

Upper Turtle River Dam No. 9 (Larimore Dam)

Class III Cultural Resource Survey

T152N; R54W; Portions of Sec. 31 & 32

Grand Forks County, North Dakota

Christopher A. Plount
State Cultural Resources Specialist-East Zone
25 January 2022

Janelle Harrison
State Cultural Resource Specialist
July 1, 2025

U. S. Department of Agriculture
Natural Resources Conservation Service
North Dakota State Office

Abstract:

The Natural Resources Conservation Services proposes construction activities to bring the Upper Turtle River Dam No. 9 (Larimore Dam) into compliance with current performance, design, and safety standards. The undertaking will involve considerable ground disturbance within the immediate vicinity of the dam structure. The dam itself may be potentially eligible for the NRHP as it is 49 years old. The area of potential effect possesses no properties eligible for the National Register of Historic Places. There have been documented sites within 1 mile of the APE that include culturally significant finds such as burial mounds and skeletal remains (Sites 32GF122 and 32GF4). Two new site lead forms were completed as a result of the survey (32GF3851 lithic scatter and 32GF3905 - Larimore Dam). The undertaking will not have an adverse effect on known sites. A finding of ***“No Historic Properties Affected”*** is recommended for the Larimore Dam rehabilitation project.

Table of Contents

Contents

Abstract:	2
Table of Contents	3
Figures and Tables	4
1.0 Introduction:.....	5
2.0 Research Goals and Methods:.....	7
2.1 Research Limitations:	8
3.0 Environment:.....	9
4.0 Literature and Archive Review:.....	10
4.1 General Land Office Maps:	11
4.2 NDSHPO Records:	12
4.3 LiDAR/ Aerial/Satellite Imagery Analysis:.....	15
4.4 Treaty of Old Crossing.....	16
4.5 Larimore Dam Inspection Reports.....	18
5.0 Field Research:.....	18
5.1 NDSHPO Sites:.....	19
5.2 Eastern APE Survey:.....	19
5.3 Haul Road and Larimore Dam Survey:	23
5.4 Shovel Probes:	26
6.0 Discussion:.....	28
6.1 Site 32GF6851	29
6.2 Site 32GF3905 (Larimore Dam).....	29
7.0 Recommendations:.....	31
Bibliography	32
Appendix A: Interagency Communication &	34
1974 NRCS Cultural Resource Report	34
Appendix B: One Mile Search Map	51
Appendix C: Engineering Plans	55

Figures and Tables

Figure 1 Larimore Dam APE and Survey Area.....	5
Figure 2 Project Features	7
Figure 3 APE showing area of focus (arrow)	8
Figure 4: Soil Map Larimore Dam Area.....	9
Figure 5: General Land Office survey Map (1877) T151N;R54W;Sec.6	11
Figure 6: General Land Office Map (1877) T152N; R54W; Sec 31&32	11
Figure 7 Section 32-152-54 - 1957 Aerial Photography.....	15
Figure 8: LiDAR Imagery showing dam section 32 with APE (red)	16
Figure 9: North and South Dakota land cessions as of 1899	17
Figure 10: Close-up of 1899 map showing Grand Forks County and approximate APE (star) ...	18
Figure 11: Eastern APE survey area with field separation ditch	20
Figure 12: Visibility of North Field.....	21
Figure 13: South Field visibility with pin flags marking find spots	22
Figure 14: South Field find spots.....	22
Figure 15 Haul Road Visibility looking east (47.941395, -97.583776)	23
Figure 16 Shovel Probe (47.941356, -97.583781).....	23
Figure 17 Larimore Dam Secondary Intake 2/29/2025	24
Figure 18 Larimore Dam Concrete Outlet structure - looking northeast.....	25
Figure 19 Larimore Dam Outlet structure looking east	25
Figure 20 Larimore Dam Primary Inlet with trash rack	26
Figure 21 Larimore Dam Primary Inlet and Riser Tower.....	26
Figure 22: Shovel probe locations	27
Figure 23 Haul Road probe locations and results	28
 Table 1: Soil Types Larimore Dam Area.....	 10
Table 2: Known sites listed with NDSHPO.....	12
Table 3 NDSHPO Manuscripts.....	14
Table 4: Eastern APE Shovel probe locations and results	27
Table 5 Haul Road shovel probe locations and results	28
Table 6 Summary of Cultural Resources Discussed in the Document	31

Project Title: Larimore Dam Renovation

Legal Location: T152N; R54W; Portions of Sec. 31 & 32

County: Grand Forks

USGS 7.5' Quadrangle: Larimore East, North Dakota 2020

Personnel: Christopher A. Plount (Principal Investigator), Rita H. Sveen (Watershed Coordinator, Walsh Co.), Steven Ashpole (Soil Conservationist Technician, Walsh County), Gwen Sobolik (Soil Conservationist, Walsh County). Janelle Harrison (Cultural Resource Specialist)

Proposed Total Acres Surveyed: 149 acres

Survey Dates: 11-13 October 2021, 29 April 2025

Project Description:

Renovation of Larimore Dam to current engineering standards.

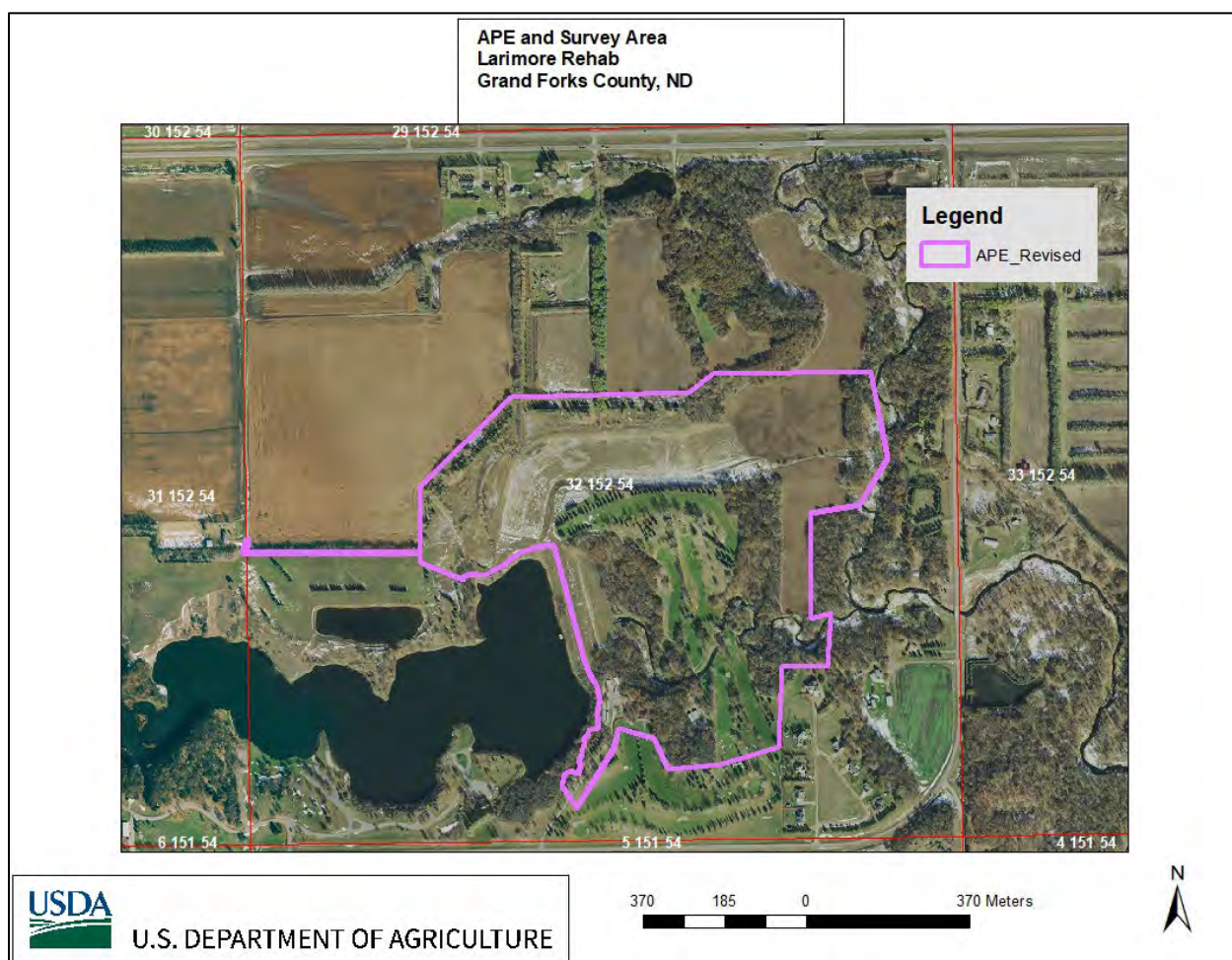


Figure 1 Larimore Dam APE and Survey Area

1.0 Introduction:

The purpose of the report is to provide documentation of compliance with Section 106 of the National Historic Preservation Act (NHPA), the National Environmental Policy Act (NEPA) and North Dakota laws in regard to historic properties. The USDA Natural Resources Conservation

Service is the lead agency for the project. The sponsor (Grand Forks County Water Resource District) owns the land and has jurisdictional control. The area of potential effect (APE) is in Grand Forks County, North Dakota approximately 3.1 miles (4.98 km) northeast of Larimore, North Dakota. The proposed APE can be reached by travelling from Larimore at the intersection of ND State Highway 18 and Front St North for 0.8 miles (0.9 km), then east on County Road 4B for mile. (3.37 km) following the curves. The APE is on the left through the Larimore Dam & Recreation entrance. The current APE was established by NRCS Engineering. The APE included the potential areas of impact determined by NRCS engineering estimates for construction alternatives proposed for the rehabilitation of Larimore Dam. The APE does not exceed the original survey performed by Lawrence Loendorf and Kent N. Good in 1974.

The dam was built in 1977 (HDR, 2015) and subject to both the National Historic Preservation Act (54USC§300101 et seq) and the Reservoir Salvage Act (54USC§312505). The design life was designated as 50 years from the construction date which will occur in 2027. At the time of construction, the dam was classified as a Significant hazard dam and is currently classified as a High hazard dam. The dam does not meet current State of ND dam safety standards regarding embankment design and earthen spillway stability requirements and poses risk to human life and downstream infrastructure, land and cultural and natural resources. The preferred (selected) alternative for Larimore Dam is to make a series of changes to several features of the dam to bring it into compliance with today's dam safety standards.

The undertaking will involve considerable ground disturbance within the immediate vicinity of the dam structure, including the removal and replacement of the existing principal spillway, the installation of a blanket drain, modifications to the slope (filling) of the existing auxiliary spillway, installation of articulated concrete block (ACB's) and reconstruction the stilling basin. The undertaking will also include constructing a hauling road (See Figure 2). Details of the measures are as follows:

Embankment – widening the top of dam to 24 feet and revising the backslope. Installing a dam chimney and blanket drain.

Principal Spillway and Tower – A new principal spillway and tower will be constructed with a jack and bore method in a location to the north of the existing spillway and will be constructed at the same elevation. The existing tower will be removed, and the existing principal spillway will be filled in place.

Principal Spillway Energy Dissipation – the stilling basin will be reconstructed to prevent damaging effects to the wingwall.

Auxiliary Spillway – The ASW will remain in the same location. Portions of the AWS will be shaped and filled, followed by the installation of ACB's and a stable outlet.

