Wildlife Lake Habitat Survey Report

NAME OF LAKE:	Shible
DOW LAKE ID #:	76014100
DATE OF SURVEY:	7/7/2009
TYPE OF SURVEY:	Wildlife Lake Survey
SURVEY CREW:	B. Arne & A. Tiemann

Information Provided by:

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

DOW Lake ID: 76014100
Survey Date: 7/7/2009

General Lake Information

Location Information

Legal Description

Township: 121 **Range:** 43 **Section:** 34

Primary County: Swift

Work Area Name:

Wildlife Work Area:

General DOW Lake Information

Basin Area (Acres): 340

Secchi Depth (feet): 0

PWI Class: P

Number of Public Accesses 1

DOW Wetland Type: 5

Watershed ID: 22004

USGS Quad Name: Appleton

Miles of Shoreline: 2

Survey Maximum Lake Depth: 5.8

Survey Mean Lake Depth: 4.5

Survey Maximum Secchi Depth 5.8

Survey Mean Secchi Depth: 4.3

DOW Maximum Lake Dept 8.0

DOW Mean Lake Depth: 7.0

Lake Survey Conditions

Time:

Temperature Air / Water (F): 78 / 80

Cloud Cover (%): 90-100% cloud cover

Wind Speed (mph): 5-15 **Direction:** SE

Previous Wildlife Lake Survey Information

Type of Survey	Survey Year	Survey Date	Survey Crew	Requested by
Wildlife Lake Survey	2003	08/28/2003	Ann Geisen & Josh Kavanagh (	by a landowner interested in improving
Wildlife Lake Survey	2006	07/06/2006	N. Kovar & L. Zluticky	case study project team
Wildlife Lake Survey	2009	07/07/2009	B. Arne & A. Tiemann	Case study project team

Lake Survey Access Information

Ownership: MN Department of Natural Resources **Access Type:** Earthen

Description: Lake was accessed through the Shible WMA on the southeast side of the lake near sample station # 82. A 16 foot jon boat was used for this survey.

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Inlets and Outlets Information

Inlet Information

Inlet Name: Unnamed

Inlet Type Code (a): IF

Inlet Cover Type (c) and Description:

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

Fish Barrier Description:

Inlet Flow Information

Flow (fps): **Average Width (feet):**

Flow (cfs): **Average Depth (feet):**

Method (d): **Inlet Surface Temp (F**

Comments:

Inlet is located on the northeast side of the lake near point # 59.

Outlet Information

Outlet Name:

Lake or River ID:

Tributary To:

Water Control Structure Information

Type and Description:

Owner and Descriptio

Head Reading:

Sill Reading:

Gauge Reading

Outlet Flow Information

Flow (fps):

Flow (cfs):

Method (d):

Average Width (feet):

Average Depth (feet):

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

Fish Barrier Description:

Comments:

No visible surface outlets. DNR Rivers and Streams theme and USGS Quad map suggest the lake can outlet on the west side during high water events and flow west for approximately 1500 feet into a series of ditches draining an old lake bed (Mud Lake "Cry of the Marsh"). This area eventually flows south into Five Mile Creek and into Marsh Lake.

(a) (ID) Intermittent - Dry (no flow at mouth, still may contain water), (IF) Intermittent - Flowing (curently 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) Uknown

(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 spawing 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:

Benchmark/Gauge Description: A stump near the landing was used as the benchmark.

Water Level Reading (feet + or -): -5.52

Current Water Level:

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):**	1060	**Total Phosphorus (ppm):**	0.048
Sulphate Ion (ppm):	**Chloride Ion (ppm):**		**pH:**	8.59
Nitrite [NO2-N] (ppm):	**Nitrogen TLKJ (ppm):**		**Alkalinity (ppm):**	137
Dissolved Iron (ppm):	**Dissolved Solids (ppm):**	832	**Alkalinity Method:**	
Ammonia [NH3-N] (ppm):	**Nitrate [NO3-N] (ppm):**		**Total Iron (ppm):**	
Suspended Solids (ppm):	**Chlorophyl A (ppm):**	0.008		

Other Measurements: Chlorophyll A-Pheophytin (ppm): 0.0057

Comments:

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Observations and Field Notes

Waterfowl and Wildlife Observations / Field Notes

Waterfowl Observations:

Waterfowl utilization at the time of the survey included eleven mallards and six blue-winged teal.

