SILOS
Recreation Area
Master Plan

Prepared for:
Broadwater County

In coordination with:
US Bureau of Reclamation

Prepared by:
Robert Peccia and Associates

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ACKNOWLEDGMENTS

The following individuals provided guidance, oversight, and support toward the successful completion of the Master Plan.

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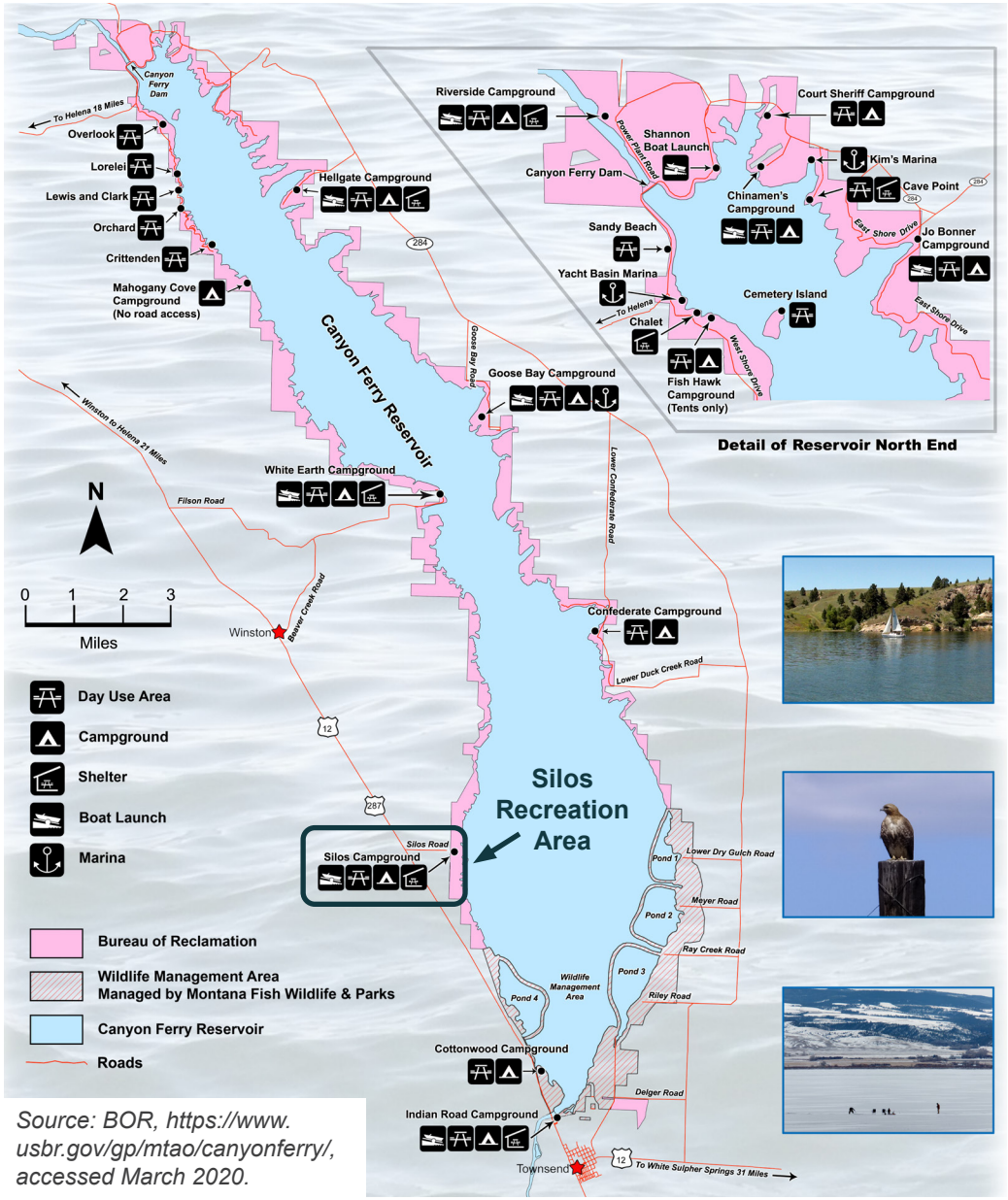
CHAPTER 1: *INTRODUCTION AND BACKGROUND*

The Silos Recreation Area (SRA) is located on the southwestern shore of Canyon Ferry Reservoir in Broadwater County, Montana, on federal lands owned by the Bureau of Reclamation (BOR) and managed by Broadwater County. BOR constructed the 35,181-acre reservoir on the Missouri River in 1953 as a unit of its Pick-Sloan Missouri River Program.



Source: BOR, https://www.usbr.gov/gp/mtao/canyonferry/, accessed March 2020.

Figure 1: Canyon Ferry Reservoir

Figure 1 shows the location of the SRA relative to the larger Canyon Ferry Reservoir management area.

The SRA is located about 7.5 miles northwest of Townsend and 23 miles southeast of Helena. The site is open all year to support camping, boating, lake fishing, ice fishing, ice boating, swimming, picnicking, and day use activities.

The SRA has seen limited capital improvements over its life. Many of the facilities are undersized and do not meet current demands or are nearing the end of their useful life and need to be rehabilitated or replaced. A major excavation of Broadwater Bay and development of a new and expanded boat launch facility were completed in 2006 with later additions of boat slips and courtesy docks. This development has proven to be a successful addition to serve the SRA and its users.

To address remaining site and user needs, Broadwater County, in cooperation with the BOR, has developed this *Master Plan* for the SRA. The *Master Plan* evaluates development alternatives and identifies a recommended alternative for improvements to SRA amenities and infrastructure.

1.1. MASTER PLAN AREA

The area addressed in the *Master Plan* generally consists of the western land portions of Sections 26 and Section 35, Township 8 North, Range 1 East in Broadwater County (see **Figure 2**). The *Master Plan* area does not include adjoining Bureau of Land Management (BLM) lands, the Canyon Ferry Airport, or privately owned lands within the Foster Estates Subdivision located adjacent to the SRA on the south or the Silos Subdivision located immediately west of the recreation area.

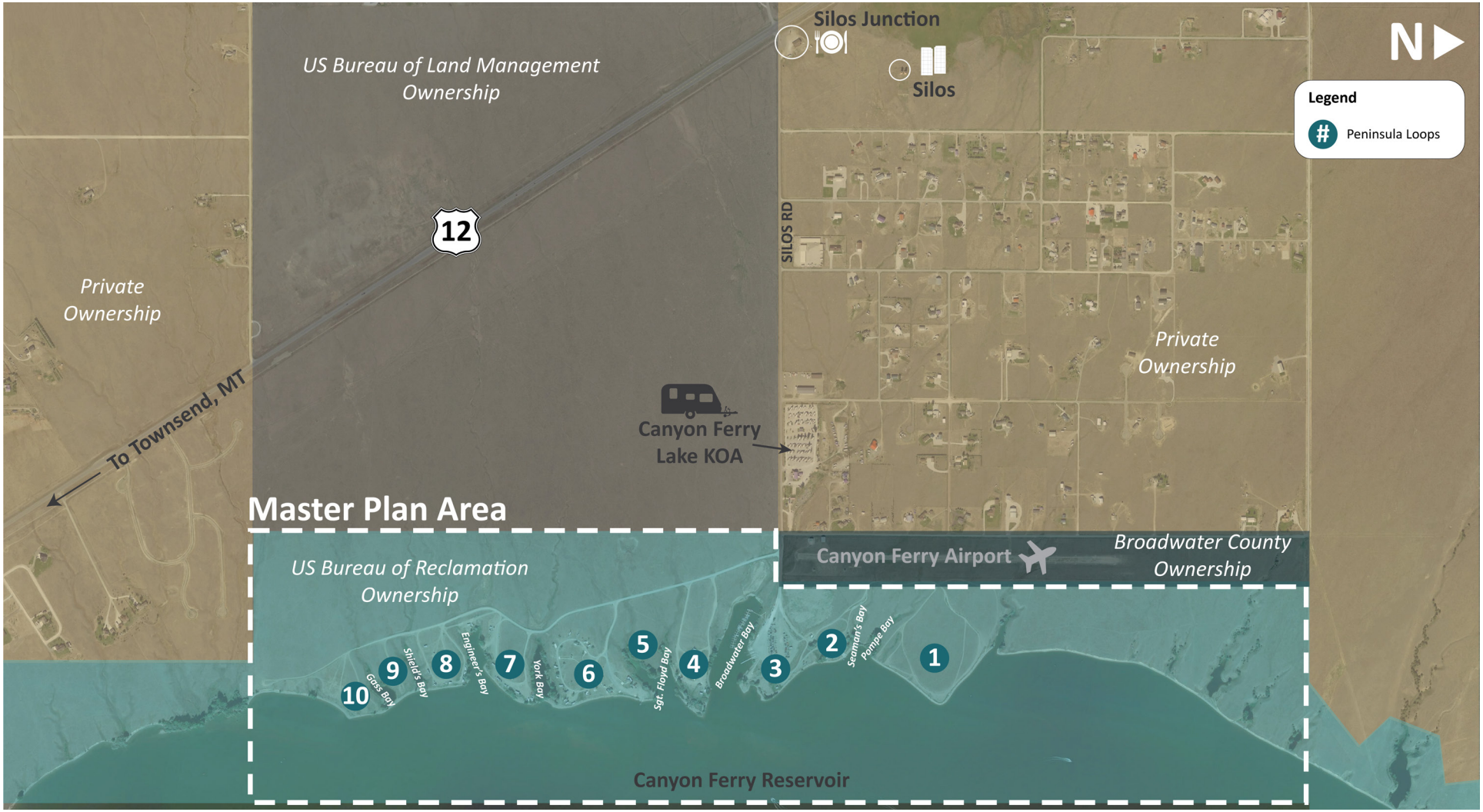


Figure 2: Master Plan Area and Adjoining Land Ownership

Figure 3 provides an enlargement of the *Master Plan* area, with labeled bays and numbered peninsula areas corresponding to March 2020 inventory collection.

Figure 3: Enlargement of Master Plan Area

CHAPTER 2: *PUBLIC AND STAKEHOLDER OUTREACH*

2.1. STEERING COMMITTEE AND STAKEHOLDER COORDINATION

A steering committee was established to guide development of the *Master Plan*. Representatives from the Broadwater County Commission, BOR, Broadwater County Planning, Broadwater County Trust Board, Broadwater County Airport Board, and the Citizens Action Group for the Silos Recreation Area (CAGSRA) met regularly to discuss planning progress, analysis methodologies and results, public input, draft technical memoranda, and other issues and concerns. Additional stakeholders were invited to attend meetings to provide input on specific areas of interest, jurisdiction, or knowledge. The committee advised the consulting team and reviewed all documentation before publication.

2.2. ONLINE ENGAGEMENT

A *Master Plan* website (https://www.silosmasterplan.com) was developed to encourage public interaction and provide information. The website contained a description of the planning process, an illustration of the planning area, contact information, public involvement announcements, links to draft reports, and other background documents.

2.3. PUBLIC MEETING #1

Broadwater County, in partnership with the BOR, hosted a public open house meeting on August 1, 2020, to share information and ideas, collect feedback, and answer questions about the *Master Plan*. The meeting was held outdoors from 9:00 AM to 1:00 PM in a tent located in the lawn area between the Silos RV Park restaurant and campground. The open house meeting format enabled attendees to review exhibits and handouts, provide comments, and speak with study representatives. A presentation was not provided.

Public notice was provided in multiple formats in advance of the open house meeting. A flyer was posted at the SRA entrance. Electronic invitations were sent to 49 study contacts. Electronic notice was posted to the study website, Broadwater County's website, and the Broadwater County event calendar. Additionally, Steering Committee members extended invitations to personal contacts.

A total of 34 members of the public attended the meeting. Attendees provided feedback on desired campground density, location of event space and day use areas, ADA access, airport considerations, boat launches and bay improvements, camping area features, entrance location and configuration, use of the existing gravel pile, investment and financial considerations, landscaping, maintenance, parking, pedestrian pathways, vehicular roadways, signage, site usage and demand, utilities, waste, and weed control. A summary of public comments is provided in **Appendix 1**.

Preliminary phasing options were presented to the public for feedback at the first public meeting.

2.4. PUBLIC MEETING #2 AND PUBLIC COMMENT PERIOD

Broadwater County, in partnership with the BOR, hosted a virtual informational meeting on January 12, 2021, to present plan recommendations, collect feedback, and answer questions about the *Silos Recreation Area Master Plan*. The meeting was held virtually using the Zoom platform from 6:00 PM to 7:00 PM. Study representatives gave a brief presentation to share key elements from the *Master Plan*. A question/answer session followed. A video recording of the meeting was posted to the website for those unable to attend the live presentation. Before the meeting, electronic invitations were sent to study contacts and electronic notice was also posted to the study website. Additionally, Steering Committee members extended invitations to personal contacts.

A total of 39 individuals registered for the meeting and 27 people attended including Steering Committee members, project team members, and members of the public. Attendees provided feedback and asked questions about the entrance configuration, showers, excavation materials, individual electricity hookups for campsites, and trails extending outside the SRA. A summary of public comments is provided in **Appendix 1**.

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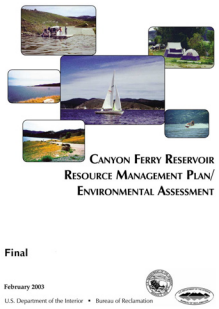
CHAPTER 3:
EXISTING CONDITIONS

3.1. OVERVIEW OF RELATED AGREEMENTS AND PLANS

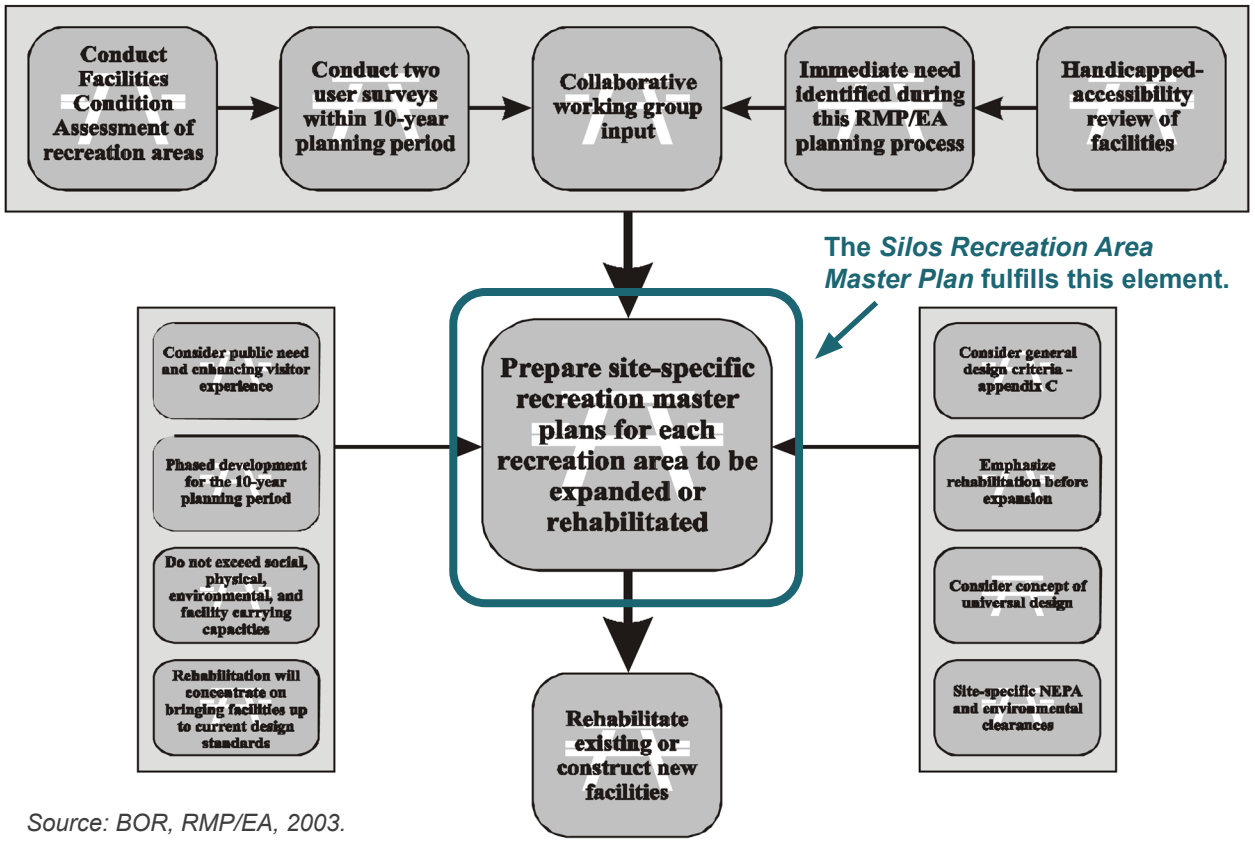
BOR and Broadwater County have developed multiple agreements and planning documents addressing goals, policies, use practices, and development activities at the SRA. The following summaries are listed in chronological order and provide an overview of elements directly relevant to the *Master Plan* process.

3.1.1. Resource Management Plan/Environmental Assessment



In 2003, BOR developed a combined *Resource Management Plan* (RMP) and *Environmental Assessment* (EA) to establish a management framework for conserving, protecting, enhancing, developing, and using the physical and biological resources at Canyon Ferry Reservoir and its surrounding lands. The RMP/EA identified varying combinations of land uses and resource management practices, including No Action (Alternative A), Moderate Recreation Development (Alternative B – Preferred), and Maximum Recreation Development (Alternative C). Under the preferred Alternative B, a moderate number of facilities would be provided including day-use facilities, some additional overnight camping sites, new boat ramps, and trails. In addition, substantial efforts would be made toward improving existing facilities and recreational opportunities.

Figure 4 illustrates the BOR's process for rehabilitating existing and developing new recreation facilities. The *Master Plan* addresses a central element in that process and must consider and incorporate the other guiding elements. Any future site development or changes in management practices must be accomplished in a manner consistent with the RMP/EA.



Source: BOR, RMP/EA, 2003.

Figure 4: Process for Rehabilitating Existing and Developing New Recreation Facilities

3.1.2. Management Agreement No. R13MA60006[1]

Management Agreement No. R13MA60006 outlines the terms under which the BOR authorizes Broadwater County to develop, manage, operate, and maintain the SRA at Canyon Ferry Reservoir for public recreation purposes. The agreement was executed February 25, 2013, and is valid for a 10-year period ending February 25, 2023. Under the agreement, BOR retains ownership of the property while Broadwater County is authorized to develop new facilities, charge and retain fees for use of the facilities, and issue third-party permits or concessions contracts associated with operation and management of the site. Additional terms of the agreement address resource conservation and protection, consumptive water use, and policies such as waste removal, safety practices, accident reporting, administration and inspection, liability and default, and other topics. The *Master Plan* process and any projects advanced from the plan must comply with the terms of the agreement.

