

# RECLAMATION

*Managing Water in the West*

## FINAL ENVIRONMENTAL ASSESSMENT

### GOOSE BAY MARINA MODERNIZATION AND LONG-TERM CONCESSION CONTRACT



U.S. Department of the Interior  
Bureau of Reclamation  
Great Plains Region  
Montana Area Office

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## **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.



## **1.2 BACKGROUND AND LOCATION**

### ***Canyon Ferry***

Canyon Ferry Dam impounds the Missouri River forming Canyon Ferry Reservoir in Montana. The dam and roughly one-quarter of the reservoir are located in Lewis and Clark County with the remainder of the reservoir located in Broadwater County. The reservoir has 33,500 water surface acres at elevation 3797 feet, extending upstream about 19 miles from the dam to the point the Missouri River enters the reservoir. Additionally, there are 9,360 acres of lands and 96 miles of shoreline associated with the project and under the jurisdiction of Reclamation.

The Canyon Ferry Unit of the Pick-Sloan Missouri Basin Program was authorized by the Flood Control Act of December 22, 1944, Public Law 534. The Canyon Ferry Unit is a multiple-purpose project with benefits of electrical production, flood control, municipal water supply, and irrigation. The passage of the Canyon Ferry Reservoir, Montana Act of 1998 (Title X, Public Law 105-277) provided Reclamation with specific authority to plan, develop, operate and maintain recreation and fish and wildlife resources as part of the Canyon Ferry Unit.

As one of the primary purposes, recreation is a key management consideration at Canyon Ferry Reservoir. The reservoir provides a wealth of both land and water based recreation activities, including, among other things, camping, day use, boating, and fishing. Management of the reservoir and associated recreation opportunities are primarily managed by Reclamation, Yacht Basin and Kim's Marina concessionaires, Broadwater County and Montana Fish, Wildlife and Parks (FWP).

Following initial filling of the reservoir in 1955, Reclamation and FWP partnered under a Memorandum of Understanding to allow FWP to manage Reclamation lands surrounding Canyon Ferry Reservoir. Numerous campgrounds, cabin sites, boat ramps, and day use areas were developed around the reservoir, including three concession operations: Kim's Marina on the northeastern shore; Yacht Basin on the northwestern shore; and Goose Bay Marina on the eastern shore of the reservoir between the north and south ends of the reservoir. This MOU was effective February 21, 1957 through September 30, 1993, at which point general land management was transferred back to Reclamation.

### ***Goose Bay Marina***

Goose Bay is located on the east side of Canyon Ferry Reservoir approximately two miles south of State Highway 284 along Goose Bay Lane and approximately 15 miles north of Townsend, Montana. The Marina is located in the North ½ Section 14, Township 9 North, Range 1 East, Broadwater County, Montana.

Goose Bay was developed under direct management of FWP from 1957 to 1995. The Goose Bay Marina was originally permitted through a lease issued by FWP. Reclamation assumed management of the concession contract in 1996 and continued through November 1, 2013. In recent years, Goose Bay Marina has provided general camping amenities to the public, including operation of a concession store, short-term and seasonal camping, boat ramps, boat

docks, RV and boat storage, on-water fueling, showers and restroom facilities. In addition, the marina leased 31 mobile home sites. The operation of Goose Bay Marina provided the only source of on-water fueling in the southern end of the reservoir and also provided a safe harbor for boaters on the southern end of the reservoir.

At this time, the concession contract has expired and all concession operations at Goose Bay have ended until a new concession contract is issued. The mobile homes and some concession property have been removed for the most part. The remaining small buildings and sheds, building foundations, utility infrastructure, and associated clutter remain. The area is highly disturbed as shown below.



**FIGURE 2: GOOSE BAY EXISTING CONDITIONS.**

### **1.3 PROPOSED FEDERAL ACTION**

Reclamation proposes to remove the remaining structures and infrastructure associated with the Goose Bay Marina and Recreation Area, modernize the area through construction of new facilities and improvements, and issue a long-term (20 year) concession contract for operation and maintenance of the area.

The proposed development would meet current Federal, State and local standards and provide enhanced and increased recreational opportunities to the public.

## **1.4 PURPOSE AND NEED FOR ACTION**

The purpose of this Federal action is to provide modernized marina and recreation facilities at Goose Bay. Reclamation is seeking to provide visitors with new and improved site facilities and provide a spectrum of recreational opportunities for visitors to the Goose Bay Marina.

This Federal action is needed to:

- 1) Rectify existing health and safety concerns associated with remnant mobile home infrastructure, marina buildings and infrastructure, access trails, boat docks and storage areas.
- 2) Continue to provide outdoor recreational opportunities and services at the Goose Bay Marina, which have ended with the expiration of the previous concession contract.

## **1.5 PUBLIC INVOLVEMENT**

### **Goals:**

- The goal of Reclamation's public outreach is to ensure stakeholders, Congressional representatives, special interest groups, media outlets, the public, and interested/affected parties are provided an array of opportunities to be briefed and involved during the development of the Goose Bay Marina Modernization Plan.
- Through public meetings, mailings, websites, media outreach, and other methods, Reclamation provides opportunities for interested and affected parties to understand the NEPA process, including the purpose and methods used to gather public comment.

Reclamation has engaged with the public in multiple forums since 2009, when the Master Planning effort for Goose Bay Marina was initiated. Reclamation's goal through public involvement is to maximize public use and develop alternatives that align with public expectations for the future of Goose Bay Marina. A public outreach summary is included in Section 5.0 at the end of this EA.

The Goose Bay Marina camping area would be closed during calendar years 2014 and 2015 to minimize conflicts between recreationists and construction crews. The existing Goose Bay boat ramp would remain open for the 2014 recreation season. Short-term, the Goose Bay area would be under construction and the recreational land use would be unavailable.

For the latest information or to provide comments on the Goose Bay Modernization Plan, please visit [www.usbr.gov/gp/mtao/canyonferry/goosebay/](http://www.usbr.gov/gp/mtao/canyonferry/goosebay/).

Additional information on public scoping efforts can be found in Reclamation's Communications Plan, Goose Bay Marina Modernization Project, Canyon Ferry Montana, available by request or at the above website.

## **2.0 DESCRIPTION OF ALTERNATIVES**

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This chapter describes the No Action and Proposed Action alternatives that have been formulated to meet the Purpose and Need for Action.

The alternatives being analyzed in this document include:

- No Action
- Proposed Action Alternative - Marina Modernization and Issuance of Long Term Concession Contract

### **2.1 NO ACTION ALTERNATIVE**

The area would not be modernized and a long-term concession contract would not be issued under the No Action Alternative. Reclamation would need to perform some essential site rehabilitation as part of this alternative because existing conditions are unacceptable for a number of reasons, including: public safety, sanitation, visual appearance, among others. The following action items would occur to provide basic and minimal access opportunities at the reservoir:

- Demolition and/or removal of remaining marina and mobile home infrastructure, including, but not limited to, buildings, docks, wooden decks, framing and roofing materials, exposed utilities, concrete slabs, septic tanks, existing signs, and miscellaneous debris.
- Removal of substructure associated with the marina facilities, including, but not limited to, buried conduits, water and septic pipelines, RV hook-up boxes and various wiring and cabling to 3-feet below grade.
- Removal of abandoned vehicles, motor homes, campers, and additional miscellaneous debris in the long-term parking and storage area.
- Removal of road surface aggregate in roads to be abandoned.
- Following removal of the existing infrastructure noted above, Reclamation would provide basic and minimal access opportunities to the recreating public. Reclamation would operate and maintain the boat ramp and parking area, the existing western camping loop with campground host, and vault toilets. The remainder of the area would be re-contoured to near natural slopes and reseeded with vegetation native to the area.

This alternative would result in full closure of the Goose Bay Marina area for the 2014 recreation season. There would be no additional services provided under this alternative.

### **2.2 PROPOSED ACTION ALTERNATIVE**

The proposed action can generally be broken into demolition, modernization, and issuance of a long term concession contract. Contracting for all associated works would be by sealed bid, through full and open competition.

## **Demolition**

The proposed action alternative would include demolition and removal very similar to No Action, including:

- Demolition and/or removal of remaining marina and mobile home infrastructure, including, but not limited to, outbuildings, docks, wooden decks, framing and roofing materials, exposed utilities, concrete slabs, septic tanks, existing signs, and miscellaneous debris.
- Removal of substructure associated with the marina facilities, including, but not limited to, buried conduits, water and septic pipelines, RV hook-up boxes and various wiring and cabling to 3-feet below grade.
- Removal of abandoned vehicles, motor homes, campers, and additional miscellaneous debris in the long term parking and storage area.
- Removal of road surface aggregate in roads to be abandoned or moved.
- Removal of specified trees and brush as needed to accomplish the associated work.

Demolition is expected to begin in spring 2014.

## **Modernization**

Additionally the area would be modernized with updated facilities that would include:

- A new 1050 square foot (approx.) store.
- A new 400 square foot (approx.) maintenance/storage building.
- Two separate flush toilet/shower facility.
- New vault toilets in the campgrounds.
- Concrete handicapped accessible trails along the shoreline connecting features of the campground.
- Gangway to docks.
- Campsites would be constructed that include: full service (water, sewer, and electrical service (~45 sites); electrical service only (~30 sites); and no service (20 sites).
- New underground telephone service would be provided to the store, concessionaire residence, maintenance building and a potential satellite store.
- A new underground water storage tank would be installed.
- A building for treatment and pumping of the water would be constructed.
- Up to five leachfields would be constructed for treatment of septic waste, and future replacement areas identified.
- A holding tank would be installed for a new RV pumpout station.
- Group use shelters would be installed throughout the area.
- Approximately 150 trees would be planted throughout the site.
- New gravel road alignments would be constructed.
- Concrete curbing and plantings would be installed around the parking lot.
- An invasive species inspection pullout (for MT Fish, Wildlife and Parks and MT Department of Agriculture inspections) would be installed at the entrance to Goose Bay Marina.
- A new well may need to be installed with associated piping and electrical service.