Other Wildlife Observations:

Other wildlife utilization at the time of the survey included one American white pelican, one black tern, and one ring-billed gull.

Field Notes:

Water clarity was good throughout the basin. Secchi disk was visible to the bottom at most sample points. Submerged aquatic vegetation was present at 85% of sample points. Sago pondweed, coontail, and chara were the most common species found. Spiny naiad was also observed at several stations. Cattails were prevalent along most of the shoreline and bulrush was also noted at a few locations. Bottom substrate was mostly hard sand with some areas having a layer of detritus and muck. Chironomids were pulled up on the plant rake at many sample stations.

Wildlife Managers Comments or Management Recommendations:

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Wildlife Lake Sample Station Summary - Shible

Sample Station Information

Minimum Depth:	**1.5**	**Minimum Secchi:**	**1.5**	**Initial # of Stations:**	**90**
Maximum Depth:	**5.8**	**Maximum Secchi:**	**5.8**	**Number of Stations Sampled:**	**88**
Mean Depth:	**4.5**	**Mean Secchi:**	**4.3**		

Vegetation Summary

Number of Sample Stations: 88

Lakewide Species Richness: 8

Percent of Vegetated Plots: 85.2%

Vegetation Species	# of Plots Occurring	Species Frequency	95% CI	High C / I	Low C / I	Frequency Value
Stuckenia pectinata Sago Pondweed	66	75.0%	0.0967	0.8467	0.6533	0.7500
Ceratophyllum demersum Coontail	39	44.3%	0.1101	0.5533	0.3331	0.4432
Chara spp. Muskgrass spp.	28	31.8%	0.1036	0.4217	0.2146	0.3182
No Vegetation Found No Vegetation	13	14.8%	0.0802	0.2280	0.0675	0.1477
Utricularia vulgaris Greater Bladderwort	10	11.4%	0.0724	0.1860	0.0413	0.1136
Najas marina Spiny Naiad	10	11.4%	0.0724	0.1860	0.0413	0.1136
Typha angustifolia or glauca Narrowleaf Cattail Group	5	5.7%	0.0543	0.1111	0.0025	0.0568
Scirpus acutus Hardstem Bulrush	2	2.3%	0.0370	0.0597	-0.0143	0.0227
Zanichellia palustris Horned Pondweed	1	1.1%	0.0280	0.0393	-0.0166	0.0114


SHIBLE
DOW# 76014100
Swift County
July 7, 2009 Lake Survey
Vegetation and Depth
2.50 3.50 3.50 3.50
3.25 4.00 4.00 4.50 4.25 2.00
3.25 4.00 4.00 4.50 4.75 4.00 1.75
3.75 4.25 4.50 4.75 5.00 5.00 5.00 3.25
3.75 4.50 4.75 4.75 5.00 5.50 5.25 5.50 4.75 4.25 4.00 1.50
4.00 4.50 4.75 5.00 5.50 5.75 5.75 5.75 5.75 5.00 4.50 4.25
4.00 4.50 5.00 5.00 5.50 5.75 5.75 5.75 5.50 5.25 5.00 4.75
3.75 4.50 5.00 5.00 5.50 5.75 5.50 5.50 5.25 5.50 5.25 2.25
2.00 3.25 4.75 5.00 5.50 5.50 5.50 5.25 5.00 3.50
Access
3.50 4.50 4.25 4.25 2.25
Wildlife Lake Survey Results
N
Emergent Vegetation Observed
Submerged Vegetation Observed
Submerged / Emergent Vegetation Observed
No Vegetation Observed
Not Surveyed
2008 FSA Orthophoto
800 400 0 800
Feet