

# CONCEPTUAL GLADE RECREATION FACILITIES PLAN

Northern Integrated Supply Project

PREPARED FOR

Northern Water

24 MAY 2019



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## MEMORANDUM

Conceptual Glade Recreation Facilities Plan  
May 24, 2019

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To: Carl Brouwer, Christie Coleman (Northern Water)  
From: Bill Bobzien, Arlene Little, Mike Johnson (B&V Glade Team)  
cc: Jennifer Williams, Greg Zamensky, David Bentler, Darrin Harris (B&V Glade Team)

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## 1 Purpose

This technical memorandum for the proposed Northern Integrated Supply Project (NISP) describes the Conceptual Recreation Facilities Plan for Glade Reservoir and its alignment with the objectives and related criteria of the 2017 Reservoir Parks Master Plan (Larimer County Department of Natural Resources, Final Draft December 2017) and the Open Lands Master Plan (Larimer County Department of Natural Resources, June 2015).

## 2 Introduction

NISP is a proposed water storage and distribution project managed by the NISP Water Activity Enterprise, which consists of two proposed reservoirs and related infrastructure. NISP will serve the current and future water needs of 15 towns and water districts in Larimer, Weld, Morgan, and Boulder Counties. The two proposed reservoirs include Glade Reservoir, which is located northwest of the town of Fort Collins, CO and Galeton Reservoir, which is located northeast of Greeley, CO. NISP infrastructure improvements include a forebay reservoir below Glade Reservoir, a forebay adjacent to the South Platte River, three river diversion structures, improvements to the Poudre Valley Canal, five pump plants, and a water pipeline distribution system to deliver water for exchange with two irrigation companies and delivery to participants.

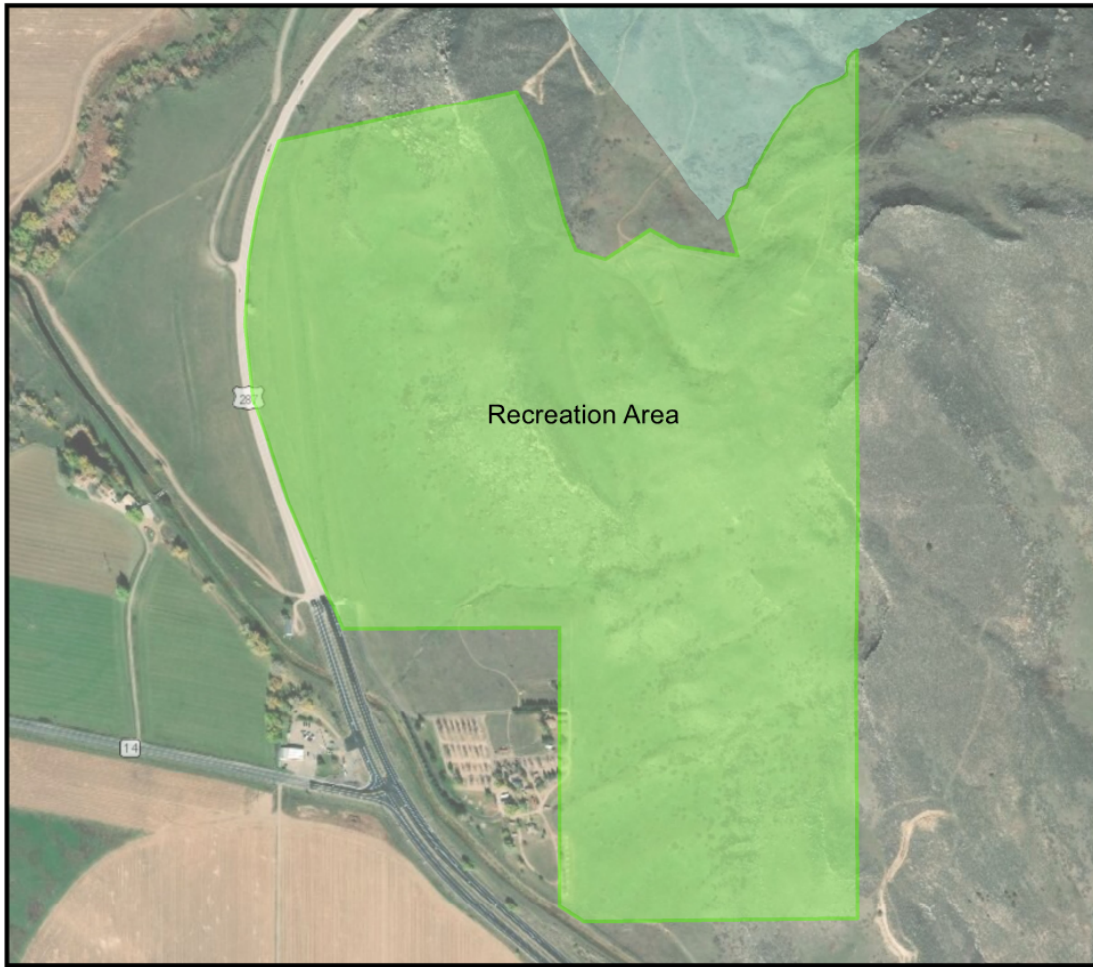
The focus of this memo is recreational facilities planned in association with Glade Reservoir. Glade Reservoir is located along the foothills of the Colorado Front Range and will be located approximately nine miles northwest of downtown Fort Collins and four miles northwest of LaPorte, CO and just north of the intersection of U.S. Highway 287 (US 287) and State Highway 14 (SH 14). Glade Reservoir will be approximately five miles in length, 280 feet deep with a storage capacity of 170,000 acre-feet. Glade Reservoir will be oriented in a northerly direction, generally following the existing US 287 alignment. This portion of US 287 will be relocated to the east as part of the NISP project.



