that the Government consider the effects of its actions on prehistoric and historic resources before implementing those actions. Since 1988, Reclamation has had more than 150 undertakings at Canyon Ferry. An integral part of this process is the review by the Montana State Historic Preservation Office (SHPO). If the project is determined to have an effect, the Government must seek measures which will reduce or mitigate the effect. The SHPO is an active participant in the compliance process, as are Native American Tribes and other interested parties.

Paleontological Resources.—Paleontological resources are, by their very nature, fragile and nonrenewable resources which are protected by law. In 1986, a paleontological survey was conducted at Canyon Ferry, and several locales of Tertiary age were recorded. Since that survey, several paleontological research projects have taken place. Each project focused on specific vertebrate and nonvertebrate remains at the reservoir. Researchers probably will

continue to conduct investigations as additional sites are exposed by erosion. For example, in 1998, conscientious recreationists reported to Reclamation a new locale which will be investigated.

Environmental Consequences

Alternative A.—Heritage resources would be managed at the minimum level required by law.

Alternative B.—Enhancement of the natural resources, with a moderate increase in recreation development, would impact the heritage resources in various ways. Stabilization of vegetation and soil erosion will result in preservation of heritage resources on or near the surface of the soil. Fencing of boundaries and control of traffic will also limit the impact on heritage resources. Heritage resource inventories for areas of undertakings will add to the knowledge base for the Canyon Ferry area.

Alternative C.—Alternative C would result in development of a program to monitor heritage resource sites and implement a systematic process to report damage. A specific heritage resources management plan would be developed and implemented. This would include periodic and systematic inventories for heritage and paleontological resources. A public archeological program to enhance visitor experiences through interpretive signage and other measures would be developed. Development of a heritage resource management plan would protect heritage resources for the long term.

Cumulative Impacts

Impacts on heritage resources tend to be cumulative. Slow erosion over time will completely destroy an archeological site. Increased usage of an area, which can disturb existing vegetation and, thus, increase erosion, will also destroy heritage resources. Direct impacts, such as artifact collection, vandalism, and excavation, also increase with larger numbers of people using an area.

Mitigation

Existing statutes require that heritage resources be protected. As impacts increase over time, measures will have to be taken to either prevent or mitigate impacts on the resources. Although some impacts may be avoided by project relocation, other impacts will require mitigation.

Mitigation may include activities such as excavations, detailed recordation, or development of interpretive areas. Specific mitigative measures will be developed on a case-by-case basis, with consultation as required by the National Historic Preservation Act and other statutes.

INDIAN TRUST ASSETS

Affected Environment

Indian Trust Assets (ITAs) are legal interests in property held in trust by the United States for Indian Tribes or individuals. Examples of things that may be ITAs are lands, minerals, hunting and fishing rights, and water rights. The United States has an Indian trust responsibility to protect and maintain rights reserved by or granted to Indian Tribes or Indian individuals by treaties, statutes, and Executive orders; these rights are sometimes further interpreted through court decisions and regulations. The trust responsibility requires that all Federal agencies, including Reclamation, take all actions reasonably necessary to protect trust assets.

Environmental Consequences

Alternative A.—Under the No Action Alternative, Reclamation will continue to perform activities as before and will continue to consult with Tribes as noted in the NEPA regulations and in accordance with the ITA policy.

Alternative B.—Any of the moderate development proposals in this alternative would require more consultation with Tribes. There might be instances where proposed activities would be revised or altered if assets are identified in the area. Research should be done to confirm the ITAs on the lands managed by Reclamation.

Alternative C.—With the additional development listed in this alternative, more potential conflicts with ITAs are possible. As with Alternative B, research should be done to confirm the ITAs on the lands managed by Reclamation.

Cumulative Impacts

No cumulative impacts have been identified.

Mitigation

If consultations determine adverse impacts are occurring (Alternative A), or would occur from implementation of any action alternative, Reclamation would seek means to avoid adverse impacts. If adverse impacts cannot be avoided, Reclamation would provide appropriate mitigation or compensation.

INDIAN SACRED SITES

Affected Environment

Indian sacred sites are defined in Executive Order 13007 as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian Tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, and Indian religion: provided that the Tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site." Federal agencies are required, to the extent practicable, to accommodate access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sites.

Environmental Consequences

Alternative A.—Under the No Action Alternative, Reclamation will continue to perform activities as before and will continue to consult with Tribes.

Alternative B.—Any of the moderate development proposals in this alternative would require more consultation with Tribes. There might be instances where proposed activities would be revised or altered if assets are identified in the area.

Alternative C.—With the additional development listed in this alternative, more potential conflicts with ITAs are possible. As with Alternative B, research should be done to confirm the location of sacred sites on the lands managed by Reclamation or the absence of such sites.

Cumulative Impacts

No cumulative impacts have been identified.

Mitigation

Executive Order 13007 does not authorize agencies to mitigate for the impact of their actions on Indian sacred sites. However, it does direct them to avoid adverse impacts when possible. If consultations determine that adverse impacts are occurring (Alternative A), or would occur from implementation of any action alternative, then Reclamation would seek means to avoid adverse impacts.

UNAVOIDABLE ADVERSE IMPACTS

Unavoidable adverse impacts are assumed to be long-term impacts to resources that would be affected by implementing the RMP/EA. No unavoidable adverse impacts are expected as a result of this Federal action.

RELATIONSHIP BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

For this Federal action, short term is defined as the 10-year planning life of the RMP. Implementation strategies proposed in the RMP will be accomplished within the 10-year timeframe. Even though rehabilitating and revegetating certain areas to their natural state may require more than 10 years, that process will begin during the planning life of the RMP/EA (short term). Long term is defined as any time period beyond the 10-year planning life of the RMP and the remaining life of the Canyon Ferry Unit of the Pick-Sloan Missouri Basin Program. As long as the Canyon Ferry Unit of the Pick-Sloan Missouri Basin Program is used for water storage for agriculture, flood control, power generation, and other legal purposes, pressure on the natural resources within the study area will continue. This long-term pressure can be attributed to: (1) Reclamation's efforts to accommodate visitor use through development of public use facilities and (2) the use of the dam and reservoir for its beneficiaries (i.e., agri-cultural, recreational, power, and fish and wildlife users).

The management actions detailed in this document are intended to reverse the deterioration of the environment that is occurring under the current conditions. It is assumed that the short- and long-term goals and objectives for managing the area would not change over time and that there will be no loss of productivity of the natural and social environment.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Irreversible and irretrievable commitments are considered to be the permanent reduction or loss of a resource.

Implementation of any of the alternatives would not result in any irreversible loss of resources. Any irreversible commitment of resources would be attributed to the use of Federal lands for the original construction of the dam, reservoir, and associated conveyance features. These resources have already been irreversibly committed for the life of the Canyon Ferry Unit of the Pick-Sloan Missouri Basin Program.

No irretrievable commitments of resources are considered under any of the action alternatives. Although the action alternatives suggest different degrees of development and increased visitor use, they are intended to either enhance or protect the wildlife and the recreational and physical resources within the Canyon Ferry Reservoir study area. Implementation of the No Action Alternative may have negative and irreversible effects on wildlife and fish habitat, soils, and water quality. Additional information and analysis would be needed to determine if the No Action Alternative would so negatively affect the existing resources that the loss of resources would be considered irretrievable. If the RMP were not implemented, the irreversible commitment of existing resources would essentially be the same as if the No Action Alternative were implemented.

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Chapter VI

Resource Management Plan

INTRODUCTION

A formal planning process was followed in completing this planning and environmental compliance document. Based on the issues and concerns identified, the Bureau of Reclamation (Reclamation) analyzed possible management alternatives for Canyon Ferry Reservoir. After analyzing the three alternatives, the study team selected Alternative B (Natural Resource Enhancement With Moderate Recreation Development) to recommend as the preferred management alternative. The preferred management alternative will be the Resource Management Plan (RMP) and is described in this chapter. This chapter describes the goals formulated to address the issues and concerns, the associated objectives formulated to successfully achieve the goals, and the actions to facilitate meeting the objectives.

Based on public input and internal review of Reclamation programs and policy, the actions highlighted in this chapter are actions that should be implemented within the study area. The overall goal is to implement the actions within the 10-year planning period; however, implementation depends on, among other things, available funding, cooperation of other involved entities; cost-sharing efforts; results of visitor use surveys; results of recreation master plans prepared for individual recreation areas; results of the Facilities Condition Assessments; and the success of the Canyon Ferry working group in resolving conflicts and providing valuable input to Reclamation in its efforts to prioritize the actions for funding and implementation. This chapter also describes the process required to amend and modify the RMP.

PLAN DEVELOPMENT

Reclamation has the primary stewardship responsibility to manage the lands under its jurisdiction in accordance with existing laws, policies, and guidelines. In cases in which Reclamation lands are directly managed by others (e.g., Montana Fish, Wildlife and Parks [MFWP]), Reclamation exercises oversight responsibility to ensure that the managing agency fulfills its responsibilities pursuant to the terms and conditions of the management agreement between both parties.

Key objectives for development include protecting fish, wildlife, and biodiversity; preserving the environmental resources and cultural values of historical places; providing for outdoor recreation; and protecting the health and safety of visitors. These objectives, as well as the actions, must be met in an environmentally and economically sound manner.

A primary step in the planning process step was to identify goals and objectives to address the issues and concerns and resolve identified problems. Many of the goals, objectives, and actions were formulated in response to basic land management principles and concepts and Reclamation policy. Pursuant to National Environmental Policy Act (NEPA) requirements, potential effects of implementing certain combinations of actions (i.e., "alternatives" or management plans) were analyzed and the results disclosed. The basic challenge was to select those combinations of goals, objectives, and actions that were widely accepted by the public and agency personnel, could be implemented without serious conflicts, within the environmental resource limitations, and consistent with existing policy, laws, and project purposes.

The RMP assumes that the existing and future rules and regulations of Reclamation and MFWP for managing Canyon Ferry Reservoir will be applied. See appendix H for a partial list of applicable Federal laws, regulations, and Executive orders.

SUMMARY OF ELEMENTS IN THE RESOURCE MANAGEMENT PLAN

As discussed in chapter IV, a Reclamation interdisciplinary team determined the elements and/or actions that would best address the identified issues. Table VI-1 summarizes the elements and/or actions contained in the preferred RMP.

Table VI-1.—Summary of elements in the RMP

Alternative elements	Natural Resource Enhancement with Moderate Recreation Development (Preferred RMP Alternative)
Access for People With Disabilities	Continue to conduct accessibility evaluations of all facilities and programs (to include evaluation of offices). Develop an adequate number of accessible day-use and campground sites. Make all or portions of new trails accessible to people with disabilities. Make interpretive displays/information accessible to people with disabilities. All upgrades and/or new developments will meet Americans with Disability Act standards.
Airport	Reclamation will continue to work with the Montana Aeronautics Division and other interested parties on the disposition of the Silos area airport. Reclamation will determine the need to retain the airport lands for Reclamation project purposes before any land transactions occur.

Table VI-1.—Summary of elements in the RMP (continued)

Alternative elements	Natural Resource Enhancement with Moderate Recreation Development (Preferred RMP Alternative)
Boat Ramps	Construct boat ramp at Silos pursuant to Broadwater County's development plan and Title X. Pursue replacing boat ramps at Kims' and Yacht Basin and extend ramp at Shannon. Goose Bay boat ramp will be replaced in 2003. Based on the Facilities Condition Assessment and a site-specific recreation master plan, upgrade certain boat ramps (including lengthening) to allow for safe access when reservoir is low and when there are high winds. Consider upgrading the boat ramp and parking area at Hellgate Recreation Area. Provide adequate boat docks at boat ramps to prevent user conflicts and to address safety concerns, such as high winds. Evaluate the need to install a boat ramp at Duck Creek.
Buoys (also see "Health and Safety")	Install buoys at designated swim beaches, boat launch areas, and other places, as needed, and comply with MFWP regulations for designating no wake zones.
Campgrounds	Develop new (and upgrade existing) overnight campsites at Silos Recreation Area, pursuant to Broadwater County's development plan and Title X. Continue operation and maintenance (O&M) of other campgrounds at the existing level. Reclamation will rehabilitate and/or expand existing campgrounds based on the results of the Facilities Condition Assessment and after a site-specific recreation master plan has been prepared for each campground. Appropriate setbacks from streams and lakes will be maintained when campground developments occur. Based on the results of the Facilities Condition Assessment and the recreation master plan, Reclamation will first look at rehabilitating and/or expanding the campgrounds at White Earth, Hellgate, Indian Road, Riverside, Jo Bonner, Court Sheriff, and Chinamen's Gulch. An immediate need to focus on these recreation sites first was identified during the planning process used to prepare this RMP/EA. Based on the results of the Facilities Condition Assessment and completion of the site master plan for Confederate Bay, consideration will be given to closing and revegetating roads, installing vehicle barriers, and signing needs along State Highway 284. The scope of rehabilitation and/or expansion efforts at other recreation sites will be assessed on a case-by-case basis and after conducting a Facilities Condition Assessment and preparing individual site master plans.

Table VI-1.—Summary of elements in the RMP (continued)

Alternative elements	Natural Resource Enhancement with Moderate Recreation Development (Preferred RMP Alternative)
Carrying Capacity Limitations	Capacity limits would be determined prior to major capital investments. Initiate two University of Montana studies to identify social and facility carrying capacity issues and to assist in monitoring capacities. Use Geographic Information System mapping to avoid exceeding environmental capacities and to aid proper site planning to address physical carrying capacity issues.
Concessions	Any proposals to provide new commercial services must first be presented to, and evaluated by, Reclamation. If approved by Reclamation, the opportunity to provide the new commercial service should be competitively offered to prospective operators. Work with Broadwater County to establish an appropriate concession operation at Silos. Reissue existing concession contracts pursuant to Reclamation policy. Kim's and Yacht Basin Marina will be offered extensions on their concession contracts to allow Reclamation time to complete a Commercial Services Plan. Identify existing guides and outfitters doing business at Canyon Ferry Reservoir and issue special use permits, if appropriate.
Day-Use Areas	Develop new day-use facilities at Silos Recreation Area pursuant to Broadwater County's development plan. Continue O&M of other day-use areas at the existing level. No existing day-use areas will be converted to overnight campgrounds. Existing day-use areas would be upgraded and/or expanded based on the results of a Facilities Condition Assessment and preparation of individual site master plans. Expand and improve the day-use site below the dam at Riverside based on the results of the Facilities Condition Assessment and site master plan. Based on the results of the Facilities Condition Assessment and after completion of a site master plan for Cemetery Island, consideration will be given to improving the existing trail, installing information signs, and investigating alternatives for pumping the existing toilets. Appropriate setbacks from streams and lakes will be maintained when day-use developments occur.
Deep Water Bay	Develop the deep water bay at Broadwater Bay (Silos).

Table VI-1.—Summary of elements in the RMP (continued)

Alternative elements	Natural Resource Enhancement with Moderate Recreation Development (Preferred RMP Alternative)
Eagles	Continue cooperating with the Montana bald eagle working group. Continue with the seasonal closure of Eagle Bay Drive during bald eagle migration if the eagle count is above 50. Continue to cooperate with the Hauser Lake Bald Eagle Committee. Consider providing improved eagle viewing facilities at Riverside Recreation Area, as needed.
Erosion Control	Continue current soil erosion-control methods. As part of implementing Title X, continue working with a shoreline management committee of concerned individuals and entities on developing input on erosion-control methods for Reclamation to consider. Enforce off-road vehicle (ORV) closures, particularly in areas sensitive to erosion and where impacts to fish and wildlife could occur. Implement program to control shore erosion adjacent to public roads, Canyon Ferry Unit Project facilities, and developed recreation areas where there is a public health and safety concern. Gabions and breakwalls or other erosion-control techniques will be used to protect shorelines, where needed. Reclamation will pursue fencing the exterior boundaries to prevent livestock trespass and identify human-use areas. Reclaim areas closed to ORV use and to prevent unauthorized access. Reclamation will initiate riparian protection measures at developed recreation areas.
Fees	Establish fees based on those at similar sites in the area that offer similar services. Evaluate a variety of fee structures to accommodate a wide variety of users. Evaluate the type of use at Indian Road Campground to determine if a fee station is needed for the use of the campground and day-use facilities. Promote the Golden Age Passport Program. Investigate the feasibility of establishing one user pass that is good for multiple areas managed by a variety of entities.
Fire Rehabilitation Efforts	Reclamation will implement the goals set forth in the Buck Snort Fire Burned Area Rehabilitation Plan and EA prepared by Reclamation and the Bureau of Land Management. Reclamation will initiate management actions to achieve the goals of the plan. Rehabilitation efforts will be completed by the end of 2003. Continue to follow the updated 2001 Federal Wildland Fire Management Policy and the January 2001 Secretary of the Interior's policy letter and prepare a Fire Management Plan. Work with remaining lease holders to permit the removal of slash, underbrush, and dead and downed timber to reduce fire hazards.

Table VI-1.—Summary of elements in the RMP (continued)

Alternative elements	Natural Resource Enhancement with Moderate Recreation Development (Preferred RMP Alternative)
Fisheries	Work with MFWP to identify areas needing closure. Continue to work with MFWP on their perch habitat program for the south end of the reservoir. Work with MFWP to identify opportunities for fisheries enhancement such as: – Montana Fish and Wildlife Conservation Trust Fund fishery enhancement projects – Setbacks for recreation areas – Area closure signage
Habitat Improvement on Lands Other Than Wildlife Management Areas (WMAs)	Identify opportunities for habitat enhancement around the reservoir. Fund and develop sites identified. Consult with MFWP on potential habitat improvement programs on lands outside the WMA.
Health and Safety	Continue to post rules and regulations in campgrounds, at boat ramps, and at other visitor contact areas. Provide sanitation facilities and trash receptacles, as needed. Promote the Crime Witness Program. Some areas above and below the dam will be closed for public safety and facility security purposes. Health and safety concerns will be a high priority when implementing future manage-ment actions detailed in the RMP. Work with MFWP to establish no wake zones by placing buoys at swim beaches, developed recreation areas, boat ramps, and other areas that need special protection. Work with MFWP and the CGAUX to improve enforcement of watercraft safety rules and regulations and to enhance their existing programs. Review monitoring procedures at campgrounds (camp hosts, etc.) Post appropriate warning signs to warn visitors of potential hazards. Ensure that existing emergency services are adequate and proper notification and response procedures are in place. Repair or replace faulty septic systems when deficiencies are identified. Establish policy and "no shooting" areas to protect visitors and capital improvements. Install dry fire hydrants at several locations in cooperation with the Broadwater County Rural Fire District.

Table VI-1.—Summary of elements in the RMP (continued)

Alternative elements	Natural Resource Enhancement with Moderate Recreation Development (Preferred RMP Alternative)
Heritage Resources	Continue National Historic Preservation Act compliance for Federal actions. Continue to conduct opportunistic inspection of sites and locales as personnel and time are available. In consultation with the Montana State Historic Preservation Office, assess adequacy of existing heritage resource inventories and conduct intensive surveys in areas not adequately covered.
Hunting	Develop plan for more WMAs to enhance habitat for game species.
Integrated Pest Management	The comprehensive weed management plan established in 1993 will be followed and updated as necessary. Will continue the weed control agreement with Broadwater County and supply annual funding to the county. Work with Lewis and Clark County on formalizing a long-term weed control agreement and supply annual funding to the county. Review all integrated pest management practices with customers and partners.
Law Enforcement (also see "Health and Safety")	Continue to provide law enforcement pursuant to signed and current agreements with local agencies. Under the terms of the signed and current agreements, work with local law enforcement agencies to increase their law enforcement efforts.
Management of Reservoir Lands	Continue to investigate the feasibility of having a non-Federal or another Federal partner manage the recreation resources on reservoir lands. In lieu of a non-Federal or another Federal management partner, Reclamation will manage recreation and other land resources. Reclamation will provide additional on-site staff to manage the land, recreation, and concession activities and programs. Continue to propose an agreement with Broadwater County for the development and future management of the Silos Recreation Area.
Nongame Birds	Reclamation may consider updating the bird species list of the Canyon Ferry area to include WMAs.
Pheasant Habitat Improvement	Continue working with Pheasants Forever to develop additional habitat along east shore.

Table VI-1.—Summary of elements in the RMP (continued)

Alternative elements	Natural Resource Enhancement with Moderate Recreation Development (Preferred RMP Alternative)
Policy Development and Land Use Strategy	Conduct Facilities Condition Assessment of existing facilities. In cooperation with the Canyon Ferry Recreation Association (CFRA) and other interested parties, Reclamation will establish a policy for the public use of the areas between private lease lot lands and the water surface. As provided in the Canyon Ferry Unit, Montana, Cabin Lease Lots Sale Final EA and FONSI, February 2002, in cooperation with the CFRA and other interested parties, Reclamation will establish procedures for approving docks authorized by Title X and establishing design and construction standards. Based on review and evaluation of existing facilities, rehabilitation will be emphasized before development of new facilities. Consider soil conditions and other limiting factors when placing future facilities. Reclamation will conduct two user surveys during the 10-year planning life of the RMP. Reclamation will establish a working group to assist in resolving Canyon Ferry issues that may occur. Reclamation will work with the Broadwater Stream and Lake Committee, Broadwater County, and Townsend on potential developments at Indian Road Recreation Area. Reclamation will investigate the possibility of entering into a Memorandum of Understanding with the U.S. Forest Service for operating an ice-skating rink on the ponds at Indian Road Recreation Area. Based on the results of the Facilities Condition Assessment and other factors, prepare site-specific recreation master plans for each recreation area needing changes. Placement and construction of utilities will be considered on a case-by-case basis. Emphasis will be placed on minimizing impacts to the environment. Abandoned/unlicensed vehicles and equipment left in campgrounds for extended periods of time should be removed. A policy addressing this issue should be established and enforced.
Pollution Control (also see "Health and Safety")	On Reclamation lands, repair or replace faulty septic systems as deficiencies occur. Ensure fueling facilities are constructed to meet fire codes. Investigate the feasibility of requiring future concessionaires to install recreational vehicle dump stations and fish cleaning stations. If feasible, implement the action. (*Note*: Kim's and Goose Bay concessionaires currently have dump stations).