3.1.3. Site Manager Contract[2]

Broadwater County is contracted with JSJ, Inc. (doing business as Townsend Canyon Ferry Lake KOA, referenced hereafter as Site Manager) to perform day-to-day operations and maintenance at the site. The *Site Manager Contract* outlines stipulations for staffing, management, maintenance, repairs, insurance and accident reporting, fee collection, group use permits, and Site Manager compensation. Under the contract, the Site Manager must employ one site host on weekdays and two site hosts on weekends and holidays to direct users, collect fees, answer questions, and generally manage the site during the May 15th to September 15th season.

The Site Manager enforces the following site rules and policies, which are appended to the *Site Manager Contract* or posted on signage at the site.

Prohibited Uses and Actions

- Discharge of firearms or fireworks
- Willful injury or destruction of site structures, signs, equipment, and other facilities
- Willful injury or destruction of trees, shrubs, other vegetation, soils, gravel, or rocks
- Littering the grounds or dumping trash/holding tanks into latrine vaults
- Loud/profane/abusive language and loud music
- Operation/parking outside designated roadways and parking areas
- Wastewater discharge onto the ground
- Building a fire outside of fire ring
- Unleashed pets
- Operation of any motorized land vehicle in excess of 15 mph
- Failure to obey quiet hours from 10PM to 8AM
- Operating motorized land vehicles on beaches
- Overnight camping in day use areas
- Cleaning fish or washing dishes at potable water sources
- Tying boats to dock longer than 15 minutes
- Delaying or impeding boat launch traffic
- Operating above a “no wake” speed within 200 feet of a dock, swimmer, or anchored vessel
- Sunbathing, loitering, diving, bicycling, swimming, or fishing in boat launch area and docks

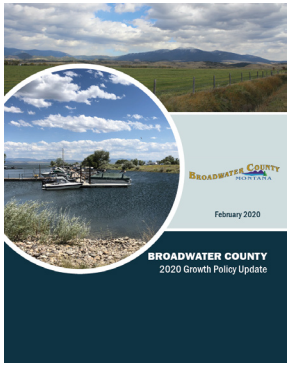
Uses Allowable with Fee and Reservation Only

- Boat slip rentals
- Overnight camping (up to a stay limit of 14 days; trailer/motor home permitted)
- Group picnic shelter/gazebo use

3.1.4. Canyon Ferry Reservoir Silos Recreation Area Framework Plan[3]

The *Framework Plan* is a foundation document for future planning and design phases. Based on input from stakeholders, members of the public, and governing agencies, the *Framework Plan* developed a vision and goals, analyzed a range of potential development program alternatives, and offered a final recommended development program for short-term and long-term phased redevelopment and management at the SRA. The planning process included a series of study group meetings, three public workshops, and a project website with a public survey to identify public needs and preferences. Recommendations from the *Framework Plan* serve as the basis for a more detailed site layout developed through the *Master Plan* process.

3.1.5. Broadwater County Growth Policy Update[4]



In 2020, Broadwater County developed an update to its 2003 *Growth Policy* outlining actions to accomplish county-wide goals relating to economic development, local services, infrastructure, housing, and land use. Through public outreach activities, the county identified the following areas of importance to county residents:

- Maintaining quality of life, open spaces, and rural lifestyle.
- Improving job opportunities, retail shopping options, recreational opportunities, housing options, and Broadband internet services.
- Focusing on economic development and enhancing emergency medical services and fire protection.

The *Growth Policy Update* noted Canyon Ferry Lake provides recreation opportunities of statewide significance, including lake fishing, ice fishing, boating, camping, and picnicking. Canyon Ferry Reservoir was also noted as an important tourism and economic development generator for the county. Improvements to the SRA were included among a list of 10 priority projects Broadwater County and the City of Townsend intend to pursue in the next 5-10 years.

3.2. PAST, CURRENT, AND PLANNED ACTIONS

Since the RMP/EA was completed in 2003, the Broadwater County Canyon Ferry Trust Board (Trust Board) led efforts for excavation at Broadwater Bay and development of concrete boat ramps. Separately funded projects involved construction of gazebos, vault toilet structures, lighting, and boat docks at Broadwater Bay.[5]

Broadwater County's 2019 work plan[6] indicates the following operations and maintenance actions:

- **Gazebos:** several are in disrepair; delay rebuilding to ensure consistency with *Master Plan*
- **Trees:** address tree struck by lightning
- **Restrooms:** daily cleaning and maintenance
- **Fire Rings:** replace and repair at campsites
- **Picnic Tables:** replace and repair at campsites
- **Roads:** county provides maintenance; magnesium chloride for dust abatement is pending for loop routes
- **Boat Ramps:** Move ramps daily for safe usage; need long-term solution for additional ramps
- **Sites:** weed weekly
- **Garbage:** empty dumpsters at least once per week
- **Marina:** maintain docks, repair as needed
- **Parking:** Broadwater County Road Department filled potholes in the large parking area and laid gravel in the dock/fishing/pedestrian parking area

The work plan also outlines ongoing efforts for recycling and waste reduction, site management and signage, soil and water conservation, integrated pest management, and dock and shore fishing parking area maintenance.

As of the spring of 2020, the Trust Board has completed projects for gravel surfacing and magnesium chloride dust control application on site access roads/parking areas and power washing and painting of two of the four gazebos. The Trust Board is also working with Walleyes Unlimited to add cinderblock walls on the open-sided gazebo (Pavilion #4) to enhance wind protection.[7]

3.3. SITE FACILITIES AND USAGE CHARACTERISTICS

The SRA offers year-round recreation opportunities including camping, boating, lake fishing, ice fishing, swimming, picnicking, and other day-use activities which attract local, statewide, and regional visitors. The following sections describe site access, features and amenities, usage characteristics and trends, and economic impacts from visitors. **Appendix 2** provides a log of site photographs taken during a March 2020 field visit.

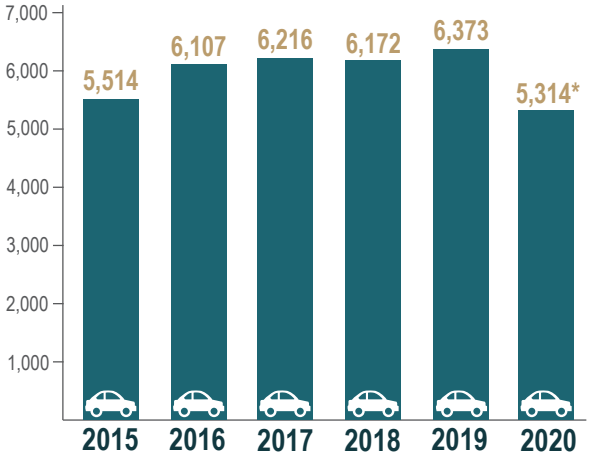
3.3.1. Highway Access

Access to the SRA is provided via Highway 287/ Highway 12, which is a non-interstate principal arterial on the National Highway System (NHS). Highway 287 runs from its intersection with Interstate 90 near Three Forks to Townsend, where it joins Highway 12 and proceeds north and west past Helena until intersecting with Interstate 90 west of Avon.

The Montana Department of Transportation (MDT) maintains an automatic traffic recorder on Highway 287 north of Townsend at Mile Marker 72.324 approximately 5.3 miles north of Townsend (count site #04-1-001). As presented in **Figure 5**, volumes at this site increased by nearly 1,000 vehicles per day from 2015 to 2019.

MDT has programmed the Townsend - North rehabilitation project on Highway 287 beginning in Townsend and proceeding approximately 10.3 miles north. MDT's 2020-2024 *Statewide Transportation Improvement Program* and the upcoming projects website indicate that the Townsend - North project is planned for construction in the summer of 2021. The project will rehabilitate the roadway to address rutting via diamond roadway smoothing, a chip seal, and intersection resurfacing at Highway 287/Highway 12 (Broadway and Front Street) with concrete pavement.

MDT has also nominated the Silos - South project, which is anticipated to extend the current five-lane configuration to the south from the Silos Road on Highway 287. The limits of the extension are yet to be determined as the project is in the early design stage.



Source: MDT, Transportation Data Management System, https://mdt.ms2soft.com/tcds/tsearch.asp?loc=mdt
**Low traffic volumes in 2020 influenced by effects of COVID-19 pandemic.*

Figure 5: Annual Average Daily Traffic Volumes (2015-2020)

3.3.2. Site Roadways and Trail Access

From Highway 287, the SRA is accessed via Silos Road, which is an asphalt paved roadway running in an east-west direction. Paving ends just after the SRA entrance signage and pay station, and an unpaved roadway running north-south roughly parallel to the reservoir serves as the main site roadway. Perpendicular to the main road, a series of unpaved loop roads provide vehicular access to SRA bays and peninsulas. Site roadways are visible in **Figure 3**.

In addition to designated vehicular roadways, a number of unpaved pathways and paved ADA sidewalks provide pedestrian access throughout the SRA. The Broadwater County Recreation Board is working to develop trails and paths extending north of the SRA and between Townsend and the SRA.[8] The *Master Plan* process provides an opportunity to support a network of connected recreation opportunities in the area.

3.3.3. Feature Inventory

The 2003 RMP/EA provided a summary of public use recreation facilities managed by BOR at that time. To support the *Master Plan* effort, updated site inventory was conducted in February and March 2020. **Figure 6** presents inventory findings from 2003 and 2020. Since 2003, additional site facilities and amenities have been added including marked campsites, picnic shelters, picnic tables, vault toilets, boat ramps/docks, and ADA facilities.

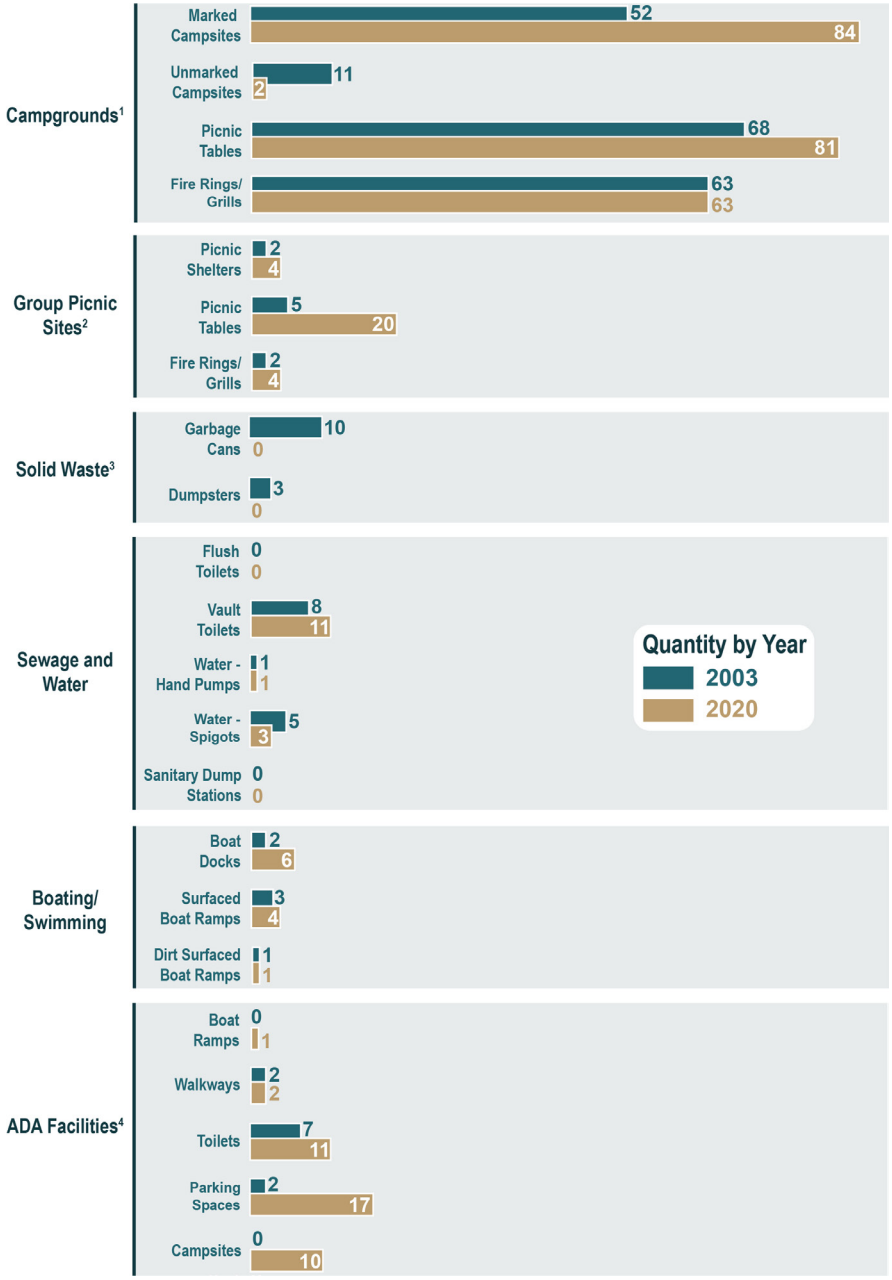


Figure 6: Feature Inventory

Sources: 2003 Inventory – as published in RMP/EA; 2020 Inventory – BOR (February) supplemented by Robert Peccia and Associates (March).

[1] For 2020 inventory, picnic tables associated with campsites were counted separately from group picnic sites. Marked campsites include a parking space, fire ring, picnic table, and a numbered post. Some campsites, marked as double sites, allow more than one camping unit.

[2] For 2020 inventory, picnic tables associated with group picnic sites were counted separately from campsites. A picnic shelter is a roofed shade/wind structure protecting groups of picnic tables.

[3] Solid waste features are set out for the summer season and were not available to be counted during the February/March 2020 inventory.

[4] For 2020 inventory, ADA facilities were included in the total campground and sewage/water counts (and are not in addition to the total).

3.3.4. Watercraft Inspection and Certified Boaters

Since 2004, Montana Fish, Wildlife & Parks (FWP) has administered the Aquatic Invasive Species (AIS) Early Detection and Monitoring Program. As part of this program, FWP conducts watercraft inspection and decontamination to identify and prevent spread of invasive species. Records from the program provide an estimate of boater usage at the site.

Canyon Ferry – Silos is a Class I inspection station providing full inspection and decontamination capability. **Table 1** presents historic watercraft inspection at Canyon Ferry Reservoir from 2015 through 2019. Mandatory watercraft inspection was implemented in 2017 following suspected detection of invasive mussel larvae in Canyon Ferry in the fall of 2016, which resulted in a substantial increase in the total number of inspections at Canyon Ferry.

Table 1: Canyon Ferry Watercraft Inspection (2015-2019)

Year	Silos (SRA)	Canyon Ferry Total
2015	-	890
2016	-	872
2017	4,398	7,403
2018	4,078	8,135
2019	3,637	7,920
2020	5,230	5,352*

Source: FWP, Watercraft Inspection Station Annual Reports, 2015-2019.

**Reflects inconsistent inspections conducted at other Canyon Ferry Reservoir locations for 2020 season.*

A total of 7,920 watercraft inspections were conducted on Canyon Ferry Lake during the 2019 boating season. Of these, 3,637 were conducted at the SRA from May 22 through September 29, 2019.[9]

To aid the inspection process, FWP developed the Certified Boater program for boaters returning to the same water bodies. Annual registration is required. Certified boaters are issued a decal, which enables them to participate in a streamlined inspection and provides access to launch points designated exclusively for the certified boater program. Full inspection is still required for boaters visiting multiple water bodies.

At the Canyon Ferry Reservoir in 2019, a total of 1,728 certified boaters were recorded. Boaters monitored through the program originated from a total of 84 zip codes. The largest numbers originated from Helena (427 boaters), Bozeman (260 boaters), Townsend (240 boaters), and East Helena (124 boaters). While most program participants likely used Certified Boater Only Launch Sites, some boaters may have chosen to launch at publicly accessible inspection and launch sites such as the SRA, potentially resulting in some overlap with **Table 1**.

In 2019, FWP tallied 2,786 certified boaters at the SRA that did not require decontamination or inspection because they indicated their next launch would be at Canyon Ferry again. In combination with the 2019 watercraft inspection numbers noted in **Table 1**, nearly 6,500 boat launches occurred at the SRA in 2019.

As of 2020, FWP has delisted Canyon Ferry Reservoir as an invasive species management area. Following three years of no invasive mussel detection, regional guidelines allow for the delisting of a suspect waterbody and the removal of the mandatory exit inspection requirements. The Canyon Ferry Reservoir certified boater program will no longer be maintained beginning with the 2020 boating season.[10]

3.3.5. Visitation and Economic Impact

FWP tracks biannual angler fishing days and associated economic value for water bodies throughout the state. Since 2005, angler activity at Canyon Ferry Lake has continued to result in increasing economic value, reaching over $16 million in 2017, as presented in **Table 2**.