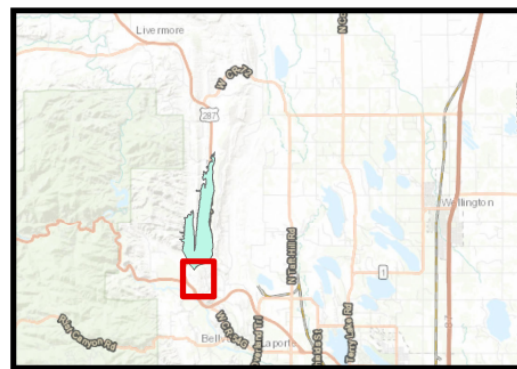
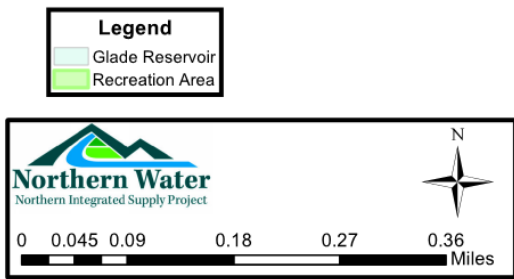
A variety of recreational opportunities will be supported and/or developed at Glade Reservoir including boating, camping, fishing, hunting access and hiking. A 170-acre Recreation Area (see Figure 1) is planned at the left<sup>1</sup> abutment of Glade Reservoir for several camping areas, a Visitor Center, parking for day-use and trail access, a boat ramp and boat parking. The Recreation Area is comprised of previously undeveloped rangeland, varying from gently-sloping to moderately-steep terrain, including several escarpments.

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<sup>1</sup> Left and right (abutment) as used in this document refer to the vantage point of looking downstream from the reservoir.



**Glade Reservoir - Recreation Areas**



**Vicinity Map**

*Figure 1 - Glade Reservoir - Recreation Area Map*

### 3 Recreation Facilities – NISP Commitments

Through NISP, Northern Water has made commitments to provide a range of recreational and public access opportunities at Glade Reservoir, expanding upon those currently available in the area. Northern Water is seeking best value amenities for its NISP partners, i.e. to implement those amenities that provide high recreational benefit for reasonable level of capital investment.

#### 3.1 Cool Water Fishery

A cool water fishery will be established and managed at Glade Reservoir. This fishery will be similar to those existing nearby at Carter Lake and Horsetooth Reservoir. Colorado Parks and Wildlife (CPW) has committed to managing the fishery using their best management practices, including annually stocking fish. Currently, CPW fish hatchery production is nearly at capacity, so implementation of the fish stocking plan will require expansion of current CPW facilities. Northern Water has committed to providing CPW with \$3M for expansion of CPW fish hatchery facilities and \$50,000 annually for annual expenses related to implementation of the cool water fishery plan.

A high-quality fishing experience will be a draw for visitors to Glade Reservoir. It is anticipated that Glade Reservoir will be stocked with fish species suitable for a cool water fishery such as walleye, saugeye, black crappie, bluegill, yellow perch, and rainbow trout, among others. As fishing has remained a popular family-oriented activity in the area, fishing opportunities at Glade Reservoir will provide recreational value.

#### 3.2 State Land Hunting Access

Approximately 1,635 acres of land is currently open to hunting in the vicinity of Glade Reservoir, including land owned by the State Land Board leased by CPW and land that will be inundated by the reservoir. Northern Water will work with CPW to ensure current hunting access and opportunities are maintained on lands currently in the Poudre River State Land Trust (PRSLT) area to the west of Glade Reservoir. Current PRSLT access points and the parking area located at the northwest side of the future reservoir's high-water mark will be affected by Glade Reservoir. Northern Water will relocate and reconstruct the parking area and walk-in access point, which will be accessed from US 287, most likely via an existing ranch road. These hunting access improvements will be separate and distinct from roads, access gates and/or entry stations, and other proposed recreation related infrastructure improvements.

Hunting remains a popular recreational sport for many in Colorado, whether big game, waterfowl, or small game. Hunters provide ecological benefit through helping maintain healthy herd populations of deer, elk, and other large game. Hunting will draw visitors to the Glade Reservoir locale during otherwise less popular seasons (fall, winter, spring).

### 3.3 Public Access

Public access will be provided to the recreational cool water fishery via boat fishing and a proposed foot trail along portions of the west shoreline. Additional public access will be available for the range of hunting opportunities in the area. Unpaved, primitive hiking trails will also be provided along the east side of Glade Reservoir.

### 3.4 Poudre River Recreator Parking

The Glade Recreation Area is located near the mouth of the Poudre Canyon, a very popular outdoor recreation destination and one known for river rafting, kayaking and many other outdoor activities. There are several commercial river rafting operators that work the Poudre River canyon. In past discussions with commercial rafting operators, as well as public comments received during the environmental permitting/NEPA process, there is a desire for a sizable parking area designated for Poudre River commercial operators and other recreators to be located within 1/2 mile of the US 287/SH 14 intersection and Ted's Place<sup>2</sup>. This parking area will be constructed by Northern Water to serve as a rendezvous location for commercial operators and related rafting participants as well as the general public; a public carpool designation; and a means to alleviate traffic volumes in the Poudre Canyon.