Table VI-1.—Summary of elements in the RMP (continued)

Alternative elements	Natural Resource Enhancement with Moderate Recreation Development (Preferred RMP Alternative)
Prime Irrigated Soils	Locate development areas to avoid concentrations of prime farmlands.
Public Education and Information and Visitor Center	Continue at current level. Proactively educate cabin site owners, concessionaires, campers, boat users, and other visitors on the appropriate use of Federal lands. Supply needed maps, brochures, pamphlets, and expanded Internet information services to the public. Continue to operate and maintain the Visitor Center.
Raptors	Require burying powerlines as a condition to issuing special use permits on Reclamation lands.
Remote Areas	Remote public use areas would continue to be managed at the current level. Maintain sufficient access to existing remote areas with legal access. Monitor public use at remote sites to determine the need for providing sanitation facilities or other improvements and restrictions.
Restrooms	Install restrooms at new trailheads. The need for facilities will be evaluated at Duck Creek and other campgrounds. Investigate methods of pumping existing toilets on Cemetery Island. Provide sanitary facilities at historical remote use sites, as needed. Upgrade existing restrooms at Hellgate and Riverside Recreation Areas and at other areas based on the results of the Facilities Condition Assessment and the site-specific recreation master plan. Incorporate the existing restroom on the north side of White Earth Campground into any campground expansion efforts.
Shorebirds	Coordinate shorebird survey with State piping plover survey. Use information from the survey to help identify and propose potential shorebird habitat enhancement projects for funding.

Table VI-1.—Summary of elements in the RMP (continued)

Alternative elements	Natural Resource Enhancement with Moderate Recreation Development (Preferred RMP Alternative)
Signs	Repair and/or replace old and deteriorated signs. In cooperation with the CFRA, provide signs to identify public use areas between private lots and the water surface. Inventory signs and identify all signing needs, including those for all roads and recreation sites. Provide signs with rules and regulations governing use of Reclamation lands and facilities such as campgrounds, boat ramps, and shoreline areas, including cabin areas. Signs will state the process used to identify and remove abandoned vehicles from the reservoir area. Consider placing interpretive signs in areas with interesting geologic features and at locations with outstanding environmental resources. Consider providing informational and directional signage to improve traffic flow and facility use. Provide warning signs to protect visitors.
Trails	Reclamation will continue to work with Broadwater County on establishing a non-motorized trail from Indian Road to Silos. Consider improving existing trail on Cemetery Island. Consider developing a nonmotorized, multiuse trail connecting White Earth and Crittendon (includes horses, hikers, nonmotorized bikes, cross-country skiing, and wheelchairs). Consider developing a small trail at White Earth on the south side of the peninsula.
Vehicular Access and Roads (also see "Remote Areas")	Reclamation will establish criteria for the closure of roads that cause damage to environmental resources and habitat. Close roads on Reclamation lands that provide reservoir access but do not have legal access across private lands. Provide improved existing public access to areas identified by the public. Provide sufficient year-round access for winter recreation activities. Maintain existing access to remote sites.

Table VI-1.—Summary of elements in the RMP (continued)

Alternative elements	Natural Resource Enhancement with Moderate Recreation Development (Preferred RMP Alternative)
Vehicular Access and Roads (also see "Remote Areas") (continued)	Investigate alternatives to provide legal access to Hole in the Wall Bay (Galzagorry Road). Evaluate O&M program for roads to achieve standards of safety and resource protection. Depending on eagle counts during migration periods, maintain closures of Eagle Bay Drive and Riverside Campgrounds. Seek cooperative partnerships for developing and maintaining roads. Work with Federal, State, and county highway departments on improving or paving roads using TEA-21 funds. Work with the Montana Department of Transportation and Lewis and Clark County on ways to improve safety on Canyon Ferry Dam Road (Highway 284). Close all ORV areas pursuant to existing regulations. Depending on the results of the Facilities Condition Assessment and site-specific recreation master plan, consider realigning the access road into Indian Road Recreation Area. Reclamation will work cooperatively with other road users and entities to consider new cooperative initiatives for road development and maintenance. The cooperative initiatives may provide cost-share opportunities commensurate with past funding amounts to upgrade East and West Shore Drives beyond the existing condition.
Volunteers	Volunteer campground host program would continue. Additional volunteers would be solicited by Reclamation to assist in trail O&M, litter cleanup, and Visitor Center operations. Camp host program will be evaluated to identify possible improvements.
Warning Systems	Continue the warning system established by the CGAUX. Work with the CGAUX to establish additional warning systems in the reservoir area.
Watchable Wildlife	Continue the bald eagle viewing program. A long-term watchable wildlife program for the Canyon Ferry area may be considered.
Water Quality Monitoring Program	Continue the long-term water quality monitoring program. Work with the State of Montana to prepare a total maximum daily load plan for Canyon Ferry Reservoir and the river immediately above the reservoir.

Table VI-1.—Summary of elements in the RMP (continued)

Alternative elements	Natural Resource Enhancement with Moderate Recreation Development (Preferred RMP Alternative)
Water Quality Monitoring Program (continued)	Monitor water quality at recreation sites and other areas, as appropriate. Data collected will include nutrient samples, zooplankton, phytoplankton, chlorophyl, and other parameters. Source Water Protection Areas being developed by Montana DEQ will be considered when implementing the management actions. These areas will be designated as environmentally sensitive areas.
Wildlife	Work with MFWP and other wildlife entities to identify projects on Canyon Ferry lands that qualify for Montana Fish and Wildlife Conservation Trust funds.
Wildlife Management Areas	Work with MFWP to identify potential new management areas. Determine if land should be added to MFWP WMA. Amend existing agreements to include new areas, if appropriate. Wildlife management plans will be prepared for specific areas identified for management by MFWP if new areas are identified.

ACTIONS TO IMPLEMENT THE RESOURCE MANAGEMENT PLAN

General Actions

The following are general actions identified during the planning process to facilitate management of Canyon Ferry Reservoir and achieve the goals and objectives established for the study area. These actions apply to all lands within the study area. More specific actions are detailed later in this chapter.

- **R** Reclamation will continue to operate Canyon Ferry Reservoir and Reclamation lands adjacent to it for the purposes for which the project was authorized.

- **R** Reclamation will adhere to existing and future Federal, State, and county laws, regulations, and ordinances, including accessibility regulations and guidelines.

- **R** Decisions will be made for the benefit of the project and the general public.

- **R** Reclamation will provide additional on-site staff to manage the land, recreation, and concession activities at Canyon Ferry Reservoir.

- **R** Visitor health and safety will be the primary focus when constructing or upgrading needed facilities and providing visitor use opportunities.

R Reclamation will ensure that public use and facility development is consistent with the goals and objectives of the RMP.

R In cooperation with concerned parties, Reclamation will establish a working group to work with Reclamation to identify potential options to resolve general Canyon Ferry Reservoir issues and implement RMP objectives.

R Reclamation will conduct periodic land management and recreation reviews to ensure that the lands are being managed pursuant to the existing agreements and land use authorizations.

R Reclamation will monitor visitor use to identify user conflicts and investigate corrective measures to prevent further conflicts.

R Reclamation will comply with its policies, directives, and standards.

SPECIFIC ACTIONS

Goals and Objectives

Goals and objectives for the RMP were developed in direct response to the issues and concerns identified during scoping. Each goal is the desired future condition Reclamation wishes to achieve as the RMP is implemented. Each goal is accompanied by a set of objectives that Reclamation should pursue to attain the goals (desired future condition).

Actions

In addition, each set of goals and objectives outlined in this chapter is accompanied by certain actions that will facilitate completion of the objectives. The actions listed below are essentially the same actions identified in table VI-1; however, the actions have been grouped into different issue categories to show the relationship of the actions to the goals and objectives.

Many of the actions may be specific; others are broad or are intended to initiate other actions that are needed to achieve the desired future condition. Examples of other actions needed are to develop: (1) wildlife management plans for potential new Wildlife Management Areas (WMAs), (2) accessibility evaluations, (3) criteria for the closure of roads, (4) recreation Facilities Condition Assessments and site-specific recreation master plans, and (5) lease lot dock and shoreline use guidelines.

Implementation of the action(s) is the sole responsibility of Reclamation contingent upon appropriations from the Congress and other funding sources, if available. Some actions may be accomplished in cooperation with other entities or organizations.

The following section lists the concerns, goals, objectives, and actions for each of the seven issue categories previously described in chapter III. The seven issue categories are access management, recreation management, heritage resources, health and safety, wildlife resources, public information, and land use.

Access Management

The issues and concerns identified in this issue category focused on improving signing, maintaining existing roads to provide safe access, providing adequate year-round access for visitors, and closing illegal access roads to the reservoir. It also focused on providing only necessary and appropriate access to or between designated recreation areas (table VI-2). Meeting the goals and objectives established for this issue category will achieve safe access to, within, and from lands within the study area.

Table VI-2.—Summary of issues and concerns and associated goals and objectives for Canyon Ferry RMP/EA

Access management issue category		
Issue or concern	Goals	Objectives
Maintain/improve existing roads	Implement program to provide reasonable maintenance of existing roads	Implement an operation and maintenance program consistent with available funding Develop partnerships for needed road maintenance and enhancements Develop a signage plan for the Canyon Ferry Reservoir area
The reservoir does not have adequate access	Provide adequate access to recreation areas	Use established Federal criteria in evaluating roads for public use Develop and implement procedures for closing off-road vehicle roads/ areas and roads that do not have legal access Evaluate the suitability of existing roads for year-round access

Access Management – Actions

R Reclamation will establish criteria for closing roads and trails causing environmental resource and habitat damage. In addition, roads that provide access to the reservoir and that cross private property illegally will be closed to reservoir access. Reclamation will coordinate the development of its road closure criteria with other Federal and State agencies.

R Reclamation will close all off-road vehicle (ORV) use areas pursuant to existing Federal law and Reclamation policy. Exceptions will be made pursuant to 43 CFR Part 420 (Off-Road Vehicle Use).

R Reclamation will evaluate its operation and maintenance program for roads to achieve appropriate standards of public safety and resource protection. Established standards will also be followed if new roads are constructed to provide safe and legal access to the reservoir area.

R Reclamation will identify existing roads that should provide year-round access (i.e., winter access). New roads to provide year-round access will not be constructed.

R Reclamation will identify roads and trails that will remain open for public use. These roads/trails have provided historic public access to the reservoir for individuals who desire a less-confined recreation experience. However, these roads/trails must have legal access across private lands before such roads are allowed to remain open for public use. Roads that are left open will be monitored by Reclamation to determine the degree of use and potential resource damage that could occur.

R Reclamation will seek cooperative partnerships for developing and maintaining public access roads to the reservoir. Reclamation will cooperate with the Federal, State, and county highway departments to evaluate the feasibility of securing funds under the Transportation and Efficiency Act for the 21st Century or other funding sources for paving Jim Towne Road and the 3-mile section between Magpie and the county line, as well as funds for improving access roads to the reservoir and within the study area covered by the RMP/EA. Reclamation will also work with other entities, including the Canyon Ferry working group and the Canyon Ferry Fire Service Areas Board of Trustees, to resolve public safety access issues on East and West Shore Drives.

R Reclamation will work with the Montana Department of Transportation and Lewis and Clark County on improving safety conditions on Highway 284 at the north end of the reservoir near the dam. Emphasis will be given to signing and establishing turning lanes into recreation areas.

R Reclamation will establish procedures which will address potential requests from private subdivisions for access to the reservoir. Generally, Reclamation will not grant additional access to special interest groups or private parties over and above access that is already provided to the public.

R Reclamation will, in cooperation with the adjacent landowner(s), research the ownership of the road that leads to the Hole in the Wall fishing area to determine if the public has legal access to this area.

R Reclamation will provide proper directional and/or warning signs for main access roads and interior roads to guide visitors.

R Reclamation will work cooperatively with other road users and entities to consider new cooperative initiatives for road development and maintenance. The cooperative initiatives may provide cost-share opportunities commensurate with past funding amounts to upgrade East and West Shore Drives beyond the existing condition.

Recreation Management

The issues and concerns identified in this issue category focused on upgrading existing recreation facilities, providing additional camping and day-use facilities, providing more recreation opportunities, reducing user conflicts, eliminating ORV use, improving the quality of the concession operations at the reservoir, and providing a healthy and safe environment for visitors (table VI-3). Meeting the goals, objectives, and actions established for this issue category will provide safe and quality recreation facilities, opportunities, and services to meet public expectations within the study area.

Table VI-3.—Summary of issues and concerns and associated goals and objectives for Canyon Ferry RMP/EA

Recreation management issue category		
Issue or concern	Goals	Objectives
Not enough recreation facilities and opportunities	Provide for a variety of recreational opportunities and facilities	Determine the types and quantities of new recreation facilities needed, based on demand, carrying capacity limits, and site-specific recreation master planning. Provide facilities and opportunities for people with disabilities

Table VI-3.—Summary of issues and concerns and associated goals and objectives for Canyon Ferry RMP/EA

Recreation management issue category (continued)		
Issue or concern	Goals	Objectives
Not enough recreation facilities and opportunities (continued)		Provide information to visitors. Use current design standards and principles for the design and construction of facilities
Laws and regulations not enforced	Improve visitor safety and increase resource protection	Establish and enforce recreation-related rules and regulations to conserve and protect resources and to protect the health and safety of visitors Balance recreation development with other uses of reservoir lands Following established procedures, eliminate ORV use
Existing facilities not maintained	Maintain facilities to protect the Federal investment	Establish and implement a schedule of routine maintenance for the reservoir's recreation facilities and infrastructure
Concessions (marinas) should continue	Provide commercial goods and services to the public in a fiscally responsible manner in response to user demand	Select concessionaires on a competitive basis Seek concessionaires as partners to assist Reclamation in protecting reservoir lands and providing quality recreation opportunities and appropriate goods and services to the visiting public Evaluate concession operations on a periodic basis to ensure that the operators adhere to the terms and conditions of their contract Use a Commercial Services Plan to assist in issuing any Request for Proposal for commercial services
Charge an appropriate fee for the use of facilities	Implement a fee structure to optimize revenue collection	Set fees on a fee-for-service or fee-for-facility use basis Fees should reflect prevailing costs for similar services or facilities in the private sector, reflecting market demand

Recreation Management – Actions

R Before rehabilitating existing facilities, Reclamation will conduct a Facilities Condition Assessment to determine needed improvements and to assist in the preparation of site-specific recreation master plans. Once the assessment and site planning have been completed, those recreation areas that have immediate needs will be given a higher priority. Those immediate needs are addressed in the actions for specific recreation areas listed below. The amount of rehabilitation work needed at other recreation areas not indicated below will depend on the results of the Facilities Condition Assessment and individual site master plans. See figure VI-1 for the process used to develop recreation facilities.

R All recreation facility developments within the Canyon Ferry Reservoir area will be based on public need, enhancing the visitor experience, and the social, physical, environmental, and facility carrying capacity limits as described in chapter III. Reclamation will monitor visitor use to ensure that the above-mentioned capacity limits at Canyon Ferry are not exceeded. Capacity limits will be determined during site planning and before major capital investments are made.

R Special attention will be given to upgrading existing restrooms, individual campsites, and day-use sites to bring the facilities up to current design standards (e.g., proper spacing, turning radii, accessibility, vegetative screening, potable water, and appropriate landscaping and irrigation).

R Reclamation will conduct handicapped-accessibility evaluations of existing facilities and programs, prepare necessary action plans, and schedule modifications to achieve compliance with existing accessibility laws and regulations.

R The concept of universal design[1] will be the standard when designing and constructing visitor use facilities.

R All trail development will follow the general design criteria described in appendix D and a comprehensive trail plan to be developed.

R Recreation will continue to be managed by Reclamation if a managing partner cannot be found.

R Emphasis will be given to rehabilitating existing recreation areas before initiating expansion efforts at new (proposed) sites.

[1] For the purposes of this RMP/EA, universal design is defined as facilities and features that will be accessible to persons with disabilities, beyond what is legally required. Once existing laws and regulations have been met, an attempt will be made to follow the principles of total accessibility in constructing the remaining facilities and features.

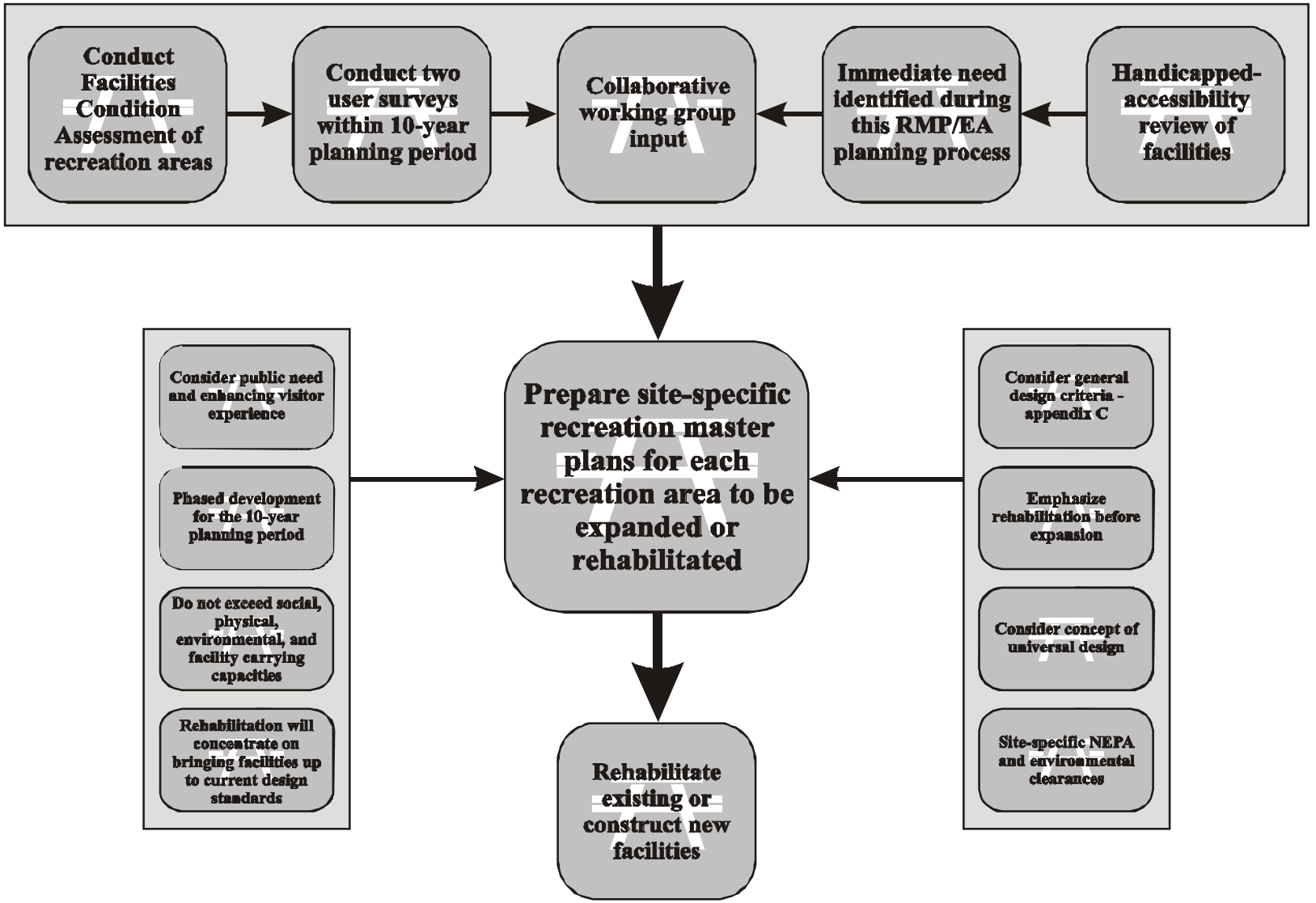

Figure VI-1.—Process for rehabilitating existing and developing new recreation facilities.
(Note: Site-specific NEPA and environmental clearances will be obtained prior to construction.)

R New developments will be phased in over the 10-year planning period.

R Reclamation will investigate riparian protection measures within, or immediately adjacent to, all developed recreation areas.

R All recreation facility development will follow the general design criteria as described in appendix C.

R Fee stations will be installed at appropriate locations leading to specific recreation areas. Fees charged for the use of facilities will be comparable to fees charged for the use of the same types of facilities and services at recreation areas other than the Canyon Ferry Reservoir area. A variety of fee structures will be examined to accommodate a wide variety of recreation uses.

R The Golden Age Passport program will be promoted to allow senior citizens to enter and use the facilities at Canyon Ferry Reservoir, as well as other federally managed areas once the passport is purchased.

R Reclamation will investigate the feasibility of establishing one user pass that is good for multiple areas managed by a variety of entities.

R None of the existing day-use areas will be converted into overnight campgrounds.

R Abandoned/unlicensed vehicles and equipment (i.e., campers, boats, tents, trailers, etc.) left in campgrounds for extended periods of time should be removed. A policy addressing this issue should be established and enforced.

The volunteer camp host program will continue, but will be evaluated to identify possible improvements. Additional volunteers will be solicited to assist Reclamation in maintaining trails, litter control, and Visitor Center operation.

Recreation facility development for specific recreation areas may consist of the following actions:

R Silos Recreation Area

S Reclamation, in cooperation with Broadwater County, will upgrade and provide new recreation facilities at the Silos Recreation Area. The plan of development will follow a plan being developed by Broadwater County and Reclamation.

- **S** Development will include the construction of a deep water bay and boat ramp.

- **S** Reclamation and Broadwater County are investigating the scope of a concession operation to enhance recreation opportunities (see page VI-25 for further discussion of concessions).

R White Earth Recreation Area

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in this planning process, consideration will be given to:

  - ¼ Constructing a new campground loop and support facilities (e.g., parking, picnic tables, grills, trash receptacles, and potable water). The existing restroom on the north side of the peninsula will be included in any development of this camping loop.

  - ¼ Developing a short trail along the shoreline on the south side of the peninsula with trail head, signing, and parking.

  - ¼ Developing a trail from White Earth to Crittendon day-use area to the north.

R Hellgate Recreation Area

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to:

  - ¼ Upgrading the existing campsites to meet current design standards (e.g., proper spacing, turning radii, accessibility, vegetative screening, and appropriate landscaping and irrigation).

  - ¼ Upgrading the boat ramp and parking area.

R Indian Road Recreation Area

S Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

S Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to:

- ¼ Realigning the access road into the campground area. A fee station will be considered, where appropriate, and fees will be collected for the use of the campground and day-use area. (***Note***: The boat launch ramp is owned and operated by MFWP; therefore, Reclamation cannot collect fees for the use of the boat ramp).

- ¼ Working with Broadwater County and Townsend on establishing a nonmotorized trail from Indian Road Recreation Area to Silos Recreation Area.

- ¼ Providing signs with interpretive information to inform the public about Canyon Ferry Reservoir and the surrounding area.

- ¼ Developing a restroom with flush toilets for the campground.

- ¼ Working with Broadwater County on finding ways to dispose of gravel pile on site.

- ¼ Coordinating development with the Broadwater Stream and Lake Committee.

- ¼ Investigating the development of a Memorandum of Understanding with the U.S. Forest Service for constructing and operating an ice-skating rink at the ponds.