Modernization activities are expected to begin in spring 2014 and continue through approximately spring 2016.

Some modifications to the design are expected as the design and construction process proceeds. The descriptions of the work are not intended to be all inclusive. Modifications could change locations and types of facilities, but they would be within the overall designated construction area.

Appendix B provides drawings from the Forest Service Teams 60% Design Submittal. Figure 1 is the general layout of the construction area. Figures 2-7 provide additional detail and follow progression of the project from west to east. The details of each could change slightly as final designs, available funding and permitting dictate. The following is a maximum development, cuts may be required depending upon funding levels. Costs of current designs are not being shared with the public to prevent these numbers from impacting potential contract bids.

*West Campground Loop* – This loop would provide approximately 20 back-in spurs, two of which would meet accessibility requirements; a covered group use shelter sized approximately 32' x 49' with pedestal grill, utility table and picnic tables, and two double vault toilet. An accessible walkway would connect this area with the parking area and tie into the shoreline walkway.

*Main Hub* - The main hub encompasses the boat ramp and main parking area, store, and flush toilet/shower facility. This area would provide parking for the boat ramp; a Day Use area consisting of parking, picnic pads with 16' x 20' shelters and picnic tables, an RV dump station and water fill station, three single vault toilets, and a potential 30' x 64' group use shelter with pedestal grill, utility table and picnic tables. A fish cleaning station may be developed in this area in the future. The eastern side of the parking area would feature a 1050 square foot marina store, a flush toilet and shower facility, and a potential 30' x 34' day use pavilion with group fire ring, pedestal grill, utility table and picnic tables. Picnic pads with 16' x 20' shelters would also be in this area. This area would also accommodate a future fueling station. Accessible parking would provide access to the shoreline trail.

*Central Campground* - The central campground encompasses the area that was formerly occupied by the majority of mobile homes and the former marina store. This campground would provide approximately 30 back-in spurs, two of which would meet accessibility requirements, a covered group use shelter sized approximately 30' x 34' with pedestal grill, utility table and picnic tables, and two double vault toilets. A walkway would wind through the area and connect with other areas.

*East Campground* - The east campground encompasses the area that was formerly occupied by the seasonal campers. This campground would provide approximately 27 back in spurs and 14 pull thru sites with electric, water and sewer hookups, four of which would meet accessibility requirements, a 30' x 34' group use shelter with pedestal grill, utility table and picnic tables, and three double vault toilets. Walkways would provide connectivity in this area and connect to other areas. Accessible parking would provide access to the accessible docks.

*Short Term Storage* - This area encompasses land previously used for long and short term storage. The short term parking area would consist of a fenced area for boats and trailers.

### **Issuance of Long Term (20 year) Concession Contract**

The final action to improve recreation access and services to the recreating public would be the issuance of a long term concession contract. Reclamation proposes to award a new concession agreement for improvement, development and management of the Goose Bay Marina Recreation Area. The new agreement would provide a full range of concession opportunities and would have a term of 20 years. The new long-term concession contract would be advertised and awarded through a competitive bidding process in accordance with Reclamation Manual, Directives and Standards LND 04-01. A concession contract is anticipated to be awarded to allow the marina to be operating to begin the 2016 recreation season.

## **3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

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This chapter describes the existing affected environment and the most likely environmental impacts of the alternatives being considered. The affected environment is considered to be the existing condition and the environmental consequences portion analyzes the environmental impacts of implementing the proposed action alternative.

It is assumed that recreation at Canyon Ferry Reservoir would continue to increase, including visitation to the Goose Bay area. It is also assumed that the proposed action alternative would moderately increase overall visitation to this area above historic numbers.

Please note, the short term environmental impacts associated with either alternative are spatially similar, in that the removal of existing infrastructure associated with the Goose Bay area would require removal of substantial surface and subsurface infrastructure encompassing the majority of the lands identified in Figure 1.

Affected Environment Section 3.1, 3.2, 3.3, 3.4, 3.5, 3.8, 3.9, 3.10, 3.11 are borrowed in part or whole from Reclamation's *Recreation Master Plan Goose Bay Planning Area Draft Environmental Assessment* prepared for Reclamation by Aukerman, Haas and Associates (Aukerman, 2009).

### **3.1 Geology**

#### **3.1.1 Affected Environment**

Four major geological units are found in the Canyon Ferry Reservoir area: Tertiary lakebeds, igneous formations, Quaternary alluvium, and sedimentary formations. Tertiary lakebeds are the most visible geologic unit in the general area, with Quaternary alluvium occupying the drainages on the east shore of the reservoir.

Canyon Ferry lands are part of the intermountain basin known as the Townsend Basin, a northwest-southeast trending valley between the Big Belt and Elkhorn Mountains. These mountains are considered to be subsidiary ranges of the Rocky Mountains. The Townsend Basin lies in a structural depression formed by the downwarping of pre-Cambrian and Cambrian sedimentary formations. These ancient sedimentary rocks have been intruded by masses of granite rocks. The basin is partially filled with water-lain Tertiary volcanics and Quaternary alluvium.

The eastern shore of the reservoir, encompassing the project area, occupies coalescing alluvial fans that rise gently eastward to their source in the Big Belts. These alluvial fans extend south to the town of Townsend

The Goose Bay area is composed primarily of alluvial fans of the Quaternary age and consists of thinner and finer textured material closer to the valley floor.

### **3.1.2 Environmental Consequences**

#### **3.1.2.1 *No Action Alternative***

Under the No Action Alternative, there would be very minor impacts to geologic resources through site modifications, including leveling, grading and removal of development related substructure. Lands in this area have been heavily disturbed through development and recreation use.

#### **3.1.2.2 *Proposed Action Alternative***

The impacts of the proposed action alternative are very minor. This alternative would require additional leveling and grading of the boat and RV parking areas. Lands in this area have been disturbed through development and recreation use. Designs and construction would maintain the natural geology of the area.

#### **3.1.2.3 *Cumulative Impacts***

No cumulative environmental affects have been identified for either alternative in consideration.

#### **3.1.2.4 *Minimization Measures***

Designs and construction would maintain the natural geology of the area under both alternatives.

## **3.2 Soils and Topography**

### **3.2.1 Affected Environment**

Information for this section was obtained from the Soil Survey of Broadwater County Area, Montana (Natural Resources Conservation Service, April 1977, formerly the Soil Conservation

Service). Since the Planning Area is located entirely within Broadwater County, the soil associations located in Lewis and Clark County and other areas within Broadwater County are not described or analyzed in this section.

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 that is present. The soils within an association typically have a common management capability. Therefore, knowing the soil associations within the Planning Area are useful in planning for development of the facilities. The slope of the surrounding landscape is an important consideration in developing recreation facilities. Disturbance of steep slopes is associated with potential erosion and/or slope failure.

From the Magpie Creek drainage south along the east shore of the reservoir to the Gurnett Creek drainage, the Amesha-Brocko-Mussel soil association dominates the landscape and is located on intermediate terraces and fans. Amesha soils consist of deep, well-drained soils formed in strongly calcareous stratified alluvium. The permeability of this soil type is moderate, and runoff is medium to slow. When the surface soil is loam or silt loam, the hazard of blowing soil is rated as severe; otherwise, it is considered to be moderate.

The Goose Bay Campground on the north side of the bay appears to be located on a narrow band of Scravo cobbly loam. Scravo soils are used primarily for range, while the Amesha soils are typically used for dry-land winter wheat, some irrigated crops, and range. The Amesha soils transition to the steeply sloping loam soils on the terrace edges along the shoreline. In this transition from land to the edge of the water, runoff is rapid, and the chance of erosion is high.

### **3.2.2 Environmental Consequences**

#### **3.2.2.1 *No Action Alternative***

Under the No Action Alternative, there would be minor short term impacts to soils and topography during leveling, grading and removal of development related substructure. Lands in this area have been heavily disturbed through development and recreation use. The area would be managed to provide basic and minimal facilities for recreation, this limited management may result in an increase in OHV and other recreational uses that may increase impacts to soils and topography.

#### **3.2.2.2 *Proposed Action Alternative***

Under the Proposed Action Alternative, there would be minor short term impacts to soils and topography during leveling, grading and removal of development related substructure. These impacts would be minor and short term. Lands in this area have been heavily disturbed through development and recreation use. The area would be managed to provide a spectrum of recreational opportunities, the increased presence of signage and on-site management would likely decrease impacts to soils and topography as OHV and other unauthorized recreational uses would be minimized.

Additionally, the area would be modernized to include appropriate grading, drainage and detention ponds to minimize soil mobilization. No significant impacts are expected to soils and topography as a result of this action.

### **3.2.2.3**        *Cumulative Impacts*

No cumulative environmental affects have been identified for either alternative in consideration.

### **3.2.2.4**        *Minimization Measures*

Typical Best Management Practices would be incorporated to maintain existing soils and topography and all applicable requirements of required permits identified in Section 3.3.2.4 would be followed to minimize impacts to soils and topography.

## **3.3**    **Water Resources**

### **3.3.1**    **Affected Environment**

Underlying the Townsend Valley is a large, confined aquifer composed of Quaternary and Tertiary deposits. The aquifer supplies water primarily for domestic and irrigation uses within the valley. Deep percolation from rainfall and snowmelt recharges the aquifer in the mountain ranges surrounding the valley. Perennial streams and seepage from irrigation canals and laterals also recharge the groundwater in the valley.

