NORTHWESTERN ENERGY

Wild Goose Landing Master Plan Due Diligence Report

December 13, 2024

MacKay Sposito

moffatt & nichol

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1. INTRODUCTION

a. Project Intent

MacKay Sposito and Moffat Nichols partnered with NorthWestern Energy in August 2024 to provide planning and engineering services for Wild Goose Landing, an existing recreation facility in Thompson Falls, Montana. The services included recreation master planning and marine engineering to enhance safety and operational efficiency.

The planning process evaluated the site's existing conditions, identified opportunities and constraints, and assessed utilities, structures, ADA compliance, and recreational needs. Based on these findings, conceptual recreation improvements were developed and presented for community input. The project's goal is to identify necessary improvements, estimate construction costs for budgeting, ensure code compliance, and outline permitting requirements for NorthWestern Energy's use.

b. Location

The recreation facility is located at 220 E Main St., Thompson Falls, within the city's central business district. It is bordered to the north by Highway 200 and to the south by the Clark Fork River (Thompson Falls Reservoir). The western boundary adjoins a single-family residence and commercial development. There are no planned developments directly east of the project area, as the land between Highway 200 and the river is limited.

c. Description of the Existing Recreation Facility

The recreation facility spans approximately three acres and features general open space with trails, mature trees, lawn, boulders, surface rock, and a vegetated shoreline. While the park's parcel extends to nine acres, much of it lies along the shoreline in front of residential and commercial properties, rendering it inaccessible.

The built environment includes stormwater management from Main Street, utilities supporting restrooms, pedestrian paths, public parking for day use and boating, informational kiosks, and a combined swimming and boat launch facility with a shared concrete ramp and dock.

However, the facility is in noticeable disrepair. The restrooms are closed, the parking lot's mixed concrete and gravel surfaces impede accessibility, and the irrigation system is insufficient.

Circulation is a major concern as boats are launched where individuals swim, creating safety hazards. Additionally, the ramp slopes and launch angles fail to meet current engineering standards, complicating operations.

The site's gentle slope from Highway 200 to the river creates pockets of flat terrain suitable for lawns, parking areas, and restroom facilities. However, stormwater management remains a significant issue. The Montana Department of Transportation (MDT) introduced an overflow system on the park's west side, which channels unmanaged stormwater into the park and eventually into the river. This contributes to localized flooding and maintenance challenges. Additional details on stormwater conditions are provided in Section 2.

d. Zoning/Land Use

Zoning/Land Use: The site is currently zoned as mixed commercial-residential (City Ordinance 10-1-16). While recreational facilities are not explicitly permitted under this zoning, they appear to be allowed in all zones historically (see Figure 1).