R Riverside Recreation Area

S Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

S Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to:

- ¼ Upgrading the existing campground to current design standards (e.g., proper spacing, turning radii, accessibility, vegetative screening, and appropriate landscaping and irrigation).

- ¼ Providing electric power to the campground area. (***Note***: Power has already been supplied to the camp host, and a pressurized water system is provided).

- ¼ Upgrading the existing day-use area.

- ¼ Constructing a vehicle turnaround and parking area near the south end of the Riverside Recreation Area complex.

- ¼ Placing riprap at appropriate locations along the riverbank to prevent erosion and protect facilities.

- ¼ Evaluating the need for providing additional eagle viewing opportunities.

R Confederate Bay Recreation Area

S Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

S Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to:

- ¼ Closing and revegetating roads that do not lead to developed areas and sites. Physical barriers may be provided, where necessary, to prevent vehicles from leaving developed roads.

- ¼ Installing direction and entrance signs along State Highway 284.

- ¼ Maintaining at least a 100-foot setback from Confederate Creek when constructing or rehabilitating facilities.

R Jo Bonner Recreation Area

S Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, a group shelter and parking area may be constructed.

R Cemetery Island

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to:

  - ¼ Improving the existing trail system on Cemetery Island.

  - ¼ Installing appropriate information signs.

  - ¼ Investigating alternatives available for pumping the two existing toilets.

R Court Sheriff

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to separating site developments so that day users and boat ramp users are not negatively impacting each other.

R Chinamen's

- **S** Prepare a Facility Condition Assessment, evaluate the uses, and prepare a site-specific recreation master plan for the area.

- **S** Depending on the outcome of the Facility Condition Assessment, master plan, and an immediate need identified in the planning process, consideration will be given to widening, lengthening, and leveling of parking spots and the redesign of the boat ramp area so that traffic does not become congested and block the road.

R Other Locations

- **S** The boat ramp at Shannon will be extended to provide access at low water levels.
- **S** Pursue replacing boat ramps at Kims' and Yacht Basin and extend ramp at Shannon. Goose Bay boat ramp will be replaced in 2003.
- **S** Based on the Facilities Condition Assessment and a site-specific recreation master plan, upgrade other boat ramps (including lengthening) to allow for safe access when reservoir is low and when there are high winds.
- **S** Provide adequate boat docks at boat ramps to prevent user conflicts and to address safety concerns, such as high winds.
- **S** Evaluate the need to install a boat ramp and restroom at Duck Creek.

Commercial service actions for Canyon Ferry Reservoir will consist of the following:

- **R** Yacht Basin and Kim's Marina operators will be offered extensions to their concession contracts to allow appropriate time to conduct commercial services planning and public involvement activities prior to the issuance of Requests for Proposals (RFPs).
- **R** Reclamation will prepare and use a Commercial Services Plan (CSP) to assist in preparing a Request for Proposal (RFP) for concession operations. A CSP for the reservoir will provide an analysis of the need for and services required of any new or existing concessions. Any commercial development will be subject to the Reclamation policies and directives and standards in place at the time.
- **R** Public involvement will be an integral part of the CSP process.
- **R** An appropriate level of environmental analysis will be completed for the CSP.
- **R** A concession operation will be developed at Silos Recreation Area subject to plans developed by Reclamation and Broadwater County. The scope of this operation is being investigated by Reclamation and Broadwater County. Reclamation and the county have signed an agreement for Broadwater County to manage the Silos Recreation Area.
- **R** Kim's, Yacht Basin, and Goose Bay Marinas will continue to operate until 2003, 2004, and 2010, respectively, unless an extension is agreed to so planning and public involvement can be accomplished for the CSP. Before expiration of each contract, Reclamation will initiate an RFP process for obtaining a concessionaire(s). The issuance of concession permits will follow Reclamation's *Concessions Policy, Directives and Standards* and associated guidelines. The policy includes, among other things, the requirement to provide for public competition for the right to operate a concession on Reclamation lands.

- **R** Reclamation will identify existing guides and outfitters doing business at Canyon Ferry Reservoir, and they will be required to obtain special use permits pursuant to existing Federal law.

- **R** Reclamation will conduct periodic evaluations of existing concession operations to determine if the terms and conditions of the concession permits are being adhered to; the evaluations will be conducted according to established directives and standards.

- **R** Any proposals to provide new commercial services must first be presented to and evaluated by Reclamation. If approved by Reclamation, the opportunity to provide the new commercial service should be competitively offered to prospective operators.

Proposed actions for historically used undeveloped remote areas are as follows:

- **R** Access to historically used undeveloped areas around the reservoir will remain open if the access roads are not causing damage to the environmental resources within the study area. As stated earlier, roads that do not have legal access to the reservoir and roads causing resource damage will be closed.

- **R** The public use of the historically used remote sites will be monitored to determine the need for sanitation facilities and future closure if such use is negatively affecting the environmental resources.

Reclamation will initiate two public user surveys at Canyon Ferry Reservoir during the RMP 10-year planning period. The results of the visitor use surveys will be used to update information collected from the two previous surveys and fill in data gaps identified during the RMP/EA process. Data to be collected includes:

- **R** Visitation and recreation activity participation levels for sailing, hunting, and jet skiing, in addition to the activities already identified during the previous studies and documented in the RMP/EA.

- **R** Carrying capacity limits (i.e., identify user conflicts and facility overuse, if any). Surveys will assist Reclamation in monitoring visitor use to ensure that carrying capacity limits have not been exceeded.

- **R** Existing studies and planning documents within the region (i.e., identify possible correlations or discrepancies between data it collects and the data contained in other existing studies and regional or local planning reports).

- **R** Possible impacts that private, exclusive use of areas within existing concessions may have on the quality of the public's recreation experience or their use of the reservoir area.

R Overall public satisfaction level with accomplishment of actions identified in the RMP.

R Information which will determine whether to build future planned developments.

R Winter use.

Heritage Resources

The issues and concerns identified in this issue category focused on protecting paleontological and heritage resources, minimizing the loss of resources to artifact collectors, avoiding sensitive resources during development of facilities and features, and providing more interpretive information on the heritage resources in the Canyon Ferry Reservoir area (table VI-4). Meeting the goals, objectives, and actions established for this issue category will safeguard heritage, historic, and paleontological resources within the study area.

Table VI-4.—Summary of issues and concerns and associated goals and objectives for Canyon Ferry RMP/EA

Heritage resources issue category		
Issue or concern	Goals	Objectives
Paleontological and heritage resources are not protected or interpreted	Identify, conserve, protect, and provide opportunities for the public to experience the heritage, historic, and paleontological resources of the reservoir	Pursue a systematic inventory of historic, prehistoric, and paleontological resources Provide a reasonable level of oversight to protect the heritage resources Develop interpretive displays and brochures for heritage resources Require all entities doing business on Canyon Ferry lands to provide enough notification to allow Reclamation to comply with all pertinent laws, rules, and regulations

Heritage Resources – Actions

R Reclamation will continue to comply with section 106 of the National Historic Preservation Act for all activities conducted at Canyon Ferry Reservoir.

R Reclamation will comply with section 110 of the National Historic Preservation Act for all heritage resources at Canyon Ferry Reservoir as personnel, time, and funding are available.

R In consultation with the Montana State Historic Preservation Office, Reclamation will assess the adequacy of existing heritage resource inventories and conduct necessary surveys in the areas that have not been adequately covered.

R Proposed improvements will be designed to avoid impacts to archeological and historic sites, as well as environmentally sensitive habitats and critical wildlife areas.

Health and Safety

The issues and concerns identified in this issue category focused on providing an appropriate level of law enforcement, establishing no wake zones to reduce user conflicts, providing appropriate sewage and garbage disposal, providing safe drinking water, posting rules and regulations, controlling dust, upgrading unsafe facilities, and providing additional boat ramps at the south end of the reservoir for escape routes during inclement weather (table VI-5). Meeting the goals, objectives, and actions established for this issue category will provide a safe and healthy environment for visitors within the study area.

Table VI-5.—Summary of issues and concerns and associated goals and objectives for Canyon Ferry RMP/EA

Health and safety issue category		
Issue or concern	Goals	Objectives
The public is not safe at some locations around the reservoir	Provide a safe and healthy environment for visitors	Promote proactive law enforcement activities
Maintain or assist in maintaining public health at and near the reservoir	Increase public awareness regarding safety and security	Separate users to prevent user conflicts and accidents
		Respond to and correct unsafe conditions
		Ensure availability of adequate emergency services
		Provide adequate public safety measures for protection of visitors
		Provide adequate sanitary facilities and safe drinking water
		Assess and implement dust abatement control measures where appropriate

Table VI-5.—Summary of issues and concerns and associated goals and objectives for Canyon Ferry RMP/EA

Health and safety issue category (continued)		
Issue or concern	Goals	Objectives
		Develop a health, safety, and security program to educate and inform visitors Develop and implement adequate informational and regulatory signage program Promote Crime Witness Program

Health and Safety – Actions

R Reclamation will work with MFWP to improve enforcement of watercraft safety rules and regulations and to enhance their existing programs.

R Rules and regulations governing the use of Reclamation lands, as stated in the public information issue category, will be placed at visitor contact areas.

R The camp host program will be reviewed and monitored to determine if additional guidance should be provided to respective camp hosts so that relations with the public can be improved within the developed recreation areas.

R Trash receptacles will be maintained and placed at campgrounds.

R Restrooms will be maintained at campgrounds and day-use areas.

R Based on the results of the sign inventory, appropriate warning signs will be placed throughout the reservoir area to warn visitors of potential hazards, including signing needs for visitors using the reservoir during the winter (i.e., driving and fishing on the ice).

R Reclamation will ensure existing emergency services (i.e., fire control, search and rescue, and ambulance service) are adequate and that proper notification and response procedures are in place.

R Upon expiration of existing concession contracts, as detailed in the recreation issue category, Reclamation will evaluate the need to have future concessionaires install fish cleaning and recreational vehicle dump stations within their area of operation. Reclamation will evaluate the need for these facilities at other locations within the study area.

- **R** Reclamation will promote the Crime Witness Program in an effort to promote public safety.

- **R** Continue to provide law enforcement pursuant to signed and current agreements with local agencies. Under the terms of the agreements, work with local law enforcement agencies to increase their law enforcement efforts.

- **R** Reclamation will ensure that fueling facilities and trash receptacles are constructed to fire codes.

- **R** Work with the Coast Guard Auxiliary in promoting their early warning system and in developing a comprehensive plan to improve boater safety.

- **R** Through the lease lot sale process, Reclamation, the CFRA, and interested parties are addressing the septic system and drain field issues. Reclamation will ensure the appropriate local and State rules and regulations are followed.

- **R** No wake zones will be established and buoys will be installed by Reclamation, in cooperation with MFWP, at swim beaches, boat ramps, developed day-use areas, campgrounds, sheltered fishing bays, environmentally sensitive areas, and other areas, as necessary, to prevent user conflicts and resource damage.

- **R** Reclamation will cooperate with the Montana Department of Environmental Quality in protecting the source water protection zones for the public water systems throughout the reservoir area.

- **R** Some areas above and immediately below the dam will be closed for public safety and facility security purposes. As of October 2002, the following closures have been instituted:

    - **S** No public access in the tail water area just below Canyon Ferry Dam. This area is closed the entire year, prohibiting public access with signage and a visible cable demarcating the closed area. This closure is listed in the Montana fishing regulations.

    - **S** The Canyon Ferry Powerplant areas is a restricted area and has chain link fencing and signs posted prohibiting public access to this area.

    - **S** The public is prohibited from entering the Helena Valley Pumping Plant area. This area has chain link fencing and signs prohibiting public access.

    - **S** Boat access is not permitted closer the floating buoy system upstream of the dam.

    - **S** No parking or stopping is permitted on the crest of Canyon Ferry Dam. Reclamation has posted signs and installed jersey barriers restricting public access and parking in this area.

R Install fire hydrants at several locations in cooperation with the Broadwater County Rural Fire District.

R Reclamation has granted space for turnarounds, dry fire hydrants, and future fire stations within the study area and will continue to work with the Canyon Ferry Fire Service Area Board of Trustees to identify and resolve issues related to fire suppression.

Wildlife Resources

The issues and concerns identified in this issue category focused on preserving, protecting, and enhancing wildlife areas; providing additional hunting opportunities; improving habitat; and adding funding in support of fish and wildlife resources (table VI-6). Meeting the goals, objectives and actions established for this issue category will protect and enhance the wildlife resources within the study area.

Table VI-6.—Summary of issues and concerns and associated goals and objectives for Canyon Ferry RMP/EA

Wildlife resources issue category		
Issue or concern	Goals	Objectives
Need more hunting opportunities, as well as habitat improvement, to increase species numbers (upland game birds and other species, as appropriate)	Enhance fish and wildlife recreation opportunities	Work cooperatively with other entities to improve fish and wildlife habitat by, among other things, developing additional wildlife areas Develop a line of communication with MFWP to forward public concerns about hunting and fishing
Need to balance recreation development with fish and wildlife protection	Balance recreation development with fish and wildlife protection	Monitor the use of Canyon Ferry lands to identify conflicts between hunters, anglers, and other users Ensure a balance between fish and wildlife resources and recreational opportunities
Need to provide funding sources, in addition to recreation funding, to support fish and wildlife	Identify a source and level of funding	Identify the base level of funding necessary to manage and maintain the fish and wildlife resources of the reservoir Seek permanent sources of funding (to the extent allowed by law and policy)

Wildlife Resources – Actions

R Reclamation will continue to work with Pheasants Forever and other organizations to develop additional habitat along the eastern shore of the reservoir.

R A long-term watchable wildlife program will be considered for the reservoir area.

R Reclamation will cooperate with MFWP and other wildlife agencies to identify and fund projects on reservoir lands that qualify for Montana Fish and Wildlife Conservation Trust Funds.

R Reclamation will cooperate with MFWP to identify opportunities for wildlife enhancement projects on all Reclamation lands within the reservoir area.

R Reclamation will consider developing a new bird species list for the reservoir, including the WMA, which is managed by MFWP.

R Reclamation will continue to cooperate with the Montana bald eagle working group and consider providing improved eagle viewing opportunities at the Riverside Recreation Area. Eagle Bay Drive and Riverside Campground will continue to be closed during certain times of the year to protect eagle perching sites if the eagle count remains above 50.

R Reclamation will coordinate a shorebird survey of the reservoir area with the State piping plover survey and use this information to propose potential shorebird habitat enhancement projects.

R Reclamation will work with MFWP to identify potential new wildlife areas. If additional WMAs are identified, the existing agreement with MFWP will be amended to incorporate provisions for MFWP management. A wildlife management plan for each new area will be prepared by MFWP.

R Reclamation will require that all new powerlines constructed in the reservoir area be buried to provide for protection of raptors.

R Reclamation will cooperate with MFWP to identify opportunities for fisheries enhancement opportunities. Possible cooperative efforts include:

- **S** Requiring setbacks of developed recreation areas
- **S** Closing specific areas for the protection of the reservoir fishery
- **S** Identifying potential fisheries enhancement projects for possible funding by the Montana Fish and Wildlife Conservation Trust Fund

- **S** Placing appropriate signs at visitor contact points (i.e., closure, informational, directional, interpretative, etc.).

- **S** Continuing to work with MFWP on their perch habitat program for the south end of the reservoir.

Public Information

The issues and concerns identified in this issue category focused on keeping the Visitor Center open; posting needed rules and regulations; providing information on the opportunities available at the reservoir; providing an appropriate number of direction, information, and warning signs to improve traffic flow, use of facilities, and visitor safety; and maintaining the eagle watching program for educational purposes (table VI-7). Meeting the goals, objectives, and actions established for this issue category will enhance the visitor experience and interpret the different resources within the study area.

Table VI-7.—Summary of issues and concerns and associated goals and objectives for Canyon Ferry RMP/EA

Public information issue category		
Issue or concern	Goals	Objectives
Need more information about the reservoir	Enhance public information	Establish clear, consistent signage to guide public use of the reservoir and inform the public about the use of Reclamation land, water, and facilities Use a variety of media to communicate with the public: printed materials, maps, photos, brochures, web sites, etc. Provide information on a variety of topics: rules, regulations, history of the dam, elk and moose distributions, dam operations, weather, etc.
Need more visitor services	Enhance visitor services	Operate Visitor Center and support facilities (e.g., restroom and parking lot) Provide additional programs for public enjoyment (e.g., wildlife observation and interpretive programs)

Public Information – Actions

R Reclamation will complete a sign inventory to determine the number and types of signs needed within the study area.

R Signs will be replaced or repaired, as appropriate.

R Signs that provide necessary information regarding boating and the use of boat launch ramps, campgrounds, day-use areas, fish cleaning stations, etc., and rules and regulations governing the use of Reclamation lands and facilities will be provided at public use areas.

R Interpretive signs will be considered for interesting geologic features and other outstanding environmental resources.

R An appropriate number of warning signs will be placed throughout the study area to protect the health and safety of the visiting public.

R Informational signs will be placed at appropriate areas to inform the public of the proper use of the shoreline, including the shoreline below the cabin site areas.

R Reclamation will supply needed maps, brochures, pamphlets, and expanded Internet service to the public.

R Reclamation will proactively educate cabin site lessees, concessionaires, and the general public on the proper use of Canyon Ferry Reservoir lands.

R The Visitor Center will remain open and maintained to provide the public with information and interpretation. Repairs will be made as necessary.

Land Use

The issues and concerns identified in this issue category focused on increasing the efforts to control weeds on Federal lands, preventing erosion, coordinating Canyon Ferry Reservoir development with local communities, locating septic systems for lease lots, consolidating lease lot docks to allow public access, and locating the exterior boundaries of lease lots (table VI-8). Meeting the goals, objectives, and actions established for this issue category will prevent unnecessary damage to existing resources and facilities within the study area.

Table VI-8.—Summary of issues and concerns and associated goals and objectives for Canyon Ferry RMP/EA

Land use issue category		
Issue or concern	Goals	Objectives
Weeds and other pests should be controlled	Control pests	Apply integrated pest management practices Minimize the invasion or spread of noxious weeds into burned areas
Erosion is a problem around the reservoir	Reduce erosion	Minimize soil loss that will be caused by water erosion on the burn areas Retain or regain site productivity; emphasize ecosystem function in upland areas and associated drainages Protect the shoreline when Federal facilities or use may be impacted
Don't pollute the reservoir	Reduce pollution	Establish procedures and programs to ensure only nonpolluting facilities are developed
Land resources are not protected	Establish strategies to protect and manage resources	Develop land uses based on criteria developed to reduce erosion

Land Use – Actions

R As part of the RMP/EA planning process discussed in this document, Reclamation will implement a land use planning strategy for protecting and expanding resource values while developing a moderate number of new facilities and opportunities for public use.

R Reclamation will continue to investigate the feasibility of having another Federal or non-Federal agency manage the land and recreation resources within the study area.

R Reclamation will consider soil conditions, and other limiting resource factors, when planning for and constructing new facilities and when granting licenses, leases, and permits for the use of Reclamation lands. As an example, prime irrigated land and critical wildlife areas will be avoided when developing facilities.

R Faulty septic systems will be repaired or replaced as deficiencies are identified.

R Reclamation will cooperate with the State to prepare total maximum daily loads of pollutants for Canyon Ferry Reservoir and the basin immediately above it.

R Reclamation will continue its water quality monitoring program for the reservoir. Emphasis will be given to monitoring drinking water supplies at developed recreation areas and other specific sites, as appropriate. Data collected will include nutrient samples, zooplankton, phytoplankton, chlorophyl, and other parameters.

R Reclamation will work with concerned individuals and entities to provide input on shoreline erosion-control methods for Reclamation to consider.

R In cooperation with the CFRA and other interested parties, Reclamation will develop a policy for public use of the shoreline between the reservoir and the lease lot areas. This policy will not conflict with Title X, Public Law 105-277.

R In cooperation with the CFRA and other interested parties, Reclamation will develop procedures that address the existing and future placement of private docks at Canyon Ferry Reservoir authorized by Title X and establish design and construction standards (Title X allows one boat dock for each lease lot owner after privatization). Proper requirements/stipulations to be contained in any such land use authorization or permit will be identified. Reclamation manual directives and standards for use authorization will be followed.

R ORV use will be eliminated to protect areas sensitive to erosion and where impacts to fish and wildlife resources could occur. Closed areas will be revegetated. Erosion-control structures will be placed in areas of ongoing erosion and areas that have the potential for erosion.

R A program will be initiated to identify and control erosion adjacent to public roads, Canyon Ferry Unit Project facilities, and developed recreation areas where there is a public health and safety concern. Gabions and breakwalls or other erosion-control techniques will be used to protect shorelines, where needed. Design, review, and approval from Reclamation, the Corps of Engineers, and the county conservation districts is required before construction begins.

R Reclamation will pursue fencing the exterior boundary of the reservoir area to prevent cattle trespass. Developed campgrounds and other public use areas to be identified may be fenced to prevent resource damage, if necessary. Since the lands in Broadwater County, which are adjacent to Reclamation lands on the east side of the reservoir, are within a horse herd district and are considered a fence-in area for horses, Reclamation will work with adjacent land owners on common fencing needs. The Montana Livestock Laws, Title 70 Property; 70-16-205 Monuments and Fences, will be followed accordingly.

- **R** Reclamation will review all integrated pest management practices and make changes if necessary. The 1993 comprehensive weed control program will be followed and updated as necessary. Reclamation will continue the long-term weed control agreement with Broadwater County and supply annual funds to the county. Work with Lewis and Clark County to formalize a long-term weed control agreement and supply annual funding to the county for weed control.

- **R** Placement and construction of utilities will be considered on a case-by-case basis, with emphasis on minimizing impacts to the environment.

- **R** Reclamation will continue to work with the Montana Aeronautics Division, the Montana National Guard, Broadwater County, and the General Services Administration to transfer ownership of Reclamation lands near Silos Recreation Area to an interested entity for the purpose of operating the airport.

- **R** Reclamation will follow the 2001 Federal Wildland Fire Management policy and the January 2001 Secretary of the Interior's policy letter and develop a Fire Management Plan.

- **R** Specific fire rehabilitation treatment actions on 500 acres of Reclamation-managed lands impacted by the year 2000 fires:

    - **S** Aerial and mechanical seeding of a native seed mixture on approximately 100 acres.

    - **S** Treatment of noxious weeds with herbicide at identified sites.

    - **S** Repair and reconstruct the damaged camping areas, facilities, and signs.

    - **S** Repair West Shore Drive by grading and cleaning out some culverts. Settling basins may be installed above all culverts throughout the burned area to catch sediment. These will require frequent maintenance.

    - **S** Design and construct new culverts on East and West Shore Drives at selected sites.