The Missouri River is the primary source of inflow to Canyon Ferry. There are 11 perennial streams that also provide inflow, with much of this water being diverted for irrigation and only small amounts reach the reservoir. Elevation levels in Canyon Ferry vary seasonally as illustrated in the following graph, which shows the average water surface elevation over the past 30 years.

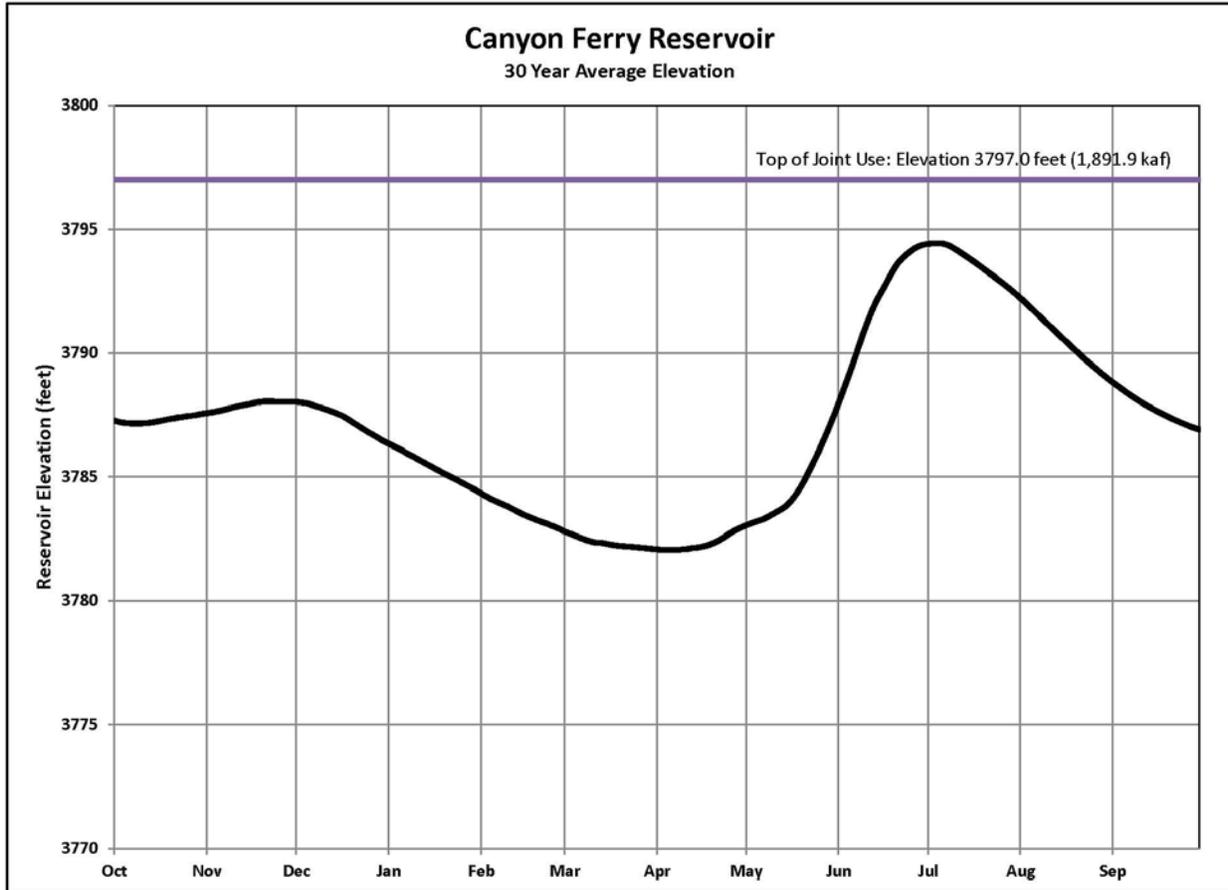


FIGURE 3: CANYON FERRY RESERVOIR ELEVATIONS – 30 YEAR AVERAGE

Water quality in the reservoir is generally suitable for the propagation of cold-water fish species, safe for water sports, and potable after adequate filtration and treatment. 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 temperatures produce conditions favorable to cold-water fisheries. The salinity of the water is low and aside from arsenic, heavy metals are not a problem because of their low concentrations and high alkalinity of the reservoir water.

Arsenic and phosphorous occur naturally in the reservoir and are considered the two primary contaminants. Soil and water in southwest Montana is generally rich in phosphorous and contributes to the nutrient load in the reservoir. The combination of phosphorous and nitrogen with hot, dry and still conditions has resulted in the algae blooms, some of which are toxic. Arsenic is carried to the Missouri River via the Madison River, a tributary that receives large amounts of arsenic-bearing thermal waters from Yellowstone National Park. Total recoverable arsenic concentrations measured in the Missouri River near Toston have typically ranged from 10 to 50 micrograms per liter, exceeding the State’s ambient water standard for human health of 20 micrograms per liter about half the time. This is well below the State’s maximum acute arsenic level of 340 micrograms per liter and the maximum chronic level of 150 micrograms per liter for aquatic life.

Streamflow alteration, metals, nutrients, and suspended solids were designated as parameters of concern for the Missouri River above the reservoir. Several tributaries entering the reservoir were listed as water quality impaired by the State under Section 303(d) of the Clean Water Act. Designating a body of water 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. However, the State has set a low priority for developing TMDLs for the reservoir and streams entering the reservoir. The State would develop a comprehensive program for the prevention, abatement and control of water pollution as mandated by the Clean Water act and the Montana Water Quality Act.

Well record data from the Montana Department of Environmental Quality show that wells on the east side of Canyon Ferry are generally 100-feet or less in depth with a yield between 10 and 40 gallons per minute.

The wells for the recreation areas are considered to be non-community, public water supplies and require monthly testing when open for public use. Occasional evidence of coliform bacteria has occurred. Chlorination of the well or temporary shutdowns of the wells has mitigated the problem.

The septic systems that were placed by the former concessionaire have been removed. Two of these septic systems were in trespass on adjacent private lands, and all of the septic systems were undersized for the demands they faced.

### **3.3.2 Environmental Consequences**

#### **3.3.2.1 *No Action Alternative***

Under the No Action alternative, Reclamation would likely maintain a non-community, public water supply well at Goose Bay. Water use would go down over historic uses. There would be no septic systems or RV dump stations provided and the risk of lake contamination from illegally dumped camper holding tanks would be of concern due to the low level of management.

#### **3.3.2.2 *Proposed Action Alternative***

Under the proposed action, Reclamation would provide adequate groundwater supplies for the Marina store, the flush toilet and shower facility, and for approximately 45 of the camping spots. Reclamation would also make one acre-foot of Canyon Ferry water for drip irrigation and construction dust management. This water use would be higher than the No Action, but would likely be very similar to the historic water use at the site. Additionally, an RV dump station would be available on-site and sewer hookups would be available for camping spots receiving water. Increased management presence and availability of facilities would limit the likelihood of camper holding tanks contaminating lake waters.

It is anticipated 1 acre-foot of water would be required for construction watering in 2014 and 2015. That water would likely be provided by Reclamation from Reclamation storage in the reservoir, likely via a pumper truck using the existing boat ramp or by a pump run from the bank

to a temporary filling station. 1 acre-foot of water on an annual basis would not significantly impact the overall water quantity of the basin because it is a very small volume that would be used.

Best management practices would be included during demolition and construction to minimize sedimentation into the lake. Additionally, septic and RV dump stations would be sited and managed to minimize potential contamination of lake waters.

Clean Water Act permits would be secured and abided by prior to and during construction to minimize impacts.

### **3.3.2.3**      *Cumulative Impacts*

No cumulative environmental affects have been identified for either alternative in consideration.

### **3.3.2.4**      *Clean Water Act Permitting/Minimization*

All stipulations of all required Federal, State and Local Permits would be followed by the construction contractor. The following list of permits would be applied for and received prior to construction activities proceeding.

- 404 and SPA-124 Permits for construction below high water at CF. This includes piles for the gangways to the docks and drop structures (riprap) for stormwater runoff.
- Subdivision application to DEQ and local sanitarian. This includes water, wastewater, and storm water runoff design review.
- Stormwater from construction permit - Contractor will get this from DEQ
- Campground permits through Broadwater County and the Montana Department of Public Health and Human Services.
- Stormwater discharge associated with Industrial activity - this will apply to the areas associated with the fueling area and the maintenance building at Goose Bay.
- Building permits from the Department of Labor and Industry.
- Any other applicable permits.

## **3.4 Air Quality**

### **3.4.1 Affected Environment**

Air quality is determined by ambient concentrations of pollutants that are known to have harmful effects on human health and the environment. The United States Environmental Protection Agency (EPA) has developed national ambient air quality standards for six common criteria pollutants: carbon monoxide, nitrogen dioxide, particulate matter, ozone, sulfur dioxide, and lead. When compared to other counties throughout the United States, and according to the Broadwater County Scorecard, the county ranks as one of the cleanest/best counties and falls well within the standards for these six common pollutants.

Minor sources of air pollution in the Goose Bay areas consist of vehicular traffic, home heating, and mine exploration activities. On occasion, the area is subject to dust storms, especially in exposed areas that have highly erodible soils. Exposed areas include roads, plowed fields, and exposed reservoir flats during low water events. These events occurred primarily in the spring prior to the reservoir filling. Reclamation, in cooperation with FWP has mitigated some of the negative impacts from the dust storms by construction dust abatement dikes, which are now managed for wildlife habitat on the southern end of the reservoir.

