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January 7, 2021

Kevin Westhuis
Utility Director
City of River Falls Municipal Utilities
222 Lewis St.
River Falls, WI 54022

Subject: Phase I Archaeological Survey at the Powell Falls Development, River Falls Hydroelectric Project (FERC #10489), Pierce County, Wisconsin
TRC Project No. 350165
WIARC No. 263

Dear Mr. Westhuis:

The River Falls Hydroelectric Project (Project) is owned and operated by the City of River Falls Municipal Utilities (RFMU). The Project consist of two developments, the Junction Falls Development, which includes Lake George, and the Powell Falls Development, which includes Lake Louise. The Project is licensed by the Federal Energy Regulatory Commission (FERC). RFMU proposes to decommission the Powell Falls Development with dam removal that will also result in the permanent drawdown of Lake Louise. The removal of the dam is defined as an undertaking and is subject to the provisions of Section 106 and its implementing regulations at 36 CFR Part 800. Section 106 directs federal agencies to consider the effects of their undertakings on any resources that are listed, or eligible for listing, in the National Register of Historic Places (NRHP). The Cultural Resources Study (Study), which includes a Phase I Archaeological Survey, is outlined in the RFMU Revised Study Plan (RSP) filed on June 11, 2019 and FERC's Study Plan Determination dated July 11, 2019.

The first objective of the Study was to determine the Area of Potential Effect (APE). The proposed APE includes the approximate FERC Project Boundary and areas of potential land disturbance from Powell Falls decommissioning and removal activities. The proposed APE was divided into two part, the Junction Falls APE and the Powell Falls APE. This distinction was made due to the proposed action at the Project: The Junction Falls Development is proposed for relicensing while the Powell Falls Development is proposed to be decommissioned with dam removal. Both the Wisconsin State Historic Preservation Office (SHPO) and FERC requested that the APE be divided this way to facilitate Project review. On October 2, 2019, the Licensee sent a letter to the Wisconsin SHPO and tribes requesting review and comment on the proposed Project APE. The Wisconsin SHPO concurred with the APE by letter (October 10, 2019.) No other responses were received.

The second phase of this Study includes the Phase I Archaeological Survey (Survey), which is reported here. This report details the results of the archaeological survey of the APE as depicted in Figures 1 - 5. The Powell Falls APE is in Sections 1 and 2 of T27N, R19W in River Falls Township (Figure 1).

LITERATURE AND ARCHIVES

Literature and archives research were conducted prior to archaeological fieldwork. The Wisconsin Historic Preservation Database (WHPD) shows the Foster Cemetery (47PI589/BPI-0064) near the Powell Falls APE. The cemetery is outside of the Powell Falls APE and will not be affected by the dam removal.¹

The 1947 Wisconsin Land Economic Inventory (WLEI) provides little information regarding natural or cultural resources in the vicinity except for the cemetery at the southwest end of the Powell Falls APE (Figure 2). The 1939 aerial photograph shows the City of River Falls, wooded areas, cultivated land, grasslands, and the Project as it existed at that date (Figure 3). The 1848 General Land Office (GLO) map shows the Kinnickinnic River, and two falls of eight feet each, now inundated by the lakes (Figure 4). The Powell Falls APE as shown on the GLO (Figure 4) is at the correct location, but the GLO is a sketch map drawn 172 years ago, not specifically surveyed; therefore, the 1848 river alignment does not conform completely to modern map depictions.

One archaeological survey was conducted within the boundary of the Powell Falls APE. A 1981 survey of a small drainage on the south side of the Kinnickinnic River, due south of the Powell Falls Dam, investigated the valley walls and floor for archaeological sites. None were found and no additional archaeological work was recommended (Barth 1981).

The Powell Falls Dam, a timber crib dam built in 1903, was the second dam built in the City of River Falls. In 1948, a powerhouse was built at the dam. In 1966, the dam was destroyed in a flood event. Since then, the dam has been repaired and improvements have been made to the structures. The 1948 powerhouse is still in use (River Falls Municipal Utilities 2020).

FIELDWORK

The purpose of the Survey was to inspect the shoreline of Lake Louise and shovel test, as needed, lands within the Powell Falls APE to discover archaeological sites that may be affected by the proposed action. Part of the shoreline inspection requirement is to identify archaeological sites that might be affected by erosion². Archaeological fieldwork was conducted on July 27-30, 2020. Figure 5 depicts the Powell Falls APE boundary with shovel test and photo locations. Photos 1-8, included in Appendix A, characterize the Project environment in the Powell Falls APE along the shoreline.

1 Chip Brown, Wisconsin SHPO, sent a shapefile of the cataloged location of the Foster Cemetery to RFMU on April 10, 2019. The cataloged location was determined to be outside of the Powell Falls APE.