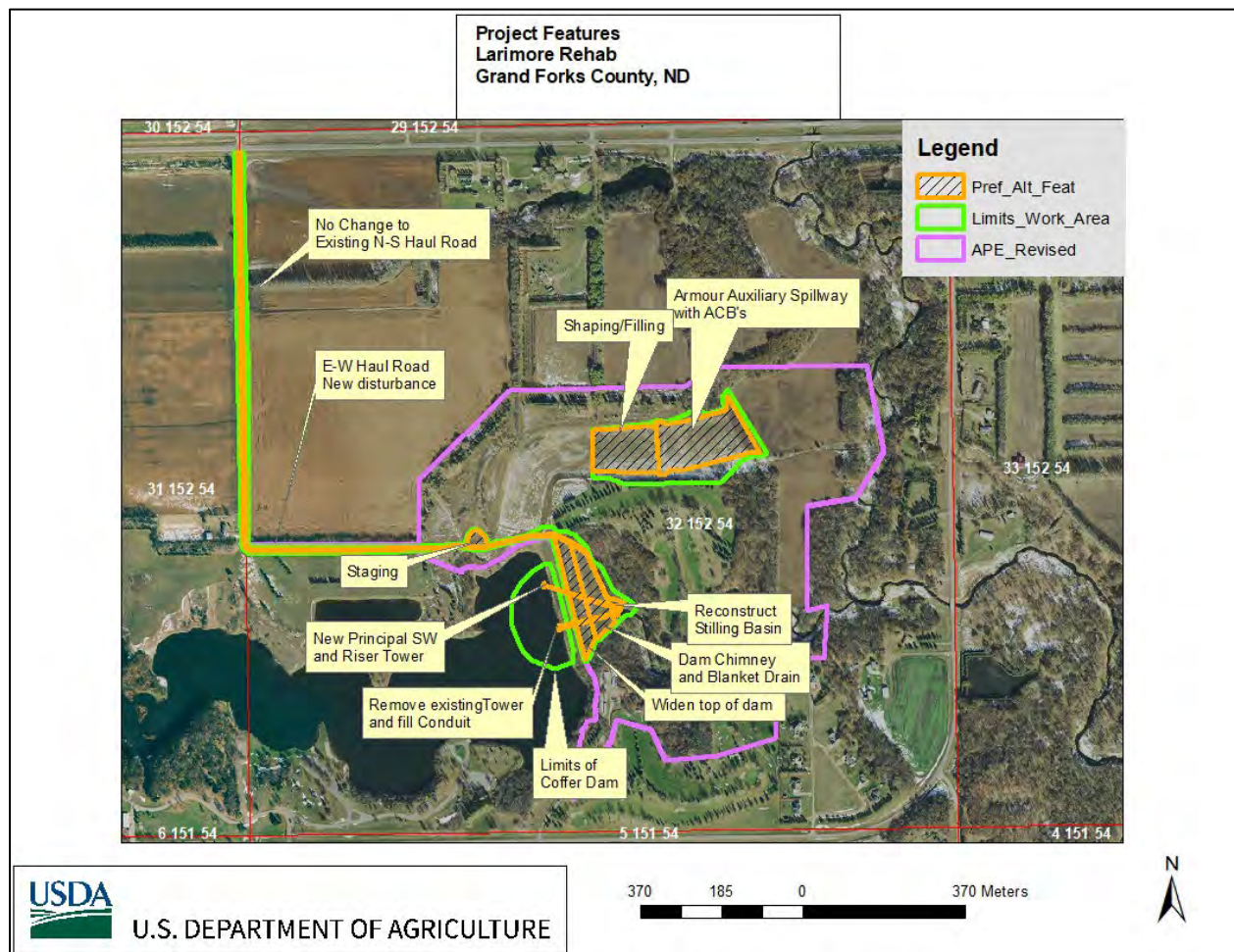


Figure 2 Project Features

2.0 Research Goals and Methods:

Historic maps, United States Geologic Survey (USGS) topographic maps, North Dakota State Historic Preservation Office archives (NDSHPO), Natural Resources Conservation Service archives (NRCS) and Farm Service Agency records (FSA) were combined with LiDAR, commercially available satellite imagery and construction design plans to pinpoint areas of interest (State Historical Society, 2020). Field reconnaissance was designed to achieve four goals:

- Positive location and identification of known cultural resources
- Discovery and recordation of previously unknown cultural resources
- Field assessment of NRHP eligibility of any cultural resources
- Determine effects of the undertaking on any NRHP eligible properties

3.0 Environment:

The APE rests within Grand Forks County upon gravel and sand (poorly sorted) from the Coleharbor group, "...delta sediment where rivers emptied into glacial lakes (Bluemle, 1977). USDA Soil Survey (Figure 4) shows the Larimore Dam area soil is primarily Velva sandy loam and other soils with sandy loam or sandy fine loam textures. Velva sandy loam formed from coarse-loamy alluvium parent material The entirety of the APE varies from 0-30% slopes. (Table 1).

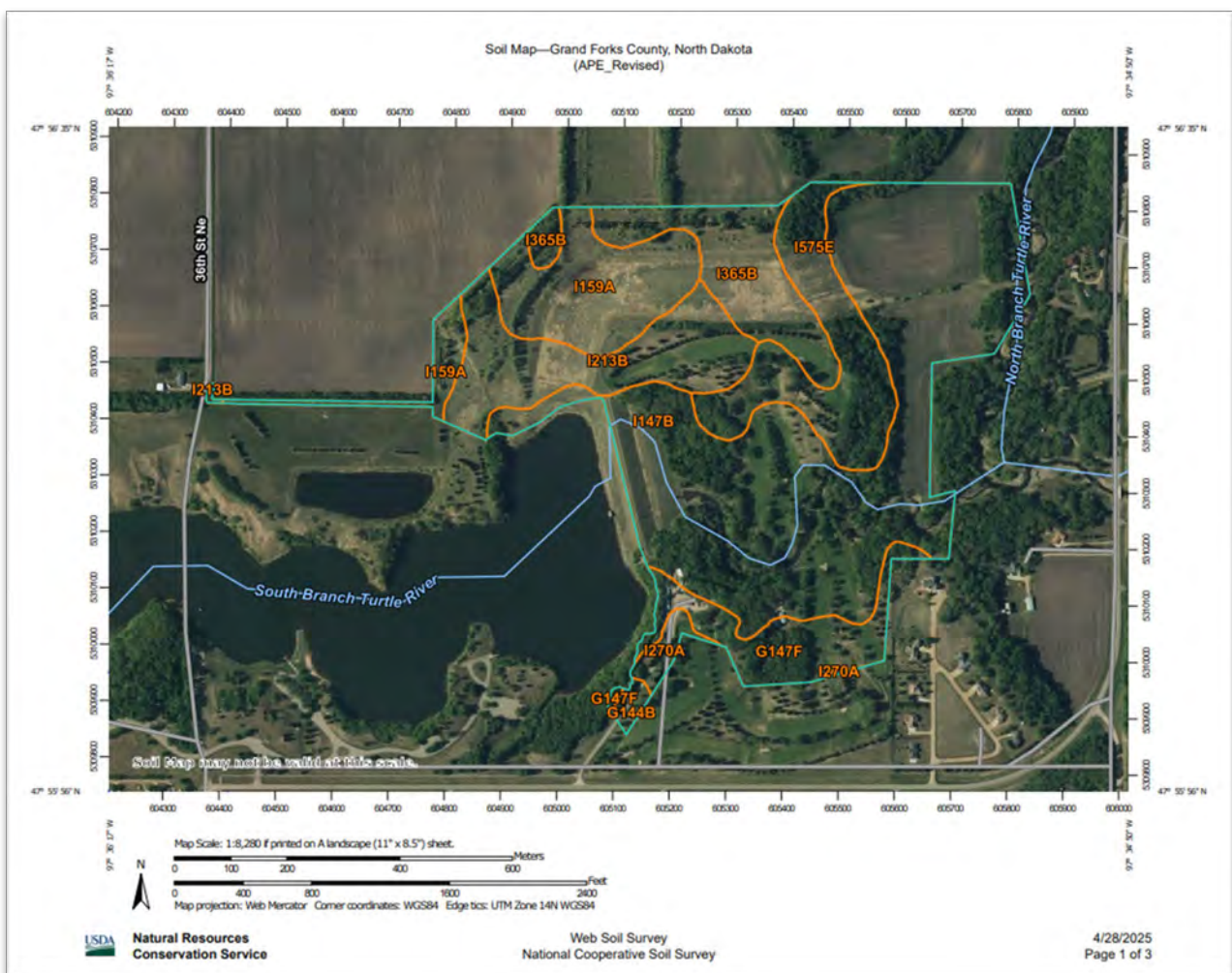


Figure 4: Soil Map Larimore Dam Area
Image Source: websoilsurvey.sc.egov.usda.gov

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
G144B	Barnes-Buse loams, 3 to 6 percent slopes	0.9	0.6%
G147F	Buse-Barnes-Damen loams, 9 to 35 percent slopes	10.2	6.8%
I147B	Velva sandy loam, moist, 0 to 6 percent slopes, occasionally flooded	70.1	47.0%
I159A	Wyndmere-Tiffany fine sandy loams, 0 to 2 percent slopes	18.0	12.1%
I213B	Embsen fine sandy loam, 2 to 6 percent slopes	17.2	11.6%
I270A	Foldahl fine sandy loam, 0 to 2 percent slopes	1.8	1.2%
I365B	Arvilla sandy loam, 0 to 6 percent slopes	14.0	9.4%
I575E	Maddock sandy loam, 9 to 25 percent slopes	16.9	11.3%
Totals for Area of Interest		149.1	100.0%

Table 1: Soil Types Larimore Dam Area
Data Source: websoilsurvey.sc.egov.usda.gov

Faunal resources include white-tailed deer (*Odocoileus virginianus*), rabbit (*Leporidae*), racoon (*Procyon lotor*), grouse (*Tetraoninae*), turkey (*Meleagridinae*), and pheasant (*Phasianus colchicus*). Introduced flora includes Kentucky Bluegrass (*Poa pratensis*), Tansy (*Tanacetum vulgare*), Sweet Clover (*Melilotus officinalis*), Canada Thistle (*Cirsium arvense*), and Milkweed (*Asclepias*). Native flora includes Oak (*Quercus*), and Balsam Poplar and Aspen (*Populus* sp), Horsetail (*Equisetum* L.), Western Snowberry (*Symphoricarpos occidentalis*), Reed Canary grass (*Phalaris arundinaca*), and Cattail (*Typha*) (USDA Plants, 2021). None of the flora are considered culturally significant (USDA Culturally Significant Plants, 2010)

4.0 Literature and Archive Review:

Digital and physical archives were accessed in 2021 and again in April 2025 for information on the presence of eligible, or potentially eligible, NRHP properties within the APE and one mile surrounding (Appendix B). These sources include 19th century General Land Office maps, North Dakota State Water Commission LiDAR, USGS topographic maps, FSA records, NRCS archives and NDSHPO site forms and manuscripts. One dam specific cultural resource report was located for the 1977 construction.

4.2 NDSHPO Records:

Thirteen (13) Known sites are within one mile of the APE. (Table 2). Known sites that intersect the APE are discussed in section 5.1.

NDSHPO Sites

NDSHPO SITE	NAME	CR TYPE	NRHP/ Suitability Status	Basis of Recommendation
32GF121	HABITATION SITE	LITHIC SCATTER	NE	Site Form
32GF122	UW#2210	ARCHEOLOGICAL	Significant	Site Form
32GF2	UW#2210	DESTROYED	NE	Site Form
32GF3175	UW#2210-1	CLAY PIPE STEM/MOUND	Eligible	Site Form
32GF323	SWENSON	LITHIC SCATTER	PS	Site Form
32GF324	HAUGEN	LITHIC SCATTER	PS	Site Form
32GF3851	FORK OF PLENTY	LITHIC SCATTER	NE	Site Form
32GF4	BURIAL 1	EXCAVATED IN 1947 SKELETAL REMAINS IN POSESSION OF UND	UN	Site Form
32GFX178	2 April 1984-1	LITHIC SCATTER	PS	Site Form
32GFX315	UNNAMED	LITHIC SCATTER	PS	Site Form
32GFX337	MAC-SP-7053X	HISTORIC DUMP	UN	Site Form
32GFX80	SCHOOL	UNKNOWN	UN	site Form
32GFX82	UNKNOWN	LITHIC SCATTER	UN	Site Form
UN = Unevaluated: Site form did not include any language indicating cultural resources significance or NRHP eligibility PE = Potentially Eligible: Site form included language that the site was potentially eligible for NRHP and needed further work NE= Not Eligible - Site form included language that the site was Not Eligible for the NRHP PS = Potentially Significant: Site form included language the site was potentially significant and/or needed further work to assess significance. Significant = Site form included language that the site was Significant				

Table 2: Known sites listed with NDSHPO

Twenty (20) previous surveys have been conducted within one mile of the APE.