### **3.4.2 Environmental Consequences**

#### **3.4.2.1 *No Action Alternative***

Minor air pollution from vehicle traffic, nearby home heating, and ongoing mine exploration would continue at near present levels. There would be temporary impacts to air quality during construction activities. These impacts would be minimal and short term and are not likely to cause air quality to exceed threshold levels for targeted pollutants.

#### **3.4.2.2 *Proposed Action Alternative***

Minor air pollution from vehicle traffic, nearby home heating, and ongoing mine exploration would continue at present levels or may slightly increase as access and visitation to the Goose Bay area increases due to the gravel access road. There would be temporary impacts to air quality during construction activities. These impacts would be minimal and short term and are not likely to cause air quality to exceed threshold levels for targeted pollutants.

Building, construction, and demolition activities which produce fugitive dust include land clearing, grading, and excavation with heavy equipment, truck travel into and out of the work area, and loading and unloading demolition debris and building materials.

Fugitive dust would be controlled through the minimization measures below. Impacts to air quality would be minimal and short term. No significant impacts would be expected to air quality.

#### **3.4.2.3 *Cumulative Impacts***

No cumulative impacts have been identified.

#### **3.4.2.4 *Minimization Measures***

The selected contractor will be required to provide dust control and abatement; and will follow stipulations of the applicable Federal, State and Local Permits to minimize fugitive dust. Best Management Practices, including, watering the construction site and access roads as needed during hot and dry months will minimize fugitive dust.

## **3.5 Vegetation**

### **3.5.1 Affected Environment**

The Goose Bay area consists mainly of grasslands and trees planted by concessionaires and others using the area. Most of the grassland area is composed of the needle-and-tread, blue gram habitat, which dominates the central and southern portions of Reclamation lands surrounding the reservoir.

Noxious weeds found in the Goose Bay area include; Russian knapweed, whitetop, spotted knapweed, Canada thistle, field bindweed, leafy spurge, perennial pepperweed, and dalmation toadflax.

### **3.5.2 Environmental Consequences**

#### **3.5.2.1 *No Action Alternative***

Under the No Action Alternative, there would be extensive leveling and grading, care would be taken to avoid native trees and a mix of native vegetation would be planted and monitored for success. The area would be managed to provide basic and minimal facilities for recreation and Reclamation would provide weed management and control at the Goose Bay Recreation Area.

#### **3.5.2.2 *Proposed Action Alternative***

Under the Proposed Action Alternative, there will be approximately 5 acres of fair to poor condition grassland removed during construction of the eastern campground and the long term parking area and a total of approximately 45 trees (many of which are the invasive Russian olive) to accommodate project features. Care will be taken to avoid disturbance of native trees. Lands in this area have been heavily disturbed through development and recreation use. The area will be managed to provide developed recreational opportunities, the increased presence of signage and on-site management will likely decrease the spread of noxious weeds by OHV use and other unauthorized recreational uses. The Concessionaire will be responsible for weed management in the project area.

#### **3.5.2.3 *Cumulative Impacts***

No cumulative environmental affects have been identified for either alternative in consideration.

#### **3.5.2.4 *Minimization Measures***

Construction contractors will be required to clean construction equipment before coming on-site. This will reduce the potential for introduction of noxious weeds.

Areas of noxious weed infestation will be removed to a regulated landfill for disposal.

Typical Best Management practices will be followed, including stockpiling of topsoil, recontouring, and appropriate planting techniques to ensure recovery of grass areas.

To minimize erosion of soils, slope and erosion protection will be applied to prevent overland water flow in the demolition and construction area. Additionally, careful design and proper maintenance, including detention ponds and other constructed features will minimize erosion.

Approximately 150 trees, most with drip irrigation will be placed throughout the campground to provide shade, improve esthetics, and increase biodiversity. All disturbed areas will be reseeded and monitored to ensure success. This will provide a vegetative buffer between the proposed development and Canyon Ferry Reservoir waters, thereby providing protection from stormwater run-off.

## **3.6 Fish and Wildlife**

### **3.6.1 Affected Environment**

The diversity of environments in the Goose Bay area ranging from open water to mountaintop provides for a great diversity of wildlife species.

#### **3.6.1.1 Fish**

The fishery at Canyon Ferry is managed by FWP, the following is verbatim from the Statewide Fisheries Management Plan, Upper Missouri River Drainage (pp250-254) and includes information on the basin, fisheries management, habitat access, and special management issues. The Management Plan is available at: <http://fwp.mt.gov/fishAndWildlife/management/fisheries/statewidePlan/default.html>

#### ***Physical Description***

The Upper Missouri River drainage includes the Missouri River and tributaries from the confluence of the Jefferson, Madison and Gallatin rivers (near the town of Three Forks), downstream 110 river miles to Holter Dam. The upper river reach extends from the headwaters 43 river miles to the upper end of Canyon Ferry Reservoir. Toston Dam, located 23 miles upstream from Canyon Ferry, is a barrier to upstream fish movement. The dam creates a small, run-of-the-river irrigation storage reservoir that has been retrofitted for hydro-power generation.

Riparian vegetation is limited to a narrow band along the river, except for the lower 10 miles above Canyon Ferry Reservoir where the river channel is braided and the bottomland is extensively vegetated with willows and cottonwoods. Width of the channel varies from 300 to 1,200 feet, the average gradient is 5.6 feet per mile, and the sinuosity is 1.6. Bottom substrate varies from sand-silt to cobble, but the majority is gravel-cobble. Tributaries originate mainly from the east and most are totally diverted during late summer for irrigation. Major tributaries of the Missouri River between Three Forks and Canyon Ferry Reservoir include Sixteenmile, Deep, Dry, Crow, Sixmile, Indian, Greyson and Warm Springs creeks. Many of these tributaries are chronically dewatered during late summer for irrigation. Water to irrigate about 555,400 acres is diverted above this reach. Thus, flow can be severely depleted during the summer irrigation season. Flows in this reach are partially regulated by a number of upstream reservoirs.

The remainder of the mainstem of this drainage is dominated by a reservoir complex that includes three reservoirs: Canyon Ferry, Hauser, and Holter. Canyon Ferry Reservoir is the first major storage impoundment on the Missouri River. Hauser and Holter reservoirs lie about 3 and 30 miles downstream from Canyon Ferry, respectively. Canyon Ferry Dam and Reservoir is operated by the BOR for power production, flood control, irrigation, recreation, and as a municipal water source. At full pool, Canyon Ferry has a surface area of 35,200 acres and a volume of nearly 2 million acre-feet and provides virtually all the storage available in the reservoir complex. Rapid filling of the reservoir begins in early May with peak storage occurring in late June to early July. Major tributaries to the reservoir include Duck Creek, Confederate Gulch, Hellgate Creek, Avalanche Creek, Magpie Creek, and Beaver Creek. The two reservoirs below Canyon Ferry are Hauser and Holter and are operated by PPL Montana. They differ significantly from Canyon Ferry Reservoir in that they are “run-of-the-river” facilities. Hauser Reservoir has a surface area of about 3,800 acres and stores approximately 98,000 acre-feet of water at full pool. The reservoir is about 15.5 miles in length and is relatively narrow, ranging from about 0.1 to 1.1 miles in width. Important tributaries to Hauser Reservoir include Prickly Pear, Silver, Trout, Spokane and McGuire creeks. A biologically important feature of Hauser is Lake Helena, which is a large (surface area of 2,100 acres), shallow water body connected to the Causeway Arm by a narrow channel which was created when Hauser Dam inundated the lower reach of Prickly Pear Creek.

A 4.6-mile reach of the Missouri River is located between Hauser Dam and Holter Reservoir. This unique segment of river flows through a narrow, high-walled gorge for most of its length prior to entering upper Holter Reservoir. Productivity in this river segment is affected by the two upstream reservoirs, which creates tailrace conditions where water temperatures are moderated and the water is enriched with nutrients.

Holter Reservoir has a surface area of about 4,800 acres, stores 243,000 acre-feet of water at full pool and is 25 miles long with widths ranging from 0.1 to 1.1 miles. The 4.6 mile segment of free flowing river located upstream of Holter Reservoir provides very important spawning habitat to migrant salmonids. Beaver Creek, a tributary to this river segment, is the principal spawning stream for reservoir fish, especially in the spring. Cottonwood and Willow creeks are also important tributaries that empty directly into Holter Reservoir.

### ***Fisheries Management***

The Missouri River drainage contains fish species common to southwestern Montana. The native species found here include westslope cutthroat trout, mountain whitefish, mountain sucker, longnose dace, longnose sucker, Rocky Mountain sculpin, stonecat and white sucker. Non-native species are the rainbow trout, brown trout, brook trout, northern pike, yellow perch, walleye and common carp. Hybrids of rainbow trout and westslope cutthroat trout are also found in the drainage.