    - **S** Replace some culverts that are undersized as funding allows.

In addition, Reclamation will work with remaining lease holders to permit the removal of slash, underbrush, and dead and downed timber to reduce future fire hazards where determined appropriate by Reclamation.

Reclamation will complete fire rehabilitation efforts by the end of 2003.

PLAN IMPLEMENTATION

Implementation of the RMP is primarily the responsibility of Reclamation. Approval and acceptance of the RMP/EA by involved agencies include a commitment by Reclamation, and other entities where appropriate, to seek financial, program, and staffing resources necessary to implement the proposed actions. Because funding is uncertain, implementation of specific actions will require close coordination between Reclamation and the many other parties (stakeholders) interested in the management and use of Canyon Ferry lands and waters.

Other factors that may influence the implementation of a particular action are based on whether the action: (1) is procedural or technical, such as preparing agreements or developing specific plans; (2) addresses public health and safety concerns; (3) is in compliance with existing laws and regulations; (4) is required to prevent resource damage or protect wildlife species or habitats; or (5) requires large capital investments, such as trail or facility development.

Successful planning and coordination will be necessary to identify annual program priorities and will be essential in securing funding necessary to accommodate the goals and objectives of this RMP. To aid in planning for future needs and development at Canyon Ferry Reservoir, Reclamation will serve as the lead agency to collaborate with appropriate stakeholders on a periodic basis to discuss issues, concerns, and solutions and identify funding sources. This working group (figure VI-2) will be used to identify concerns and help Reclamation decide which projects should be funded and who will fund them. Once a budget is approved, Reclamation could then implement specific actions.

AMENDMENTS AND MODIFICATIONS TO THE RMP/EA

Reclamation may revise or amend the RMP within the established 10-year planning period. During the implementation or monitoring phases of the RMP, Reclamation, other agencies, or the public may identify problems, deficiencies, or additional issues that should be addressed. Changes in the social, economic, physical, or environmental conditions may also necessitate changes to the RMP/EA. Minor changes in data or material that do not conflict with the established goals and objectives would be documented by Reclamation and would not require further public involvement and NEPA compliance. Changes that would modify one or more of the prescribed decisions and require major changes to the established goals and objectives would be documented by an amendment to the RMP and may require further public involvement and NEPA compliance. Reclamation will determine the level of public involvement and NEPA compliance.

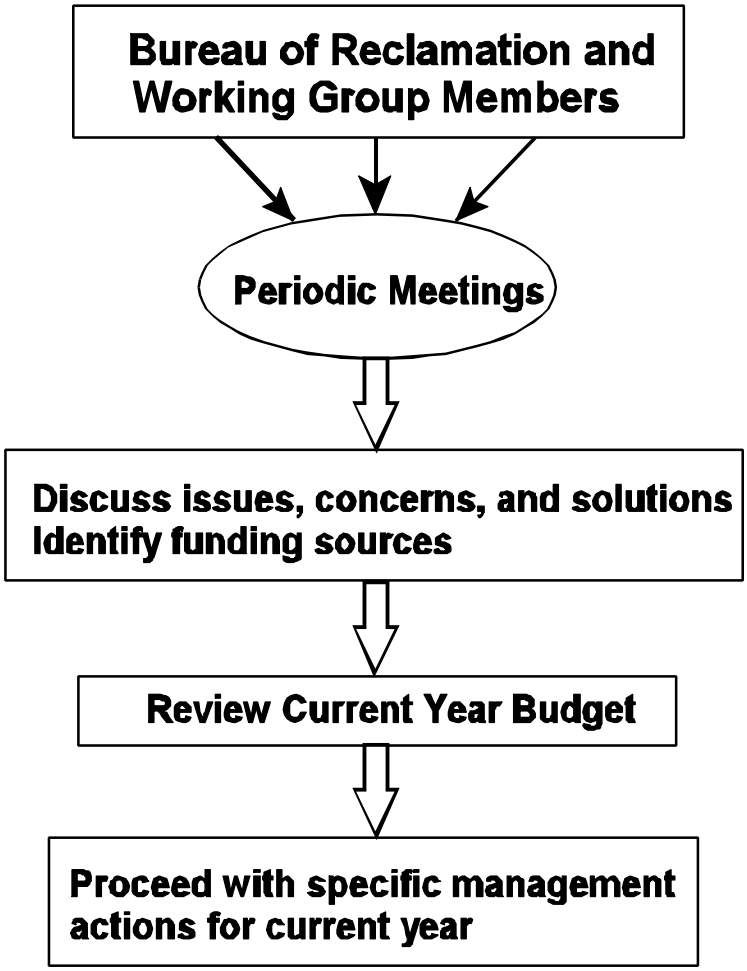

Figure VI-2.—Working group process.

The RMP is expected to be re-evaluated at the end of the 10-year planning period (year 2013) to determine whether or not the RMP should be revised. The planning and NEPA process used to complete this RMP/EA will be used to prepare an updated RMP/EA.

Environmental Commitments

Environmental Commitments

The following environmental commitments will be implemented to offset potential effects to the resources within the Canyon Ferry Reservoir area that could occur if the preferred alternative were implemented. *Although not listed here, the elements identified in the preferred alternative are also considered to be environmental commitments.*

Any proposed activity will be analyzed and evaluated to minimize erosion.

The Bureau of Reclamation (Reclamation) will protect vegetation and wildlife by restricting users to designated access roads, trails, and public use areas.

Reclamation will continue to support dust abatement measures which are coordinated by others.

Degraded landscapes will be reclaimed, and appropriate erosion-control measures will be applied to protect areas where soil exposure is inevitable.

Disturbed areas will be revegetated.

Native vegetation will be planted to provide buffer zones (visual screening) between individual camping sites and day-use sites.

Recreation facility development will complement the surrounding landscape as much as practical and will follow: (1) site-specific recreation master plans; (2) strict design and construction criteria, guidelines, and standards; and (3) development criteria to protect the visual quality of the reservoir area.

Restrictions will be imposed on activities that may have an unacceptable adverse impact on the natural and social environment.

Carrying capacity limits and user demand will be determined before major facility development occurs.

Potential adverse impacts from septic releases will be curtailed.

Reclamation will monitor water quality at Canyon Ferry Reservoir to ensure that it is not negatively impacted.

Future concessionaires will be required to install recreational vehicle dump stations as part of their concession operations if determined by Reclamation to be necessary.

Sanitation facilities and trash receptacles will be added where necessary.

Fueling facilities will be required to meet State and local codes.

Enhanced pollution prevention initiatives will be implemented to safeguard water quality.

Unique geologic features will be protected from construction activity.

Soil information will be integrated into all future land-use decisions. Prime and sensitive soil areas will be protected, and soils with identified hazards will be avoided.

Land-use limitations and potential impacts to the environmental resources will be considered when determining the types of uses that will be permitted. Geographic Information System mapping will be used to help eliminate potential impacts to existing resources by identifying environmentally sensitive areas.

Measures to curb shore erosion by wave action will be implemented to protect Reclamation facilities, public roads, and established recreation facilities.

All government actions will consider the potential effects on prehistoric and historic resources before implementation.

All land-use permits will contain specific stipulations to protect existing resources.

Proper regulatory and informational signing will be posted throughout the reservoir area informing the public of the rules and regulations governing the use of Canyon Ferry Reservoir land and water areas.

Reclamation will work with law enforcement entities to ensure enforcement of all laws and regulations.

Reclamation plans to have all treatment actions for the fire management areas completed by the end of 2003.

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Glossary

Glossary

Acre-foot: Amount of water needed to cover 1 acre with 1 foot of water.

Concession: A non-Federal commercial business that supports public recreational uses and provides facilities, goods, or services for which revenues are collected. A concession generally involves use of the Federal estate and may involve the use or development of improvements.

Confined aquifer: An aquifer bounded above and below by impermeable beds or beds of distinctly lower permeability than that of the aquifer itself.

Crime Witness Program: A program originally created by the Bonneville Power Administration (BPA) to protect transmission systems, substations, facilities, property, and personnel. The BPA administers the Bureau of Reclamation's program through an agreement signed in October 1998. The program offers cash awards up to $1,000 for information leading to the arrest and conviction of persons committing crimes. Signs posted at facilities direct informants to call a toll-free number to report suspicious or criminal activity.

Heritage resources: Property, plant, and equipment of historical, natural, educational, artistic, or architectural significance.

Imprint stock (fish): Fish reared in water from the area whence it is hoped they will return to spawn. It is believed that the fish will imprint with the natural odors of the water, and they will "home" to the same waters. To help improve the imprint, the fish are planted in the same stream and at the proper spawning location.

Imprint stockings: A factor associated with the natal habitat and homing accuracy is the homestream odor profile that provides the fingerprint ultimately identified with the homestream spawning and incubation site. Hatchery programs not only use groundwater for incubation, but hatcheries are usually away from the natal environment to which local stocks have adapted. The assumption is that by planting the fish in the proper location, hatchery fish will "home" to that stream on return. While this is true, imprinting is sequential (Brannon and Quinn, 1990; Quinn et al., 1990), and the incubation environment is the first odor cue on which young fish imprint and the ultimate identity sought by returning fish (Brannon, 1982). Strays are common in some hatchery populations, and lack of having imprinted during the incubation phase is suggested as being responsible for higher stray rates. To assure the continuity between hatchery fish genetics and local stream habitat, the water sources closely linked with the natal environment are most desirable.

Jurisdictional wetlands: A wetland area that meets the definitional requirements for wetlands as determined by the U.S. Army Corps of Engineers (Corps).

> Wetlands, commonly recognized as bogs, swamps, and marshes, are often areas of transition between terrestrial and aquatic environments. Forested wetlands can contain both terrestrial and aquatic environments. Wetlands are generally distinguished by the seasonal or year-round presence of water, saturated soil types, and vegetation adapted to wet conditions. Therefore, these three characteristics must be recognized when determining whether an area is specified a jurisdictional wetland.
>
> The three criteria (hydrology, soils, and vegetation) for wetlands were initially established in 1977 by the Corps and later incorporated into the Corps' 1987 wetlands delineation manual. The burden of proof that an area is a jurisdictional wetland in need of regulation must rest with the Federal Government, based on a preponderance of evidence that a site meets all three wetlands criteria.

Pioneers (plants): Plants that are among the first to appear in an area that has been devoid of vegetation (e.g., the first plants to appear after a fire or on the newly exposed shore after the level of a reservoir drops). Many of these plants are often considered weeds.

Private exclusive use: Exclusive use is any use which excludes other appropriate public recreational use or users for extended periods of time, including concessionaire-permitted sites on which dwellings or improvements are privately owned, such as a cabin, trailer, or mobile home. Exclusive use occurs when there is not:

(1) An established process that frequently rotates users of sites
(2) A process which accommodates changes in use, including a process for determining and accommodating other desired uses and resource values

Rookery: A breeding place or colony of birds.

Setbacks: The distance activities that pose a potential threat to the environment must be separated from the feature they threaten (e.g., the proper linear distance that an oil well must be from a flowing stream).

Sociodemographics: Descriptive statistics (means, medians, modes, ranges, etc.) relating the characteristics of a particular population. Population characteristics may focus on a wide range of measures but often include population size, employment by density, unemployment rates, average income and percent of population below poverty level, education, racial background, average age, percent by gender, etc.

Distribution List

Distribution List

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- Max Baucus

U.S. Representative
- Dennis R. Rehberg

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Smith, Curtis and Janet, Boise, Idaho
Smith, Edward and Raven, Helena
Smith, Erna A., Butte
Smith, Keri L., Belgrade
Southall, Linda, Townsend
Spear, Ober E., Elliston
Squires and Shontz PLLC., Helena
Stahly, Dave, Helena
State Bank of Townsend, Townsend
Stebbins, Carol M., Helena
Stenhjem, Allen, Helena
Sternhagen, Roy, Townsend
Stoner, John L., Townsend
Stricker, Allan, Helena
Stubblefield, Ellen, Helena
Stueck, Scott D., Belgrade
Sucharda, Charles, Billings
Sutton, Jim, Bozeman
Swain, Eunice, Helena
Swing, Andrea, Manhattan
Swing, Douglas C., Manhattan
Tarbet, Cheri, Dennis Williams, Townsend
Taylor, Shannon, Bozeman
Ted Arts, Bozeman
Tedesco, Ann L., Helena
Timmerman, Walter W., Helena
TNSC, Helena
Toepfer, Stephen and Jennifer, Billings
Toomey, John, Helena
Toston Irrigation District, Toston
Townsend Area Chamber of Commerce, Townsend
Townsend Electric, Inc., Townsend
Townsend Rotary Club, Townsend

Townsend Star, Townsend
Trerise, W.E., Helena
Trischman, Ted L., Belgrade
Tromly, Bill and Maria, Butte
Trout Unlimited, Helena
Trudnowski, James, Helena
Turcotte, Carolyn and Jim, Helena
Turgeon, Robert, Fort Harrison
Turner, James and Victoria, Helena
Turner, Vicki, Brad Vollmer, Helena
U.S. Coast Guard Auxiliary, Helena
Van Der Linden, Cathy, Sammamish, Washington
Vandyke, Ann, Bozeman
Vanek, John and Marie, Havre
Varone, Mike, Helena
Vellinga, Mary L. and John, Bozeman
Venetz, Wayne, Helena
Vestre, Jon, Helena
Vollmer, William A., Helena
Voss, Mary and Stan, Townsend
Walleyes Unlimited of Montana - Helena Chapter, East Helena
Walleyes Unlimited of Montana - Region 2, Ulm
Walsh, John and Margaret, Butte
War, William and Elizabeth, Castle Rock, Colorado
Ward, James and Edie, Three Forks
Waring, Greg, Bozeman
Waring, Thomas and Judith, Butte
Warren, Bernard and Mary, Helena
Warren, Owen and Ann, Townsend
Waterman, Connie, Helena
Watson, Clint, Townsend
Welch, Greg, Townsend
Weyer, Gary and Carol, Great Falls
White, Brian, Bozeman
White, Rob, East Helena
Williams, Dennis, Toston
Williams, Diana, Helena
Williams, Lorene and Bert, Townsend
Williams, Lou, Bozeman
Williams, William D. and Ida S., Centennial, Colorado
Winchell, Ronald and Melinda, Great Falls
Winston, Gregg, Helena
Wise, Bruce, Helena
Woodring, Arnold and Lorraine, Townsend
Wortman, Roz, Manhattan
Yacht Basin Marina, Helena
Young, James G., Helena
Zimmerman, L. David, Townsend

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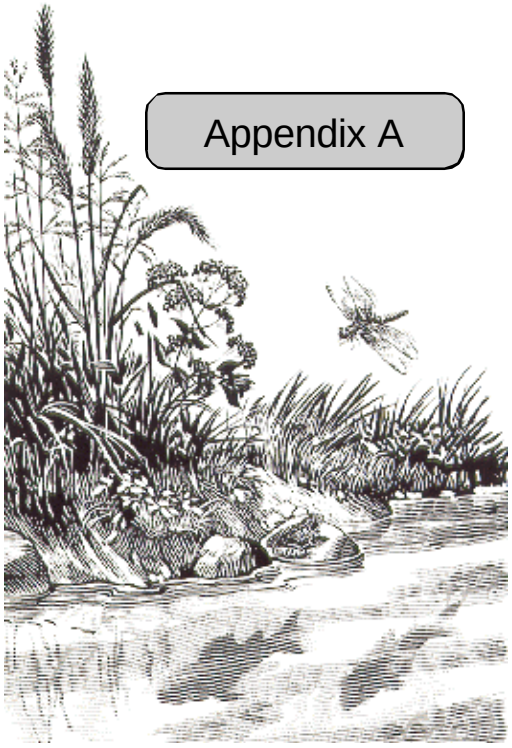
Appendix A



Appendix A

Second Public Draft Comments and Responses

The Bureau of Reclamation (Reclamation) provided an individual response to each comment to the first public draft Resource Management Plan/Environmental Assessment (RMP/EA). For the second public draft, Reclamation was able to summarize the comments requiring a response or a change to the RMP/EA. Many of the approximately 340 comments received were general in nature and did not require a response or a revision to the RMP/EA. The comments requiring a response and/or a revision in the RMP/EA are summarized below. Responses
to these comments and the location of any changes are also listed below.

Comment: The document is not clear about the Commercial Services Plan (CSP), and we are afraid that the public will not be involved in the process.

Response: As stated throughout the Resource Management Plan/Environmental Assessment public involvement process, the CSP is not part of this planning effort. However, additional language has been added to the "Concessions" section in Chapter II, Management Framework, to better explain the CSP process (i.e., the process includes public involvement and appropriate National Environmental Policy Act compliance activities).

Comment: The document is not clear about what happens to the privately owned trailers at Kim's Marina.

Response: Other than stating the Bureau of Reclamation's policy to remove exclusive uses, the Resource Management Plan/Environmental Assessment (RMP/EA) does not address the future status of the trailer sites within individual concession areas. The RMP/EA is programmatic and does not address specific issues such as the trailers at Kim's Marina.

Comment: Let's keep fees reasonable for locals and out-of-State visitors.

Response: A management action has been added to chapters IV and VI under "Recreation" stating that the Bureau of Reclamation (Reclamation) will promote the Golden Age Passport program that gives senior citizens access to Canyon Ferry Reservoir, as well as other areas managed by other Federal entities throughout the United States, for one price. A second action has been added stating that Reclamation will work with others to investigate the feasibility of establishing one user pass that is good for multiple areas managed by a variety of entities.

Comment: A full-service concession should be developed at Silos Recreation Area.

Response: Appropriate sections of the document have been reworded to indicate that a concessions operation will be located at Silos and that the Bureau of Reclamation will work with Broadwater County in the development of such a concession operation. The scope of such development will become clearer during the public involvement phase of preparing the Commercial Services Plan (CSP) for Canyon Ferry Reservoir. Also, the "Concessions" section in Chapter II, Management Framework, was expanded to explain the CSP process.

Comment: Development of a seaplane base should be considered when establishing a marina at Silos.

Response: The use of the Canyon Ferry Reservoir water surface by owners of recreational seaplanes would require a special use authorization issued by the Bureau of Reclamation (Reclamation). Reclamation cannot guarantee this use would be approved. If approved, the duration and other stipulations and conditions would be included in the use authorization document. The permit would be administered by Reclamation and not a concessionaire. This is stated in chapter V under the "Canyon Ferry Airport" section of the "Land Use" narrative. Also refer to Chapter II, Management Framework, under "Aeronautics Division, Montana Department of Transportation."

Comment: Some areas above and immediately below the dam will be closed for security purposes. If this is done, Canyon Ferry Road would have to be closed, as well as the road that is used for eagle watching. Rumor has it that you are thinking about re-routing traffic. How can this be done, and at what cost?

Response: The Bureau of Reclamation has no plans to close Canyon Ferry Road or the road(s) used for eagle watching for security reasons. The areas that are currently closed or have some use restrictions have been listed in the "Recreation" section in chapter VI.

Comment: The addition of new roads on surrounding lands should not be ruled out, including the construction of a road from White Earth to Silos.

Response: The Resource Management Plan/Environmental Assessment (RMP/EA) already states that the Bureau of Reclamation will work with other entities to improve roads on surrounding lands and lands within the study area using Transportation and Efficiency Act or other funding sources. No new roads are planned within the 10-year planning period described in the RMP because no public need has been identified; however, this would not rule out new road developments in the future if there was an identified public need and available funding. Actions, not mentioned in the RMP/EA and identified within the 10-year planning period, could be accommodated through an amendment or modification to the RMP/EA. No changes have been made to the RMP/EA to address this comment.

Comment: We would like to see a hiking/biking trail from Indian Road Campground to Silos.

Response: The Resource Management Plan/Environmental Assessment already states that the Bureau of Reclamation (Reclamation) will work with Broadwater County in developing a nonmotorized trail from Indian Road Campground to the Silos Recreation Area. This includes use by non-motorized bikes. Reclamation will also evaluate the need for a nonmotorized trail from White Earth Campground to Crittendon day-use area.

Comment: A boat ramp should be installed at Duck Creek.

Response: The preferred Resource Management Plan alternative already states that the Bureau of Reclamation will evaluate the need for developing facilities at Duck Creek. This will also include evaluating the need for a boat ramp.

Comment: By stating that the Bureau of Reclamation (Reclamation) will continue to work with the Coast Guard Auxiliary (CGAUX) implies that Reclamation has worked with them in the past.

Response: That phrase has been modified to reflect that Reclamation will support the efforts already made by the CGAUX and will cooperate with the CGAUX to improve boater safety and enhance weather monitoring.

Comment: Plan B states that the Bureau of Reclamation (Reclamation) will continue operation and maintenance (O&M) of other campgrounds at the existing level.

Response: Alternative B (preferred plan) does not state this; it is mentioned in Alternative A, which is not the plan Reclamation will implement. Reclamation will continue to provide O&M for the campgrounds at a level that is indicated by public health and safety needs as well as needs identified in the Facility Condition Assessments.

Comment: Specific upgrades or modifications to existing sites should be made (general comment from a variety of comment documents).

Response: Site-specific master planning and Facility Condition Assessments should identify specific problem areas and provide suggestions on needed upgrades and modifications to existing recreation sites around the reservoir. Also, the Working Group should identify problems and provide input as to how to resolve the problems.

Comment: We believe that the Bureau of Reclamation (Reclamation) will continue to pursue one concessionaire to manage all commercial services at Canyon Ferry Reservoir.

Response: The Resource Management Plan does not suggest that Reclamation pursue this course of action nor is it Reclamation's policy to seek a single concessionaire for a reservoir the size of Canyon Ferry.

Comment: We question the elevation of the boat ramps and usability at different elevations.

Response: The "Recreation" section of chapter V discussing this item has been modified. We have added other factors that may influence the usability of boat ramps other than water elevation. In addition, we changed the 5 feet of water required to launch a boat to a 3-foot depth. This is the minimum depth suggested to safely launch most watercraft from a trailer. Five feet was a conservative estimate of the depth needed to safely launch most watercraft. We realize smaller watercraft will be able to safely launch in 3-foot water depth on the boat ramp.

Comment: How has the Crime Witness Program been promoted?

Response: Crime Witness Program signs listing the number to call to report crimes have been posted within the study area.

Comment: I, U.S. Senator Conrad Burns, feel that the Bureau of Reclamation (Reclamation) should have a sound, thought-out plan on how to respond to the public's need for emergency assistance.