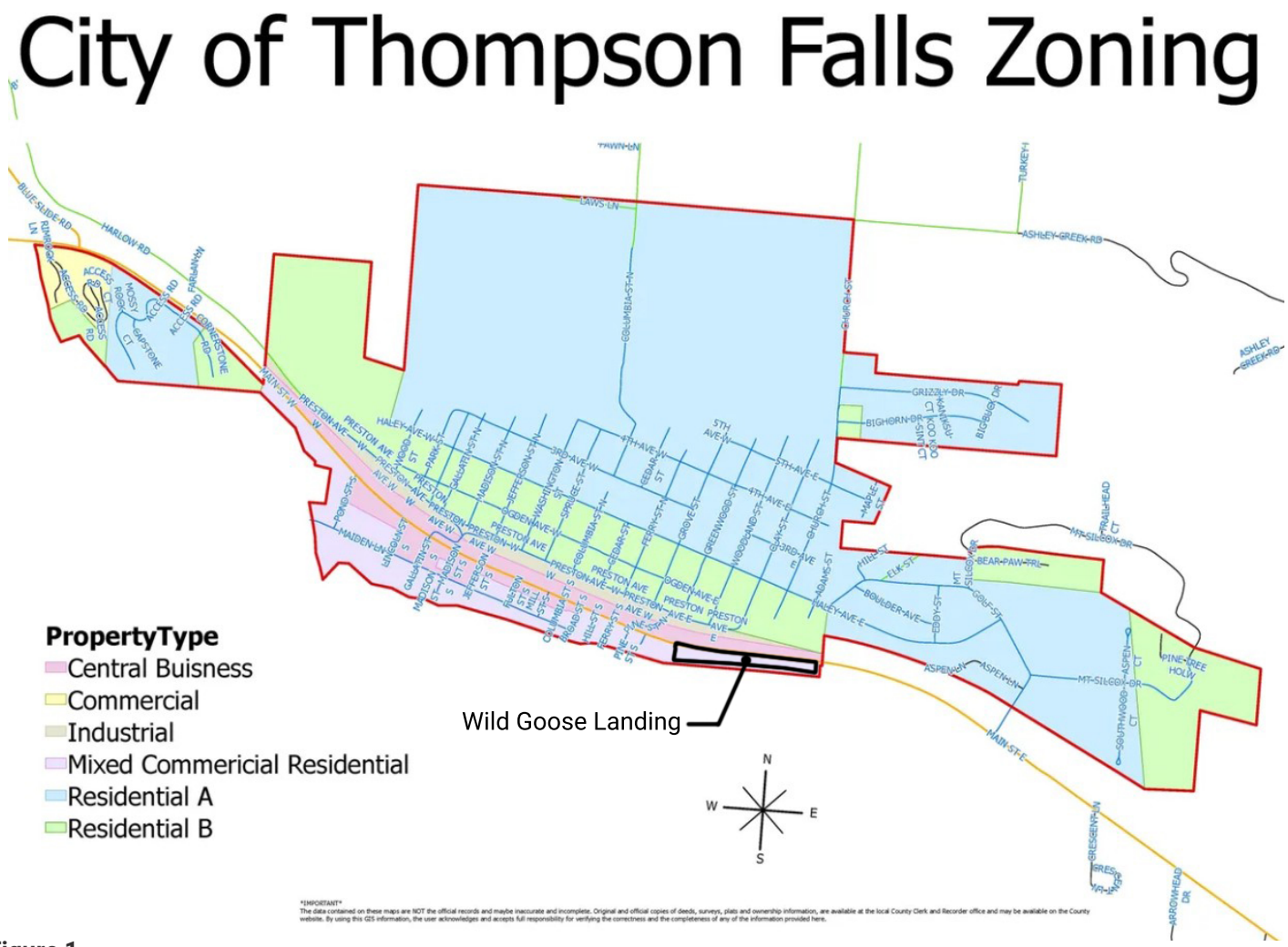

City of Thompson Falls Zoning
PropertyType
Central Buisness
Commercial
Industrial
Mixed Commericial Residential
Residential A
Residential B
Wild Goose Landing
N
W
E
S
IMPORTANT
The data contained on these maps are NOT the official records and maybe inaccurate and incomplete. Original and official copies of deeds, surveys, plats and ownership information, are available at the local County Clerk and Recorder office and may be available on the County website. By using this GIS information, the user acknowledges and accepts full responsibility for verifying the correctness and the completeness of any of the information provided here.

Figure 1

2. EXISTING CONDITIONS

a. Stormwater

Stormwater management in the park has been modified over the years. Based on our investigations, the Montana Department of Transportation (MDT) modified the existing site stormwater with the expansion of the system to collect water from Main Street. The collection of additional stormwater from Main Street releases to a small basin located on the west side of the park.

During large storm events this area becomes flooded and stormwater then travels along the existing concrete path as part of the overflow then turns south towards the river where it is dispersed and released.

While the current design hasn't created scour or other erosion control issues, it does make the path and surrounding area difficult to navigate, maintain and doesn't properly treat the stormwater. It also appears that there are two storm water outfalls along the shoreline that are abandoned. Further investigation for these facilities is warranted.

The stormwater for the rest of the recreation area is currently not treated nor detained and generally flows towards the river. The stormwater design and calculations that were completed by the Montana DOT were not available to assess the volume of water captured and detained to assess the current design. Therefore, a stormwater analysis should be completed as part of the next phase of engineering to understand what is currently being released and how the stormwater, both existing and future, will be Treated and detained based on the new recreation improvements.

b. Electrical

Power is supplied to the site by a single transformer owned by NorthWestern Energy, which powers the restroom, irrigation controller, and grinder sewer pump station. This transformer appears sufficient for the planned improvements. The presence of an electrical meter must be confirmed during the design phase.

c. Sewer

The site is serviced by the City's sewer system, which is an 8" PVC line that runs along the shoreline to the site. Currently there is an on site grinder pump system that is located adjacent to the restroom.