The Missouri River drainage upstream of Canyon Ferry Reservoir is managed as a wild trout fishery, emphasizing natural reproduction. The basin is also suitable for westslope trout recovery efforts in many locations. Upstream from Toston Dam, the fisheries resources are sparse, due to

the poor quality of the river system in terms of temperature and physical habitat. Up until the early 1990s, the fishery downstream from Toston Dam was seasonal and characterized by spawning runs of large rainbow and brown trout from Canyon Ferry Reservoir; however, resident brown trout fishing was also an attraction during this time period. Then, a variety of factors began to modify the composition of the fish community, including the expansion of walleye into Canyon Ferry Reservoir, changes in temperatures and flow, hydroelectric retrofits of Toston Dam, expansion of pelicans and cormorants, whirling disease, and the introduction of northern pike in Canyon Ferry Reservoir. All of these factors caused a significant reduction of spawning trout in the Missouri River downstream from Toston Reservoir, and as a result, angling use of this 21-mile stretch of the Missouri River for trout angling has declined substantially. Over the past decade, angler use of the Missouri River reach downstream from Toston Dam has varied from 2,594 angler days in 2005 to 8,939 angler days in 2009. Upstream from Toston Dam to the Confluence of the Madison and Jefferson rivers, angling pressure over the past decade has varied from 1,564 angler days in 2007 to 3,837 angler days in 2001. The Central Fishing District Standard regulations govern the Missouri River upstream from Canyon Ferry Reservoir. Exceptions include restricted harvest opportunities for brown trout, no limit on northern pike, and size and number exceptions for walleye downstream from Toston Dam.

### ***Fishing Access***

The reach on the Missouri River above Canyon Ferry Reservoir has good access for recreationists, and access points are well placed for floaters. These points include the Toston, York's Island and Townsend access sites. In addition, ample opportunities for walk-in access exist within the Canyon Ferry Wildlife Management area.

The reservoir complex has good access for recreationists and access points are well placed for boaters and campers. The BOR, Broadwater County, and private marinas provide access to Canyon Ferry Reservoir throughout its length. The BOR manages recreational areas, including campgrounds, boat ramps, and day-use areas around the reservoir. FWP administers six FASs on Hauser and Lake Helena. The BLM also has two recreation areas that provide access to Hauser and Lake Helena, and three recreation areas that provide access to Holter Lake.

### ***Special Management Issues***

Unauthorized introductions of predatory species have significantly changed the characteristics of the fishery throughout this drainage. The Upper Missouri River Reservoirs Fisheries Management Plan 2010-2019 guides management within the plan area, which extends from Toston Dam through the reservoir complex down to Holter Dam, including short sections of the Missouri River between Canyon Ferry Reservoir and Toston Dam. In 2012, FWP initiated an environmental assessment to remove northern pike from the entire basin upstream from Holter Dam.

The Upper Missouri River drainage is also home to several conservation populations of westslope cutthroat trout, providing opportunities to conserve this native species in the drainage. The long-term goal of cutthroat conservation in the Upper Missouri River Drainage is to have approximately 20% of the historically occupied habitat restored to secure conservation

populations of cutthroat trout (see Part 1: Trout: Westslope and Yellowstone Cutthroat Trout for details).

Additional information on Management Direction for the Upper Missouri Basin, Canyon Ferry Lake is also included in the document available above (page 256).

### **3.6.1.2 Wildlife**

Canyon Ferry Reservoir and the surrounding lands provide a wide variety of habitats for an array of species.

Fish, Wildlife and Parks manages the south end of Canyon Ferry as a Wildlife Management Area. Additional information on the recreation opportunities and wildlife values present in this area can be found on their website at: <http://fwp.mt.gov/fishAndWildlife/wma/siteDetail.html?id=281291>.

FWP also manages the overall wildlife populations in the Region, species specific information can be obtained at: <http://fieldguide.mt.gov/>

## **3.6.2 Environmental Consequences**

### **3.6.2.1 *No Action Alternative***

Fish and wildlife management would continue at Canyon Ferry Reservoir under the direction of FWP. The No Action Alternative would temporarily displace wildlife in the immediate area of access and construction and would not impede FWP management efforts. Long-term, the area may experience a slight increase in wildlife use due to the smaller footprint of development.

### **3.6.2.2 *Proposed Action Alternative***

Fish and wildlife management would continue at the reservoir under the direction of FWP. The Proposed Action Alternative would temporarily displace wildlife in the immediate area of access and construction. These impacts would be minimal and short term as public and private lands in the immediate area would support dispersal. No part of this action would impede FWP fish and wildlife management efforts. Long-term, the area would support fish and wildlife and access to fish and wildlife, much as it has in recent history with a likely increase in diversity associated with increased irrigated tree plantings. Reclamation would work with FWP to develop a monitoring station for aquatic invasive species. Increased management presence would allow for controlled development and minimal overall impacts on fish and wildlife.

Vehicle wildlife collisions would continue to occur, likely at lower rates during construction. Long term, collisions may increase as recreation use increases.

### **3.6.2.3 *Cumulative Impacts***

No cumulative environmental affects have been identified for either alternative in consideration.

### 3.6.2.4 *Minimization Measures*

Wildlife friendly fencing will be used, where necessary, to minimize impacts to wildlife.

Electric lines will be buried where possible. All above ground facilities will be built to standards identified in Suggested Practices for Avian Protection on Power Lines: The State of the Art 2006.

## 3.7 Threatened and Endangered Species

The Endangered Species Act seeks to recover and conserve listed species and the ecosystems on which they depend. The action area defined for this action, includes the access road, the Goose Bay Marina Area and the bay itself. All lands within this action area are within Broadwater County. The species listed below are from the United States Department of the Interior Fish and Wildlife Service website

at: [http://www.fws.gov/montanafieldoffice/Endangered\\_Species/Listed\\_Species/countylist.pdf](http://www.fws.gov/montanafieldoffice/Endangered_Species/Listed_Species/countylist.pdf).

The species list was updated July 2013 and accessed on October 24, 2013.

Broadwater County ESA Listed Species		
Scientific Name	Common Name	Status
<i>Spiranthes diluvialis</i>	Ute Ladies' Tresses	Threatened
<i>Lynx canadensis</i>	Canada Lynx	Threatened
<i>Anthus spragueii</i>	Sprague's Pipit	Candidate
<i>Pinus albicaulis</i>	Whitebark Pine	Candidate
<i>Gulo gulo luscus</i>	Wolverine	Proposed

The action area does not provide the habitat necessary for Canada Lynx, Wolverine or Whitebark Pine. There would be No Effect to any of the above listed species or their preferred habitats as a result of No Action or the Proposed Action.

Ute Ladies' Tresses are perennial orchids which grow near the base of the Rocky Mountains in Montana and have been documented in the upper Missouri River and its tributaries. This species is restricted to a highly specialized and limited habitat and is typically dependent upon unaltered, high-quality habitat, typically moist streambanks, wet meadows, and abandoned stream channels. These habitat types are not present in the highly disturbed action area, as such, there would be No Effect upon Ute Ladies' Tresses as a result of the No Action or Proposed Action.

Sprague's Pipit is an endemic grassland bird which prefers native vegetation and requires large areas of appropriate habitat. The highly disturbed action area does not provide suitable habitat for the pipit. There would be No Effect upon the Sprague's Pipit as a result of the No Action or Proposed Action.

## **3.8 Recreation**

### **3.8.1 Affected Environment**

Canyon Ferry Reservoir offers a variety of recreation opportunities for the visiting public to enjoy. The total visitation at the reservoir from 2008 was 327,699 and has increased steadily over the years (Reclamation, 2009c). The recreation facilities are primarily operated and maintained by Reclamation and other entities. Under an agreement with Reclamation, there are two concessionaires that offer recreation-related goods and services to the public.

The reservoir has 33,500 water surface acres with 96 miles of shoreline and 9,360 acres. Nearly all the water surface acres (dam safety buoy area excluded) and approximately 1,000 developed land acres are open for public use. The remaining 8,360 land acres are undeveloped, but offer dispersed recreation opportunities such as wildlife observation, hiking, and photography.

The primary developed facilities include 11 campgrounds with 233 campsites, 11 day use areas, 6 picnic sites, 11 boat launch ramps, and 9 swim beaches. There is no fee charged from entry into the reservoir areas, but 7 of the 11 campgrounds charge a camping fee for use of facilities. There are also five group use areas with shelters that can be reserved for a fee from May through September on a first-come, first-served basis (Reclamation, 2009b).

Goose Bay Marina was, and would be, located on the east side of the reservoir off of State Highway 284. Services and facilities at the marina included a boat ramp, boat slips and connecting docks, marine fuel service, store, restroom facilities, RV campsites with full hookups, dry storage, and 31 mobile sites. At this time, the Goose Bay Marina concession contract has expired. A new concession contract would be advertised pending the outcome of the EA and other environmental permitting. The Marina has a new modern boat launch ramp with launch dock.

Pursuant to the Canyon Ferry Shoreline Management Plan (Reclamation, 2012), Reclamation lands adjacent to the Goose Bay Marina have been categorized as undeveloped/limited access. By definition, undeveloped areas provide dispersed recreation opportunities and provide valuable riparian and upland game habitat for a variety of upland game birds, waterfowl, deer, antelope, and other wildlife species. Although established roads access some undeveloped areas, motorized access is typically prohibited to reduce user conflicts and protect natural resources.

The lands within the Canyon Ferry Reservoir area are closed to OHV use pursuant to 43 CFR, Part 420. According to the CFR, all Reclamation lands are closed to OHV use unless the lands are officially designated as open. No formal process has been initiated for legally opening reservoir lands to OHV users; therefore all lands under the jurisdiction of Reclamation at the reservoir are currently closed to OHVs.

