APPENDIX A

HISTORY:

INTEGRATED BUCKATABON HISTORY

(BRUCE BICKNER, 2020)

&

CEDED TERRITORY MAP

HISTORICAL ORIGINS OF UPPER BUCKATABON LAKE

September 18, 2020 Draft

PREFACE

Upper Buckatabon Lake lies in Township 41 North, Range 9 East in the Town of Conover, Vilas County, Wisconsin.

According to the Wisconsin State Historical Society in Madison, Wisconsin, an 1847 journal by Norwood says that the lake name of Buckatabon can be traced back to the Ojibwe Nation. The Ojibwe name for this lake was Kenonjapugataban. The source also references an extensive trail system connecting Buckatabon and Lake Laura. Other journal sources reference a longer primary route from Lac Du Flambeau to the Wisconsin River via Trout Lake, Lost Canoe Lake, Escanaba Lake, White Birch Lake, Ballard Lake, and Irving Lake to Buckatabon.

EARLY LAND OWNERSHIP

Abstracts of Title researched to date all indicate that private ownership of the land surrounding Upper Buckatabon lake traces back to a deed from the U.S. Government to James B. Tolman dated November 1, 1872.

In the ensuing 16 years there, are a series of quit claim deeds among James G. Clark, John J. Clark, Daniel H. Forbes, Lucy A. Forbes, John R. Forbes, Alexander F. Clark, Amelia P. Clark, Charles Barber (in trust for Nora Wilsie), Nora. G. Clark, and D.C. Barber. These parties appear to be related and each at one time or another held an undivided 1/3 interest in the property surrounding Upper Buckatabon,, either individually or together with a spouse. (John R. Forbes was the father of Daniel H. Forbes; Lucy A. Forbes was the daughter-in-law of John R. Forbes; Nora Wilsie married James G. Clark, who in turn was a

business partner of Daniel H. Forbes; and Charles Barber was a trustee for Nora Wilsie prior to her marriage.)

October 31,1889, Nora G. Clark, Lucy A. Forbes, and Amelia R. Clark (the owners resulting from the earlier transactions) conveyed by warranty deed the entire property around Upper Buckatabon to the United States Lumber Company, headquartered in Milwaukee, Wisconsin for $105,000.

November 9, 1912, the United States Lumber Company granted the Wisconsin Valley Improvement Company the rights to overflow by means of a dam certain lands, including the land around Upper Buckatabon, for purposes of the construction, maintenance and operation of a dam. (Contact Wisconsin Valley Improvement to learn Lower Buckatabon dam history.)

August 1, 1922, the United States Lumber Company granted a quit claim deed for the Upper Buckatabon properties to the Tomahawk Lumber Company of Tomahawk, WI.

January 23, 1930, the Tomahawk Lumber Company granted the Upper Buckatabon properties to Egbert G. Gesell and Carl F. Gesell, as trustees of the trust estate of Marie H. Kelly, deceased. (Note that this transaction was at the time of the stock collapse that resulted in the Great Depression.) Marie Kelly had been a resident of Tomahawk, WI. Egbert G. Gesell was a resident of the city of New York. Carl F. Gesell was a resident of Tomahawk, WI. They were brothers. (Marie Kelly may well have been the sister of the Gesell brothers.)

July 14, 1936, Egbert G. Gesell, and Carl F. Gesell, as trustees, conveyed the Upper Buckatabon properties to Carl F. Gesell and Margaret E. Gesell, a single person. Barbara G. Gessell, the wife of Carl F. Gessell , was later added to the property ownership.

February 5, 1937 Vilas County quit claimed any interest in the Upper Buckatabon properties to Carl Gesell. The chain of title includes some tax sale deeds with Vilas County these properties, and it appears that the Gesells wanted to clear their title. (The Vilas County quit claim

deed to the Gesells prohibited any cutting of timber on the property for ten years—other than to clear a building site.) So, in the late 1930s, the Gesells owned all the property surrounding Upper Buckatabon.

In the ensuing years, Carl Gesell is rumored to have been forced to sell practically all such lake frontage as a result of losses sustained in the 1929 market crash and subsequent debts associated with travel to and entertainment in Chicago hotels. When Gesell finished his sales in the late 1940s, the only Upper Buckatabon property he owned was a small parcel in the back of Musky Bay now owned by Jim Moeller.

THE SELLOFF

The earliest Upper Buckatabon sales by the Gesells appear to have been to Ed Moore, Fred and Clara La Mason and Darrel and Frances Martin, sales which apparently occurred prior to 1940. This stretch of land on the north shore is now owned by Ronald W. Schaefer, Ginny Kressin, John Folland, the Mark J. Yogerst Trust, and the John R. Uecker Trust. (Abstracts of these early sales need to be reviewed to confirm.)

TURTLE ROCK

My parents, Arno and Dorothy ('Do") Bickner first visited the shores of Upper Buckatabon in the summer of 1941. Teachers in the Chicago Public School system, they used part of their summer vacation to drive with a camper trailer around Lake Michigan, starting on the eastern shore. On the way down the western shore, they diverted to Conover, to visit Ed Moore (who then owned a cabin on the north shore of Upper Buckatabon) and Fred and Clara La Mason (who owned a small resort with a boathouse cabin on Upper Buckatabon.) Their interest in visiting Buckatabon was heighted by pictures Moore hand provided to Charlie Lasher and my parents. (The La Mason property was the Lake View Resort property later owned by Fred and Friedel Mueller.)

Ed Moore, who had taught in the Chicago public schools at Crane Technical High (with my dad and Charlie Lasher), encouraged my parents to consider purchasing nearby property on the north shore of Buckatabon. They were receptive to the idea, and later that summer they agreed with Charlie and Irene Lasher to go together and purchase 400 feet of frontage on Upper Buckatabon.

The land in question was owned by Carl and Margaret Gesell, who owned most of the land around Upper Buckatabon. On October 13,1941, the Lashers and Bickners each purchased 200 feet of frontage, at a cost of $2 a foot from the Gesells. The cost to survey and mark the property was $30, and the work was done by V.M. Maine, a county surveyor for Oneida County. The legal work was done by Edmund Drager, the former Vilas County attorney who had offices above the Vilas Theater in Eagle River. (On July 31, 1942, Arno went back to Gesell to purchase another 50 feet of frontage to the east. Gesell agreed to sell the additional property, but he increased the price to $2.50 a foot!) Viewed from the lake, the property was identified by a large rock on the northern shoreline with the profile of a turtle—thus my parents named their property "Turtle Rock."

Subsequent land additions to Turtle Rock were (1) the purchase by Arno and Dorothy of an additional 50 feet of frontage to the east from Gus and Erna Struss on September 1, 1960, (2) the purchase of 200 additional feet of frontage by Joan and Bruce from Gus and Erna Struss on October 10, 1967 for $5,000, and (3) the purchase of the adjoining 40 acre tract to the north by Bruce from Henry and Frieda Schwatlo on April 18, 1968. In total, Turtle Rock had grown to 500 feet of lake frontage and an adjoining forty-acre tract by 1968. Additional frontage was added in later years: 567 feet of frontage beginning at the narrows and running up to the Deerpath Resort in 2004 from Dr. Ives , and 700 feet of frontage from the Warrens just south of the Hibbards in 2014.

In 1941, the adjoining land to the west of Turtle Rock was owned by Lasher, Martin, Mason, and Moore. The land to the east was still owned by the Gesells.

In 1942, Arno and Do began to develop Turtle Rock. Early projects began with the building of a set of poplar log stairs from the lake up to the top of the hill facing the lake. The hillside was largely blow sand, and 42 steps were staked into the hill to form a stairway to access the lake. They were helped in this project by Ed Moore, my grandfathers (Anton Bickner and Carl Pierce), as well as my aunt and uncle, Ruth and Ed Groneman. In subsequent years, the original logs were first replaced with oak logs—and then later with railroad ties from repairs to the Northwestern rail tracks between Conover and Land O'Lakes. (At about the age of four, I took my first train trip on the Northwestern from Conover to Eagle River.)

They also cleared the land on the hill near the east side of their property line overlooking the lake. Construction of an outhouse and a small, adjoining shed, together with a water well were other early construction projects. During this early development, my parents stayed at Sabra Kulle's Hi Banks Resort on Lower Buckatabon and daily rowed a resort boat loaded with construction materials up to Turtle Rock to accomplish their work.

At the beginning summer 1943, there was no road access from West Buckatabon Road to Turtle Rock. The current Bay Road and continuing access to Turtle Rock was not built until late summer 1943. Roads to individual properties were in most instances bulldozed by Hilby Struck, who also owned property on the north shore and later ran the hardware store in Conover. (As an aside, in the early 40s, East and West Buckatabon Roads were not connected. The roads were sand/gravel, with East Buckatabon Road ending at Larson's Resort and West Buckatabon Road ending near Buckatabon Creek and the Old Star Lake Road. The two roads were not connected until 19??.)

In early summer 1943, Arno built a small cabin (with help from Ed Moore and Boyd Mitchell) on the site that had been cleared in 1942. The cabin was originally 12' wide and 16' long. It consisted of one room with two sets of bunk beds, a two-burner gas cooking "plate," and an ice box. Light was provided by kerosene lamps, and heat supplied by a small black, iron stove. (A small screened-in porch, 12'

wide and 4' long, was later added to the cabin. The porch had green and orange striped, roll-up awnings.) The materials were purchased from the Eichoff lumber yard in Conover. Due to war time regulations, one could purchase only $200 of building materials, but could also spend $200 on construction labor. Since my dad intended to do the work himself (assisted by Ed Moore and Boyd Mitchell), Eichoff agreed to sell him $400 of building materials. My mother remained in Chicago during the summer of 1943, as she was expecting me.

During the summer of 1943, the Lashers also built a similar cabin on their portion of the property they had bought in the fall of 1941. In 1947, a small stone fireplace was built on the property line between the Bickners and the Lashers. The cement hearth of such fireplace still shows the remnants of the footprints of Charlie Lasher and Bruce Bickner almost 73 years later. Over the years the two families held many picnic potlucks on the hill at the fireplace, the largest being on the Fourth of July each year.

The road from Bay Road into the Bickner and Lasher properties was built primarily on Lasher's land with an oral access easement granted to the Bickner land. (This easement was converted to a written document on November 13, 1970.) The path was cleared by Arno, Carl Pierce, and Ed Groneman in 1943. Hilby Struck then bulldozed the path into a road that met the newly created Bay Road. The point at which the common road split to service the individual properties was commonly known by us as the "Y." Initially the individual access to the Bickner parcel ran from the Y up the hill along the property dividing line. In the early 50s when electrical service was brought to the properties, the power line followed that line and the Bickner branch was moved east to provide access with less of a hill to climb. At that time, my dad and Clyde Echelbarger (another Crane Tech teacher) built a fish cleaning shanty on the old road site. Both men were rather short in stature, so taller men had to bend over to clean fish. Thousands of crappies were cleaned in that structure over the years.

In the early years, the cabin at Turtle Rock was the summer home for my parents and me, but on occasion the Cabin's inhabitants also included some combination of my fraternal grandfather (Anton Bickner) and my maternal grandparents (Carl and Violetta Pierce). When all of us were present, a platform tent with hammocks was set up near the cabin. My aunt and uncle (Ed and Ruth Groneman) also visited Turtle Rock for two weeks a year, staying in the boat house cabin at Friedel Mueller's Lake View Resort, located to the west on the north shore of Upper Buckatabon. An early picture shows me in a diaper hanging in a sling seat from one of the cabin's rafters.

Early visitors to Turtle Rock included Otz and Mildred Nielsen, Ber and Pat Lewis and Max and Sadie Ittin.

My early memories include Ed Warfield, a Lower Buckatabon resident that delivered ice to the early lake residents. The ice blocks were cut during the winter and stored with sawdust in an icehouse located behind George Dobbs' Red Owl store in Conover. Ed delivered ice once a week in a staked, flatbed truck. There are many stories related to this local character, some concerned his preference to receive his tip in the form of a shot of whiskey.

As a young boy, I recall great fishing on Upper Buckatabon. Our first outboard motor (1946) was a 5 hp Johnson. It was mounted on a wooden Rhinelander boat, a boat noted for its wide and deep back seat. At the age of nine, I could fish across the lake on my own. It was the norm for me to catch a dozen nice, large Crappie slabs in an hour. Large walleyes were easy to catch by trolling the deeper portions of the lake while rowing. In the early spring of 1951 Arno caught a 51" musky in shallow water in front of the cabin.

Later fishing boats included a 12' Dow Magnesium boat, a 14' steel Starcraft boat with a 15 hp motor (still in use after 67 years), a 16' aluminum Starcraft boat with a 40 hp motor, and finally a 17' Lund steel boat with a 60 hp motor.

We also had a series of ski boats dating back to 1955. The first one was a Thompson wooden lapstrake boat with two cockpits. It had a 25 hp motor and once put in the water had to be put on blocks until the lapstrakes swelled with the moisture and sealed against the entry of further water. Subsequent boats were a red Larson with a 50 hp, a blue Starcraft with a 75 hp, a green Crestliner with a 90 hp and the current green Mastercraft inboard with a 350 hp.

The availability of electricity for the Buckatabon Lakes in 1952 (see separate write-up on the Conover Recreation Association) led to the further development of Turtle Rock. Initially my parents retained the Reed brothers (Eldo, Larry and Ray) to build a year-round home to the west of our cabin. The house was begun in 1952 and completed the following year. It was 30 feet long and 20 feet wide. Ray Brackob did the basement masonry and interior fireplace. Plumbing and a new well was put in by Clarence Hedberg, assisted by Grandpa Lindberg. Electrical work was done by Elmer Young. The house had two bedrooms, one bath, a modern kitchen, and a living room with large picture windows. A two-car garage was added in the late 1980s. This house remained intact until 2000-2001 when my family expanded it to add two more bedrooms, another bathroom, an office area, and a large, open kitchen.

OTHER RESIDENTS IN THE FORTIES

Other Upper Buckatabon residents in the early 1940s included the Petersons, Dembskys and the Pagenkopfs on the south shore from the narrows down to what is now Musky Bay. The Pagenkopfs (brothers Arthur and Frank) were guests at Larson's Resort after they returned from WWI. They purchased 700 feet of frontage about 1920 and built a log cabin and outhouse on such property. The original construction featured vertically placed and locally sourced pine log walls. The

Pagenkopf cabin was later expanded to include an expanded kitchen and a bathroom. A boat house with roof deck was also added to the shoreline in front of the cabin. (This property stayed in the Pagenkopf/Warren family until 2014, at which time it was purchased by the Bickner family. During that time, my father taught one of the Pagenkopf sons who was a student at Lane Technical high school in Chicago).

(As an aside, when the Bickners purchased the Pagenkopf/Warren property in 2014, we found a Vilas County map dating back to the 1920s and showing Upper and Lower Buckatabon lakes as separated by a thin strip of land. (Can anyone confirm or refute that at one time the Buckatabon lakes were once not connected? Or that the land separating the lakes was eliminated by the dam construction which also facilitated the floating of logs from one lake to the other?)

The Dembsky property was initially purchased from the Gesells about 1939 by Hazel and Herman Medrow, the grandparents of Carla Hibbard. Hazel was the driving force in acquiring the property, and they promptly built a two-bedroom house on what she thought was the property she had purchased. (The property is located to the east of the Pagenkopf property.) It turns out, however, that she built in part on adjacent property still owned by Gesell—so in 1940 she acquired such adjacent property. In acquiring such additional parcel, her Hazel's attorney in Eagle River advised her to also buy the back land adjacent to each of the two parcels she had purchased. The current property now consists of about 43 acres.

The Dembsky property was used by the Medrows and the Dembskys as a summer cabin until 1946. After WWII, the Medrows daughter Caroline Helen and her husband Roy Dembsky (together with their daughter Carla) moved their residence from Milwaukee to Buckatabon, and they took up full time residence on the lake. Carla attended grades 4-6 at the Conover school. (Mrs. Hedberg taught grades 1-4 and Mr. Sparks taught grades 5-8). For the first two years, Roy Dembsky drove the "school bus," transporting 7 students from the "west side" of Conover to and from school in a 1939 Chevy two door

sedan. Thereafter, Mr. Steiner (who lived on the Tamarack Flowage) got the school contract and transported the "west siders," who had grown in number to 10, in a real bus. During these years Roy added a small cabin to the property with the intention of developing a resort. The profitability of such venture, however, was not as expected, so about 1950 the family moved their primary residence back to Milwaukee. Shortly after their move, there was a fire which burned the house to the ground. Carla's mother and father divorced in 1952, at which time Carla and her mother moved to California. Roy then owned the property and rebuilt the buildings. Carla was an infrequent visitor to Buckatabon for 40 years before she and her husband returned to the property in 1998, where they continue to live from May through October. They enlarged their house and built a large garage in recent years.

On April 17, 1940, the Gesells sold about 1,350 foot of frontage on the south shore of Upper Buckatabon to Alfred and Debora Peterson of Elmwood Park, IL. They later built a cabin at the southern edge of such frontage on a point of land later know as Pete's Point. This purchase also led to the construction of Birch Point Road.

Upper Buckatabon was not very developed prior to the 1940s. In addition to the above-mentioned residents, the largest property was Larson's Resort located just to the east of the current boat landing. Larson's was a very popular fishing lodge, and it was where my parents stayed when they first saw the lake and later when they closed their purchase. Larson's Resort was started as Buckatabon Lodge in 1903 as a lumber camp. The property was sold to Hadley Larson inn 1913, and he developed a resort consisting of 12 cottages that housed up to 60 persons. The Resort was sold to the current Camp Ramah owners in 1947.

Camp Ramah was founded by Rabbi Ralph Simon and sponsored by the Chicago Council of Conservative Synagogues, the Midwest branch of the United Synagogue and the Teachers Institute of the Jewish Theological Seminary of America. What started with 100 campers has grown to about 700 campers and staff. Campers spend 4 to 8-week

sessions during the summer months. The camp also served as the model for several other similar camps across the United States dedicated to furthering Jewish education and Jewish values. Buckatabon residents in the early years have memories of Camp Ramah sea planes flying in movies to be shown to the campers; a loud speaker system that could be heard across the lake; and an annual canoe caravan from the Camp through the narrows to the dam at the end of Lower Buckatabon.

In the mid and late 1940s, the development of Upper Buckatabon spread rapidly. To the east of Turtle Rock, Gustav and Erna Struss in the mid-1940s purchased land from the Gesells and developed the Sunset Bay Resort. Gus was born in Hanover, Germany and they lived in Chicago. Gus and Erna cleared a small, stump-filled bay and built a home and seven seasonal guest cabins together with a recreation room. The recreation room was the site of Wednesday night movies and dances.

In the 50s and 60s Gus was host of the German Hour on WERL, Eagle River's first radio station. His program lasted for 24 years and featured German music and announcements of local interest. During the summer he broadcast his program on occasion wearing a captain's hat on his pontoon boat, visiting with listeners at their Buckatabon piers. At Christmas time, he also has a sleigh ride broadcast.

Sunset Bay Resort was operated by the Strusses until the resort was purchased by Bart and Eunice Ball in 19??

Between Sunset Bay Resort and the "narrows" into Lower Buckatabon lake, early property owners included Small and Ahl, as well as Deerpath Resort that was developed by Sophie Gonzalez in 19??.

To the west of the Lasher's, Henry and Frieda Augusta Hermine Schwatlo in April 1946 purchased 300 feet of lake frontage and a forty-acre tract to the north. They built a year-round home between the Lashers and the Lake View Resort operated by Friedel Mueller. Henry Schwatlo had been a baker in Germany. He also built a small swimming pool in front of his house for the purpose of providing a rehab facility for an orthopedic injury that limited his mobility.

To the west of Lake View Resort, North Shore Resort was operated by Louis Federspiel and his wife. It was later owned by the Dieters and then in 1966 by the Gumps.

Further west was Struck's Pine Lodge Resort consisting of four cottages and a main house. Hilby Struck operated the resort as well as a hardware store in Conover. He also bulldozed most of the early lake roads around Buckatabon. The resort was later run by Bob Mitchell.

Since most, if not all, of the early residents of the Upper and Lower Buckatabon lakes were seasonal residents, their names are not listed in the 1940 census of the Town of Conover, including the nearby lake areas. The best listing of the early landowners with residential structures comes from a map produced by the Wisconsin Michigan Power Company in 1951 when it was seeking easements to bring electrical service to the area. Beginning on Upper Buckatabon at the narrows and moving west, these property owners are shown as: Sophie Gonzales (Deerpath Resort), Fred Ahl, George Small, Gus Struss (Sunset Bay Resort), Arno Bickner, Charles Lasher, Henry Schwatlo, Fred Mueller (Lake View Resort), Hans Schubring, Louis Federspiel (North Shore Resort), Hilby Struck (Pine Lodge Resort), Anita Engberg, C.W. Lassau, Hans Schubring Cottages, Rinefeldt, Ben Luebke, William Luebke, Paul Pitzner, and K.C. Merrick. In the springs, the residents were: G.A. Schoenrock, William Mueller, J. Larson, and H.F. Wolter. Continuing beyond the springs and moving southeasterly toward Larson's Bay, the landowners were: Ed Kahn, Ted Schalton, and J. Ingram—before reaching Camp Ramah on the east side of Larson's Bay. Moving beyond Camp Ramah the list shows J.S. Gibbons and

Alvin Pitzner. Beyond the peninsula and the next bay were: R. Lau, A.H. Pagenkopf, Dembsky, Gesell, A.F. Peterson, and William Schmidt. Reaching the narrows and moving into Lower Buckatabon on the southern shore were: Max Gabler, Ken Mass, Tabea Troesken, Childers Resort, Bruno Valt, Charles Smith, S.E. Grundstrom, David Ellis, Ray Brackob, and Fred La Mason, all before reaching the dam on Lower Buckatabon. Continuing after the dam were: Bauer's Resort, A.C. Johnson, Ed Warfield, H.C. Waldron, H. Christensen. William Givisada, Hart's Resort, O.C. Thompson, Sabra Kulle, (Susan Seely, H.D. Mach, and H. Luttkus are shown as owning property back from the lake) and then Robert Jacoby (one of the earliest Buckatabon owners) is shown as owning the north shore of Lower Buckatabon up to the narrows.