NDSHPO Manuscripts

MANUSCRIPT	TITLE	AUTHOR/DATE	CR	NRHP
000160	Minnkota Power Comp. Inc. Lorfald Station Survey, Grand Forks Co., ND	Fox, Richard A. 1978	N	N

004536	Larimore Dam Recreational Area Access Road Archeological Survey Results of a Class III Intensive Cultural Resources Survey of Five Miles of Access Road to the Larimore Dam Recreational Area, Grand Forks County, North Dakota	Kordecki, Cynthia 1988	Y	N
004538	Subsurface Probing at 32GF123, A Prehistoric Archeological Site on The Turtle River Near Larimore Dam, Grand Forks County, North Dakota	Artz, Joe A. 1988	Y	N
004560	Cultural Resources of the Larimore Dam Recreational Area Access Road, G. F. Co.: Class III Intensive Survey of Five Miles of Access Road & Subsurface Probing at Three Prehistoric Sites Near the Confluence of the N. & S. Branches of	Artz, Joe A. 1988	Y	N
004722	Archaeological Investigations of Sites 32GF121 and 32GF123, Grand Forks County, North Dakota	Larson, Thomas K. 1989	Y	N
004863	North Dakota State Highway Department Turtle River Bridge Replacement Project, Grand Forks Co., A Class II Cultural Resource Survey Project No. BRF-6-002(037)332	Good, Kent N. 1989	N	N
006332	Weigh Scale - Larimore Corner Class III Cultural Resources Survey Project No. SNH-6-002(046)330 Weigh Station & Scale at the Intersection of Highways 2 and 18, Grand Forks County, ND	Good, Kent N. 1994	N	N
006509	North Dakota Department of Transportation Material Source Projects Cultural Resource Review 1989-1994	Borchert, Jean L. 1995	N	N
007283	Results of a Class II and Class III Cultural Resource Inventory for NDDOT Project Area SS-6-018(028)152 Grand Forks County, ND	Larson, Thomas K. 1998	N	N
007658	Tri-County Water Users, Inc. Phase 1 System Improvements, Contract 99-1, Class III Inventory Results	Klinner, Duane G. 2000	Y	N
007966	Tri-County Water Users, Inc. Phase 1 System Improvements, Contract 99-1 - Results of the Class III Inventories for Pipeline Reroutes UW #2275	Kilnner, Duane G. 2001	Y	N
011575	Polar Communications' Larimore Line: A Class III Cultural Resource Inventory for a Proposed Fiber Optics Line in Grand Forks Co., ND	Engel, Damita J. 2010	N	N

012315	Cultural Resource Inventory of 10.1 miles along Highway 2; PCN 18281, NH-6-002(094)318; Grand Forks and Nelson Counties, ND.	Croll, C. Kathleen 2011		N
014322	Larimore Dam and RV Park All Weather Siren Installation, Cultural Resource Monitoring During Installation	Kinney, W. Jeffrey 2013	N	N
014851	Grand Forks to Lakota: A Class I Study and Class III Cultural Resource Inventory along US Highway 2 in Grand Forks and Nelson Counties, North Dakota NDDOT Project # 6-002(113)295 PCN: 20140, 6-002(104)295 PCN: 18951, 6-002(105)305 PCN:18952	Fandrich, Blain 2013		N
015894	Rest Area and Intersection Improvement on Highway 2, Class III Cultural Resource Inventory, Grand Forks County, ND. NDDOT Project #: SHE-6-002(113)330, PCN: 20140	Vogt, Cassie 2015	N	N
016590	Enbridge Sandpiper Pipeline Project: 2015 Sandpiper Pipeline Project Class III Archaeological Resource Inventory and Evaluation: Williams, Mountrail, Ward, McHenry, Pierce, Towner, Ramsey, Nelson and Grand Forks Counties, North Dakota	Muller, Andrew C. 2015	N	N
016591	Enbridge 2015 Sandpiper Pipeline Project Class III Archaeological Resource Inventory: Williams, Mountrail, Ward, McHenry, Pierce Towner, Ramsey, Nelson, and Grand Forks Counties, North Dakota	Muller, Andrew C. 2015	N	N
018682	Tri-County Water District Phase 5 Project: Class III Cultural Resource Inventory, Ramsey, Walsh, Nelson, and Grand Forks Counties, North Dakota	Morrison, John G. 2019	N	N
019617	2019 System Expansion and District Interconnect. East Central Regional Water District. A Class I, II, and III Cultural Resource Inventory	Kinney, W. Jeffrey	N	N

Table 3 NDSHPO Manuscripts

The manuscript *“Inventory of the Cultural Resources in the Turtle River Watershed Dam #9”* by Loendorf and Good (1974) was not located in the NDSHPO files. The manuscript was discovered in UDSA-NRCS archives and is included in Appendix A.

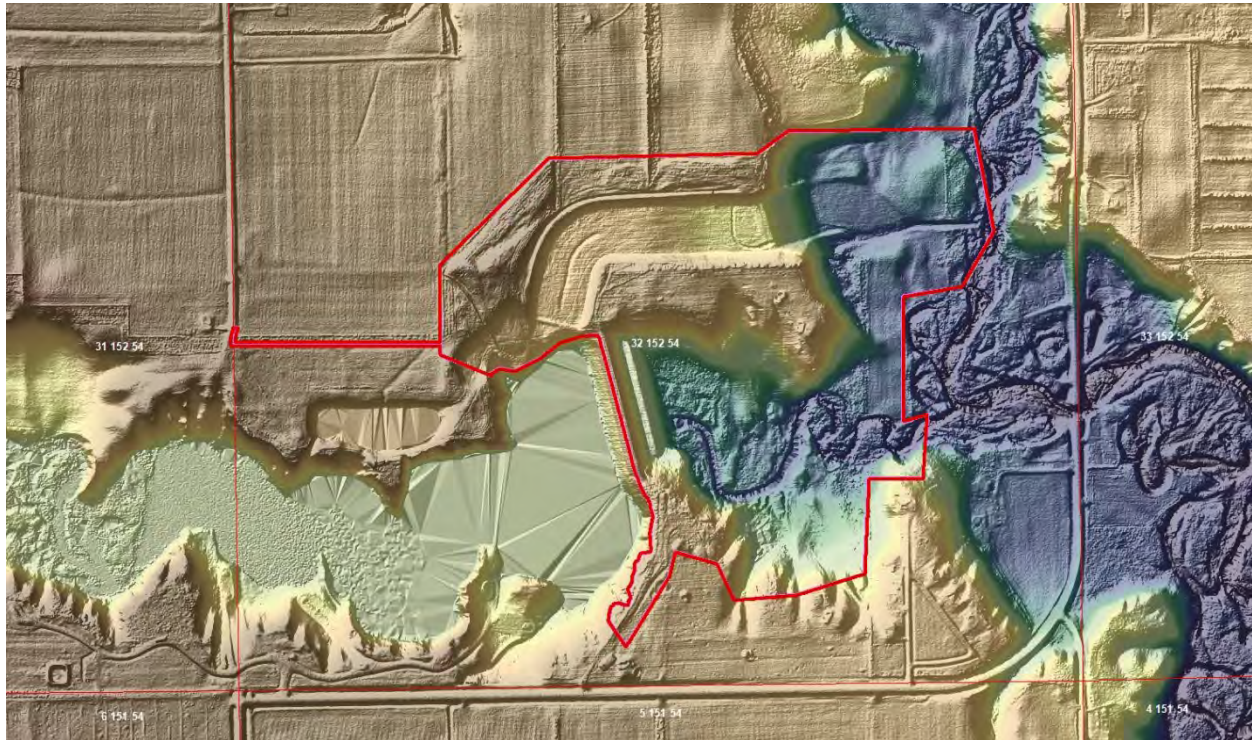
4.3 LiDAR/ Aerial/Satellite Imagery Analysis:

Aerial photography from 1957 (Figure 7) provides context on the APE prior to the dam construction and recreational land use changes. Prior to dam construction there was already significant disturbance as it appears that woodland had been cleared for grazing in what is now under the permanent pool and other park facilities. A few small structures may have been present in the permanent pool area. A farmstead appears to be present at the site of the Country Club. The construction of the dam embankment and auxiliary spillway required significant amounts of tree removal and land shaping/filling. The majority of the golf course was developed in what appears to be crop or hayland. In the eastern portion of the APE, there appears to be no change in landuse. The current cropland boundaries that were not converted to the dam and recreational areas, have not changed since 1957.



Figure 7 Section 32-152-54 - 1957 Aerial Photography
Source: NDGIS Hub State of ND

LiDAR analysis revealed no subsurface features that required investigation. The anthropogenic modifications to the APE are visible on the LiDAR/satellite composite. Areas with steep ravines, roads, and landscaped infrastructure are readily visible (Figures 8).



*Figure 8: LiDAR Imagery showing dam section 32 with APE (red)
Source: USDA NRCS*

4.4 Treaty of Old Crossing.

In the Treaty of Old Crossing (Royce, 1899) the Red Lake and Pembina Bands of Chippewa (Hawkinson, 1935) ceded the majority of Grand Forks County to the United States (Figure 9). When the 1899 map is geo-referenced the undertaking lies within the ceded land (Figure 10).

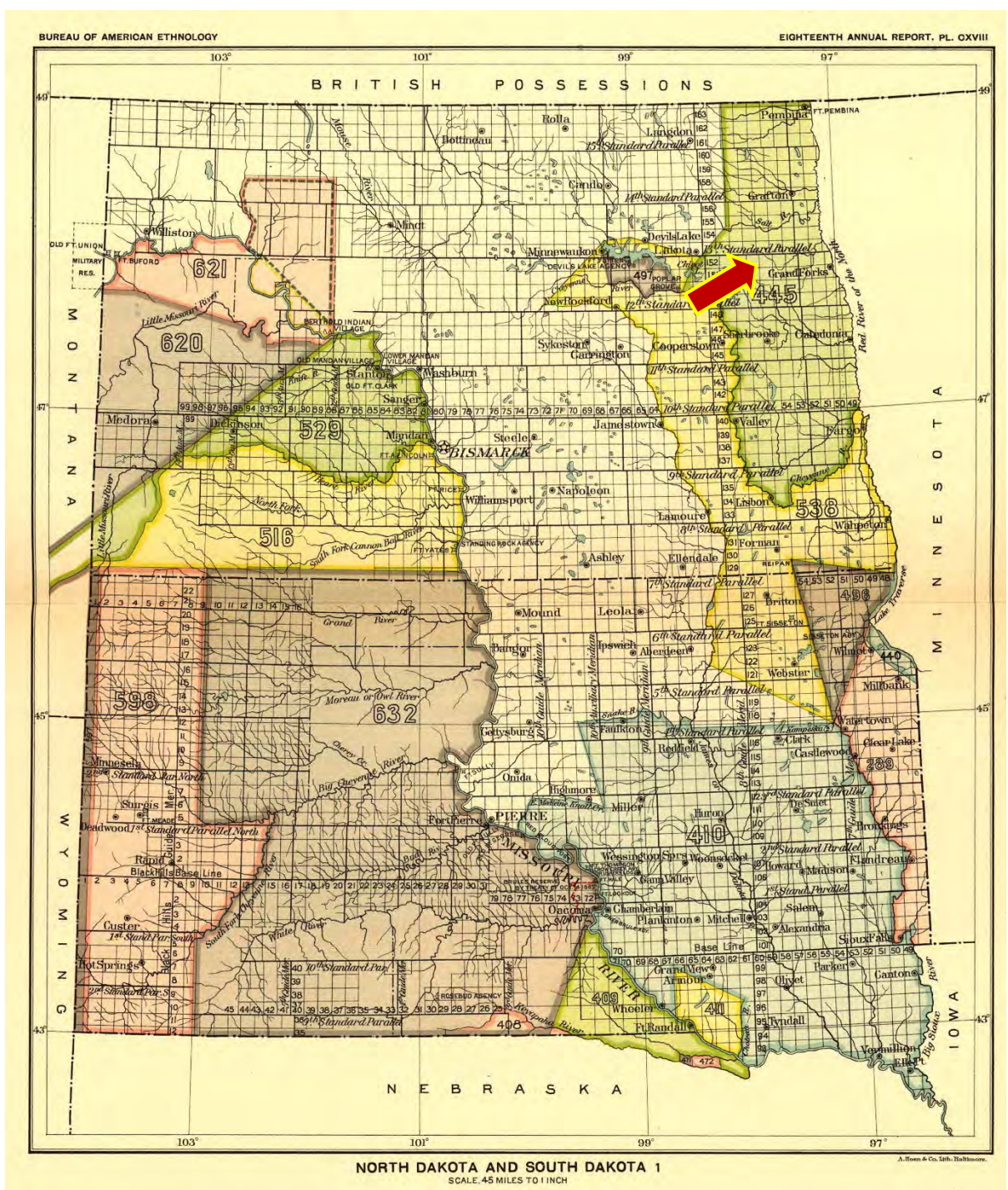


Figure 9: North and South Dakota land cessions as of 1899
Image Archive: <https://www.loc.gov/item/13023487/>.



