



Larimer County Analysis – Technical Memorandum No. 5 Glade Reservoir Recreation

Prepared for:
**Larimer County in accordance with the
Memorandum of Understanding between
Larimer County and Northern Water**

Prepared by:
**Northern Integrated Supply Project
Water Activity Enterprise
Northern Colorado Water Conservancy District**

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1.0 GLADE RESERVOIR RECREATION

Glade Reservoir provides an opportunity to develop water-based recreation on up to 1,600 surface acres of reservoir and additional land-based recreation on an adjacent 170-acre recreation area. As part of commitments in the state Fish and Wildlife Mitigation and Enhancement Plan (FWMEP) and the federal Clean Water Act Section 404 Permit process, Northern Water will allow recreation at Glade Reservoir, and as described below, Northern Water has committed to multiple items that will develop recreation opportunities at Glade Reservoir. The types of recreational opportunities would likely be similar to those at Horsetooth Reservoir and Carter Lake, including motorized boating, hiking, and developed campground(s).

1.1. Present Commitments

Northern water has committed to multiple recreation and public access items as part of cooperative discussions with potential recreation managers, as well as through the FWMEP. These items include the following:

- Visitor Center – The Glade Reservoir Complex will serve as a gateway to natural resources and recreation in Northern Colorado and the Poudre Canyon. The visitor’s center would include displays and information on NISP operations, regional geology, municipal and agricultural conservation, preserving irrigated lands, and NISP environmental commitments. Northern Water will commit up to \$940,000 for construction of the visitor’s center to meet these environmental commitments, which could be used to construct a 4,000 to 6,000 square foot facility, without staffing. Ideally, the staffing and use of the visitor’s center will be tied to recreational uses at Glade Reservoir. The exact location and layout of this facility will be determined during final design of the facility.
- Left Abutment Paved Road & Guardrail – An access road for operations and maintenance is required for Northern Water personnel to access the dam embankment on Glade Reservoir. To enable this access road to be utilized by the public, the road will be enlarged, paved, and a guardrail will be added. Additional security fencing will be required for operations and maintenance personnel to access secure areas.
- Foothills Recreation Area – Land owned by Northern Water south and west of the left abutment that is not required for the dam, reservoir, or appurtenant facilities will be set aside for the recreation manager to develop hiking trails, camping sites, etc. This includes an area of approximately 170 acres.
- Boat Ramp – Northern Water commits to construct facilities dedicated to providing access to the Glade Reservoir Fishery, including boat launch facilities.
- Rough Grading of Campground(s) – As part of the construction phase of the Glade Reservoir Facilities, large excavation and earth moving equipment will be utilized on site. Northern Water commits to rough grading of recreational parking areas and campground sites to lower costs for the future recreation manager of constructing the final recreational parking areas and campground sites.

- Upper Parking Lot – At the top of the Left Abutment roadway, a parking lot will be added for boat and day use. This parking lot will be paved and enable easier access to the boat ramp. Significant excavation and grading will be required for this area due to the rocky outcrops and existing steep slopes.
- North Trailhead Parking Lot – At the north end of Glade Reservoir, a parking lot will be added to provide access for a multi-purpose trail on the east side of the reservoir. The parking area will be accessed off U.S. Highway 287.
- Lower Parking Lot – Northern Water has committed to constructing a large-scale parking lot to provide a meeting area for large groups of people, primarily for those participating in non-commercial rafting trips and other recreational activities, to carpool to those activities and relieve traffic congestion in the canyon. The parking area would be located within ½ mile of Ted’s place to increase drive-by traffic at Ted’s Place businesses, with daily parking allowed at a reduced rate from the fees being charged by the managing agency for recreational access to Glade Reservoir and the forebay. The parking area would have a capacity of 100-200 cars.

Estimated costs for the present commitments are shown in Table 1 below. These costs are approximate based on the FWMEP, engineering design estimates, and current bidding climate.