FURTHER DEVELOPMENT IN THE 50S AND 60S

Development of the south shore of Upper Buckatabon was active in the mid-1950s through the early 1960s. August 6, 1954 The Petersons sold 100 feet of their lake frontage nearest the narrows to William P. Schmidt and his wife Adeline. The Schmidts built a European chalet and boat house on their property. After many years (date to be verified), the Schmidts sold to the current owners, Scott and Wendy Johnson. (The Johnsons also own about 358 feet of shoreline immediately adjacent toward the narrows. The origin of their title too this property has yet to be determined.)

About 1958, Alfred Peterson passed, and his wife inherited his interest their 1,200 feet of frontage.

On May 16, 1958 Leonard C. Fleming and his wife June A. Fleming purchased from Debora Peterson all her frontage, other than the parcel previously sold to the Schmidts.

On October 13, 1958, the Flemings sold to Kenneth W. Daring and Alice M, Daring of Belvidere, IL 150 feet of lake frontage located further south along the shoreline. The Darings then built a house on this

parcel. This property is currently owned by their grandson, Wayne Daring, and his wife, the third generation to reside on this parcel.

On October 13, 1959, the Flemings sold to Alfred Ziese and Dorothy Ziese 200 feet of frontage immediately to the south of the Daring lot. The Zieses built a bunk house on this lot. About 1970, the Zieses sold the property to Elmer and Mabel Schwanke. The Schwankes added a Wausau home to the property. In 1987, the Schwankes moved to Eagle River, and they sold this property to Richard and Nada Moeller. (Nada Moeller is the daughter of Michael and Margaret Zurich.)

On February 5, 1960, the Flemings sold the southern-most portion of their frontage to Michael P. Zurich and Margaret R. Zurich. The parcel covered about 550 feet of lake frontage. The property included a small cottage/garage and outhouse on the southern point of this parcel at the time of the transaction. The Zurichs learned of the property from Margaret's brother, Glen Ingbretson, who became aware that the property was for sale during a hunting trip in the area. He so liked the property that he removed the "for sale" sign and told his brother-in-law to quickly purchase the property. Mike Zurich owned Remy Battery company in Milwaukee. The Zurichs and their three daughters (Nada, Gay and Marsha) enjoyed the cottage for many years before remodeling the structure about 1962 and adding a separate garage, which also doubled as an additional living area for the family. They later built a chalet on the property south of the parcel which the Zurichs had sold to Glen Ingbretson, Margaret's brother. (See later entry.) Following the passing of both Mike and Marge Zurich, the southern-most portion of the remaining Zurich property, and the cottage and garage situated thereon, was inherited by their daughter, Gay Felton, in 1999. (About ten years later, Gay Felton sold this property to her daughter, Kathryn Felton-Moore. About 2015, Katy and her husband Jason replaced the cottage with a two-story residence and large, log garage. They currently are full time residents on the lake.) The 100 feet of the Zurich parcel to the north of the Ingbretson parcel was inherited by Nada Moeller, in 1999, together with the chalet. Nada and her husband Richard currently own such 100 feet, as

well as the adjoining 200 feet acquired from the Zeises. Richard and Nada have life estates in such properties, with the remainder interests designated for Matt Moeller and Sarah Moeller-Kruse and Randy Kruse.

Later in 1960, the Zurichs sold 115 feet of their frontage to Glen and Marion Ingbretson, the brother of Margaret Zurich and a real estate agent in West Allis, WI. The Ingbretsons then built a home and garage on the property. The Ingbretsons and their children spent many years enjoying the property. The property remains in the family through the Skony Trust for benefit of their daughter and her husband, Marilyn and Lou Skony.

On December 6, 1961, the Flemings sold 150 feet of their frontage to C. Fred and Patricia Novack. This lot is located just north of the Daring parcel (The Novaks were reputed to have been Scandinavian bathers.) Following the death of Fred Novak, his second wife sold the property to Christopher Schafer. (Date of sale and his wife's name to be verified.)

On November 4, 1964, the Flemings sold the last of their Upper Buckatabon property to Chris H. Groth and Irma K. Groth. The parcel has 100 feet of frontage on Upper Buckatabon. It was located north of the parcel then owned by the Novaks and south of the parcel then owned by the Schmidts. The Groths and their daughter were longtime residents on the lake. Diane was a pilot, and for many years she flew from Appleton to Eagle River, buzzing the property as a signal to her parents to meet her at the airport. Diane now owns the property and is a retired schoolteacher living in Appleton.

Summarizing the current ownership on this shore of Upper Buckatabon (from north to south) is as follows: Johnson, Groth, Schafer, Daring, Moeller, Skony, and Felton-Moore.

Just south of the Felton-Moore ownership described above, lies 300 feet of frontage on what is now commonly known as Musky Bay. This parcel represented the last Upper Buckatabon frontage owned by the Gesell family. the 1940s Carl and Margaret Gesell owned most of the frontage on Upper Buckatabon. They left this parcel to their two sons,

and then, at some point, Judge Robert Dean of the Children's Court in Wausau, WI partnered with the grandson of Carl and Margaret Gesell in the ownership of this parcel. Judge Dean subsequently bought out the Gesell grandson. The parcel was mostly swamp, but Judge Dean filled in the swamp with sand, paying the DNR a fine for the violation. He then added a basement under the old cabin on the property. In 1996, the property was sold to Norm Adams, an insurance agent in Houston, TX. Adams demolished the existing cottage and then built a log cabin and garage on the property. He then sold it to Jim and Michelle Moeller, the son and daughter-in-law of Richard and Nada Moeller in 2015. The Moellers subsequently remodeled portions of the first floor and the garage.

Behind the shoreline of Upper Buckatabon lies Soleit lake. The Upper Buckatabon lots owned by the Moeller, Skony, Felton-Moore and Hibbard families include portions of shoreline of this small, picturesque lake. It once was connected to Upper Buckatabon by a stream, which stream has naturally filled-in and disappeared over the years, leaving Soleit landlocked.

TO BE RESEARCHED AND WRITTEN

Upper Buckatabon:

- **Dr. Ives ownership**
- **Deerpath Resort history**
- **Ahl and Small**
- **Ball's ownership of Sunset Bay**
- **Land west and east of the entrance to the springs**
- **The springs**
- **Benson and other ownership to the east**
- **The islands**
- **Klomstad**

Lower Buckatabon

My focus for the past two years has been on Upper Buckatabon. It is now time to research similar information on the Lower Lake, e.g. the early Jacoby story, the history of the dam, the origins of Bauer's Resort, Gabler's Resort—including Papa Gabler and their infamous Sunday chicken dinners, Camp Buckatabon, Buckatabon Lodge, Hi-Banks Resort and Sabra Kulle, the Christensen's' and Waldron's stories, Ray Brackob, Ellis, Vin Fuller the weatherman on WERL.

BUCKATABON DUMPS

Recollections of the "early years" on Buckatabon would not be complete without addressing our dumps. Prior to the early 1940s, there were no dumps adjacent to the Buckatabon lakes. Each landowner had one or more 55-gallon drums in which the owner would periodically burn the material that could be burned. The rest of the garbage, including fish guts, was put in a pit dug for such purpose and covered over periodically.

In the early 1940s, however, Vilas County donated some land for a Buckatabon dump. The site was selected because it was convenient to lake landowners, but not too close to anyone's home. The site was located near the intersection of West Buckatabon Road and Jacoby Road—on the west side of West Buckatabon Road. The site was dominated by a hill that ran down to Buckatabon Creek. (Obviously, environmental protection was not high on the list.) The County leveled the top of the hill and built a circular road, with directional arrows, entering from West Buckatabon Road south of Jacoby Road, circling

through the leveled off area and returning to West Buckatabon Road just north of Jacoby Road. (The road location can still be discerned by walking the old road location. The site now is covered by flowers and blueberries and gives the appearance of an old home site overlooking a creek.) Garbage was not sorted, and it was dumped on the west decline of the flattened area. When built, the dump was projected to last 12 years. This dump was also a very popular area for bear watching at dusk and then with headlights on into the early night. It was not unusual to find a half dozen cars lined up facing west on any given evening. In fact, it was a popular place to take your guests to see a bear. I remember two interesting evenings: (1) watching a black bear fight a grizzly bear with the former being killed by the latter, and (2) sitting next to a car of first time viewers who were sitting with their windows rolled down—until the bear arrived not on the front stage, but from the east walking between the cars and sending the newcomers into a frenzy.

In the 1950s the dump location was moved to a former gravel pit located on the south side of County K West just east of West Buckatabon Road. (You can still see the entrance to the dump from West Buckatabon Road, as well as the exit onto County K West.) This upgraded location featured a new name i.e. The Bearatorium, and featured a wide circle drive with an expanded bear watching area. No one wanted to be the last one to leave a bear watch, because occasionally someone's car would not start, and they would be stranded in the dump—long before cell phones. As older cabins were remodeled or replaced with seasonal homes, there became a need for a land fill for stumps and building materials. Eventually this location was converted to such use and a new dump was built across County K West on the north side.

This third dump was located further back from County K West. For the first time it had set hours of operation, and the road to the dump was chained closed when the dump was not open. (For a time, this was a problem as users would just dump their garbage on the road in front of the chain when the road was closed.) This dump also had an

attendant. Ollie Olson, a former employee of the Northwestern Railroad, was the first attendant. He would recycle aluminum cans and donate the proceeds to the Phelps school children. He was very popular with the kids who came with their parents/grandparents to the dump, as he would tell them historical stories about Conover. He also took an interest in all the kids and would brag about their accomplishments even after they left the area. Everyone regarded Ollie as a celebrity with whom they wanted their picture taken. (Ollie's wife Josephine was also the first "Star Route" carrier for delivering the US Mail to individual mailboxes around the lakes.)

This dump also became both a social gathering place and a place to set out "lightly used" things that others might see as having value for them. To this end, Ollie would have a display area for those reusable items. People knew to get to the dump early if they wanted "first pick" of such items. Old bed springs were picked up quickly because with rocks place on top they became effective road graders when pulled behind a car. Because seeds from vegetables and flowers often ended up in the dump, the surrounding area developed with wildflowers and vegetables like melons. It was not unusual to see the occupants of a Lincoln or a Cadillac digging up flower or vegetable plants to replant outside their cottages.

CONOVER RECREATION ASSOCIATION

The roots of Conover area lake organizations can be traced back to the early summer of 1946 and a meeting held at Burnt Bridge Tavern, then owned by Art Ewert. Those present were Gus Struss, Sabra Kulle, Jack Hart and Arno Bickner. The purpose of the meeting was to discuss ways to take care of and to improve the local lakes: Upper and Lower Buckatabon, Stormy and Hunter. A second meeting, also held at the Burnt Bridge Tavern, also included Elly Christensen and Ted Shalton.

There followed a larger meeting of interested lake owners at the Conover Town Hall. Halene Thompson, Georgia Lawson and Sabra Kulle were appointed to draw up by-laws for the organization. The organization's first officers were: Jack Hart, President; Gus Struss, Vice-President; Elly Christensen, Treasurer; and Sabra Kulle, Secretary.

Many of the lake owners (homes and resorts) spent the winter in Chicago, so the practice began of holding monthly meetings of the organization in Chicago during the winter. Attendance was initially about 35, with members coming not only from Chicago, but also from the surrounding area (Waukegan, Berwyn as well as the suburbs of Chicago). Winter meetings were generally held in a member's home, but later in city field houses and parks when the attendance grew.

In the summer of 1947, the organization expanded its organizational base to include residents of Pioneer and Twin lakes, as well as Conover business owners. The members chose "Conover Recreation Association" as the association's name, reflecting the inclusion of both lake residents and town business owners. Early business members were Dobbs, Denton, Seifert, Eickhoff and Dussault. New lake members included Marge Johnson, Krueger, Krambs and Draheim.

The Association had a membership of 87 at the end of 1946. Records indicate that the membership had grown to 132 in 1957. The Association remained very active throughout the Fifties and Sixties and celebrated its 25th Anniversary on July 22, 1971. The formation of separate lake associations for Stormy Lake and Upper/Lower Buckatabon Lakes later began to reduce the membership and activity of the Association.

Over the more than 30 years of the Association's existence, its officers included:

- **President: Jack Hart, Gustav Struss, Sabra Kulle, Ellie Christensen, Hilbert Struck, Frank Krueger, Al De Bruyne, and Allan Waldron**
- **Secretary: Arno Bickner, Evelyn De Bruyne, Peg Waldron, William Schmidt, Colonel Frank Singer, Bob Mitchell, Sabra Kulle, Bill Schere, Martha Scharf, and Lydia Miers**
- **Treasurer: Ellie Christensen, Emma Hackel, Frieda Brackob, Gustav Struss, Elenore Kasten, Helen Andreson and Buehla McNeil**

The Conover Recreation Association functioned as a lakes' association, a local chamber of commerce and a provider of entertainment. Some of the organization's activities over the years included:

- **Town Hall square dances called by the Van Wies, that also included the hokey pokey, a waltz contest, raffles, door prizes and a cake walk. Radio station WERL provided many of the prizes. The Town Hall dances were later supplemented by Street Dances held between Dobbs' Red Owl and the Post Office. Music for the dances was provided by Hugo Jahn, Al Achterberg, Myron Ostrowski, Florian Walsh, and Tony Jonas**
- **BINGO on Wednesday nights played on both floors of the Town Hall**
- **Movie nights with potluck dinners and topical speakers (e.g. DNR) in the Town Hall**
- **Representation of the Conover area at sport shows in the Chicago, including the first promotional brochure for the Conover Area. The Conover Chamber of Commerce succeeded to the "Chamber" functions in 1968.**
- **Crowning of the Conover Blueberry Queen—the first such contest in Vilas County—Susan Kerstner**
- **A weekly fish contest, with the winners displayed in a refrigerated case outside Denton's Sporting Goods**

- **Spaghetti dinners and pancake breakfasts to raise funds for local projects, e.g. a projector, card tables and a sound system for the Town Hall, and the scale and fish display case at Denton's**
- **Local trips, including the Monheim fire tower and Bond Falls**
- **A local newsletter that was published several times a year**
- **Lobbying efforts that resulted in the first Star postal mail routes around the lakes, eliminating the need to drive to town for the mail, road improvements, the first town dump and the first public telephone in Conover**
- **Improvements in the dam management and water level control on the Buckatabon lakes**
- **Donations to local organizations, the Eagle River Hospital building fund, the fund for the Land O' Lakes ambulance, Little League, Boys and Girls Scouts, etc.**
- **Annual Association potluck dinners began in 1948 and were later replaced by annual banquets held at local restaurants, including Char Lou, Brown Derby, Fireside, Maple View, De Noyer's, Gensler's Club 155 and the Eagle River Steak House**

But perhaps the largest project accomplished was the electrification of the Buckatabon and Stormy lake areas. While not a project per se of the Association, the Association leaders were the ones responsible for working with the Wisconsin Michigan Power Company in Iron Mountain, Michigan to make the project possible. The salient facts concerning the project were as follows:

- **The scope of the project focused on Buckatabon and Stormy Lake property owners.**
- **The project began in 1951 and was completed about 1957.**
- **One of the initial steps was to put together comprehensive lists of all the property owners, to include good year-round contact information.**
- **There ensued organizational and informational meetings supplemented by myriad one-on-one meetings.**
- **The power company required signed easements and monthly minimum commitments from each landowner. Conover**

Recreation Association mailing lists were the primary starting point.

- **A December 1951 map indicates that 91 landowners were on the contact list**
- **Individual cabin or homeowners were required to contract for a $40 annual minimum. Many had trouble visualizing how they would use $40 of electricity. A frequent comment was: "All I need is one bulb in the ceiling and one wall outlet for every room." The rest, of course is history!**
- **Commitments from resorts and other businesses on the lake ran from $200 to $525 per year, with Camp Ramah making the largest commitment.**
- **Most homeowners really wanted something other than kerosene lighting, ice boxes and outhouses, so the sell on the minimums went well. But there were a few holdouts on the easements, especially the around the lake's easement for the tall power lines. There were some heated meetings and verbal threats, but by 1957 most of the homes were up and running with electricity and using a lot more than $40 a month.**

[Need to find some information on the advent of the telephone service which consisted of underwater cables that ran the perimeter of the lakes.]

CONOVER IN THE 1940s

The Town of Conover dates to 1907. In the early 1940s, the Conover township had a population of approximately __ , according to the 1940 census. A lot of the town activity centered around George C. Dobbs' Super Service Store and Standard Service Station, which had the only phone available to the public. (In the case of emergencies, one would call George at the store's phone number, and he would drive out to the lake residences to deliver the good or bad news. The store (later a Red Owl) was located on the northeast corner of Hwy 45 and Town

Road. Most weekday, late afternoons would find Ollie Olson, a Northwestern railroad laborer, standing by the Pepsi machine with a cold Pepsi in hand and sharing stories of the local area. (In retirement, Ollie worked at three successive town dump locations. His wife Josephine would later be the first star route mail person for the local lakes.

Across highway 45 to the west was the Chicago and Northwestern railroad station. The line ran from Watersmeet on the north all the way south to Chicago.

In 1932, George Dobbs moved the U.S. Post Office from his grocery store across Town Road to a building he had erected on Town Road. The postmaster was Art Nortwin.

On the southeast corner of Highway 45 and Town Road was Seifert's Standard gas station. And immediately to the south on Highway 45 was Lil's Café, where hamburgers and hand-picked blueberry pie were favorite menu items. Continuing south brought one to Denton's Sporting Goods, where local birch bark wood souvenirs were popular. Denton's later had the first fish display case for the "latest catch" of note.

East of the Red Owl on Town Road was the local icehouse, owned by George Dobbs. Ed Warfield ran a one-truck block ice distribution service to the local lake residences. Turning south on the Town Road, one found the local hotel on the east side of the road—another Dobbs enterprise.

If one proceeded south on Hwy 45, there was Dussault's tavern near the corner of Hwy 45 and County K east. Chet Dussault was the proprietor. Just south of the tavern was Dussault's Mobil gas station, operated by Francis Dussault, Chet's brother. (In later years, Francis opened one of Wisconsin's first Dairy Queens just north of the tavern, adjacent to his house.) Even further south was the Adams Motel and the Log Cabin Tavern, operated by Alfred Adams. In 1948, Al and Esther Eberle opened a Texaco gas station and a small grocery store just north of the Adams motel.

On Town Road were located the local grade school, as well as the town hall. Schuyler Primley was the custodian at both locations, and his wife Ann was the school cook. (Ann's daughter Margaret and her husband Ray would later purchase Dobb's Red Owl and rename the store as Ray's Red Owl.)

At the corner of County K West and Highway 45 was Kroon's Bakery, established in the early 1930s. This building in later years housed Helen's bakery.