Figure 10: Close-up of 1899 map showing Grand Forks County and approximate APE (star)
Image Archive: <https://www.loc.gov/item/13023487>

4.5 Larimore Dam Inspection Reports

Three investigations were conducted during the watershed planning process which are relevant to the discussion of the dam itself as potentially eligible for the NRHP. In November 2021, NRCS conducted an inspection of the conduit including pictures documenting the concrete and steel components of the dam. HDR Engineering conducted an inspection in November of 2022 which also documented the condition of the features of the dam. A geotechnical investigation was conducted in 2022 which documented the man-made earthen features of the dam.

5.0 Field Research:

Except for the area east of the main dam structure, the proposed undertaking lies within the footprint of a survey conducted by Loendorf in 1974. Therefore, research was focused on the APE boundary east of the dam structure and confirmation of known sites that intersect the APE. The first pedestrian survey was conducted in October of 2021 – the principal investigator was Christopher Plount. Where possible, the APE was subjected to pedestrian survey in 15 meter transects utilizing four team members, evenly spaced. Ground visibility ranged from 25-90% across highly modified topography in the east, flattening gradually into river bottoms in the west. The dam structure, primary, auxiliary, and emergency spillway areas had been seeded with a combination of tame and native grasses which obscured the ground. A total of ten (10) shovel probes, divided into three areas, were conducted. The APE crosses annually inundated bottomland, active cropland, and engineered recreational facilities with heavy soil disturbance.

A second pedestrian survey was conducted on April 29, 2025 by principal investigator Janelle Harrison. The survey was necessary due to the addition of a construction road to the APE. There

was no ground visibility. The ground cover consisted of tame grass. Six shovel probes were conducted.

5.1 NDSHPO Sites:

The 2021 NDSHPO files search data found no sites that intersected the APE. The twelve sites that are within the one-mile buffer will not be impacted by the undertaking and were not surveyed.

5.2 Eastern APE Survey:

The eastern APE was surveyed in October of 2021, it was divided into two sections, North Field and South Field, separated by a drainage ditch (Figure 11). The North Field lies at the eastern terminus of the emergency spillway and is an active agricultural area. The easternmost portion is forested in second growth oak and birch with thick understory and leaf litter obscuring the ground. The area abuts the North Branch Turtle River and possesses only one area of sufficient elevation and slope to be shovel tested as described in section 5.4.

The South Field is at the bottom of a slope more than 30 degrees with the Larimore Country Club Golf Course at the top. The eastern portion of the APE possessed the same flora as the North Field and possessed one area adequate for shovel testing and likely to produce cultural material.

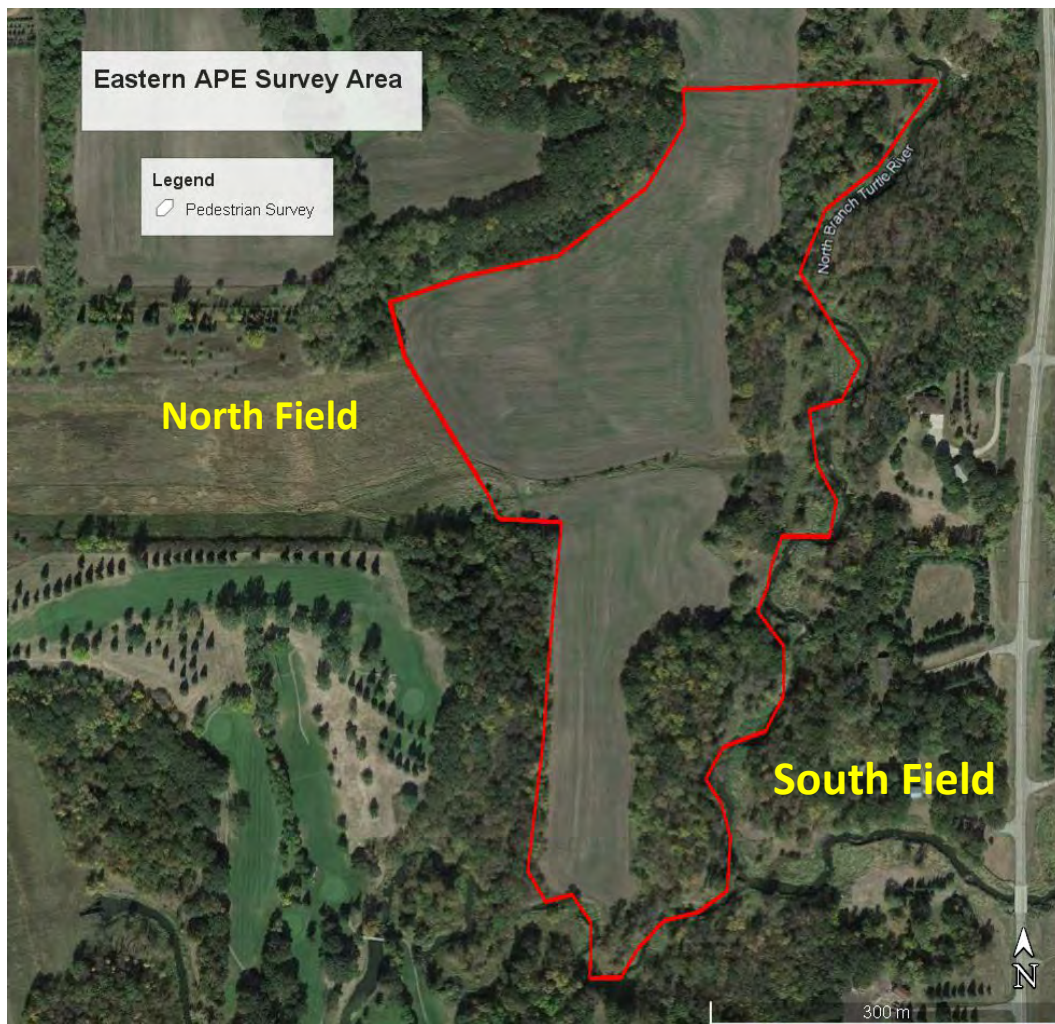


Figure 11: Eastern APE survey area with field separation ditch

Image source: Google Earth

The north and south fields had been recently tilled/harvested creating ground visibility more than 70%. Both areas were subjected to pedestrian survey as described in section 5.0. The north field yielded no finds (Figure 12).



Figure 12: Visibility of North Field
 Lat/Lon 47.941728, -97.586126

The South Field (Figure 13) had a medium dense concentration in a sparse scatter of surface artifacts. The material included knife river flint (KRF) and chert flakes with visible conchoidal fractures, one large core and multiple heat-treated quartzite flakes. Debitage was strewn across the area in no discernable pattern (Figure 14). A KRF “bird point” was discovered by a team member late in the afternoon but due to overnight heavy rain and wind causing a tree fall on the location, the projectile point could not be relocated the next day. The find, excluding debitage, was recorded and reported to NDSHPO on a site form with the “Further Work” recommendation and a Not eligible for NRHP Listing. NDSPHO assigned number 32GF3851 to this site.



Figure 13: South Field visibility with pin flags marking find spots
Lat/Lon 47.9391, -97.5862



Figure 14: South Field find spots
Image Source: Google Earth/ESRI

5.3 Haul Road and Larimore Dam Survey:

The haul road and Larimore Dam surveys were conducted on April 29, 2025. There was zero ground visibility at the haul road site due to the thick tame grass/grass residue cover (Figure 15). The area is a level area and may have been disturbed by the original dam construction. Six shovel probes (Figure 16) were conducted at the site of a haul road running E-W for approximately 0.25 miles.



Figure 15 Haul Road Visibility looking east (47.941395, -97.583776)



Figure 16 Shovel Probe (47.941356, -97.583781)

The construction of Larimore Dam was completed in 1977 and is 48 years old. Because it will be eligible for the NRHP in one year, it was included in the field research. At the time of the survey, spring runoff had inundated the lower intake structure (Figure 17). The architectural features have been extensively documented for the rehabilitation plan. Photos from the latest NRCS inspection in October of 2024 were included here to illustrate the integrity of the structures (Figures 18-21). A field survey was completed on 4/29/2025 and a site form was submitted to NDSHPO on May 22, 2025.

The 2022 Geotechnical investigation found the embankment consists of 70 feet of sandy lean clay fill underlain by 30 feet of glacial till, further underlain by a harder pre-consolidated glacial till. The top of the dam is 66 feet high and 20 feet wide. The auxiliary spillway is 300-foot-wide earthen spillway with a 15% average slope cut into the hillside north of the embankment. The principal spillway consists of a two-stage reinforced concrete riser that is connected to a 6 ft X 6 ft concrete conduit that carries flow through the embankment (Figures 18-21). The pipe

discharges into a rip rap lined stilling basin. The investigation indicated that the current drain fill does not meet criteria for seepage control.

The most recent site review and detailed inspection of Larimore Dam was conducted by HDR Engineering Inc. (HDR) staff in November of 2022. The inspection showed that the principal spillway concrete inlet structure was in good condition. The conduit had minor deficiencies and it was recommended to replace or repair the steel plates at the joints. The condition of the dam embankment and earthen auxiliary spillway were also determined to be adequate with only minor issues such as tree growth within the dam abutments, gopher holes in the auxiliary spillway and an erosion area on the left side slope of the auxiliary spillway. Additionally, a conduit inspection was performed by the NRCS in November 2021 to look at the corrosion condition of the reinforcing steel in the box culvert. Results indicated a moderate rate of corrosion with a potential lifespan of 6-20 years remaining for the conduit.

A site form was submitted to NDSHPO for the dam on 5/22/25 with a “no nomination potential/ineligible for inclusion in the NRHP” recommendation; the site was assigned number 32GF3905.



Figure 17 Larimore Dam Secondary Intake 2/29/2025



Figure 18 Larimore Dam Concrete Outlet structure - looking northeast



Figure 19 Larimore Dam Outlet structure looking east



Figure 21 Larimore Dam Primary Inlet and Riser



Figure 20 Larimore Dam Primary Inlet with trash

5.4 Shovel Probes:

Eastern APE Survey:

Ten (10) shovel probes, equally split into two locations, were conducted on October 11, 2021 (Figure 22). Each location was chosen for its relatively undisturbed location and proximity to a permanent source of water. Each was dug with a 30 (+/-) centimeter diameter in arbitrary 10-centimeter (+/-) levels. The matrix was screened through a 0.25-inch wire mesh over a tarpaulin and any artifacts discovered were photographed, documented, and returned. All shovel probes were negative (Table 4).



Figure 22: Shovel probe locations
Image Source: Google Earth.

