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# Wildlife Lake Habitat Survey Report

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**NAME OF LAKE:** Vinge

**DOW LAKE ID #:** 56040200

**DATE OF SURVEY:** 7/6/2009

**TYPE OF SURVEY:** Wildlife Lake Survey

**SURVEY CREW:** A. Tiemann & B. Arne



**Information Provided by:**

**Minnesota Department of Natural Resources  
Wildlife Management Section  
Shallow Lakes Program  
Tuesday, December 07, 2010**



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DOW Lake ID: 56040200  
Survey Date: 7/6/2009

## General Lake Information

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### Location Information

#### Legal Description

Township: 131 Range: 41 Section: 18

Primary County: Otter Tail

Work Area Name:

Wildlife Work Area:

### General DOW Lake Information

Basin Area (Acres): 181

Secchi Depth (feet): 0

PWI Class: P

Number of Public Accesses 0

Survey Maximum Lake Depth: 16.0

Survey Mean Lake Depth: 10.9

Survey Maximum Secchi Depth 16.0

Survey Mean Secchi Depth: 10.9

DOW Wetland Type: 5

Watershed ID: 23024

USGS Quad Name: Dalton

Miles of Shoreline: 3

DOW Maximum Lake Depth 0.0

DOW Mean Lake Depth: 0.0

### Lake Survey Conditions

Time:

Temperature Air / Water (F): 75 / 80.7

Cloud Cover (%): 0-50% cloud cover

Wind Speed (mph): 0-5 Direction: NE

### Previous Wildlife Lake Survey Information

Type of Survey	Survey Year	Survey Date	Survey Crew	Requested by
Wildlife Lake Survey	2009	07/06/2009	A. Tiemann & B. Arne	Josh Kavanaugh, Ducks Unlimited

### Lake Survey Access Information

Ownership: Private

Access Type: Earthen

**Description:** Access is northwest of the landowners property at 13620 County Road 117. Landing is southwest of the locked gate on the southern side of the only peninsula on the northeast side of the lake. Permission is needed and a key must be obtained to access this lake.

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# Inlets and Outlets Information

## Inlet Information

Inlet Name:

Inlet Type Code (a):

Inlet Cover Type (c) and Description:

Fish Barrier (Y/N) (e):

Fish Barrier Description:

Comments:

No visible surface inlets.

## Inlet Flow Information

Flow (fps):

Average Width (feet):

Flow (cfs):

Average Depth (feet):

Method (d):

Inlet Surface Temp (F)

## Outlet Information

Outlet Name: Unnamed

Lake or River ID:

Tributary To:

### Water Control Structure Information

Type and Description: Culvert

Concrete culvert

Owner and Descriptio

Head Reading:

Sill Reading:

Gauge Reading

Comments:

High water outlet is located on the northeast side of the lake. A concrete culvert is located under County Road 117, approximately 100-200 meters north of the access point. The outlet flows northeast into nearby Johnson Lake (56039300) which is 10 feet lower in elevation according to topographic maps.

### Outlet Flow Information

Flow (fps):

Flow (cfs):

Method (d):

Average Width (feet):

Average Depth (feet):

Barrier to Fish (Y/N) (e): N

Fish Barrier Description:

- (a) (ID) Intermittent - Dry (no flow at mouth, still may contain water), (IF) Intermittent - Flowing (currently has flow at mouth), (C)ontinuous flow, (X) Unkown
- (b) (N)amed lake (give name), (U)nnamed lake, (M)arsh, (S)pring, (W)ell, (T)ile, (SS) Storm sewer, (D)itch, (O)ther (describe), (X) Unkown
- (c) Give up to two most common in order of abundance: (H)ardwoods, (CO)nifers, (MI)xed Forest, (G)rasses, (CR)ops, (P)asture, (MU)nicipal, (R)esidential, (O)ther (describe), (X) Unkown
- (d) (F)loating object, (C)urrent meter, (D)irect time and volume measurement (gpm / 15.9 = cfs). Describe where the flow measurement and avg. width/depth estimates were taken on the flow worksheet section
- (e) (Y)es, (N)o, (X) Unkown
- (f) List the species code for up to 4 species with known spawning runs in this inlet
- (g) (TC) type "C" with stoplogs, (SP) Sheet piling, (DI) Drop inlet with stoplogs, (CF) Concrete with fixed sill, (BD) Beaver dam, (O)ther (describe), (X) Unkown
- (h) (DNR), (UFS), (DOT), (COU)nty, (COE), (NPS), (FWS), (CIT)y, (TOW)nship, (NPS), (PRI)vate (describe), (None) (natural dam), (O)ther (describe), (X) Unkown

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## Water Level and Chemistry

### Water Level Information

Code: BM

Water Level Reading Date: 07/06/2009

Benchmark/Gauge Description:

Benchmark is located on the north side of the lake. It is a spike placed in the SW side of the second power pole north of the driveway with fire number 13620. \*Ditch was wet at the time of the survey. The surface water elevation was 1303.51 at the time of the survey.