Response: The Resource Management Plan/Environmental Assessment (RMP/EA) states that Reclamation will ensure that existing services are adequate and that proper notification and response procedures are in place; will work with the United States Coast Guard Auxiliary (CGAUX) to continue with their established warning system; and will work with the CGAUX and Montana Fish, Wildlife and Parks to develop a comprehensive plan to improve boater safety in the reservoir area. Reclamation has added a list of areas that have been dedicated to the Canyon Ferry Fire Service Area for turn-arounds, dry hydrants, access sites, and cisterns (Certificate of Survey No. 3006402, recorded September 9, 2001, in Lewis and Clark County records). In addition, Reclamation already has emergency response procedures for the dam and powerplant, but is not documented in the RMP/EA for security purposes. Also, Reclamation has agreements with local entities for fire suppression and law enforcement. The details of such agreements are not documented in the RMP/EA. Cell phones are provided to camp hosts to respond to emergency situations. Spill Prevention Plans are in place. Reclamation reports hazardous materials stored at its facilities to the Lewis and Clark County, Disaster Emergency Services, the Community Right to Know Group, and the State of Montana. The details of these agreements are not highlighted in the RMP/EA. As additional needs or issues are identified, Reclamation will take them under consideration.

Comment: Concern was expressed about the Bureau of Reclamation's (Reclamation) lack of commitment to public safety and how it pertains to essential emergency services along East and West Shore Drives.

Response: Reclamation is concerned with public safety at Canyon Ferry Reservoir. To that end, Reclamation has provided a list of additional land dedications for addressing fire suppression needs along East and West Shore Drives (see chapter II, "Canyon Ferry Volunteer

Fire Department" for additional information). A management action has been added that states that Reclamation will work cooperatively with other road users and entities to consider new cooperative initiatives. The cooperative initiatives may provide cost-share opportunities commensurate with past Reclamation road maintenance funding to upgrade East and West Shore Drives beyond the existing condition. In addition, a management action is included in the Resource Management Plan/Environmental Assessment that states that Reclamation will seek cooperative partnerships for developing and maintaining roads, including working with county, State, and Federal Highway Departments on improving or paving roads using TEA-21 funds.

Comment: The Resource Management Plan/Environmental Assessment states that the Bureau of Reclamation (Reclamation) will continue to operate and maintain the Visitor Center. Since the Bureau of Land Management's departure, the Visitor Center has been closed.

Response: In 2002, Reclamation hired staff to operate the Canyon Ferry Visitor Center. Due to a resignation, staff has to be hired again. The Visitor Center will be open in 2003 if staff is available.

Comment: What is the schedule for the fire rehabilitation efforts?

Response: The fire rehabilitation actions will be completed in 2003. Actual recovery depends on climatic conditions. The date has been added to the Resource Management Plan/ Environmental Assessment.

Comment: The Resource Management Plan/Environmental Assessment (RMP/EA) states repeatedly that the Bureau of Reclamation (Reclamation) will replace the launch ramps at Yacht Basin. Since no one from Reclamation has even discussed this topic with us, we can only conclude that Reclamation sees our input as irrelevant.

Response: After the 2000 fires, Reclamation determined the need to replace the boat ramp and identified it as a management action. At the appropriate time, and prior to design and specifications, Reclamation will contact the operators of Yacht Basin and Kim's Marinas to solicit input.

Comment: I, U.S. Senator Conrad Burns, am concerned that there may not be an avenue for the impacted concessionaires to appeal Bureau of Reclamation (Reclamation) decisions. (*Note*: the Commercial Services Plan [CSP] and the Office of Inspector General [OIG] Report of 2000 are mentioned in the comment.)

Response: The CSP, which is being prepared as a separate planning and National Environmental Policy Act (NEPA) process, will follow all procedural requirements of

Reclamation's Policy, Directives, and Standards, the Council on Environmental Quality, and NEPA regulations. While there is no formal appeals process through the CSP process, decisions can be challenged through the Regional Director, the Commissioner of Reclamation, and legal means. The OIG report you reference deals with compliance issues related to existing contracts between Reclamation and concession operators (i.e., contract language and contract compliance). Procedures for resolving contract compliance issues should be contained in the contract.

Comment: Appendix D, Visitation Calculations, is very misleading.

Response: Appendix D was an attempt to detail the various techniques used to calculate the visitation at Canyon Ferry Reservoir and the problems that have been encountered. Because the existing information is somewhat misleading, it has been deleted and replaced with visitation figures collected since 1995 by the Bureau of Reclamation (Reclamation) at the major campgrounds and group-use areas where fees were collected. Visitation figures do not include concession areas or day use. Reclamation stands by its annual estimated visitation of 259,000 for the reservoir, which is mentioned in the document. Appendix D is now Appendix E, Visitation Data, because of the addition of an appendix dealing with comments and responses.

Comment: We feel that a concession at Silos is a good idea. Will there be an opportunity to rent a boat slip; will there be security in the area; and is there going to be a break wall to protect boats? Also, will camping facilities accommodate large recreation vehicles?

Response: The Commercial Services Plan (CSP), which will be prepared in the near future, will identify the scope of concessions development that will occur at Silos. Security and the number of slips, among other things, will be addressed in the CSP. The boat ramp and channel construction are addressed in the *Final Broadwater Bay Excavation Project Final Environmental Assessment* dated August 2000. When any new campsites are planned or upgrades occur to existing sites, larger recreational vehicles will be accommodated by following the most current recreation design standards.

Comment: We support the implementation of the actions in Alternative C.

Response: Reclamation has selected Alternative B as the preferred Resource Management Plan. We feel that the full-scale recreation development proposed in Alternative C is not justified at this time and would be too costly to implement within the next 10 years. There has not been a demonstrated need or overwhelming public support to implement Alternative C at this time. Many of the actions mentioned in Alternative C will likely be addressed when the Resource Management Plan/Environmental Assessment is re-evaluated and analyzed at the end of the 10-year planning period (2013).

Comment: There should be a provision in the selected alternative that will allow a review in 5 years so that changes can be made to accommodate potential use increases or other factors not identified in this planning phase.

Response: In chapter VI under "Amendments and Modifications to the RMP/EA," it states that the Bureau of Reclamation may revise or amend the Resource Management Plan (RMP) within the 10-year planning period. This would be done to accommodate changes in the social, economic, physical, or environmental conditions that would necessitate a change to the RMP. Needed revisions or modifications would be identified during the implementation and monitoring phases of the RMP and would likely be discussed by the Canyon Ferry Working Group before the change(s) would be considered for incorporation into the RMP.

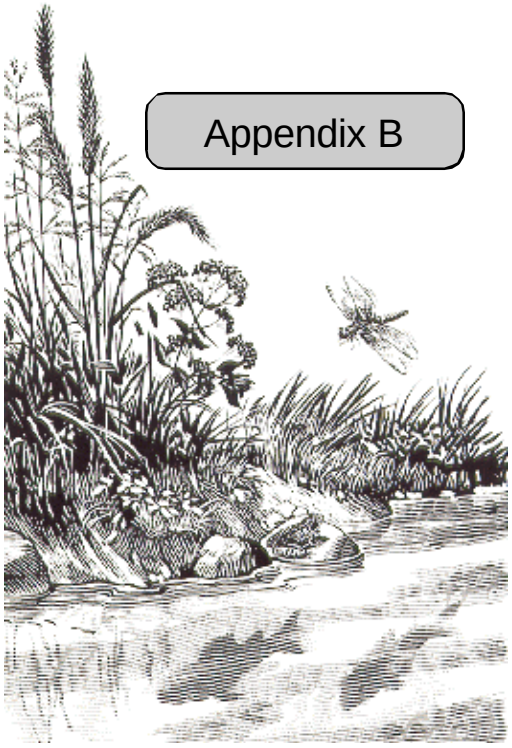
Comment: I noticed that there was nothing in the paper about a meeting in Townsend on September 19, 2002. I found no documentation from the mailing of this Resource Management Plan/Environmental Assessment (RMP/EA) that informed the public that there was a set of meetings. Adding this meeting just shows that the Bureau of Reclamation (Reclamation) has done another Reclamation thing—changed in mid-stream.

Response: The meeting that you mention was sponsored by Broadwater County to explain and gather public input on their plan to construct a boat ramp and develop other recreation opportunities at the Silos Recreation Area. Broadwater County invited Reclamation to attend and have a station to answer questions and gather comments about the Canyon Ferry RMP/EA. The comments collected about the RMP/EA at this meeting did not require a response or a change in the RMP/EA, but were considered in finalizing the RMP/EA. This meeting was not scheduled at the time the *Second Public Draft Canyon Ferry Resource Management Plan/Environmental Assessment* was released and was not included in the meetings listed in the transmittal letter for the RMP/EA. Meetings held specifically for the RMP/EA were public information meetings held May 14, 16, 21, and 23, 2002, in Bozeman, Helena, Townsend, and Butte, respectively, and formal public hearings held July 30, 2002, and August 1, 2002, in Townsend and Helena, respectively.

Comment: The Bureau of Reclamation (Reclamation) should seek volunteers to help maintain trails.

Response: A volunteer element has been added to the elements table in chapter IV, and a management action has been added to the "Recreation" section in chapter VI stating that Reclamation will seek the assistance of volunteers to maintain trails, help with litter cleanup, and assist in operating the Visitor Center.

Appendix B



Appendix B

History of Cabin Sites and Public Law 105-277, Title X, Canyon Ferry Reservoir, Montana Act

In 1965, 7 years after leases were first issued, the Secretary of the Interior (Secretary) called for a phaseout of all cabin site leases on Department of the Interior lands. This action precipitated a visit to Washington, DC, by a delegation of cabin site lessees from Canyon Ferry to lobby against the phaseout. An opinion released by the Interior Solicitor exempted Canyon Ferry from the policy because it was, at that time, under the control of a separate managing agency—Montana Fish, Wildlife and Parks (MFWP).

Although this calmed the controversy temporarily, it brought home to the leaseholders the fact that the investments they had made in the cabins, and the leases themselves, were vulnerable. In 1968, the Canyon Ferry Recreation Association (CFRA), a group composed primarily of lessees, asked the Montana congressional delegation to intercede on their behalf to authorize purchase of the sites. Purchase was attempted again in 1971. Each time, the response was the same. This response was summed up in a letter from Ellis L. Armstrong, then Commissioner of the Bureau of Reclamation (Reclamation):

> *The Bureau policy relative to existing cabin site leases at Canyon Ferry Reservoir is consistent with the policy of the Department of the Interior, which provides that where competition for specific land areas develops between cabin site use and general public recreation use, the latter will take precedence. This policy is supported by the need to assign a higher priority to public use for Federal lands as opposed to cabin site use which is essentially a private use. However, informal advice from our Regional Director's office at Billings, Montana, indicates no immediate prospect that lands presently leased for cabin site purposes at Canyon Ferry Reservoir will be needed for public use in the foreseeable future. Thus, it is not likely that any of the presently held leases will need to be terminated soon.*

In 1973, the Lewis and Clark County Commission requested the sale of the cabin sites on the premise that the county would accrue taxes from the land, in turn, to provide services. The commission's request was rejected for reasons stated in the above Reclamation policy.

During the 1980s, when the Federal Government initiated its Assets Management Program, essentially a divestiture of "surplus" public lands, inquiries were again made to the Federal Government and MFWP regarding sale of cabin sites. No lands at the reservoir were recommended for sale by either agency.

In 1983, the CFRA formed a cabin site purchase committee. The committee contacted Bruce Bugbee, of the American Public Land Exchange Company, to assess the feasibility of a land trade proposal. Reclamation again expressed little interest in a trade.

In October 1984, the CFRA retained Mr. Bugbee to present a conceptual proposal to Reclamation, MFWP, the Lewis and Clark County Commission, Helena Valley Irrigation District, and the Areawide Planning Office. This proposal consisted of selling the cabin sites and having the proceeds go to a development rights purchase program in the Helena Valley. Rights would have been purchased on irrigated agricultural lands that were designated as having other important public values such as critical wildlife, open space, or environmental values. Further justification for spending the cabin site proceeds here was that lands under the federally funded irrigation system in the valley were being subdivided; this program would protect those lands and public investment in the irrigation system (Lisa Bay Consulting and Bruce A. Bugbee and Associates, 1984).

Though no formal proposal had been submitted, Reclamation and MFWP formulated a joint response. In summary, the agencies concluded that the proposed use of the money did not maintain the recreational and wildlife values at Canyon Ferry and that the sale of the cabin sites did not protect future public and project needs at the reservoir.

Specifically, it was stated that:

> *All acquired lands were considered necessary to meet long-term project needs and that the cabin sites were being leased for 10-year increments with the understanding that leases might not be renewed if the land was needed to fulfill authorized project purposes.*

The leasing of cabin sites was considered a private, incidental use and was not intended to foreclose the option to return the lands to use by the general public at such time as use or needs of the project warranted. Further, the mitigations suggested by using the proceeds of the sales to purchase development rights did not offset the possible impacts on future water-based recreational uses that could be offered at Canyon Ferry. This would also create a situation at the sites that could result in jurisdictional and public service problems. Covenants suggested by the proposal to protect the reservoir's scenic quality in the event of a sale were considered to be a long-term enforcement problem involving possible costly litigation.

In May 1985, Mr. Bugbee submitted a formal proposal on behalf of the CFRA answering many of the concerns voiced by the agencies and offering to establish a permanent trust fund with the cabin sale proceeds. The proposal demonstrated that interest from the trust would substantially exceed the annual lease fees.

In July 1985, the agencies prepared a formal joint response to this proposal. The response reiterated the position that, once public landownership was lost through the sales, reservoir operation could be constrained, future recreational options could be foreclosed, and

jurisdictional and management difficulties could result. It was also pointed out that such a proposal would require a number of complex steps, beginning with congressional action to authorize such precedent-setting legislation. Also, cabin site owners could lose some of the benefits that they now enjoy, such as private boat docks.

[***Note***: Some of the above information was taken from a 1987 report prepared by Steven R. Clark. Lease terms and conditions have changed since 1987 and pursuant to Title X of Public Law (P.L.) 105-277.]

In 1988, MFWP substantially increased annual lease fees from $200-$250 to an average fee near double that. This may have prompted many leaseholders to seriously consider ownership because costs of leasing were no longer as advantageous.

The cabin site owners have argued that if the Federal Government intended to phase out the leases, it should never have allowed the level of private investment that it has. (The CFRA estimated that improvements totaled $9 to $12 million in 1987.) Reclamation contended that although policy had been inconsistent in the past, it had, for the last 25 years, rejected all attempts to privatize and retained 10-year increments on leases. The difficulty had been in addressing the belief on the part of some of the lessees, valid or not, that they had a vested interest in the land.

The cabin site lessees stated that they would control only 8 percent of the lakeshore. Managing agencies contended, however, that this is some of the most desirable lakeshore.

In the fall of 1990, the CFRA conducted a mailout survey to the 265 leaseholders to determine the level of interest in cabin site ownership. The vast majority of respondents were in favor of purchase. The survey solicited comments about conditions that would need to be in place for sales to occur. Certain issues surfaced during the solicitation of comments. The issues are listed below.

- **R** Would public services such as road maintenance be provided by private or public entities, and how much would they cost?

- **R** There are risks involved for the lessees in the event of a sale. Although exclusive sales to occupants of lands of this type have taken place, congressional authorization was necessary. The lessees stand the risk of losing their investments to the highest bidder.

- **R** The cabin sites do not include beaches. Beaches are public property and would probably remain so for the purpose of maintaining the reservoir. Reclamation policy does not allow docks and other water-related facilities to be installed by private users other than lessees and concessionaires. Therefore, the lessees stand to lose some key privileges.

- **R** Sale price would be based on fair market value. The price, financing, taxes, and any other costs would have to be favorable for some buyers to remain interested.

- **R** Cabin sites would have to be protected in case water levels were ever raised.

Another issue concerned year-round occupation of the cabin sites. The properties were originally intended to be seasonally occupied (U.S. Department of the Interior, 1958). As they have become permanent dwellings, the area has taken on both the appearance and demands of a community, including the provision of fire protection, year-round road maintenance, and law enforcement. The CFRA has acted as a de facto council for airing "community" concerns, although there is no formal way to govern the "community," and traditional sources of public funding are not available.

In 1996, Reclamation prepared a report entitled *Canyon Ferry Cabin Site Leasing Program Historic Background*. The report provided background information on the leasing program to support future policy formulation regarding the cabin sites at Canyon Ferry Reservoir. Because of the lack of historic information, the nature of promotional activities regarding the leasing of cabin sites was difficult to assess. The report basically concluded that there was insufficient control of the leasing program, which resulted in a lack of effective administration and planning.

PUBLIC LAW 105-277, TITLE X, CANYON FERRY RESERVOIR, MONTANA ACT

The Canyon Ferry Reservoir, Montana Act, P.L. 105-277 Title X, as amended by Title IV of P.L. 106-113 and P.L. 106-377, authorizes the Secretary to sell 265 recreational cabin sites at Canyon Ferry Reservoir, Montana. Title X directs the Secretary, in consultation with the State congressional delegation and the Governor, to establish the Montana Fish and Wildlife Conservation Trust (Trust). Ninety percent of the proceeds of the sale and, after the first sale, 90 percent of future lease revenues on any unsold lots, are to be deposited into the Trust. The remaining 10 percent of the sale proceeds and lease revenues shall be applied to reduce the outstanding debt for the Pick-Sloan Project at the reservoir. The purpose of the Trust is to provide a permanent source of funding to acquire publicly accessible land and interests in land in Montana to restore fish and wildlife habitat and enhance public hunting, fishing, and recreational opportunities. Not more than 50 percent of the income from the Trust in any year shall be used outside the watershed of the Missouri River in the State, from Holter Dam upstream to the confluence of the Jefferson River, Gallatin River, and Madison River. Title X designates the following members of the Trust Board:

1. Trust Manager – To manage the trust asset and make disbursements.

2. Joint State-Federal Agency Board – To consist of one employee from Reclamation, the Forest Service, the Bureau of Land Management, the Fish and Wildlife Service, and MFWP.

3. Citizens Advisory Board – To be nominated by the Secretary and approved by the Joint Board. To be comprised of one member representing the following Montana organizations: agricultural landowners, hunters, fishermen, and a nonprofit land trust or environmental organization. One of the members shall have a demonstrated commitment to improving public access and to fish and wildlife conservation.

Also under Title X, the Broadwater County Commissioners shall establish the Canyon Ferry-Broadwater County Trust. The Broadwater Trust shall be managed by a nonprofit foundation or other independent trustee to be selected by the Commissioners. The Commissioners are also to appoint an advisory committee consisting of not fewer than 3 nor more than 5 persons. The advisory committee shall meet on a regular basis to establish priorities and make requests for the disbursements. Under Title X, funds for the Broadwater Trust are to be disbursed as follows:

1. Principal – A sum not to exceed $500,000 may be expended from the corpus to pay for the planning and construction of a harbor at the Silos Recreation Area.

2. Interest – The balance of the Broadwater Trust shall be held, and the income shall be expended annually, for the improvement of access to the portions of the reservoir lying within Broadwater County and for the creation and improvements of new and existing recreational areas within Broadwater County.

No closing on the sale of property can take place until the CFRA and Broadwater County enter into a Contributions Agreement concerning funding of the Broadwater County Trust. The Contributions Agreement shall require that the CFRA shall ensure that $3 million in value is deposited into the trust from one or more of the following sources:

1. Direct contributions made by the purchasers on the sale of each cabin.

2. Annual contributions made by the purchasers.

3. All other monetary contributions.

4. In-kind contributions, subject to the approval of the county.

5. A loan from the Montana Fish and Wildlife Conservation Trust to the CFRA. The CFRA and the Conservation Trust shall enter into a Recreation Trust Agreement, which will provide the terms of the loan.

6. Assessments made against the cabin sites made under a county park district or any similar form of local government under the laws of the State of Montana.

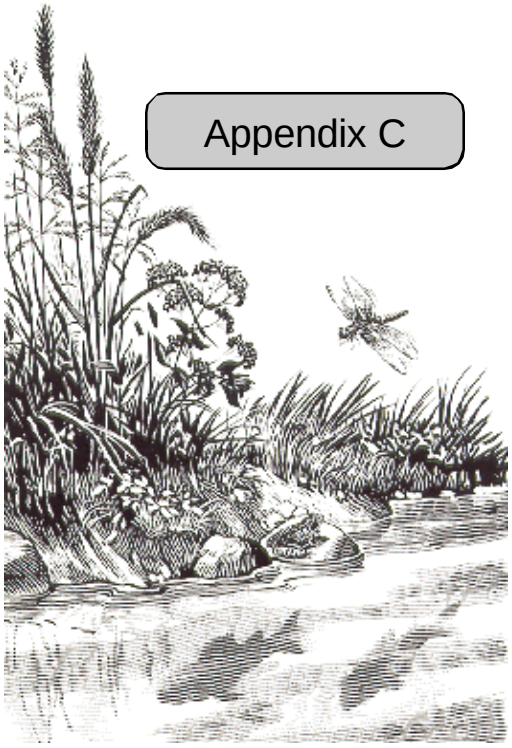
7. Any other contribution, subject to the approval of Broadwater County.

During 1999, the Montana Area Office (MTAO) began to implement the law. The MTAO has completed the survey work necessary to conduct the sale. This work included the preparation of a certificate of survey for all the lands and all access easements as required for legal county recordation after the sale. Some additional land has been added to the lots or reserved for future septic systems. Reclamation worked with Lewis and Clark County to accommodate their rules and regulations regarding adequate space to locate drain fields. An appraisal to determine the fair market value of the lease lots is complete.

As required by Title X, Broadwater County was offered a management agreement for the Silos Recreation Area. Broadwater County chose not to take over management at that time. In 2001, Reclamation, in cooperation with Commissioners and other local individuals, worked on the design and specifications for deepening Broadwater Bay, constructing a boat ramp, parking lot, and other facilities at the Silos Recreation Area. The Commissioners, interested local individuals, and Reclamation looked at several options to providing safe harbor and low water elevation access. Excavating Broadwater Bay, developing an emergency boat ramp at Duck Creek, and enhancing access at Hole in the Wall fishing area were options selected for further analysis. The design of the excavation of Broadwater Bay, the boat ramp, and other pertinent activities were completed by Reclamation in 2001. Construction of the boat ramp is pending due to budget constraints.

Title X requires that the 265 lots first be offered for sale to the highest bidder as an entire block of land at not less than their appraised fair market value. In addition to the sale price, the purchaser is required to pay for all costs associated with the sale. This sale was held in April 2002. Since there were no qualified bids received, Reclamation was required to offer each current lessee the option to buy their cabin site at the fair market value or to continue leasing through August 2014. As of January 2003, 216 of these lots have been purchased by the current lessees. The current lease lot agreements have been renewed for 5 years, until August 2004, and will be renewed for two consecutive 5-year terms thereafter. Cabin site rental rates are based on an appraisal of the cabin sites approved and accepted in 1998 under a Settlement Agreement between Reclamation and the CFRA. The Settlement Agreement specifies that rent for the base year (1999) would be adjusted each year for the following 9 years based on the Implicit Price Deflator for the Gross Domestic Product, not to exceed 10 percent from the rent of the previous year. The Settlement Agreement provides for the rental rates through 2008. Rental rates for the remaining years, 2009 through 2014, have not yet been determined. Although it is expected that all lots will sell, if some lots are not sold by 2014, those lots are to be vacated and the lands to remain in Federal ownership.