The grinder pump grinds and pumps sewage from the restroom facility and pumps it back into the existing 8" sewer line. This system may have to be replaced and will be evaluated during the next phase of engineering design. A pump station/grinder pump will still be needed as the restroom can not be gravity fed. For the purposes of this master planning effort, the existing connection to the existing sewer line will be maintained and the grinder pump would remain at the same location and be re-plumbed between the new restroom and the pump.

d. Domestic Water

A domestic City water mainline is located in Main Street and runs along the frontage of the property. Water is supplied to the restroom with a 1" meter and 1" line to the restroom. This line will need to be evaluated as part of the next engineering effort to ensure the water system is properly protected, the line is in good condition and re-usable. The double check valve assembly is not functioning due to freeze damage and will need to be replaced.

e. Irrigation Source

The irrigation line is connected to the same 1" water meter used for the domestic water. There is a double check valve assembly for the irrigation system but it is not functioning due to freeze damage and will need to be replaced. The irrigation mainline is 1", exact routing is unknown at this time but there are existing valve boxes that will help trace the mainline routing.

The mainline and point of connection will need to be evaluated as part of the next engineering effort to ensure that the water system is property protected and that the line is in good condition. This will include replacement of the double check valve assembly. At this time it is assumed that City water will be used for the irrigation system but using the reservoir for the water source may be explored as an option.

f. Sub-surface Conditions-Existing Soils

Existing soils for the recreation area consist of fine sandy loam, https://www.nrcs.usda.gov/resources/data-and-reports/gridded-soil-survey-geographic-gssurgo-database. Based on field observations there is not a lot of topsoil on site and surface rock is visible throughout the recreation area.

Further geotechnical investigations are needed to evaluate the depth of topsoils throughout the park for trenching activities and placement of structures, infiltration rates for stormwater management, and bearing capacity for footing and structural design.

g. Shoreline Environmental/Critical Areas and Permitting

This project will take multiple permits and clearances before we proceed with construction. Here is a list of what will be required:

- **Cultural Clearance** – Section 106 National Historic Preservation Act. NorthWestern is required to comply with this as part of their FERC license. This would entail a cultural resource survey, determination of effect, and concurrence from the Montana State Historic Preservation Office before proceeding.
- **Sanders County Floodplain Permit** – This permit is issued through the local county floodplain administrator. The Clark Fork is FEMA mapped so NorthWestern will most likely have to complete and provide a no-rise modeling report to get a floodplain permit.
- **Army Corps CWA Section 404 Permit***
- **Montana Natural Streambed and Land Preservation Act Section 310 Permit*** – This is administered through the local conservation district (Green Mountain Conservation District).
- **Montana Department of Environmental Quality 318 (turbidity) authorization*** - This permit is for temporary authorization for short-term water quality standards for construction. This is issued by DEQ but can be waived by Montana Fish Wildlife and Parks during its review of the 310 permit.

The two permits and the 318 authorization with * above are all applied for through the submittal of a Joint Application.

h. Transportation

The recreation area is bordered on the north by Highway 200 or Main street and is owned and operated by Montana Department of Transportation. Based on initial research it appears that the highway typically has a 70 foot Right of Way (ROW) along the frontage of the park. More than half of the frontage has roadside parking and is curbed.

The curb and parking stops at the recreation area entrance and transitions to a soft gravel shoulder with concrete wheelstops acting as a barrier.

Access off of Highway 200 is a single access point where both the day use visitors, swimmers and the boating community enter the park. The driveway then splits and the 14 stall day use parking is provided to the west and 8 stall truck and trailer and 2 standard stall boat launch parking and swim areas are to the east. The boat launch does have a secondary exit at the east end of the parking lot.

In 1989 there were boundary line adjustments that show modifications to the ROW along the frontage of the park that will require additional investigations. The 1989 adjustments push the ROW further into the park than potentially needed. Complicating the matter is the BNRR railroad ROW or easement that also encroaches into the site.

i. FERC Relicensing

NorthWestern is in the process of relicensing the Thompson Falls Hydroelectric Project, FERC No. 1869. Their existing license expires on December 31, 2025. NorthWestern submitted their Final License Application (FLA) to relicense the Project on December 29, 2023. As part of NorthWestern's relicensing proposal described in the FLA, NorthWestern included a Recreation Management Plan. Wild Goose Landing Park is included as a Project-sponsored recreation site in the proposed Recreation Management Plan. If FERC were to adopt the Recreation Management Plan as proposed, NorthWestern would be required to make the Wild Goose Landing Park available for public use for the duration of the new license term, 50 years as proposed.

