# REQUISITION FOR TECHNICAL SERVICES

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|---|---|---|---|
| **Project** OHWL Determination | | | **Lake No.** 14-0086-00P Goose Prairie Marsh 14-0314-00P Unnamed Basin |
| City N of Hitterdal | **County** Clay | | **Req. No.** 2014-15 |
| **Sec.** 27 | **Twp.** 141N Goose Prairie Twp | **Rng.** 44W | **Quad No.** UTM 15N E: 253399 N: 5210591 |
| **Funding string must be included with request.** | | | |
| **Fund** | **FinDeptID** | **AppropID** | **CC2** |

**Statement of Problem/Situation (Provide detailed information)**

The Wild Rice Watershed District is looking into controlling water levels on the above mentioned basins for the purpose of flood damage reduction. DNR Wildlife is supportive of designating these basins and controlling water levels for wildlife habitat management purposes. The two will be working collaboratively on this project. An OHWL determination is the next step in the planning phase.

See Attached : Houston Engineering survey, aerial photo, parcel map

**Services Requested (Attach map as necessary)**

1) Determine OHWL for 14-86 and 14-341.
2) Survey culverts at 115th Ave. N and 120th Ave. N
3) Set benchmark

**Landowner(s):**
USFWS Easements & WPA - Ryan Frohling (218) 847-4431
DNR WMA – Blane Klemek (218) 846-8375
Private Property – Contact Kevin Rudd, Wild Rice Watershed District (218) 784-2459

**Permission obtained for access:** X Yes ☐ No

| | | |
|---|---|---|
| **Requested By: Emily Siira** | **Date 8/2/13** | **Phone No. 218-843-8384** |
| **Manager/Supervisor Approval by:** | | **Date** 3/2/13 |

1/12

8/5/2013

# Minnesota DNR Waters
# Field Survey Report

| | | | |
|---|---|---|---|
| **Project** Goose Prairie Marsh | | | **Lake No.** 14-86 |
| **City** near Hitterdal | **County** Clay | | **Req. No** 2014-15 |
| **Sec.** 26,27 | **Twp.** 141 | **Rng.** 44 | **Watershed** |

**SURVEY DATE:** 12/17/2013
**SURVEY CREW:** Woodrich/Schaffer/Cameron

**LAKE SIZE**

Meandered Area Acres — X Non-meandered
Planimetered Area 94 Acres — □ Unknown

**DATUM ADJUSTMENT**

Assumed 1912 1929 X 1988 Source: Houston Engineering BM-confirmed elevation checking with MNDOT BM "Winnipeg".

**CONTROL BENCHMARK**

Location: NE-SW-SE, Sec. 27-141-44
Elevation: 1212.96
Description: At crude public access on south side of basin, spike with head cut off, 1.3' above ground in north side of a 2.5' oak near top of bank, 20' from cattails, 18' SW of access trail to lake.

**SURVEY WORK COMPLETED**

X levels topography cross sections profiles X OHW
X establish benchmarks X outlet elevations X other: GPS/VRS/RTK survey

**WATER LEVELS**

Highest Recorded: 1206.02 7/8/13 — Water Surface: 1205.92
Lowest Recorded: — OHW Elev: 1207.5
Range: — Highest Known:

**OUTLET**

General Description: On north side of basin via county ditch 18, NE-NW-NE, Sec. 27-141-44
Runout Elevation and Description: approximately 1205.0 near beginning of ditch from main basin as per 2013 survey profile from Houston Engineering.

**BENCHMARKS SET**

Location:
Elevation:
Description:
Location:
Elevation:
Description:

| Prepared By Kurt Woodrich | Title Senior Engineering Specialist | Date 12/23/2013 |
|---|---|---|

The OHW elevation of Goose Prairie Marsh is based on the average reduced elevation of the best 22 of the 25 trees (cottonwood, ash, and elm) we documented around the basin. We also documented the landward edge of the cattail vegetation at several locations around the basin with an average elevation of 1207.4. No stainlines or washlines were recorded. There are several wetland areas to the north and northeast that appear to be separated from the basin and are not shown to be part of the basin on the protected waters inventory. We were unable to substantiate the connecting elevations to these areas due to the snow and ice conditions. The basin is shown as mostly open water at elevation 1203 (NGVD 1929) on the 1966 USGS quadrangle.

Goose Prairie Marsh outlets to the north via County Ditch 18. The ditch appears to flow through several wetland areas. Due to snow and ice conditions we were unable to duplicate the outlet profile completed of the entire outlet system by Houston Engineering. Based on Houston Engineering's plan and profile sheet 6 of 6 (project no. 1432-354), it appears the runout point of Goose Prairie marsh would be approximately 1205.0 at the beginning of the outlet ditch. There is another point on the profile approximately 1/2 mile north of the basin at elevation 1204.95.