Shovel Probe Data – Eastern APE Survey

Shovel Probe	Lat/Lon WGS 84	Max Depth (cm)	Soil	CR Material
1	47.941395, -97.583776	40	SANDY LOAM	NO
2	47.941384, -97.583739	40	SANDY LOAM	NO
3	47.941356, -97.583781	40	SANDY LOAM	NO
4	47.941375, -97.583815	40	SANDY LOAM	NO
5	47.941433, -97.583753	40	SANDY LOAM	NO
6	47.936911, -97.585470	40	SANDY LOAM	NO
7	47.936872, -97.585509	40	SANDY LOAM	NO
8	47.936925, -97.585537	40	SANDY LOAM	NO
9	47.936965, -97.585470	40	SANDY LOAM	NO
10	47.936951, -97.585436	40	SANDY LOAM	NO

Table 4: Eastern APE Shovel probe locations and results

Road Haul APE Survey:

Six (six) shovel probes were conducted on 4/229/2025. (Figure 23). Each was dug with a 30 (+/-) centimeter diameter in arbitrary 10-centimeter (+/-) levels. The matrix was screened through a 0.25-inch wire mesh over a tarpaulin. All shovel probes were negative (Table 5).



Figure 23 Haul Road probe locations and results

Shovel Probe	NAD 1983	Max Depth (cm)	Soil	CR Material
1	14 604286E, 5310412N	60	SANDY LOAM	NO
2	14 604446E, 5310342N	60	SANDY LOAM	NO
3	14 604503E, 5310435N	60	SANDY LOAM	NO
4	14 604612E, 5310451N	60	SANDY LOAM	NO
5	14 604685E, 5310433N	60	SANDY LOAM	NO
6	14 604737E, 5310434N	60	SANDY LOAM	NO

Table 5 Haul Road shovel probe locations and results

6.0 Discussion:

Historic maps, aerial/satellite imagery, and pedestrian survey reveal most of the APE consists of ground heavily disturbed by the construction of the dam. Smaller areas of cultivated cropland, native woodland, and the river corridor are also present. The dam was constructed when modern historic preservation laws applied to its design and construction but only one cultural resource survey specific to the dam could be located.

Except for the portion of the APE directly east of the dam structure, the undertaking lies within the boundaries set in 1973 by Loendorf and Good. The NDSHPO concurrence of “no adverse effect” dated 7 October 1976 stated a possibility of previously unknown cultural material being discovered during construction. This report concurs with that assessment regarding the proposed undertaking.

6.1 Site 32GF6851

The field survey resulted in the completion of a new site: 32GF3851 (Fork of Plenty). Site 32GF6851 is a lithic scatter concentrated at the South Field edge nearest the steep slope drop from the west. Decades of farming make ascertaining a reliable provenience of the surface artifacts unlikely. However, the lithic scatter is in a prime spot for intermittent camping. The potential for intact deposits below the plow zone is unknown. Therefore, the material scatter is unevaluated pending further work or avoidance. The footprint of the preferred alternative avoids this site entirely. Site 32GF351 should be protected from any incidental impacts of construction with fencing or signage.

6.2 Site 32GF3905 (Larimore Dam)

The construction of Larimore Dam was completed in 1977 and is 48 years old. Rehabilitation construction would not take place until the dam would reach NRHP eligibility age of 50 years, therefore an eligibility discussion is warranted. A field survey was completed on 4/29/2025 and a site form was submitted to NDSHPO on May 22, 2025. Larimore Dam was originally designed and constructed with a “significant-hazard” classification and is now classified as a high hazard dam. It was constructed under local and Federal sponsorship between the Grand Forks Water Resource District and the USDA Natural Resources Conservation Service (formerly SCS).

The 2022 Geotechnical investigation found the embankment consists of 70 feet of sandy lean clay fill underlain by 30 feet of glacial till, further underlain by a harder pre-consolidated glacial till. The top of the dam is 66 feet high and 20 feet wide. The auxiliary spillway is 300-foot-wide earthen spillway with a 15% average slope cut into the hillside north of the embankment. The principal spillway consists of a two-stage reinforced concrete riser that is connected to a 6 ft X 6 ft concrete conduit that carries flow through the embankment (Figures 18-21). The pipe discharges into a rip rap lined stilling basin. The investigation indicated that the current drain fill does not meet criteria for seepage control.

The most recent site review and detailed inspection of Larimore Dam was conducted by HDR Engineering Inc. (HDR) staff in November of 2022. The inspection showed that the principal spillway concrete inlet structure was in good condition. The conduit had minor deficiencies and it was recommended to replace or repair the steel plates at the joints. The condition of the dam embankment and earthen auxiliary spillway were also determined to be adequate with only minor issues such as tree growth within the dam abutments, gopher holes in the auxiliary spillway and an erosion area on the left side slope of the auxiliary spillway. Additionally, a conduit inspection was performed by the NRCS in November 2021 to look at the corrosion condition of the reinforcing steel in the box culvert. Results indicated a moderate rate of corrosion with a potential lifespan of 6-20 years remaining for the conduit.

The proposed rehabilitation undertaking will change the appearance of the dam slightly as the existing riser tower will be removed and replaced in a different location. The embankment height and pool elevation will remain the same. The auxiliary spillway will remain in the same location, but some of the appearance will change due to the addition of articulated concrete block in the downstream section. The dam will retain most elements of integrity as it has not been subject to significant alterations to its design and the surrounding setting has undergone little change over the years in terms of land use and/or alterations to the built environment. The 1977 construction of the dam is more contemporary than the defined period of 1931-1943 of the ND SHPO historic context for federal relief construction in North Dakota. It does not fall under the context of the New Deal initiated public works aimed at recovering the Nation from the effects of the Great Depression (Criterion A). Nor does it fall into any other historical context that can be shown to be of similar significance locally. The dam structure and its construction are not associated with any historically significant person(s) (Criterion B), is of common and ubiquitous design (Criterion C), and does not possess the potential to yield additional historically significant information (Criterion D).

The proposed modifications to the dam will not significantly alter the position or function of the dam or its impoundment zone and, thus, do not pose an adverse effect to the integrity or eligibility status of surrounding cultural resource sites. The Larimore Dam is recommended ineligible for inclusion in the NRHP. Considering the Larimore Dam does not meet the qualifying criteria for a historic property, the proposed undertaking will have no effect.

No other sites were shown to intersect the APE. In addition to 32GF3261, twelve sites are within one mile of the APE. These sites were not surveyed and will not be impacted by the undertaking, however two of them merit some discussion due to significance and proximity.

Site 32GF122 is approximately 700 feet east and upstream of the APE. This site was originally recorded in 1988 as a location with a mound and prehistoric and historic cultural materials. The site had been impacted by cultivation and possibly by ground leveling and building of a road. The site update form completed in 2020 found the site may have been further leveled and a tree row and a garage were built on or adjacent to the sites southeastern edge. The update found the integrity to have been compromised by these actions. The update determined the site to be significant in June 2020 as it met Criterion D. This site is not within the APE and will not be impacted by the proposed undertaking.

Site 32GF4 is approximately ½ mile upstream of the APE. The site was documented as a mound in 1947 and described skeletal fragments that in 1949 were in possession of the Sociology and Anthropology Department of UND. The site was excavated by Gordon Hewes, UND on May 13, 1947. This site is not within the APE and will not be impacted by the proposed undertaking.

See Table 6 for a summary of cultural resources discussed in the document

The NRCS has consultation obligations with federally recognized, sovereign Native American groups (Kappler, 1904). The undertaking is located within land ceded by the Red Lake and

Pembina Bands of Chippewa Indians, ancestors of the Turtle Mountain Band of Chippewa Indians, and Red Lake Nation. Consultation may reveal locations in need of protection.

Summary of Cultural Resources Discussed in the Document				
SITS #	Site Name & Type	Site Form Update Completed	In or Out of APE	Management Recommendation
Previously Recorded Cultural Resources				
32GF122	Archeological	No	Out	Site was documented in 1988 as a potential mound site with poor integrity. An update in 2000 found the integrity to have been further eroded with human activity.
32GF4	Archeological	No	Out	Mound site was excavated in 1947, and skeletal remains were in possession of the University of North Dakota.
Newly Recorded Cultural Resource				
32GF3851	Archeological - Lithic Scatter	Yes	In	NRCS recommendation is Not Eligible for any criterion for NRHP. The site may have been an encampment and would benefit from systemic shovel probing to discover what lies below the plow zone. The site will be avoided and excluded from incidental construction impacts such as staging or stockpiling.
32GF3905	Larimore Dam	No	In	NRCS recommendation is Not Eligible for any criterion for NRHP.

Table 6 Summary of Cultural Resources Discussed in the Document

7.0 Recommendations:

In accordance with 36CFR§800.5(3)(b) a finding of **“No Historic Properties Affected”** is recommended for the Larimore Dam rehabilitation project. NRCS recommends temporary signage and fencing during construction to ensure there is no disturbance to site 32GF6851. NRCS recommends the Larimore Dam – site 32GF3905 as Not Eligible for any criterion for NRHP.

Bibliography

Bluemle, William J.

1977 *The Face of North Dakota: The Geologic Story*. Educational Series 11, North Dakota Geologic Survey, Bismarck, North Dakota.

Hawkinson, Ella

1935 *The Old Crossing Chippewa Treaty and Its Sequel in "Minnesota History Magazine"*. Minnesota Historical Society, St. Paul, Minnesota. Archived at <http://collections.mnhs.org/mnhistorymagazine/articles/15/v15i03p282-300.pdf>. (accessed 14 December 2021)

HDR/Kleinfielder JV

2015 *North Dakota Dam Assessment for Upper Turtle River Dam No. 9*. Bismarck, North Dakota.

Kappler, Charles J.

1904 *Indian Affairs Laws and Treaties* (Vol 2). Government Printing Office, Washington D. C. Reprint by Interland Publishing. New York (1975)

Loendorf, Lawrence L., Kent N. Good

1974 *Inventory of the Cultural Resources in the Turtle River Watershed Dam #9*. University of North Dakota. Grand Forks, North Dakota.

Royce, Charles C, and Cyrus Thomas

1899 *Indian land cessions in the United States. Library of Congress, Washington District of Columbia*. Archived at <https://www.loc.gov/item/13023487/>. (accessed 15 December 2020)

State Historical Society of North Dakota

2020 *North Dakota Guidelines Manual for Cultural Resource Inventory Projects*. Archaeology and Historic Preservation Division, Bismarck North Dakota. Archived at: <https://www.history.nd.gov/hp/PDFinfo/North-Dakota-SHPO-Guidelines-Manual-for-Cultural-Resource-Inventory-Projects.pdf> (accessed 3 December 2021)

USDA-Natural Resources Conservation Service

2021 The PLANTS Database (<http://plants.usda.gov>, 15 December 2021). National Plant Data Team, Greensboro, NC 27401-4901 USA.

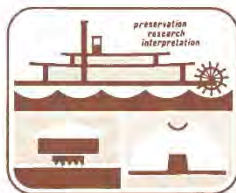
USDA-Natural Resources Conservation Service

2021 Web Soil Survey of Grand Forks County, North Dakota. United States Department of Agriculture. <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. (accessed 14 December, 2021)

USDA-Natural Resources Conservation Service

2010 *Culturally Significant Plants*. by P. Allen Casey and Richard L. Wynia. Adapted from PowerPoint presentation by Patrick J. Broyles. Manhattan Plant Materials Center, Manhattan, Kansas.
https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/kspmcp_u9871.pdf. (accessed 3 January 2022)

Appendix A: Interagency Communication & 1974 NRCS Cultural Resource Report



State Historical Society

of north dakota

LIBERTY MEMORIAL BUILDING — BISMARCK, NORTH DAKOTA 58505
TELEPHONE 701/224-2666

October 7, 1976

Henry D. Galt
Range Conservationist, SCS
P.O. Box 1458
Bismarck, North Dakota 58501

SUBJECT: NCSCO -S (76-125-08) Turtle River Watershed Dam # 9.

