

RECLAMATION

Managing Water in the West

DRAFT ENVIRONMENTAL ASSESSMENT

CANYON FERRY WATER AND SEWER DISTRICT LAND CONVEYANCE

CANYON FERRY RESERVOIR



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

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Mission Statements

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

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

DRAFT ENVIRONMENTAL ASSESSMENT

CANYON FERRY WATER AND SEWER DISTRICT LAND CONVEYANCE

PROPOSED FEDERAL ACTION

The Bureau of Reclamation (Reclamation), Montana Area Office proposes to convey 83.5 acres of federal lands to the East and West Shore Canyon Ferry Sewer Districts (Districts) to allow the development of community septic systems in compliance with County and State standards.

The lands would be conveyed unencumbered and would be managed at the sole discretion of the Districts. Lands proposed for conveyance are shown in Figures 1-9, located at the end of this document.

PURPOSE AND NEED FOR ACTION

The purpose of this Federal action is to convey federally owned land for the purpose of developing community septic systems to support the residents on East Shore and West Shore Drives, on the northern end of Canyon Ferry Reservoir. These lands would allow for the future development of community septic systems. The Districts would have full control over the lands and the community septic systems.

166 cabin sites occur on the East shore and 99 on the West shore. Due to the close proximity of the cabins to the reservoir, disposal of wastewater from the cabins is a concern. Most of the cabin sites dispose of wastewater using standard septic tanks and drain fields, and some utilize holding tanks, which are pumped for transfer to an off-site disposal site on a regular basis. A few cabin sites still use outhouses. Very few of the 265 cabins have land available for replacement drain fields if their primary systems fail.

This Federal action is needed to:

- 1) Protect the public and water quality by meeting the need of long term septic systems as identified in the Cabin Lease Lot Sale NEPA process conducted in the early 2000's.
- 2) Accommodate the future replacement of existing septic and waste systems prior to potential contamination of lands and waters.

Reclamation currently owns and administers these lands proposed for conveyance.

BACKGROUND AND LOCATION

Canyon Ferry

Canyon Ferry Dam impounds the Missouri River forming Canyon Ferry Reservoir in Montana. The dam and roughly one-quarter of the reservoir are located in Lewis and Clark County with the remainder of the reservoir located in Broadwater County. Constructed between 1949-1954, the Canyon Ferry Unit facilities include the dam, powerplant and reservoir. The reservoir has 33,500 water surface acres at elevation 3797 feet, extending upstream about 19 miles from the dam to the point the Missouri River enters the reservoir. Additionally, there are 9,360 acres of lands and 96 miles of shoreline associated with the project and under the jurisdiction of Reclamation.

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

Cabin Site History

In the early 1950s, Reclamation entered into agreement with the Montana State Highways Commission-Parks Division (State Parks) to administer, manage, operate and maintain the lands for recreational purposes. The agreement granted State Parks authority to issue permits for concession purposes, private cabin sites and organized camping. Canyon Ferry lands opened for recreational cabin development in 1954. Interest in securing cabin sites grew very rapidly and leases were issued to allow construction of access roads, cabins and outbuildings, place utilities, and develop a variety of sewage management options.

The State of Montana ended its role as managing partner for recreation management in 1994 and the management of the cabin leases reverted to Reclamation. Reclamation managed these lands tracts through the early 2000's when the Canyon Ferry Reservoir, Montana, Act of 1998 (Public Law 105-277), directed the Secretary of Interior to sell the 265 federally owned cabin lots at Canyon Ferry. Reclamation subsequently completed the necessary environmental compliance and completed the sale as directed. During the NEPA analysis (Cabin Lease Lot Sale NEPA Process), the public identified a concern with lack of planning for future septic replacements.

Since sale of the cabin lease lotss, the Districts have officially formed under State law to develop a community septic system to serve the cabin owners on both the east and west shores of the reservoir. Cabin sizes have increased in many cases and there is more year round occupancy, which increases the likelihood of septic system failure and subsequent contamination of surface and ground water.

DESCRIPTION OF ALTERNATIVES

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

The alternatives being analyzed in this document include:

- No Action
- Proposed Action Alternative – Convey 83.5 acres of Federal lands to East and West Canyon Ferry County Water & Sewer District.

The District originally requested 220 acres of lands for septic purposes. Reclamation asked the District to reduce the acreage to the minimal needed and those 83.5 identified acres are analyzed in the document. The 220 acre alternative is no longer in consideration and analysis is not included herein.