To assist in determining the overall affected recreation environment, it is important to understand how the public perceives the existing environment. In 2003, Reclamation contracted with the University of Montana for completion of a recreation survey during the summer recreation season (May to September) are summarized below (Dvorak, et al, 2004):

- Most of the visitors were Montana residents.
- Nonresident visitors came mainly from Washington, Arizona and Idaho.
- Less than one-third of the visitors were visiting the reservoir for the first time.
- The primary reasons for visiting particular recreation sites were:
  - Close to home.
  - Good fishing.
  - Scenic beauty.
- Overall, visitors were satisfied with their visit to a particular site.
- Visitors were generally satisfied with conditions at the overnight and day use sites, especially campsites and picnic areas, maintenance of facilities, cleanliness of the area, privacy, natural features, and opportunities to view wildlife.
- The majority of visitors to most sites thought that additional facilities were needed, and suggestions included showers, electrical hookups, dump stations, dock maintenance, and restrooms.
- In general, visitors did not mind seeing various recreation types and resource uses at the reservoir; however, jet skiing was disliked the most among visitors who encountered them, followed by shoreline development.

The majority of respondents to the 2004 survey expressed a need for more facilities. This is approximately 10-12 percent higher than a survey conducted in 1995 by the University of Montana. The facility needs cited most from summer visitors included showers, restrooms, electrical hookups, dump stations and dock maintenance. Fall/winter visitors cited the need for restrooms and boat ramps. This differs from 1995 when visitors wanted covered picnic tables most, followed by RV facilities and dump stations, beach areas, running water, and docks. As the results of the survey indicate, visitors were very satisfied with the visit to the reservoir and the condition of existing facilities and opportunities.

Overall, the recreation activities with the highest participation levels at the reservoir in 2003-04 were swimming, fishing, and auto/RV camping. Other activities with participation levels included boating and sailing. These findings are consistent with national, regional, and State findings and trends.

It is important to understand what the public perceives the recreation condition to be. Following are some of the comments provided by the general public from the 2004 recreation survey regarding condition of the Goose Bay Marina area.

- Goose Bay has a lot of potential – current concessions will never make major improvements.
- Needs to be managed better. Nobody obeys the no-wake in the bay, and the campground bathrooms, boat docks, and walkways could use some improvements.
- Goose Bay is fine the way it is.
- Everything is good, and we come to this site because we have fun here and there are no fees to camp.
- The more development any place has takes away from the experience nature can offer. Making areas more accessible brings more people, and is counterproductive.

- Stronger rules are needed.
- Too much dust in the area.
- Much more could have been done over the years to enhance Goose Bay Marina.
- The new government boat ramp and, finally gasoline, have made this one of the best on the lake.
- Handicapped facilities are needed.
- The campground is unkempt, there are no trees to speak of, no grass, and the sewer system is always plugged.

Overall, the public surveyed in 2004 perceived the Goose Bay areas as having potential for enhancing recreational opportunities; however, the existing facilities are in need of repair. Some respondents felt more management was necessary within the area, while others believed that the area should be left as it is today.

During the public scoping meetings held to solicit comments on the proposed RMP, the following summarizes some of the major concerns and issues collected during those meetings. (Reclamation, 2009d).

- There is too much uncontrolled use within the planning area.
- The planning area should remain somewhat primitive and managed but not overdeveloped.
- OHVs are environmental, fire, and safety problem and need strict controls.
- A range of opportunities and camping experiences should be provided.
- A sewage and grey water dump station should be provided.
- Access to the area should be controlled and enforced.
- Facilities that are accessible for persons with disabilities should be provided.
- Group use and day use shelters are needed.
- Additional facilities are needed, including a swim beach and fish cleaning station.
- The area should be managed solely by a concessionaire.

The following summarizes the major concerns and issues collected during the public scoping meets held in June and November 2013.

- The access road to the Marina should be improved to provide safe access to the Goose Bay Marina.
- Additional trees and irrigation should be provided to enhance the natural values of the area.
- Concern with fairness of the Reclamation funded Marina at Goose Bay, while Kim's and Yacht Basin Marina purchased their respective facilities.
- Concerns with dispersal of recreationists from Goose Bay, specifically related to the seasonal campers.
- On reservoir fuel should be provided.
- Campsites with most services should be located closest to the reservoir.
- Safe access should be provided to and between the campgrounds, shoreline, docks, and boat ramp.
- Reclamation should consider a Reclamation operated alternative.

## **3.8.2 Environmental Consequences**

### **3.8.2.1 *No Action Alternative***

The Goose Bay Marina area would remain closed through the 2014 recreation seasons while the activities described as the No Action Alternative proceed. The closure would encompass the boat ramp and all public lands behind the entrance sign and would remain closed through approximately April 2015 to minimize conflicts between recreationists and construction activities.

Campers accustomed to a lifestyle at Goose Bay would be temporarily displaced from Goose Bay. This would likely increase visitation at other area campgrounds and marinas that support water based recreation. The remaining access opportunities provided by Reclamation at Canyon Ferry would remain open and available for public use. Kim's Marina and Yacht Basin Marina continue to provide services and recreational opportunities. The existing opportunities in the surrounding recreation areas managed by State and Federal agencies would also continue to provide diverse access and camping opportunities in the Canyon Ferry area. Reclamation does not anticipate the additional pressure placed on the other Marinas and other campground areas to have negative impacts to the environment. This may cause some increased congestion in existing campgrounds, especially during the holiday weekends during the two year closure.

Following completion, the area would provide rustic camping opportunities for approximately 20 units. The lands would be managed according to Reclamation rules and regulations, including 14-day stay limits. Goods and services, including fuel would not be available in the area, with the nearest land based fuel store in Townsend and the nearest water based fuel at Kim's and Yacht Basin Marinas on the reservoirs north end.

Goose Bay Drive would be impacted by construction equipment accessing the Goose Bay area.

### **3.8.2.2 *Proposed Action Alternative***

The Goose Bay Marina camping area would be closed during calendar years 2014 and 2015 to minimize conflicts between recreationists and construction crews. The existing Goose Bay boat ramp would remain open for the 2014 recreation season.

Campers accustomed to a lifestyle at Goose Bay would be temporarily displaced from Goose Bay. This would likely increase visitation at other area campgrounds and marinas that support water based recreation. The remaining access opportunities provided by Reclamation at Canyon Ferry would remain open and available for public use. Kim's Marina and Yacht Basin Marina continue to provide services and recreational opportunities. The existing opportunities in the surrounding recreation areas managed by State and Federal agencies would also continue to provide diverse access and camping opportunities in the Canyon Ferry area. Reclamation does not anticipate the additional pressure placed on the other Marinas and other campground areas to have negative impacts to the environment. This may cause some increased congestion in existing campgrounds, especially during the holiday weekends during the one year closure.

Following completion of the project, the area would provide a spectrum of recreational opportunities to the recreating public ranging from tents to RVs with and without services. The availability of the Marina would restore historic values provided by the Marina, including fuel, a safe port, and communications. These available opportunities would enhance recreation in the area above the current and historic conditions and provide an overall positive benefit to recreation opportunities.

### **3.8.2.3**        *Cumulative Impacts*

No cumulative environmental affects have been identified for either alternative in consideration.

### **3.8.2.4**        *Minimization Measures*

Construction contracts would include requirements to maintain Goose Bay Drive at current levels during the construction period and to return the road to current levels following construction.

Reclamation would partner with Broadwater County to apply for Federal Lands Highway Program funding, which funds access projects to public lands. The FLHP program funds may be used to pay the non-Federal share of the cost of any Federal-aid highway project that provides access to or within Federal lands.

## **3.9**    **Land Use**

### **3.9.1**    **Affected Environment**

The 9,630 acres of land and the 33,500 water surface acres were acquired as part of the Canyon Ferry Unit of the Pick-Sloan Missouri Basin Program. The total of approximately 42,500 acres is under the jurisdiction of Reclamation.

Reclamation has entered into an agreement with FWP for management of the the WMA located at the south end of the reservoir. FWP has the responsibility to manage public use and the wildlife resources within the WMA. The 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. FWP also provides overall fish and wildlife management and enforcement of State hunting, fishing, boating at Canyon Ferry Reservoir.

Reclamation has a 10-year agreement with Broadwater County to manage part of the Silos Recreation Area for public recreation. While Reclamation retains primary jurisdiction of the Silos Recreation Area, Broadwater County is authorized to operate and maintain existing facilities, collect user fees, develop new facilities, and develop and operate commercial services in the area covered by the agreement.

Canyon Ferry Reservoir provides water for the Helena Valley west of the reservoir for the primary purposes of supplying irrigation and municipal water for Helena, MT. The Helena

Valley Irrigation District is responsible for Operations and Maintenance (O&M) of the distribution facilities beyond the point of delivery by Reclamation.

Currently two concessions have agreements with Reclamation to operate commercial businesses and to provide recreation opportunities for the public at the reservoir. As described in the Proposed Action, a new concession agreement is proposed at the Goose Bay Marina.

The remaining lands are managed by Reclamation and are primarily used for outdoor recreation purposes and open space within the following exceptions:

- Canyon Ferry Dam and Power Plant.
- Offices and Buildings associated with management of the reservoir.
- Cabin sites.
- Legalized uses that have been granted by Reclamation or managing partners through issuance of use authorizations.

For the most part, the lands under the jurisdiction of Reclamation are surrounded by private lands consisting of residential uses at the north and south ends of the reservoir, primarily farming and ranching on the east and west sides along with a limited number of second home developments. Ultimately, as private land around the reservoir is developed for residential use, the visual character of the landscape would likely change to a landscape more suburban in nature.

The Bureau of Land Management has jurisdiction over lands adjacent to Reclamation lands primarily on the west side of the reservoir and north of Beaver Creek and White Earth Recreation Area. The State of Montana has several parcels of land that border the reservoir area. The U.S. Forest Service manages the nearby Helena National Forest.