### 3.5 Visitor Center

A Visitor Center is envisioned to be a key amenity for the nearby community and the general public. This facility will provide information and displays or exhibits related to NISP operations and environmental commitments, available recreational opportunities, regional geology, water stewardship and conservation, and agricultural interests including the preservation of irrigated lands.

This building offers a means to be an outlet for positive community learning and gathering. Beneficiaries might include school groups, clubs, scouts, families, and so forth. In addition to focused displays, specialized educator-led programs are possible. Topics might include those listed under the Educational Outreach section in this memorandum. Staffing and use of the Visitor Center will ideally be tied to recreational uses at the reservoir with the management agency providing staffing. The Visitor Center could also provide a location for ongoing or seasonal events such as educational programs. Amenities and programming will be defined and provided by the recreation management agency.

Northern Water has committed to funding Visitor Center improvements amounting to \$940,000. Northern Water will coordinate and pursue funding from partner agencies and various funding sources to jointly fund construction and management of this facility.

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<sup>2</sup> Ted's Place is a local business fuel station and convenience market, located at the intersection of US287 / SH14.

### 3.6 Recreation Area Access Road

The public will be provided vehicular access to Recreation Area amenities via a paved access road located along the left abutment area. The access road will begin at US 287 and traverse up the hillside within the Recreation Area, continuing to the left dam abutment and a boat ramp. Vehicular access into campgrounds, parking, and the Visitor Center will be provided via this access road.

### 3.7 Embankment Area Earthwork

Opportunities for boating, camping, and other day-use areas are part of Northern Water's commitment toward providing recreation at Glade Reservoir. In conjunction with reservoir construction and related mass earthwork operations, Northern Water has committed to rough grading site areas for a boat ramp, campgrounds, parking, and the Visitor Center. This will reduce eventual site development costs incurred by the future recreation management agency.

## 4 Recreation Facilities – NISP Additional Considerations

The Conceptual Glade Recreation Facilities Plan has been developed taking into consideration comments received from various stakeholders. Larimer County (LC or County) is a key stakeholder of NISP and presently manages similar reservoir-based and other recreational facilities throughout the County through policies and procedures identified in two related LC Department of Natural Resources master plans: the LC Open Lands Master Plan and the LC Reservoir Parks Master Plan. Northern Water's intent is for the recreational amenities planned at Glade Reservoir to be consistent with the County's efforts as they relate to these master plans as well as meet their requirements.

### 4.1 Larimer County Open Lands Master Plan

Larimer County has in the past, and continues to, experience significant population growth. According to the Open Lands Master Plan the County would need to conserve over 45,000 acres of open space by the year 2040 to maintain the current provision of 1/4 acre of open space per capita. The increase in population also increases demands for land and water with 4,500 acres of County land currently being developed annually, along with an increase in needs for development-related water rights.

Public outreach efforts during the development of the Open Lands Master Plan identified and prioritized land conservation needs that could play a significant role in satisfying the goals of the master plan.

Glade Reservoir can support the Open Lands Master Plan in conserving lands to:

- “protect lakes, rivers, streams and preserve water quality”,
- “protect natural resources, wildlife habitat and rare species”,
- provide “more outdoor recreation opportunities”,
- “create greenways or trail corridors that connect communities and parks”,
- “conserve regional lands”,
- “invest in management and maintenance of current natural areas and facilities”,
- “invest in additional paved and natural surface trails...trailheads, parking, shelters and facilities”,
- “restore and rehabilitate rivers and open lands”,
- “acquire water rights for in-stream flows and wildlife habitat”,
- “secure water rights for agricultural lands”, and
- “conserve land with proximity to existing open space”.

## 4.2 Larimer County Reservoir Parks Master Plan

The LC Department of Natural Resources is responsible for managing the County’s park and open space system, including four Bureau of Reclamation reservoirs. It is estimated that approximately 1,000,000 people visit County reservoirs annually and that growth in this number is expected to exceed population growth in the future.

The Reservoir Parks Master Plan was prepared concurrently with the Bureau of Reclamation’s Resource Management Plan and Environmental Assessment (RMP/EA) with additional County needs beyond the RMP/EA being identified. Key objectives noted in both plans include protecting wildlife and biodiversity, preservation of environmental resources and culturally significant places, providing outdoor recreational opportunities and protecting visitor health and safety.



The master plan states that the department’s mission is to “establish, protect, and manage significant regional parks and open lands providing quality outdoor recreational opportunities and stewardship of natural resource values”. The department’s mission also includes key goals relative to reservoir parks “to ensure a reservoir parks system that”:

- “supports the County’s vision”,
- “anticipates the future”,
- “ensures a nationally-recognized park system”,
- “provides a diversity of recreational experiences”,
- “celebrates the natural environment”,
- “integrates with a larger recreational network”, and
- “manages resources in an economically and environmentally sustainable manner”.

#### 4.3 Potential Contributions to Larimer County Recreation Goals by Glade Reservoir

The LC Reservoir Parks Master Plan recognizes Glade Reservoir as a “future park strategy”. As mentioned above, due to ongoing population growth, there is increased pressure for recreational amenities within existing parks and on existing reservoirs in the County. The addition of new facilities, especially large, regional reservoir parks such as Glade Reservoir, will assist in reducing pressure on existing facilities and will provide for a wide range of recreation activities, including water-based recreation activities.