NO ACTION ALTERNATIVE

Reclamation would not authorize the land conveyance to the District. This is a viable alternative and allows a comparative analysis of impacts which may occur as a result of the Proposed Action Alternative.

PROPOSED ACTION ALTERNATIVE

Reclamation proposes to convey 83.5 acres of federal lands to the District to allow the development of community septic systems in compliance with County and State standards. This conveyance of land would occur under the authority of the General Services Administration (GSA) pursuant to 40 U.S.C. 541, which gives GSA the legal authority by congress to supervise and direct the disposal of property held by the United States.

The lands would be conveyed unencumbered and would be managed at the sole discretion of the Districts.

Routing of sewage lines, power lines, and access roads outside the 83.5 conveyed acres will be evaluated on a case by case basis through the Reclamation's Use Authorization process, which would include additional NEPA evaluation, as these locations and their impacts are unknown at this time.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section includes both the affected environment and the environmental consequences. The affected environment is considered to be the existing condition and the environmental

consequences analyze the environmental impacts of implementing the proposed action alternative.

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 a problem because of their low concentrations and high alkalinity of the reservoir water.

Nutrient levels, especially phosphorous and high chlorophyll levels, indicate that Canyon Ferry is a hypereutrophic system. Hypereutrophic systems are characterized by excessive nutrient concentrations, with periods of algal blooms and oxygen deficiencies. Orthophosphate levels during summer months are often high enough to allow algal blooms to occur and were often higher than recommended limits for surface water. This results in occasional toxic blooms of blue green algae.

Canyon Ferry Reservoir is a dimictic reservoir, which means that water mixes “turns over” from the surface to the bottom twice each year. Canyon Ferry Reservoir turns over in the fall and again in the spring. Thermal stratification begins in the spring with rising air temperature with well-developed stratification occurring in June. Further, Canyon Ferry Dam releases cold water near the thermocline (the temperature gradient in a body of water, which is marked by a steep difference in temperature above and below the thermocline), resulting in low dissolved oxygen (DO) levels in the Missouri River downstream. DO depression occurs throughout the reservoir due to decompositional processes in inflowing sediments and the decompositional processes of dead algal material settling out of the epilimnion (the warmer water in the upper layer of the reservoir).

Fecal coliform is common but below state standards for untreated water throughout the reservoir. Sources are likely cattle, waterfowl, and possibly leaking septic systems.

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

Several tributaries entering the reservoir were listed as water quality impaired by the State under Section 303(d) of the Clean Water Act. Streamflow alteration, metals, nutrients, and suspended solids were designated as parameters of concern for the Missouri River above the reservoir. Designating a body of water as impaired requires the State to set a priority for determining the total maximum daily load (TMDL) of a pollutant that the water body can receive and still meet water quality standards set for the designated uses of the water body. However, the State has not yet developed TMDLs for the reservoir and streams entering the reservoir.

Two groundwater quality concerns related to septic system failure were identified by the Lewis and Clark County Health Department during the Cabin Lease Lot Sale NEPA Process. First the fractured bedrock in combination with the shallow soils on the west shore forms a conduit between septic drainfields and groundwater supplies. Second, there is concern that the density of development and trend toward year round occupation of the cabins, especially on the east shore, may eventually degrade groundwater quality because of malfunctioning septic tank drain fields.

No Action Alternative

Water quality would remain as at present, along with the likelihood of fecal coliform increasing in both surface and ground water as the septic systems continue to age. Arsenic and phosphorous, naturally occurring in the Missouri River, would cause the Canyon Ferry Reservoir to continue to be considered water-quality impaired by the Montana Department of Environmental Quality. Water would remain suitable for classified uses: cold-water fish, water sports, and-after filtration and treatment-for domestic consumption. This alternative would not change low dissolved oxygen concentrations in water below Canyon Ferry Dam. Algal blooms are likely to continue.

Non-compliance with existing state and county laws related to septic systems would continue.

Proposed Action Alternative

Water quality would remain as present, along with a decreased risk of future fecal coliform levels reaching unacceptable levels due to aging and failing septic systems. Public health risks would be minimized. Arsenic and phosphorous, naturally occurring in the Missouri River, would continue to exist in Canyon Ferry Reservoir to continue to be considered water-quality impaired by the Montana Department of Environmental Quality. Water would remain suitable for classified uses: cold-water fish, water sports, and-after filtration and treatment-for domestic consumption. Low dissolved oxygen concentrations in water below Canyon Ferry Dam would remain a concern in summer. Algal blooms are likely to continue.