Table 2: Economic Value of Angler Activity at Canyon Ferry Reservoir

Year	Resident Daily Value	Non-Resident Daily Value	Total Angler Days	Total Economic Value
2005	$40.04	$211.03	80,248	$4.24M
2007	$43.04	$224.65	83,346	$4.38M
2009	$44.55	$232.53	133,122	$8.03M
2011	$46.83	$244.44	99,926	$6.60M
2013	$83.40	$646.23	105,327	$13.58M
2015	$84.12	$651.80	35,255	$11.24M
2017	$86.35	$669.12	127,692	$16.04M

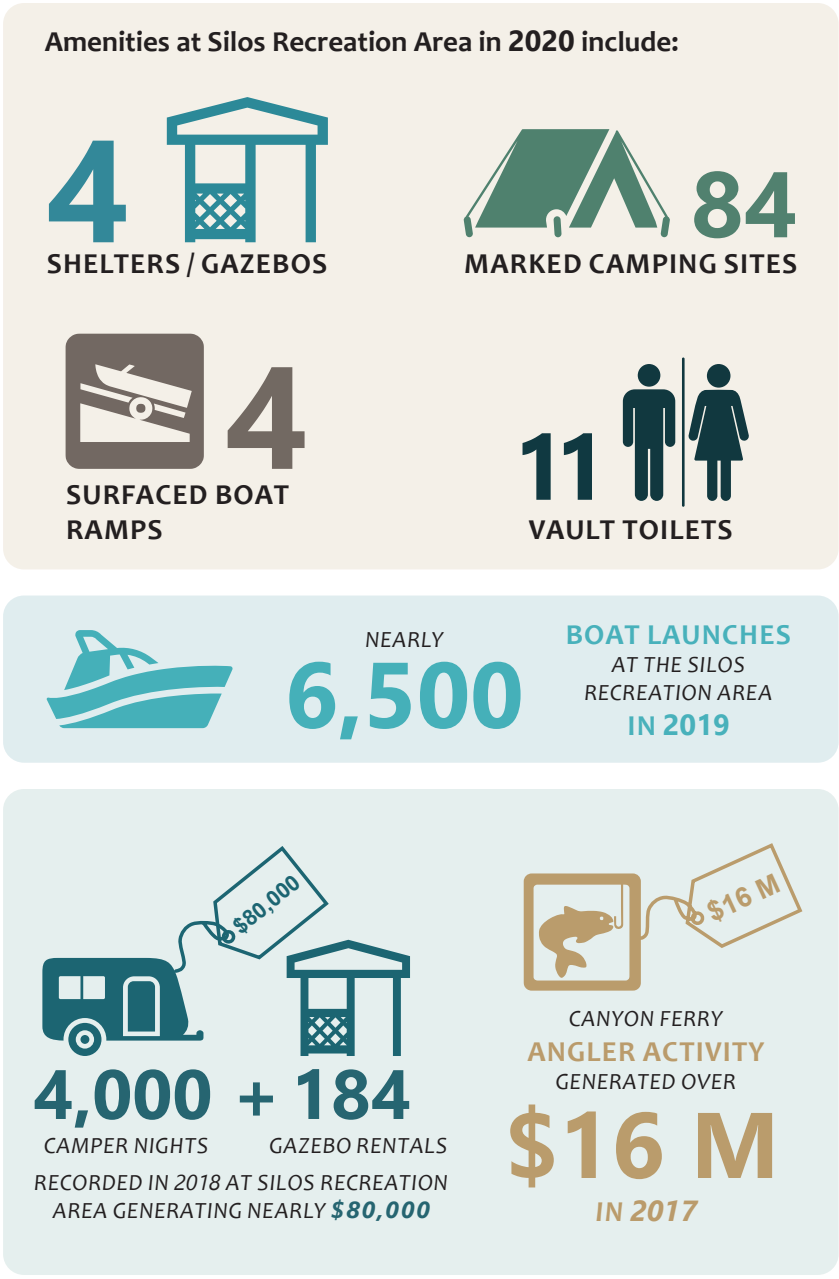
Source: FWP.

According to Broadwater County records, in 2018 approximately 4,000 camper nights and 184 gazebo rentals were recorded at the SRA. The 2018 season generated nearly $80,000 in fee revenues, an increase of nearly $40,000 since the 2016 season, as shown in **Table 3**. Per the terms of the *Site Manager Contract*, the Site Manager pays 10% of gross proceeds to Broadwater County.

Table 3: Fee Revenue at Silos Recreation Area (2016-2018)

Revenue Type	2018 Value[1]	2016 Value[2]
BOR Campsite	$41,190	$20,531
BOR Gazebos	$5,670	$4,025
Marina Dock Slips	$29,130	$6,810
Total	**$79,550**	**31,366**

[1]*Source: Broadwater County Work Plan for 2019, SRA at Canyon Ferry.*
[2]*Source: Broadwater County Annual Reports for 2016 Season, SRA at Canyon Ferry.*



3.4. PHYSICAL ENVIRONMENT

3.4.1. Geology and Topography

The study area occurs in the Townsend Basin, a northwest-southeast trending valley between the Big Belt and Elkhorn Mountains. The Townsend Basin lies in a structural depression formed by the down warping of pre-Cambrian and Cambrian sedimentary formations. Four major geological units are found in the Canyon Ferry Reservoir area: Tertiary lakebeds, igneous formations, Quaternary alluvium, and sedimentary formations.

Tertiary lakebed deposits cover most of the northeast and southwest portions of the Canyon Ferry area, including the gently sloping plains along the western shore below the Spokane Hills and Elkhorn Mountains where the SRA has been developed. These deposits overlie eroded surfaces of folded and faulted older rocks and underlie most of the younger sediments in the Townsend Valley. Tertiary lakebed deposits range in thickness from 4,000 to 6,000 feet.

Ground surface elevations are generally about 3,800 feet above sea level in the recreation area. Gentle slopes of less than five percent exist on lands west of the reservoir although areas of steeper slopes exist along the shoreline of the reservoir and in the numerous bays within the recreation area.

3.4.2. Soils

Soil Types Found in the Study Area

Information for this section was obtained from the Soil Survey of Broadwater County Area, Montana (US Department of Agriculture Natural Resources Conservation Service [NRCS], April 1977, formerly the Soil Conservation Service). **Appendix 3** illustrates soils in the study area.

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.

Soils in the study area consist almost entirely of Radersburg very cobbly loam. A small area of Musselshell-Crago channery loams, 15 to 35 percent slopes exists along the shore of the reservoir in the extreme northeastern portion of the recreation area. Radersburg very cobbly loam soils are typically found on river terraces and alluvial fans with slopes ranging from two to five percent. The soil is typically well drained and is not overly susceptible to erosion by wind or water. The Radersburg soil is considered to be in Hydrological Soil Group C suggesting the soils have a slow infiltration rate.

The Musselshell-Crago soils are typically found on relatively steep slopes adjoining the shore of the reservoir. This soil is more susceptible to erosion than Radersburg very cobbly loam soil. The soil is moderately deep and well drained and has a slow infiltration rate.

Important Farmland

The Farmland Policy Protection Act (FPPA) (7 United States Code [U.S.C.] 4201 et. seq.) requires deliberate analysis for potential farmland impacts of projects with federal involvement. The FPPA defines the term farmland only as prime farmland, unique farmland, and farmland of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. The FPPA does not apply to lands already in or committed to urban development but does stipulate that federal programs be compatible with state, local and private efforts to protect farmland.

The NRCS determines where prime farmland exists and maintains mapping resources and information to support the FPPA. Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, and forage; the area must also be available for these uses. Prime farmland can be either non-irrigated or lands that would be considered prime if irrigated. Farmland of statewide importance is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, fiber, forage, and oilseed crops.

The NRCS does not classify Radersburg very cobbly loam or Musselshell-Crago channery loams, 15 to 35 percent slopes soils as prime, unique, or important farmland. For this reason, the FPPA does not apply and there is no need to coordinate further with the NRCS about potential impacts to farmland.

3.4.3. Water Resources

Surface Waters

The study area lies entirely within the Upper Missouri River Basin (Hydrologic Unit Code [HUC] 10030101) as delineated by the United States Geological Survey (USGS). Portions of the recreation area lie within the Upper Canyon Ferry Lake-Missouri River (HUC 1003010110) and Middle Canyon Ferry Lake-Missouri River (HUC 1003010111) watersheds. The Upper Missouri River Basin 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 only named stream within the study area is Whitehorse Creek, a 9.5-mile-long stream originating in the Elkhorn Mountains to the west. Whitehorse Creek joins Canyon Ferry Reservoir just south of the SRA. USGS Quad Maps and aerial photographs suggest ephemeral drainages flow towards each bay within the recreation area.

Canyon Ferry Reservoir

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 3,797 feet, extending upstream about 19 miles from the dam to the point the Missouri River enters the reservoir.[11] Additionally, there are 9,360 acres of lands and 96 miles of shoreline along the reservoir under the jurisdiction of the BOR.

The Missouri River is the primary source of inflow to Canyon Ferry, although other perennial streams also provide inflow to the reservoir. Elevation levels in Canyon Ferry vary seasonally, with the highest water levels typically occurring in June and July and the lowest levels occurring in early spring to prepare for runoff within the Upper Missouri River drainage.

Surface Water Quality

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 problematic given their low concentrations and the high alkalinity of the reservoir water.

Canyon Ferry Reservoir is considered to be an impaired water according to the Montana Department of Environmental Quality (MDEQ) Water Quality Division's *2018 Montana Water Quality Report and List of Impaired Surface Waters, (305(b) and 303(d) Integrated Report*. This designation was made due to impairments by the presence of algae (blooms), ammonia, arsenic, and thallium that do not fully support beneficial uses including agriculture, aquatic life, drinking water, and some types of recreation.

Some of these impairments are naturally occurring in soils or are present due to ongoing and past activities within the Upper Missouri Basin. Designating a body of water as impaired requires MDEQ to set a priority for determining the total maximum daily load (TMDL) of a pollutant that the water body can receive and still meet water quality standards set for the designated uses of the water body. The MDEQ has designated the Canyon Ferry TMDL Planning Area (TPA) which includes the lake and river areas downstream from Canyon Ferry Dam; however, TMDLs have not yet been established.

Groundwater

A large, confined aquifer composed of Quaternary and Tertiary deposits lies beneath the Townsend Valley. 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 irrigation facilities also recharge the groundwater in the valley.

The Montana Bureau of Mines and Geology, Ground Water Information Center (GWIC) was consulted to identify wells in the vicinity of the recreation area. This review showed 4 wells within the recreation area, all with static water levels ranging from 9 to 32 feet below the ground surface with yields of 20 to 30 gallons per minute.

Public Water Supplies

The listing of Public Water Systems in Broadwater County maintained by the MDEQ Public Water Supply Program was reviewed to identify any potential drinking water sources in the project area. The database showed public water systems at the SRA (MT0040693) and at the nearby Silos RV Park/Store (MT0003074). The SRA system, classified as a non-community water system (NC) by MDEQ, relies on groundwater from three wells for its water supply. NC water systems regularly serve at least 25 non-residential individuals during 60 or more days per year. The wells for the recreation area require monthly testing when open for public use. Similarly, the Silos RV Park and Store system is considered to be a NC water system.

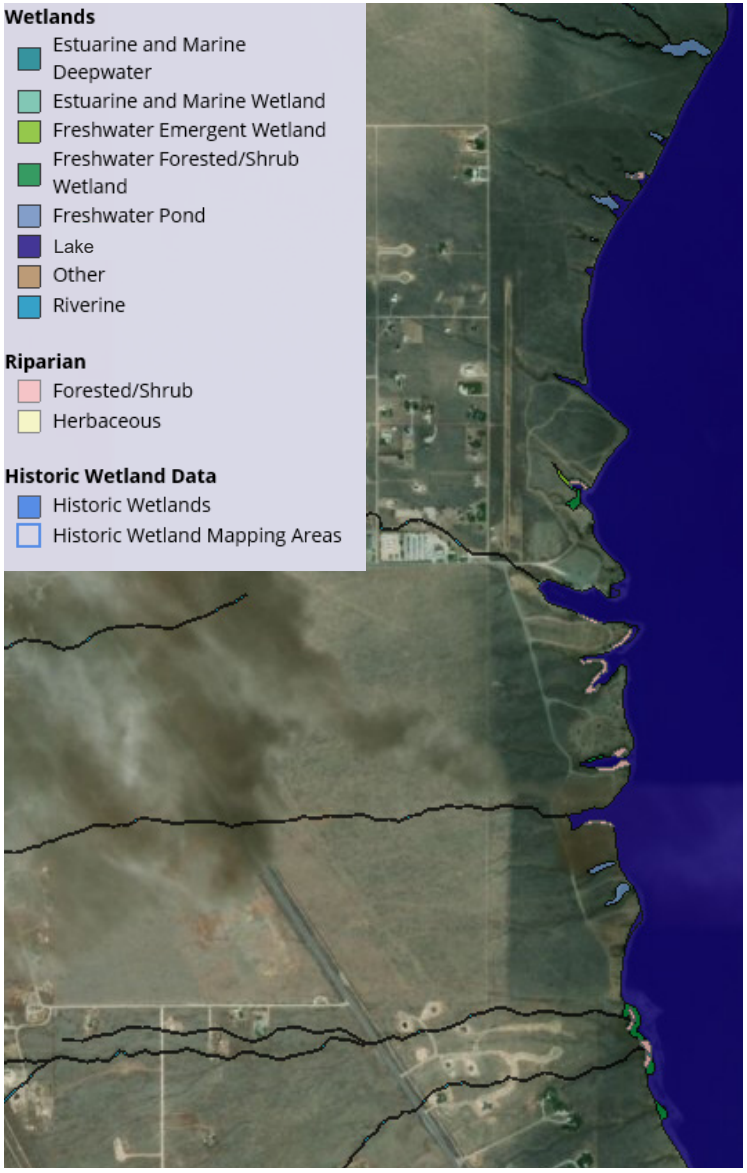
3.4.4. Wetlands

Wetlands are lands that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. The repeated or prolonged presence of water at or near the soil surface is the dominant factor in determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands can typically be identified by the existence of three environmental parameters: a dominance of hydrophytic vegetation, hydric soils, and prolonged periods of inundation or saturation resulting in sufficient hydrology to support wetland development. Examples of types of wetlands include marshes, bogs, the shallow portions and shorelines of lakes, ponds, and reservoirs, seasonal wet meadows, and the floodplain and shoreline of streams.

The US Fish and Wildlife Service (USFWS) is the principal federal agency that provides information to the public on the extent and status of the nation's wetlands. The USFWS has compiled mapping to show wetlands and deepwater habitats in the US including many parts of Montana and has made this mapping available through access to the National Wetland Inventory (NWI). NWI wetlands are identified in general accordance with USFWS's publication *Classification of Wetlands and Deepwater Habitats of the United States*. NWI maps do not define wetlands for regulatory purposes since the wetlands are identified through aerial photo interpretation. The NWI definition of wetlands requires one or more of the three attributes of wetlands (wetland hydrology, vegetation, or soils) be present to be a wetland.

NWI mapping for the study area is presented in **Figure 7**. The NWI mapping shows a variety of riparian and wetland habitats occur at the SRA including lake habitat, riverine habitat, forested/shrub riparian habitat, freshwater emergent wetland habitat, freshwater pond habitat, and freshwater forested/shrub wetland habitat.

Field-based wetland delineations would be required during project development if improvements in the recreation area could potentially affect wetlands.



Source: USFWS, NWI, accessed March 2020.

Figure 7: NWI Wetland Mapping for Silos Recreation Area

3.4.5. Floodplains

Executive Order (EO) 11988, *Floodplain Management*, requires efforts be taken to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains. The natural and beneficial values of floodplains include providing habitat for fish, wildlife, plants, open space, natural flood moderation, water quality maintenance, and groundwater recharge. EO 11988 requires projects undertaken or funded by federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

Compliance with EO 11988 requires an evaluation to determine the effects of any encroachments on the "base" floodplain. The base floodplain is the area covered by water from the 100-year flood and is a regulatory standard used by federal agencies and states to administer floodplain management programs. The 100-year flood represents a flood event that has a 1 percent chance of being equaled or exceeded in any given year.

Floodplains in the vicinity of the SRA are shown on Flood Insurance Rate Map (FIRM) Panel 30007C0350C (Effective Date August 18, 2014) developed by the Federal Emergency Management Agency (FEMA) (**Appendix 4**). Canyon Ferry Lake is considered a Special Flood Hazard Area and FEMA has designated the lake as Zone A (no base flood elevations determined) according to the FIRM. Zone A areas extend into the various bays within the SRA.

Broadwater County adopted Floodplain Regulations in 2019. Coordination with the county floodplain administrator would be necessary if any improvements at the SRA encroach on the regulated flood hazard area.

3.4.6. Air Quality

The *Clean Air Act* of 1970, as amended, is the basis for air pollution control programs. In accordance with the Act, the Environmental Protection Agency (EPA) established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: ozone, carbon monoxide, particulate matter (PM-2.5 and PM-10), lead, sulfur dioxide, or nitrogen dioxide. The NAAQS are health-based standards to protect human health and public welfare and set allowable concentrations and exposure limits for each criteria pollutant.

Montana has also established air quality standards for criteria pollutants, as well as for settleable particulates and visibility. The Montana Ambient Air Quality Standards (MAAQS) – found in the Administrative Rules of Montana 17.8.210-17.8.230 – establish statewide targets for acceptable levels of ambient air pollutants.

The EPA and MDEQ are charged with regulating air quality and may designate areas as attainment or nonattainment based on their history of meeting the NAAQS or MAAQS for pollutants of concern. Areas where air pollution levels do not exceed the air pollution thresholds established in the NAAQS are designated as "attainment" areas. "Nonattainment areas" are localities where air pollution levels persistently exceed the NAAQS or MAAQS, or that contribute to ambient air quality in a nearby area that fails to meet standards.

Broadwater County is currently considered an attainment area for all pollutants. Minor and temporary sources of air pollution in the area may include dust from vehicular traffic or plowed fields and particulates associated with home heating or seasonal wildfires.

3.4.7. Climate

Based on information provided by the Western Regional Climate Center[12], the climate of the SRA is described as a Modified Continental type influenced by Pacific Ocean air masses, drainage of cool air from the surrounding mountains, and protection by mountains in all directions. These modifiers make temperature changes less dramatic than those of a true continental climate. According to the Western Regional Climate Center, the temperature in the area varies greatly from summer (average 64 degrees Fahrenheit [°F]) to winter (average 25° F). The extreme temperatures are 105° F to -39° F. Average annual precipitation in the Townsend area is about 11 inches, with the extremes ranging from a low of about 7 inches to a high of nearly 17 inches. Most of the precipitation comes from March through August in the form of rain. The area typically sees about 23 inches of snow each year. Prevailing winds are typically from the west.

3.5. BIOLOGICAL ENVIRONMENT

3.5.1. Vegetation

The SRA consists mainly of grasslands with scattered groupings of trees and shrubs. The foothill and valley grasslands at the recreation area are typified by cool-season perennial bunch grasses and forbs with sparse shrub cover. Dominant species include fescues, bluebunch wheatgrass, and Western wheatgrass. Prickly pear cactus is a common ground cover in many areas of the SRA, which can pose a safety issue. Cottonwoods, quaking aspen, Russian olive, willows, and cattails and rushes are species seen within the recreation area and along the adjacent shoreline. Russian olive is listed as a Priority 3 Regulated Plant, with the potential for significant negative impacts and a recommendation to minimize spread, although it is not a Montana Listed Noxious Weed.

Noxious weeds that could potentially occur in the vicinity of the SRA include Russian knapweed, whitetop, spotted knapweed, Canada thistle, field bindweed, leafy spurge, Common Hound's tongue, perennial pepperweed, and dalmation toadflax. A complete listing of invasive and pest species is included in the *Environmental Summary Report* for the study area compiled by the Montana Natural Heritage Program (MTNHP) found in **Appendix 5**.

3.5.2. Fish and Wildlife

Fish

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. Nonnative species include rainbow trout, brown trout, brook trout, northern pike, smallmouth bass, largemouth bass, yellow perch, walleye, and common carp. Hybrids of rainbow trout and westslope cutthroat trout are also found in the drainage.

Canyon Ferry has consistently been one of the most heavily fished waters in Montana. A variety of important fish species are present within the reservoir system. Rainbow trout, kokanee salmon, yellow perch, brown trout, burbot (ling), and walleye are among the species of greatest interest to the public. The SRA is one of many developed sites along the reservoir providing fishing access.