Appendix C



Appendix C

Criteria for Facility Development

- **R** Facilities development will be based on the most current recreation design standards dealing with campground layout, road construction, utilities, sewage systems, potable water systems landscape planting, and irrigation systems.

- **R** To the extent possible, facilities will be developed only at sites that have already been disturbed and sites that have been fragmented by human activity.

- **R** To the extent possible, the use of adjacent lands will be taken into consideration when planning for facility development.

- **R** Development must be subjected to public involvement and publicly supported.

- **R** Development will be based on public demand and carrying capacity limitations. Limitations will be determined by assessing safety, quality of the visitor experience, potential for visitor-use conflicts, and natural resource conditions such as the presence of heritage resource sites or critical habitat.

- **R** Development must be compatible with the goals and objectives of the Resource Management Plan and Bureau of Reclamation (Reclamation) policy and directives and standards.

- **R** Development will be compatible with existing uses and opportunities.

- **R** Developed facilities will be able to sustain anticipated use and will comply with applicable Federal, State, and local regulations, laws, and policies, including the Americans with Disabilities Act Guidelines and the Uniform Federal Accessibility Standards.

- **R** Developed facilities will accommodate general public use; private, exclusive use of facilities will not be allowed according to established Reclamation policy.

- **R** Developed facilities will be designed to complement the surrounding landscape and will use native plant species for vegetation and landscaping.

- **R** Vegetation on areas disturbed by construction will be restored, to the extent practicable, to its predisturbance conditions.

- **R** Development and use of facilities must not create safety hazards, increase noise levels, or limit emergency access.

- **R** Development will take into consideration the future cost of operation and maintenance (O&M) of new facilities (i.e., emphasis should be on low cost O&M items).

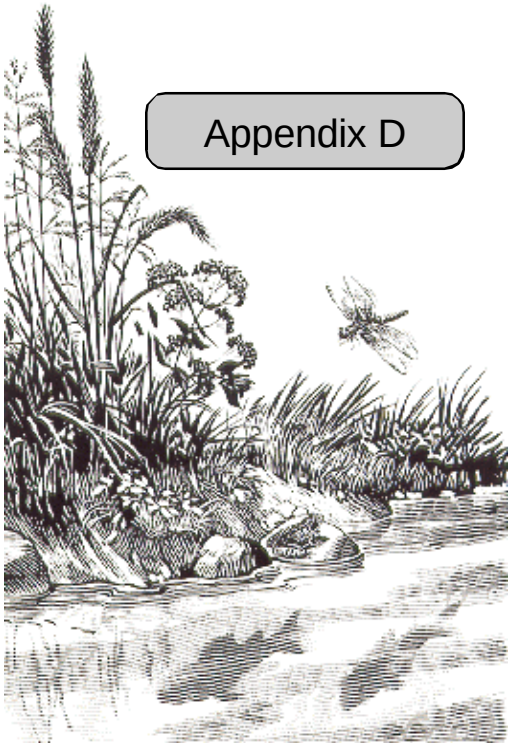
- **R** Best management practices will be employed to prevent erosion and surface runoff.

- **R** Development of facilities will incorporate universal design standards to the maximum extent practical.

- **R** When locating facilities, every effort will be made to avoid prime farmlands and other environmentally sensitive areas.

- **R** Developments should adhere to Federal, State, and local requirements concerning placement of facilities adjacent to streams and lakes (i.e., appropriate setbacks are realized).

Appendix D



Appendix D

Criteria for Nonmotorized, Multiuse Trail Development

R A comprehensive trail plan will be prepared before any construction and will detail, among other things, site locations (alignment), lengths, materials, signing needs, construction costs, and an operation and maintenance strategy.

R Public use of the nonmotorized trails will be limited to foot traffic, equestrian users, nonmotorized bikes, cross-country skiers, and wheelchair users, when possible.

R Construction will not proceed until all environmental and cultural resource clearances are obtained.

R Trail alignment will be 200 feet from the lake shoreline; however, existing trails and abandoned and reclaimed off-road vehicle roads will be integrated with new trail construction as much as possible, providing old trails and roads were properly laid out and have good drainage.

R Terrain and elevation changes should not be extreme.

R The route should be planned for minimum maintenance, while providing maximum ecological variety (i.e., use forest edges bordering meadows, rather than crossing meadows, when possible).

R Portions of the trail designed for access by people with disabilities will follow appropriate accessability guidelines and standards for outdoor recreation facilities and components.

R Location should be suitable for both winter and summer activities to the degree that visitor or management needs, terrain, and climate patterns will allow.

R Access points to trail heads should be provided, as feasible.

R For interpretive purposes, trails should meander to take advantage of scenic panoramas and historic, cultural, and natural resources.

R Trails should be located to disperse visitors from fragile or heavily used areas.

R Areas of critical or sensitive habitat should be avoided.

R Critical cultural resource sites will be avoided whenever feasible

R Trails should avoid areas where plants and animals may be seriously impacted.

R Trails should be located on stable soils. If soils are not stable, alternate material must be provided.

R Special attention should be given to the problems that traffic and traffic-related noise and safety could create for hikers and equestrians at road crossings.

R Access at varying distances along the trail should be provided so that users can choose trips of varying lengths.

R If equestrians frequent the trail, hitching rails should be located near trails so riders can secure their horses at trail heads, rest stops, viewing, and scenic areas. Also, trail heads should be large enough to accommodate horse trailers, and access roads should be designed to provide safe access to trail heads by vehicles handling large trailers.

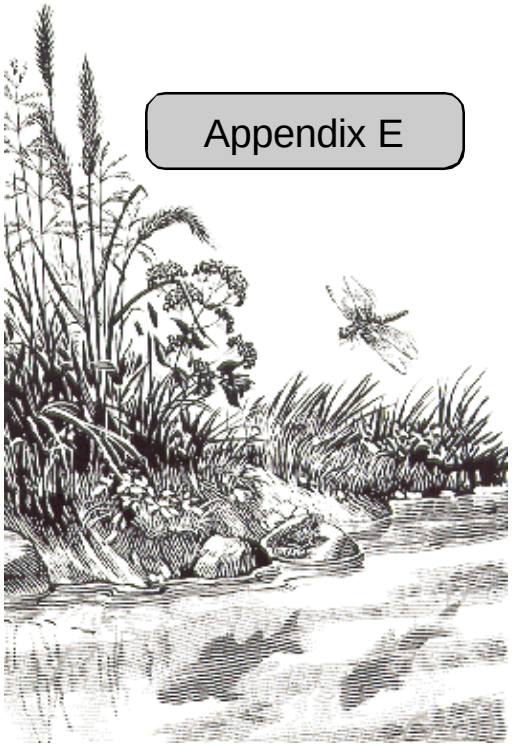
R Alignment should offer the users the best views, follow contours, avoid steep topography, and angle across the natural slope to take advantage of natural drainage.

R Structures should be made of native materials when feasible (i.e., bridges, benches, retaining walls, erosion-control devices, etc.).

R The best available guidelines will be used for specific guidance on drainage (water bars and culverts), trail signing, dimensions, clearing requirements, structures, surface, revegetation, cribbing (retaining walls), switchbacks, base construction, and bridges.

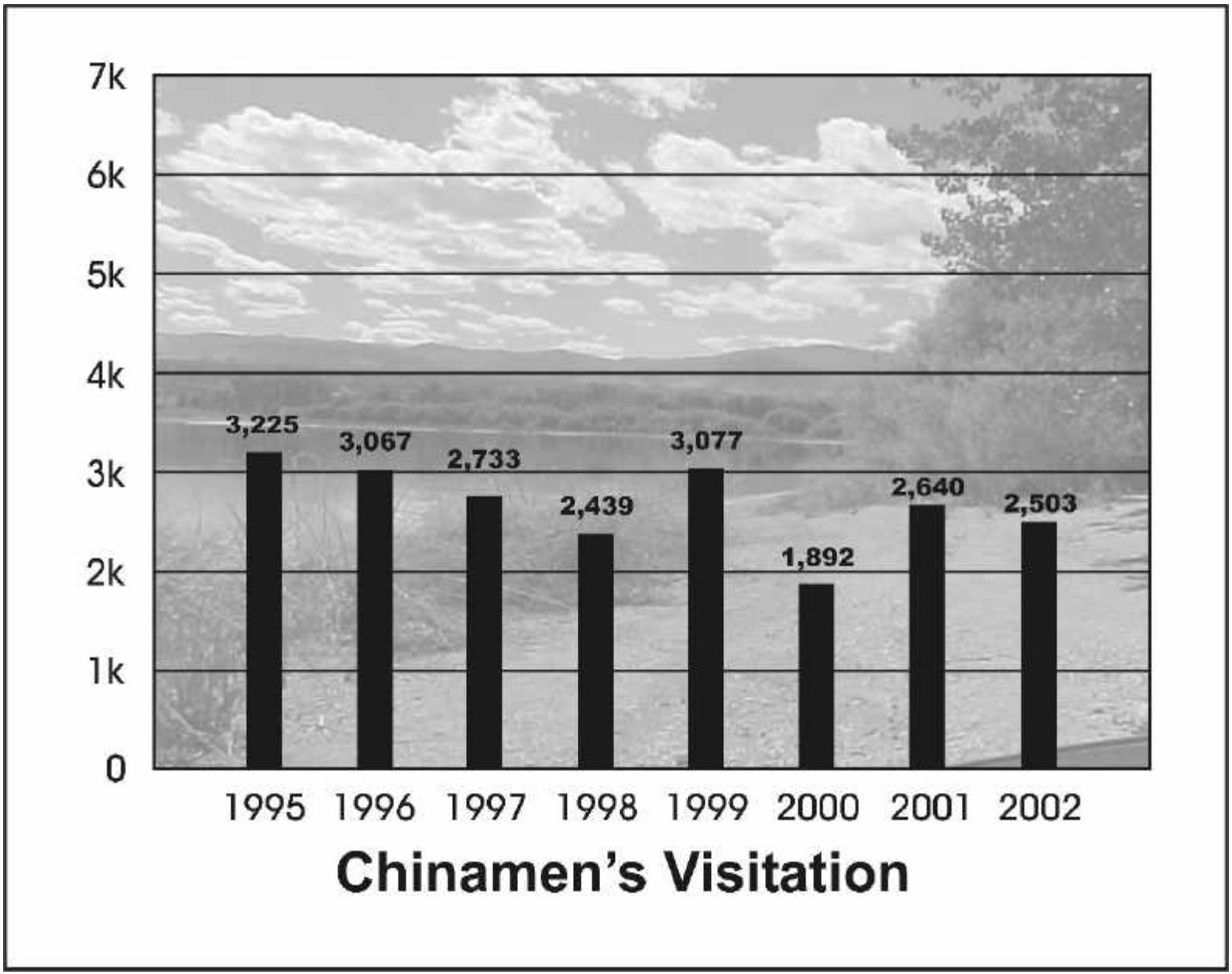
R Proper facilities, such as loading, staging and parking areas, signage, potable water sources, and restrooms, will be incorporated into trail designs.