Minimization Measures

All community septic components would be reviewed and approved by the Lewis and Clark County Sanitarian to assure compliance with state and county law and adequacy in protecting Montana's waterways.

Vegetation

The lands proposed for conveyance border the cabin sites on the north end of Canyon Ferry Reservoir are generally upland shrub and coniferous forest habitat types. The upland shrub habitat consists of big sagebrush/bluebunch wheatgrass and mountain mohogany/bluebunch wheatgrass habitat types. The coniferous forest habitat types include ponderosa pine/bluebunch wheatgrass and Douglas-fir/rough fescue habitat types. These abut the needle-and-thread grassland habitat to the south.

Noxious weeds can be found throughout the area and include spotted knapweed, Russian knapweed, diffuse knapweed, dalmation toadflax, leafy spurge, whitetop, Canada thistle, musk thistle, bull thistle, field bindweed, hounds tongue, common mulien, and perennial pepperweed.

Affected Environment

No Action Alternative

Riparian, grassland, upland shrub, and coniferous forest vegetative groups would remain as present. Current levels of weed control would continue to be completed by Reclamation staff and through contracts.

Proposed Action Alternative

The proposed septic systems would result in disturbance to the ground surface in both upland shrub and coniferous forest habitat types. Removal of trees and vegetation would be required on much of the 83.5 acres. Noxious weeds are typical adept at pioneering in disturbed areas.

Minimization Measures

To minimize the spread of weeds, the following minimization measures would be followed during the construction process.

- Trees and area of native vegetation would be considered during final planning and preserved where possible.
- All weeds would be sprayed prior to ground disturbing work.
- All equipment would be cleaned and inspected to assure weed seeds are not present from other sites, in accordance with Reclamation's *Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species* (<http://www.usbr.gov/mussels/prevention/docs/EquipmentInspectionandCleaningManual2010.pdf>)
- All topsoil would be removed and stockpiled for placement following construction.
- Following placement of septic components, the ground would be recontoured to near natural grades.
- Top soil would be placed on the surface and the areas would be reseeded with a mix of native vegetation.

- Weed management would be the responsibility of the District and would comply with State noxious weed law.

Wildlife

Canyon Ferry supports a diverse range of mammalian and avian life in the areas proposed for sale. A number of wildlife species could be expected in or near the project areas and include white tail and mule deer, badgers, ground squirrels, raptors, skunk, porcupine, raccoon, weasel, beaver, muskrat, and a number of other small rodents. A host of migratory and non-migratory bird species use the habitats provided nearby. Avian foraging and nesting are common in the areas proposed for conveyance.

Additional information on the recreation opportunities and wildlife values present in this area can be found on their website at:

<http://fwp.mt.gov/fishAndWildlife/wma/siteDetail.html?id=281291>.

Montana Department of Fish, Wildlife and Parks (FWP) manages the overall wildlife populations in the general project area, species specific information can be obtained at:

<http://fieldguide.mt.gov/>

No Action Alternative

The No Action alternative would have no effect on wildlife.

Proposed Action Alternative

The 83.5 acres of potential wildlife habitat would be conveyed to the District. Short term impacts would include displacement of most species during construction activities and avian mortality would be likely if construction occurred during the nesting season. Following construction and associated planting, wildlife patterns are expected to return to near pre-development.

Threatened and Endangered Species

The Endangered Species Act seeks to recover and conserve listed species and the ecosystems on which they depend. The action area defined for this action, includes the access road, cabin lot areas, and areas where the communal septic systems will be located, so this alternative would have no effect on them. All lands within this action area are within Broadwater County. The species listed below are from the United States Department of the Interior Fish and Wildlife Service website at:

http://www.fws.gov/montanafieldoffice/Endangered_Species/Listed_Species/countylist.pdf. The species list was updated May 2016 and accessed on August 9, 2016.

Lewis and Clark County - ESA Species		
Scientific Name	Common Name	Status
<i>Ursus arctos horribilis</i>	Grizzly Bear	Threatened
<i>Lynx canadensis</i>	Canada Lynx	Threatened
<i>Salvelinus confluentus</i>	Bull Trout	Threatened
<i>Mustella nigripes</i>	Black-footed Ferret	Endangered
<i>Calidris canutus rufa</i>	Red Knot	Threatened
<i>Gulo fulo luscus</i>	Wolverine	Proposed
<i>Pinus albicaulis</i>	Whitebark Pine	Candidate

The action area does not provide the habitat necessary for grizzly bear, Canada lynx, bull trout, black-footed ferret, red knot, wolverine, or whitebark pine. There would be No Effect to any of the above listed species or their preferred habitats as a result of No Action or the Proposed Action.