Table 1: Present Commitments Cost

Item	Cost
Visitor Center	\$ 940,000
Paving Road with Guardrail	\$ 1,500,000
Foothills Recreation Area (170 acres)	\$ 500,000
Boat Ramp	\$ 500,000
Campground Rough Grading	\$ 1,000,000
Upper Parking Lot	\$ 500,000
North Parking Lot	\$ 50,000
Lower Parking Lot	\$ 40,000
TOTAL	\$ 5,030,000

In addition to the commitments listed and itemized above, a cool-water fishery will be established and managed in Glade Reservoir. An annual stocking plan was developed by Colorado Parks and Wildlife for maintenance of a cool-water fishery. It is anticipated that the cost of the fishery is \$4,070,000 including capitalized cost and annual O&M costs capitalized over 50 years.

1.2. Recreation Study

A technical memorandum assessing areas for recreation development at Glade Reservoir is included as Appendix A. This study presents a concept for providing the commitments listed above and is meant to be a starting point for potential recreational-areas-development discussions. Further details of land and water-based recreation will be contained in a recreation plan developed in conjunction with the managing agency or agencies. Larimer County is involved with these studies and has had opportunity to

review the included concept map. There have also been discussions on recreation at Glade Reservoir with Colorado Parks and Wildlife.

2.0 CONSISTENCY WITH MASTER PLAN

The included conceptual recreation plan was developed after review of Larimer County’s 2017 Reservoir Parks Maser Plan (Master Plan) to be consistent with that Master Plan. Development of Glade Reservoir recreation meets demand for and provides access to recreation opportunities including water-based recreation, which are called for in the Master Plan. More specifically, 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%.

As discussed in the Master Plan, to maintain service levels similar to those it currently offers, Larimer County will need to acquire additional acres of parkland and flatwater for public recreation use. Purchasing additional land is also the number one priority identified by the public for addressing crowding and improving the recreation experience.

Because Glade Reservoir recreation is well suited to provide additional recreation options and address an increasing demand for recreation in Larimer County, it is identified in the Master Plan as a Future Park Strategy.

3.0 FACILITY MANAGEMENT

Northern Water will partner with a third party to manage Glade Reservoir recreation facilities. Larimer County, Colorado Parks and Wildlife, and a third-party concessioner are being considered as facility managers. Decision regarding the management agency will be made after the Larimer County IGA is developed and will include discussion regarding:

- Development and design of amenities
- Extent of facility development by Northern Water vs. management agency
- Financial analyses and planning
- Facility security needs and methods
- Prioritizations, phasing, and timing to implement recreational features

This approach to choosing a facility manager was developed after consultation with Larimer County’s staff and management.

Representatives from Northern Water, Larimer County, and Colorado Parks and Wildlife met for a site visit in May 2018 to brainstorm ideas and opportunities for recreation, as well as review the planned recreation features. Additional coordination with Larimer County occurred in six subsequent meetings to discuss recreation types and options.

The site visit, additional meetings with Larimer County, additional studies, and future public input processes will be utilized to inform the planning and design of the recreational areas.



Figure 1: May 2018 Field Trip - Exploring Camping Areas



Figure 2: Future Glade Reservoir

This photo is looking north from the inflection point in the dam alignment. This shows land that will be inundated by Glade Reservoir in the future.

4.0 BENEFITS TO LARIMER COUNTY

Glade Reservoir provides an opportunity to develop a brand-new, outdoor, water-based recreation facility in Larimer County. The recreation commitments, as described above, provide over \$9 million dollars to develop recreation infrastructure and an associated cool-water fishery.

Reservoir recreation will bring tourism and economic opportunities to businesses in Larimer County along with additional sales tax revenues. Development of Glade Reservoir Recreation is estimated to provide \$13 million per year to \$30 million per year in total economic effects as described in the project's Final Environmental Impact Statement.

The development of Glade Reservoir recreation also meets the objectives of Larimer County's Master Plan.

5.0 CONCLUSIONS

Northern Water will continue working with Larimer County to develop a recreational plan that is agreed upon by the County, Northern Water, the Project Participants, and the recreation management organization (if not Larimer County). The recreation areas will be further refined based on collaboration between Larimer County, Colorado Parks and Wildlife, and Northern Water.