### **3.9.2 Environmental Consequences**

#### **3.9.2.1 *No Action Alternative***

The Goose Bay Marina area would remain closed through the 2014 recreation seasons while the activities described as the No Action Alternative proceed. The closure would encompass the boat ramp and all public lands behind the entrance sign and would remain closed through approximately April 2015 to minimize conflicts between recreationists and construction activities. Short-term, the Goose Bay area would be under construction and the recreational land use would be unavailable. Long-term, this alternative would not provide concession operations at Goose Bay similar to historic conditions.

#### **3.9.2.2 *Proposed Action Alternative***

The Goose Bay Marina camping area would be closed during calendar years 2014 and 2015 to minimize conflicts between recreationists and construction crews. The existing Goose Bay boat ramp would remain open for the 2014 recreation season. Short-term, the Goose Bay area would be under construction and the recreational land use would be unavailable. Long-term, this alternative would provide recreational opportunities similar to historic conditions.

### **3.9.2.3**      *Cumulative Impacts*

No cumulative environmental affects have been identified for either alternative in consideration.

### **3.9.2.4**      *Minimization Measures*

No Minimization measures have been identified for land uses. There would be no significant impacts to land uses as a result of this action.

## **3.10 Heritage Resources**

### **3.10.1 Affected Environment**

Both intensive and nonintensive surveys have been conducted at Canyon Ferry Reservoir since the mid-1940s. Most of these surveys were undertaken to comply with one or more of the Federal laws and regulations that direct Federal agencies to manage Heritage resources and consider the effects of certain actions on prehistoric and historic remains.

Pursuant to Federal regulations and laws, detailed information the actual location of heritage resources is not public information. Not all heritage resources receive the same level of protection. Following is a breakdown of how heritage resources are protected (Reclamation, 2009a):

- Sites that are on or have been determined eligible for listing on the *National Register of Historic Places* receive the highest level of protection. Damage to these types of properties must be avoided or mitigated through a formal process.
- Sites that have not had a “determination of eligibility” for the *National Register* require a determination before they can be disturbed by a Federal action.
- Sites that have been determined “not-eligible” for the *National Register* are not considered to be “historic properties” and do not require consideration.

Prior to construction of Canyon Ferry Dam and Reservoir, the River Basin Survey of the Smithsonian Institution conducted heritage work at the reservoir. In addition, the University of Montana and the National Park Service (NPS) conducted reconnaissance level archeological surveys for the proposed location of the reservoir. After the reconnaissance surveys, Montana State University tested and/or excavated sites that would eventually be flooded by the reservoir.

During the 1980s, several archeological surveys sponsored by the NPS and Reclamation were conducted at the reservoir. A Class III inventory (intensive) for prehistoric and paleontological resources was conducted pursuant to a contract issued by Reclamation (Greiser, S.T., et al., 1983). Numerous historic, prehistoric, and paleontological sites were recorded around the reservoir, many of which are now inundated. In 1983, a contract issued by Reclamation for analysis of a collection of artifacts from the reservoir revealed that the Missouri River in the area

of the reservoir was inhabited or used intermittently for at least 10,000 years (Greiser, S.T., et al., 1983).

Since the 1980s, heritage resource surveys have focused on reservoir lands that would be impacted by recreation use. In 2008, Reclamation contracted with John Brumley for a Class III Survey of White Earth, Hellgate, and Goose Bay Campgrounds. Several potential sites are in the general area, but none within the Area of Potential Effects (APE).

### **3.10.2 Environmental Consequences**

#### **3.10.2.1 *No Action Alternative***

Reclamation has completed National Historic Preservation Act Section 106 Consultation with the Montana State Historic Preservation Office (SHPO). The SHPO concurred with the Reclamation determination that the proposed undertaking would have no effect to historic properties located within or adjacent to the APE.

#### **3.10.2.2 *Proposed Action Alternative***

Reclamation has completed National Historic Preservation Act Section 106 Consultation with the SHPO. The SHPO concurred with the Reclamation determination that the proposed undertaking would have no effect to historic properties located within or adjacent to the APE.

#### **3.10.2.3 *Cumulative Impacts***

No cumulative environmental affects have been identified to Heritage Resources.

#### **3.10.2.4 *Minimization Measures***

No minimization measures have been identified for heritage resources. There would be no significant impacts to heritage resources as a result of this action.

### **3.11 Climate Change**

Reclamation completed a Basin Report for the Missouri River in 2011. *SECURE Water Act Section 9503(c) - Reclamation Climate Change and Water 2011, Section 5 - Basin Report: Missouri*. The following is an overview of the findings. The full report may be read online at [www.usbr.gov/climate](http://www.usbr.gov/climate).

The Missouri is the longest river in the United States and has a watershed of more than 500,000 square miles, covering parts of 10 states and one Canadian province and encompasses approximately one-sixth of the United States. The Missouri drains the largest watershed within the United States and produces annual yields of 40,000,000 acre-feet. Reclamation has constructed more than 40 dams on Missouri River tributaries that have helped with agriculture development in the basin. The facilities in the basin also provide significant benefits including flood control, navigation, irrigation, power, water supply, recreation, fish and wildlife and water quality. Navigation is important in the lower basin states. Water-based recreation is another

important activity and includes boating, boating related activities and swimming. To protect these critical resources, Reclamation must continually evaluate and report on the risks and impacts from a changing climate and to identify appropriate adaptation and mitigation strategies utilizing the best available science in conjunction with stakeholders.

The following are challenges the Missouri River Basin could likely face:

- Temperature is projected to increase by roughly 5°F - 6°F during the 21st century with precipitation projected to increase from 0.6 to 7.3% over the basin by 2050.
- Mean annual basin runoff is projected to increase as much as 9.7%, with higher variability in sub-basin runoff.
- Moisture falling as rain instead of snow at lower elevations may increase the wintertime runoff with decreased runoff during the summer.

Historical and projected climate changes have potential impacts for the basin:

- Runoff decreases during the spring and early summer likely translate into water supply reductions for meeting irrigation demands, adversely impacting hydropower operations and increasing wintertime flood control challenges.
- Warmer conditions might increase fishery stress, increase electricity demand, increase water demands for instream ecosystems and thermoelectric cooling, increase invasive species infestations and further shrink the prairie pothole region.
- Climate changes in the Missouri Basin could lead to declines in basin hydropower generation and moderate decreases in adequate and safe water supplies are fundamental to the health, economy and ecology of the United States and global climate change poses a significant challenge to the protection of these resources. Reclamation is taking a leading role in assessing risks to Western U.S. water resources and is dedicated to mitigate risks to ensure long-term water resource sustainability. To this end, Reclamation is refining these preliminary results through detailed basin studies on the St. Mary, Milk and Niobrara Rivers, tributaries to the Missouri, under its WaterSMART program.

### **3.11.2 Environmental Consequences**

#### **3.11.2.1 *No Action Alternative***

Greenhouse gas emissions would occur during the demolition activities required to complete the No Action. Emissions would be limited to one construction season. Impacts from implementation of this action would be negligible.

The Bureau of Reclamation is currently working with the State of Montana to develop additional modelling on the impacts of Climate Change on the Missouri River Basin to assist in making scientifically supported management decisions into the future.

Reclamation would continue to monitor and model project operations to attempt to meet the needs of water delivery, recreation and the host of other values associated with Canyon Ferry Reservoir and would adapt to the challenges of a changing climate.

### **3.11.2.2**      *Proposed Action Alternative*

Greenhouse gas emissions would occur during the demolition and construction activities required to complete the Proposed Action. Emissions would occur over two construction seasons. Impacts from implementation of this action would be negligible and there would be no significant contributions to global climate change as a result of this action.

### **3.11.2.3**      *Minimization Measures*

The Bureau of Reclamation is currently working with the State of Montana to develop additional modelling on the impacts of climate change on the Missouri River Basin to assist in making scientifically supported management decisions into the future.

Reclamation would continue to monitor and model project operations to attempt to meet the needs of water delivery, recreation and the host of other values associated with Canyon Ferry Reservoir and would adapt to the challenges of a changing climate.

## **3.12 Socioeconomics**

Broadwater County Profile (From Townsend Chamber Website)

As of the census of 2000, there were 4,385 people, 1,752 households, and 1,270 families residing in the county. The population density was 4 people per square mile (1/km<sup>2</sup>). There were 2,002 housing units at an average density of 2 per square mile (1/km<sup>2</sup>). The racial makeup of the county was 97.04% White, 0.27% Black or African American, 1.16% Native American, 0.11% Asian, 0.07% Pacific Islander, 0.34% from other races, and 1.00% from two or more races. 1.32% of the population were Hispanic or Latino of any race. 25.5% were of German, 14.5% English, 12.9% Irish, 9.9% Norwegian and 6.3% French ancestry according to Census 2000. 98.0% spoke English and 1.3% German as their first language.

There were 1,752 households out of which 30.10% had children under the age of 18 living with them, 61.40% were married couples living together, 6.90% had a female householder with no husband present, and 27.50% were non-families. 24.10% of all households were made up of individuals and 9.90% had someone living alone who was 65 years of age or older. The average household size was 2.47 and the average family size was 2.91.

In the county the population was spread out with 25.20% under the age of 18, 4.80% from 18 to 24, 26.20% from 25 to 44, 27.40% from 45 to 64, and 16.40% who were 65 years of age or older. The median age was 41 years. For every 100 females there were 104.00 males. For every 100 females age 18 and over, there were 103.70 males.

The median income for a household in the county was \$32,689, and the median income for a family was \$36,524. Males had a median income of \$28,495 versus \$19,500 for females. The per capita income for the county was \$16,237. About 7.60% of families and 10.80% of the population were below the poverty line, including 13.70% of those under age 18 and 7.90% of those age 65 or over.

According to the Census Bureau State and County Quick Facts for Broadwater County, there were 135 private non-farm businesses in the County in 2011.