Recreation

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

Montana Fish, Wildlife and Parks provides overall fish and wildlife management and enforcement of State hunting, fishing, boating at Canyon Ferry Reservoir.

Three concessions have agreements with Reclamation to operate commercial businesses and to provide recreation opportunities for the public at the reservoir. These include Kim's Marina, Yacht Basin Marina, and Goose Bay Marina.

Canyon Ferry also provides a diversity of recreational opportunities through the management of 13 campgrounds and 9 day use areas.

The remaining lands are managed by Reclamation and are primarily used for outdoor recreation purposes and open space.

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

The diversity of public lands in the area provide for a wealth of recreational opportunities.

No Action Alternative

The No Action alternative would have no effect on recreation.

Proposed Action Alternative

The 83.5 acres of land would be conveyed to the District. These proposed lands are not highly recreated area, but can currently be accessed by the public. Short term impacts would include disruption of the recreating public using the proposed land for sale and to recreationist accessing east and west shore during construction period. This land would be conveyed unencumbered. Long term, the loss of 83.5 acres of federal lands for recreational use by the American public will occur. Future public access will be at the discretion of the District.

Cultural Resources

Pedestrian surveys have been completed on all tracts of land proposed for conveyance. Consultation with the State Historic Preservation Office is ongoing and will be completed prior to the conveyance. This section will be completed in the Final EA.

Executive Orders

Executive Order 11990 – Protection of Wetlands

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

Both the No Action and the Proposed Action are in compliance with the Executive Order. No known wetlands exist within the footprint of the proposed land conveyance.

Executive Order 11988 – Floodplain Management

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

Both the No Action and the Proposed Action are in compliance with the Executive Order. All lands proposed for conveyance are outside the floodplain.

Executive Order 13186 – Protection of Migratory Birds

The United States has ratified international, bilateral conventions for the conservation of migratory birds. These international migratory bird conventions impose substantive obligations on the United States for the conservation of migratory birds and their habitats, and through the Migratory Bird Treaty Act (16 U.S.C. 703-711) (Act) will implement these conventions. This Executive Order directs Federal agencies to take certain actions to further implement the Act.

Executive Order 13007 – Indian Sacred Sites

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

Both the No Action and Proposed Action are in compliance with this executive order. No known Indian Sacred Sites exist in the area of the proposed land sale.

Executive Order 12898 – Environmental Justice

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

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

Executive Order 13112 – Invasive Species

Federal agencies are required to identify actions to prevent the introduction of invasive species, including detection, response, monitoring, and restoration. Agencies are not authorized to complete actions likely to cause or promote the introduction or spread of invasive species.

Under No Action, Reclamation would continue ongoing monitoring and management of endangered species. Under the proposed action, the Districts would be required to complete effective weed management to Montana standards.