On February 26, 2024, FERC staff requested NorthWestern file additional information to assist in the evaluation of NorthWestern's relicensing proposal. By letter dated May 23, 2024, NorthWestern filed its response to most of the additional information requested by the Commission staff, but sought additional time to respond to information related to fish and aquatic resources. In this request for additional information NorthWestern explained that its relicensing proposal for fish and aquatic resources for the new license term was under negotiations with settlement parties and requested 180 days to conclude settlement negotiations. FERC granted this request by letter dated May 31, 2024. On November 19, 2024, NorthWestern submitted another request to FERC to extend the deadline for the fisheries and aquatics relicensing proposal for another 180 days to continue and conclude the settlement negotiations. FERC granted NorthWestern the additional 180 day extension, until May 18, 2025, on November 11, 2024.

j. Boating Facility

The existing ramp is constructed with pre-cast concrete planks, oriented parallel to the ramp slope and a paved surface to transition from the concrete planks to the access road.

Due to high reservoir water level, the limited extent of the concrete planks on the ramp was visible. The planks were in fair condition. A dock was located along the east side of the ramp for boat launching and retrieval. The dock was metal frame construction with a wood deck, and was supported on the lake bed using vertical metal supports.

Freeboard (distance from water surface to deck) was about 15 inches. Cleats were located along both sides of the dock. The boat dock was in fair condition.

k. Swimming Area and Dock

A second dock was located along the west side of the boat ramp, constructed using a metal frame and timber deck and flotation units for the offshore section.

The swim dock consisted of three dock units, connected by hinges The landward end of the swim dock was resting on the lake bed, with a transition plate attached to provide access to/from shore.

The lack of piles suggests that the dock is held in place with some type of anchor lines and dead-weights or other type of anchor. Freeboard was about 15 inches. Along the perimeter of the swim dock was a bull rail (raised rail above the deck). A swim ladder was attached to the offshore end of the dock. The access dock was considered in fair condition. For structures to remain in-place for use as public access, it is recommended that an assessment be conducted at a lower reservoir water level to allow access to the structures (including foundation areas). Alternatively, an underwater assessment can be completed by qualified divers. Areas to be observed should include:

- Foundation base material for the boat launch ramp planks
- Attachments for cleats and swim ladder
- Joints and structural members of the metal dock systems
- Dock anchoring system components
- Flotation units

Swim Area: An area located west of the boat launch would be designated for swimming as well as access to the reservoir. The existing concrete ramp structure and swim dock would remain in place to provide a means to enter the water in addition to the beach area. A swim buoy line would be used to define the designated swimming area, and to enhance safety for swimmers by marking a boundary and alerting boaters to stay a safe distance away. The buoy line would be anchored using chain or cable to anchors, at points along the buoy line alignment. This line can be removed for the winter season, and permanent buoys would remain in-place to secure the anchor line until needed for the following season.

3. PLANNING PROCESS

The planning process was conducted over six months, beginning with site investigations during which the team gathered existing condition information, summarized in Section 2. As part of this inventory, we assessed the condition of the existing facility, identifying what is working, maintenance concerns, management challenges, public use patterns, constraints, and opportunities. Based on this analysis (see Figure 2).

Two concepts were developed to illustrate several options for development. These options were evaluated by NorthWestern Energy, and a single concept was developed based on their input, as well as feedback gathered during a public open house held on November 14, 2024. A final master plan was subsequently developed, along with an estimate of probable costs for planning purposes.

The Wild Goose Landing master plan provides a framework for future development for NorthWestern Energy and the City of Thompson Falls (see Figure 3).