Due to its being nearly equal in size to Horsetooth Reservoir in southwest Fort Collins, Glade Reservoir will provide another unique option for County residents for many types of recreation, including several available year-round. Glade Reservoir is especially important as it will provide a new sizable water body for boating, a rare resource in Colorado. Boaters and recreators living north of Fort Collins that now travel to Horsetooth Reservoir or beyond to recreate will have an option much closer to home, resulting in an increase of use by a wider cross section of County residents serving those that may not make routine visits to more distant recreational opportunities to the south.

Through a separate recreation management agency (yet to be selected by Northern Water), Glade Reservoir is well positioned to provide a wide range of recreation-based activities. Of the 32 activities listed in the master plan as “Desired Activities at the Reservoirs”, Glade Reservoir could provide 26, or 81%. These 26 potential recreational activities are listed in Table 1.

*Table 1 - Potential Recreational Activities*

POTENTIAL RECREATIONAL ACTIVITIES	
Mountain biking	Snowshoeing and cross-country skiing
Hiking	Youth Programs
Educational Programming	Horseback Riding
Kayaking and Canoeing	Backcountry and Boat-In Camping
Rock Climbing	Tent Camping
Road Biking	Picnicking
Stand Up Paddle Boarding	Guided Tours
Wildlife Viewing	Boat Ramps
Fishing	Festivals or Events
Jogging / Running	Developed / RV Camping
Sailing	Scuba Diving
Large Group Picnicking	Water Skiing
Power Boating	Jet Skiing



## 5 Recreation Area Master Planning

This section describes the master planning performed for the Glade Reservoir recreation facilities.

### 5.1 Site Inventory/Analysis and Feasibility

The 170-acre Recreation Area site is located on a natural, rolling hillside that generally faces south and west toward the intersection of US 287 and SH 14. The site's topographic character ranges from gently sloping areas with varied vegetative cover consisting of low native grasses and groundcover to low woody plants. There are also significant areas with moderate-to-steep, rocky, rugged terrain with similar vegetative cover. One intermittent drainage exists low on the site near the existing developed campground across from Ted's Place at the US 287 and SH 14 roadway intersection.

### 5.2 Digital Elevation Model

For purposes of studying the Recreation Area and defining areas suitable for recreation-based improvements, a Digital Elevation Model (DEM) was developed using GIS related software, see Figure 2.

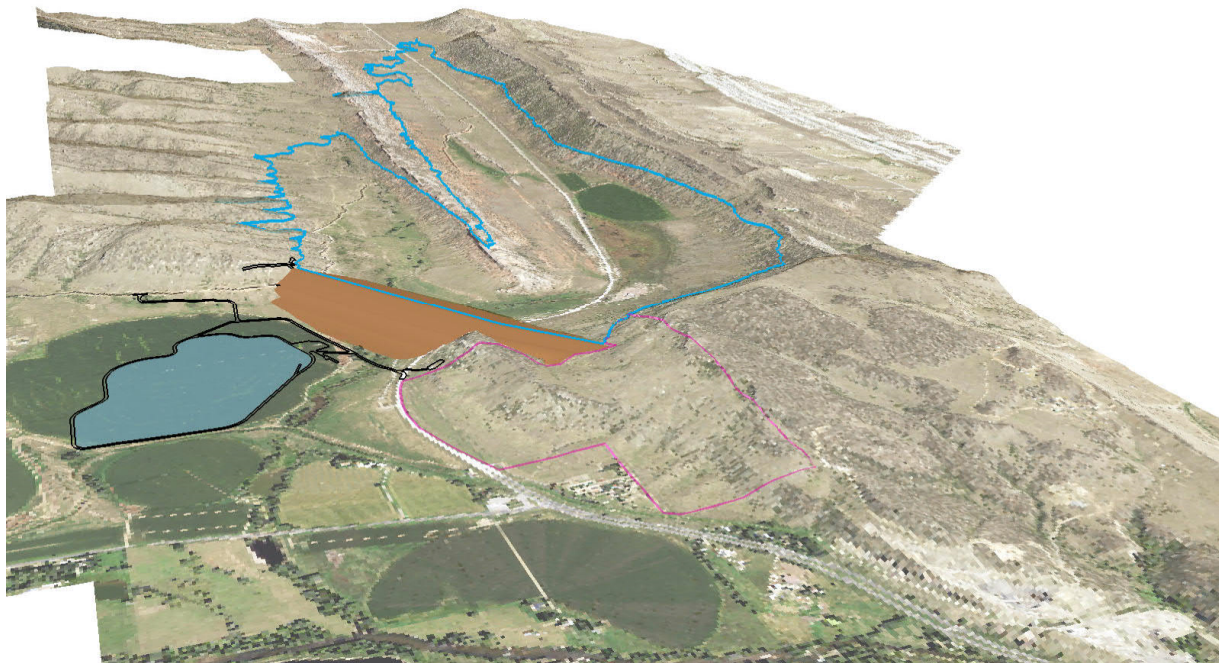


Figure 2 - Digital Elevation Model

### 5.3 Slope Analysis

Two major slope analyses were performed on the DEM. First, slope was visualized using a color ramp (a continuous color scale) to create a shaded representation of slope in the area. Second, the values of slope (ranging from near zero to almost 450%) were reclassified. A slope analysis map (see Figure 3) was developed with slope classifications. In order to contain site grading within a recreational development site such as a campground, areas of slope over 10% are considered too steep as they would likely result in earthwork operations affecting adjacent natural, sensitive vegetated areas that would require revegetation and specialized maintenance over the course of many years to return to current condition.