As requested, the State Historical Society of North Dakota has reviewed the maps supplied by your office concerning the proposed Dam #9 on the South Branch of the Turtle River. Our review indicates that the project will not adversely affect sites 32GF324 and 32GF325 or any other known historical, archeological, architectural or other cultural resources. You should be advised, however, that previously unrecorded cultural materials or artifacts might exist within the project area and could be discovered during the projects implementation. Therefore the following stipulation is made a part of these review comments and it is suggested that it also be made a part of any contracts or agreements issued on the projects behalf:

In the event that any historical, archeological, architectural or other cultural artifacts, vestiges or remains are found prior to, during or after any earth disturbance or construction activity in the proposed project area, the State Historical Society of North Dakota will be notified immediately and the site and the materials will be protected from further disturbance until a professional examination of them can be made or until some other form of clearance to proceed is given by the State Historical Society.

Upon your agreement to the stipulation, we consider this review process completed and the project approved for implementation to the extent of this agency's involvement. A signed notification of your agreement or rejection of the stipulation will be appreciated.

James E. Sperry
State Historic Preservation Officer
(North Dakota)

C.L. Dill
Survey Archeologist

CLD/je

*Copy to Hobbs
for contact
file*

DAM SITE #1

UPPER TURTLE RIVER WATERSHED

During two days of October, 1974, an archaeological field survey was started on the 465 acres which will be inundated by Dam Site #1 of the Upper Turtle River Watershed. The project was conducted under the directorship of Dr. Lawrence L. Loendorf and the field research was carried out by M. Jane Loendorf and Donna J. Dobesh.

Before entering the field a thorough check was made of the files of the University of North Dakota Archaeological Research. In this search we failed to uncover any leads to historical or archaeological sites in the area.

Due to inclement and snow cover additional field work on the project was delayed until the Spring of 1975 when on May 26, 1975, we re-entered the field. The spring work was accomplished by Dr. Loendorf and M. Jane Loendorf.

In both of the field surveys we did not find any cultural remains and since our "on the ground" reconnaissance was carried out in both the autumn season and the spring season, we are confident that no remains were overlooked.

During the course of the survey local landowners were contacted and they reported that they had never encountered any archaeological or historical features in the area of the watershed, nor had they recovered any artifacts from the area. It is our belief that the proposed dam and reservoir will not expose or harm any features of cultural significance.

Lawrence L. Loendorf
Anthropology-Archaeology
University of North Dakota

117 #8
Turtle River
7/1

INVENTORY OF THE CULTURAL RESOURCES
IN THE TURTLE RIVER
WATERSHED DAM # 9

by

Lawrence L. Loendorf

and

Kent N. Good

June 14, 1974

THE SURVEY OF THE SOUTH BRANCH OF THE TURTLE RIVER

Introduction

During the spring of 1974 the Department of Anthropology and Archaeology, University of North Dakota, under the direction of Dr. Lawrence L. Loendorf and the field supervision of Kent N. Good, conducted an "on the ground" survey of lands to be inundated by Turtle River Watershed Dam # 9. Work was facilitated through a contract with the Soil Conservation Service

The study was undertaken to identify the cultural resources in the area which will be inundated and in the area which will be recreation access for the reservoir. Three archaeological sites were recorded in the boundaries of the project. This report includes a short discussion of the sites, material collected, and a brief statement of the archaeological value of the sites.

During the fall and spring of 1946 and 1947, Dr. Gordon Hewes, then of the University of North Dakota conducted a survey along the North Branch of the Turtle River and the main Turtle River. In 1967 Ken Cole of the University of North Dakota, Department of Anthropology, revisited the sites reported by Hewes and assigned numbers to nine sites. Five of these sites were burial mounds and four were surface scattered occupation sites. None of these nine sites will be affected by the construction of Dam # 9.

Three additional archaeological sites were recorded during the current survey of the South Branch of the Turtle River. Two of these,

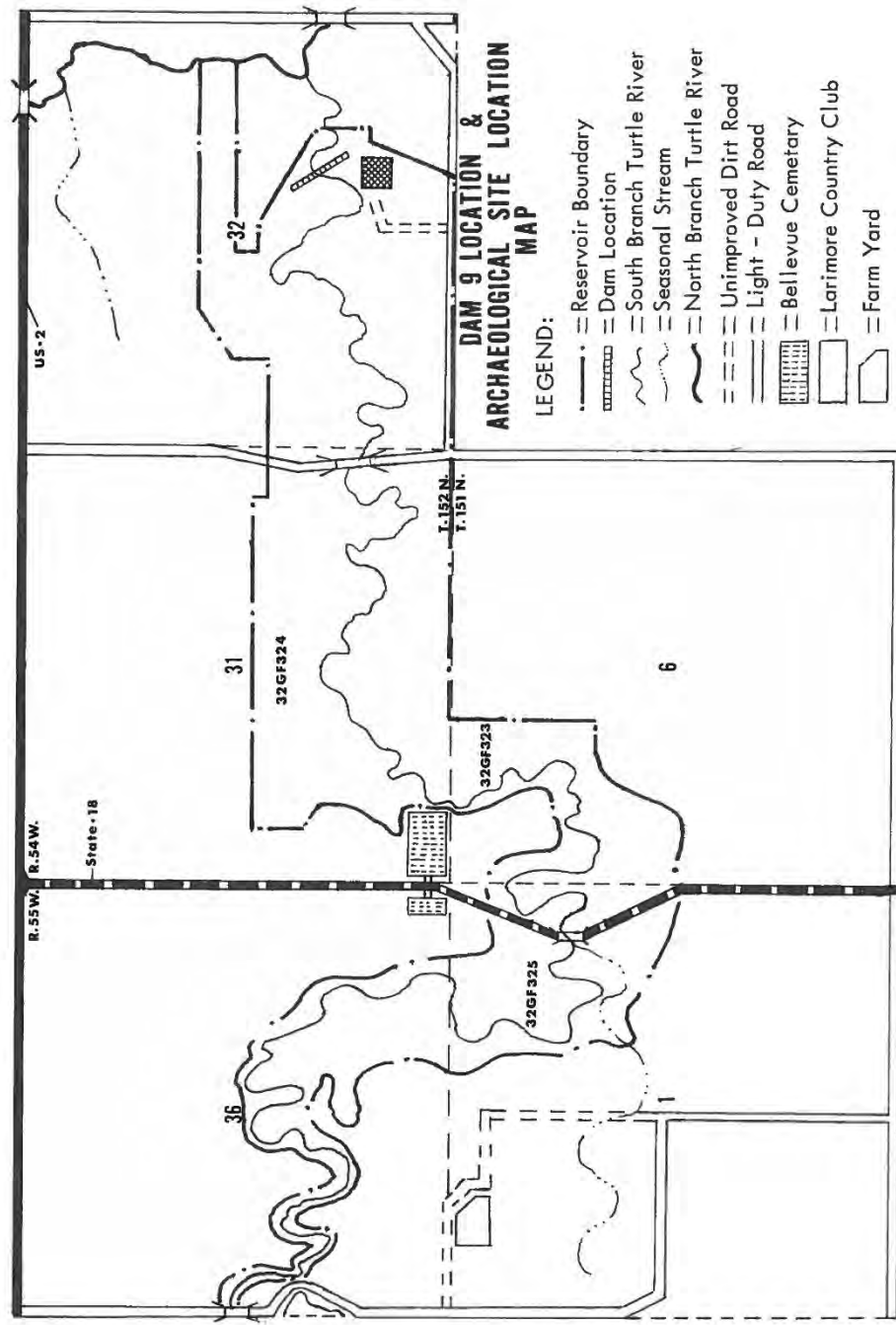


Figure One-- Map showing the location of the archaeological sites in the project area.

of chert, Knife River Flint, and jasper. Two broken bifaces and one complete end scraper were collected from the surface of the site.

The site is positioned where there is an excellent view of the South Branch of the Turtle River which flows approximately 300 yards to the east. Wood is available in the river bottom.

No recommendations for further work have been made.

Lithic Detritus:

Material	No. of Flakes	Weight
Quartzite	36	278.9 gr.
Knife River Flint	10	14.3 gr.
Chert	10	40.4 gr.
Yellow Jasper	1	0.5 gr.

Artifacts Collected:

Broken projectile point (Fig. 2-a)

Material: quartzite

Provenience: surface

Size: Length : 19.9 mm.

Width : broken

Thickness: 1.5 mm.

Weight : 1.0 gr.

Characteristics: a generally rectangularly shaped tool is possibly a fragment of a triangular point. This suggests a late pre-historic occupation for the site.

Broken biface (Fig. 2-b)

Material: Knife River Flint

Provenience: surface

Size: Length : broken

Width : 28.0 mm.

Thickness: 2.2 mm.

Weight : 4.2 gr.

Characteristics: a triangular shaped blade with retouch flaking.

End scraper (Fig. 2-c)

Material: white chert

Provenience: surface

Size: Length : 15.3 mm.

Width : 28.0 mm.

Thickness: 2.2 mm.

Weight : 4.2 gr.

Characteristics: a thumbnail sized, circular scraper with unifacial retouch.

5



a



b



c



d



e

Figure Two--Artifacts collected from the surface of the Swenson Site,
32GF323.

area is the Larimore Cemetery.

The area of occupation has thinly scattered detritus over an area of 150 yards by 150 yards. Because of the wind eroded sandy soil, the condition of the site is only fair.

A small amount of lithic debris was collected on the site. Sixty percent of the debris was river cobble quartz and quartzite, followed in relative abundance according to weight by chert, Knife River Flint, agate and obsidian. The presence of obsidian is unusual, because no other traces of the material have been reported in the area. Artifacts recovered include two complete bifaces, one back hafted knife, two broken bifaces, one unmarked body pot sherd, and one corner-notched projectile point. Other materials observed were thinly scattered bone fragments.

The diversity of materials ranging from the diagnostic projectile point to the obsidian flakes and the pottery sherd indicates a fairly long occupation period. [Testing of the site would be worthwhile and should be undertaken to learn the nature of the subsurface deposits.] *

The site is in close proximity to game, wood, and water and might be located on a beach line of Lake Agassiz.

Lithic Detritus:

Material	No. of Flakes	Weight
River cobble quartz	1	275.0 gr.
quartzite	88	292.4 gr.
chert	10	36.0 gr.
Knife River Flint	8	15.5 gr.
agate	1	23.7 gr.
obsidian	2	0.3 gr.

Artifacts Collected:

Broken projectile point (Fig. 4-a)

Material: Knife River Flint

the Swenson Site (32GF323) and the Haugen Site (32GF324) are occupation sites with the only archaeological feature on the site being the lithic detritus and artifacts scattered throughout the surface. The third site, Anderson-McDonald Site (32GF325) has been designated a burial mound site. Burial mound sites usually contain low earth mounds as the only cultural feature and the Anderson-McDonald Site is no exception. Burial mounds pose an interesting archaeological problem. Many times natural topography will provide what appears to be a burial mound but without proper testing or excavation it is difficult to determine whether or not these "mounds" are the result of human activity or the some natural process. This is the case with the Anderson-McDonald Site, but since it is such an unusual feature and other burial mounds have been recorded in the area the mound is believed to contain human skeletons.

32GF323--The Swenson Site

The site is a long, extremely narrow ($\frac{1}{2}$ mile by 200 feet) occupation site located in a gently sloping plowed field in the East $\frac{1}{2}$ of the Northeast $\frac{1}{4}$ of the Northwest $\frac{1}{4}$ of Section 6, Township 151 North, Range 54 West. A wire fence, lined by tall grass, has been constructed on a north/south axis where it forms the site's westernmost boundary. Another fence segment on a roughly east/west line converges with the first to create the site's northern periphery. An extensive clover field is situated just south of the area of occupation.

Lithic debris is extremely scattered along the surface of the area of occupation. Forty-seven chipped stone cores, and flakes (334.1 grams) were collected from the surface. More than eighty-three percent of the total weight of the debris is a clunky, poor grade quartzite. The remaining detritus is composed of small amounts

32GF324--The Haugen Site artifact description continued

Provenience: surface
 Size: Length : 26.3 mm.
 Width : 19.4 mm.
 Thickness: 1.3 mm.
 Weight : 2.2 gr.
 Characteristics: a triangular artifact with irregular flaking and fine retouch. The tool appears to be a projectile point with the base broken. There could be rounded notches at the base of the tool suggesting a possible corner-notched point.