Wildlife

The Canyon Ferry Reservoir and the surrounding lands provide a wide variety of habitats for an array of species. Commonly seen mammals in the vicinity of the SRA include white-tailed deer, mule deer, antelope, several bat species, and occasionally elk or moose. Wolves and black bears occasionally visit the SRA. Non-game species include smaller animals such as a variety of migratory songbirds, porcupines, raccoons, fox, and jack rabbits. The general area also provides habitat for game birds such as grouse, ducks, geese, and pheasants. Gopher snakes, garter snakes, and Northern leopard frogs are reptile and amphibian species occurring in the vicinity of the recreation area.

Canyon Ferry Wildlife Management Area

FWP manages more than 5,000 acres at the south end of Canyon Ferry as a Wildlife Management Area (WMA). The reservoir, dikes/ponds, islands, river bottom, and upland communities associated with the WMA provide habitat for a wide variety of birds and mammals. The WMA is managed to provide and improve habitat for ducks, geese, and non-game species and to provide wildlife viewing and hunting opportunities for white-tailed deer, pheasants, ducks and Canada geese. Commonly seen mammals include white-tailed deer, beaver, raccoon, mink, coyote, and red fox. River otters, black bear, and moose are seen infrequently in the WMA. The northern boundary of the WMA is located about one mile south of the SRA.

3.5.3. Threatened and Endangered Species

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA), as amended, requires federal agencies to review actions they authorize, fund, or carry out, and to ensure such actions do not jeopardize the continued existence of federally listed species, or result in the destruction or adverse modification of designated critical habitat.

The USFWS Ecological Services Montana Field Office online summary of listed species by county (as of December 12, 2019)[13] shows three threatened species (grizzly bear, Canada lynx, and Ute ladies' tresses), one proposed threatened species (wolverine), and one candidate species (whitebark pine) as occurring in Broadwater County. No critical habitat for any USFWS-listed species has been designated within the county. **Table 4** shows the ESA listed species for Broadwater County and summarizes their typical habitats.

Table 4: Threatened and Endangered Species – Broadwater County

Species	Federal Status	Typical Habitat
Canada Lynx (*Lynx canadensis*)	**Listed as Threatened**	The Canada lynx is an elusive forest-dwelling cat of northern latitudes. The Canada lynx are closely associated with moist, cool, boreal spruce-fir forests, and landscapes with high densities of snowshoe hares. Suitable habitat includes subalpine forests at elevations ranging between 4,000 and 7,000 feet above sea level. Lynx also need persistent deep, powdery snow, which limits competition from other predators.
Grizzly Bear (*Ursus arctos*)	**Listed as Threatened**	In Montana, grizzly bears primarily use meadows, seeps, riparian zones, mixed shrub fields, closed timber, open timber, sidehill parks, snow chutes, and alpine slabrock habitats. Habitat use is highly variable between areas, seasons, local populations, and individuals. As grizzly bear numbers continue to increase in the western half of Montana from the Greater Yellowstone Ecosystem in the southwest to the Northern Continental Divide population, their range is expanding. For this reason, it is possible for grizzlies to be found anywhere in the western half of Montana.
Ute Ladies' Tresses *(Spirantes diluvalis)*	**Listed as Threatened**	Ute ladies' tresses is a perennial, terrestrial orchid that occurs in alkaline wetlands, swales, and old meander channels often on the edge of the wetland or in areas that are dry by midsummer. Habitat is limited to areas within major river drainages in southwest and south-central Montana. 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.
Wolverine *(Gulo gulo)*	**Proposed for Listing as Threatened**	In North America, wolverines occur within a wide variety of habitats, primarily high elevation boreal forests, tundra, and western mountains throughout Alaska and Canada; however, the southern portion of the range extends into the contiguous United States, including Montana. South of the Canadian border, wolverines are restricted to areas in high mountains, near the tree-line, where conditions are cold year-round and snow cover persists well into the month of May. When inactive, wolverines occupy dens in caves, rock crevices, under fallen trees, in thickets, or similar sites.
Whitebark Pine *(Pinus albicaulis)*	**Candidate for Listing**	Whitebark pine is a non-commercial conifer occurring primarily on federally owned or managed lands in the United States. Whitebark pine is typically found in cold, windy, high elevation or high latitude sites in western North America and as a result, many stands are geographically isolated.

Source: USFWS Ecological Services Montana Field Office, online summary of listed species by county as of December 12, 2019.

A USFWS Information for Planning and Consultation (IPaC) report[14] covering lands in the study area indicates grizzly bears, Canada lynx, Ute ladies' tresses, and wolverines may potentially occur near the SRA. In general, the lands within the recreation area do not include habitat components typically used by grizzly bears, Canada lynx, or wolverines. Ute ladies' tresses is known to occur in the Missouri River drainage. The MTNHP Map Viewer was consulted to determine if observations of these species have been recorded in the general vicinity of the SRA. The MTNHP showed no observations of the listed wildlife or plant species in the area.

3.5.4. Montana Species of Concern

The MTNHP maintains a database of Species of Concern (SOC) in Montana[15]. SOC are native animals or plants that are at risk due to declining population trends, threats to their habitats, and restricted distribution, among other factors. Designation as a SOC is based on the Montana Status Rank and is not a statutory or regulatory classification. Rather, these designations provide information that helps resource managers make proactive decisions regarding species conservation and data collection priorities.

Federal status is designated by three entities: USFWS, BLM, and the US Forest Service (USFS). USFWS status reflects the ESA listings as well as those species protected under or included in the Migratory Bird Treaty Act (MBTA), Birds of Conservation Concern (BCC), or Bald and Golden Eagle Protection Act (BGEPA) listings. The BLM designates species listed in three ways: as threatened or endangered under the ESA or as sensitive on BLM lands. The USFS has six designations: endangered, threatened, proposed, or candidate on the ESA; sensitive species on USFS lands; or a Species of Conservation Concern (SCC). A SCC is a species that is not recognized by the ESA, but available data indicates substantial concern about the species' capability to persist over the long-term in the area.

Montana employs a standardized ranking system to denote state status. Species are assigned numeric ranks ranging from 1 (highest risk, greatest concern) to 5 (demonstrably secure), reflecting the relative degree of risk to the species' viability, based upon available information.

Table 5 presents species occurrence records for lands at and immediately adjacent to the SRA, their federal status, and state status and rank. A species occurrence is an area of land or water in which a species is, or was, present. Species observations are reviewed by MTNHP for evidence of sustained presence (for example, breeding evidence) and species occurrences are created from those that meet established criteria for species. Additionally, MTNHP occurrence data indicates a non-cave natural bat roost exists in the general vicinity of the recreation area.

Other species have been observed in the vicinity of the SRA (see the *Environmental Summary Report* for the study area, **Appendix 5**) but have not been documented as a species occurrence within the study area by the MTNHP. The appendix includes lists of other observed species and other potential species that may occur near the study area. Many of these species are considered SOC in Montana and/or have been assigned management categories by federal agencies.

Table 5: Montana Species of Concern – Species Occurrence in Study Area

Species		USFWS Status	BLM Status	USFS Status	State Status / Rank
Mammals	**Little Brown Myotis** *(Myotis lucifugus)*	None	None	None	SOC / 3
	Hoary Bat *(Lasiurus cinereus)*	None	None	None	SOC / 3
	Townsend's Big-eared Bat *(Corynorhinus townsendii)*	None	Sensitive	Sensitive	SOC / 3
Birds	**Clark's Nutcracker** *(Nucifraga columbiana)*	MBTA	None	Species of Concern on Forests	SOC / 3
	Long-billed Curlew *(Numenius americanus)*	MBTA/BCC	Sensitive	Sensitive	SOC / 3
	Great Blue Heron *(Ardea herodias)*	MBTA	None	None	SOC / 3
	McCown's Longspur *(Rhynchophanes mccownii)*	MBTA/BCC	Sensitive	None	SOC / 3
	Evening Grosbeak *(Coccothraustes vespertinus)*	MBTA	None	None	SOC / 3

Source: MTNHP SOC database, accessed March 2020.

3.6. SOCIAL AND CULTURAL ENVIRONMENT

3.6.1. Socioeconomics

Historical Population Growth

Between 1970 and 2018, Broadwater County experienced steady population growth seeing a 140 percent increase in population over that time span. This long-term growth translates to an annual percentage (straight line) population growth rate of 2.93% in Broadwater County over the 48-year period.

According to the United States Census Bureau, the county's population in 2010 was approximately 5,612 people and grew to an estimated 6,085 persons by 2018. This represents an annual percentage growth rate of 1.05% over the 2010-2018 period. For comparison, the City of Townsend and State of Montana saw annual percentage population growth rates of 1.46% and 0.92%, respectively, over the same 8-year period.

Demographic Characteristics

The National Environmental Policy Act (NEPA) directs federal agencies to assess potential social and economic impacts anticipated from proposed actions. Guidance recommends consideration of impacts to neighborhoods and community cohesion, social groups including minority populations, local and/or regional economies, as well as growth and development that may be induced by federal actions. Demographic and economic information presented in this section is intended to assist in identifying populations that might be affected by improvements in the study area. **Table 6** summarizes recent population and demographic data for the City of Townsend, The Silos Census Designated Place (CDP), Broadwater County, and Montana obtained from the 2014 to 2018 American Community Survey (ACS) 5-Year Estimates[16]. A CDP is a concentration of population defined by the Census for statistical purposes only. The Silos CDP generally includes the concentrations of rural residences northwest of Townsend along both sides of Highway 287/ Highway 12 surrounding the SRA.

In general, the population composition of Broadwater County is primarily white. Broadwater County and the City of Townsend exhibit some racial and ethnic diversity, but the ACS estimates suggest a homogeneous population resides in The Silos CDP. Persons identifying as Hispanic or Latino make up about 5.3% of the population in the City of Townsend and about 2.8% of the county's population. The percentages of the population identifying as Black or African American, American Indian or Alaska Native, or Asian are all well below those seen for Montana as a whole.

Broadwater County's population is notably older than seen for the State of Montana. The median ages of residents of the county, City of Townsend, and The Silos CDP are all well above that seen for the state. County geographies show about the same percentages of residents less than 18 years of age as the state, but Broadwater County has a higher percentage of residents 65 years and older than the state.

Table 6: Demographic and Economic Characteristics

		City of Townsend	The Silos CDP	Broadwater County	Montana
Estimated Population		2,069	682	5,834	1,041,732
Race/Ethnic Characteristics	**White (not Hispanic or Latino)**	98.3%	100.0%	96.1%	88.9%
	Hispanic or Latino	5.3%	0.0%	2.8%	3.7%
	Black or African American	0.1%	0.0%	0.1%	0.4%
	American Indian or Alaska Native	0.9%	0.0%	1.2%	6.5%
	Asian	0.0%	0.0%	0.0%	0.8%
	Native Hawaiian and Other Pacific Islander	0.0%	0.0%	0.0%	0.1%
	Some Other Race	0.4%	0.0%	0.3%	0.6%
	Two or more races	0.3%	0.0%	2.3%	2.8%
Age Characteristics	**Median Age**	47.5	45.5	46.9	39.8
	Under 18 Years of Age	22.2%	23.9%	19.7%	21.8%
	65 Years and Older	24.2%	23.4%	23.8%	16.8%
Economic Characteristics	**Median Household Income**	$50,341	$61,607	$56,469	$52,559
	Per Capita Income	$23,859	$29,612	$32,362	$29,765
	Persons below poverty level	11.4%	6.0%	6.9%	13.7%
	Unemployment rate	3.1%	3.4%	6.1%	4.2%

Source: 2014 to 2018 ACS 5-Year Estimates.

Median household income for residents in The Silos CDP and Broadwater County as a whole is higher than state median values. The median income for residents of the City of Townsend is below that seen for the other geographies reviewed in the ACS report. The median income for residents of The Silos CDP is about 22 percent more than households in Montana and 8 percent more than households in the county. The unemployment rate for residents of The Silos CDP and the City of Townsend was below that seen for Broadwater County as a whole and for the state. The percent of the population below poverty level for Broadwater County residents was below that seen for all State of Montana residents. However, the City of Townsend showed notably more residents living below the poverty line than in either The Silos CDP or the county as a whole.

Environmental Justice

Title VI of the United States Civil Rights Act of 1964 prohibits recipients of federal financial assistance (states, grantees, etc.) from discriminating based on race, color, or national origin in any program or activity. In 1994, EO 12898 was issued to direct federal agencies to incorporate achieving environmental justice into their mission. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

The data presented in the *ACS Profile Report: 2014-2018* indicates that minority and/or low-income populations are unlikely to be adversely or disproportionately affected by improvements made at the SRA. This conclusion is supported by the fact that most demographic and economic indicator values for the Broadwater County geographies examined are below comparable values for the State of Montana.

Economic Conditions

Broadwater County has a relatively diversified economy. The industry sectors with the largest number of jobs in the county have traditionally included agriculture, manufacturing (including forest products), construction, retail trade, and services. Tourism is an important component to the county's economy given the abundant recreational opportunities that exist at Canyon Ferry, on the Missouri River, and on surrounding mountains and public lands. Mining has also been a notable component of the county's economy as GrayMont Western US, Inc. has operated a lime mining and lime processing plant in the Elkhorn Mountains west of Townsend. Timber harvesting and processing have been important to the county's economy. However, RY Timber which operated a sawmill located just north of Townsend for many years announced the closure of its Townsend mill in early 2020.

3.6.2. Land Use

As illustrated in **Figure 2**, lands adjoining the west side of the SRA include a large parcel of grazing land owned by the BLM, the Silos Subdivision, and Canyon Ferry Airport. Privately owned lands to the south of the recreation area are subdivided for rural residential development within the Foster Estates Subdivision. Private lands north of the SRA are used for livestock grazing.

The Silos Subdivision contains more than 120 developed homesites and several commercial enterprises. Major commercial uses within the Silos Subdivision include the Canyon Ferry Lake KOA Campground, RV Park & Store, the Silos Boat Loft and Storage, Lakeside Boat & RV Storage, and Broadwater Storage. Additionally, the Silos Junction Bar & Grill is located near the intersection of Highway 12 and Silos Road.

BOR lands adjoining the SRA are classified as "Undeveloped/Limited Access Areas" according to the BOR's *Canyon Ferry Reservoir Shoreline Management Plan.*[17] Undeveloped areas provide dispersed recreational opportunities and provide valuable riparian and upland habitat for antelope, deer, waterfowl, non-game birds, and many other species. Some undeveloped areas are accessed by established roads. However, motorized access is prohibited in most undeveloped areas to reduce user conflicts and protect natural resources. Hunting and trapping are allowed in these areas as permitted or regulated by MFWP.

The Canyon Ferry Airstrip, owned by Broadwater County, is located adjacent to the northwest edge of SRA. The Aeronautics Division of MDT is permitted to conduct public airport activities at the air strip. The Runway Protection Zone (RPZ) at the south end of the landing strip extends a significant distance into the SRA. This is notable because development within the RPZ is typically limited for aviation safety reasons.

3.6.3. Recreation

The Canyon Ferry Reservoir complex provides access for many types of recreationists, including boaters, anglers, and campers. The BOR, Broadwater County, and private marinas provide access to Canyon Ferry Reservoir throughout its length. The BOR manages multiple recreational areas, including campgrounds, boat ramps, and day-use areas around the reservoir.

The SRA is open all year providing camping, boating, lake fishing, ice fishing, ice boating, swimming, picnicking, and other day use activities. Camping is limited to the developed campground areas between Seaman's Bay and Shields Bay. The areas north of Seaman's Bay, south of Shields Bay, and west of the main site road are currently

limited to day use activities. Additional information about recreational features and amenities is provided in the *Existing and Projected Conditions Report* for the SRA.

3.6.4. Visual Resources

The visual resources of an area include the features of its landforms, vegetation, water surfaces, and cultural modifications (physical changes caused by human activities) that give the landscape its visual character and aesthetic qualities. Landscape features, natural appearing or otherwise, form the overall impression of an area. Visual resources are typically assessed based on landscape character (what is seen), visual sensitivity (human preferences and values regarding what is seen), scenic integrity (degree of intactness and wholeness in landscape character), and landscape visibility (relative distance of seen areas) of a geographically defined view shed.

Views to the east from the SRA are dominated by the undulating shoreline and the expanse of Canyon Ferry Lake and more distant views of the foothills leading to the Big Belt Mountains. To the west, views from the recreation area are dominated by open gently sloping terrain leading to the Elkhorn Mountains and residential and limited commercial development in the Silos Subdivision. Within the SRA, the most apparent manmade features include camping, picnicking, and boating facilities, circulation roadways, and a waste gravel pile produced from prior bay excavation activities.

3.6.5. Heritage Resources

Section 106 of the National Historic Preservation Act (36 CFR 800) establishes requirements for considering the effects of proposed federal, federally assisted, or federally licensed undertakings on any district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places (NRHP). The implementing regulations of Section 106 require agencies to seek ways of avoiding, minimizing, or mitigating any adverse effects on historic and archaeological properties. Additionally, Section 106 requires consultations with the Indian Tribes that may have current or traditional interests in the project area.

Other federal and State of Montana directives impose additional requirements that must be addressed regarding effects of proposed undertakings on historic and archaeological resources and paleontological sites. Federal directives addressing historic and archaeological resource issues include the Archaeological Resources Protection Act and the Native American Graves Protection and Repatriation Act. State of Montana directives addressing historic and archaeological resource issues include the Montana Antiquities Act (which also addresses paleontological resources) and the Montana Human Skeletal Remains and Burial Site Protection Act. Federal agencies consult with the Montana State Historic Preservation Office (SHPO) or the appropriate Tribal Historic Preservation Office (THPO) to ensure compliance with Section 106 and other directives regarding cultural resources.

Historical and Archaeological Properties

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 archaeological 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. Additionally, during the 1980s, several surveys for prehistoric and paleontological resources sponsored by the NPS and BOR were conducted at the reservoir. Numerous historic, prehistoric, and paleontological sites were recorded around the reservoir, many of which are now inundated. Research suggests the Blackfeet, Gros Ventre, and Shoshone Indians used the Canyon Ferry area during the historic period.

To support the *Silos Recreation Area Master Plan*, a file search of Sections 26 and 35 of Township 8 North, Range 1 East was conducted by the Montana SHPO in March 2020 (**Appendix 6**). The SHPO file search identified several cultural resource investigations specific to the SRA that have been conducted since 2002. These studies include two studies in 2002 by William B. Vincent for work within the recreation area, a 2003 inventory of the Silos Airport by Adam M. Nickels, and a Class III cultural resource inventory of the SRA completed in January 2006 by William B. Vincent.

The SHPO file search identified nine previously recorded cultural properties in the study area. **Table 7** lists the site numbers, locations, site types, ownership, and NRHP eligibility determinations for the previously recorded cultural sites in the study area. Based on the location information obtained from the SHPO file search, sites 24BW0040 and 24BW0044 are likely inundated by the reservoir. Other previously recorded sites listed in the table may also be inundated at this time.