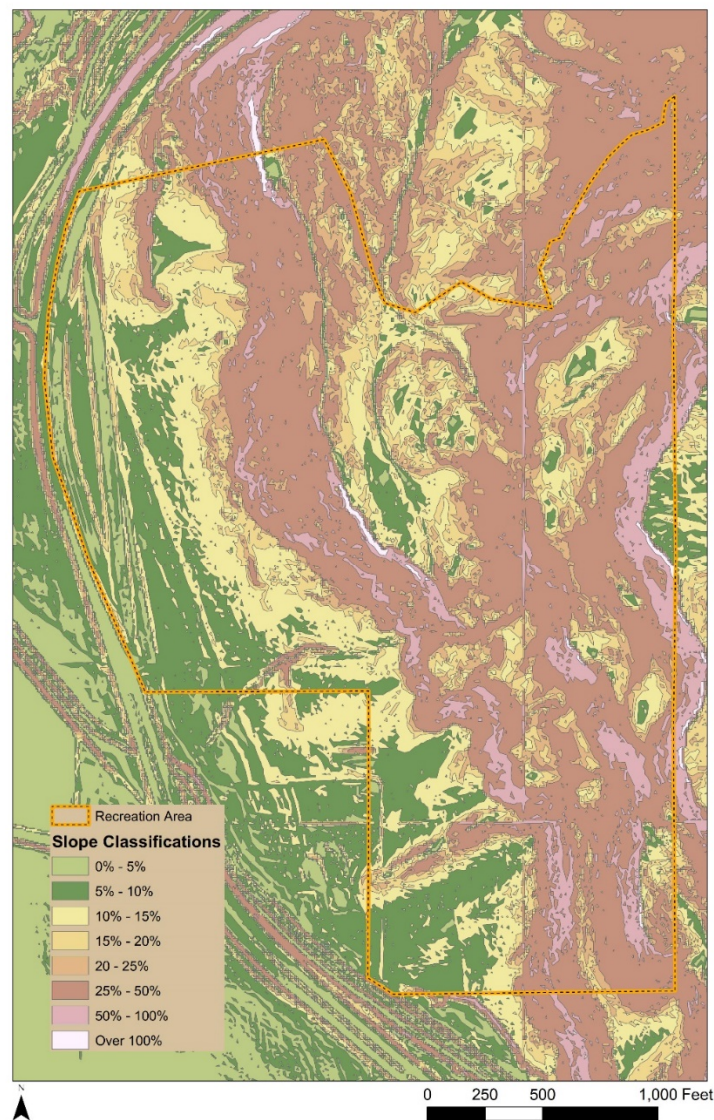


Figure 3 - Slope Analysis Map

## 5.4 Rockfall Hazard

Rockfall areas were delineated due to the existence of several large escarpment/rockfall areas within the Recreation Area, see Figure 4. Rockfall hazard areas fell within two classifications, low-to-moderate rockfall hazard and high rockfall hazard, areas depicted in yellow and red, respectively on Figure 4. These rockfall hazard areas were defined based on visual observations in the field and analysis of Google Earth imagery.

In the low-to-moderate rockfall hazard area there is only minor evidence of prior block releases from the upslope bluff on the existing slope face. Adverse joint sets in the Lytle Formation exist, but the upper slope appears to be gradual. Although these areas have some potential to release material downslope in the future, for the recreation area master planning, it was determined that no setback, or buffer, would be required between the low-to-moderate rockfall area and future recreation areas, such as campground areas and the Visitor Center.

High rockfall hazard areas contain large blocks of sandstone that have dislodged from the upslope bluff, migrated downslope, and have come to rest on the slope face and mid-slope benches. Adverse joint sets in the Lytle Formation and over-steepened upper slopes appear to be the primary cause. These areas are currently releasing material downslope and will likely continue to do so in the future. For early planning efforts, a 50-foot setback, or buffer, is required between high rockfall areas and future recreation areas such as campground areas and the Visitor Center. A thorough rockfall assessment would need to be performed to determine potential mitigation measures that could reduce the required setback distance.





Figure 4 - Rockfall Hazard Zones

## 5.5 Federal Environmental Surveys

As part of the NISP project development, fish and wildlife impacts are expected to be caused by NISP. Mitigation measures have been developed for Preble’s Meadow Jumping Mouse (PMJM) and Special Status Species. Special status species include bald eagle, Colorado butterfly plant, Ute Ladies Tresses orchid, black-footed ferret, black-tailed prairie dog, swift fox, burrowing owl, and Townsend’s big-eared bat, among others. Endangered Species Act (ESA) and Clean Water Act (CWA) compliant PMJM and wetlands compensatory mitigation and enhancement areas are being established adjacent to and downstream of the new reservoir dam embankment. Because of those requirements, public access into those areas will be precluded.

## 5.6 Site Visit

A site visit was held on March 1, 2019 and attended by representatives from Northern Water, Black & Veatch, and AECOM, see Figure 5. The purpose of the site visit was to gain first-hand knowledge of the overall reservoir development area and the 170-acre Recreation Area. The attendees visited the proposed location for the north trailhead and walked several areas within the Recreation Area. Potential sites for campgrounds and the Visitor Center were noted and photo documented.