Broken projectile point (Fig. 4-b)

Material: purple jasper
 Provenience: surface
 Size: Length : 29.7 mm.
 Width : 19.5 mm.
 Thickness: 1.5 mm.
 Weight : 2.6 gr.
 Characteristics: the artifact is badly broken, making it hard to distinguish the original shape. There is regular bifacial flaking on all parts of the artifact showing good workmanship. One straight edge of the piece has wear and it appears to be part of a projectile point.

Projectile point (Fig. 4-c)

Material: Knife River Flint
 Provenience: surface
 Size: Length : 30.7 mm.
 Width : 17.8 mm.
 Thickness: 7.4 mm.
 Weight : 5.7 gr.
 Characteristics: a basically triangular shaped point with deep U-shaped corner-notches. The bifacial flaking is irregular with fine retouch evident. The tip also appears to have been broken off leaving no fracture scars. The cross section is lenticular.

Single-notched biface (Fig. 4-e)

Material: large quartz crystal
 Provenience: surface
 Size: Length : 30.7 mm.
 Width : 17.8 mm.
 Thickness: 7.4 mm.
 Weight : 5.7 gr.

10

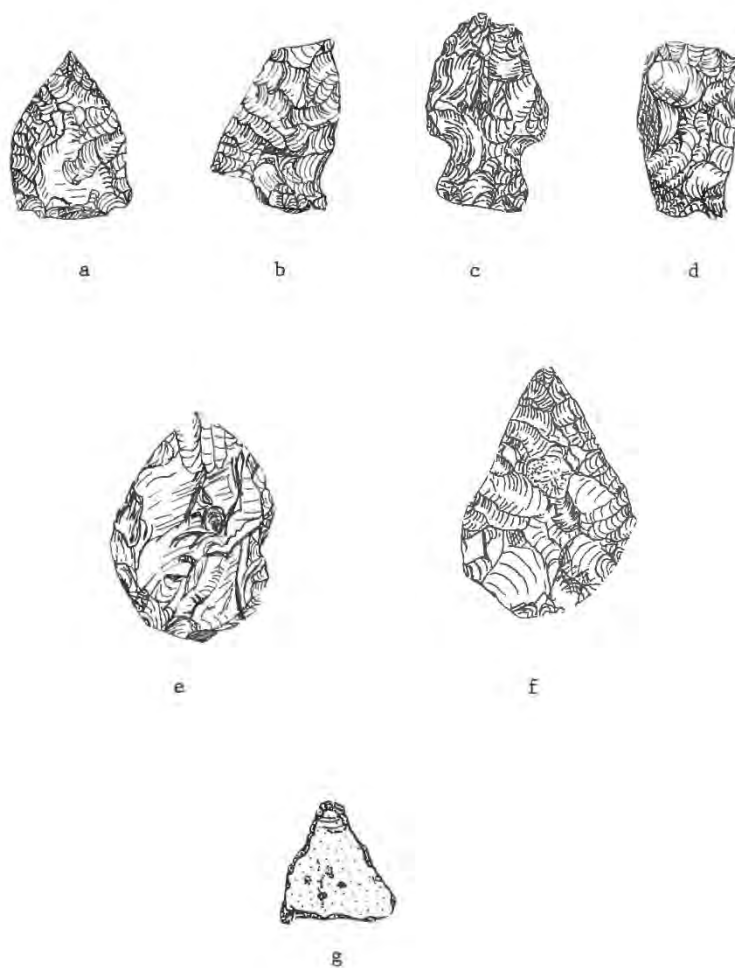


Figure Four--Artifacts from the surface of the Haugen Site, 32GF324.

32GF324--The Haugen Site artifact description continued

Complete biface (Fig. 4-e)

Material: white chert

Provenience: surface

Size: Length : 41.6 mm.

Width : 28.4 mm.

Thickness: 6.0 mm.

Weight : 8.0 gr.

Characteristics: a triangular shaped, irregularly bifacially flaked biface. Base is convex shaped, probably giving the biface a variety of uses. There is fine retouch and wear is evident.

Complete biface (Fig. 4-f)

Material: yellow chert

Provenience: surface

Size: Length : 36.8 mm.

Width : 26.4 mm.

Thickness: 8.0 mm.

Weight : 10.0 gr.

Characteristics: an ovoid shaped, irregularly flaked biface. The edges are smoothed indicating wear.

Pottery sherd (Fig. 4-g)

Provenience: surface

Size: Thickness: 2.3 mm.

Weight : 1.5 gr.

Characteristics: the matrix of the sherd appears to be fine clay. The temper is of course, angular grains, probably crushed rock. The color of the exterior is a light brown, while the interior is black. The only hint of decoration would be the surface finish, probably produced by some sort of brushing or scraping effect.

32GF25--The Anderson-McDonald Mound Site

One possible burial mound located during the survey is found on river bottom property owned by Glenn McDonald and Sidney Anderson. The location of the mound is within the reservoir boundary in the Northeast $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of the Northwest $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ of Section 1, Township 151 North, Range 55 West. The fairly large mound is situated

approximately 150 yards west southwest of the Bellevue Cemetery.

The mound is "loaf" shaped and in the bottomland adjacent to the river channel. The character of fill in the mound is a dark loam intermixed with sand. It is covered by a lush growth of grass and surrounded by low growing forbs. The mound measures thirteen meters in diameter by approximately four meters high. The mound is in good condition as it seems to be undisturbed by "curio seekers", however, some rodent activity has disturbed the top of the feature.

No other archaeological features were noted in the area and no lithic detritus or artifacts were found near the mound. Two unidentifiable bone fragments were noted in the back dirt created by rodent burrow. These may or may not be human bone.

[The site should be mapped and tested to determine its archaeological significance.] Since the mound lies within the reservoir boundary and will inundated by water from the dam, it should be considered for complete excavation. X

Site Summary

The artifacts recovered suggest that the river was occupied during the Woodland Period. The Woodland Period is characterized by the introduction of pottery and the use of mounds. The period dates from approximately 2000 years ago to 200 years ago.

The one pottery sherd recovered from the Haugen Site suggests a Woodland occupation and projectile points from the site are corner-notched indicating a fairly early occupation. These two artifacts also suggest that the site had multiple occupation.

Although no pottery sherds were recovered from the Swenson Site, a broken triangular point was found on the surface. Small triangular,

unnotched projectile points are characteristic of Late Woodland occupation. These two occupation sites in conjunction with the burial mound located approximately one mile northeast of the Swenson Site, indicate extensive use of the area during the Woodland Period.

University of North Dakota
Archaeological Survey

RESERVOIR Upper Turtle River Watershed SITE NO. Swenson Site 32GF323

STATE North Dakota COUNTY Grand Forks
USGS Larimore West Quadrangle

1. MAP REFERENCE Land Rights Work Map 2. TYPE OF SITE Occupation

3. CULTURAL AFFILIATION unknown

4. LOCATION On a partially plowed bluff seperated from grassy area by a fence
E $\frac{1}{2}$ of NE $\frac{1}{4}$ of NW $\frac{1}{4}$ SEC. 6 T. 151 N. R. 54 W.

5. OWNER AND ADDRESS Vivian B. and Ingebor Swenson, Larimore, No. Dak.

6. PREVIOUS OWNERS unknown

7. TENANT _____

8. INFORMANTS none

9. PREVIOUS DESIGNATIONS FOR SITE none

10. SITE DESCRIPTION Lithic debris very thinly scattered along surface of a plowed field.

11. POSITION OF SITE AND SURROUNDINGS Situated in a plowed, gentle slopping field; east of and overlooking south branch of Turtle River. It is bounded by a fence and grassy area to the west and north. A long shelter belt is to the north.

12. AREA OF OCCUPATION One-half mile x 200 feet.

13. DEPTH AND CHARACTER OF FILL Very dark sandy soil

14. PRESENT CONDITION Fair to good - lithic debris being extremely scattered

15. PREVIOUS EXCAVATIONS none

16. MATERIAL COLLECTED Flakes and chips of brown chalcedony (Knife River Flint), jasper, quartzite Artifacts include two end scrapers and two broken bifaces.
Also collected one large chopper(basalt) and another end scraper of KRF

17. MATERIAL OBSERVED Scattered bone fragments of undetermined species

18. MATERIAL REPORTED AND OWNED none

19. RECOMMENDATIONS FOR FURTHER WORK none

20. PHOTOGRAPH NOS. none

21. MAPS OF SITE over

REMOVED BY Good-Dahlberg DATE 5-21-74

STATE

COUNTY

RESERVOIR

SITE NO.

University of North Dakota
Archaeological Survey

RESERVOIR Upper Turtle River Watershed SITE NO. Haugen Site 32GF324

STATE North Dakota COUNTY Grand Forks

USGS Larimore West Quadrangle

1. MAP REFERENCE Land Rights Work Map 2. TYPE OF SITE Occupation

3. CULTURAL AFFILIATION unknown

4. LOCATION _____

NE $\frac{1}{4}$ of SW $\frac{1}{4}$ SEC. 31 T. 152 N. R. 54 W.

5. OWNER AND ADDRESS Arnold and G. Colin Haugen

6. PREVIOUS OWNERS unknown

7. TENANT _____

8. INFORMANTS none

9. PREVIOUS DESIGNATIONS FOR SITE none

10. SITE DESCRIPTION An occupation site with scattered lithic debris as the only cultural indicator. The presence of certain tools may indicate a relatively long occupation period.

11. POSITION OF SITE AND SURROUNDINGS Located in a flat area overlooking Turtle River
Nothing unique except for the possibility that the site may be located along a strand line.

12. AREA OF OCCUPATION Thinly scattered lithics over an area 150yds. x 150yds.

13. DEPTH AND CHARACTER OF FILL Very sandy - Site is in a plowed field subjected to wind erosion. Knolls located to the north of blowouts.

14. PRESENT CONDITION Fair to good - Site has not been potted but lithics are very rare and scattered.

15. PREVIOUS EXCAVATIONS none (field has been plowed)

16. MATERIAL COLLECTED Flakes and chips of quartzite, brown chalcedony (KRF), pink and white chert, obsidian and large quartz crystals. Artifacts include one diagnostic projectile point (KRF), two complete bifaces, one pottery sherd, one backhanded knife and two broken bifaces.