There were numerous local tradespersons who played an important role in constructing and servicing the summer residents that came to the area in increasing numbers in the 1940s:

- **The Reed brothers were popular carpenters/builders (Eldo, Raymond, Lawrence, and Simon)**
- **Clarence and Ed Hedberg drilled most of the wells in the area**
- **Wally Adams was a local real estate broker**
- **Ed and Charles Osterberg were well-known township highway employees, often seen operating the road grader on the local, gravel roads that ran around the lakes**
- **Alfred Johnson was the school bus driver**
- **Herman Luttkus and Shorty Murdock were local "jacks of all trades"**

Located outside the "downtown" Conover area were:

- **The Eickhoff Lumber yard operated by Harold Eickhoff and his brother-in-law Bud Reed. The yard was connected to the Northwestern line by a rail spur.**
- **The Pioneer Lake Lutheran Church founded in 1903**
- **The Evangelical Mission Covenant Church whose first pastor was Oscar Renberg**
- **Clarence and Eva Olson's farm at the intersection of Hwy 45 and Church Road, which supplied great sweet corn to Dobbs' Red Owl**
- **Twin lake businesses included:**
    - **Resort owned by Joseph Regenfuss**

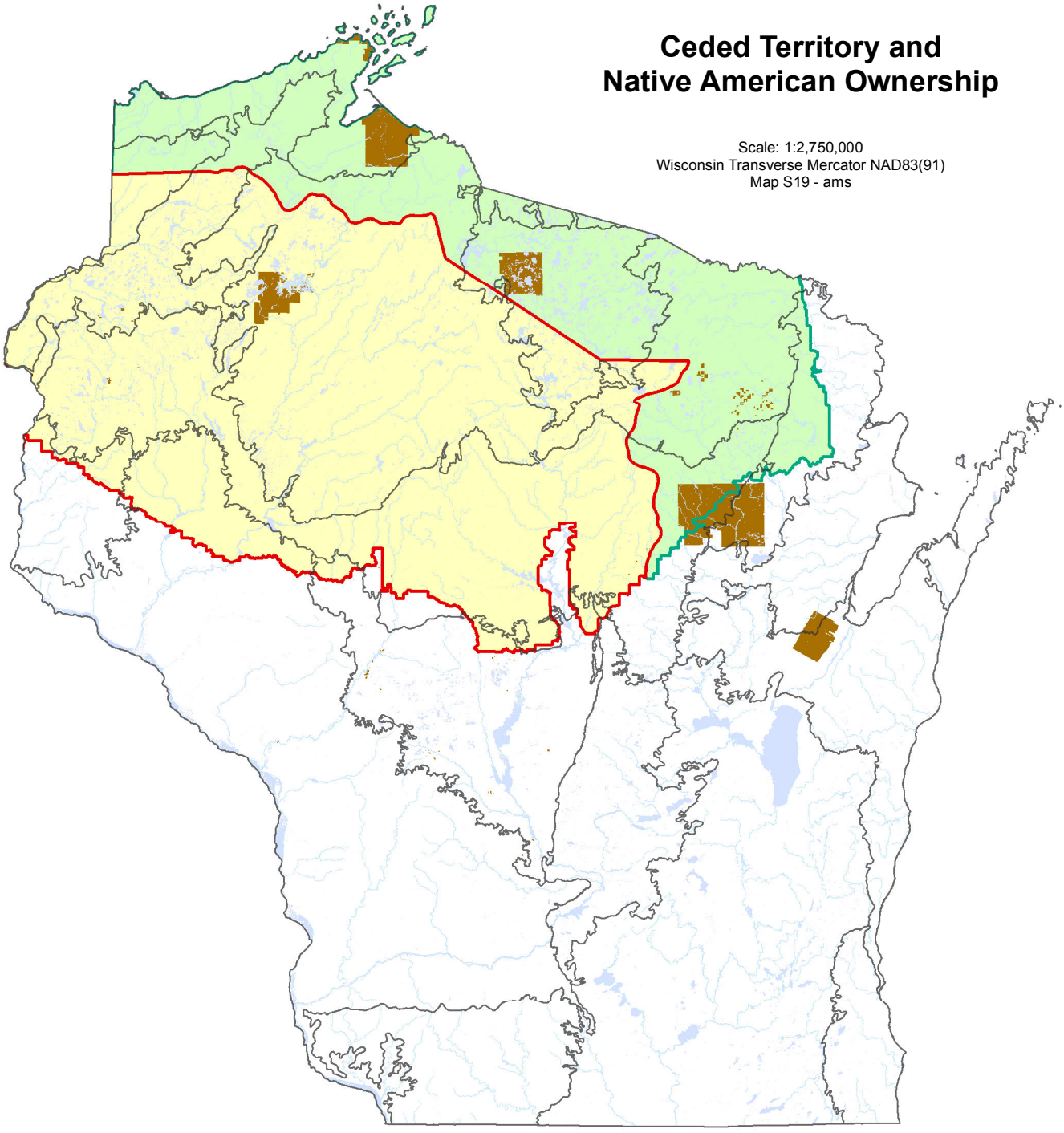
    - **Resort/tavern owned by Harry and Margaret (Marge) Johnson**
    - **Resort owned by Charles and Tess Wagner (Charley later operated a small bait hut on the north edge of Conover at the creek)**

- **The Burnt Bridge Tavern on County Hwy west near the Buckatabon lakes was operated by Fred La Mason**

Information sourced from The History of Conover and recollections of Don Olson

Ceded Territory and Native American Ownership

Scale: 1:2,750,000
Wisconsin Transverse Mercator NAD83(91)
Map S19 - ams



Ecological Landscape

Ceded Territory

Treaty of 1837

Treaty of 1842

Native American Land

Open Water

The data sources used to prepare this map are of varying age and reliability. Representations of the ceded territory and Native American lands may include errors and omissionsand should not be interpreted as a legal representation of legal ownership boundaries. No warranty, expressed or implied, is made regarding accuracy, applicability for particular use, completeness, or legality of the information depicted on this map.

The 'Ceded Territory' was ceded to the United States by treaty with various Ojibwe Tribes who retain certain use rights to this land.

0 10 20 40 60 80
Miles

0 15 30 60 90 120
Kilometers

APPENDIX B

WVIC/

BUCKATAHPON DAM INFORMATION

BUCKATABON LAKES' ROLE IN THE WISCONSIN RIVER RESERVOIR SYSTEM

Placing the Buckatabon Lakes in the "landscape" includes knowing they are functioning members of the Wisconsin River Reservoir System thanks to the dam at the outlet of Lower Buckatabon. This system consists of 21 water storage reservoirs owned and operated by the Wisconsin Valley Improvement Company (WVIC) used to regulate the flow in the Wisconsin River. The reservoirs are located in Gogebic County in Upper Michigan, and Vilas, Forest, Oneida, Lincoln, and Marathon counties in north central Wisconsin. They have a total maximum surface area of 61,265 acres. Reservoirs range in size from surface areas of 313 to 7,626 acres and from usable storage volumes of 23 to 4,170 million cubic feet. Total usable storage capacity of the reservoirs is 15,601 million cubic feet.

The WVIC reservoirs control runoff from 1,931 square miles of the headwaters region of the Wisconsin River basin, about one-sixth of the total basin area. The control of basin runoff, increases hydroelectric power generated on the river by approximately 14 percent over what would be generated without control. Reservoir operation reduces flood flows, in some locations by as much as 30 percent.

In addition to supplementing hydroelectric generation and reducing flood flows, reservoir operation enhances the environment and the public's use of the Wisconsin River by increasing river flow during what would otherwise be naturally occurring periods of low flow. Reservoir operations can more than double flow during such periods. The man-made reservoirs add approximately 23,000 surface acres and 404 miles of shoreline, with many undeveloped miles of shoreline, enhancing Wisconsin River valley recreation resources. See attached map.

The system was initiated in 1907 and 1908 with the acquisition of 16 existing logging dams. These dams are all located at the outlets of natural lakes on streams that are tributary to the Wisconsin River, except for Lac Vieux Desert which is located at the outlet of a natural lake that is the origin of the Wisconsin River. The dams raised the levels of the associated natural lakes by several feet and were used in the late 1800s for transporting logs to downstream industrial facilities. This was done by storing water in the lakes and then opening the dam to cause a large artificial rise in river flow, generally at the same time natural flooding was already occurring, that would then float logs stored in the lakes to downstream markets. When WVIC acquired these dams the operation pattern was changed so that the storage and release of water from the lakes could be used to achieve more uniform downstream river flow. This operation is exactly opposite of that used for logging purposes.

The remaining five reservoirs are man-made reservoirs created by building dams at locations where no lake existed naturally. Reservoir dams do not contain hydroelectric generating facilities, but they impact flows on the Wisconsin River that does contain 25 hydroelectric dams, owned and licensed separately (not by WVIC.) All of the WVIC dams in the twenty-one dam system are licensed under the Federal Energy Regulation Commission and are subject to inspection and licensing rules that are described in an operating plan. The original FERC license for the project expired in 1993. After over 5 years of deliberation between WVIC, FERC, and numerous other

resource agencies and public groups, a new license was issued to WVIC in July 1996. The new license (No. 2113) contains specific operating rules for the reservoir system that were designed to balance the many benefits of the system including hydropower production, flood control, and recreation, while at the same time protecting water quality and fish and wildlife resources[1].

The operating plan for this system of dams can generally be described as follows:

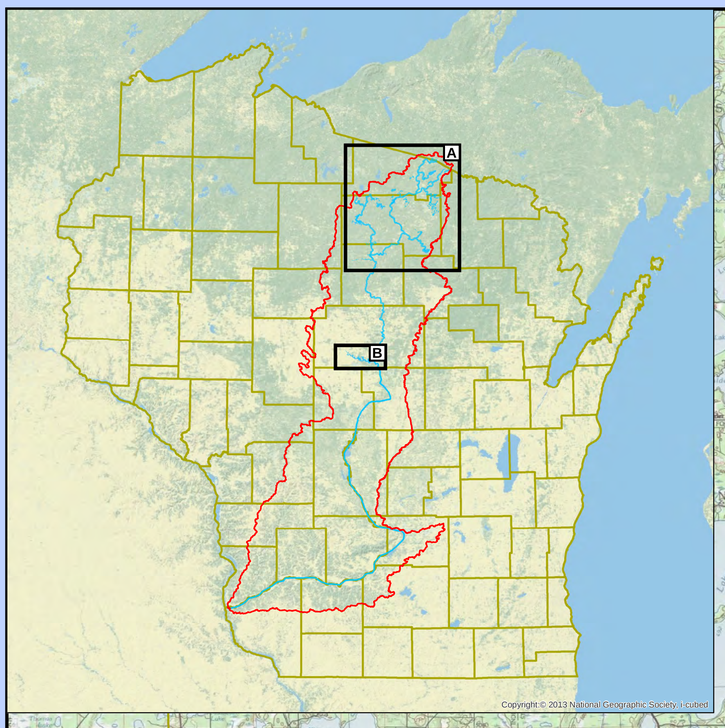
- Target river flows, or flow goals, are set for two locations on the Wisconsin River. These goals are set based on time of the year and available storage in the reservoirs.
- Reservoir storage is managed to meet the flow goals. If natural river flow is above the flow goals because of rainfall or snowmelt, water is stored in the reservoirs. If natural river flow is below the flow goals because of dry conditions, water is released from the reservoirs.
- Storage is balanced between the reservoirs by assigning index levels to various water levels in each reservoir. The amount of water released from each reservoir is managed to keep all reservoirs at the same index level if possible.
- Each reservoir has maximum and minimum water levels that cannot be exceeded.
- Each reservoir has a minimum flow that must be discharged at all times.
- Each component of the operating plan is explained in detail on the WVIC website: http://www.wvic.com/Content/Operations_Plan.cfm

The official name of the dam controlling the Upper and Lower Buckatabon reservoir is **Dam Buckatahpon, 1909C361**—apparently the Native American name for these waterbodies (Ojibwe for “hunger”) was retained when it was commissioned in 1909. WVIC replaced the original wood and earthen dam with a concrete structure on Buckatabon Creek in 1938. Buckatabon Creek drains a total of 1 square mile and the impoundment of these lakes totals 1,070 surface acres and a normal volume of 3,000 acre-ft. The dam is 100 feet wide. The structural height of the dam (above and below ground) is 10 feet, with the hydraulic height (above ground) being 5 feet. The spillway is 6 feet wide and discharge capacity is 333 cubic feet per second. Although the dam was last inspected by WDNR in 1975, WVIC implements a robust dam safety program as part of the FERC license that includes monthly inspections.

[1] WVIC.com

Wisconsin River Headwaters Reservoir System

Wisconsin Valley Improvement Company



A

Lac Vieux Desert
Long-on-Deerskin
Buckatahpon
Twin Lakes
Little Deerskin
Big St. Germain
Little St. Germain
Eagle River
Lower Nine Mile
Seven Mile
Pickerel
Minocqua
Squirrel
Rainbow Reservoir
Sugar Camp
Burnt Rollways
Three Lakes
Willow Reservoir
North Pelican
Rhinelander
Rice Reservoir
South Pelican
Tomahawk
Spirit Reservoir

Wisconsin Valley Improvement Company

2301 North 3rd St
Wausau, WI 54403
715-848-2976
www.wvic.com

B

Big Eau Pleine Reservoir
Mosinee

Legend

- Hydroelectric Dams (Non-WVIC)
- WVIC Reservior Dams
- Natural-Lake Reservoir
- Man-Made Reservior
- Wisconsin River
- Tributaries
- Wisconsin River Drainage Basin
- County Boundaries

N

0 1.25 2.5 5 7.5 10 Miles

Prepared By The North Central Wisconsin Regional Planning Commission
210 McClellan St., Wausau, WI 54403
www.ncwrpc.org

Detailed Information for Dam Buckatahpon

Dam Key Seq No	747	Field File No	63.04
Size	LARGE	NID	804
Popular Name		Former Name	

Location

County	Vilas		
Latitude	46.020788	Longitude	-89.311470
Permitted TRS		**Located TRS**	
QQQ:NE QQ:SW Q:NE - Sec:24 T:41N R:09E			

Contacts

Owner		**Alternate**	
Organization	Wisconsin Valley Improvement Company	Organization	
Name	Peter Hansen	Name	

Waterbody

Drainage Basin (sq mi)	14.00		
Stream		**Impoundment**	
Local Name	BUCKATABON CREEK	Local Name	UPPER AND LOWER BUCKATABON
Row and Official Name		Row and Official Name	
Navigable?	not determined	Size (acres)	1,070.00
When was navigability determined?		Maximum Depth (ft)	47.00

Regulatory/Inspection

NR 333 Years	EAP: IOM: HYD: STAB: ZONE:		
Auth. Approval Desc	1909C361	Regulatory Agency	FERC
Hazard Rating	None	Estimated Hazard Rating	Significant
Ferc. No	2113C	Exempt Issue Date	
Ferc. Inspection Year		License Expiration Year	2026

Construction Characteristics

Normal Storage (acre-ft)	3,000.00	Max Storage (acre-ft)	6,200.00
Structural Height (ft)	10.00	Hydraulic Height (ft)	5.00
Crest Length (ft)	100.00	Spillway Type	Controlled
Discharge Through Principal Spillway (cfs)	333.00	Width/Diameter of Principal Spillway (ft)	6.00
Total Discharge Through All Spillways (cfs)	333.00	Total Width/Diameter of All Spillways (ft)	
Core Type		Position	
Foundation Type		Foundation Certainty	
Purposes	HYDROELECTRIC RECREATION	Structural Types	GRAVITY EARTH

Detailed Information for Dam Buckatahpon

Water Levels

	Normal		Winter	
	MSL	Datum	MSL	Datum
Minimum	1,638.35	NGVD 29		
Normal				
Maximum	1,641.52	NGVD 29		

Construction History

Designer	Construction Firm	Complete Year
WI VALLEY IMPROVEMENT CO	WI VALLEY IMPROVEMENT CO	1938

Outlet Gates

No data found.

Inspection History

Inspection Date	Inspection Report Date	DNR Engineer Initials	Inspection Type
10/7/1975	10/10/1975		GEN
7/10/1969			GEN
7/16/1968	10/9/1968		GEN
8/15/1962	8/30/1962		GEN
7/24/1948	8/3/1948		GEN
6/10/1938	8/26/1938		GEN
7/15/1929			GEN
8/3/1922	9/24/1922		GEN

Followups

No data found.

Approvals

Approval Date	Docket ID	Approval Type	DNR Engineer Initials
6/1/1976	3-WR-1808	LEVELS; STAT 31.02	XXX

Orders

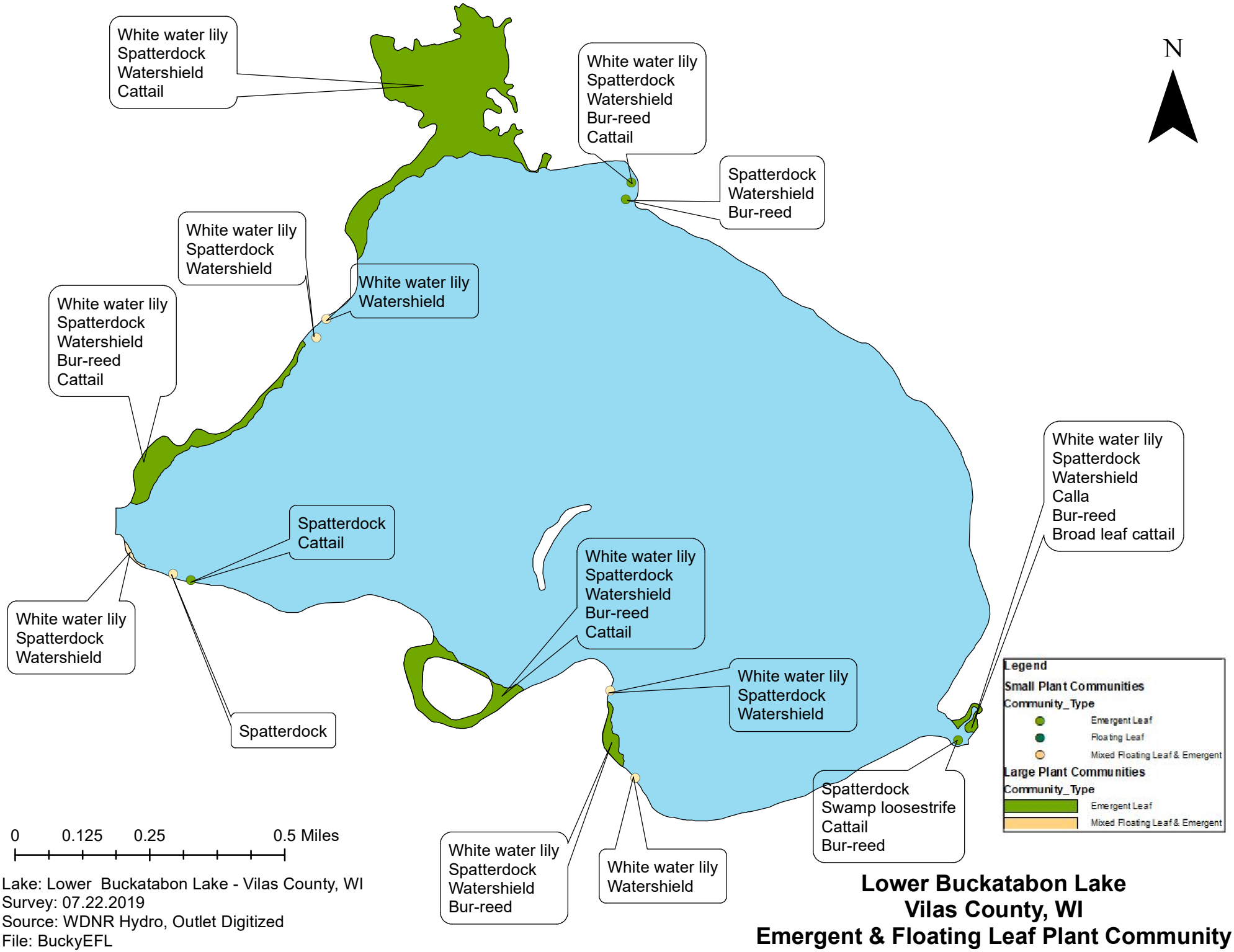
Issue Date	Complied On Date	Docket ID	Order Description
6/30/1982		3-NC-82-9312	Warning Signs

Inspection Schedule

No data found.