*Figure 5 - March 2019 Site Visit*

The group also toured a small intermittent drainage along the northern property line of the existing developed campground. It was discussed that if required for vehicle access this drainageway could be crossed via a culvert engineered and rated for vehicular traffic.

It was noted that the hillside for the Recreation Area could be seen from residences across the valley to the west. As the hillside is without large vegetation that could screen recreational facility development, discussion ensued related to a high level of care being required when preparing the Recreation Concept Plan to minimize visual, light, and noise impacts to neighbors throughout the day and evening. In addition to a significant reduction in traffic-related impacts due to the relocation of US 287 (such as noise and light) potential design and management measures that could be implemented to reduce the above impacts include:

- Addition of native vegetative buffers and/or stands of native trees along beneficial edges of and/or within camping areas,
- Restricting recreational vehicles to less visible campground areas located in lower areas of the Recreation Area, and/or behind vegetative buffers
- Use of downcast, full cutoff light fixtures meeting Dark Sky criteria

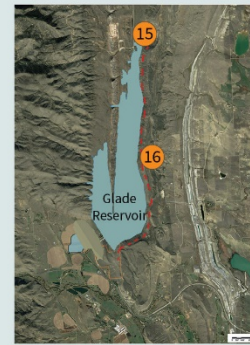
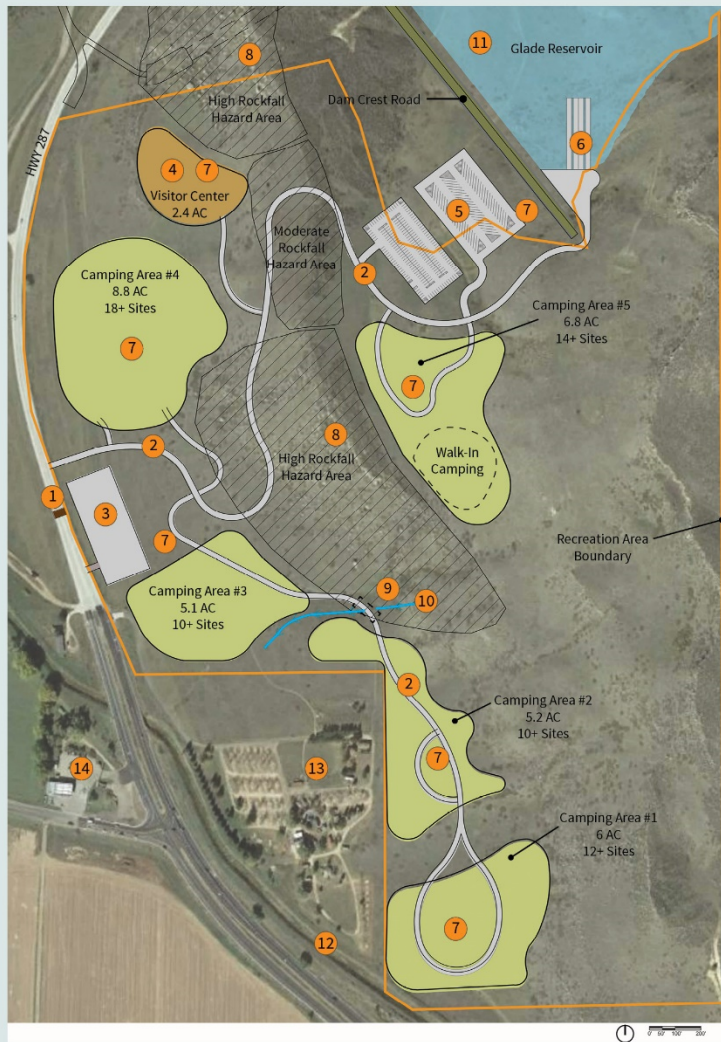
## 6 Recreation Area Conceptual Master Plan

The recreation planning team has developed a Conceptual Master Plan (Figure 6) for the Recreation Area that utilizes the information gained during the Site Inventory/Analysis phase and the related site visit. This master plan illustrates the current site development program based on current Recreation Area related commitments by Northern Water such as the recreation access road, campgrounds, Visitor Center and boat ramp.



**Glade Reservoir - Northern Integrated Supply Project**

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- 1 Entry Station
- 2 Access Road
- 3 Poudre Canyon Public Parking 100-200 spaces
- 4 Visitor Center-25 Parking Spaces
- 5 Day Use/Trailer Parking 200-300 Car Spaces +60 Boat Trailer Spaces
- 6 Boat Ramp-4 Lane
- 7 Restrooms
- 8 Escarpment
- 9 Box Culvert Crossing
- 10 Intermittent Drainage Channel
- 11 Cool Water Fishery
- 12 Poudre Valley Canal
- 13 Fort Collins/ Poudre Canyon KOA
- 14 Ted's Place
- 15 North Trailhead
- 16 Hiking Trail Connecting North Trailhead to Recreation Area

NOTES:  
 1) Restrooms to be developed by managing agency.  
 2) Rough grading of campground to be provided by NISP.  
 3) Design is conceptual and subject to change as design process progresses.

May 2019



Figure 6 - Conceptual Master Plan



## 6.1 Reservoir Entry Station

An entry station to Glade Reservoir will be located a short distance north of the US 287/SH 14 intersection along the current alignment of US 287. The location for the entry station will allow for “stacking” of vehicles and trailers in anticipation of above-average/holiday weekend usage of the Recreation Area and Boat Ramp. The entrance to the Recreation Area Access Road will be located north of the entry station.