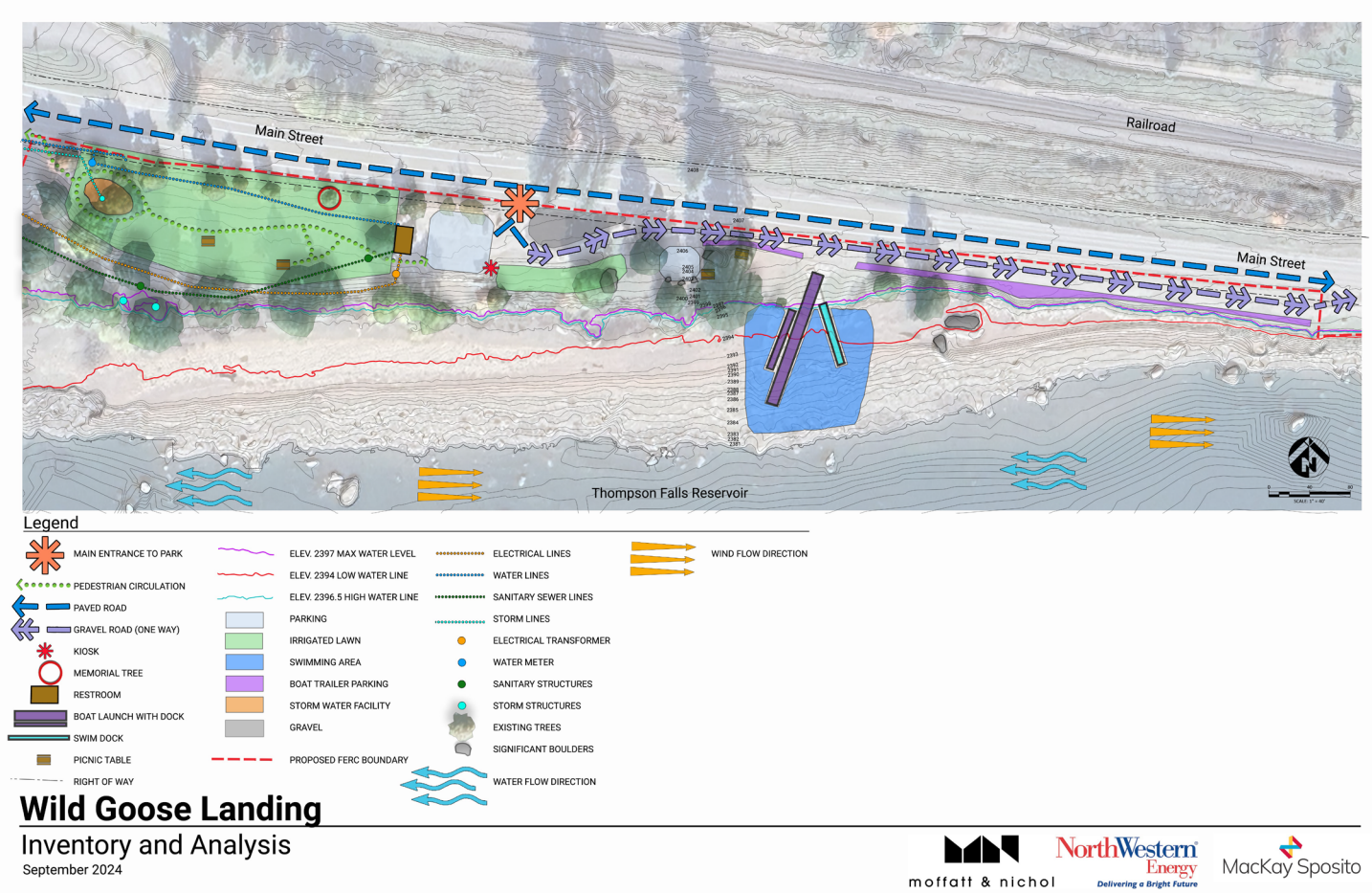


Figure 2

1. TIERED RAIN GARDEN WITH NATIVE VEGETATION
2. OPEN LAWN
3. EXISTING SHORELINE VEGETATION
4. ACCESSIBLE PICNIC TABLE
5. SMALL PICNIC SHELTER
6. RESTROOM
7. RELOCATED KIOSK WITH VISITOR INFORMATION
8. ASPHALT DAY USE PARKING (13 STANDARD STALLS, 1 ADA STALL)
9. CONCRETE SIDEWALK
10. EXISTING ROCK OUTCROPPING
11. NATURE PLAY WITH LOGS AND BOULDERS
12. VEGETATED BUFFER
13. NATIVE BUNCH GRASS, MEADOW AND PINES
14. LARGE PICNIC SHELTER
15. SWIMMING AREA (DOCK, RAMP, BEACH AND SWIM BUOYS)
16. BOAT RAMP AND DOCK
17. ASPHALT TRUCK AND TRAILER PARKING (5 STANDARD STALLS, 1 ADA STALL)
18. CONCRETE WHEEL STOP BARRIERS AND GRAVEL ISLAND WITH SWALE
19. FISHING NODES
20. SEASONAL DOCK STORAGE
21. BIKE RACKS, TRASH ENCLOSURE, DRINKING FOUNTAIN AND WASH STATION
22. ADA PARKING
23. ENTRY SIGN