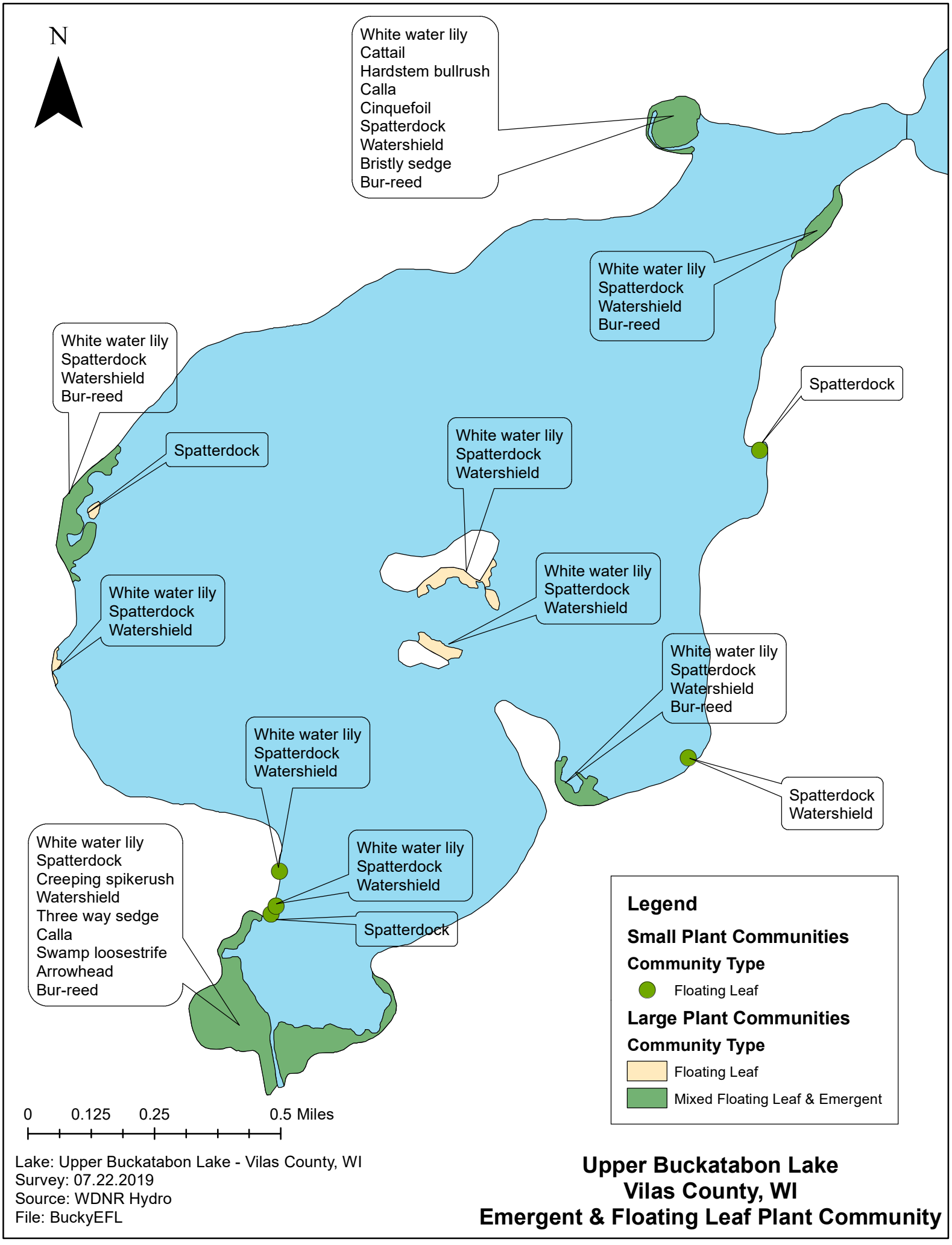
APPENDIX C

EMERGENT AND FLOATING LEAF PLANT MAPPING



Lake: Lower Buckatabon Lake - Vilas County, WI
Survey: 07.22.2019
Source: WDNR Hydro, Outlet Digitized
File: BuckyEFL

Lower Buckatabon Lake
Vilas County, WI
Emergent & Floating Leaf Plant Community



Lake: Upper Buckatabon Lake - Vilas County, WI
Survey: 07.22.2019
Source: WDNR Hydro
File: BuckyEFL

Upper Buckatabon Lake
Vilas County, WI
Emergent & Floating Leaf Plant Community

APPENDIX D

AQUATIC VEGETATION SURVEY DATA

Boat Survey

Lake	Lower Buckatabon
County	Vilas
WBIC	1621000
Date of Survey	7/27/2019
Field Crew	Barb Gajewski
	Bill

Nearest Point	Species seen				
14	NYOD	NUVA2	SPAR ERECT		
27	NYOD	NUVA2	SPAR ERECT		
40	NYOD	TYPHA SP	SPAR ERECT	BRSC	NUVA
42	NYOD	NUVA2	BRSC	SPAR ERECT	TYPHA SP
43	NYOD				
55	NYOD	SPAR ERECT	BRSC	TYPHA SP	DEVE
56	NUVA2	NYOD	BRSC		
58	NUVA2 OR NYOD				
73	NYOD	SPAR ERECT	BRSC	TYPHA SP	DEVE
115	NYOD	BRSC			
144	NUVA2	NYOD	BRSC		
159	NYOD	NUVA2	BRSC		
175	NUVA2				
206	NUVA2	SPAR ERECT			
237	NUVA2	NYOD	SPAR ERECT	BRSC	
268	NYOD	SPAR ERECT	TYPHA SP		
269	BRSC	SPAR ERECT			
297	NYOD	NUVA2	BRSC		
323	NUVA2	BRSC	NYOD		
346	NUVA2	NYOD			
420	NUVA2	NYOD	BRSC		
434	NUVA2	NYOD	BRSC		
446	NUVA2	NYOD	BRSC		
447	NUVA2	NYOD			
455	NUVA2	SPAR ERECT	TYPHA SP		
456	NUVA2	NYOD	SPAR ERECT	TYPHA SP	
461	CAPA	SPAR ERECT	TYPHA SP	NUVA2	
570	NYOD	BRSC	SPAR ERECT		

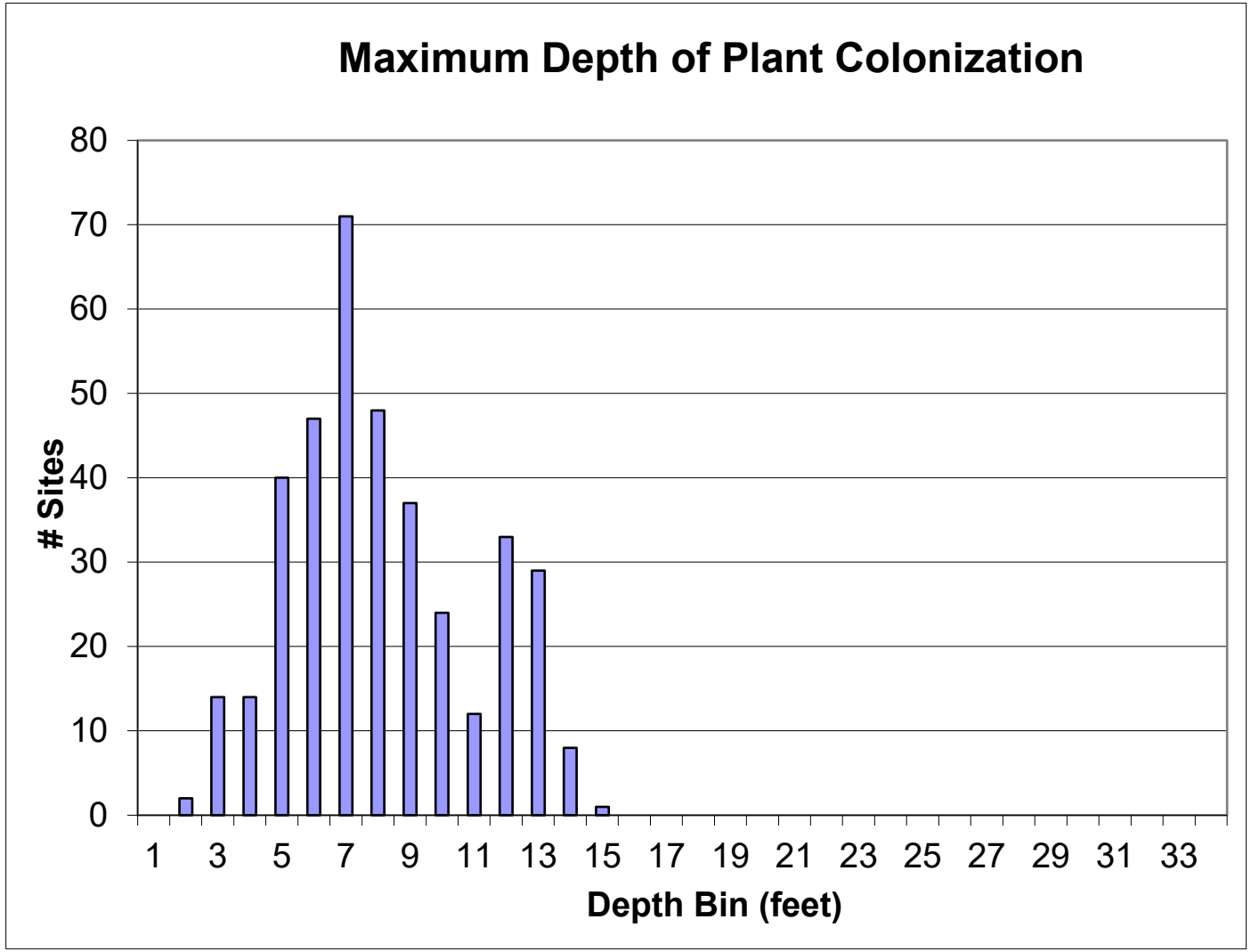
	Lower Buckatabon Pl Aq Veg Survey Stats_2019 STATS	Total vegetation	*Myriophyllum spicatum,Eurasian water milfoil*	Bidens beckii (formerly Megalodonta), Water marigold	Brasenia schreberi, Watershield	Ceratophyllum demersum, Coontail	Ceratophyllum echinatum, Spiny hornwort	Chara sp., Muskgrasses	Eleocharis acicularis, Needle spikerush	Elodea canadensis, Common waterweed	Elodea nuttallii, Slender waterweed	Heteranthera dubia, Water star-grass	Isoetes sp., Quillwort	Myriophyllum sibiricum, Northern watermilfoil	Najas flexilis, Slender naiad	Nitella sp., Nitella	Nuphar variegata, Spatterdock
Lake	Lower Buckatabon																
County	Vilas																
WBIC	1621000																
Survey Date	07/27/19																
	INDIVIDUAL SPECIES STATS:																
	Frequency of occurrence within vegetated areas (%)			4.74	0.53	32.89	6.05	4.74	4.47	36.05	0.79	0.79	4.74	1.05	7.11	0.26	0.26
	Frequency of occurrence at sites shallower than maximum depth of plants			4.16	0.46	28.87	5.31	4.16	3.93	31.64	0.69	0.69	4.16	0.92	6.24	0.23	0.23
	Relative Frequency (%)			2.1	0.2	14.7	2.7	2.1	2.0	16.1	0.4	0.4	2.1	0.5	3.2	0.1	0.1
	Relative Frequency (squared)	0.18		0.00	0.00	0.02	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Number of sites where species found			18	2	125	23	18	17	137	3	3	18	4	27	1	1
	Average Rake Fullness	2.07		1.00	1.00	1.36	1.39	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	#visual sightings		1		5					1							
	present (visual or collected)		present	present	present	present	present	present	present	present	present	present	present	present	present	present	present

	STATS	Total vegetation	Nymphaea odorata, White water lily	Potamogeton amplifolius, Large-leaf pondweed	Potamogeton friesii, Fries' pondweed	Potamogeton gramineus, Variable pondweed	Potamogeton praelongus, White-stem pondweed	Potamogeton pusillus, Small pondweed	Potamogeton richardsonii, Clasping-leaf pondweed	Potamogeton robbinsii, Fern pondweed	Potamogeton vaseyi, Vasey's pondweed	Potamogeton zosteriformis, Flat-stem pondweed	Utricularia intermedia, Flat-leaf bladderwort	Utricularia minor, Small bladderwort	Utricularia vulgaris, Common bladderwort	Vallisneria americana, Wild celery	Aquatic moss
Lake	Lower Buckatabon																
County	Vilas																
WBIC	1621000																
Survey Date	07/27/19																
	INDIVIDUAL SPECIES STATS:																
	Frequency of occurrence within vegetated areas (%)		0.53	9.74	1.84	2.37	1.05	11.84	1.58	77.11	0.53	1.05	0.26	0.26	0.79	10.79	1.32
	Frequency of occurrence at sites shallower than maximum depth of plants		0.46	8.55	1.62	2.08	0.92	10.39	1.39	67.67	0.46	0.92	0.23	0.23	0.69	9.47	1.15
	Relative Frequency (%)		0.2	4.3	0.8	1.1	0.5	5.3	0.7	34.4	0.2	0.5	0.1	0.1	0.4	4.8	
	Relative Frequency (squared)	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00	
	Number of sites where species found		2	37	7	9	4	45	6	293	2	4	1	1	3	41	5
	Average Rake Fullness	2.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.09	1.00	1.00	1.00	1.00	1.00	1.07	1.40
	#visual sightings		1	32					1								
	present (visual or collected)		present	present	present	present	present	present	present	present	present	present	present	present	present	present	present

	STATS	Total vegetation	Nymphaea odorata, White water lily	Potamogeton amplifolius, Large-leaf pondweed	Potamogeton friesii, Fries' pond-weed	Potamogeton gramineus, Varia-ble pondweed	Potamogeton praelongus, White-stem pondweed	Potamogeton pusillus, Small pondweed	Potamogeton richardsonii, Clasp-ing-leaf pondweed	Potamogeton robbinsii, Fern pondweed	Potamogeton vaseyi, Vasey's pondweed	Potamogeton zosteriformis, Flat-stem pondweed	Utricularia intermedia, Flat-leaf bladderwort	Utricularia minor, Small bladder-wort	Utricularia vulgaris, Common bladderwort	Vallisneria americana, Wild celery	Aquatic moss	Filamentous algae
Lake	Lower Buckatabon																	
County	Vilas																	
WBIC	1621000																	
Survey Date	07/27/19																	
	INDIVIDUAL SPECIES STATS:																	
	Frequency of occurrence within vegetated areas (%)		0.53	9.74	1.84	2.37	1.05	11.84	1.58	77.11	0.53	1.05	0.26	0.26	0.79	10.79	1.32	3.68
	Frequency of occurrence at sites shallower than maximum depth of plants		0.46	8.55	1.62	2.08	0.92	10.39	1.39	67.67	0.46	0.92	0.23	0.23	0.69	9.47	1.15	3.23
	Relative Frequency (%)		0.2	4.3	0.8	1.1	0.5	5.3	0.7	34.4	0.2	0.5	0.1	0.1	0.4	4.8		
	Relative Frequency (squared)	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00		
	Number of sites where species found		2	37	7	9	4	45	6	293	2	4	1	1	3	41	5	14
	Average Rake Fullness	2.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.09	1.00	1.00	1.00	1.00	1.00	1.07	1.40	1.00
	#visual sightings		1	32					1									
	present (visual or collected)		present	present	present	present	present	present	present	present	present	present	present	present	present	present	present	present

SUMMARY STATS:	
Total number of sites visited	**452**
Total number of sites with vegetation	**380**
Total number of sites shallower than maximum depth of plants	**433**
Frequency of occurrence at sites shallower than maximum depth of plants	**87.76**
Simpson Diversity Index	**0.82**
Maximum depth of plants (ft)**	**15.00**
Number of sites sampled using rake on Rope (R)	**0**
Number of sites sampled using rake on Pole (P)	**452**
Average number of all species per site (shallower than max depth)	**1.97**
Average number of all species per site (veg. sites only)	**2.24**
Average number of native species per site (shallower than max depth)	**1.97**
Average number of native species per site (veg. sites only)	**2.24**
Species Richness	**28**
Species Richness (including visuals)	**29**
****SEE "MAX DEPTH GRAPH" WORKSHEET TO CONFIRM**	

DEPTH BIN (FT)	# SITES (NO ENTRY)
1	0
2	2
3	14
4	14
5	40
6	47
7	71
8	48
9	37
10	24
11	12
12	33
13	29
14	8
15	1
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0
32	0
33	0
34-40	0



Lower Buckatabon Max Depth Graph_2019

Lake	Lower Buckatabon
County	Vilas
Date	07/27/19

Species	Common Name	C	species pre-sent=1	
Acorus americanus	Sweet-flag	7	0	0
Alisma triviale	Northern water-plantain	4	0	0
Bidens beckii	Water marigold	8	1	8
Bolboschoenus fluviatilis	River bulrush	6	0	0
Brasenia schreberi	Watershield	6	1	6
Calla palustris	Wild calla	9	0	0
Callitriche hermaphroditica	Autumnal water-starwort	9	0	0
Callitriche heterophylla	Large water-starwort	9	0	0
Callitriche palustris	Common water-starwort	8	0	0
Carex comosa	Bottle brush sedge	5	0	0
Catabrosa aquatica	Brook grass	10	0	0
Ceratophyllum demersum	Coontail	3	1	3
Ceratophyllum echinatum	Spiny hornwort	10	1	10
Chara	Muskgrasses	7	1	7
Dulichium arundinaceum	Three-way sedge	9	0	0
Elatine minima	Waterwort	9	0	0
Elatine triandra	Greater waterwort	9	0	0
Eleocharis acicularis	Needle spikerush	5	1	5
Eleocharis erythropoda	Bald spikerush	3	0	0
Eleocharis palustris	Creeping spikerush	6	0	0
Elodea canadensis	Common waterweed	3	1	3
Elodea nuttallii	Slender waterweed	7	1	7
Equisetum fluviatile	Water horsetail	7	0	0
Eriocaulon aquaticum	Pipewort	9	0	0
Glyceria borealis	Northern manna grass	8	0	0
Gratiola aurea	Golden hedge-hyssop	10	0	0
Heteranthera dubia	Water star-grass	6	1	6
Isoetes echinospora	Spiny-spored quillwort	8	0	0
Isoetes lacustris	Lake quillwort	8	0	0
Isoetes sp.	Quillwort	8	1	8
Juncus pelocarpus f. submersus	Brown-fruited rush	8	0	0
Juncus torreyi	Torrey's rush	4	0	0
Lemna minor	Small duckweed	4	0	0
Lemna perpusilla	Least duckweed	10	0	0
Lemna trisulca	Forked duckweed	6	0	0
Littorella uniflora	Littorella	10	0	0
Lobelia dortmanna	Water lobelia	10	0	0
Ludwigia palustris	Marsh purslane	4	0	0
Myriophyllum alterniflorum	Alternate-flowered water-milfoil	10	0	0

Lake	Lower Buckatabon
County	Vilas
Date	07/27/19

Species	Common Name	C	species pre-sent=1	
Myriophyllum farwellii	Farwell's water-milfoil	8	0	0
Myriophyllum heterophyllum	Various-leaved water-milfoil	7	0	0
Myriophyllum sibiricum	Northern water-milfoil	6	1	6
Myriophyllum tenellum	Dwarf water-milfoil	10	0	0
Myriophyllum verticillatum	Whorled water-milfoil	8	0	0
Najas flexilis	Slender naiad	6	1	6
Najas gracillima	Northern naiad	7	0	0
Najas guadalupensis	Southern naiad	8	0	0
Nelumbo lutea	American lotus	7	0	0
Nitella	Nitella	7	1	7
Nuphar advena	Yellow pond lily	8	0	0
Nuphar microphylla	Small pond lily	9	0	0
Nuphar X rubrodisca	Intermediate pond lily	9	0	0
Nuphar variegata	Spatterdock	6	1	6
Nymphaea odorata	White water lily	6	1	6
Phragmites australis	Common reed	1	0	0
Polygonum amphibium	Water smartweed	5	0	0
Polygonum punctatum	Dotted smartweed	5	0	0
Pontederia cordata	Pickerelweed	8	0	0
Potamogeton alpinus	Alpine pondweed	9	0	0
Potamogeton amplifolius	Large-leaf pondweed	7	1	7
Potamogeton bicupulatus	Snail-seed pondwwed	9	0	0
Potamogeton confervoides	Algal-leaved pondweed	10	0	0
Potamogeton diversifolius	Water-thread pondweed	8	0	0
Potamogeton epihydrus	Ribbon-leaf pondweed	8	0	0
Potamogeton foliosus	Leafy pondweed	6	0	0
Potamogeton friesii	Fries' pondweed	8	1	8
Potamogeton gramineus	Variable pondweed	7	1	7
Potamogeton hillii	Hill's pondweed	9	0	0
Potamogeton illinoensis	Illinois pondweed	6	0	0
Potamogeton natans	Floating-leaf pondweed	5	0	0
Potamogeton nodosus	Long-leaf pondweed	7	0	0
Potamogeton oakesianus	Oakes' pondweed	10	0	0
Potamogeton obtusifolius	Blunt-leaf pondweed	9	0	0
Potamogeton praelongus	White-stem pondweed	8	1	8
Potamogeton pulcher	Spotted pondweed	10	0	0
Potamogeton pusillus	Small pondweed	7	1	7
Potamogeton richardsonii	Clasping-leaf pondweed	5	1	5
Potamogeton robbinsii	Fern pondweed	8	1	8