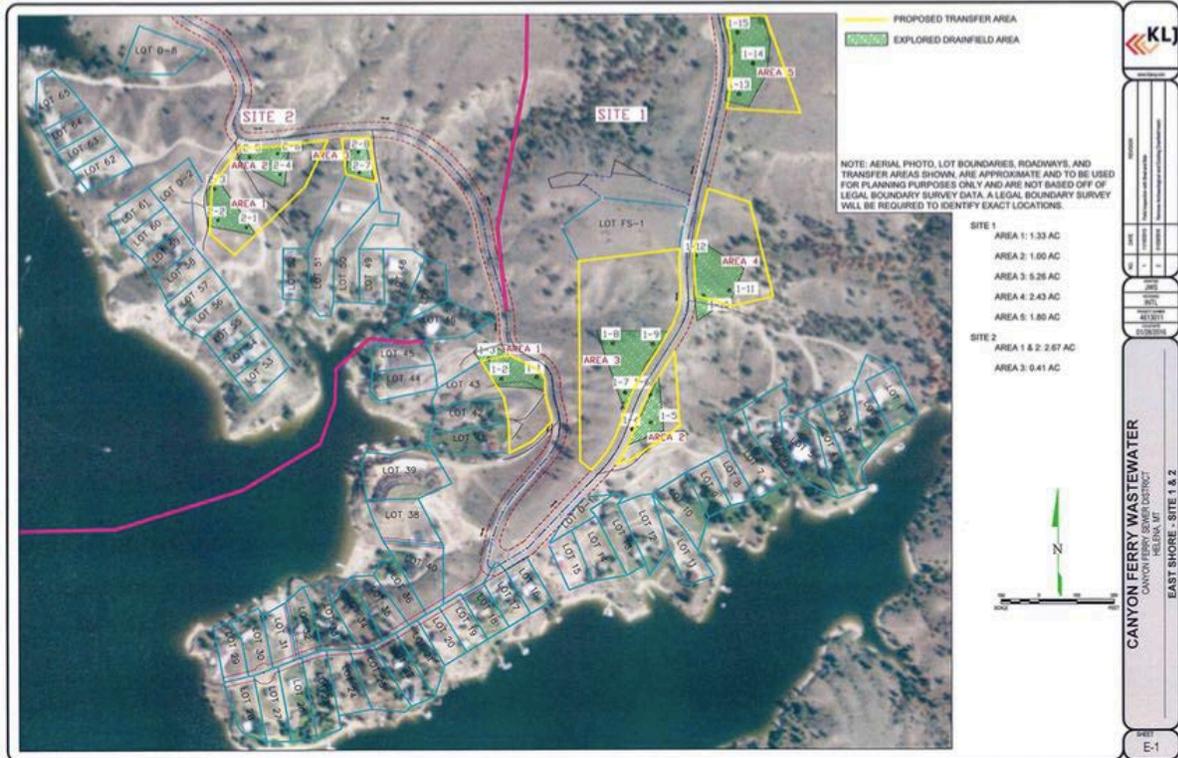


Figure 1: KLJ provided aerial photo showing proposed locations of land conveyance near cabin lots 1-65. The areas in yellow are proposed for conveyance. This includes seven tracts of land totaling 14.1 acres.

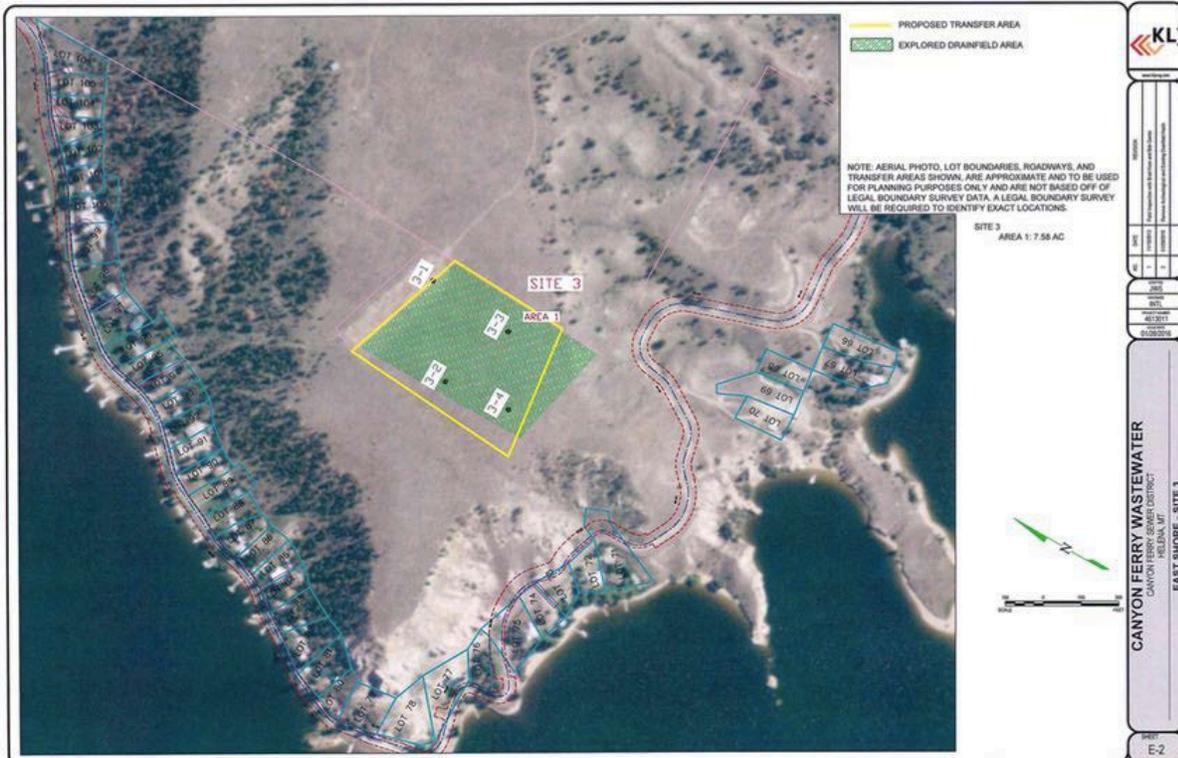


Figure 2: Proposed land conveyance near cabin lots 66-106. One tract totaling 7.58 acres.