Following are the elevations we obtained at the culverts of the first downstream road crossing at 115th Avenue North:

| | |
|---|---|
| Headwater at upstream side of easterly culvert under 115th Ave. No. | 1205.21 |
| Top upstream (SW) end of 24" CMP under 115th Ave. No. | 1206.60 |
| Upstream invert of 24" CMP | 1204.53 |
| Top downstream (NW) end of 24" CMP | 1206.31 |
| Downstream invert of 24" CMP | 1204.25 |
| Tailwater at culvert | 1204.35 |
| Ice surface in downstream Unnamed Basin 14-314 | 1203.56 |
| | |
| Top upstream end of remaining portion of dilapidated 18" CMP under 115th Ave. No. | 1204.70 |
| Upstream flowline of 18" CMP (westerly culvert) | 1203.45 |
| Water level at upstream side of culvert | 1204.54 |
| Top downstream end of 18" CMP | 1205.08 |
| Downstream invert of 18" CMP | 1203.64 |

Following are elevations we obtained of a culvert under a field crossing on the north side of 115th Ave. No. between the east and west culverts thru 115th Ave. No.:

| | |
|---|---|
| Top east end of 24" CMP under field road | 1207.11 |
| Flowline at east end of 24" CMP | 1205.7 |
| Top west end of 24" CMP | 1205.90 |
| Flowline at west end of 24" CMP | 1204.4 |

# Minnesota DNR Waters
# Field Survey Report

| | | | |
|---|---|---|---|
| **Project Unnamed Basin 14-314** | | | **Lake No. 14-314** |
| **City near Hitterdal** | **County Clay** | | **Req. No 2014-1** |
| **Sec. 22** | **Twp. 141** | **Rng. 44** | **Watershed** |

**SURVEY DATE: 12/17/2013**
**SURVEY CREW: Woodrich/Schaffer/Cameron**

**LAKE SIZE**

Meandered Area Acres — X Non-meandered
Planimetered Area 20 Acres — □ Unknown

**DATUM ADJUSTMENT**

Assumed 1912 1929 X 1988 Source: Houston Engineering BM-confirmed elevation checking with MNDOT BM "Winnipeg".

**CONTROL BENCHMARK**

Location: NE-SW-SE, Sec. 27-141-44
Elevation: 1212.96
Description: At crude public access on south side of Goose Prairie Marsh 14-86, spike with head cut off, 1.3' above ground in north side of a 2.5' oak near top of bank, 20' from cattails, 18' SW of access trail to lake.

**SURVEY WORK COMPLETED**

X levels topography cross sections profiles X OHW
establish benchmarks X outlet elevations X other: GPS/VRS/RTK survey

**WATER LEVELS**

Highest Recorded: — Water Surface: Ice surface 1203.56
Lowest Recorded: — OHW Elev: 1205.3
Range: — Highest Known:

**OUTLET**

General Description: on north side of basin, NW-NE-NW, Sec. 22-141-44
Runout Elevation and Description: at culvert thru 120th Ave No. on north end of basin, upstream flowline of 30" CMP; elevation 1202.8.

**BENCHMARKS SET**

Location:
Elevation:
Description:
Location:
Elevation:
Description:

| | | |
|---|---|---|
| Prepared By Kurt Woodrich | Title Senior Engineering Specialist | Date 12/23/2013 |

The OHW elevation of Unnamed Basin 14-314 is based on the average elevation at the landward edge of the cattail vegetation we recorded around the basin. The edge of the cattail vegetation ranged in elevation from 1204.7 to 1205.9 with an average of 1205.3. No stainlines or washlines were observed. There were no trees suitable for use in determining the OHW elevation. The basin is shown as all wetland symbols with no open water or elevation shown on the 1966 USGS quadrangle.

The basin is mainly contained within the Goose Prairie State Wildlife Management area. County Ditch 18 flows from south to north through the basin. A possible runout elevation within the cattail vegetation upstream of 120th Avenue North was not determined due to snow and ice conditions.

Following are the elevations we obtained at the outlet culvert crossing under 120th Ave. No. at the north end of the basin:

| | |
|---|---|
| Ice level in the south portion of the basin | 1203.56 |
| Headwater at culvert thru 120th Ave. No. | 1203.44 |
| Top upstream (south) end of 30" CMP thru 120th Ave. No. | 1205.49 |
| Upstream flowline of CMP thru 120th Ave. No. | 1202.8 |
| Top downstream end of 30" CMP thru 120th Ave No. | 1204.89 |
| Downtream invert of CMP thru 120th Ave No. | 1202.30 |
| Tailwater at 120th Ave. No. | 1203.55 |