Lake	Lower Buckatabon
County	Vilas
Date	07/27/19

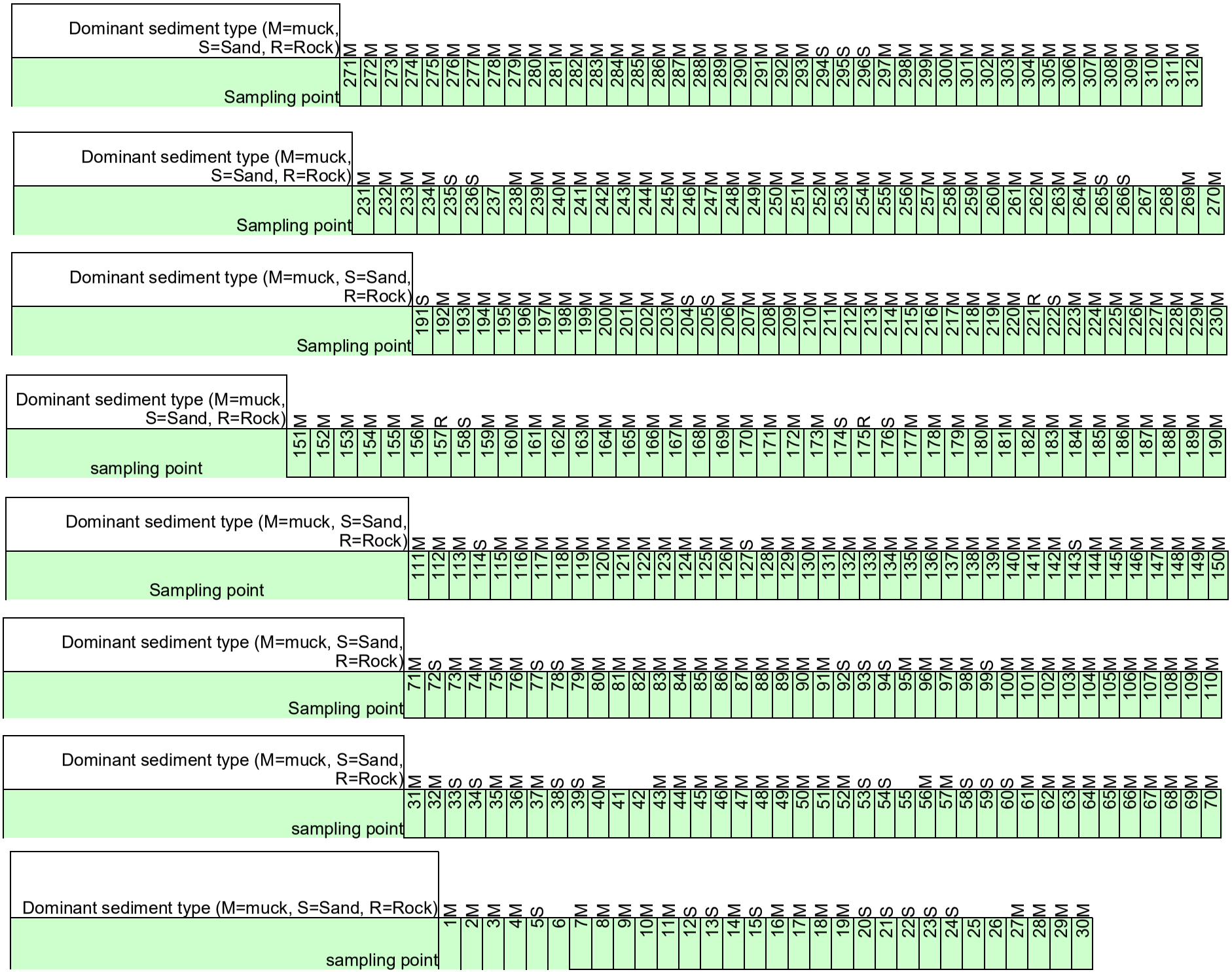
Species	Common Name	C	species present=1	
Potamogeton spirillus	Spiral-fruited pondweed	8	0	0
Potamogeton strictifolius	Stiff pondweed	8	0	0
Potamogeton vaseyi	Vasey's pondweed	10	1	10
Potamogeton zosteriformis	Flat-stem pondweed	6	1	6
Ranunculus aquatilis	White water crowfoot	8	0	0
Ranunculus flabellaris	Yellow water crowfoot	8	0	0
Ranunculus flammula	Creeping spearwort	9	0	0
Riccia fluitans	Slender riccia	7	0	0
Ruppia cirrhosa	Ditch grass	8	0	0
Sagittaria brevirostra	Midwestern arrowhead	9	0	0
Sagittaria cuneata	Arum-leaved arrowhead	7	0	0
Sagittaria graminea	Grass-leaved arrowhead	9	0	0
Sagittaria latifolia	Common arrowhead	3	0	0
Sagittaria rigida	Sessile-fruited arrowhead	8	0	0
Schoenoplectus acutus	Hardstem bulrush	6	0	0
Schoenoplectus heterochaetus	Slender bulrush	10	0	0
Schoenoplectus pungens	Three-square bulrush	5	0	0
Schoenoplectus subterminalis	Water bulrush	9	0	0
Schoenoplectus tabernaemontani	Softstem bulrush	4	0	0
Sparganium americanum	American bur-reed	8	0	0
Sparganium androcladum	Branched bur-reed	8	0	0
Sparganium angustifolium	Narrow-leaved bur-reed	9	0	0
Sparganium emersum	Short-stemmed bur-reed	8	0	0
Sparganium eurycarpum	Common bur-reed	5	0	0
Sparganium fluctuans	Floating-leaf bur-reed	10	0	0
Sparganium natans	Small bur-reed	9	0	0
Spirodela polyrhiza	Large duckweed	5	0	0
Stuckenia filiformis	Fine-leaved pondweed	8	0	0
Stuckenia pectinata	Sago pondweed	3	0	0
Stuckenia vaginata	Sheathed pondweed	9	0	0
Typha angustifolium	Narrow-leaved cattail	1	0	0
Typha latifolia	Broad-leaved cattail	1	0	0
Typha sp.	Cattail	1	0	0
Utricularia cornuta	Horned bladderwort	10	0	0
Utricularia geminiscapa	Twin-stemmed bladderwort	9	0	0
Utricularia gibba	Creeping bladderwort	9	0	0
Utricularia intermedia	Flat-leaf bladderwort	9	1	9
Utricularia minor	Small bladderwort	10	1	10
Utricularia purpurea	Large purple bladderwort	9	0	0

Lake	Lower Buckatabon
County	Vilas
Date	07/27/19

Species	Common Name	C	species present=1	
Utricularia resupinata	Small purple bladderwort	9	0	0
Utricularia vulgaris	Common bladderwort	7	1	7
Vallisneria americana	Wild celery	6	1	6
Wolffia borealis	Northern watermeal	6	0	0
Wolffia columbiana	Common watermeal	5	0	0
Zannichellia palustris	Horned pondweed	7	0	0
Zizania aquatica	Southern wild rice	8	0	0
Zizania palustris	Northern wild rice	8	0	0
Zizania sp.	Wild rice	8	0	0
N			28	
mean C				6.857
FQI				36.28

CITATION: **Nichols, SA. 1999. Floristic Quality Assessment of Wisconsin Lake Plant Communities with Example Applications. Journal of Lake and Reservoir Management, 15(2):133-141.**

CITATION: **University of Wisconsin-Madison, 2001. Wisconsin Floristic Quality Assessment (WFQA). Retrived October 27, 2009 from: http://www.botany.wisc.edu/WFQA.asp**


Dominant sediment type (M=muck, S=Sand, R=Rock)
Sampling point
271M 272M 273M 274M 275M 276M 277M 278M 279M 280M 281M 282M 283M 284M 285M 286M 287M 288M 289M 290M 291M 292M 293M 294S 295S 296S 297M 298M 299M 300M 301M 302M 303M 304M 305M 306M 307M 308M 309M 310M 311M 312M
Dominant sediment type (M=muck, S=Sand, R=Rock)
Sampling point
231M 232M 233M 234M 235S 236S 237 238M 239M 240M 241M 242M 243M 244M 245M 246M 247M 248M 249M 250M 251M 252M 253M 254M 255M 256M 257M 258M 259M 260M 261M 262M 263M 264M 265S 266S 267 268 269M 270M
Dominant sediment type (M=muck, S=Sand, R=Rock)
Sampling point
191S 192M 193M 194M 195M 196M 197M 198M 199M 200M 201M 202M 203M 204S 205S 206M 207M 208M 209M 210M 211M 212M 213M 214M 215M 216M 217M 218M 219M 220M 221R 222S 223M 224M 225M 226M 227M 228M 229M 230M
Dominant sediment type (M=muck, S=Sand, R=Rock)
sampling point
151M 152M 153M 154M 155M 156M 157R 158S 159M 160M 161M 162M 163M 164M 165M 166M 167M 168M 169M 170M 171M 172M 173M 174S 175R 176S 177M 178M 179M 180M 181M 182M 183M 184M 185M 186M 187M 188M 189M 190M
Dominant sediment type (M=muck, S=Sand, R=Rock)
Sampling point
111M 112M 113M 114S 115M 116M 117M 118M 119M 120M 121M 122M 123M 124M 125M 126M 127S 128M 129M 130M 131M 132M 133M 134M 135M 136M 137M 138M 139M 140M 141M 142M 143S 144M 145M 146M 147M 148M 149M 150M
Dominant sediment type (M=muck, S=Sand, R=Rock)
Sampling point
71M 72S 73M 74M 75M 76M 77S 78S 79M 80M 81M 82M 83M 84M 85M 86M 87M 88M 89M 90M 91M 92S 93S 94S 95M 96M 97M 98M 99S 100M 101M 102M 103M 104M 105M 106M 107M 108M 109M 110M
Dominant sediment type (M=muck, S=Sand, R=Rock)
sampling point
31M 32M 33S 34S 35M 36M 37M 38S 39S 40M 41 42 43M 44M 45M 46M 47M 48M 49M 50M 51M 52M 53S 54S 55 56M 57M 58S 59S 60S 61M 62M 63M 64M 65M 66M 67M 68M 69M 70M
Dominant sediment type (M=muck, S=Sand, R=Rock)
sampling point
1M 2M 3M 4M 5S 6 7M 8M 9M 10M 11M 12S 13S 14M 15S 16M 17M 18M 19M 20S 21S 22S 23S 24S 25 26 27M 28M 29M 30M

Lower Buckatabon Lake Sediment Type Survey_ pg 2 of 2

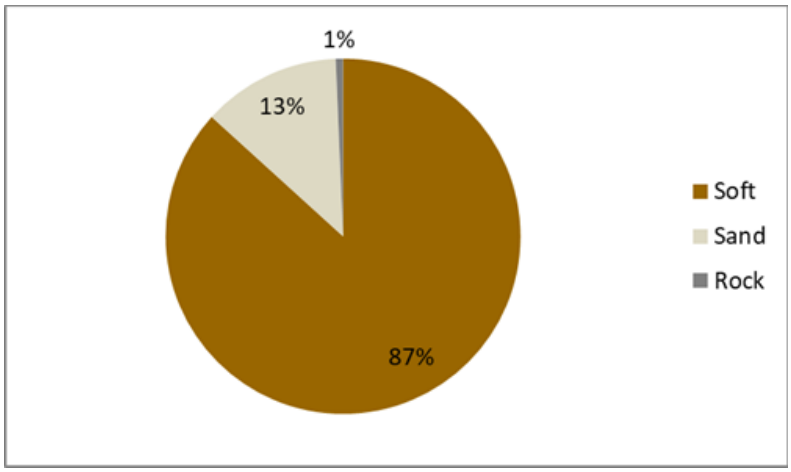
Sampling point	Dominant sediment type (M=muck, S=Sand, R=Rock)
316	M
317	M
318	M
319	M
320	S
321	S
322	S
323	M
324	M
325	M
326	M
327	M
328	M
329	M
330	M
331	M
332	M
333	M
334	M
335	M
336	M
337	M
338	M
339	M
340	M
341	M
342	M
343	M
344	S
345	S
346	M
347	M
348	M
349	M
350	M
351	M
352	M
353	M
354	M
355	M

Sampling point	Dominant sediment type (M=muck, S=Sand, R=Rock)
356	M
357	M
358	M
359	M
360	M
361	M
362	M
363	M
364	M
365	S
366	S
367	S
368	M
369	M
370	M
371	M
372	M
373	M
374	M
375	M
376	M
377	M
378	M
379	M
380	M
381	M
382	M
383	M
384	M
385	M
386	M
387	S
388	M
389	M
390	M
391	M
392	M
393	M
394	M
395	M

Sampling point	Dominant sediment type (M=muck, S=Sand, R=Rock)
396	M
397	M
398	M
399	M
400	M
401	M
402	M
403	S
404	S
405	M
406	M
407	M
408	M
409	M
410	M
411	M
412	M
413	M
414	M
415	M
416	M
417	M
418	M
419	S
420	M
421	M
422	M
423	M
424	M
425	M
426	M
427	M
428	M
429	M
430	M
431	M
432	M
433	S
434	M
435	M
436	M
437	M
438	M
439	M

Sampling point	Dominant sediment type (M=muck, S=Sand, R=Rock)
440	M
441	M
442	M
443	M
444	S
445	S
446	M
447	M
448	M
449	M
450	M
451	M
452	M
453	M
454	M
455	M
456	M
457	M
458	M
459	M
460	M
461	M

Soft	392	87%
Sand	57	13%
Rock	3	1%



Boat Survey

Lake	Upper Buckata-bon
County	Vilas
WBIC	1621800
Date of Survey	7/20/2019
Field Crew	Barb Gajewski Bill Artwich

Nearest Point	Species seen										
1	NUVA2	NYOD	SPFL	BRSC	CAPA						
2	NUVA2	NYOD	SPFL	DEVE	TYPHA SP.	SCAC3					
3	NYOD	NUVA2	SPFL	DEVE	TYPHA SP.						
4	NYOD	NUVA2	SPFL	DEVE	TYPHA SP.						
5	NYOD	NUVA2	SPFL	DEVE	TYPHA SP.						
6	NUVA3	NYOD	SPFL	DEVE	TYPHA SP.	SCAC4					
7	NUVA2	NYOD	SPFL	DEVE	TYPHA SP.	SCAC3					
8	NUVA2	NYOD	SPFL	DEVE	TYPHA SP.	SCAC3					
9	NYOD	NUVA2	SPFL	DEVE	TYPHA SP.						
10	NYOD	NUVA2	SPFL	DEVE	TYPHA SP.						
11	NYOD	NUVA2	SPFL	DEVE	TYPHA SP.						
15	NYOD	NUVA2									
16	NYOD										
17	DEVE	NYOD	NUVA2	SPFL	ELPAV						
18	DEVE	NYOD	NUVA3	SPFL	ELPAV						
25	NYOD	NUVA2	BRSC	SPFL							
26	NUVA2	NYOD	BRSC	TYPHA SP							
32	BRSC	NUVA2	NYOD	SPFL							
33	CAPA	NYOD	NUVA2	TYPHA SP	DEVE	ELPAV	SPFL				
40	NUVA2	NYOD	SPFL	TYPHA SP							
46	NUVA2										
48	NUVA										
67	NUVA2										
77	BRSC										
89	BRSC										
102	BRSC										
103	NYOD										
122	NUVA2	BRSC	NYOD								
123	NUVA2										
143	NUVA										
144	NUVA2										
148	NUVA2										
174	NYOD										
200	NYOD										
228	NUVA2										
273	NUVA										
339	NUVA2	NYOD									
367	NYOD										
385	NUVA										
395	NYOD	NUVA2	SPFL								
423	SPFL	NUVA2	NYOD								
452	SPFL	NUVA2									
482	NUVA2	BRSC	NYOD								
725	NUVA	SPFL									
734	NUVA2										
742	NUVA2	SPFL									
749	NUVA2										
750	NYOD	TYPHA SP									
759	NUVA2										
760	SCAC3	CAPA	NUVA2	NYOD	SPFL	SPAR FLOAT-ING	POTEN	BRSC	TYPHA SP	ELPAV	SALA2
761	NUVA3	NYOD	BRSC	TYPHA SP	SPFL						
762	NUVA2	NYOD	BRSC	TYPHA SP	SPFL						

Upper Buckatabon Point Intercept Aq Vegetation Survey_Statistics_2019

STATS	Total vegetation	*Myriophyllum spicatum,Eurasian water milfoil*	Bidens beckii (formerly Megalodonta), Water marigold	Brasenia schreberi, Watershield	Ceratophyllum demersum, Coontail	Ceratophyllum echinatum, Spiny hornwort	Chara sp., Muskgrasses	Eleocharis acicularis, Needle spikerush	Elodea canadensis, Common waterweed	Elodea nuttallii, Slender waterweed	Heteranthera dubia, Water star-grass	Isoetes sp., Quillwort	Lemna trisulca, Forked duckweed	Myriophyllum sibiricum, Northern water-milfoil	Najas flexilis, Slender naiad	Najas guadalupensis, Southern naiad	Nitella sp., Nitella	Nuphar variegata, Spatterdock
Lake Upper Buckatabon																		
County Vilas																		
WBIC 1621800																		
Survey 07/20/19																		
INDIVIDUAL SPECIES STATS:																		
Frequency of occurrence within vegetated areas (%)		1.89	15.09	0.47	23.58	0.94	8.96	7.08	24.06	4.25	3.30	3.77	2.36	14.62	25.47	1.89	0.47	2.83
Frequency of occurrence at sites shallower than maximum depth of plants		1.47	11.72	0.37	18.32	0.73	6.96	5.49	18.68	3.30	2.56	2.93	1.83	11.36	19.78	1.47	0.37	2.20
Relative Frequency (%)		0.6	4.9	0.2	7.7	0.3	2.9	2.3	7.8	1.4	1.1	1.2	0.8	4.8	8.3	0.6	0.2	0.9
Relative Frequency (squared)	0.08	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Number of sites where species found		4	32	1	50	2	19	15	51	9	7	8	5	31	54	4	1	6
Average Rake Fullness	1.47	1.00	1.00	1.00	1.24	1.00	1.00	1.00	1.02	1.00	1.00	1.00	1.00	1.03	1.00	1.00	1.00	1.00
#visual sightings		11		2										3				3
present (visual or collected)		present	present	present	present	present	present	present	present	present	present	present	present	present	present	present	present	present

Lake Upper Buckatabon

County Vilas
WBIC 1621800

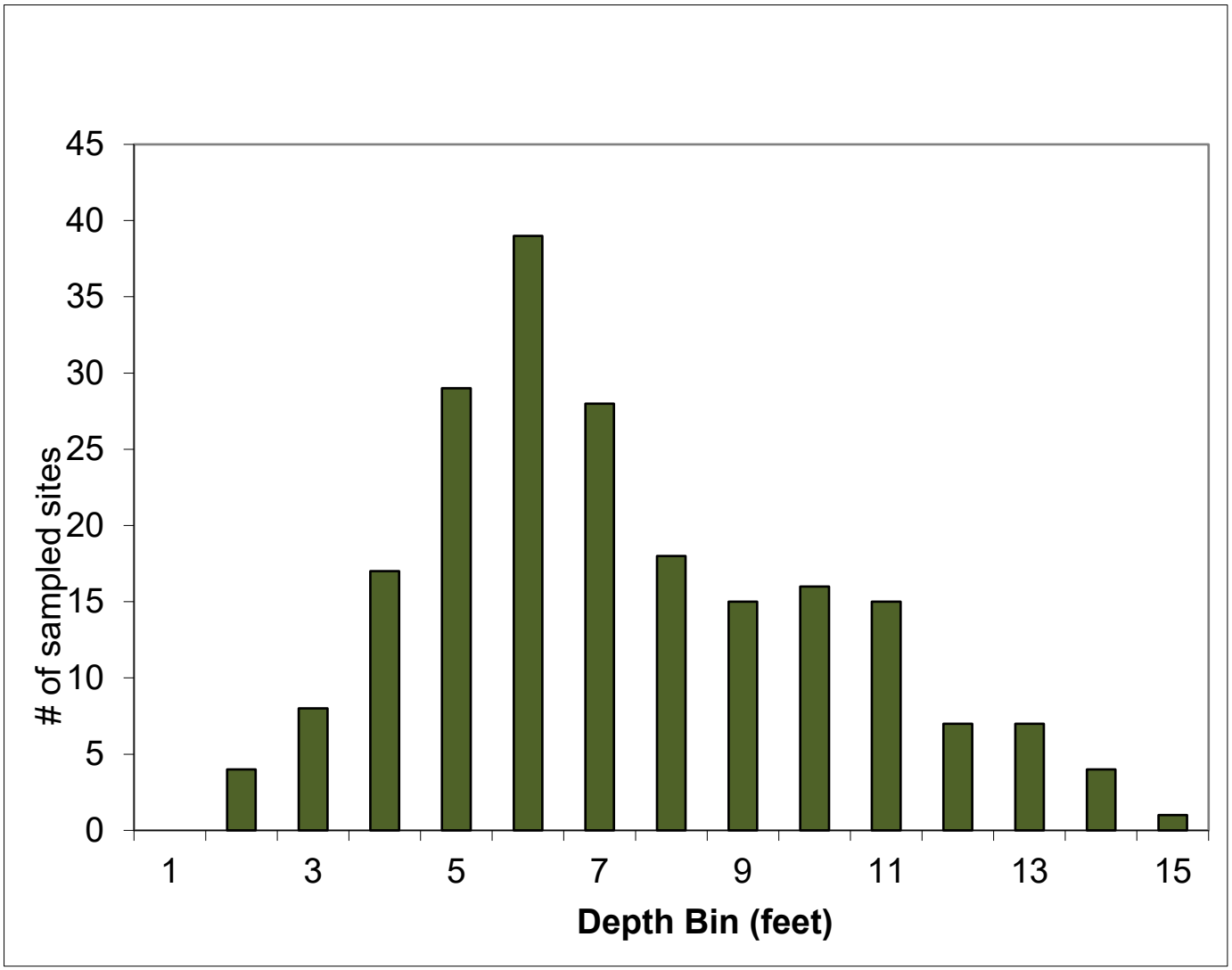
Survey Date 07/20/19

INDIVIDUAL SPECIES STATS:

STATS	Total vegetation	Nymphaea odorata, White water lily	Potamogeton amplifolius, Large-leaf pondweed	Potamogeton berchtoldii	Potamogeton friesii, Fries' pondweed	Potamogeton gramineus, Variable pond-weed	Potamogeton natans, Floating-leaf pond-weed	Potamogeton praelongus, White-stem pondweed	Potamogeton pusillus, Small pondweed	Potamogeton richardsonii, Clasping-leaf pondweed	Potamogeton robbinsii, Fern pondweed	Potamogeton spirillus, Spiral-fruited pondweed	Potamogeton vaseyi, Vasey's pondweed	Potamogeton zosteriformis, Flat-stem pondweed	Sagittaria latifolia, Common arrowhead	Utricularia minor, Small bladderwort	Vallisneria americana, Wild celery	Aquatic moss	Filamentous algae
Frequency of occurrence within vegetated areas (%)		0.94	14.15	0.94	1.42	11.79	0.47	3.30	29.72	8.02	52.83	1.42	0.94	5.66	1.42	0.94	32.08	3.77	9.43
Frequency of occurrence at sites shallower than maximum depth of plants		0.73	10.99	0.73	1.10	9.16	0.37	2.56	23.08	6.23	41.03	1.10	0.73	4.40	1.10	0.73	24.91	2.93	7.33
Relative Frequency (%)		0.3	4.6	0.3	0.5	3.8	0.2	1.1	9.7	2.6	17.2	0.5	0.3	1.8	0.5	0.3	10.4		
Relative Frequency (squared)	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.01		
Number of sites where species found		2	30	2	3	25	1	7	63	17	112	3	2	12	3	2	68	8	20
Average Rake Fullness	1.47	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.14	1.00	1.26	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
#visual sightings			11					1		3				5					
present (visual or collected)		present	present	present	present	present	present	present	present	present	present	present	present	present	present	present	present	present	present

SUMMARY STATS: Upper Buckatabon	
Total number of sites visited	742
Total number of sites with vegetation	212
Total number of sites shallower than maximum depth of plants	273
Frequency of occurrence at sites shallower than maximum depth of plants	77.66
Simpson Diversity Index	0.92
Maximum depth of plants (ft)**	17.00
Number of sites sampled using rake on Rope (R)	23
Number of sites sampled using rake on Pole (P)	227
Average number of all species per site (shallower than max depth)	3.66
Average number of all species per site (veg. sites only)	4.71
Average number of native species per site (shallower than max depth)	3.64
Average number of native species per site (veg. sites only)	4.69
Species Richness	33
Species Richness (including visuals)	33
**SEE "MAX DEPTH GRAPH" WORKSHEET TO CONFIRM	

DEPTH BIN (FT)	# SITES (NO ENTRY)
1	0
2	4
3	8
4	17
5	29
6	39
7	28
8	18
9	15
10	16
11	15
12	7
13	7
14	4
15	1
16	1
17	3
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0
32	0
33	0
34 - 40	0



Upper Buckatabon Max Depth Graph_2019

Upper Buckatabon Floristic Quality Index Calcs_2019

Lake	Upper Buckata-bon
County	Vilas
Date	07/20/19

Species	Common Name	C	species pre-sent=1	
Acorus americanus	Sweet-flag	7	0	0
Alisma triviale	Northern water-plantain	4	0	0
Bidens beckii	Water marigold	8	1	8
Bolboschoenus fluviatilis	River bulrush	6	0	0
Brasenia schreberi	Watershield	6	1	6
Calla palustris	Wild calla	9	0	0
Callitriche hermaphroditica	Autumnal water-starwort	9	0	0
Callitriche heterophylla	Large water-starwort	9	0	0
Callitriche palustris	Common water-starwort	8	0	0
Carex comosa	Bottle brush sedge	5	0	0
Catabrosa aquatica	Brook grass	10	0	0
Ceratophyllum demersum	Coontail	3	1	3
Ceratophyllum echinatum	Spiny hornwort	10	1	10
Chara	Muskgrasses	7	1	7
Dulichium arundinaceum	Three-way sedge	9	0	0
Elatine minima	Waterwort	9	0	0
Elatine triandra	Greater waterwort	9	0	0
Eleocharis acicularis	Needle spikerush	5	1	5
Eleocharis erythropoda	Bald spikerush	3	0	0
Eleocharis palustris	Creeping spikerush	6	0	0
Elodea canadensis	Common waterweed	3	1	3
Elodea nuttallii	Slender waterweed	7	1	7
Equisetum fluviatile	Water horsetail	7	0	0
Eriocaulon aquaticum	Pipewort	9	0	0
Glyceria borealis	Northern manna grass	8	0	0
Gratiola aurea	Golden hedge-hyssop	10	0	0
Heteranthera dubia	Water star-grass	6	1	6
Isoetes echinospora	Spiny-spored quillwort	8	0	0
Isoetes lacustris	Lake quillwort	8	0	0
Isoetes sp.	Quillwort	8	1	8
Juncus pelocarpus f. submersus	Brown-fruited rush	8	0	0
Juncus torreyi	Torrey's rush	4	0	0
Lemna minor	Small duckweed	4	0	0
Lemna perpusilla	Least duckweed	10	0	0
Lemna trisulca	Forked duckweed	6	1	6
Littorella uniflora	Littorella	10	0	0
Lobelia dortmanna	Water lobelia	10	0	0
Ludwigia palustris	Marsh purslane	4	0	0
Myriophyllum alterniflorum	Alternate-flowered water-milfoil	10	0	0

Lake	Upper Bucka-tabon
County	Vilas
Date	07/20/19

Species	Common Name	C	species pre-sent=1	
Myriophyllum farwellii	Farwell's water-milfoil	8	0	0
Myriophyllum heterophyllum	Various-leaved water-milfoil	7	0	0
Myriophyllum sibiricum	Northern water-milfoil	6	1	6
Myriophyllum tenellum	Dwarf water-milfoil	10	0	0
Myriophyllum verticillatum	Whorled water-milfoil	8	0	0
Najas flexilis	Slender naiad	6	1	6
Najas gracillima	Northern naiad	7	0	0
Najas guadalupensis	Southern naiad	8	1	8
Nelumbo lutea	American lotus	7	0	0
Nitella	Nitella	7	1	7
Nuphar advena	Yellow pond lily	8	0	0
Nuphar microphylla	Small pond lily	9	0	0
Nuphar X rubrodisca	Intermediate pond lily	9	0	0
Nuphar variegata	Spatterdock	6	1	6
Nymphaea odorata	White water lily	6	1	6
Phragmites australis	Common reed	1	0	0
Polygonum amphibium	Water smartweed	5	0	0
Polygonum punctatum	Dotted smartweed	5	0	0
Pontederia cordata	Pickerelweed	8	0	0
Potamogeton alpinus	Alpine pondweed	9	0	0
Potamogeton amplifolius	Large-leaf pondweed	7	1	7
Potamogeton bicupulatus	Snail-seed pondwwed	9	0	0
Potamogeton confervoides	Algal-leaved pondweed	10	0	0
Potamogeton diversifolius	Water-thread pondweed	8	0	0
Potamogeton epihydrus	Ribbon-leaf pondweed	8	0	0
Potamogeton berchtoldii		7	1	7
Potamogeton friesii	Fries' pondweed	8	1	8
Potamogeton gramineus	Variable pondweed	7	1	7
Potamogeton hillii	Hill's pondweed	9	0	0
Potamogeton illinoensis	Illinois pondweed	6	0	0
Potamogeton natans	Floating-leaf pondweed	5	1	5
Potamogeton nodosus	Long-leaf pondweed	7	0	0
Potamogeton oakesianus	Oakes' pondweed	10	0	0
Potamogeton obtusifolius	Blunt-leaf pondweed	9	0	0
Potamogeton praelongus	White-stem pondweed	8	1	8
Potamogeton pulcher	Spotted pondweed	10	0	0
Potamogeton pusillus	Small pondweed	7	1	7
Potamogeton richardsonii	Clasping-leaf pondweed	5	1	5
Potamogeton robbinsii	Fern pondweed	8	1	8
Potamogeton spirillus	Spiral-fruited pondweed	8	1	8
Potamogeton strictifolius	Stiff pondweed	8	0	0
Potamogeton vaseyi	Vasey's pondweed	10	1	10
Potamogeton zosteriformis	Flat-stem pondweed	6	1	6

Lake	Upper Buck-atabon
Date	07/20/19

Species	Common Name	C	species present=1	
Ranunculus aquatilis	White water crowfoot	8	0	0
Ranunculus flabellaris	Yellow water crowfoot	8	0	0
Ranunculus flammula	Creeping spearwort	9	0	0
Riccia fluitans	Slender riccia	7	0	0
Ruppia cirrhosa	Ditch grass	8	0	0
Sagittaria brevirostra	Midwestern arrowhead	9	0	0
Sagittaria cuneata	Arum-leaved arrowhead	7	0	0
Sagittaria graminea	Grass-leaved arrowhead	9	0	0
Sagittaria latifolia	Common arrowhead	3	1	3
Sagittaria rigida	Sessile-fruited arrowhead	8	0	0
Schoenoplectus acutus	Hardstem bulrush	6	0	0
Schoenoplectus heterochaetus	Slender bulrush	10	0	0
Schoenoplectus pungens	Three-square bulrush	5	0	0
Schoenoplectus subterminalis	Water bulrush	9	0	0
Schoenoplectus tabernaemontani	Softstem bulrush	4	0	0
Sparganium americanum	American bur-reed	8	0	0
Sparganium androcladum	Branched bur-reed	8	0	0
Sparganium angustifolium	Narrow-leaved bur-reed	9	0	0
Sparganium emersum	Short-stemmed bur-reed	8	0	0
Sparganium eurycarpum	Common bur-reed	5	0	0
Sparganium fluctuans	Floating-leaf bur-reed	10	0	0
Sparganium natans	Small bur-reed	9	0	0
Spirodela polyrhiza	Large duckweed	5	0	0
Stuckenia filiformis	Fine-leaved pondweed	8	0	0
Stuckenia pectinata	Sago pondweed	3	0	0
Stuckenia vaginata	Sheathed pondweed	9	0	0
Typha angustifolium	Narrow-leaved cattail	1	0	0
Typha latifolia	Broad-leaved cattail	1	0	0
Typha sp.	Cattail	1	0	0
Utricularia cornuta	Horned bladderwort	10	0	0
Utricularia geminiscapa	Twin-stemmed bladderwort	9	0	0
Utricularia gibba	Creeping bladderwort	9	0	0
Utricularia intermedia	Flat-leaf bladderwort	9	0	0
Utricularia minor	Small bladderwort	10	1	10
Utricularia purpurea	Large purple bladderwort	9	0	0
Utricularia resupinata	Small purple bladderwort	9	0	0
Utricularia vulgaris	Common bladderwort	7	0	0
Vallisneria americana	Wild celery	6	1	6
Wolffia borealis	Northern watermeal	6	0	0
Wolffia columbiana	Common watermeal	5	0	0
Zannichellia palustris	Horned pondweed	7	0	0
Zizania aquatica	Southern wild rice	8	0	0
Zizania palustris	Northern wild rice	8	0	0
Zizania sp.	Wild rice	8	0	0

N			32	
mean C				6.7
FQI				37.65

CITATION: **Nichols, SA. 1999. Floristic Quality Assessment of Wisconsin Lake Plant Communities with Example Applications. Journal of Lake and Reservoir Management, 15(2):133-141.**

CITATION: **University of Wisconsin-Madison, 2001. Wisconsin Floristic Quality Assessment (WFQA). Retrived October 27, 2009 from: http://www.botany.wisc.edu/WFQA.asp**

Sampling point	Dominant sediment type
1	M
2	
3	
4	
5	
6	M
7	
8	
9	
10	
11	
12	M
13	M
14	M
15	M
16	M
17	
18	
19	M
20	M
21	M
22	M
23	M
24	M
25	M
26	M
27	M
28	M
29	M
30	M
31	M
32	S
33	M
34	M
35	M
36	M
37	M
38	M
39	M
40	S

Sampling point	Dominant sediment type
41	M
42	M
43	M
44	M
45	M
46	S
47	
48	S
49	M
50	M
51	M
52	M
53	M
54	M
55	M
56	S
57	S
58	M
59	M
60	M
61	M
62	M
63	M
64	M
65	M
66	S
67	M
68	S
69	M
70	M
71	M
72	
73	
74	
75	
76	
77	M
78	S
79	
80	

Sampling point	Dominant sediment type
81	M
82	M
83	M
84	
85	M
86	
87	
88	S
89	S
90	S
91	S
92	S
93	M
94	M
95	
96	
97	
98	S
99	
100	
101	
102	S
103	S
104	M
105	S
106	S
107	
108	
109	
110	S
111	
112	
113	
114	
115	
116	
117	S
118	
119	
120	S

Sampling Point	Dominant sediment type
121	S
122	M
123	S
124	S
125	
126	
127	
128	
129	
130	
131	
132	
133	
134	
135	
136	
137	
138	
139	S
140	
141	
142	S
143	M
144	M
145	M
146	
147	
148	M
149	M
150	
151	
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Sampling Point	Dominant sediment type
161	
162	
163	
164	S
165	S
166	
167	R
168	M
169	
170	
171	
172	
173	S
174	M
175	
176	
177	
178	
179	
180	
181	
182	
183	
184	
185	
186	
187	
188	
189	S
190	S
191	M
192	R
193	S
194	
195	
196	
197	
198	
199	S
200	M

Sampling Point	Dominant sediment type
201	
202	
203	
204	
205	
206	
207	
208	
209	
210	
211	
212	
213	
214	M
215	S
216	S
217	S
218	S
219	M
220	
221	
222	
223	
224	
225	
226	
227	S
228	S
229	
230	
231	
232	
233	
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239	
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Sampling Point	Dominant sediment type
241	M
242	R
243	S
244	S
245	S
246	R
247	
248	
249	
250	
251	
252	
253	
254	
255	S
256	S
257	
258	
259	
260	
261	
262	
263	
264	
265	
266	
267	
268	
269	M
270	S
271	
272	
273	S
274	M
275	
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Sampling Point	Dominant sediment type
281	
282	
283	M
284	R
285	
286	
287	
288	
289	
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293	
294	
295	
296	
297	M
298	M
299	M
300	M
301	M
302	S
303	
304	
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307	
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311	M
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Sampling Point	Dominant sediment type
321	
322	
323	
324	M
325	S
326	S
327	M
328	M
329	S
330	S
331	
332	
333	
334	
335	
336	
337	S
338	S
339	M
340	M
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352	S
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354	S
355	M
356	M
357	S
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Sampling Point	Dominant sediment type
361	
362	
363	
364	
365	S
366	S
367	M
368	S
369	
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374	
375	
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377	
378	
379	
380	R
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382	
383	
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389	
390	
391	
392	
393	S
394	S
395	M
396	M
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Sampling Point	Dominant sediment type
401	
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411	R
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417	
418	
419	
420	
421	S
422	S
423	M
424	M
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Sampling Point	Dominant sediment type
441	
442	
443	
444	
445	
446	
447	
448	
449	S
450	S
451	S
452	M
453	M
454	M
455	
456	
457	
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459	
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478	
479	S
480	M

Sampling Point	Dominant sediment type
481	M
482	M
483	M
484	M
485	S
486	
487	
488	
489	
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507	
508	S
509	S
510	M
511	S
512	M
513	M
514	M
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Sampling Point	Dominant sediment type
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534	
535	
536	S
537	S
538	S
539	S
540	M
541	M
542	S
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Sampling Point	Dominant sediment type
561	
562	
563	S
564	S
565	S
566	S
567	M
568	S
569	
570	
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589	
590	S
591	S
592	S
593	M
594	M
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600	

Sampling Point	Dominant sediment type
601	
602	
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615	
616	M
617	S
618	S
619	S
620	S
621	
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623	
624	
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627	S
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Sampling Point	Dominant sediment type
641	
642	S
643	S
644	S
645	
646	
647	
648	M
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650	
651	
652	
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656	
657	
658	
659	
660	
661	
662	M
663	S
664	S
665	
666	S
667	R
668	R
669	
670	
671	
672	
673	
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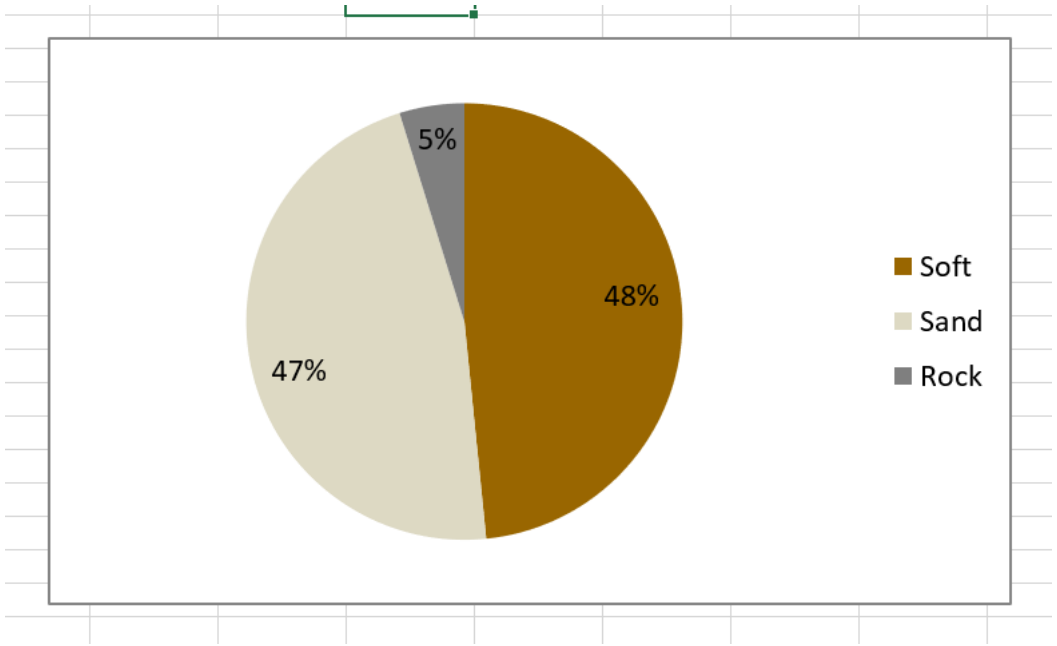
Sampling Point	Dominant sediment type
681	S
682	S
683	M
684	S
685	S
686	S
687	
688	
689	
690	
691	
692	
693	
694	
695	
696	
697	
698	
699	S
700	M
701	
702	
703	
704	
705	
706	
707	
708	
709	
710	
711	
712	R
713	M
714	
715	
716	
717	
718	
719	
720	

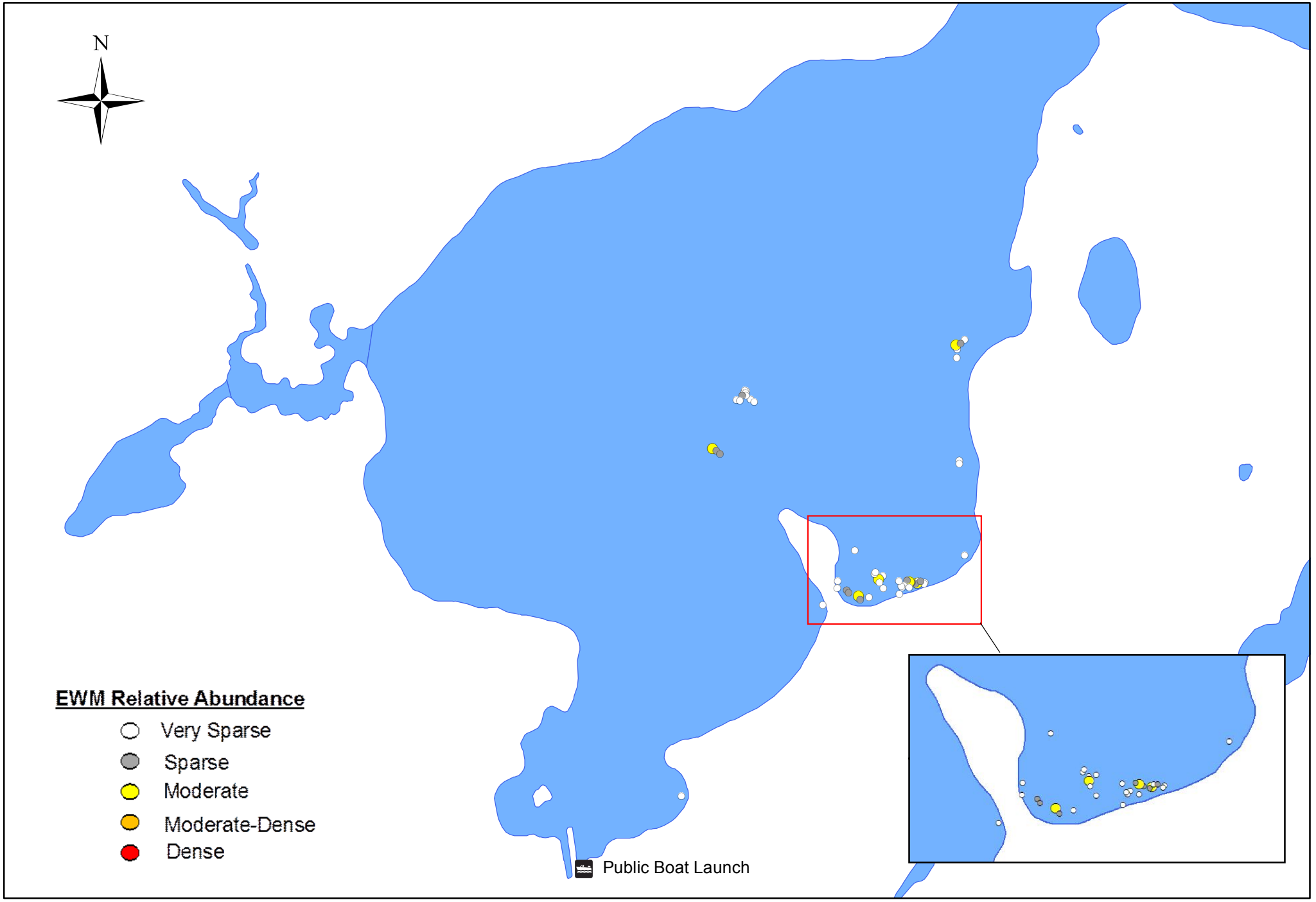
Sampling Point	Dominant sediment type
721	
722	
723	
724	R
725	S
726	S
727	S
728	
729	
730	
731	
732	
733	S
734	S
735	S
736	
737	
738	
739	
740	
741	S
742	S
743	
744	
745	
746	
747	
748	
749	S
750	M
751	M
752	
753	S
754	S
755	R
756	
757	
758	
759	M
760	M