0 50 100 150

Wild Goose Landing Recreation Improvements - Master Plan

December 2024

moffatt & nichol NorthWestern Energy MacKay Sposito

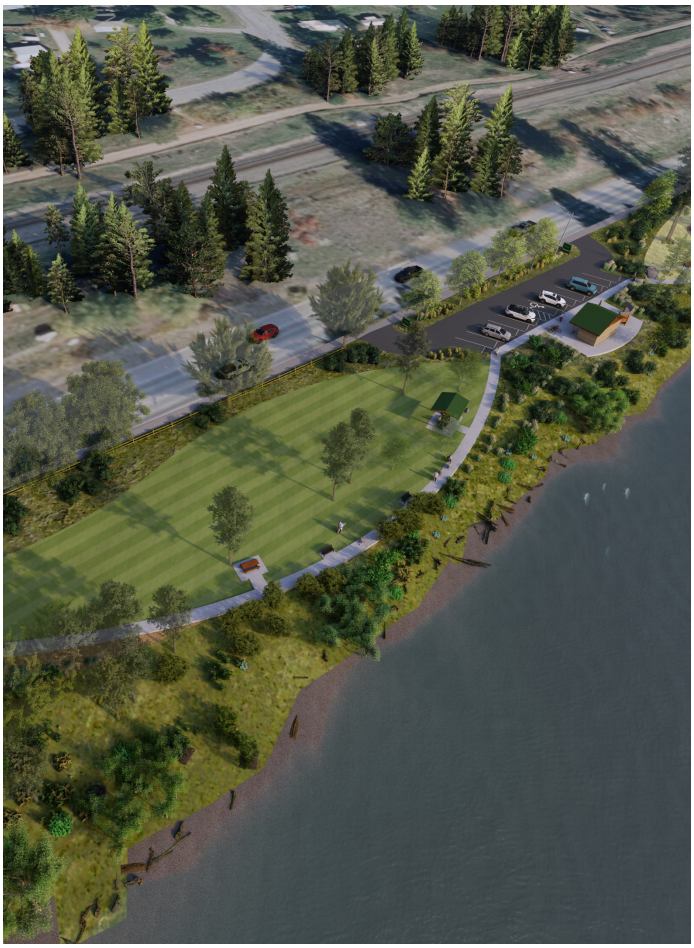
Figure 3

This plan will also inform discussions with FERC as part of the re-licensing effort. Key goals for the master plan include reducing ongoing maintenance and operation costs, ensuring ADA compliance, creating a safe and enjoyable environment, and minimizing environmental impacts and permitting requirements.

The recreation improvements depicted in Figure 3 begin with establishing a new connection to the existing sidewalk along Highway 200 or Main Street. This connection is critical as it links the park to the downtown central business district. Upon entering the park, users will pass by a modified stormwater outfall, where a series of rain gardens and weirs are proposed to treat and manage stormwater from both off-site and on-site sources.

Pedestrians will then flow into the day-use area, which will feature open lawn for various recreational activities, as well as benches, picnic tables, and covered shelters along the shoreline.

Vehicle access to the day-use area will follow a one-way loop with angled parking, including separate entrances and exits from the boat launch area. This design minimizes vehicular and pedestrian conflicts by separating traffic associated with trucks and boat trailers. The parking lot will include 13 standard stalls and one ADA-compliant stall.



Adjacent to the day-use area, a proposed restroom facility will be plumbed and heated for seasonal use. This area will also include bike racks, a drinking fountain, a wash station, and the relocated existing kiosk.