## 6.2 Recreation Area Access Road

The Recreation Area Access Road is a two-lane paved roadway engineered to allow for vehicular access into the campgrounds, Visitor Center, and boat ramp areas, as well as to accommodate a range of vehicles with or without camping/boat trailers. While the access road climbs nearly 300-feet vertically, it has been configured so the maximum road gradient will not exceed 9%, including reduced grades at access points in the campgrounds, Visitor Center, and parking areas. The alignment of the access road will make efforts to preserve significant natural landforms and vegetation and minimize site disturbance to preserve the natural character of the Recreation Area hillside.

## 6.3 Poudre River Recreator Parking

The Poudre River Recreator Parking area is proposed to be located within the Recreation Area, approximately 1/4 mile north of the US 287/SH 14 intersection and Ted’s Place. This parking area will have an improved surface and will provide between 100 and 200 parking spaces. The entrance to the parking area is from the existing US 287 roadway, prior to entering the reservoir and the proposed reservoir entry station. A permanent year-round restroom, that will be developed by the management agency, is proposed east of the parking area and will be shared with Campground #3 which is located south of the parking area.

## 6.4 Campground Use Areas

Five Campground Use Areas have been located along the Recreation Area Access Road ranging from 5.1 to 8.8 acres in size and totaling 31.9 acres. In defining these use areas, the topographic slope was limited to, and ranges between, 0% and 15%. The limits of the campground use areas were defined also taking into consideration preserving as much existing native woody vegetation as possible.

The Campground Use Area sites will be rough graded by Northern Water and developed to an operable level by the management agency. The campground limits illustrated on the master plan fall outside the rockfall hazard setback/buffer zones noted above. With additional analysis of the rockfall areas, and rockfall mitigation, campgrounds adjacent to the rockfall areas may be enlarged.

Each campground will have an improved one-way or two-way roadway as well as access to permanent restroom facilities that will be developed by the management agency. A range of camping experience will be accommodated by the group of five campgrounds with vehicular access to include recreational vehicles, car/camping trailers, car camping, tent camping and limited walk-in camping. Additional amenities will be defined and provided by the recreation management agency.



Back-country camping opportunities at Glade Reservoir can include boat-in access shoreline camping and potential campsite areas along the east shoreline trail. Further planning and definition of backcountry camping locations and associated maintenance needs will be performed by the recreation management agency.

## 6.5 Visitor Center Site

A 2.4-acre Visitor Center site is proposed above Campground 4, west of the access road. The topographic slope of the Visitor Center site ranges between 0% and 15% with low-to-moderate and high rockfall areas adjacent to the east and north. Like the campground areas, slope and preservation of existing woody vegetation helped to define the limits of the site. Additionally, the natural rock outcropping feature along the west and south edges of the Visitor Center site should be preserved as this could be included as part of a future outdoor education program. The Visitor Center is envisioned as a 4,000 to 6,000 square-foot structure. Amenities that could be provided at the Visitor Center include parking, restrooms, and an outdoor classroom.

## 6.6 Boat Ramp Area

A boat ramp and associated amenities is shown on the Conceptual Master Plan at the left embankment/upper limit of the Recreation Area Access Road. There is a known landslide zone to the north of the boat ramp area that will require mitigation. The landslide deposits in the vicinity of the boat ramp area are included in the proposed earthwork borrow model for the Glade Reservoir construction. This material will be removed down to bedrock and, if suitable, used for the embankment construction.

The boat ramp will be designed to function from the reservoir's design high water level to a design low water level, spanning a range of about 25 to 35 vertical feet. Based on the Glade Reservoir operating model developed by Northern Water, for the 56 years of Poudre River flow data record from 1950 to 2005, the reservoir level is within 25 feet of full 75% of the time. The additional 10 feet of water level drop accommodated by the boat ramp will therefore result in a seasonal usage of over 75%.

Parking areas below the boat ramp and west of the access road will include permanent restrooms, that will be developed by the management agency, and will accommodate parking for personal vehicles and vehicles with boat trailers. This parking area will also function as overflow for nearby campgrounds, as well as a trailhead for public access to future unpaved, primitive trails to be developed along the east shoreline.

## 6.7 Trail Connectivity/North Trailhead

The East Shoreline Trail, an unpaved, primitive trail will be developed along the east shoreline that could serve a variety of recreational uses such as hiking, snowshoeing, mountain biking, camping, rock climbing and fishing activities. This east shoreline trail will be approximately 5 miles in length and will connect to the future North Trailhead located at the northerly limit of Glade Reservoir. By vehicle, access to the North Trailhead will be available from the future section of US 287 being realigned as part of NISP.

## 6.8 Fishing/Hunting Access

In addition to the East Shoreline Trail, a non-motorized, unpaved, primitive foot trail will be developed along the west shoreline to provide public access to fishing and hunting in areas west of Glade Reservoir. A 50-meter fishing access trail corridor along the west shoreline will protect environmentally sensitive areas and assist in reducing impacts to wildlife.

# 7 Beneficial Value of Recreation Amenities

The Glade Reservoir recreation commitments will provide value to the Larimer County community. The new amenities will elevate the overall desirability of the area and meet growing demand for outdoor based recreation. Recreation facilities provided at Glade Reservoir are being chosen to be suitable for the local environs and operational requirements of the reservoir, and work in harmony with natural features. Beneficial value in the context of this memorandum is considered to entail both economic and more subjective elements. Several areas of perceived beneficial value are described below.