2 Erosion is here defined as "banks that [are] not stabilized and [are] experiencing serious sheet erosion and down-drift with material freely flowing into the flowage. Such banks [are] usually losing topsoil and vegetation. Some vegetation [may] be present at the water's edge but it [covers] less than 50% of the total shoreline." This definition of Class III erosion is provided by Great Lakes Environmental Center, Inc. of Traverse City Michigan.

TRC archaeologists walked the shoreline and shovel tested where it was possible to do so, *i.e.*, on natural land surfaces with less than 25 percent slope at the bank top and within the Powell Falls APE. Exposed or eroding banks and gravel bars formerly underwater, were inspected for artifacts. Generally, unexposed ground surfaces bordering the shore were shovel tested.

Shovel testing is the hand excavation of small holes in a systematic grid-like fashion. The tests are dug in parallel lines, called transects, with an interval within and between transects that is consistent and not greater than 15 meters, the maximum allowable by Wisconsin Archaeological Survey guidelines for public archaeology. Shovel tests, about 35 cm in diameter, are excavated to an undisturbed natural soil horizon in order to reveal former human occupation surfaces. The depth of shovel tests varies with terrain, but it is based on the archaeologist's substantive knowledge of local archaeology and soil sequences for the area. All soil from each hole is screened through ¼ inch mesh hardware cloth and placed back into the hole. If artifacts are found, the location is marked with a GPS waypoint and marked for possible test excavation. Lands within the Powell Falls APE were shovel tested at 15-meter intervals.

To facilitate description, the Powell Falls APE was divided into four quadrants. The northwest quadrant consisted of the shoreline west of the Junction Falls Dam to just east and north of the River Falls Wastewater Treatment Facility property along the northern bank. The northeast quadrant was west of the Junction Falls Dam to east of the junction of the S. Kinnickinnic River Trail with W. Park Street along the southern bank. The southwest quadrant consisted of part of the northern shoreline that is adjacent to the River Falls Wastewater Treatment Facility property and ends at the Powell Falls Dam. The southeast quadrant was along the southern shoreline extending between the Powell Falls Dam to the west, to the junction of the S. Kinnickinnic River Trail with W. Park Street to the east.

The July 2020 survey³ examined the shoreline and noted that the northwestern shoreline of Lake Louise is stable and well vegetated with areas protected by natural slow water environments, which allow emergent and submergent vegetation to buffer the shoreline. Shovel tests were dug where it was possible to do so, but large areas of standing water and marsh were encountered. Soil profiles in shovel tests generally showed an A-Horizon of black (10YR 2/1) sandy clay loam (0-15 cm) over a B-Horizon of dark gray (10YR 4/1) sandy clay loam.

The northeastern shoreline is marked with gravel bars and well vegetated and steeply sloped banks. Shovel tests were dug where possible in areas with less than 25 percent slope and dry soil. Shovel profiles showed varied stratigraphy: profiles near the dam were shallow with a dark brown (10YR 3/2) sandy loam (0-5cm) over bedrock; shovel tests west of the dam showed an A-horizon of brown

³ In late June 2020, due to a heavy rainfall event, the Kinnickinnic River and Lake Louise overflowed their banks. The well vegetated shorelines of Lake Louise experienced little damage. Modern debris was observed along the shoreline and caught in the trees and brush indicating the height of the flood stage water.

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(10YR 5/3) sand (0-5 cm) over a B-horizon of black (10YR 2/1) sandy loam (5-30 cm). The water table was encountered at about 30 cm. The area had large gravel bars and showed disturbance caused by sewer construction as evidenced by a manhole in one of the gravel bars (Photo 3).

The southwestern and southeastern Lake Louise shoreline was steep but well vegetated. The shoreline sloped up from the water at about 70-80 degrees within the Powell Falls APE.

The Phase I survey continued along the existing transmission line south of the southern shoreline of the lake. Shovel tests in the western half of the corridor showed mixed soils and heavy disturbance related to earlier episodes of development and expansion at Glen Park. The eastern half of the corridor ran along a well vegetated valley wall that had a 60-70 percent slope which was not shovel tested.

About three acres of land below the dam were surveyed for the proposed dam removal with the Kinnickinnic River bisecting the three acres. Surface collection (also referred to as pedestrian survey), of the bluff tops and along the river edge noted that most of the area was steeply sloped (~80 percent). Shovel tests were dug where possible, even in areas with up to 40 percent slopes and dry soils. Shovel test profiles showed an A-Horizon of very dark brown (10YR 2/2) loam (0-30cm) over a B-Horizon of dark grayish brown (10YR 4/2) sandy loam. A single shovel test near the canoe launch and pedestrian trail on the south side of the river showed mixed, disturbed soils related to recreational use and landscaping.

The combination of bank examination, surface collection of exposed gravel bars, and shovel testing did not yield any artifacts or archaeological sites in the Powell Falls APE.