Table 7: Previously Recorded Historic Sites in the General Study Area

Site #	Township, Range, Section	Site Type	Ownership	NRHP Status
24BW0040	T8N R1E, NE ¼ Section 35	Lithic Material Concentration	No Data	Undetermined
24BW0044	T8N R1E, SE ¼ Section 26	Lithic Material Concentration	No Data	Undetermined
24BW0045	T8N R1E, NW ¼ Section 26	Lithic Material Concentration	No Data	Undetermined
24BW0046	T8N R1E, SW ¼ Section 35	Lithic Material Concentration	No Data	Undetermined
24BW0047	T8N R1E, NW ¼ Section 26	Tipi Ring	No Data	Unresolved
24BW0952	T8N R1E, Section 26	Historic Political/Government	BOR	Undetermined
24BW0965	T8N R1E, Section 35	Historic Building Foundation	BOR	Ineligible
24BW1163	T8N R1E, NW ¼ Section 26	Rock Cairn(s)	BOR	Undetermined
24BW1164	T8N R1E, NW ¼ Section 35	Historic Political/Government	BOR	Undetermined

Source: Montana SHPO, March 2020.

If improvements are implemented at the SRA in the future, identification of unrecorded historic and archaeological properties within the Area of Potential Effect (APE) may be accomplished through the BOR's ongoing programmatic cultural resource efforts to identify the significance of any newly discovered properties and determine the potential for impacts to any properties that may be on or eligible for the NRHP.

3.7. ENVIRONMENTAL SUMMARY

Table 8 summarizes known resources occurring within and near the site. If improvements identified in the *Master Plan* advance into project development, an analysis for compliance with the NEPA and other applicable federal and state regulations will be completed as part of the project development process to determine specific impacts and any required mitigation actions.

Table 8: Resource Summary

Resource		Description
Physical Environment	**Geology and Topography**	• Tertiary lakebed deposits ranging in thickness from 4,000 to 6,000 feet cover the SRA. • Ground surface elevations are generally 3,800 feet above sea level. • Gentle slopes are primarily less than 5 percent, with areas of 15 to 35 percent slopes along the reservoir shoreline and bays.
	Soils	• Soils mostly consist of Radersburg very cobbly loam, which is typically well drained, not overly susceptible to erosion by wind or water, with a slow infiltration rate. • A small area of Musselshell-Crago channery loams occur, which are more susceptible to erosion, moderately deep and well drained, with a slow infiltration rate. • Site soils are not classified as prime, unique, or important farmland.
	Water Resources	• The recreation area borders Canyon Ferry Reservoir, with ephemeral drainages flowing toward the reservoir bays. • 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. • Canyon Ferry Reservoir is considered to be an impaired water. TMDLs have not been set. • A large, confined aquifer lies beneath the Townsend Valley, supplying water for domestic and irrigation uses. • Four wells occur within the recreation area, with static water levels from 9 to 32 feet below the ground surface and yields of 20 to 30 gallons per minute.
	Wetlands	• Lake, riverine, forested/shrub riparian, freshwater emergent wetland, freshwater pond, and freshwater forested/shrub wetland habitats occur at the SRA.
	Floodplains	• Canyon Ferry Lake is considered a Special Flood Hazard Area. • The lake is designated as Zone A, indicating no base flood elevations determined. Zone A areas extend into the bays at the SRA.
	Air Quality	• Broadwater County is an attainment area for all air pollutants. • Minor and temporary sources of air pollution may include dust from vehicular traffic or plowed fields and particulates associated with home heating or seasonal wildfires.
	Climate	• Temperature in the area varies greatly from summer (average 64° F) to winter (average 25° F). • Average annual precipitation in the Townsend area is about 11 inches, mostly occurring from March through August in the form of rain. The area typically sees about 23 inches of snow each year. • Prevailing winds are typically from the west.

Table 8: Resource Summary (Continued)

Resource		Description
Biological Environment	**Vegetation**	• The SRA consists mainly of grasslands with scattered groupings of trees and shrubs and potential for noxious weeds.
	Fish and Wildlife	• Native species in the Missouri River drainage include westslope cutthroat trout, mountain whitefish, mountain sucker, longnose dace, longnose sucker, Rocky Mountain sculpin, stonecat, and white sucker. Nonnative species include rainbow trout, brown trout, brook trout, northern pike, smallmouth bass, largemouth bass, yellow perch, walleye, and common carp. • Canyon Ferry also supports rainbow trout, kokanee salmon, yellow perch, brown trout, burbot (ling), and walleye, with fishing access provided at the SRA. • Surrounding lands provide habitat for white-tailed deer, antelope, elk, moose, bats, migratory songbirds, porcupines, raccoons, fox, jack rabbits, and game birds such as grouse, ducks, geese, and pheasants. Gopher snakes, garter snakes, and Northern leopard frogs also occur in the vicinity.
	Threatened Endangered & MT SOC	• Federally listed, proposed, and candidate species occurring in Broadwater County include grizzly bear, Canada lynx, Ute ladies' tresses, wolverine, and whitebark pine. • Montana SOC in the area include three bat species and five bird species.
Social and Cultural Environment	**Socio-Economics**	• The population composition of Broadwater County is primarily white and is older than the State of Montana average. • Median household income for residents in The Silos CDP and Broadwater County as a whole is higher than state median values. • Minority and/or low-income populations are unlikely to be adversely or disproportionately affected by improvements made at the SRA. • Important industries in the county include agriculture, manufacturing (including forest products), construction, retail trade, services, tourism, and mining.
	Land Use	• Lands to the west of the SRA include a large parcel of grazing land owned by the BLM, the Silos Subdivision, and Canyon Ferry Airport. • Privately owned lands south of the recreation area are subdivided for rural residential development. Private lands north of the recreation area are used for livestock grazing.
	Recreation	• The SRA is open all year providing camping, boating, lake fishing, ice fishing, ice boating, swimming, picnicking, and other day use activities. • Camping is limited to the developed areas between Seaman's Bay and Shields Bay. • Areas north of Seaman's Bay, south of Shields Bay, and west of the main site road are currently limited to day use activities.
	Visual Resources	• Views to the east are dominated by the undulating shoreline and the expanse of Canyon Ferry Lake and more distant views of the foothills leading to the Big Belt Mountains. • To the west, views are dominated by open gently sloping terrain leading to the Elkhorn Mountains and residential and limited commercial development in the Silos Subdivision.
	Heritage Resources	• Nine previously recorded cultural properties occur in the area, including lithic material, a tipi ring, historic buildings and government features, and a rock cairn.

CHAPTER 4:
PURPOSE, NEEDS, OBJECTIVES, AND OTHER CONSIDERATIONS

The purpose, needs, and objectives for the *Master Plan* were developed based on a review of the *Canyon Ferry Reservoir Resource Management Plan/Environmental Assessment* and *Silos Recreation Area Framework Plan*; input from resource agencies, stakeholders, and the public; and conditions described in the *Environmental Scan* and *Existing and Projected Conditions Report*. As projects are advanced from the *Master Plan*, these elements may be incorporated in purpose and need statements for future NEPA documentation.

*Statements of purpose explain **what** is intended to be accomplished.*

*Needs explain **why** action is necessary.*

*Objectives provide detail on **how** to address the needs.*

4.1. PURPOSE

The purpose of the *Master Plan* is to provide a long-term vision and blueprint to guide conservation, protection, enhancement, development, and use of natural and built resources at the SRA.

In support of this aim, the *Master Plan* will identify, evaluate, and recommend development alternatives. The purpose of these alternatives is to encourage visitor use and enhance visitor experience at the SRA by offering improved and expanded recreational services, opportunities, and amenities.

4.2. NEEDS AND OBJECTIVES

The following needs and objectives will guide the alternatives development process.

Need 1: Improve visitor health and safety.

Objectives

- **1.1**: Rehabilitate existing facilities and/or construct new facilities to meet current design standards.
- **1.2**: Provide adequate water, waste, and sanitation systems and facilities.
- **1.3**: Provide designated facilities and areas to ensure compatibility and minimize use conflicts.

Need 2: Enhance visitor access.

Objectives

- **2.1**: Provide accessible paths and facilities for individuals with disabilities.
- **2.2**: Improve pedestrian and vehicular circulation, connectivity, and wayfinding.
- **2.3**: Enhance and expand boater access at site bays.

Need 3: Accommodate visitor demand.

Objectives

- **3.1**: Increase designated vehicular parking.
- **3.2**: Augment boat launch and storage capacity.
- **3.3**: Provide adequate overnight camping and day-use facilities.

Need 4: Improve visitor comfort.

Objectives

- **4.1**: Modernize site facilities and amenities.
- **4.2**: Provide shade, dust abatement, and privacy for site users.
- **4.3**: Provide utility connections to enhance user convenience.

Other considerations are influencing factors that affect the way improvements are prioritized, funded, designed, constructed, and maintained.

These factors are used as screening criteria to evaluate alternatives.

4.3. OTHER CONSIDERATIONS

The following considerations may affect development actions at the SRA. Alternatives identified in this plan attempt to address the purpose, needs, and objectives to the extent feasible within the context of considerations listed below, which will guide the alternatives evaluation process. Other considerations are not listed in order of importance.

- Environmental resource conservation and protection
- Local and regional planning
- Temporary construction impacts
- Funding availability
- Construction feasibility and physical constraints
- Economic development and local economy
- Adjacent uses and quality of life
- Maintenance cost, responsibility, and management sustainability
- Regulatory and permitting requirements

SILOS
Recreation Area
Master Plan

CHAPTER 5:
ALTERNATIVES AND RECOMMENDATIONS

5.1. ALTERNATIVES

The *Master Plan* considered a range of alternatives relating to construction phasing, development adjacent to the Canyon Ferry Airport, and entrance configurations. The following sections provide relevant background information, a brief description of alternatives considered, and a discussion of the selection process and outcomes.

5.1.1. Phasing Alternatives

Multiple phasing alternatives were considered to identify the most advantageous sequence of operations for improvements at the site.

Phasing Alternatives Description

- **Phasing Alternative 0: No Build**
  This alternative would involve no new construction. Existing facilities would be maintained, and the terms of management agreements would be updated to reflect new site policies.
- **Phasing Alternative 1: Phasing By Geography**
  This alternative would involve full buildout of improvements within phasing areas. For example, all improvements within an area defined as Phase I would be completed first, following by all improvements within areas defined under subsequent phases.
- **Phasing Alternative 2: Phasing By Improvement Type**
  This alternative would involve full buildout of a single improvement type sitewide. For example, buildout of all excavation/ bay improvements could be completed first, followed by buildout of all RV camping areas sitewide and subsequent improvement types according to improvement priority.
- **Phasing Alternative 3: Hybrid Phasing**
  This alternative would involve a combination of primary geographic improvements and sitewide improvements sequenced according to priority. Secondary improvements could follow in a final phase.

Phasing Alternative Selection

A two-part screening process was used to evaluate phasing alternatives. First, the alternatives were assessed using the defined purpose and needs for development alternatives at the site. To proceed, an alternative must meet the purpose and needs.

Second, the alternatives were evaluated according to other considerations to identify a preferred alternative. The screening process is illustrated in **Figure 8**.

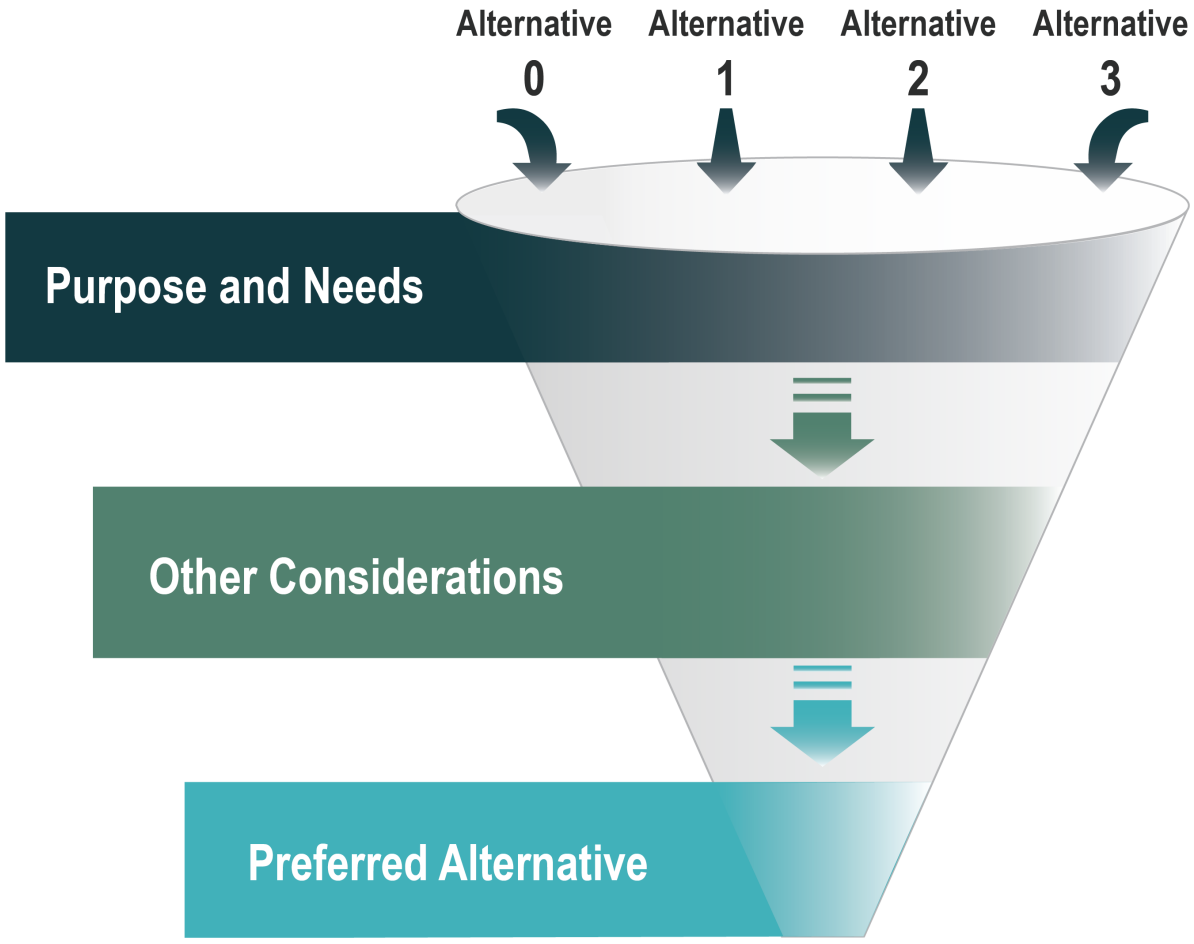


Figure 8: Phasing Alternatives Screening Process

As presented in **Table 9**, all Build Alternatives meet the defined purpose and needs. By constructing new facilities and amenities at the site, they would each meet the intent of the *Master Plan* by addressing visitor use and experience through improvements to health, safety, access, demand, and comfort. The No Build Alternative would not the meet the intent for the site because it would not introduce any new or enhanced site features or amenities. Therefore, Alternative 0 was not forwarded for additional consideration.

Table 9: Phasing Alternatives Screening – Purpose and Needs

Purpose & Needs	No Build	Build			Discussion
	Alt 0	Alt 1	Alt 2	Alt 3	
Purpose of Development of Alternatives: *Encourage Visitor Use and Enhance Visitor Experience*	✗	✓	✓	✓	*All Build Alternatives meet the defined purpose and needs.*
Need 1: *Improve Visitor Health and Safety*	✗	✓	✓	✓	
Need 2: *Enhance Visitor Access*	✗	✓	✓	✓	
Need 3: *Accommodate Visitor Demand*	✗	✓	✓	✓	
Need 4: *Improve Visitor Comfort*	✗	✓	✓	✓	
Screening Result	**Eliminate**	**Advance**			

Table 10 presents the results of the screening process based on other considerations. Comparing the three Build Alternatives, the screening process assigned a positive outcome (**+**) for alternatives exhibiting an advantage over the other alternatives, a negative outcome (**-**) for alternatives exhibiting a disadvantage over the other alternatives, and a neutral outcome (**0**) indicating no significant difference between the three alternatives. Based on a summation of scores, Broadwater County and the BOR selected Alternative 3 as the preferred phasing alternative.

Table 10: Phasing Alternatives Screening – Other Considerations

Other Considerations	Alt 1	Alt 2	Alt 3	Discussion
OC1: Environmental resource conservation and protection	+	-	+	The most substantial adverse impacts are anticipated to wetlands and surface water resources. Alternatives 1 and 3 would have a more localized impact initially by concentrating impacts within a designated area, whereas Alternative 2 would have more widespread impacts throughout the site, compounded due to repeated mobilization throughout the site from multiple sitewide improvement phases. Positive impacts from all alternatives would include: • Reduced dust, noise, and off-road usage resulting from paved roadways • Improved recreational access/connectivity • Improved waste facilities (wastewater and trash) • New landscaped areas/native plantings may support small species • No-wake zones For all alternatives, wetland delineation and cultural survey is recommended sitewide before any construction activities begin.
OC2: Local and regional planning	-	+	+	All alternatives can be designed and constructed in alignment with the BOR RMP/EA[18]. By tailoring the combination of improvements both sitewide and in concentrated geographic locations, Alternative 3 would best balance the Broadwater County *Growth Policy* priorities for rural quality of life with desire for increased economic development. Alternative 2 could provide sitewide trail connectivity before Alternatives 1 and 3.
OC3: Temporary construction impacts	+	-	+	Alternatives 1 and 3 would result in concentrated impacts within a designated area, whereas impacts from Alternative 2 would be compounded due to repeated mobilization throughout the site from multiple sitewide improvement phases.
OC4: Funding availability	-	+	+	Funding for the main access roadway (sitewide) may be available in the near term before funding for remaining improvements. The best use of funds may be to develop roadway improvements before bay and campground improvements. This could be accomplished with Alternatives 2 and 3.
OC5: Construction feasibility and physical constraints	+	-	+	Alternatives 1 and 3 would result in concentrated impacts within a designated area, whereas impacts from Alternative 2 would be compounded due to repeated mobilization throughout the site from multiple sitewide improvement phases.
OC6: Economic development and local economy	-	+	+	Alternatives 2 and 3 would delay new businesses that may compete with Townsend and Silos area businesses.
OC7: Adjacent uses and quality of life	0	0	0	Adjacent lands would all benefit from improved recreation opportunity, with potential for traffic/noise impacts from increased usage.
OC8: Maintenance cost, responsibility, management sustainability	+	-	+	It would be easiest to maintain localized improvements within concentrated use areas under Alternatives 1 and 3.
OC9: Regulatory and permitting requirements	+	-	+	The most substantial adverse impacts are anticipated to wetlands and surface water resources, however permitting is anticipated to be feasible for all phasing alternatives. It may be easier to permit and fund mitigation for smaller, localized impact areas associated with Alternatives 1 and 3.
Summary	**2**	**-2**	**8**	**Phasing Alternative 3 is Preferred.**

+ indicates advantage; 0 indicates no substantial difference; - indicates disadvantage

5.1.2. Airport Considerations

Runway Protection Zone Overview

In 1952, a report by the President's Airport Commission recommended the establishment of clear areas beyond runway ends. The purpose of these clear areas was to prevent obstructions potentially hazardous to aircraft and to control building construction as a protection from nuisance and hazard to people on the ground. The Federal Aviation Administration (FAA) implemented the Commission's recommendation by adopting the RPZ with dimensional standards.