Sampling Point	Dominant sediment type	
760	M	
761		
762	M	
763	S	
764	S	
765	S	
766	S	
Soft	121	48%
Sand	117	47%
Rock	12	5%
	250	



APPENDIX E

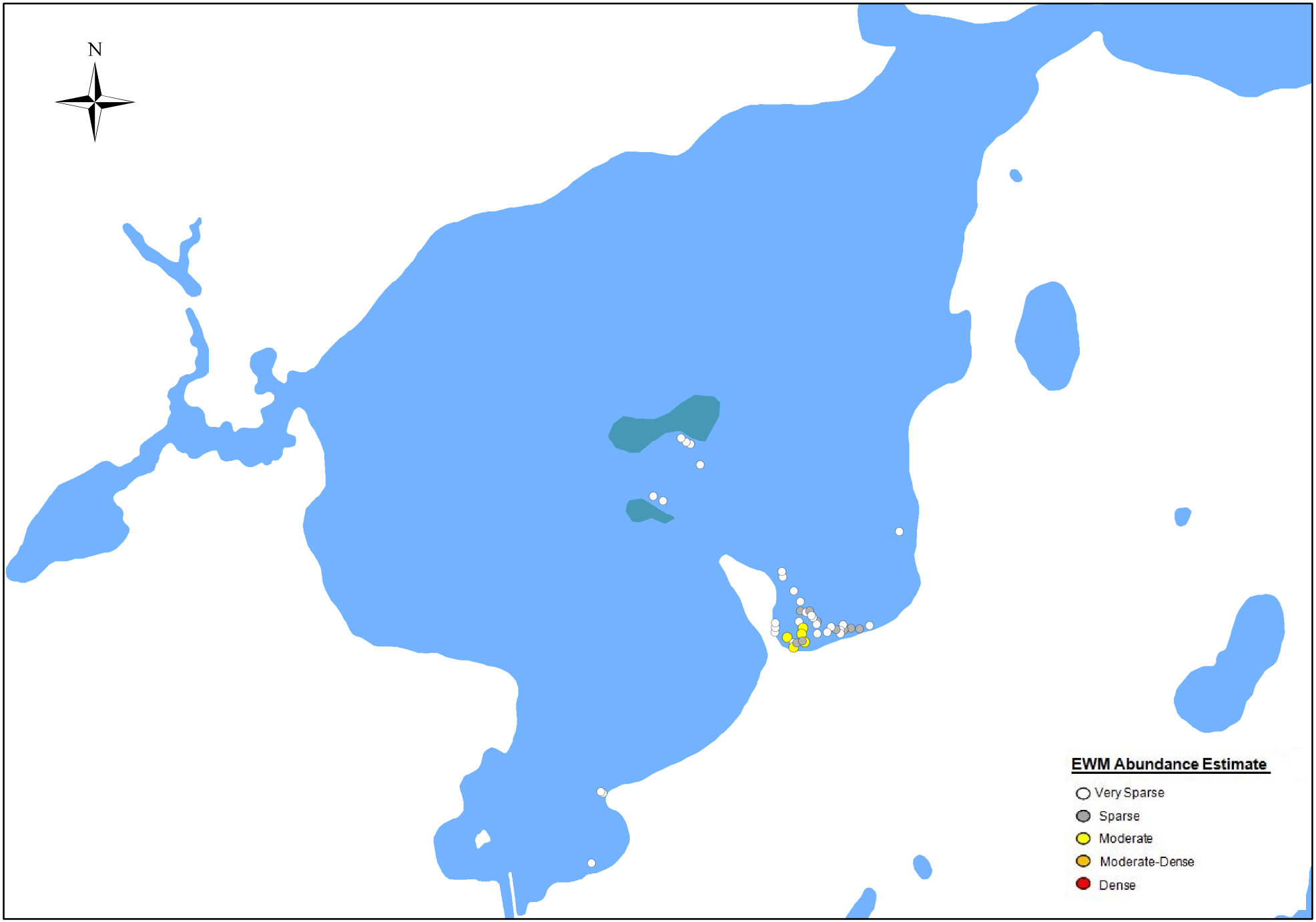
EURASIAN WATERMILFOIL MAPS, 2015-2019



Lake: Upper and Lower Buckatabon Lakes
Location: Conover Township - Vilas County, WI
Map Date & Creator: 12.18.2015, Many Waters, LLC
Source: WDNR hydro
File: EOY_2015_Buckatabon

0 625 1,250 2,500 Feet

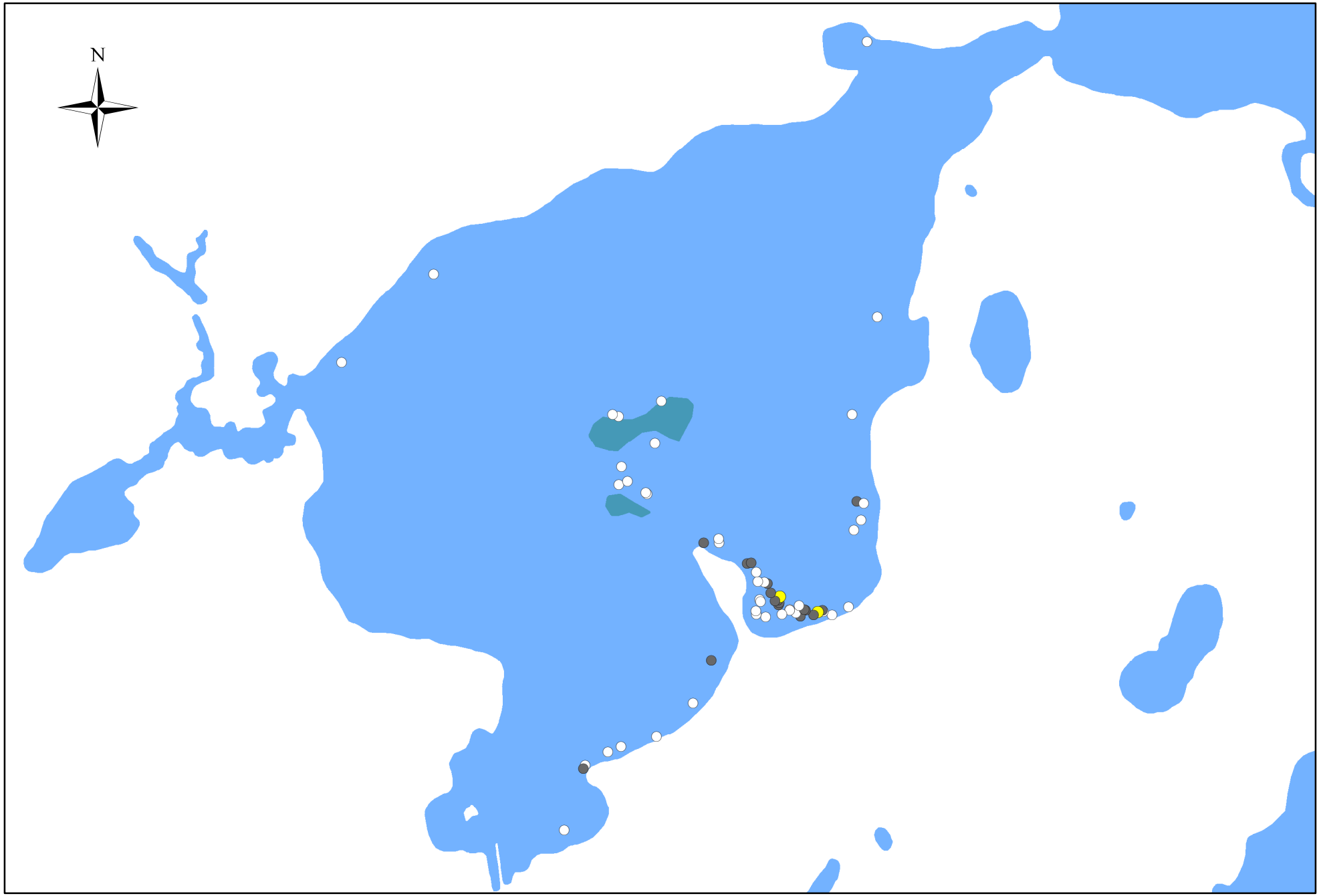
Upper and Lower Buckatabon
Vilas County, WI
2015 EWM Locations
Upper Buckatabon



Lake: Upper Buckatabon, Vilas County, WI
Map Date & Creator: 1.2.2017, Many Waters, LLC
Source: WDNR hydro, EWM-Many Waters, Islands
Digitized by Many Waters
Survey Date: 10.6.2016
File: Buckatabon_ES_2016

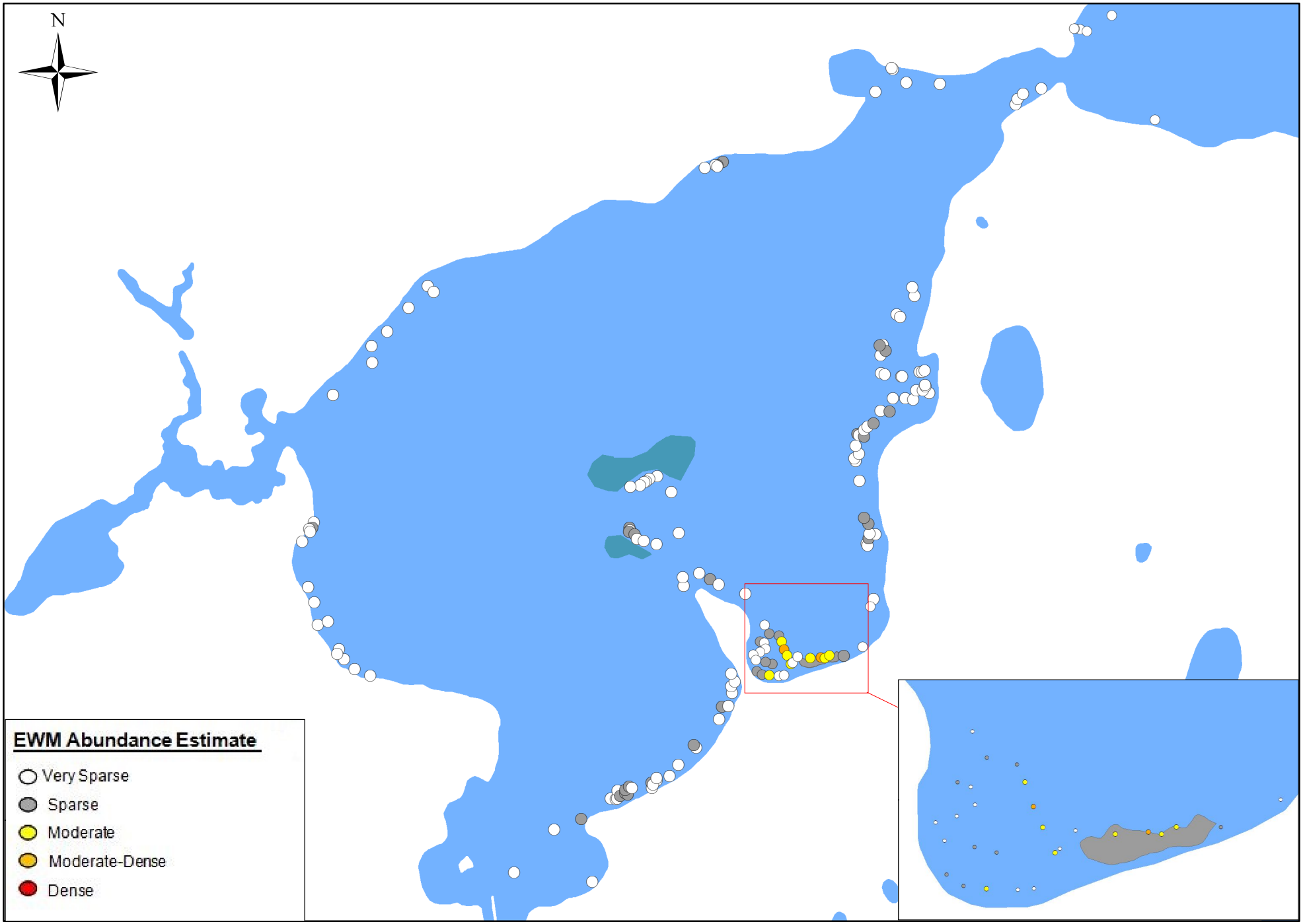
0 625 1,250 2,500 Feet

End of the Year EWM Survey
Upper Buckatabon Lake
2016



Lake: Upper Buckatabon, Vilas County, WI
Map Date & Creator: 1.9.2017 Many Waters, LLC
Survey Date: 10.22.2017
Source: WDNR hydro, EWM-Many Waters, Islands
Digitized by Many Waters
File: EOY_Bucky_2017

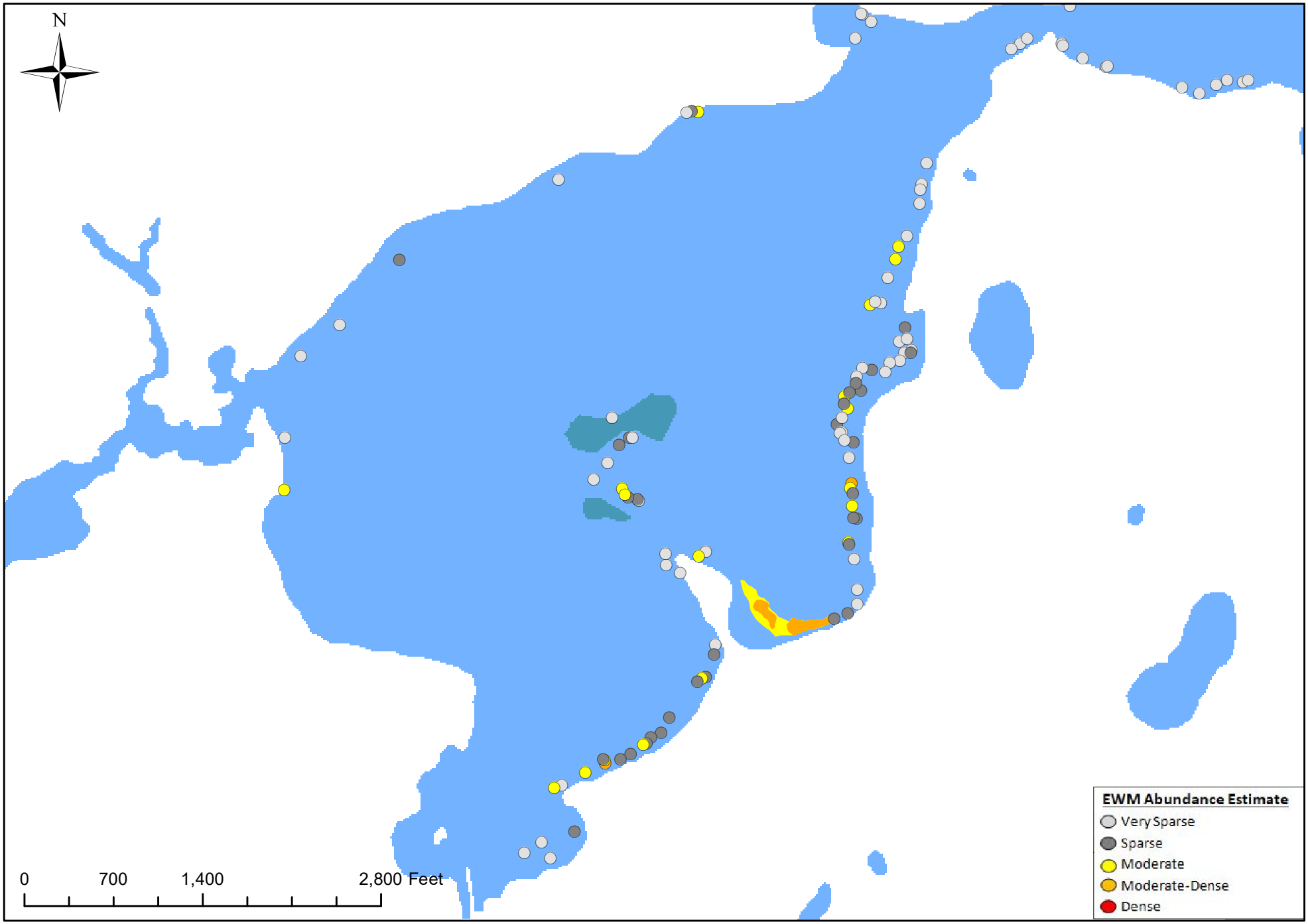
End of the Year EWM Locations
Upper Buckatabon Lake
Vilas County, WI
2017



Lake: Upper Buckatabon, Vilas County, WI
Map Date & Creator: 4.24.2019 Many Waters, LLC
Source: WDNR hydro, EWM-Many Waters, Islands-Digitized
File: Buckatabon_MLSS_EOY_2018

0 700 1,400 2,800 Feet

Mid/Late Season EWM Survey
Upper Buckatabon
2018



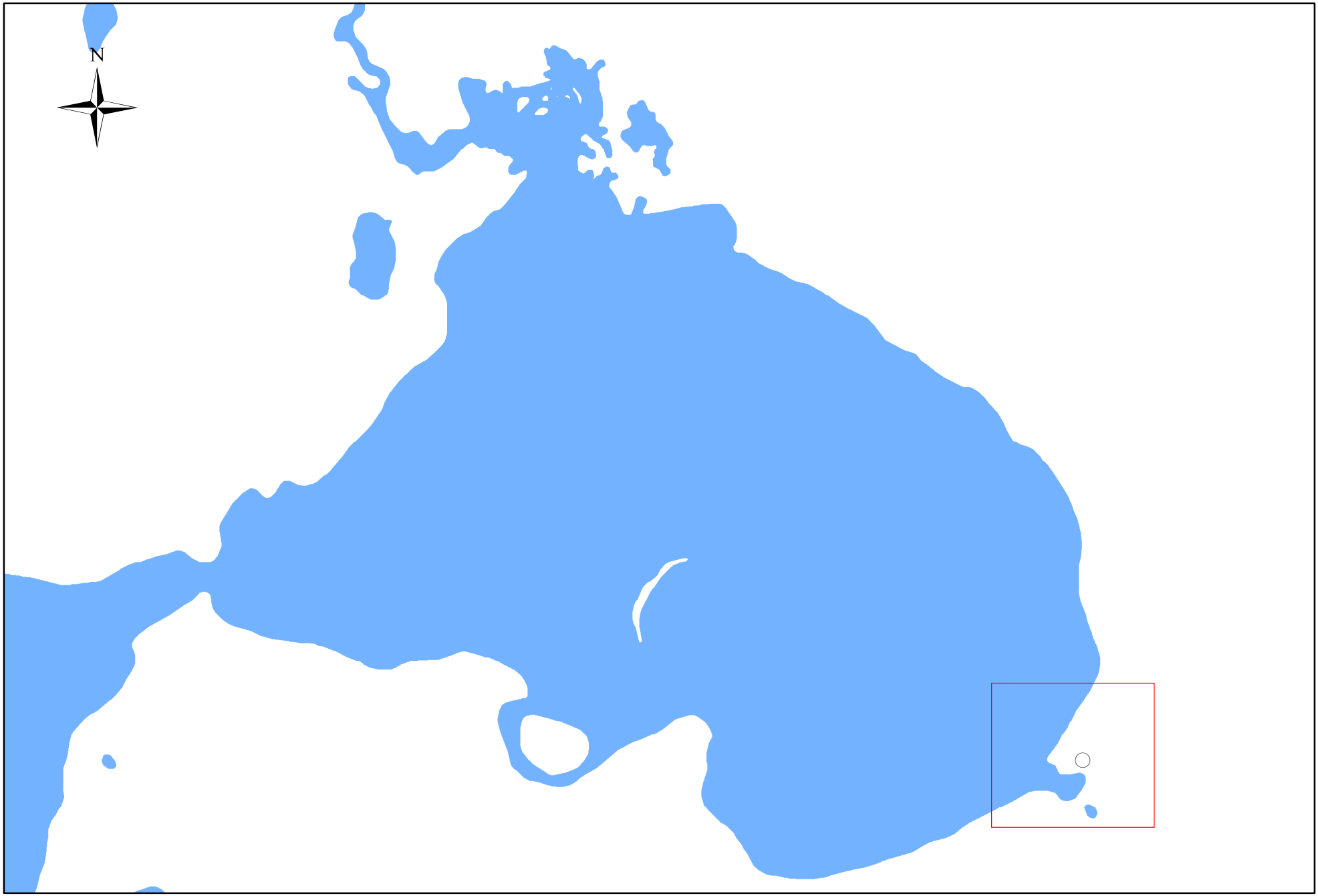
Lake: Upper Buckatabon, Vilas County, WI
Map Date & Creator: 3.18.20,Many Waters, LLC
Survey Date: 9.28.2019 & 10.4.2019
Source: WDNR hydro, EWM-Many Waters
File: Buckatabon_MLSS_EOY_2019