Water Level Reading (feet + or -):

-1.79

Current Water Level:

H

Water Level Description:

Average Annual Fluctuation:

Annual Fluctuation Description:

Annual Level Fluctuation Source:

Extreme Fluctuation:

Water Level History Comments:

### Water Chemistry

Lake or Inlet (L or I):

Station Number of Water Sample:

Sample Date:

Depth Sample Taken (ft):

Date Sample Analyzed:

Bottom Depth (ft):

Nonstandard Description:

Color Cause Code and Description:

Water Color Code and Description:

Biological O2 Demand (ppm):

Dissolved Oxygen (ppm):

Organic Dissolved Solids (ppm)

Ortho Phosphorus (ppm):

Conductivity (umhos):

Total Phosphorus (ppm):

Sulphate Ion (ppm):

Chloride Ion (ppm):

pH:

Nitrite [NO2-N] (ppm):

Nitrogen TLKJ (ppm):

Alkalinity (ppm):

Dissolved Iron (ppm):

Dissolved Solids (ppm):

Alkalinity Method:

Ammonia [NH3-N] (ppm):

Nitrate [NO3-N] (ppm):

Total Iron (ppm):

Suspended Solids (ppm):

Chlorophyl A (ppm):

Other Measurements:

Comments:

## Waterfowl and Wildlife Observations / Field Notes

### Waterfowl Observations:

Waterfowl utilization at the time of the survey was two mallards.

### Other Wildlife Observations:

Other wildlife utilization at the time of the survey included two common loons, two American white pelicans, four double-crested cormorants (fourty+ nests were observed on the islands), one great blue heron, and two common egrets.

### Field Notes:

Overall, Vinge Lake is in good condition. Secchi disk was visible to the bottom at most locations. The maximum secchi disk measurement recorded was 16.0 feet. Three sample stations were not recorded because of water depth exceeding the length of rope attached to the secchi disk. Aquatic vegetation was widely dispersed and somewhat abundant, although diversity was low. Sago pondweed and coontail were the predominate species found. Filamentous algae was common throughout the basin and blue-green algae was also present. Wildlife use seemed fairly low, except for double-crested cormorants nesting on an island near sample point 49. The banks surrounding the basin were very steep. There was a fringe of cattail and bulrush around most of the shoreline. Aspen, basswood, and elm trees were common along the lakeshore. Largemouth bass and sunfish were observed during the survey.

### Wildlife Managers Comments or Management Recommendations:

The private landowner on the basin would like to draw the lake down to eliminate fish and increase amphipod populations to a normal level. The landowner has planted both sago pondweed and wild rice in the basin, and believes the high water levels are to blame for the low plant diversity. Ducks Unlimited is working with landowners and Ottertail County to investigate drawdown potential.

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## Wildlife Lake Sample Station Summary - Vinge

### Sample Station Information

Minimum Depth: 2.5 Minimum Secchi: 2.5 Initial # of Stations: 71

Maximum Depth: 16.0 Maximum Secchi: 16.0 Number of Stations Sampled: 68

Mean Depth: 10.9 Mean Secchi: 10.9

### Vegetation Summary

Number of Sample Stations: 68

Lakewide Species Richness: 7

Percent of Vegetated Plots: 67.6%

Vegetation Species	# of Plots Occurring	Species Frequency	95% CI	High C / I	Low C / I	Frequency Value
<b>Stuckenia pectinata</b> Sago Pondweed	36	52.9%	0.1269	0.6563	0.4025	0.5294
<b>Ceratophyllum demersum</b> Coontail	30	44.1%	0.1262	0.5674	0.3149	0.4412
<b>No Vegetation Found</b> No Vegetation	22	32.4%	0.1194	0.4429	0.2042	0.3235
<b>Typha angustifolia or glauca</b> Narrowleaf Cattail Group	2	2.9%	0.0478	0.0772	-0.0184	0.0294
<b>Scirpus acutus</b> Hardstem Bulrush	2	2.9%	0.0478	0.0772	-0.0184	0.0294
<b>Scirpus spp.</b> Bulrush Group	1	1.5%	0.0362	0.0509	-0.0215	0.0147
<b>Myriophyllum sibiricum</b> Northern Water Milfoil	1	1.5%	0.0362	0.0509	-0.0215	0.0147
<b>Chara spp.</b> Muskgrass spp.	1	1.5%	0.0362	0.0509	-0.0215	0.0147

Survey Map