17. MATERIAL OBSERVED Thinly scattered bone fragments

18. MATERIAL REPORTED AND OWNER none

19. RECOMMENDATIONS FOR FURTHER WORK Possible testing

20. PHOTOGRAPH NOS. none

21. MAPS OF SITE over

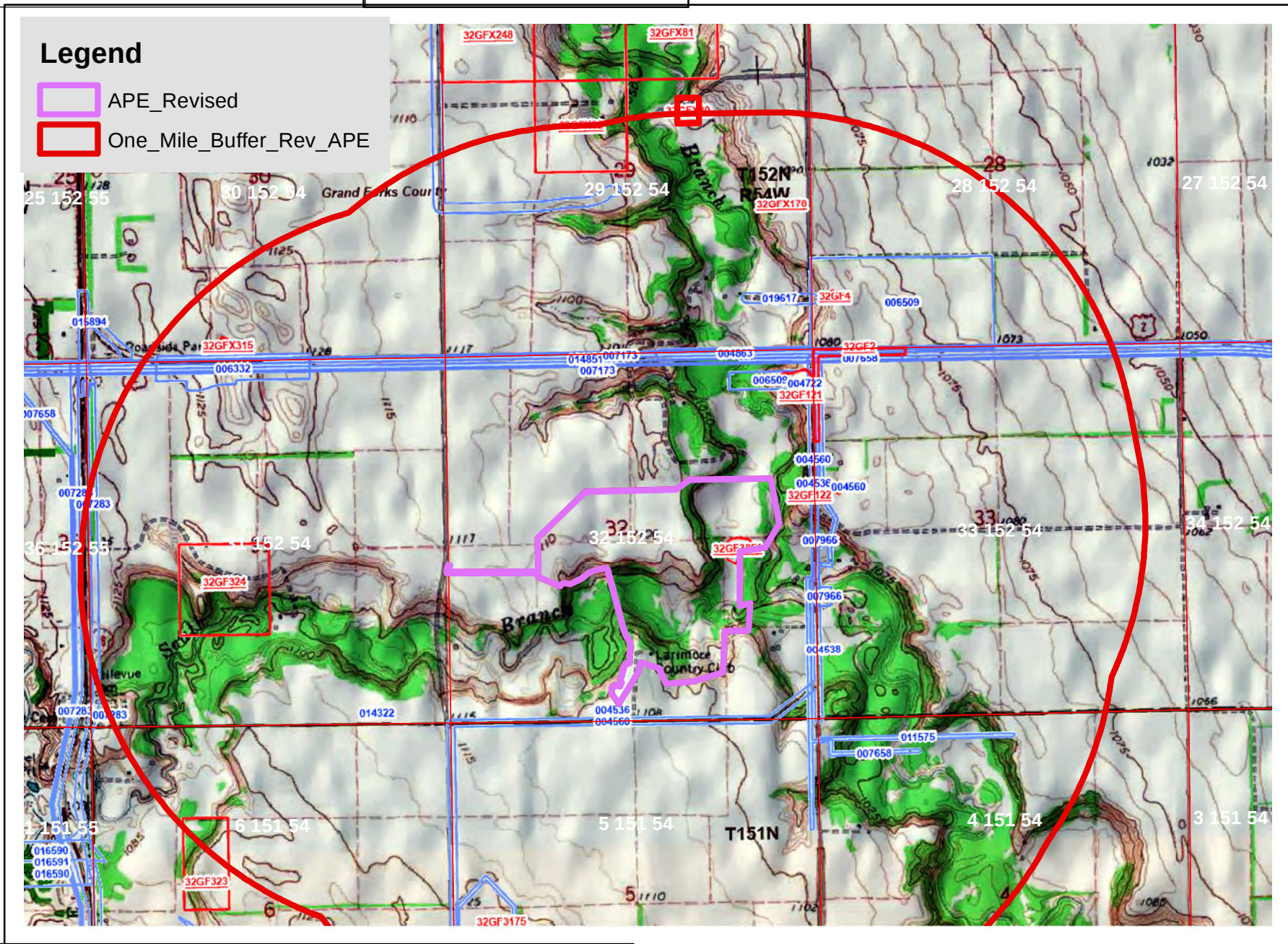
REMOVED BY Good-Dahlberg DATE 5-17-74

STATE
COUNTY
RESERVOIR
SITE NO.

Appendix B: One Mile Search Map

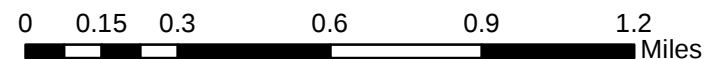
One Mile Search Area Larimore Dam APE

Legal Description
Sec 28 - 33 T152 R54
Sec 4 - 6 T151 R54



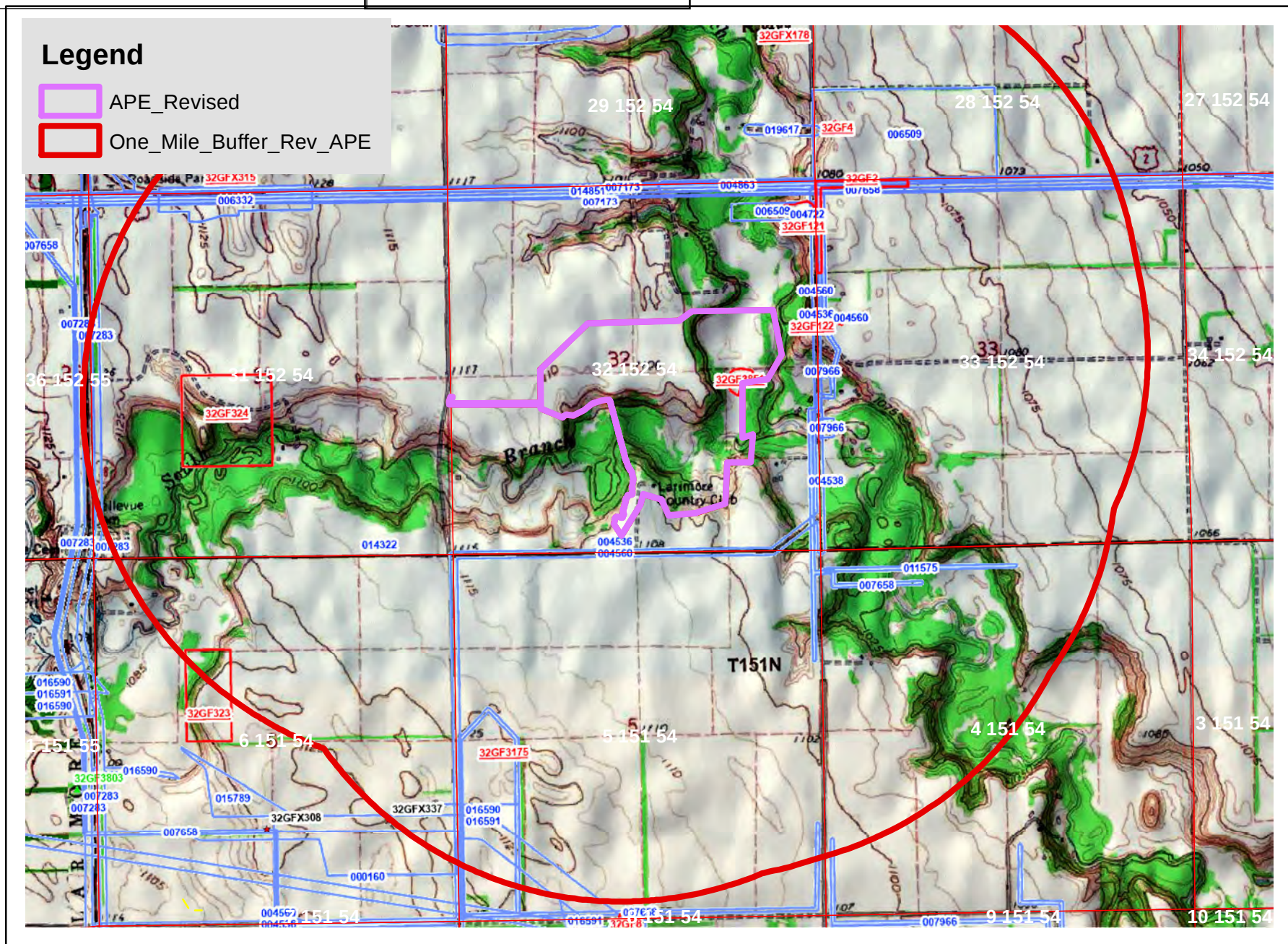
U.S. DEPARTMENT OF AGRICULTURE

Scale 1:24,000



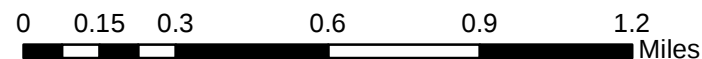
One Mile Search Area Larimore Dam APE

Legal Description
Sec 28 - 33 T152 R54
Sec 4 - 6 T151 R54



U.S. DEPARTMENT OF AGRICULTURE

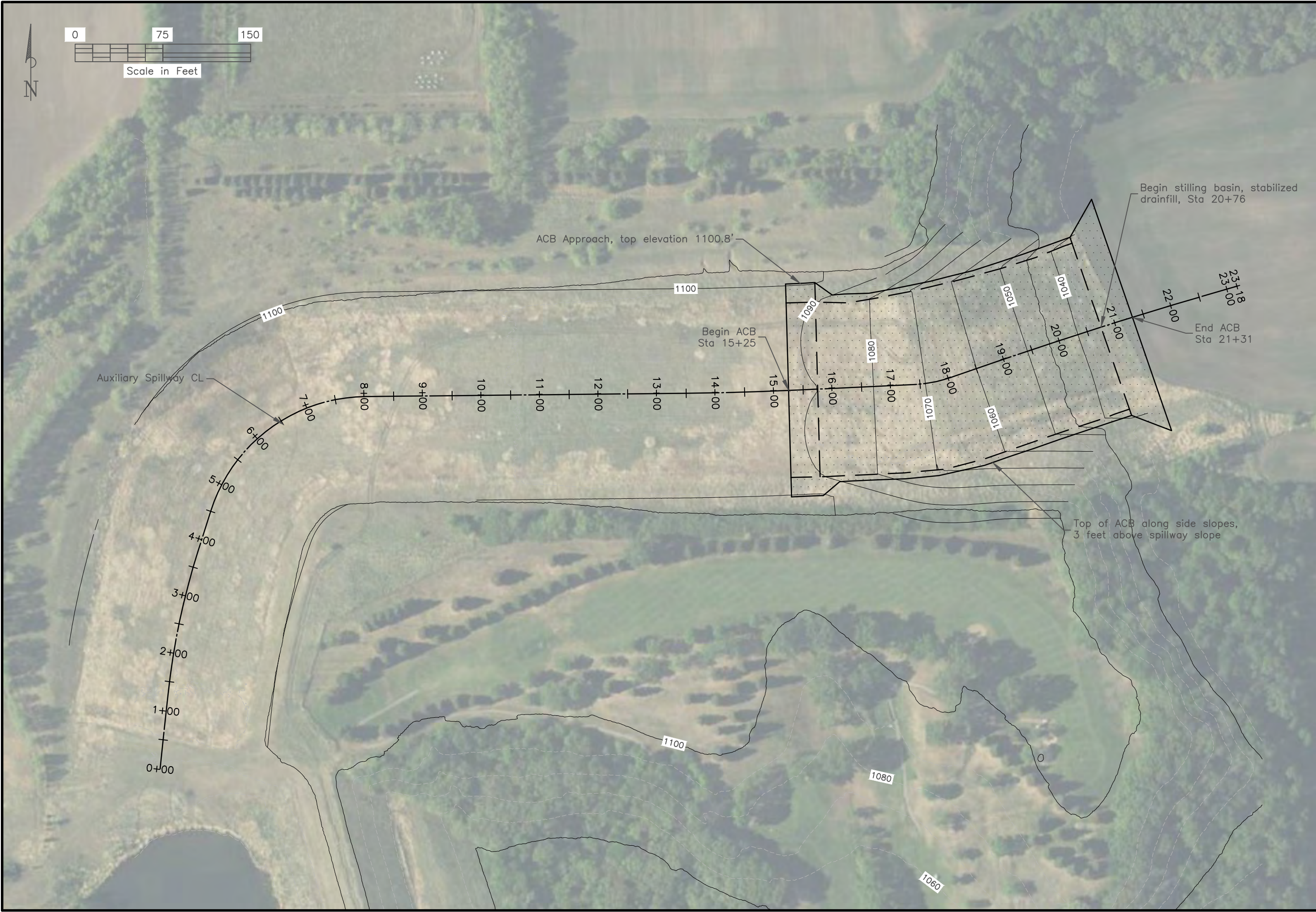
Scale 1:24,000



Appendix C: Engineering Plans



 United States Department of Agriculture Natural Resources Conservation Service	UPPER TURTLE RIVER DAM NO. 9 REHAB CONSTRUCTION LAYOUT		Date 3/12/25	
	OWNER: GRAND FORKS COUNTY WRD COUNTY: GRAND FORKS		Designed: Kate Staley Drawn: Kate Staley Checked: _____ Approved: _____	
File Name Construction_easements_recovery		Date 3/14/2025		Sheet 2 of 11



 United States Department of Agriculture Natural Resources Conservation Service	File Name ACB_earthwork_smooth.dwg		Date 3/11/2025	
	Sheet 5 of 11			
	AUXILIARY SPILLWAY PLAN VIEW UPPER TURTLE RIVER DAM NO. 9 REHAB OWNER: GRAND FORKS COUNTY WRD COUNTY: GRAND FORKS			
	Designed	Kate Staley	Date	3/6/25
Drawn	Kate Staley		3/6/25	
Checked				
Approved				