### **3.12.2 Environmental Consequences**

#### **3.12.2.1 *No Action Alternative***

Under the No Action Alternative, employment opportunities would be foregone which would result in negative economic impacts. This loss of employment opportunity could have negative impacts upon the community.

Construction contracts would likely increase employment opportunities for construction related jobs over 1 construction season.

#### **3.12.2.2 *Proposed Action Alternative***

A concession contract would be awarded that would provide employment opportunities for the concession operators themselves and also staff that would be required to successfully operate and maintain. Operation of the Goose Bay Marina would provide employment opportunities to the community.

Construction contracts would likely increase employment opportunities for construction related jobs over 2 construction seasons.

### **3.13 Executive Orders**

#### *Executive Order 11990 – Protection of Wetlands*

Federal agencies shall avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities.

Both the No Action and the Proposed Action are in compliance with the Executive Order.

#### *Executive Order 11988 – Floodplain Management*

Federal agencies shall avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out the agency's responsibilities.

Both the No Action and the Proposed Action are in compliance with the Executive Order.

#### *Executive Order 13186 – Protection of Migratory Birds*

The United States has ratified international, bilateral conventions for the conservation of migratory birds. These international migratory bird conventions impose substantive obligations on the United States for the conservation of migratory birds and their habitats, and through the

Migratory Bird Treaty Act (16 U.S.C. 703-711) (Act) will implement these conventions. This Executive Order directs Federal agencies to take certain actions to further implement the Act.

Both the No Action and Proposed Action are in compliance with this executive order.

Executive Order 13007 – Indian Sacred Sites

Federal agencies shall, to the extent practicable, and not clearly inconsistent with essential agency function; accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites.

Both the No Action and Proposed Action are in compliance with this executive order.

Executive Order 12898 – Environmental Justice

Federal agencies need to ensure their actions do not disproportionately impact minority and disadvantaged populations or communities.

The No Action and Proposed Action would comply with this Executive Order.

## **4.0 CONSULTATION AND COORDINATION**

Montana State Historic Preservation Office

United States Fish and Wildlife Service

Montana Fish, Wildlife and Parks

Montana Department of Environmental Quality

Montana Department of Health and Human Services

Broadwater County

U.S. Army Corps of Engineers

## **5.0 PUBLIC OUTREACH SUMMARY**

- Reclamation initiated a master planning effort in 2008 to assess the public demand and help the agency prepare for the future of the Goose Bay Marina. That effort culminated in the *Draft Goose Bay Master Plan and Financial Feasibility Report* that was released for public comment in Sept. 2009.
- The *Draft Goose Bay Master Plan and Financial Feasibility Report* identified future recreation opportunities, facilities and services that could be provided by Reclamation, a concessionaire, or both, within the Goose Bay Planning Area.

- On Feb. 3, 2009, a scoping letter was mailed to 207 people on the Canyon Ferry Working Group mailing list. The letter announced the planning process, the public meetings, and requested comments during a 60-day comment period. The letter and comment form were also posted on the Reclamation's Canyon Ferry website.
- Public meetings were held on Feb. 18 & 19, 2009, in Townsend and Helena, MT., to initiate the public comment period and planning process.
- On Oct. 15, 2009, the Draft Recreation Master Plan, EA and public comment form were posted on Reclamation's Canyon Ferry website. A second letter was mailed to the project mailing list; including those who participated in the first public comment period. This mailing initiated a second 60-day public comment period from October 15 through December 15 of 2009.
- On November 4, 2009, an open house meeting was held in Townsend, MT., to obtain public input on and provide information about the Draft Master Plan, the five Alternatives presented within the Draft Plan and the EA.
- In preparation for issuing a solicitation for a new, long-term concession contract for the future operation of the Goose Bay Marina, Reclamation arranged for a comprehensive compliance review of the facility during calendar year 2010.
- In December 2012 a *Conceptual Project Approach to Schematic Design* was prepared and submitted to Reclamation. The document included three potential approaches to a schematic layout at the site (layouts A, B, and C) with the option to institute a low, medium, or high level of development within any of the three layouts.
- The existing concessionaire contract expired on December 31, 2012, and the existing 31 mobile homes authorized under the concession contract were required to be removed in 2013.
- Public meetings were held on Jan. 30 & 31, 2013, in Townsend and Helena, MT., to gather comments on the Goose Bay Modernization Plan. Both meetings used a traditional forum method for interacting with the public, which included a formal presentation, visual aids showing site proposals, followed by a Q&A session. Of primary concern at these meetings was the removal of the mobile homes.
- In a written decision issued April 22, 2013, Senior U.S. District Court Judge Charles Lovell affirmed that Goose Bay mobile home owners were in trespass after May 1, 2013.
- On May 17, 2013, Reclamation issued a news release announcing the award of an interim contract to operate Goose Bay Marina through Sept. 30, 2013.
- On June 12, 2013, Reclamation released *Feasibility (30%) Design: Goose Bay Concession Area Modernization Study* for public comment.
- Public meetings were held on June 26, 27 & 28, 2013, in Bozeman, Townsend and Helena, MT., to gather public comments on Reclamation's 30 percent feasibility study for the Goose Bay Modernization Plan at Canyon Ferry, Mont.
  - In preparation for public meetings, Reclamation engaged in a comprehensive public outreach effort to refocus attention on the Goose Bay Modernization Plan Study. News releases & PSA's were issued to more than 200 media outlets the week prior to the meeting, and more than 100 personal contacts via phone were made with private individuals, special interest groups, Congressional staffers and media outlets.
  - Reclamation was active on social media, including the national website, Facebook and Twitter.

- These meetings were conducted in an open house format, with separate stations staffed by subject-matter experts in NEPA and Recreation Planning, as well as the Montana Area Manager, Canyon Ferry Assistant Manager and Regional public affairs staff.
- The primary goal of these meetings was to direct the public’s attention to the modernization plan, and gather comments to aid Reclamation planners as they move forward.
- Discussion was favorable in regards to the planning, construction and modernization of Goose Bay.
- Primary areas of concern appeared to be interim seasonal camping and the closure of the boat ramp. At the Bozeman meeting, Reclamation offered to schedule a separate public meeting to specifically discuss these issues with the “Save Goose Bay Marina” representatives. Other comments included:
  - Goose Bay is a very important location for many short term and seasonal campers.
  - A great interest was shown in keeping the boat ramp open and allowing some seasonal camping in or near Goose Bay.
  - Concern was expressed with the use of 20 x 60’ back-in spurs being too small to handle a camper, a truck, a boat and an RV, which is what many of the seasonal campers typically have onsite.
  - Concerns were expressed with having items stolen from boats left in dock slips overnight.
  - There was general interest in improving the area, but many were interested in keeping the rustic feel of the area.
  - Accessible parking, restrooms, walkways and docks were of interest to many parties.
  - Concerns that the area would be closed for more than one season.
- A “trap-line” was also conducted while on site at Canyon Ferry. Reclamation staff drove to businesses, campgrounds and other areas around Canyon Ferry Reservoir, including Kim’s Marina, Yacht Basin and Goose Bay Marina. The purpose was to ensure an awareness of the public meetings, and answer questions or respond to concerns.
- The June 26-28, 2013, public meetings generated significant positive media coverage from a variety of outlets.
  - A feature length article appeared in the Helena Independent Record on June 20, 2013 *Latest Plan for Goose Bay marina unveiled*, which was later posted to the wire and carried by other major outlets in the state including the Billings Gazette on June 21, 2013.
  - PSA’s were run by radio stations in major target markets, including Billings, Bozeman, Helena and Butte.
  - All four of the primary targeted daily newspapers – Butte Standard, Bozeman Chronicle, Helena IR and Great Falls Tribune, ran at least one story prior to the public meetings.
  - Three on-camera interviews were conducted on June 27 and June 28, 2013. Including an on-site interview at the Canyon Ferry Field Office by Beartooth NBC, Helena.

- One on-air radio interview was conducted on June 25 with KZVK “The Eagle” in Bozeman.
- A series of public meetings were held on November 19, 20 & 21, 2013, in Bozeman, Townsend and Helena, Mont., to gather public comments on Reclamation’s Draft Environmental Assessment and 60 percent Design Study for the Goose Bay Modernization Plan at Canyon Ferry, Mont.
  - In preparation for public meetings, Reclamation engaged in a comprehensive public outreach effort to refocus attention on the Goose Bay Modernization Plan Study. News releases & PSA’s were issued to more than 200 media outlets the week prior to the meeting, and more than 100 personal contacts via phone were made with private individuals, special interest groups, Congressional staffers and media outlets.
  - Reclamation was active on social media, including the agency’s national website, Facebook page and Twitter.
  - These meetings were conducted in an open house format, with separate stations staffed by subject-matter experts in NEPA and Recreation Planning, as well as the Montana Area Manager, Canyon Ferry Assistant Manager and regional public affairs staff.
  - The primary goal of these meetings was to direct the public’s attention to the Draft Environmental Assessment, and gather comments to aid Reclamation planners as they moved forward in the NEPA process.
  - Various members of broadcast and print media were engaged during the public meeting process, including on-camera interviews with MTAO and regional staff, as well as multiple print and broadcast stories.
- **Moving forward** – outreach strategies for the closure of Goose Bay Marina Recreation Area would need to be thoroughly considered, including:
  - Signage at all marinas and access points
  - Media coverage reminder boaters of the closure
  - Alert local sports/recreation groups
  - Coordination with Coast Guard/other local, state & federal agencies
  - Contact/flyers for businesses and other locations near Canyon Ferry
  - PSA’s

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