RECOMMENDATION AND CONCLUSION

The Powell Falls APE includes the Lake Louise impoundment which was created by construction of the Powell Falls Dam. RFMU proposes to decommission the Powell Falls Development with dam removal and permanent draw down of Lake Louise. The Powell Falls Development is licensed by the FERC and is subject to the provisions of Section 106 and its implementing regulations at 36 CFR Part 800. TRC archaeologists conducted a Phase I Archaeological Survey of the shoreline of Lake Louise areas below the dam and lands within the Powell Falls APE. Walking observation did not encounter any areas of erosion but noted a well vegetated and stable shoreline. Approximately 50 percent of the shoreline was steeply sloped with slopes over 80 percent. Shovel testing encountered areas of disturbance attributable to recreational use, but artifacts or archaeological sites were not noted. Shovel tests in areas that contained more-or-less intact soils did not encounter any artifacts.

Archaeological sites or artifacts were not found; no additional archaeological work is recommended for the proposed project in the Powell Falls APE.

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If we can provide additional assistance, I can be reached at 262-225-5105, or by email at AVanDyke@trccompanies.com.

Sincerely,

TRC

A handwritten signature in blue ink that reads "Allen P. Van Dyke". The signature is written in a cursive, flowing style.

Allen P. Van Dyke
Principal Archaeologist - Midwest

Attachments: 8 Photos and 5 Figures

cc: R. Klabacka-Williams, TRC
L. Brotkowski, TRC
L. Nordman, TRC

REFERENCES CITED

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Appendix A

Photos & Figures



Photo 1: View of the shoreline of both the northwest and northeast quadrants. View to southwest.



Photo 2: View of the northwestern quadrant.. View to west – southwest.



Photo 3: A view of gravel bar and the sewer utility line within the northeastern quadrant. View to west.



Photo 4: Overview of stable shoreline in the southeastern quadrant. View to southwest.



Photo 5: View of slope of shoreline in the southwestern quadrant. View to south.

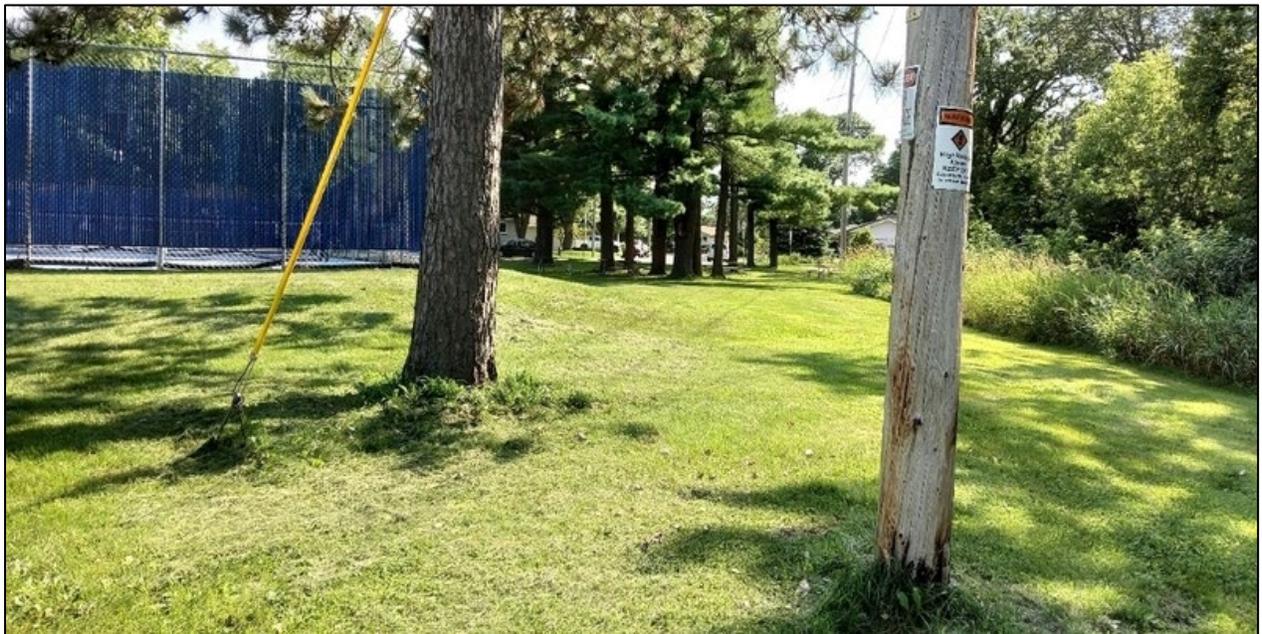


Photo 6: Glen Park and recreational disturbance. View to southwest.



Photo 7: Wooded area below Powell Falls Dam. View to west.



Photo 8: Bank below Powell Falls Dam. View to southwest.