The RPZ is a trapezoidal area centered on the runway centerline. Based on service levels and aircraft types, the Canyon Ferry Airport RPZ is 1,000 feet in length, 250 feet wide at the end closest to the runway, and 450 feet wide at the far end away from the runway. Typically, the RPZ is located off the end of the runway, however the Canyon Ferry Airport has defined a 597-foot displaced threshold, which shifts the RPZ to the north.

Where practical, the FAA advises that airport owners should own the property under the runway approach and departure areas to at least the limits of the RPZ. However, the Canyon Ferry Airport RPZ area is part of the SRA and is not included within airport property. Regardless of ownership, it is desirable to maintain the RPZ clear of all facilities supporting incompatible activities, such as buildings and structures, recreational land uses encouraging public assembly, and above-ground utilities.

Figure 9 illustrates the location of the Canyon Ferry Airport RPZ from both the end of the runway (in yellow) and from the end of the displaced threshold (in green). The *Master Plan* considers both areas as a safety precaution should airport configuration and operations change in the future.

The FAA does not provide funding for the Canyon Ferry Airport and therefore does not have jurisdiction or decision-making authority. The decision about what development should occur within the RPZ is ultimately up to Broadwater County (as the owner of the Canyon Ferry Airport and as the manager of the SRA) and to BOR (as the owner of the SRA land).

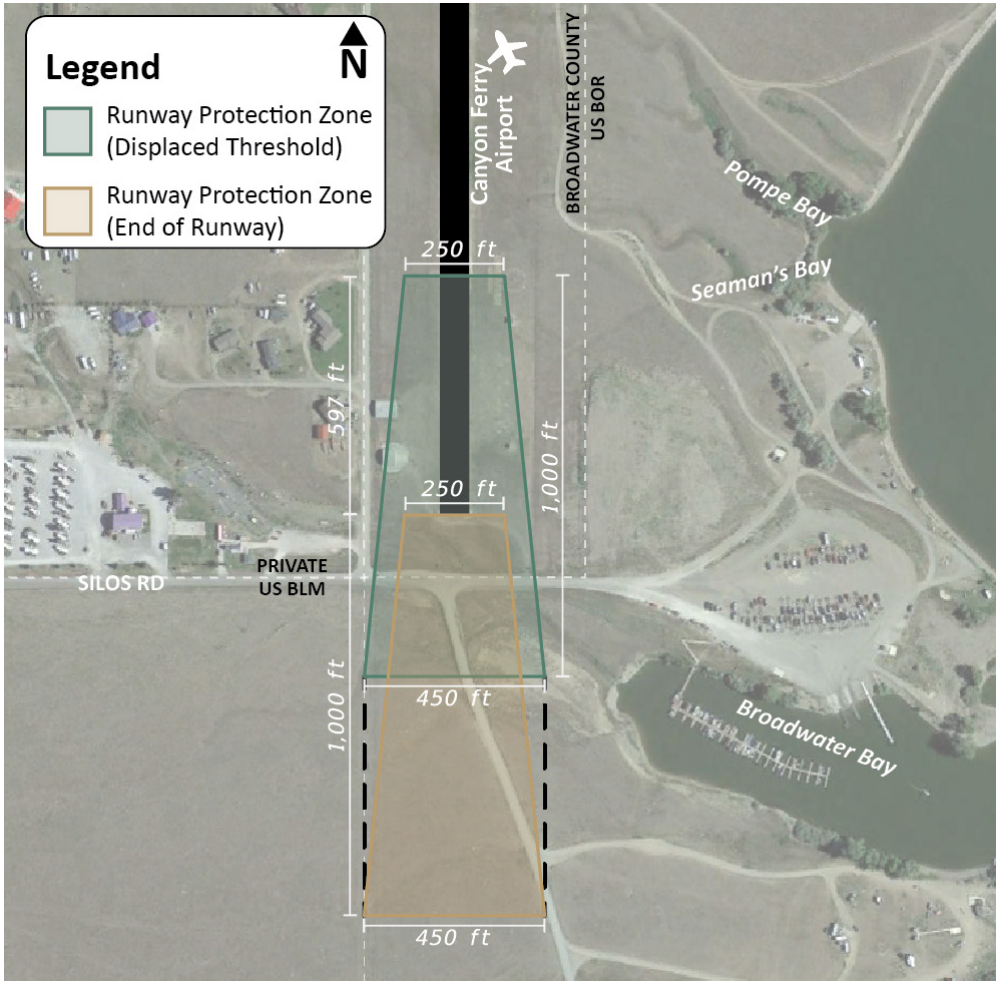


Figure 9: Canyon Ferry Airport RPZ

RPZ Alternatives Description

- **RPZ Alternative A: No Development**
  Under this alternative, no new development would occur. The existing access roadway would remain unpaved in its current location. The alternative would fully meet the FAA intent by avoiding the introduction of any new incompatible land uses.

- **RPZ Alternative B: Limited Development**
  This alternative would involve ground-level development to maximize land use potential of the RPZ while minimizing safety concerns. Development would include paving the existing access roadway in its current location, constructing new paved areas to serve as overflow parking for developed areas outside the RPZ, and installing an automated entrance kiosk. No vertical structures would be constructed, apart from signage and gates at the entry kiosk. Visitors would be discouraged from congregating for extended periods and would only be allowed to use the area for brief periods of time to enter the site and park their vehicles. The alternative would partially meet the FAA intent by minimizing the impact of new land uses and the risk to people and property.

- **RPZ Alternative C: Full Development**
  This alternative would involve full buildout of a range of desired improvements, potentially including a staffed entrance building, day-use structures such as an amphitheater and pavilions, and paved parking areas and access roadways to serve facilities within the RPZ. Due to the vertical structures and potential for visitors to congregate for extended periods, the alternative would violate the FAA intent by posing a more substantial risk to people and property.

RPZ Alternative Selection

Based on safety considerations, the relatively low frequency of airport use, and desired SRA development potential, Broadwater County and the BOR identified Alternative B (Limited Development) as the preferred alternative within the RPZ. This selection was made in coordination with the Broadwater County Airport Board in consideration of existing and future airport usage and needs.

Additional Airport Considerations

In addition to the RPZ, the FAA defines an area called the approach surface, which is a trapezoidal shape extending away from the runway along the centerline at a specified slope. It is meant to protect visibility for approaching and departing airplanes. Based on runway operations at Canyon Ferry Airport, the approach surface extends for a horizontal distance of 5,000 feet at a slope of 20 (horizontal) to 1 (vertical), as illustrated in **Figure 10**. To minimize risk and enhance safety in this area, Broadwater County and the BOR elected not to place any above-ground development or vertical structures within the approach corridor south of the airport runway. Future development in this area may include parking areas, day use areas, and trails. No proposed development will exceed approach surface height limitations.

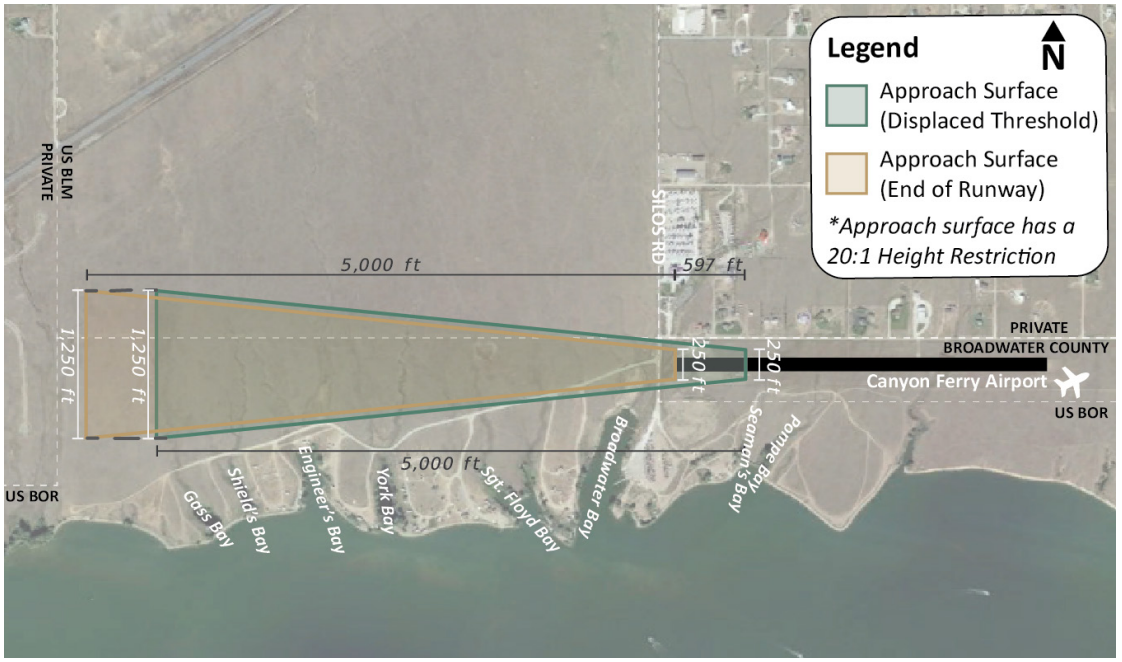


Figure 10: Canyon Ferry Airport Approach Surface

5.1.3. Entry Configuration

Access to the SRA is provided from Highway 287/Highway 12, which runs in a north-south direction. From its intersection with the highway, Silos Road runs in an east-west direction leading to the SRA entrance. The entry configuration is important because it is the first point of contact with recreation users and facilitates collection of a recreation user fee for boat launching and overnight camping. An improved configuration was identified as a high-priority need to ensure revenues are being collected and visitors have a positive, informative first experience as they enter the site.

For the *Master Plan*, multiple entrance alternatives were evaluated to determine the most efficient and accessible configuration. All alternatives would include nearby parking areas and bypass/turnaround lanes to accommodate visitors.

Entry Alternatives Description

- **Entry Alternative A: One Staffed Entrance Building Outside RPZ**
  Under this alternative, the main entrance road would curve to the north at the eastern edge of the RPZ, leading to a single entrance station staffed for fee collection and informational purposes. After passing through the entrance station, traffic would either be routed left for access to the northern portion of the site or to the right for access to the southern portion of the site, with access roadways splitting again between Broadwater Bay and areas further south. The configuration would require large vehicles to make a series of turns to reach their destination.
- **Entry Alternative B: One Staffed Entrance Building Outside RPZ with Roundabout**
  This alternative would involve an entrance station configuration similar to Entry Alternative A but would include a roundabout instead of sharp tee-intersections to route traffic to the north and south.
- **Entry Alternative C: Two Staffed Entrance Buildings Outside RPZ**
  This alternative would split traffic at the existing entry intersection and place separate staffed entrance stations to the north and south, avoiding construction of staffed buildings in the RPZ. By splitting traffic before the entrance stations, this configuration would provide improved access for entering and existing vehicles.
- **Entry Alternative D: Two Automated Entrance Gates/Fee Stations Inside RPZ**
  This alternative would maintain the entrance roadway in its current configuration inside the RPZ and replace the existing entry kiosk with two automated entrance gates, fee collection systems, and informational kiosks within the RPZ to serve northern and southern traffic. No buildings would be constructed, and no staffing would be provided.
- **Entry Alternative E: One Staffed Entrance Building Outside RPZ and One Automated Entrance Gate/Fee Station Inside RPZ**
  This alternative would be a combination of Entry Alternatives D and E, providing one staffed entrance station to the north and one automated station to the south inside the RPZ.
- **Entry Alternative F: One Staffed Entrance Building West of SRA**
  This alternative would site a single staffed station west of the existing entrance point adjacent to Silos Road on land owned by the BLM, which is currently subject to historic grazing arrangements. Use of the land would need to be negotiated with BLM. Depending on the land area available, other services such as search and rescue, fire protection, maintenance, and boater inspections could potentially be co-located at or near the entrance station.

Entry Alternative Selection

Based on challenges with traffic circulation, RPZ development limitations, staffing considerations, topography, and drainage in the vicinity of the entrance, Broadwater County and the BOR selected Entry Alternative E. This alternative would optimize vehicle access and provide future staffing capabilities outside the RPZ, automated fee collection within the RPZ, and improved informational signage compared to existing conditions. This configuration is shown in the schematic drawings for the *Master Plan*.

The possibility of locating the entrance station west of the SRA on BLM land was briefly explored under Alternative F. Following completion of the *Master Plan* and as improvement projects proceed, it may be possible for Broadwater County and the BOR to negotiate with the BLM to use land outside the BOR right-of-way to enable a larger entrance outside the RPZ to the west.

5.2. CONCEPTUAL SITE LAYOUT

Building on concepts developed for the *Framework Plan*, using a hybrid phasing approach as described under Phasing Alternative 3, and implementing the selected RPZ and entry alternatives, Broadwater County and BOR developed a conceptual site layout indicating the location and sequencing order for proposed improvements at the SRA. **Figure 11** illustrates the results of multiple discussions with the Steering Committee, stakeholders, and members of the public. The layout directs concentrated development, utilities, and services to be constructed in the central area surrounding Broadwater Bay, Sgt. Floyd Bay, and York Bay areas before more dispersed development is constructed in the areas to the north and south. Site element locations are illustrated generally and are not intended to indicate exact placement for construction purposes.

5.2.1. Phasing

Phase I

Under the first phase, the primary access roadway would be improved throughout the site. Within the RPZ, the roadway would be paved in its current location. Outside the RPZ, the roadway alignment would be shifted to optimize development potential at the site. Where the new access roadway deviates from the existing alignment, new gravel-surfaced spurs would be constructed to connect to existing camping and day-use access loops. New road closure gates would be installed to manage access to the site, and signage would direct visitors to site facilities and amenities. Additionally, new entrance stations would be constructed to enable user fee collection and to provide information for visitors.

Phase IIA

Phase IIA would involve excavation and improvements to the bays throughout the site, including new or rehabilitated boat ramps and boat slips. The Broadwater Bay pedestrian ramp would be relocated to ensure accessibility. A new major boat ramp is proposed on Engineer's Bay. This facility would be similar to the existing Broadwater Bay ramp facilities with multiple launching lanes, and boat prep lanes upon area entry and exit. Depending on final excavation limits and construction feasibility, additional development features such as anchored shoreline docks could be explored at Engineer's Bay during design. The existing boat ramps at Sgt. Floyd Bay would be removed, and a new boat ramp would be constructed in the center of the bay to enable protection against wave and wind action. The existing boat ramp at Seaman's Bay would be retained for use by non-motorized watercraft.

Phase IIB

Phase IIB would involve improvements to the central camping and day-use areas surrounding Broadwater Bay, Sgt. Floyd Bay, and York Bay (corresponding to Peninsulas 2, 3, 4, 5, 6, and 7 as referenced in **Figures 2** and **3**). Trails and footpaths would provide access to site facilities, amenities, and the waterfront. During initial project phases, the Phase IIB area would offer the only centralized comfort station with flush toilets, which would be served by an adjacent drainfield.

The implementation order of Phase IIA and Phase IIB may be reversed depending on funding availability and relative user demands.

Phase III

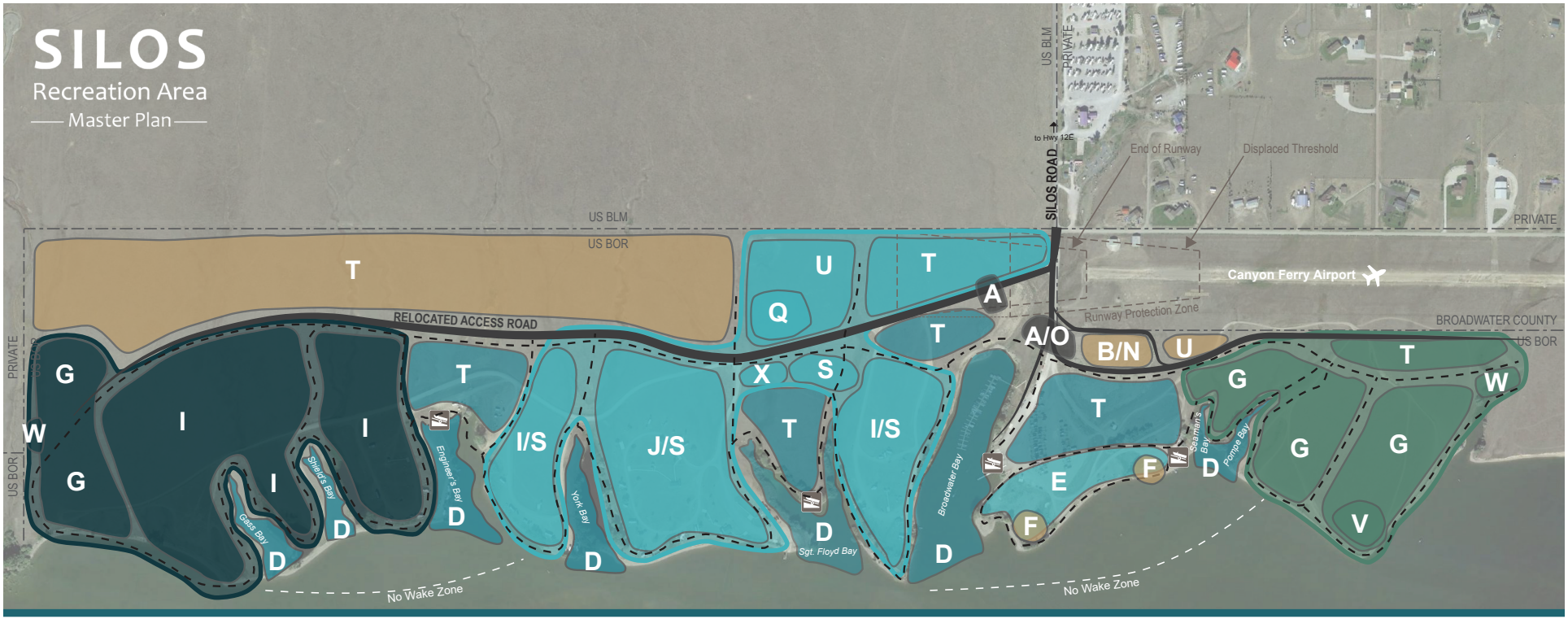
Phase III would provide improvements south of Engineer's Bay (corresponding to Peninsulas 8, 9, and 10). RV and tent camping facilities would be situated on the peninsulas and along the waterfront, with a day use park and trailhead at the far southern end of the site connecting to trails south of the site. Parking to serve the day use areas would be located west of the main access roadway. A maintenance shop would be located just south of the RPZ along the western boundary of the site.