## 7.1 Additional Recreational Opportunities

Foremost, Glade Reservoir will provide additional recreational opportunities within Larimer County. In light of ongoing population growth in the County, there is an ever-increasing demand for recreation amenities. The new recreation facilities will help alleviate crowding, parking demands, wait times, and natural resource pressures on other similar regional facilities (e.g. Horsetooth Reservoir, Carter Lake, Flatiron Reservoir, Pinewood Reservoir). This will lead to better overall visitor experiences, and increased frequency of visits.

As part of the 2015 Open Lands Master Plan and 2017 Reservoir Parks Master Plan, significant public outreach occurred to obtain input on wants and usage of local reservoir facilities of similar nature to Glade Reservoir (e.g. Horsetooth Reservoir, Carter Lake). This is valuable information and the development of the Glade Reservoir recreation facilities will align with those identified objectives. No significant departures from these trends are anticipated during the Glade Reservoir development.

As a new facility, it will be possible to tailor the recreational offerings to meet trends in demand, as feasible for the physical configuration of the reservoir and surrounding geology. The ability to meet the public's needs and close gaps in underrepresented recreational opportunities will further the popularity of Glade Reservoir. Diversification and innovations are possible.

## 7.2 Economic Benefits

The addition of new recreation opportunities and facilities is anticipated to bring economic benefit to the local area. Glade Reservoir will further elevate the local area as a desirable place to visit and reside. The amenities will draw an increase in visitors to the area, local citizens and tourists alike. Spending at local recreation-based and tourism-related businesses such as markets, gas stations, recreational supply stores, restaurants, guided tours, etc. is expected to increase. Greater revenues, employment, and an expanded tax base will occur. Expanded business opportunities will be available at Glade Reservoir, some of which do not currently exist. For instance, the new Visitor's Center and group pavilions, could become a focal point for local small business support such as for: farmers' markets, group catering, education, professional photography, etc.

An estimation of overall economic benefit of \$13M to \$30M annually from Glade Reservoir was previously made as noted in the NISP Final Environmental Impact Statement (FEIS), section 4.16.3.5. This value was based on visitation estimated at 379,000 visitors annually at full development.

## 7.3 Healthy Living in Colorado Outdoors

Glade Reservoir, through its varied recreational opportunities, will promote healthy living and enjoyment of the Colorado outdoors. Whereas existing nearby reservoir facilities are seeing crowding during peak times that may deter visitors, Glade Reservoir expands options for outdoor enjoyment, exercise, and mindfulness. The recreational facilities are intended to serve a variety of patrons, such that benefit can be gleaned by many.

## 7.4 New Recreational Lands

An identified need in the Larimer County 2017 Reservoir Parks Master Plan is that additional land acreage (park land and water area) is needed as part of the County's long-range plans to meet ongoing demands and population growth, while maintaining reasonable service levels. If Larimer County serves as the recreation management agency, Glade Reservoir would readily address this deficit, without requiring outright property acquisition (estimated at \$15,000 / acre in the 2017 master plan).

## 7.5 A Nearby Amenity

Glade Reservoir will be in close proximity to populated areas within Larimer County. It is generally located 4 miles northwest of Laporte, 9 miles northwest of downtown Fort Collins, 25 miles north of Loveland, and 50 (driven) miles northeast of Estes Park. This will encourage visitations by the public, for both day-use and overnight camping. Its nearby location will also facilitate staffing and servicing of the facilities by the recreation management agency (yet to be selected).

## 7.6 Educational Outreach

Glade Reservoir will provide numerous opportunities for educational outreach to the community. Through a variety of possible features such as the Visitor Center, kiosks, trails, and other interpretive signage, a means for conveying education to the public could be provided. Educational outreach can consist of both passive features and instructor/guide-led programs. Topics could include:

- Water Stewardship and Conservation
- Local Colorado History
- Geology, Archeology, Paleontology
- Ecology, Wildlife, Nature
- Reservoir Construction and its Workings

## 8 Recreation Facility Management

This section summarizes our understanding of Northern Water’s approach to management of the Glade Recreation Facilities. Northern Water does not intend to operate and manage the recreation facilities at Glade Reservoir and will instead partner with a management agency to provide these services. Potential management agencies being considered by Northern Water include Larimer County, Colorado Parks and Wildlife (CPW), and concessionaires. Northern Water intends to commence a selection process for a management agency at a later date, separate from and following completion of an Inter-governmental Agreement (IGA) between Northern Water and Larimer County. This approach was developed in coordination with Larimer County management and staff. Northern Water acknowledges that Larimer County is a valued partner in recreation facility management at other Northern Colorado reservoirs.

Upcoming recreation facility discussions with a potential management agency would include:

- Input on development and design of amenities
- Extent of facility development by Northern Water vs. management agency
- Flexibility to allow for refinements in recreation facilities
- Financial analysis and planning
- Facility security needs and methods to provide security
- Prioritizations, phasing, and timing to implement recreational features

## 9 Reference Documents

- Larimer County Department of Natural Resources. December 2017. 2017 Reservoir Parks Master Plan Final Draft
- Larimer County Department of Natural Resources. June 2015. Open Lands Master Plan
- US Bureau of Reclamation. October 2016. Public Scoping Report for the Larimer County Parks Master Plan and Resource Management Plan / Environmental Assessment
- US Army Corps of Engineers, Omaha District. July 2018. Final Environmental Impact Statement, Northern Integrated Supply Project