Appendix E



Appendix E

Visitation Data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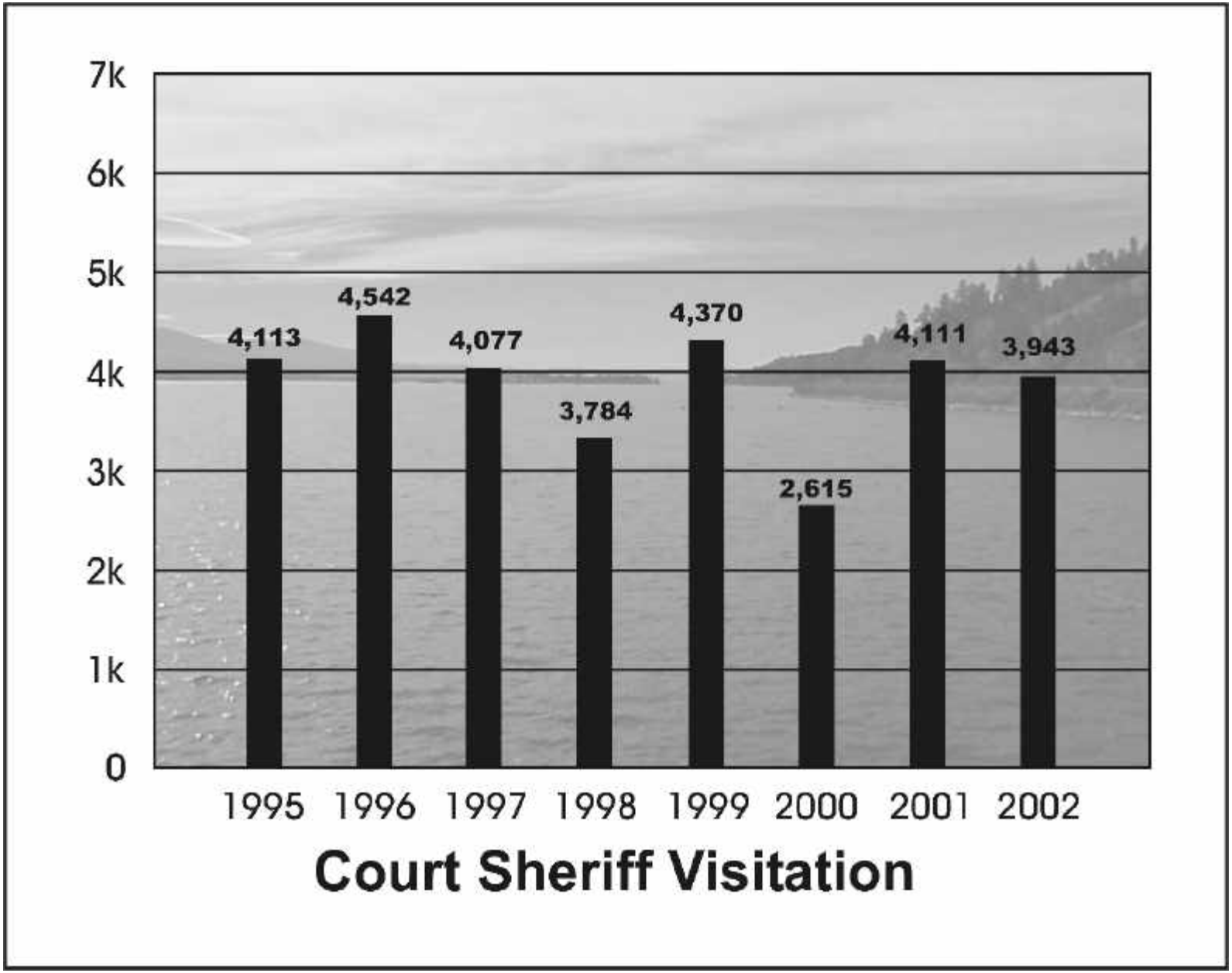
Chinamen's Visitation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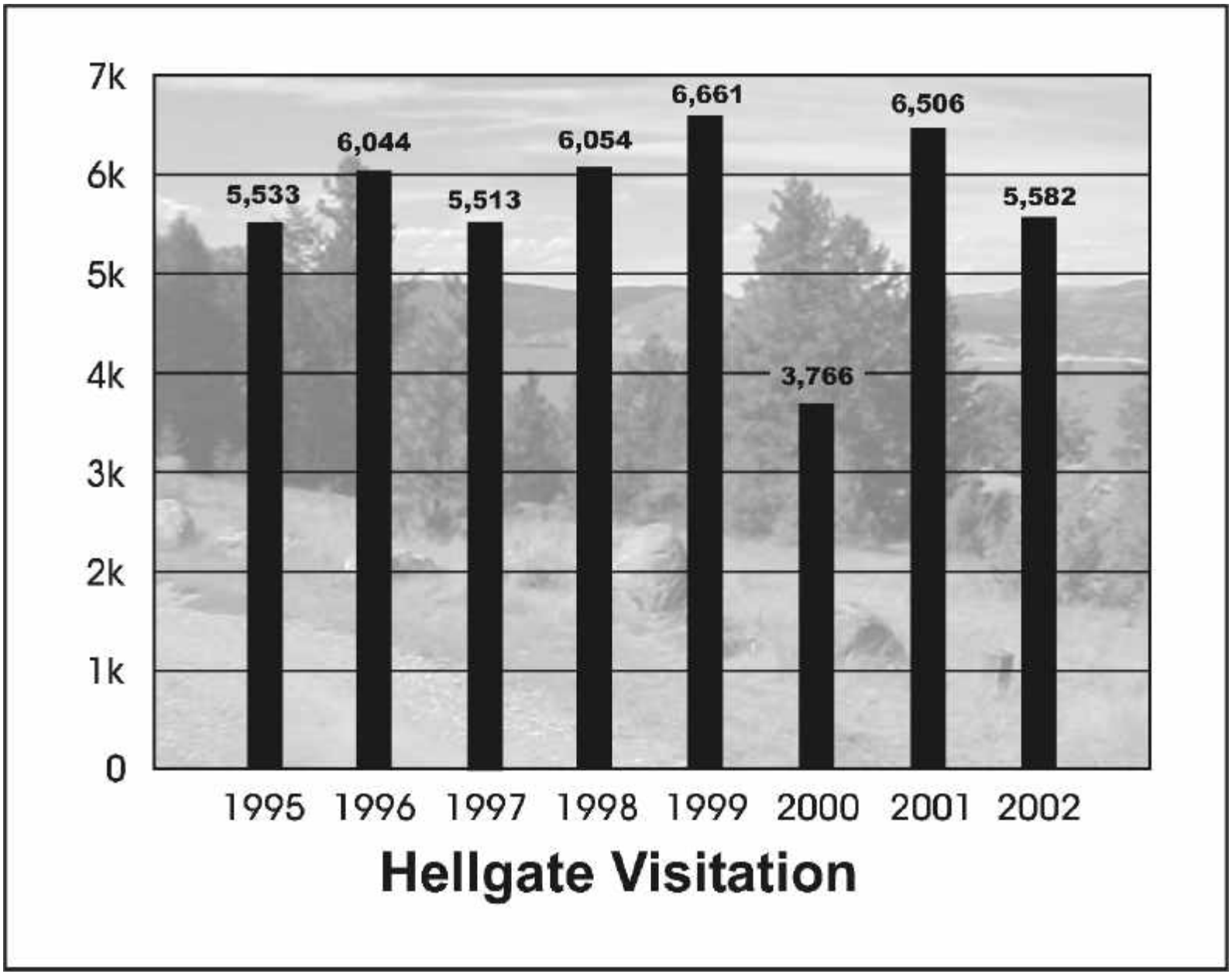
Court Sheriff Visitation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1995
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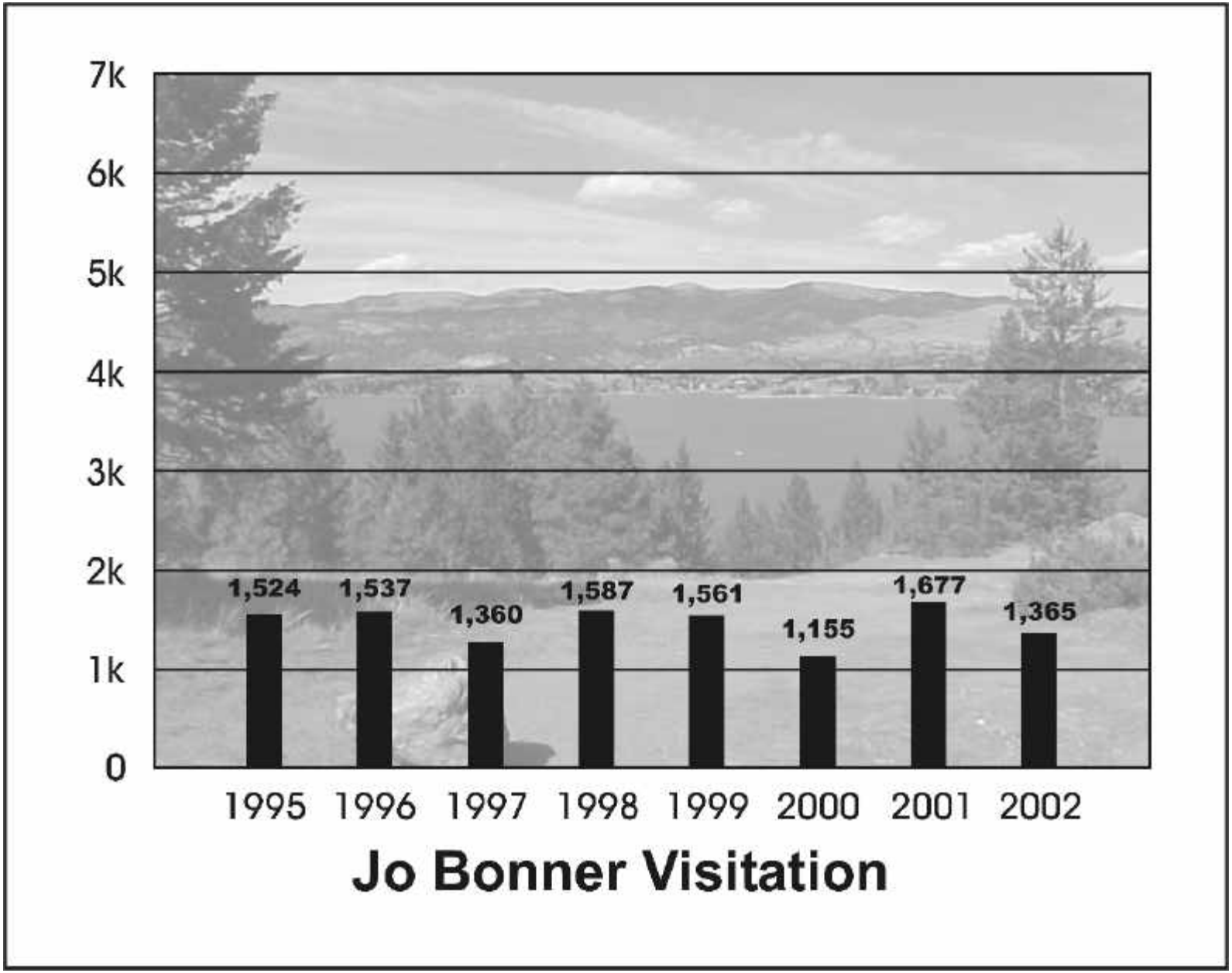
Hellgate Visitation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1995
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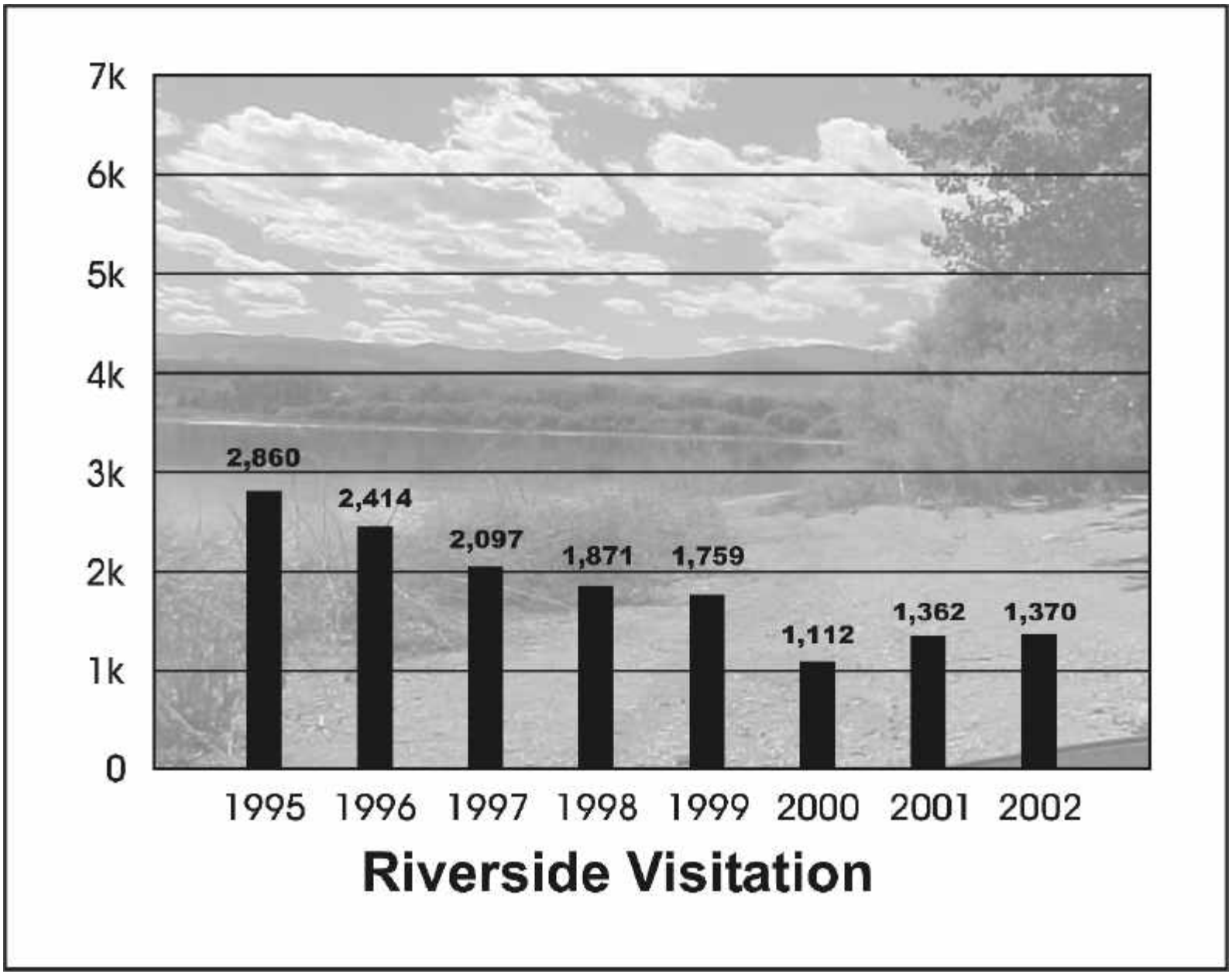
Jo Bonner Visitation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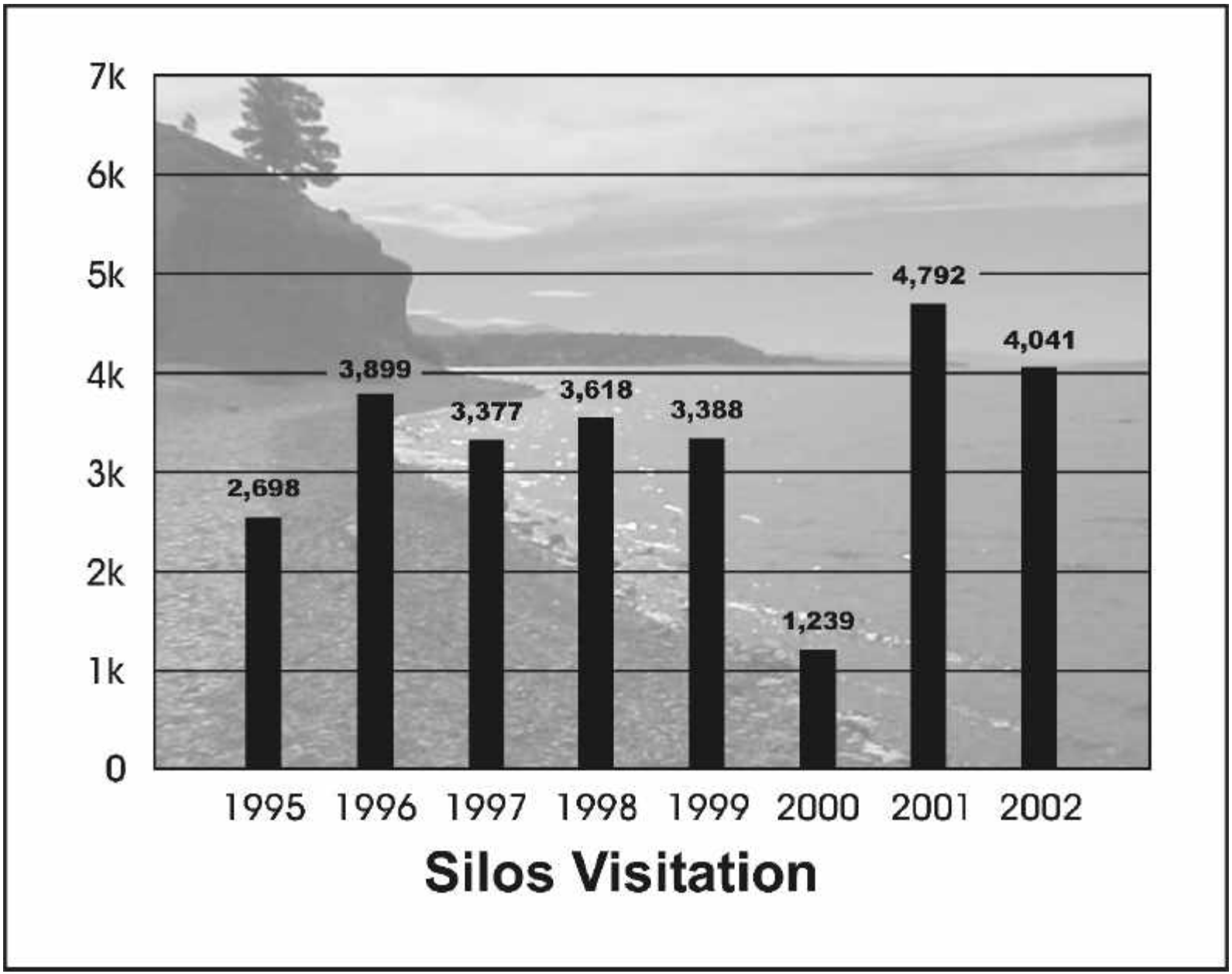
Riverside Visitation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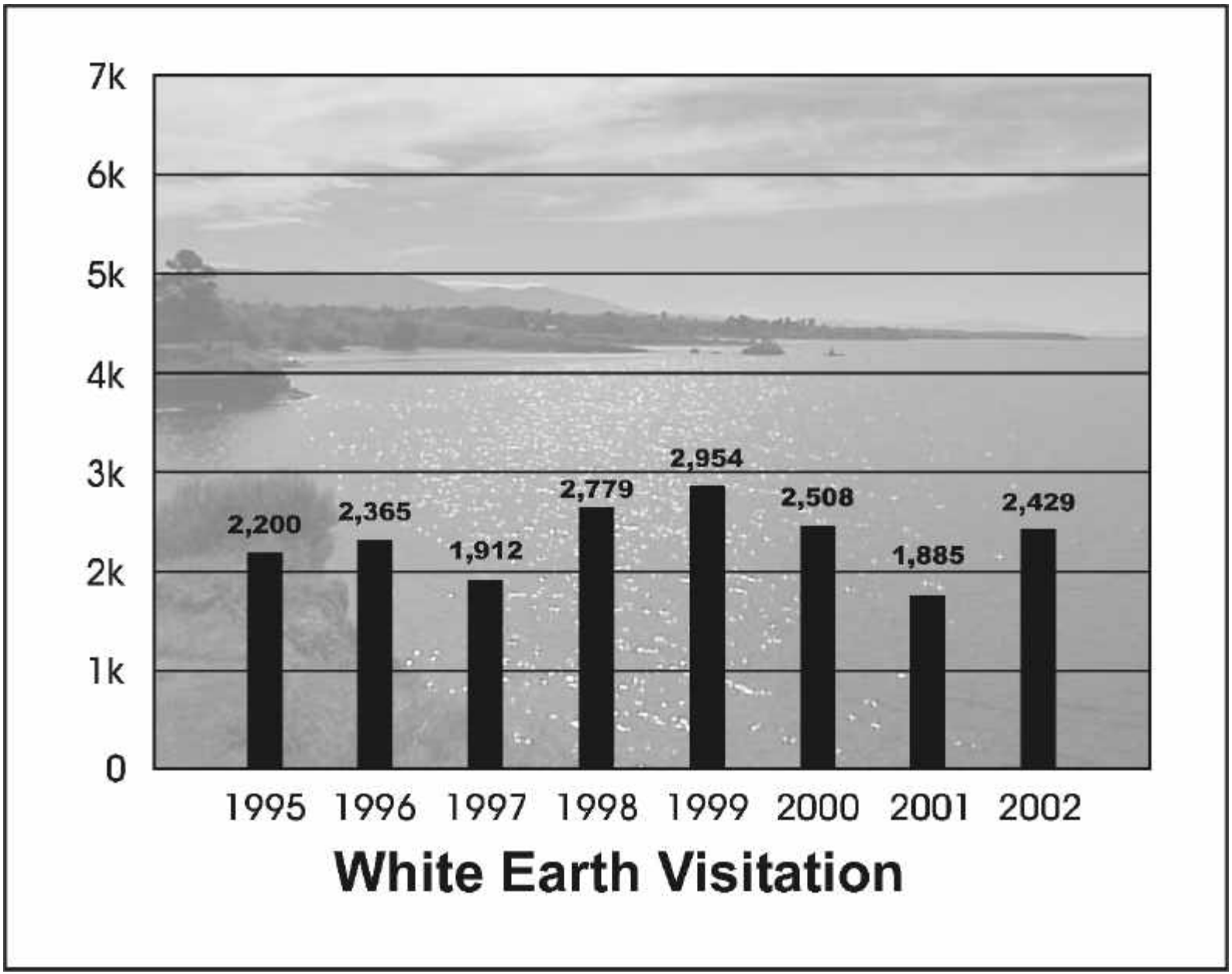
Silos Visitation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2002
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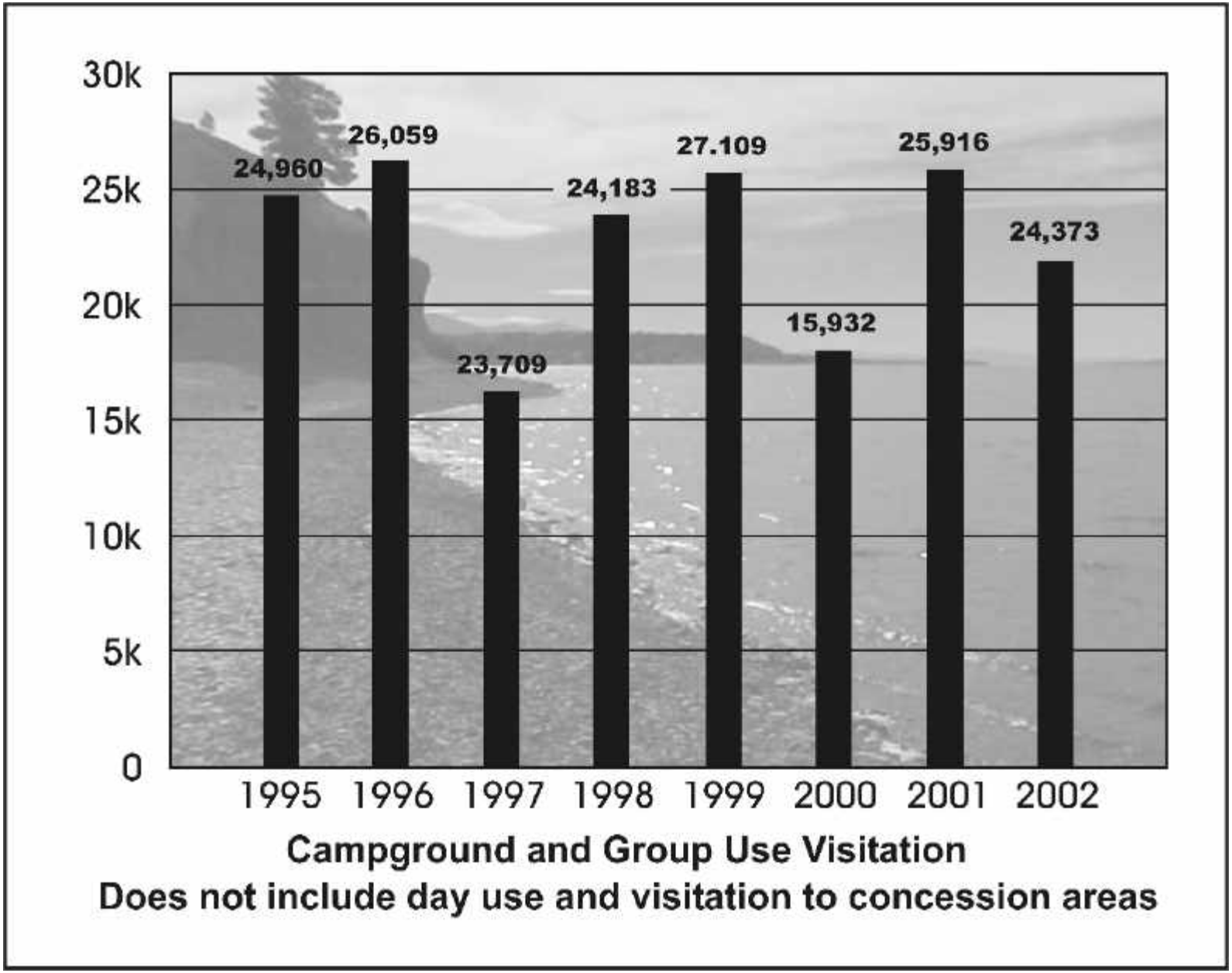
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1995
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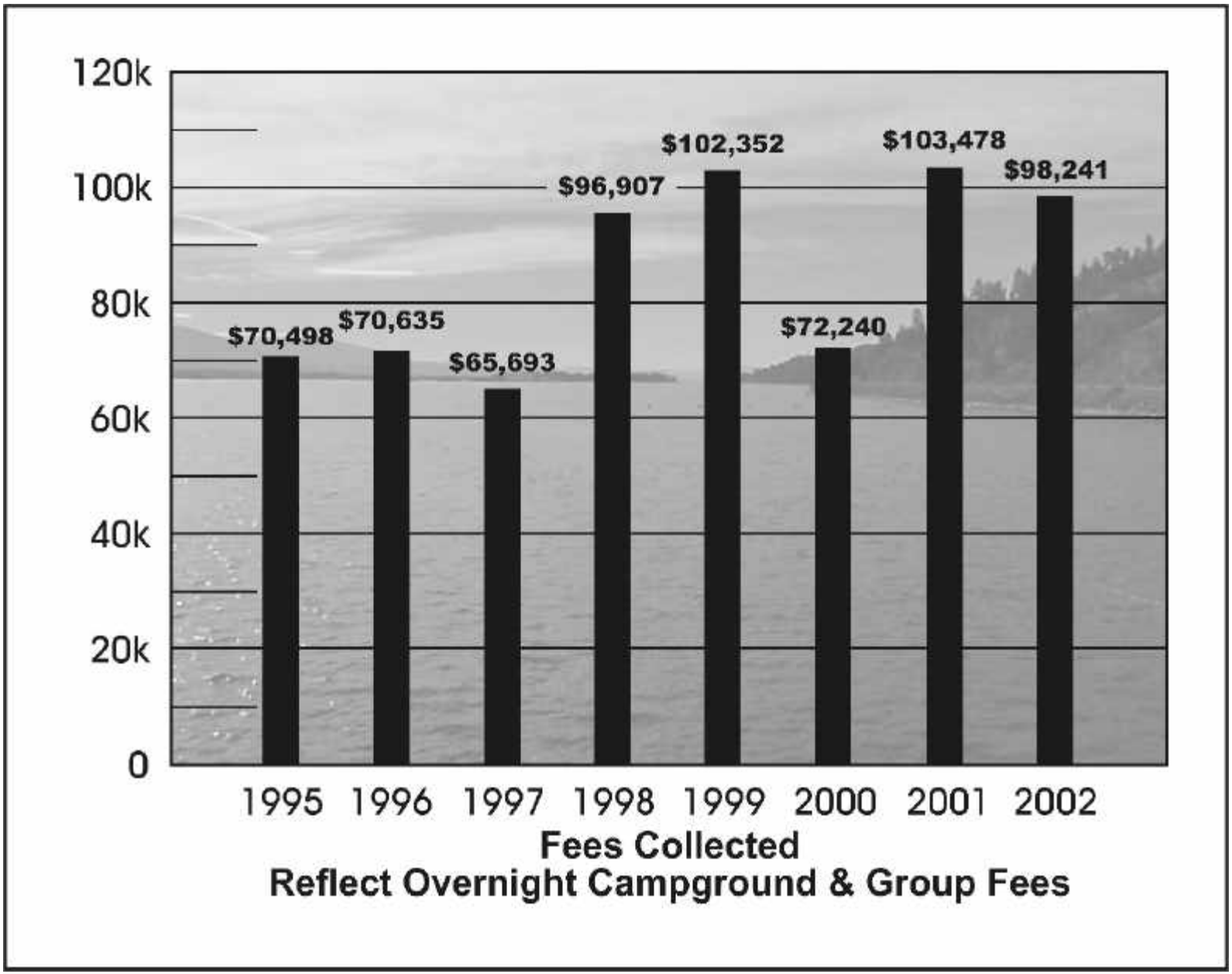
2002
Campground and Group Use Visitation
Does not include day use and visitation to concession areas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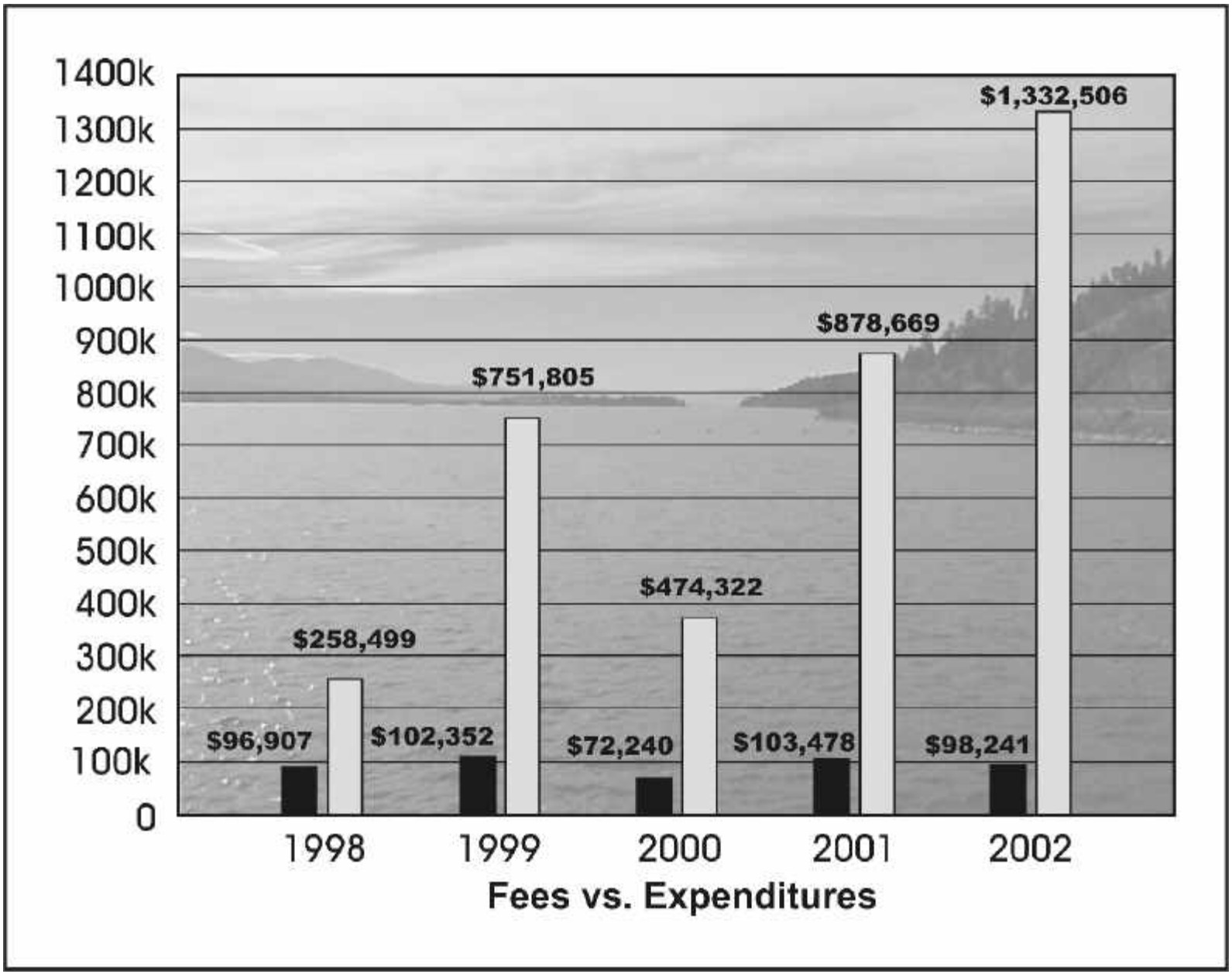
1995 1996 1997 1998 1999 2000 2001 2002
Fees Collected
Reflect Overnight Campground & Group Fees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$103,478
$878,669
$98,241
$1,332,506
1998
1999
2000
2001
2002
Fees vs. Expenditures

Chinamen's

1995		1996		1997		1998		1999		2000		2001		2002	
Date	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**
May 27-31	353	May 23-31	392	May 17-31	417	May 16-31	230	May 16-31	355	May 19-31	294	May 19-31	324	May 20-31	264
June 1-30	748	June 1-30	752	June 1-30	432	June 1-30	240	June 1-30	502	June 1-30	502	June 1-30	468	June 1-30	523
July 1-31	1,066	July 1-31	1,006	July 1-31	935	July 1-31	978	July 1-31	1,197	July 1-31	920	July 1-31	924	July 1-31	973
Aug 1-31	764	Aug 1-31	738	Aug 1-31	833	Aug 1-31	729	Aug 1-31	839	Aug 1-31	94	Aug 1-31	643	Aug 1-31	631
Sept 1-14	294	Sept 1-15	179	Sept 1-14	116	Sept 1-15	262	Sept 1-12	184	Sept 1-9	82	Sept 1-16	281	Sept 1-14	112
Total	**3,225**		**3,067**		**2,733**		**2,439**		**3,077**		**1,892**		**2,640**		**2,503**
											Total of all years 21,576				

NOTE: These figures reflect overnight campers only; day use is not included.