Phase IV

Under Phase IV, the northern end of the SRA (corresponding to Peninsula 1) would be developed for day use activities, with ADA-accessible fishing access at the northern peninsula, a trailhead connecting to trails north of the site, and an adjacent parking area. The exclusive day-use designation is intended to minimize traffic and noise conflicts that could occur if overnight camping, events, and days uses were co-located. Additionally, this area would continue to facilitate use by the 1-189th Aviation Battalion as a landing location for helicopters during training events as authorized under a special use permit issued by the BOR.

Phase V

If desired, improvements throughout the site such as a visitor center, event amphitheater, camper services, overflow parking, and an interpretive program could be developed under a final phase, depending on user demand and coordination with the Site Manager or concessionaire. Improvements under this final phase would be optional, depending on desired build-out level.



HYBRID PHASING

PHASE I - PRIMARY ACCESS ROADWAY
- Construct new paved access roadway
- Leave existing roadway in place until areas are developed
- **A:** Entrance Station
- **O:** Maintenance

PHASE IIA - BAYS
- **D:** Excavation / Marina / Boat Ramps / Watercraft Launching
- **T:** Parking Areas

PHASE IIB - BROADWATER, SGT. FLOYD, & YORK BAY AREAS
- **E:** Event and Group Day Use
- **I:** RV / Tent Camping
- **J:** Group RV Camp
- **Q:** Sanitary Waste Dump Station
- **R:** Overall Site Development (Not Illustrated)
- **S:** Utility Infrastructure (Power and water)
- **T:** Parking Areas
- **U:** Drainfield
- **X:** Fish Cleaning

PHASE III - SOUTH OF ENGINEER'S BAY
- **G:** Day Use Park
- **I:** RV / Tent Camping
- **R:** Overall Site Development (Not Illustrated)
- **S:** Utility Infrastructure (Not Illustrated, Power Only)
- **T:** Parking Areas
- **W:** Trailhead

PHASE IV - NORTH OF SEAMAN'S BAY
- **G:** Day Use Park
- **R:** Overall Site Development (Not Illustrated)
- **S:** Utility Infrastructure (Not Illustrated, Power Only)
- **T:** Parking Areas
- **V:** ADA Fishing Access
- **W:** Trailhead

PHASE V - THROUGHOUT SITE
- **B:** Visitor Center
- **F:** Amphitheater/Event Space
- **N:** Camper Services
- **R:** Overall Site Development (Not Illustrated)
- **T:** Parking Areas
- **U:** Drainfield

Legend
- Property Boundary
- Trail
- Boat Ramp
- Phase I Improvements
- Phase IIA Improvements
- Phase IIB Improvements
- Phase III Improvements
- Phase IV Improvements
- Phase V Improvements

Figure 11: Proposed Site Layout

5.2.2. Incorporated Site Elements

Building on recommendations from the *Framework Plan*, the following site elements were incorporated in the *Master Plan* layout and schematic design.

Entrance Station (A) & Maintenance Shop (O)

For the *Master Plan*, Entrance Alternative E was selected, which would provide one staffed entrance station to the north and one automated station to the south inside the RPZ. Each location would provide bypass and turnaround lanes to accommodate individuals who had already paid appropriate fees or who were traveling to other parts of the recreation area. At the northern station, a staffed building would be placed outside the RPZ near the eastern/northern access roadway, co-located with a maintenance shop. This configuration would facilitate traffic circulation while providing a centralized location where visitors could pay fees, ask questions, and make reservations. At the southern station, an automated fee collection system would require appropriate payment, with site access controlled by road closure gates. Informational and wayfinding signage would inform visitors about site amenities, recreational opportunities, and usage policies. ***Phase I***.

Future discussions with the BLM may enable placing entrance and maintenance facilities on BLM land adjacent to Silos Road and west of the SRA.

Visitor Center (B), Camper Services (N), and Drainfield (U)

As envisioned in the Framework Plan, a visitor center would provide services such as an information desk with sitewide, regional, and statewide orientation; restrooms; interpretive and education exhibits; and a multi-use room for special exhibits, community, or special event use. Additionally, the center could provide facilities to support site administration and management, including administrative offices, meeting rooms, staff locker/shower/restrooms and other appropriate features needed to support management of the SRA. The siting of this facility would be near the staffed entry point to the north to serve as a gateway. Parking would be provided nearby to serve a full range of expected vehicle sizes. Space would be reserved for a below-grade drainfield adjacent to the buildings in the event flush toilets at the visitor and administration buildings were desired in the future. ***Phase V***.

Excavation/Marina/Boat Ramps/ Watercraft Launch (D) & Parking (T)

To improve boating and swimming safety, access, and comfort, the following improvements would be implemented. Refer to **Figure 12** below. ***Phase IIA***.

- Pompe Bay: Shallow excavation for summer season/high water access.
- Seaman's Bay: Shallow excavation for summer season/high water access. Retain existing boat ramp for use by non-motorized watercraft; construct jetty to enable protected swimming/ kayaking; provide ADA fishing access at Peninsula 1; expand and improve existing parking area.
- Broadwater Bay: Deep excavation for shoulder season/low water access. Expand and improve existing parking area; relocate and reconstruct ADA-accessible walkway. No changes to existing boat ramp or marina. Due to width restrictions at other bays, pontoon boat access

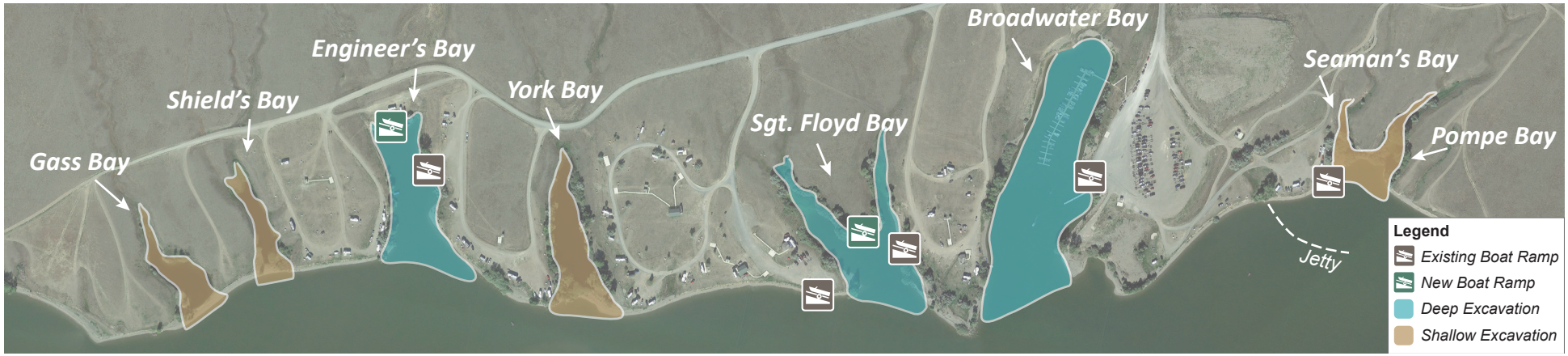


Figure 12: Bay Improvements

would primarily be provided at Broadwater Bay.

- Sgt. Floyd Bay: Deep excavation for shoulder season/low water access. Provide new parking area; construct new double-lane concrete boat ramp at the middle point, which would provide additional shelter from wave action, eliminate need for a constructed jetty, and provide general visitor access separate from the adjacent campgrounds; consider repurposing two existing boat ramps to the north and south for ADA fishing/waterfront access from campground areas.
- York Bay: Shallow excavation for summer season/high water access.
- Engineer's Bay: Deep excavation for shoulder season/low water access. Provide new parking area; construct new double-lane concrete boat ramp at the middle point; consider repurposing existing northern dirt-surfaced ramp for ADA fishing/waterfront access from campground areas. Due to narrow bay width, dock construction is not included in the *Master Plan* drawings or cost estimates, although anchored shoreline docks could be pursued during final design depending on final excavation limits and construction feasibility.
- Shields Bay/Gass Bay: Shallow excavation for summer season/high water access.

Event and Group Day Use (E), Amphitheater (F), Day Use Park (G), Trailhead (W), & ADA Fishing Access (V)

Day use would be directed to designated locations away from overnight camping areas. To improve access and amenities for day users, the following improvements would be implemented.

- Waterfront day use area between Broadwater Bay and Seaman's Bay (E): This area would be the most developed for day use and would serve as a public park with irrigated lawn and landscaped areas, a children's playground, picnic areas with shade structures and tables, comfort stations, and waterfront access. Adjacent parking would be provided for passenger vehicles separate from boat-launch parking. Refer to **Figure 13** on the following page. ***Phase IIB***.
- Day use area at Peninsula 9 to the south and Peninsula 1 to the north (G): These open space areas would be less developed in terms of landscaping and amenities compared to the waterfront area between Broadwater and Seaman's Bay but would still provide picnic areas with shade structures and tables, comfort stations, and waterfront access. They would also provide walking paths connecting to trailheads leading to the north and south from the site. ADA waterfront access would be provided at Peninsula 1. Peninsula 1 would also be configured to enable use by the 1-189th Aviation Battalion as a landing location for helicopters during training events. ***Phase III and IV***.
- Amphitheater/Event Center (F): Space for these facilities would be reserved within the waterfront day use area between Broadwater Bay and Seaman's Bay for implementation during a future optional phase. To the north near Seaman's Bay, the amphitheater would provide stadium/theater seating embedded into the bank and a platform for presentations. For purposes of the *Master Plan*, it was assumed that no overhead structure would be provided for the amphitheater. The event center would be placed on the southern point near Broadwater Bay and would include a two- or three-sided pavilion similar to the existing gazebos but larger in size. Both facilities would be placed facing the water. These facilities would be designed to accommodate special events such as festivals and tournaments. ***Phase V***.

RV/Tent Camping (I), Group RV Camp (J), & Utilities (S)

Based on feedback from the Steering Committee, stakeholders, and members of the public, overnight camping sites would be configured to accommodate side-by-side vehicle access (for a combination of vehicle, boat, trailer, and RV parking), with room for a fire pit and picnic table with adequate clearance for ADA access. A combination of pull-through and back-in spaces would be provided. Tent camping could be accommodated at these campsites, but no designated areas would be provided for tent camping only, separate from RV camping. Public feedback and input from the BOR also indicated a desire for multi-party campsites where up to three RVs could gather around a shared picnic table/ fire pit area. Refer to **Figure 14** for a schematic example of potential campsite configurations.

Walking trails would be provided from campsites to the water's edge enabling all users to access the waterfront. The easternmost waterfront areas bordering the reservoir would be left as open space for common use as opposed to individual campsite access. Individual electricity hookups would be provided at each campsite. For campsites in the central area surrounding Broadwater Bay, Sgt. Floyd Bay, and York Bay (Phase IIB), a shared well/ potable water source would be provided to serve each peninsula campground. Group-use pavilions with electric power and potable water sources would be provided for use by groups ranging from 5 to 15 campsites. For more primitive campsites to the south (Phase III), no potable water source would be provided. ***Phase IIB and III***.

NORTH 0 50 100 200

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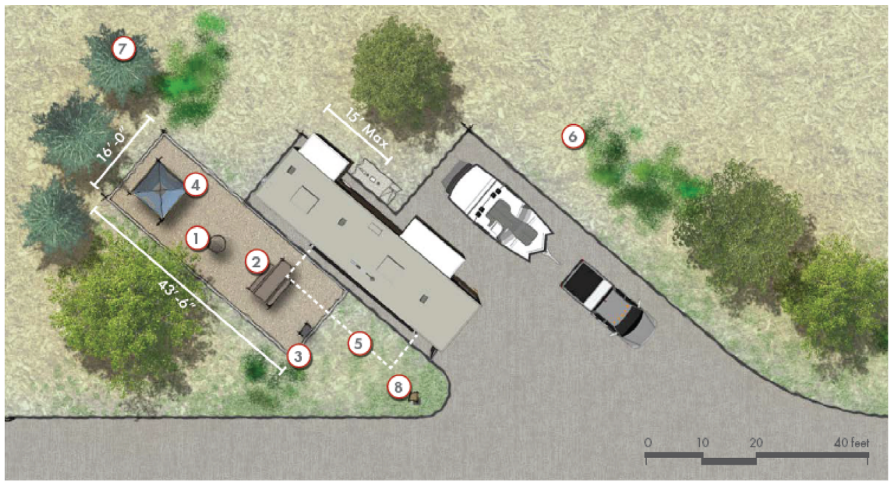
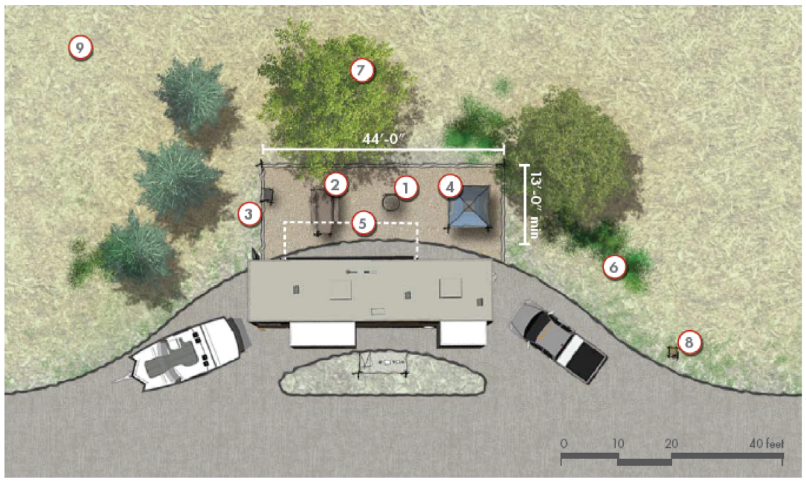
Figure 13: Day Use Area



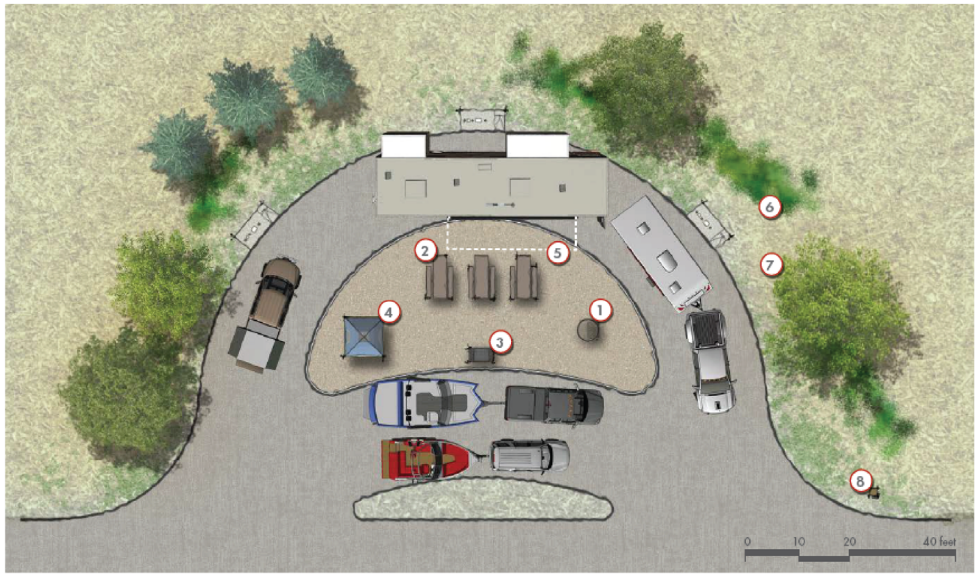
BACK-IN SITE - WITH TENT PAD

Facility/Tent Pad Size = 645 SF



PULL-THROUGH SITE - WITH TENT PAD

Facility/Tent Pad Size = 635 SF



GROUP SITE

Facility/Tent Pad Size = 645 SF

1. Fire Ring - 36" dia. (48" at Group Site)
2. ADA Picnic Table
3. Grill - 24" (36" at Group Site)
4. Tent - 92" x 92"
5. Awning
6. Native Shrub Massing
7. Shade Tree
8. Site Marker #
9. Native Seed
10. Evergreen Tree/Windbreak

Note: Trees and shrub massings only in loops where irrigation water is available.

Figure 14: Potential Campsite Configurations

Sanitary Waste Dump Station (Q), & Fish Cleaning Station (X), Comfort Station (S), & Drainfield (U)

An RV dump station would be located adjacent to the main drainfield, south of the entrance and outside the RPZ. For a fee, RV users could dump their waste before leaving the site. Although this service may result in business competition, a dump station is desired at the SRA in case the current KOA campground cannot accommodate additional demand from the SRA or if the KOA should close in the future. Waste from the dump station would be processed through the drainfield system to avoid the cost and maintenance responsibility of pumping.

A fish cleaning station would be located across the main access road to the east outside the approach/departure corridor for the Canyon Ferry Airport and near the parking area for the new Sgt. Floyd Bay boat launch. It would include a sheltered structure with power and water utilities. Although it would provide a benefit to visitors, a fish cleaning station would be costly to construct and would require significant ongoing seasonal maintenance.

A shared comfort station next to the fish cleaning station would provide the only flush toilets and showers constructed during initial phasing. These facilities would not be provided in other campground locations throughout the site due to maintenance concerns.

A below-grade drainfield would filter site wastewater from the adjacent sanitary waste dump station, fish cleaning station, and shared comfort station. ***Phase IIB***.

R: Overall Site Development

Site development elements would include spur road improvements, informational and wayfinding signage, and landscaping. Refer to **Appendix 7** for a list of suggested plantings and a discussion of establishment and maintenance considerations. Non-potable irrigation water would be pumped from the reservoir to support landscaping at the day use area between Broadwater Bay and Seaman's Bay (Peninsulas 2 and 3), to establish seed mix throughout the site, and to support trees and shrubs used for windbreaks and shade in campgrounds in Peninsulas 4, 5, 6, and 7. ***Phases IIB, III, IV, and V***.

T: Parking Areas

In addition to the new parking areas serving the boat launches, additional gravel parking areas would be placed near the southern entrance station and near the northern and southern day use areas. As needed or desired in the future, additional overflow parking could be developed west of the main access road adjacent to the BLM land. This improvement was selected to ensure compatible land use within the approach/departure corridor of the Canyon Ferry Airport. ***Phases IIB, III, IV, and V***.