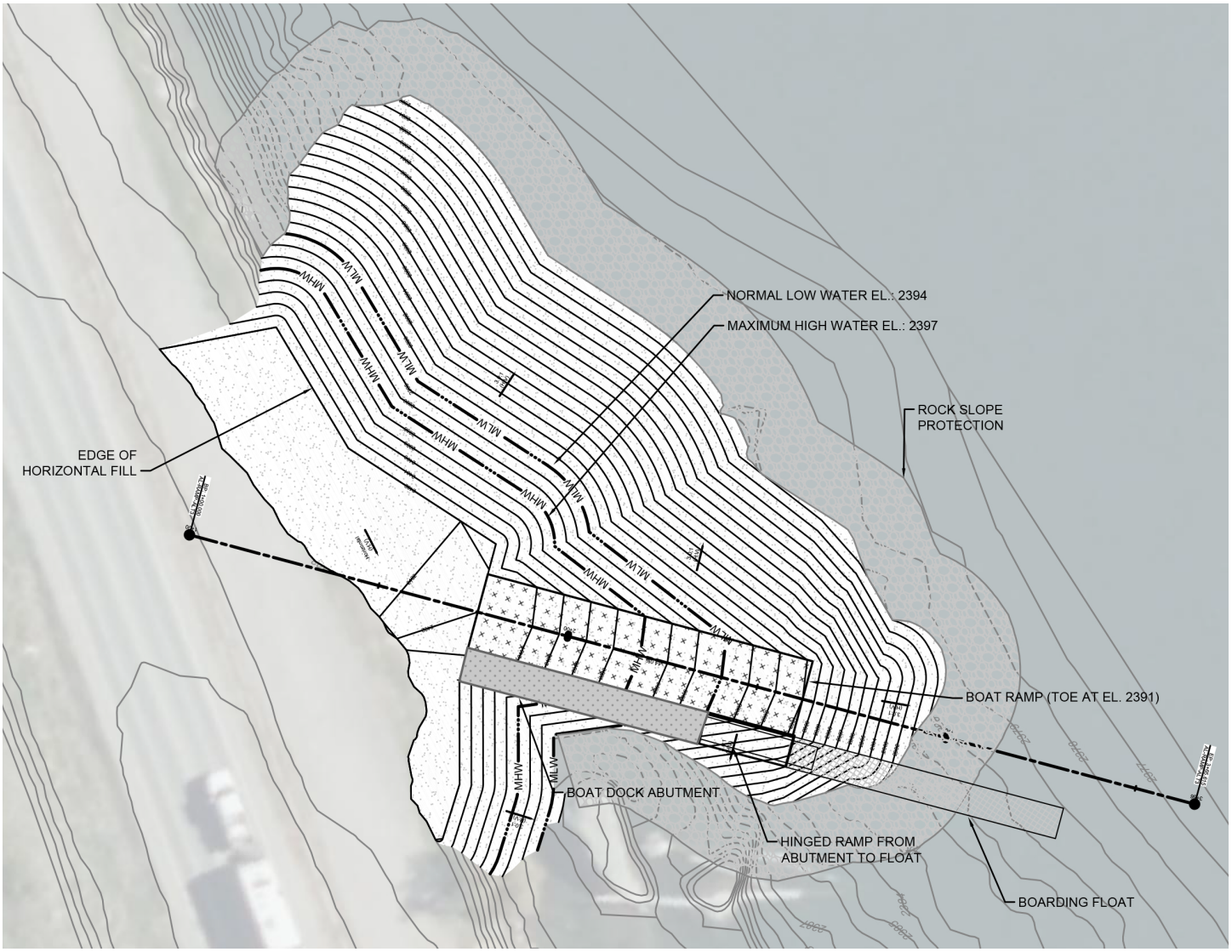
Users transitioning to the beach or boating facility will pass through a small area with high surface rock identified as a “nature play” element. This space will utilize large rock outcroppings as play elements, supplemented with logs, steppers, and other natural elements.

Beyond this area lies a small sand or mineral swim beach equipped with picnic tables and a covered shelter, providing various options for the public to enjoy, including wildlife viewing. Swim amenities, such as ladders and grab bars, will be added to the existing dock to assist non-motorized boat users. The existing concrete ramp will remain, offering a safe surface for swimmers and ADA users to access the water. ADA parking for the beach and boat launch will also be provided, with small ramps ensuring access to the swim beach and boating docks.

The boat ramp and dock shown in the master plan will be newly constructed. Pre-cast concrete panels will be used for the ramp below elevation 2,396.5 feet, with cast-in-place concrete will be used for areas above this elevation. See figure 4 for a conceptual plan view and section of the boat ramp. The dock will be securely anchored to the land and newly fabricated, featuring standard dock amenities such as cleats, bumpers, and toe guards. Parking for the boat launch will maintain a one-way traffic route, with an entrance and exit connecting to Highway 200. The parking drive aisle and spaces will be paved and striped, with a sidewalk to accommodate pedestrians. The new parking area will include eight truck-and-trailer stalls, one ADA stall, and one standard stall.

The parking improvements will necessitate expansion of the shoreline along the boat launch and parking area, requiring fill and encroachment into the river. Preliminary estimates show that the shoreline will expand by approximately 24’ on average. The fill slope will be armored with large rocks or cobbles at the toe and reinforced with large woody debris to prevent scouring. Above this elevation, a vegetated bag retaining wall system is recommended to allow for planting.

This design aims to create a visually appealing, vegetative shoreline that offers access for recreational fishing and supports habitat creation. Stormwater from new hard surfaces will be managed using small drainage swales within the park, allowing infiltration back into the groundwater.