Court Sheriff

1995		1996		1997		1998		1999		2000		2001		2002	
Date	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**
May 27-31	238	May 23-31	406	May 17-31	433	May 16-31	264	May 16-31	382	May 19-31	443	May 19-31	412	May 20-31	292
June 1-30	893	June 1-30	1,281	June 1-30	831	June 1-30	476	June 1-30	762	June 1-30	938	June 1-30	1,003	June 1-30	813
July 1-31	1,364	July 1-31	1,443	July 1-31	1,404	July 1-31	1,310	July 1-31	1,776	July 1-31	1,033	July 1-31	1,317	July 1-31	1,369
Aug 1-31	1,282	Aug 1-31	1,170	Aug 1-31	1,250	Aug 1-31	1,459	Aug 1-31	1,109	Aug 1-31	148	Aug 1-31	1,095	Aug 1-31	1,281
Sept 1-14	336	Sept 1-15	242	Sept 1-14	159	Sept 1-15	274	Sept 1-12	341	Sept 1-9	53	Sept 1-16	284	Sept 1-14	188
Total	**4,113**		**4,542**		**4,077**		**3,784**		**4,370**		**2,615**		**4,111**		**3,943**
											Total of all years 31,555				

NOTE: These figures reflect overnight campers only; day use is not included.

Hellgate

1995		1996		1997		1998		1999		2000		2001		2002	
Date	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**
May 27-31	629	May 23-31	433	May 17-31	493	May 16-31	680	May 16-31	671	May 19-31	686	May 19-31	705	May 20-21	522
June 1-30	990	June 1-30	1,336	June 1-30	735	June 1-30	504	June 1-30	850	June 1-30	1,202	June 1-30	1,289	June 1-30	1,307
July 1-31	2,035	July 1-31	2,247	July 1-31	2,129	July 1-31	2,268	July 1-31	2,975	July 1-31	1,767	July 1-31	2,094	July 1-31	1,967
Aug 1-31	1,355	Aug 1-31	1,610	Aug 1-31	2,009	Aug 1-31	1,847	Aug 1-31	1,600	Aug 1-31	16	Aug 1-31	1,950	Aug 1-31	1,514
Sept 1-14	524	Sept 1-15	418	Sept 1-14	147	Sept 1-15	755	Sept 1-12	565	Sept 1-9	95	Sept 1-16	468	Sept 1-14	272
Total	**5,533**		**6,044**		**5,513**		**6,054**		**6,661**		**3,766**		**6,506**		**5,582**
											Total of all years 45,659				

NOTE: These figures reflect overnight campers only; day use is not included.

Jo Bonner

1995		1996		1997		1998		1999		2000		2001		2002	
Date	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**
May 27-31	142	May 23-31	90	May 17-31	148	May 16-31	141	May 16-31	182	May 19-31	180	May 19-31	191	May 20-31	138
June 1-30	320	June 1-30	365	June 1-30	189	June 1-30	144	June 1-30	242	June 1-30	286	June 1-30	358	June 1-30	261
July 1-31	515	July 1-31	588	July 1-31	446	July 1-31	595	July 1-31	788	July 1-31	580	July 1-31	424	July 1-31	573
Aug 1-31	441	Aug 1-31	410	Aug 1-31	504	Aug 1-31	475	Aug 1-31	321	Aug 1-31	46	Aug 1-31	606	Aug 1-31	388
Sept 1-14	106	Sept 1-15	84	Sept 1-14	73	Sept 1-15	232	Sept 1-12	128	Sept 1-9	63	Sept 1-16	98	Sept 1-14	41
Total	**1,524**		**1,537**		**1,360**		**1,587**		**1,661**		**1,155**		**1,677**		**1,365**
											Total of all years 11,866				

NOTE: These figures reflect overnight campers only; day use is not included.

Riverside

1995		1996		1997		1998		1999		2000		2001		2002	
Date	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**
May 27-31	184	May 23-31	202	May 17-31	293	May 16-31	259	May 16-31	300	May 19-31	124	May 19-31	113	May 20-31	194
June 1-30	693	June 1-30	741	June 1-30	539	June 1-30	319	June 1-30	350	June 1-30	211	June 1-30	368	June 1-30	374
July 1-31	1,016	July 1-31	694	July 1-31	684	July 1-31	606	July 1-31	574	July 1-31	637	July 1-31	434	July 1-31	478
Aug 1-31	702	Aug 1-31	540	Aug 1-31	483	Aug 1-31	455	Aug 1-31	385	Aug 1-31	84	Aug 1-31	289	Aug 1-31	263
Sept 1-14	265	Sept 1-15	237	Sept 1-14	98	Sept 1-15	232	Sept 1-12	150	Sept 1-9	56	Sept 1-16	158	Sept 1-14	61
Total	**2,860**		**2,414**		**2,097**		**1,871**		**1,759**		**1,112**		**1,362**		**1,370**
											Total of all years 14,845				

NOTE: These figures reflect overnight campers only; day use is not included.

Silos

1995		1996		1997		1998		1999		2000		2001		2002	
Date	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**
May 27-31	262	May 23-31	314	May 17-31	278	May 16-31	493	May 16-31	518	May 19-31	172	May 19-31	473	May 20-31	355
June 1-30	416	June 1-30	776	June 1-30	554	June 1-30	489	June 1-30	540	June 1-30	262	June 1-30	1,358	June 1-30	1,394
July 1-31	1,227	July 1-31	1,243	July 1-31	1,159	July 1-31	1,220	July 1-31	1,314	July 1-31	567	July 1-31	1,444	July 1-31	989
Aug 1-31	546	Aug 1-31	1,185	Aug 1-31	1,143	Aug 1-31	929	Aug 1-31	737	Aug 1-31	189	Aug 1-31	1,086	Aug 1-31	1,102
Sept 1-14	247	Sept 1-15	381	Sept 1-14	243	Sept 1-15	487	Sept 1-12	279	Sept 1-9	49	Sept 1-16	431	Sept 1-14	201
Total	**2,698**		**3,899**		**3,377**		**3,618**		**3,388**		**1,239**		**4,792**		**4,041**
											Total of all years 27,052				

NOTE: These figures reflect overnight campers only; day use is not included.

White Earth

1995		1996		1997		1998		1999		2000		2001		2002	
Date	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**	**Date**	**No. of visitors**
May 27-31	211	May 23-31	244	May 17-31	107	May 16-31	326	May 16-31	144	May 19-31	639	May 19-31	218	May 20-31	169
June 1-30	580	June 1-30	654	June 1-30	308	June 1-30	535	June 1-30	566	June 1-30	646	June 1-30	451	June 1-30	605
July 1-31	840	July 1-31	636	July 1-31	529	July 1-31	768	July 1-31	1,170	July 1-31	794	July 1-31	517	July 1-31	693
Aug 1-31	375	Aug 1-31	579	Aug 1-31	795	Aug 1-31	789	Aug 1-31	646	Aug 1-31	289	Aug 1-31	425	Aug 1-31	749
Sept 1-14	194	Sept 1-15	252	Sept 1-14	173	Sept 1-15	361	Sept 1-12	428	Sept 1-9	140	Sept 1-16	274	Sept 1-14	213
Total	**2,200**		**2,365**		**1,912**		**2,779**		**2,954**		**2,508**		**1,885**		**2,429**
											Total of all years 19,032				

NOTE: These figures reflect overnight campers only; day use is not included.

Summary visitation table
(Campgrounds)

Year	Riverside	Court Sheriff	Chinamen's	Jo Bonner	Hellgate	Silos	White Earth	Total
1995	2,860	4,113	3,225	1,524	5,533	2,698	2,200	22,153
1996	2,414	4,542	3,067	1,537	6,044	3,899	2,365	23,868
1997	2,097	4,077	2,733	1,360	5,513	3,377	1,912	21,069
1998	1,871	3,784	2,439	1,587	6,054	3,618	2,779	22,132
1999	1,759	4,370	3,077	1,661	6,661	3,388	2,954	23,870
2000	1,112	2,615	1,892	1,155	3,766	1,239	2,508	14,287
2001	1,362	4,111	2,640	1,677	6,506	4,792	1,885	22,973
2002	1,370	3,943	2,503	1,365	5,582	4,041	2,429	21,233
Total	**14,845**	**31,555**	**21,576**	**11,866**	**45,659**	**27,052**	**19,032**	**171,765**

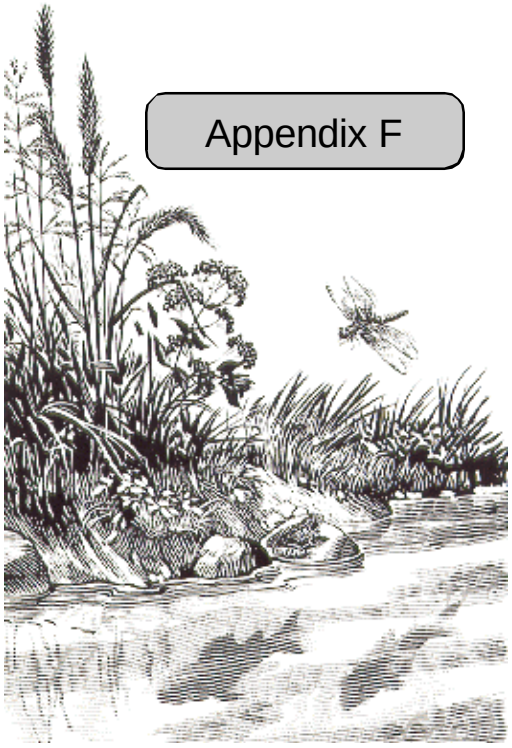
Year	1995	1996	1997	1998	1999	2000	2001	2002	Total fees
	Fees collected	Fees collected	Fees collected	Fees collected	Fees collected	Fees collected	Fees collected	Fees collected	Fees collected
Campgrounds	$66,535.19	$67,757.90	$62,167.74	$92,750.97	$97,602.30	$68,715.15	$97,740.98	$93,666.39	$646,936.62
Group Use	$3,962.50	$2,877.50	$3,525.00	$4,156.00	$4,750.00	$3,525.00	$5,737.50	$4,575.00	$33,108.50
Totals	**$70,497.69**	**$70,635.40**	**$65,692.74**	**$96,906.97**	**$102,352.30**	**$72,240.15**	**$103,478.48**	**$98,241.39**	**$680,045.12**

NOTE: These figures reflect overnight campers and group use only. There are no day-use fees charged.

Summary visitation table
(Group use)

Year	1995	1996	1997	1998	1999	2000	2001	2002	Total
Chalet	1,798	1,498	1,486	1,096	1,409	434	1,394	1,830	10,945
Hellgate N Hellgate S	459	317	769 115	520 67	590 232	315 216	705 402	595 305	4,270 1,337
Silos	410	376	270	398	1,008	680	442	410	3,994
Village Park	140								140
Totals	**2,807**	**2,191**	**2,640**	**2,051**	**3,239**	**1,645**	**2,943**	**3,140**	**20,686**

Appendix F



Appendix F

List of Improvements to Respective Concession Operations

KIM'S MARINA IMPROVEMENTS

Improvements from April 1, 1998 (time of purchase) to August 8, 2001

- **R** Replacement of 12 dock slips
- **R** Working on replacement of all dock slips
- **R** Planted trees with drip system
- **R** Planted flowers
- **R** Applied over 450 gallons of paint to main building and outbuildings
- **R** Painted 90 picnic tables
- **R** Upgraded electrical on cabins
- **R** New box spring and mattresses in cabins
- **R** Re-decorated cabins (new bedding and curtains)
- **R** New light fixtures in cabins
- **R** Replaced some of the cabin windows
- **R** New flooring in bathrooms in cabins
- **R** Upgraded electrical boxes on many campsites
- **R** Graveled parking lot
- **R** Landscaped around cabins

- **R** Remodeled store to provide bigger gift shop and more seating for customers
- **R** Espresso bar
- **R** Concession stand
- **R** New sheetrock, paint, and trim on conference room
- **R** Replaced flooring with tile in conference room
- **R** Shelving in upper pumphouse
- **R** Purchased new picnic tables for campground
- **R** Purchased new irrigation pump
- **R** Purchased two new pumps for water well system
- **R** Purchased new compressor for ice room
- **R** Replaced three freezers
- **R** Purchased 12-person pontoon boat for rental fleet
- **R** Purchased jet skis for rental fleet
- **R** Installed basketball hoop in tennis court for customer use
- **R** Installed handrail to concrete steps to docks
- **R** Removed approximately 200 tires from property
- **R** Installed metal protective barriers around propane tanks
- **R** Installed numbers on trailers
- **R** Acquired a fire safety vehicle with water pump, hose, and tank
- **R** Installed signs on main dock for fire safety

GOOSE BAY MARINA IMPROVEMENTS

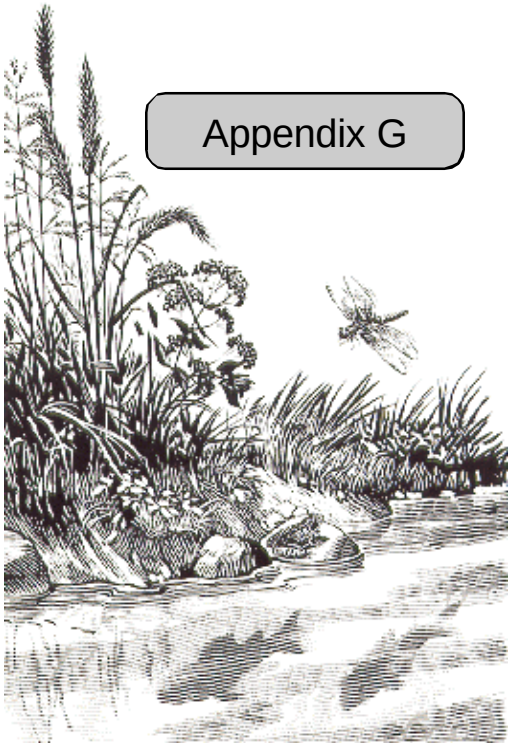
- **R** Upgraded electrical service to recreational vehicle campsites and permanent trailers
- **R** Plan to install fuel service and a couple of new boat docks (by next spring)

Note: Goose Bay Marina has not made any big capital investments due to operating on 1-year lease extensions for 2 years.

YACHT BASIN MARINA IMPROVEMENTS

1995 – 2000	Installed boat docks for 100 boats—16 to 40 feet
1995 – 1996	Refurbished existing residence building and cabin rentals
1995 – 2001	Cleanup and painting exterior of buildings (ongoing)
1995 – 1998	Removed/disposed of approximately 75 log and foam docks, old fuel dock, etc.
1996 – 1998	Removed old bait house from floating location; relocated on foundation and remodeled to create convenience store and office
1996 – 2000	Constructed and installed wheelchair-friendly gangways to all docks
1999	Brought in temporary rental outhouses and shower facilities
	Installed VHF Coast Guard Base Station and created base for Coast Guard Auxiliary patrol operations
1999 – 2000	Brought in rustic camping cabins
2000	Installed new fuel system and fueling dock for on-water service
2001	Repaired and improved boat ramp damaged during 2000 fires

Appendix G



Appendix G

United States Coast Guard Auxiliary Programs and Activities at Canyon Ferry Reservoir

R In 1999, the United States Coast Guard Auxiliary (CGAUX), with the assistance of Coast Guard Loran Station Havre, installed a VHF marine radio base station at Yacht Basin Marina. This base station, with a directional di-pole antenna, effectively covers Canyon Ferry all the way to Silos. It is monitored during CGAUX patrols and at most other daylight times by qualified watchstanders. It is hoped that this station will encourage area boaters to install VHF radios in their boats, thereby increasing the CGAUX's ability to assist boaters in distress. The radio base station was especially critical during CGAUX's on-the-water activities during the Canyon Ferry fires. CGAUX and Yacht Basin have held VHF radio classes to educate the boating public on proper use of VHF radios.

R In 1998, the CGAUX and the Montana Department of Fish, Wildlife and Parks (MFWP) worked out an arrangement whereby MFWP loaned the CGAUX hand-held radios programmed to communicate with MFWP, Broadwater, and Lewis and Clark County sheriff departments and the Montana Highway Patrol. These radios provide effective communication during large events, emergencies, or disasters, and provide a medium for the CGAUX to contact appropriate agencies should law enforcement be necessary.

R The CGAUX, in cooperation with local boating organizations and the National Weather Service (NWS) Regional Forecast Office, is working to establish weather monitoring stations on Canyon Ferry. In 2000, a station was established at Yacht Basin Marina. This station primarily monitors wind speed and direction with a computer link to the NWS Regional Forecast office. The combination of the VHF base station, which includes National Oceanic and Atmospheric Administration's weather channel and Weather Alert and the local wind monitoring stations, allows the CGAUX to relay pertinent weather information to Canyon Ferry boaters. During 2000, several weather alerts (primarily thunderstorm and high wind alerts) and warning were broadcast via the CGAUX's radio system.

R The CGAUX has established safe boating literature displays at Yacht Basin, Kim's, and Goose Bay Marinas. This free information display includes State and Federal boating regulations, personal watercraft safety, hypothermia, environmental protection, and other brochures. Auxiliarists check the displays periodically to ensure brochures are available.

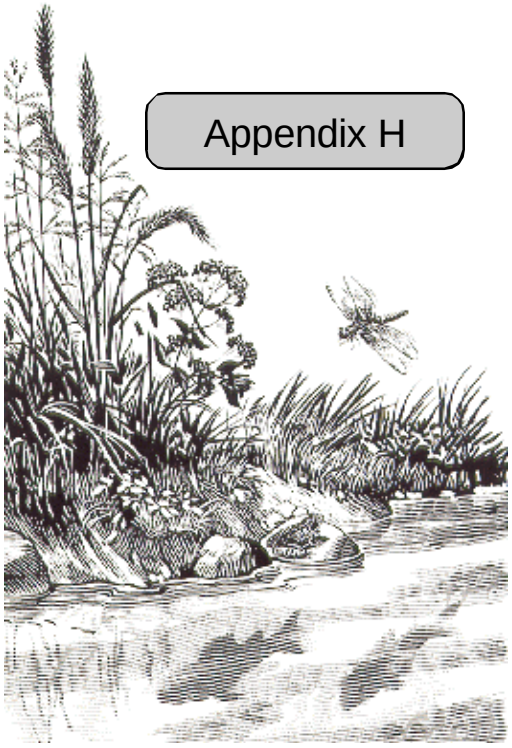
R Vessel safety checks (VSC) are conducted at all three existing marinas on Canyon Ferry. The VSC program involves checking boats to determine compliance with Federal and State requirements. It is voluntary and, if a boat does not meet the requirements, suggestions are made so the boater can rectify any deficiencies. A boat that meets the checklist criteria is awarded a safety decal.

R MFWP, the CGAUX, Boat/U.S., and Healthy Mothers Healthy Babies have established Life Jacket Loaner Stations at all three marinas at Canyon Ferry. Boaters may borrow life jackets at these stations. In addition, the CGAUX vessels carry extra life jackets that may be loaned.

R CGAUX conducts patrols of Canyon Ferry Reservoir on most summer weekends and holidays.

R Provided rapid response to emergencies.

Appendix H



Appendix H

Partial List of Applicable Laws, Regulations, and Executive Orders

- **R** The 1968 Architectural Barriers Act (Public Law [P.L.] 90-480)
- **R** Section 504 of the 1973 Rehabilitation Act (P.L. 93-112)
- **R** The 1990 Americans with Disabilities Act (P.L. 101-336)
- **R** The Federal Water Project Recreation Act of 1965 (P.L. 89-72, as amended by Title 28 of P.L. 102-575)
- **R** The Canyon Ferry Unit of the Pick-Sloan Missouri River Basin Program Act (P.L. 534)
- **R** American Indian Religious Freedom Act of 1978
- **R** Archeological Resources Protection Act of 1979, as amended
- **R** Archeological and Historic Preservation Act of 1974
- **R** Clean Water Act of 1974, as amended
- **R** Clean Air Act of 1970, as amended
- **R** Department of Defense American Indian and Alaska Native Policy, October 20, 1998
- **R** Endangered Species Act of 1973, as amended
- **R** Executive Order 12875, Enhancing the Intergovernmental Partnership, October 26, 1983
- **R** Executive Order 12898, February 11, 1994, Environmental Justice
- **R** Executive Order 11990, 1977, Protection of Wetlands
- **R** Executive Order 13007, Indian Sacred Sites, May 24, 1996

- **R** Executive Order 13084, Consultation and Coordination with Indian Tribal Governments, May 14, 1998
- **R** Fish and Wildlife Coordination Act of 1958, as amended
- **R** Indian Trust Assets Policy, July 1993
- **R** Migratory Bird Treaty Act of 1918, as amended
- **R** National Environmental Policy Act of 1969
- **R** National Historic Preservation Act of 1966, as amended
- **R** Native American Graves Protection and Repatriation Act of 1990
- **R** Presidential Memorandum: Government-to-Government Relations with Native American Tribal Governments, April 29, 1994
- **R** Title X, P.L. 105-277, Montana Act, Conveyance of Cabin Sites to Private Ownership, as amended
- **R** Concessions Policy LND P02 and Directives and Standards LND 04-01 and 04-02
- **R** Recreation Policy LND P04 and Directives and Standards LND 01-01
- **R** National Environmental Policy Act ENV P03
- **R** Other pertinent Reclamation policy and directives and standards