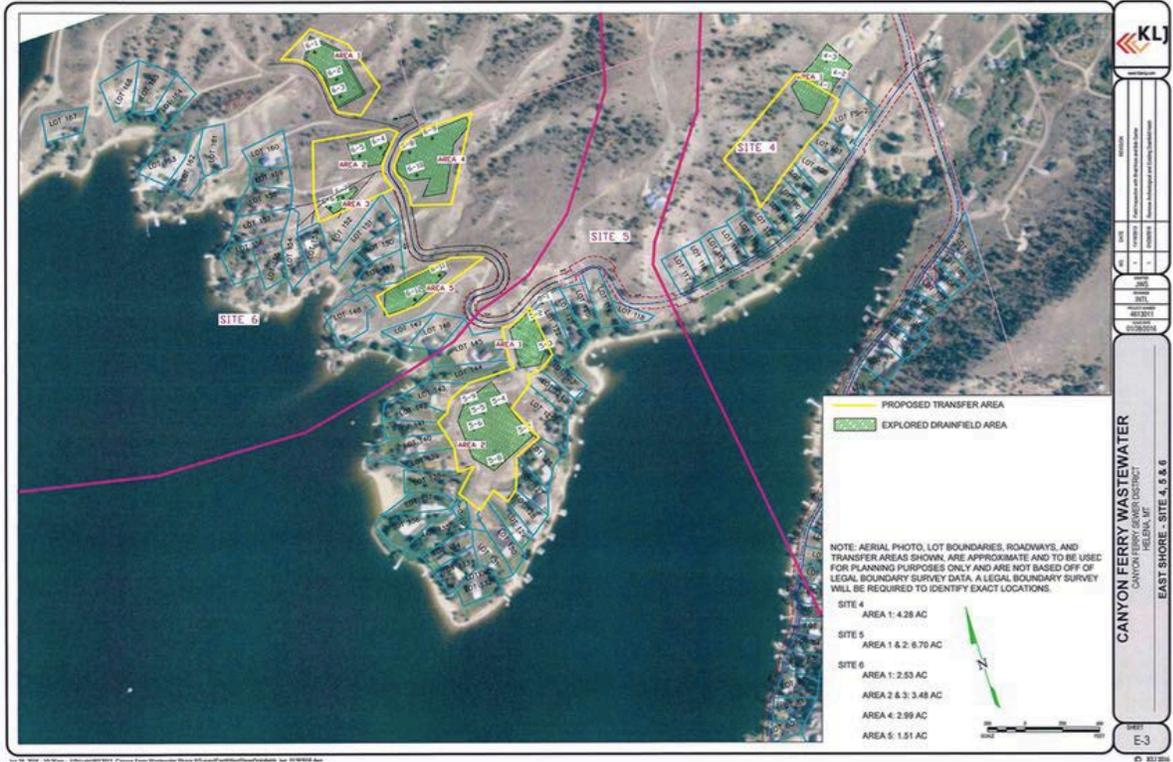


Figure 3: Proposed land conveyance near Cabin Sites 107-167. A total of six tracts are proposed for conveyance totaling 21.49 acres.



Figure 4: Proposed land conveyance near Cabin Site 168-170 on the west shore. A total of two tracts are proposed for conveyance totaling 7.04 acres.