NOTES:

1. AERIAL IMAGE FROM MICROSOFT BING.
2. SURVEY DATA PROVIDED BY MacKay Sposito, VERTICAL DATUM AND DATE UNKOWN.
3. BOAT RAMP TOE AT 3' BELOW NORMAL LOW WATER ELEVATION

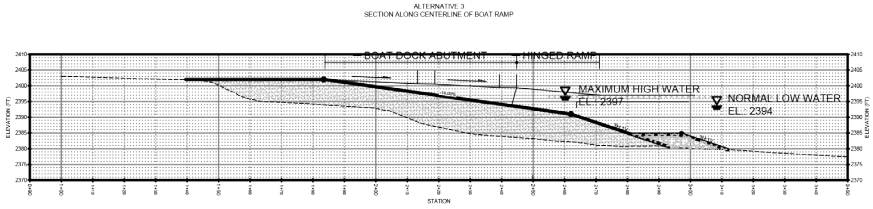


Figure 4

4. EXECUTIVE SUMMARY

The Wild Goose Landing Master Plan Due Diligence Report provides a detailed analysis of the existing recreational facility in Thompson Falls, Montana, managed by NorthWestern Energy. The purpose of this report is to evaluate current site conditions, identify areas for improvement, and propose a master plan for sustainable development that aligns with community needs and regulatory requirements. (See Key Findings)

PROPOSED IMPROVEMENTS

The master plan emphasizes safety, accessibility, and ecological sustainability:

- **Recreation Upgrades** - Enhanced swimming and boating facilities, ADA-compliant pathways, nature play areas, and new picnic spaces.
- **Infrastructure Development** - New restrooms, modernized utilities, expanded parking, and improved stormwater management through rain gardens and drainage swales.
- **Environmental Enhancements** - Stabilized shoreline with habitat-friendly features, vegetated retaining walls, and controlled access for recreational fishing and wildlife viewing.

NEXT STEPS

To advance the master plan, NorthWestern Energy should:

- Consult with MDT on right of way (ROW), stormwater design and access.
- Conduct a topographic survey, including boundary resolution.
- Undertake a geotechnical investigation to assess soil conditions and inform design.
- Create a permitting matrix to guide environmental compliance and mitigation efforts.
- Develop detailed engineering drawings for phased construction.

CONCLUSION

The Wild Goose Landing Master Plan provides a vision for revitalizing a vital community resource. By addressing current deficiencies and incorporating community feedback, the plan aims to create a safer, more accessible, and environmentally sustainable recreational area. While boundary resolution and permitting challenges present obstacles, these risks are manageable with phased implementation and careful coordination with stakeholders, including FERC and local agencies. This project represents a significant opportunity to enhance the quality of life in Thompson Falls while aligning with NorthWestern Energy's regulatory commitments and long-term goals.

KEY FINDINGS

1. Current Condition

- The 3-acre site is heavily used by the public but suffers from aging infrastructure, poor maintenance, and inadequate facilities. Specific challenges include closed restrooms, degraded parking surfaces, unsafe swimming and boating access, and a lack of stormwater treatment systems.
- Existing amenities like docks and ramps are in fair condition but require structural assessments and updates for long-term usability and safety.

2. Utilities and Infrastructure

- Utilities, including electrical, sewer, and water, are functional but need upgrades to accommodate future improvements.
- The double check valves for the domestic water and irrigation system are damaged and require replacements during engineering design.

3. Environmental and Regulatory Challenges

- Development will require extensive permitting, including cultural clearances, environmental impact evaluations, and compliance with floodplain and water quality standards.
- Shoreline stabilization is necessary to protect against erosion and support recreational use

4. Recreational Needs

- The site is a critical community asset for swimming, boating, and day-use recreation. Planned upgrades include designated swim and boating areas with improved safety features and expanded accessibility.

5. Planning Risks

- The biggest risk to the development of the recreation based on the master plan will be boundary resolution. If the Montana Department of Transportation ROW is accurate along with BNRR ROW/easement, negotiations will need to occur to recapture shoreline along the day use and boat parking areas. As of now we have assumed a 70' right of way based on the center line of Highway 200 for the development of the master plan. If that property can not be acquired the entire park program would have to shift to the west and would encumber the majority of the existing day use area with parking, boat ramp, swim area and other recreational facilities shown in the master plan..

MacKay Sposito

Celebrating 50 Years

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