5.2.3. Eliminated and Delayed Site Elements

The following site elements originally proposed in the *Framework Plan* were eliminated from the *Master Plan* layout based on feedback from Broadwater County and BOR officials, stakeholders, and members of the public. Some of these elements could be provided in the future at the discretion and expense of a concessionaire or Site Manager.

Visitor Services (C)

Services such as a restaurant/café, retail store, and rental shop would not be provided by Broadwater County or the BOR at the SRA. In the future, a concessionaire or Site Manager could choose to provide these services if approved by Broadwater County and the BOR.

Camper Cabins (H)

Based on public and Steering Committee feedback, this level of development is not desired at the SRA.

Group Tent (K)

Tent camping is less common at the SRA compared to RV camping. Rather than designate an area exclusively for tent camping, this activity can be accommodated at combined RV/tent camping areas.

Walk-in Tent (L)

As noted above, walk-in tent camping is not common at the SRA. Tent camping can be accommodated at combined RV/tent camping areas.

Fly-in Camp (M)

This amenity is provided within the Canyon Ferry Airport property, and duplicate facilities are not needed at the SRA.

Outfitter (N)

Based on public and Steering Committee feedback, this type of visitor service is not currently desired at the SRA.

Watercraft Inspection Station (P)

It was decided not to designate a specific location for this mobile activity. Site managers will coordinate with FWP to make arrangements for any future inspection activities. If the entrance station is ultimately placed on BLM land adjacent to Silos Road and west of the SRA, inspection services could potentially be provided in that location.

5.3. SCHEMATIC DESIGN AND COST ESTIMATES

Based on guidance provided in the BOR *Recreation Facility Design Guidelines*[19], input provided by the Steering Committee, and review of past work including conceptual plans developed by Montana State University students[20], schematic drawings were prepared to support development of future site improvements. These drawings are intended to show an example of the type, location, and density of site features generally illustrating how the site could be developed for future use and expansion. Site element dimensions, orientation, materials, and final configuration are subject to change, and site survey and engineering design would be required before construction of improvements could occur. The drawings do not represent construction documents.

Figure 16 presents a schematic plan view of how the site could appear after improvements are constructed. Additional concept drawings are provided in **Appendix 8**. These **drawings illustrate one possible configuration** of roadway, trail, campsite, marina/bay, parking, shelter, and service/amenity elements. Using these concept drawings as a starting point for the design process, elements may be added, removed, or reconfigured in the final design based on level of desired investment as well as engineering design and constructibility limitations or opportunities determined during future project phases. Drawings do not reflect a construction commitment or requirement on behalf of the BOR or Broadwater County.

Planning-level costs for site improvements were prepared based on estimated quantities derived from concept drawings to provide an order-of-magnitude estimate. Unit costs are provided in 2020 dollars and are based on published bids and unit pricing as well as local contractor input. An annual inflation cost accounting for the year of construction has not been added since construction timing will depend on funding identification.

Costs reflect planning-level assumptions about the types, sizes, and quantities of amenities and services. These assumptions are subject to change during final design, and final costs associated with design drawings will vary from these estimates. Costs for environmental compliance, permitting, mitigation, and other regulatory fees are not included.

Figure 15 presents a possible range of costs for improvements at the site, which vary based on the level of development ultimately selected for implementation. Additional information and assumptions are provided in **Appendix 8**. Refined cost estimates will need to be developed to accompany future design phases as final configurations and materials are determined.

Figure 15: Planning-Level Cost Estimates

Figure 16: Site Schematic

CHAPTER 6:

MANAGEMENT AND POLICY CONSIDERATIONS

Redevelopment of the SRA presents an opportunity to review and update contracts between BOR, Broadwater County, and the Site Manager outlining management requirements and site policies. The *Master Plan* recommends revisiting policies and procedures relating to the following management areas.

6.1. RECREATION SEASON

Currently, Broadwater County contracts with its Site Manager to staff and manage the site during the primary recreation season from May 15th to September 15th. As the site is redeveloped, bays are excavated to offer shoulder-season access, and new amenities are provided that attract early spring and late fall users, it may be appropriate to revisit this timeframe to extend the primary period of use and service provision. Additionally, a policy addressing allowable activities and use of the reservoir surface during the winter recreation season is recommended.

6.2. FEE COLLECTION

Currently, Broadwater County authorizes its Site Manager to collect fees for boat slip rentals, overnight camping, and group-use pavilions. BOR has had success at other campsites using a same-day online system to collect fees. With redevelopment of the site and provision of additional features and amenities, a review of the fee structure and fee collection procedures is recommended for individual and group uses.

Although users typically resist fee increases, the BOR and Broadwater County will need to consider the value of improvements and the degree to which site fees will be needed to offset capital investment and ongoing maintenance costs while still providing recreational access at an affordable cost to the public. Fees should be reasonable and comparable to similar facilities in the region.

6.3. FACILITY RESERVATIONS

Public comments have indicated a desire for a combination of reservation-only and first-come/first-served campsites, with availability information and specified usage durations provided in an easy-to-access platform online. Consideration should also be given to availability and use of pavilions. In some areas, it may be appropriate to coordinate pavilion reservations in tandem with an adjacent group of campsites, whereas pavilions in day use areas could be available either by reservation in advance or for general public use. BOR has had success at other campsites using a same-day online reservation system to reserve facilities. A review of reservation policies and procedures is recommended as new facilities are developed at the site.

6.4. SITE MAINTENANCE, UTILITIES, AND SANITATION

Current management contracts address items such as site access, consumptive water use, waste removal, administration, and inspection. Review of these policies should occur with any new development at the site. At a minimum, new policies will be required for gates used to block off access to unused areas of the site, potable and irrigation water use, establishment and maintenance practices for landscaped areas, waste disposal, and maintenance of power, water, and wastewater utilities.

6.5. SAFETY POLICIES

With enhanced facilities and development occurring over a larger portion of the site, visitor usage may increase, resulting in new or different types of safety concerns. Review of existing safety policies relating to fires, accidents, and other emergencies is recommended. Safety reporting procedures should also be updated to ensure timely and accurate information is shared with Broadwater County and the BOR.

6.6. RESERVOIR AND WATERFRONT ACCESS

Public and stakeholder comments gathered through the *Master Plan* process have indicated a need to provide policies and enforcement regarding boating, swimming, and waterfront access. Additionally, comments have suggested development of boat launch policies to address the types of vessels that may be accommodated at each boat ramp depending on the size and orientation of the launch points within each bay. Signage is recommended to indicate areas where swimming and wake action are prohibited. Additionally, the final design of boat ramps and access trails can be used to either discourage or encourage certain uses in designated areas.

6.7. RESOURCE CONSERVATION

As the site is redeveloped, it will be important to revisit policies and procedures related to soil and water conservation, wildlife habitat and fisheries enhancement, erosion control, weed control, and unauthorized off-road vehicle use resulting in harm to native vegetation and habitat. These policies should support commitments and best practices outlined in the *Canyon Ferry RMP/EA*, the *Canyon Ferry Reservoir Shoreline Management Plan*, and other applicable guiding documents.

CHAPTER 7:
CONCLUSIONS AND NEXT STEPS

After a review of available information on environmental resources and existing infrastructure, coupled with focused outreach and coordination with the Steering Committee, stakeholders, and members of the public, the *Master Plan* outlines recommended developments to address site needs and objectives. These recommendations will assist Broadwater County and the BOR in advancing their efforts to improve visitor health and safety, enhance visitor access, accommodate visitor demand, and improve visitor comfort at the site through optimal allocation of resources. The following sections describe next steps required for implementation.

7.1. FUNDING IDENTIFICATION

The ability to advance recommendations from the *Master Plan* and develop phased projects will depend on the availability of federal, local, and private funding sources. The BOR is the federal agency with ownership and ultimate management authority and will be responsible for advancing capital investment at the site. In addition to capital funds secured and administered through the BOR, improvements identified in this plan may be eligible for funding through the following programs and sources. Currently, no funding has been identified or secured to complete any of the recommended improvements included in this plan.

Federal Lands Access Program

The Federal Lands Access Program (FLAP)[21] was established in 23 U.S.C. 204 under section 1119 of the *Moving Ahead for Progress in the 21st Century Act* (MAP-21) (Pub. L. 112- 141) and continued under the *Fixing America's Surface Transportation Act* (FAST Act) (Pub. L. 114-94) to improve transportation facilities that provide access to, are adjacent to, or are located within federal lands. The FLAP supplements local resources with an emphasis on high-use recreation sites and economic generators.

Eligible project activities include transportation planning, research, engineering, preventive maintenance, rehabilitation, restoration, construction, and reconstruction of federal lands access transportation facilities located on or adjacent to, or that provide access to, federal lands. Eligibility also extends to adjacent vehicular parking areas and provisions for pedestrians and bicycles, construction and reconstruction of roadside rest areas including sanitary and water facilities, and other appropriate public road facilities.

Project selection criteria include:

- An assessment of the Programming Decisions Committee (PDC) cooperation with the Federal Land Management Agency (FLMA)
- Endorsement by the FLMA as a high priority, access to federal high-use recreation sites or federal economic generators
- Consistency with long-range planning by the owner, FLMA, and the region and state
- Improvements to safety and access to federal facilities
- Realistic completion based on proposed scope, schedule, and budget
- Ability to meet match requirements determined based on a sliding scale of public lands in the state

Funds are allocated from the Federal Highway Trust Fund amongst the states using a statutory formula. A PDC within each state requests project applications through a call for projects, makes programming decisions, and develops a multi-year program of projects in consultation with each applicable federal agency. The Montana PDC includes representatives from the Federal Highway Administration, MDT, and the Montana Association of Counties. It publishes selected projects in the Western Federal Lands *Transportation Improvement Plan*. As of the date the *Master Plan* was published, the Montana PDC had not established a date for the next request for proposals, although it will likely be after January 2021.[22]

Funding allocations are based on the authorized funding amounts cited in the FAST Act, with expiration at the close of the federal fiscal year on September 30, 2020. Future funding will be subject to continuing appropriations or funding reauthorizations issued by the United States Congress.

Great American Outdoors Act/Land and Water Conservation Fund

The *Great American Outdoors Act* was signed into law on August 4, 2020. Under the Act, earnings from offshore oil and natural gas leasing will permanently fund the *Land and Water Conservation Fund* (LWCF) to invest in conservation and recreation opportunities across the country.

Montana State Parks administers the state component of the LWCF program[23], which provides matching grants to state and local governments for the acquisition and development of public outdoor recreation areas and facilities. Sponsors eligible to submit a project application must own the project site or have effective land control in the form of a long-term lease from the federal government. Eligible project sponsors include incorporated cities, towns, counties, school districts, state agencies, and tribal governments.[24] All eligible project sponsors must commit resources to the perpetual stewardship of the fund-assisted public outdoor recreation area pursuant to Section 6(f)(3) of the LWCF Act. LWCF grants are provided through the states to local governmental jurisdictions on a matching reimbursement basis for up to 50 percent of the total project-related allowable costs. Under the program, the project sponsor must commit total project costs at the time of application and make full payment on all project expenses before being reimbursed for up to 50 percent of allowable costs.[25] Montana State Parks indicates examples of eligible projects include ball fields, open space acquisitions, public parks, outdoor swimming pools, playgrounds, picnic facilities, walking trails, and more.[26]

Recreational Trails Program

The Recreational Trails Program (RTP)[27] is administered by Montana State Parks to provide matching funds to develop and maintain recreational trails and trail-related facilities in Montana. Program funding comes from the Federal Highway Trust Fund based on the motor fuel excise tax collected from fuel used for off-highway recreation by snowmobiles, all-terrain vehicles, off-highway motorcycles, and off-highway light trucks. RTP applicants may include federal, tribal, state, county or city agencies, and private organizations.

Montana State Parks collaborates with the State Trails Advisory Committee to review the RTP applicants each year. Each application must include matching funds equaling or just exceeding 20 percent of the total RTP project cost. Eligible projects include:

- Construction and maintenance of trails including weed control
- Restoration of areas damaged by trail use.
- Development of trailside and trailhead facilities
- Features to assist individuals with disabilities.
- Trails information, ethics education, and interpretive information.
- Signs and other traffic control devices relating to trail use

Tourism Grant Program

The Montana Office of Tourism and Business Development administers the Tourism Grant Program by awarding matching funds to projects that strengthen Montana's economy through the development and enhancement of the state's tourism and recreation industry. Funds are awarded annually to projects that develop and enhance tourism and recreation products that have the potential to increase non-resident visitation. The program is funded by the 4 percent Lodging Facility Use Tax (commonly known as the "Bed Tax"), which is collected from guests of hotels, motels, bed and breakfasts, guest ranches, resorts, and campgrounds. Eligible applicants include city or county government, tribal government, non-profit organizations. Applicants must commit one-third of project costs, with the grant awards available for the remaining two-thirds of project costs.

Applications are evaluated annually based on impact to non-resident visitors, identification by the community in a plan as a key tourism development project, and support from tourism and community partners. Consideration is also given to projects in rural communities, under-served regions of Montana, and to tribal communities.[28]

Broadwater County Trust

The Broadwater County Trust Board manages the trust funds generated from the sale of BOR property in the 1990s. The surplus funds in the trust account above $2,500,409.75 may be used for developing recreational projects in Broadwater County. The surplus funds are accessed through a grant process, with screening managed by the Trust Board. Recommendations for grant payments are sent to the Broadwater County Commissioners for action. All contracts and disbursement of funds are completed by the Broadwater County Commission.[29]

Agency Partnerships

Partnerships with federal, state, and local agencies may be possible to support shared investment at the SRA. Steering Committee members intend to continue conversations with appropriate agency representatives about the possibility of constructing an entrance station on land owned by the BLM west of the SRA. Coordination with other entities may be beneficial to consider co-location of services such as search and rescue, fire protection, and maintenance. Partnerships with FWP may also be possible to provide services such as boater inspections and fish cleaning amenities.

Private Funding

Private investment at the SRA may be viable as a means to generate economic returns. Depending on future management arrangements, private development of a restaurant/café, retail store, rental shop, outfitter, or other facilities could be provided in the future at the discretion and expense of a concessionaire or Site Manager if approved by Broadwater County and the BOR. Additionally, Broadwater County could initiate a fundraising drive to solicit private and corporate donations to fund specific site improvements. Private donations could be recognized through naming of specific improvements or by other means.

7.2. PROJECT DEVELOPMENT CONSIDERATIONS

To continue with the development of improvement projects, the steps shown in **Figure 17** are needed.

Building on the *Master Plan* recommendations for the general type and location of site improvements, a full design process will be required to develop construction plans for the site. The design process should include a topographical survey and engineering design for all site elements including roadways, drainage structures, trails, buildings, campsites, utilities, ADA accommodations, boat ramps, and other site features. During design, it will be important to consider and finalize details such as the number, exact location, orientation, dimensions, and materials for each site element. Construction drawings should provide a detailed design sufficient to direct a contractor in constructing the site improvements.

The purpose and need for any future project should be consistent with the needs and objectives contained in this plan. Detailed analysis will be required during the design process to quantify specific resource impacts, and compliance with all applicable state and federal regulations will be required.

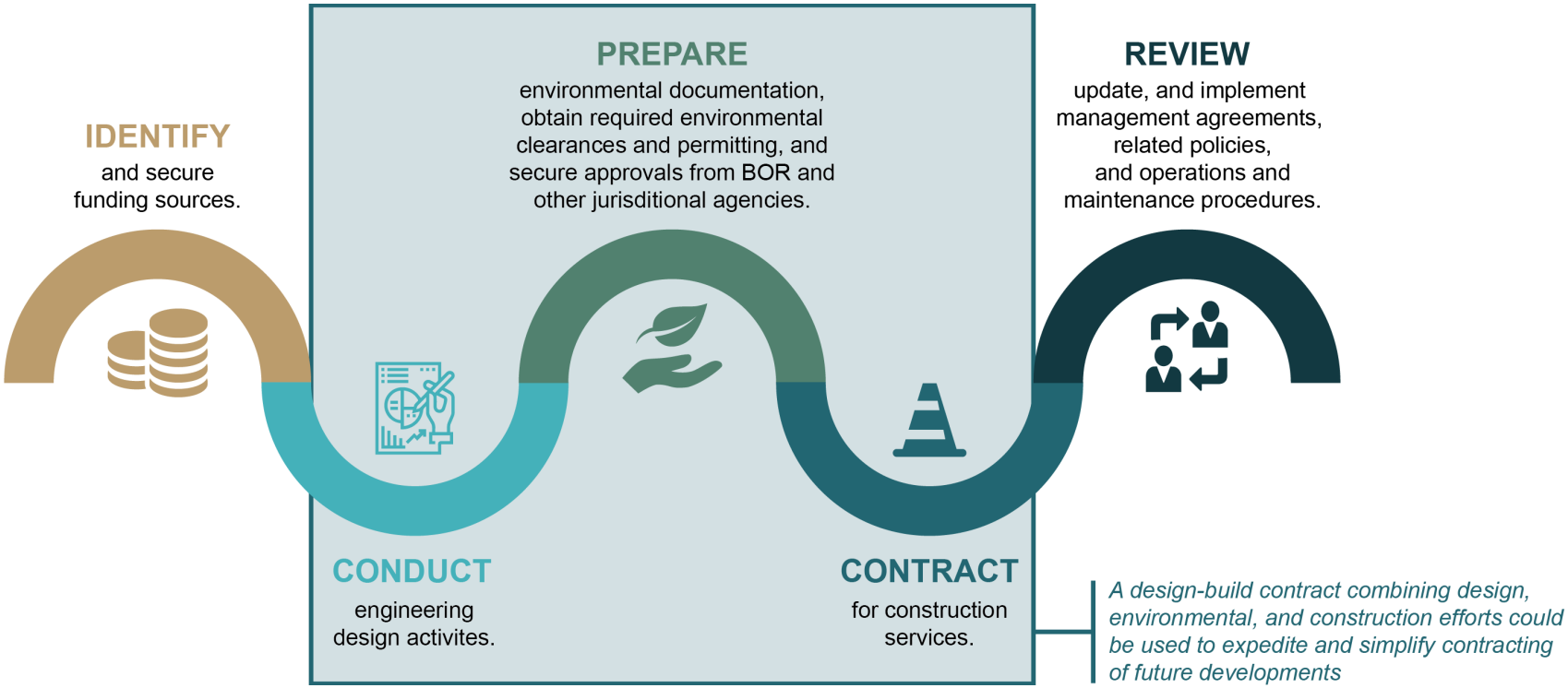


Figure 17: Development Process

REFERENCES

Multiple federal, state, and local reference documents and online data sources were reviewed for the Master Plan. References to data sources are listed below.

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