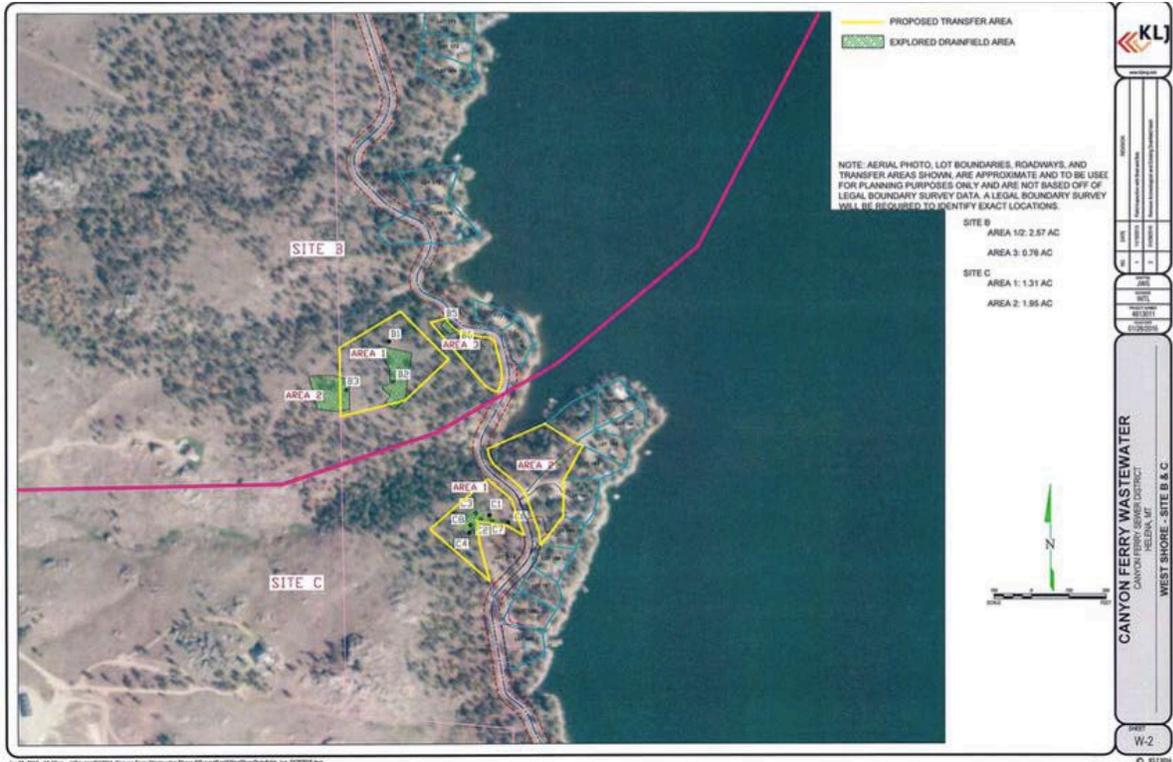


Figure 5: Proposed land conveyance near Cabin Site 171-191 on the west shore. At total of four tracts are proposed for conveyance totaling 6.59 acres.



Figure 6: Proposed land conveyance near Cabin Sites 172-178. A total of two tracts are proposed for conveyance totaling 3.72 acres.



Figure 7: Proposed land conveyance near Cabin Sites 179-214. A total of four tracts are proposed for conveyance totaling 16.24 acres.

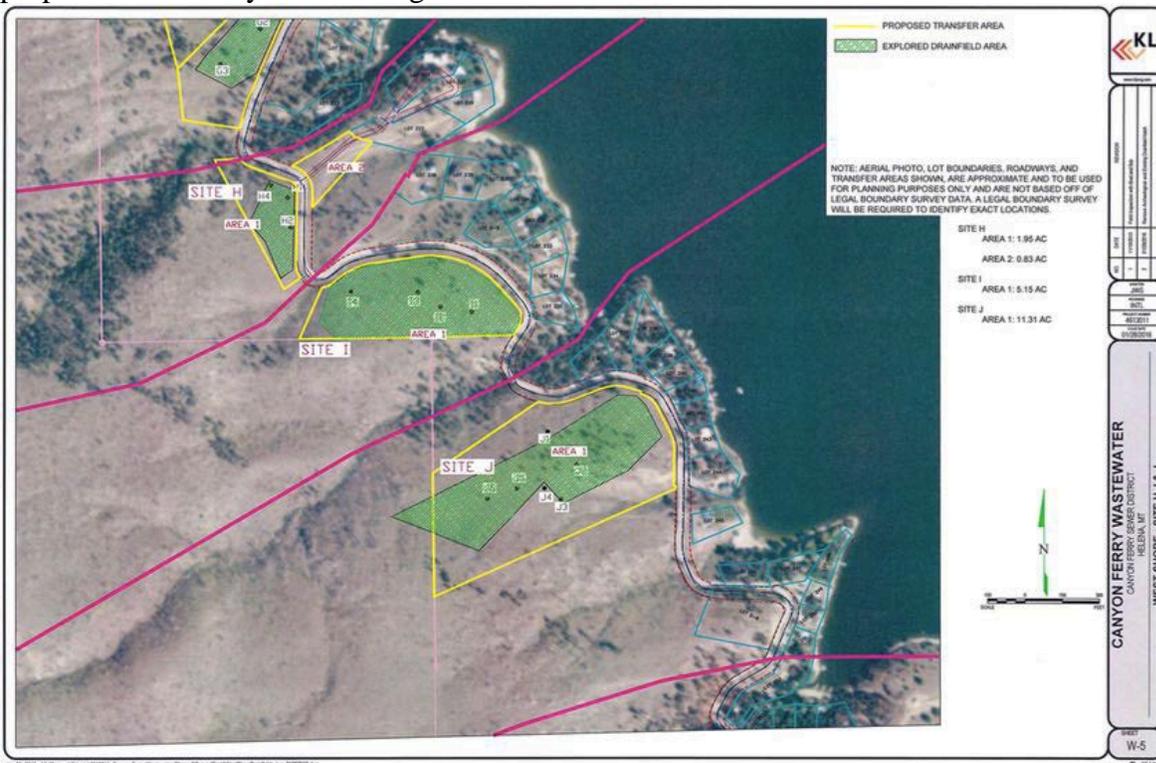


Figure 8: Proposed land conveyance near Cabin Sites 215-240. A total of four tracts are proposed for conveyance totaling 16.24 acres.

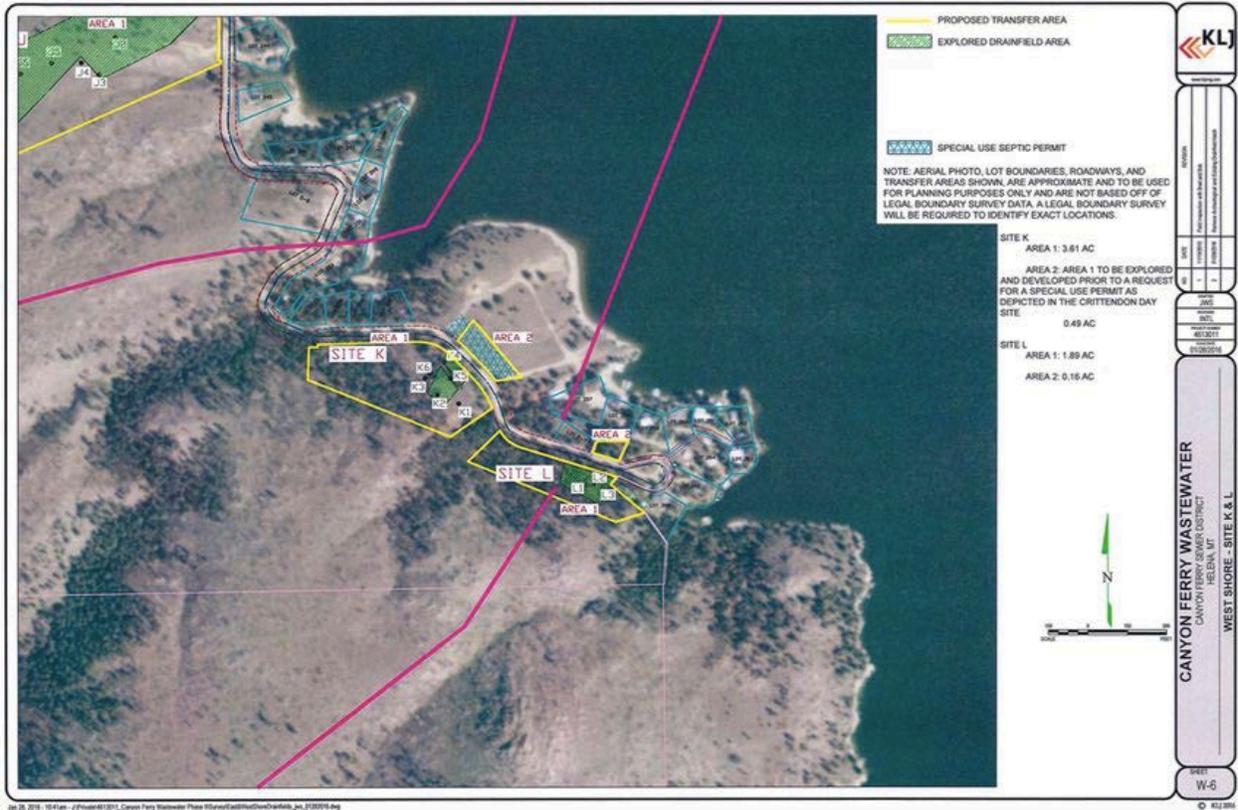


Figure 9: Proposed land conveyance near Cabin Sites 241-265. A total of four tracts are proposed for conveyance totaling 6.15 acres.