Upper Buckatabon Lakes
End of the Year EWM Locations
2019

Lake: Upper and Lower Buckatabon Lakes
Location: Conover Township - Vilas County, WI
Map Date & Creator: 12.18.2015, Many Waters, LLC
Source: WDNR hydro
File: EOY_2015_Buckatabon

0 487.5 975 1,950 Feet

Upper and Lower Buckatabon
Vilas County, WI
2015 EWM Locations
Lower Buckatabon



Lake: Lower Buckatabon, Vilas County, WI
Map Date & Creator: 1.9.2017 Many Waters, LLC
Survey Date: 10.22.2017
Source: WDNR hydro, EWM-Many Waters, Islands
Digitized by Many Waters
File: EOY_Bucky_2017

0 330 660 1,320 Feet

EWM Abundance Estimate

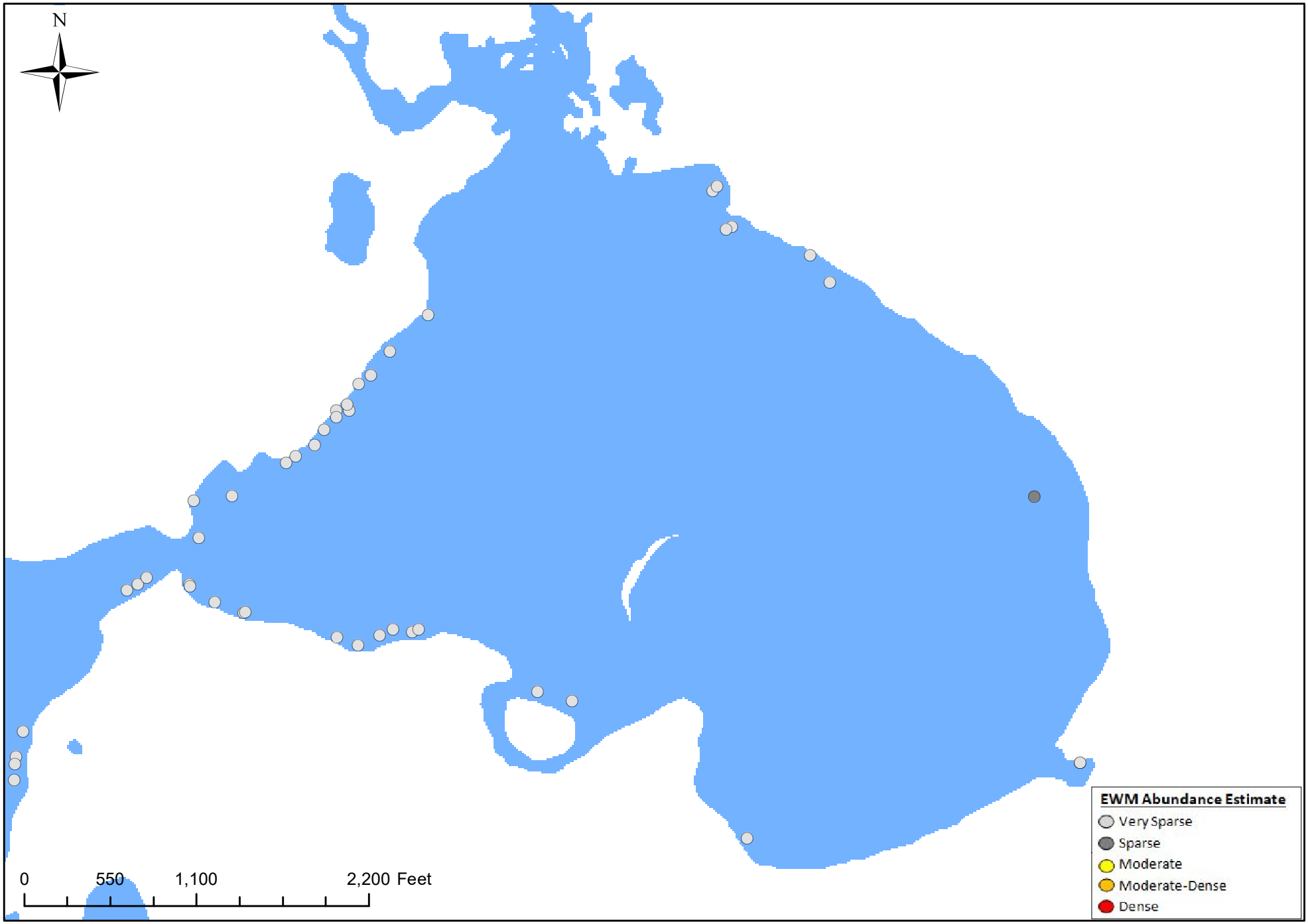
- Very Sparse
- Sparse
- Moderate
- Moderate-Dense
- Dense

End of the Year EWM Locations
Lower Buckatabon Lake
Vilas County, WI
2017

Lake: Lower Buckatabon, Vilas County, WI
Map Date & Creator: 4.24.2019 Many Waters, LLC
Source: WDNR hydro, EWM-Many Waters
File: Buckatabon_MLSS_EOY_2018

0 550 1,100 2,200 Feet

Mid/Late Season EWM
Lower Buckatabon
2018



Lake: Lower Buckatabon, Vilas County, WI
Map Date & Creator: 3.18.20,Many Waters, LLC
Survey Date: 9.28.2019 & 10.4.2019
Source: WDNR hydro, EWM-Many Waters
File: Buckatabon_MLSS_EOY_2019

Lower Buckatabon Lakes
End of the Year EWM Locations
2019

Buckatabon Lakes EWM Herbicide Management Options

June 18, 2019

History

- PI Surveys in 2010 and 2015 (2010 data with Vilas County)
- 2015 Lower Buck survey had just one visual, Upper Buck had two visuals. No level of FOO at that time.
- Coontail, common waterweed, fern pondweed very high FOO

Current Grants

- AIRR-201-16 and AIRR-216-17 and AIRR-234-19
- LPL 1640-17: status on recommendations?

Current Management

- 2019: 9.1 acres of DASH and supplemental hand pulling of EWM
- EWM point-based mapping ranging from 0.25 acres in 2015 to 3.25 acres in 2019 of 845 total acreage. Covering less than 1% of surface area of lakes.

Herbicide Treatments: Things to Consider

- Spot treatments have proven to be ineffective
- Damage to native vegetation is likely
- Herbicide resistance is real, over time chemical use may select for those that are most hardy
- Is motivation based on recreational use? Natives and invasives can pose recreational inhibitions
- Hand pulling does not require permit or mgmt. plan
- We know little about new herbicides

Traditional Herbicide Uses

- For EWM, 2-4,D used alone or with combination of other chemicals
- Both whole-lake and spot treatments occurred in the past. We know now that this chemical is ineffective in many spot-treatment circumstances.
- Diquat used in the past for faster-acting herbicide

New Herbicide Use

- Florpyrauxifen-benzyl is a newly approved herbicide that claims to work better on spot treatments
- Research occurring now on Minocqua and North Twin using florpyrauxifen-benzyl

Why All Plants are Good

- They reduce shoreline erosion
- Minimizing shoreline disturbance may increase nature's ability to ward off colonization of invasive plants
- They provide habitat and oxygen for all animals in the lake
- They hold aesthetic beauty

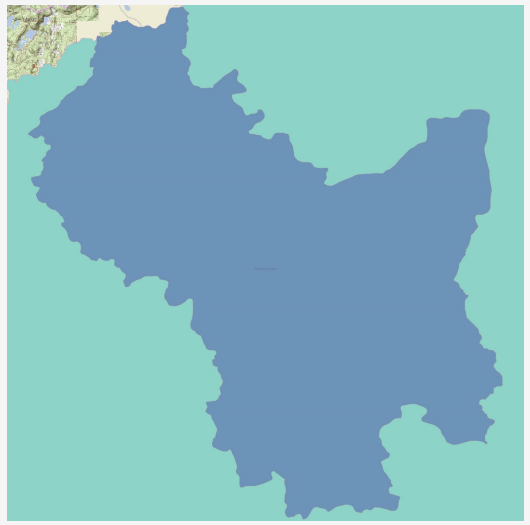
APPENDIX F

WDNR

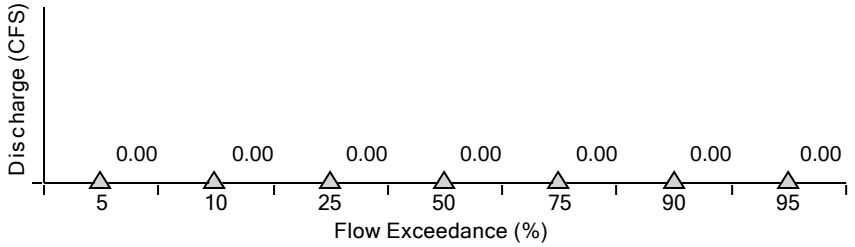
PRESTO-LITE

PRESTO-Lite Watershed Delineation Report

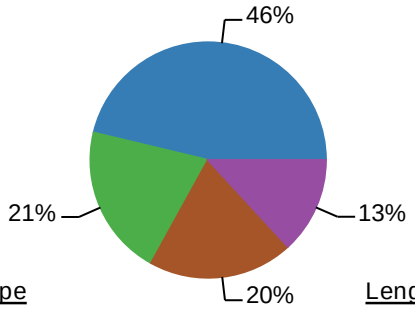
Reach ID: 600007709
Watershed Name: Buckatabon Creek
Waterbody Name: Lower Buckatabon Lake
HUC08: Upper Wisconsin
Watershed Area: 16.54 mi²
Average Annual Precipitation: 32.24in



Stream Flow

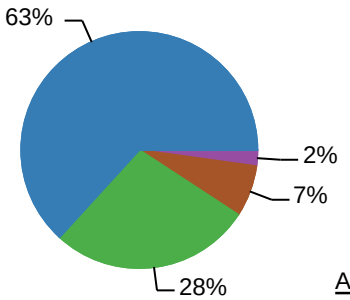


Tributary Stream Type



Type	Length
Cool-Cold Headwater	5500 ft
Coldwater	2463 ft
Warm Headwater	2363 ft
Macroinvertebrates	1565 ft
Cool-Cold Mainstem	0 ft
Cold Headwater	0 ft
Cold Mainstem	0 ft
Large River	0 ft
Warm Mainstem	0 ft

Landcover



Type	Area
Forest	8.82 mi²
Wetland	3.85 mi²
Urban	0.98 mi²
Grassland	0.31 mi²
Barren	0.16 mi²
Agriculture	0.01 mi²

PRESTO Phosphorus Load Estimate

Avg. Annual Nonpoint Phosphorous Load (80% Confidence Interval)	692 (336 - 1,271) lbs
Number of Facilities (Individual Facility Information below)	0
Avg. Annual Point-source Phosphorous Load (2010 - 2012 total of all facilities)	0lbs
Most Likely Point : Nonpoint Phosphorous Ratio	0% : 100%
Low Estimate Point : Nonpoint Phosphorous Ratio (Adaptive Management)	0% : 100%

Adaptive Management Results

Facilities Discharging to the Buckatabon Creek Watershed:

Facility Name	Permit #	Outfall #	Waste Type	Receiving Water	Avg. Phosphorus Load (lbs.) (2010 - 2012)
No Facilities Found	-	-	-	-	-

Watershed Analysis Limitations

- This analysis relies on pre-defined catchments from the Wisconsin Hydrography Data-Plus and may not delineate from the exact location required. When assessing phosphorus loads for specific facility in support of efforts such as adaptive management, care should be taken to ensure that additional downstream point sources do not exist. For adaptive management information related to specific facilities please reference the PRESTO website http://dnr.wi.gov/topic/surfacewater/presto.html
- Delineation of watersheds is based on a topographic assessment and therefore do not account for modified drainage networks such as stormwater sewer systems and ditched agriculture.
- If a watershed requires delineation from an exact location the user may use the desktop version of PRESTO that requires ESRI ArcGIS. The PRESTO tool and default datasets can be downloaded at http://dnr.wi.gov/topic/surfacewater/presto.html
- Data sources for this report originate from the WDNR's Wisconsin Hydrography Data-Plus value-added dataset and the point and non-point source loading information including in the WDNR's PRESTO model.
- If you have questions about the report generated from the PRESTO-Lite application please contact: DNRWATERQUALITYMODELING@wisconsin.gov

APPENDIX G

WDNR

FISHERIES

INFORMATION

WISCONSIN DNR
FISHERIES INFORMATION SHEET

LAKE: UPPER BUCKATABON **COUNTY:** VILAS **YEAR:** 2010

The Department of Natural Resources and WVIC surveyed Upper Buckatabon Lake, Vilas County, from April 3 through May 17, 2010, to determine the health of its fishery. Estimating walleye abundance was the primary objective of the survey.

Upper Buckatabon Lake is a drainage lake with predominantly sand and muck substrate and a low-density walleye population. It has a surface area of 494 acres, 7.4 miles of shoreline and a maximum depth of 47 feet.

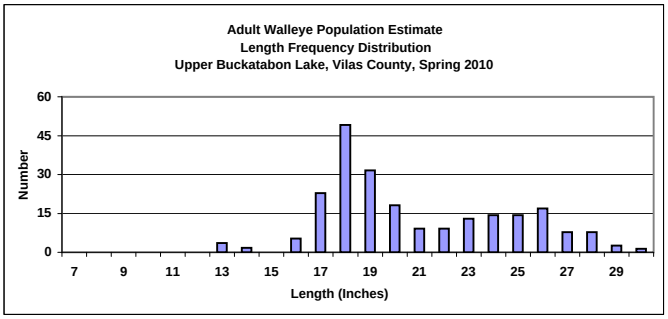


Figure 1. Length frequency distribution of 230 adult* walleye estimated to be in Upper Buckatabon Lake, Vilas County, based on a spring 2010 survey.

* Note: Adult walleye are defined as all sexable walleye and walleye of unknown sex ≥ 15 inches long.

Walleye

We conducted a mark-recapture survey of Upper Buckatabon Lake's adult* walleye population from April 3-11, 2010. We captured and marked (fin clipped) 153 adult walleye in six days of fyke netting. A crew sampled Upper Buckatabon Lake with an electro-fishing boat on April 9th and 11th and captured 38 adult walleye. Roughly one-half (13 of 25) of those walleye had been fin-clipped during fyke netting.

Based on those results, we estimated that Upper Buckatabon Lake was inhabitated by 230 adult walleye (0.5 /acre). Approximately 97% (223 of 230) of adult walleye were 15 inches long or larger. The largest walleye we captured was a 30.7-inch female.

Smallmouth Bass

Smallmouth bass were an incidental catch in our survey of Upper Buckatabon Lake. Our sampling was not done during the peak of the smallmouth bass spawning season.

We captured 39 smallmouth bass, 8 inches or larger, during our fyke netting and electro-fishing sampling of Upper Buckatabon Lake. One-third (13 of 39) of those smallmouth were 14 inches long or larger. The largest smallmouth bass we captured was 18.8 inches long.

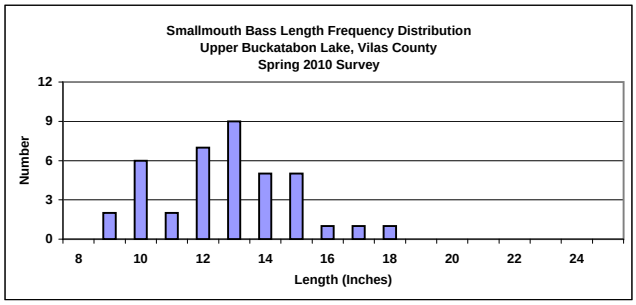


Figure 2. Length frequency distribution of 39 smallmouth bass ≥ 8" captured during a fisheries survey of Upper Buckatabon Lake, Vilas County, in spring 2010.

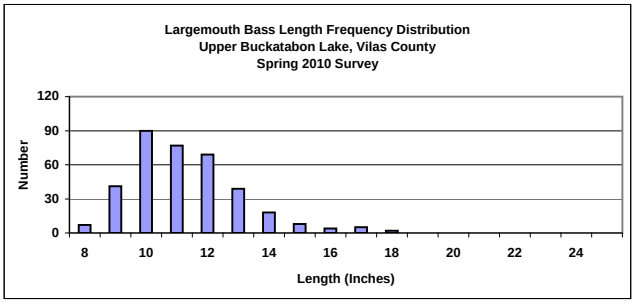


Figure 3. Length frequency distribution of 360 largemouth bass ≥ 8" captured during a fisheries survey of Upper Buckatabon Lake, Vilas County, in spring 2010.

Largemouth Bass

Our sampling of Upper Buckatabon Lake was also done outside the spawning period for largemouth bass. We captured 360 largemouth bass, 8 inches or larger, during our fyke netting and electro-fishing sampling of Upper Buckatabon Lake. Approximately 10% (37 of 360) of those largemouth were 14 inches long or larger. The biggest largemouth bass we captured was 18.7 inches long.

Drafted: July 12, 2010
By: Mike Coshun

Northern Pike

We captured 119 adult* northern pike in fyke nets fished in Upper Buckatabon Lake from April 3-8, 2010. Six of the adult northern pike we captured were larger than 26 inches long. The largest northern pike we captured was a 27.7-inch female.

* Note: Adult northern pike are defined as all sexable northern pike and northern pike of unknown sex ≥ 12 inches long.

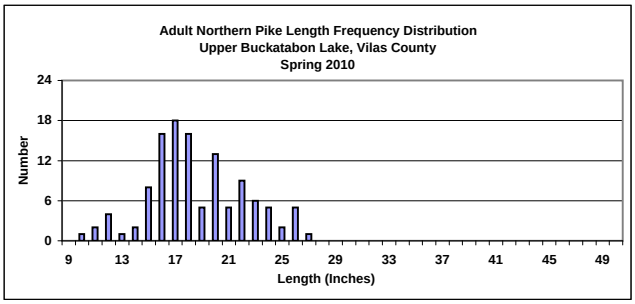


Figure 4. Length frequency distribution of 119 adult* northern pike captured in fyke nets during a fisheries survey of Upper Buckatabon Lake, Vilas County, in spring 2010.

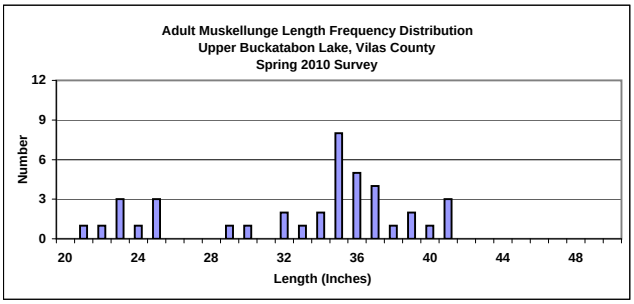


Figure 5. Length frequency distribution of 40 adult* muskellunge captured during a fisheries survey of Upper Buckatabon Lake, Vilas County, in spring 2010.

Muskellunge

We captured 40 adult* muskellunge during our fyke netting and electro-fishing sampling of Upper Buckatabon Lake. Sixty-five percent (26 of 40) of the adult muskellunge we captured were 34 inches long or larger. Four of those muskellunge were 40 inches long or larger. The largest muskellunge we captured was a 41.7-inch female.

* Note: Adult muskellunge are defined as all sexable muskellunge and muskellunge of unknown sex ≥ 20 inches long.

Other Species

We captured 10 species of fish in our fyke netting and electro-fishing sampling of Upper Buckatabon Lake in addition to the game fish mentioned above. Black crappie, bluegill, pumpkinseed, rock bass, yellow bullhead and yellow perch were common in our fyke net catches. We also caught creek chub, golden shiner, grass pickerel and white sucker. In-water sampling will conclude with a survey of young-of-year walleye in fall 2010.

We are also conducting a creel (angler harvest) survey on Upper Buckatabon Lake this year. Creel clerk Lynn Robinson will count and interview anglers and examine their catch throughout the 2010 open-water fishing season.

Table 1. General Fishing Regulations for Upper Buckatabon Lake, Vilas County, 2010

FISH SPECIES	OPEN SEASON	DAILY LIMIT	MINIMUM LENGTH
Walleye	May 1 - March 6	3	15 inches
Largemouth and Smallmouth Bass	May 1 - June 18 (C&R) June 19 - March 6 (Harvest)	None 5 in total	14 inches
Muskellunge	May 29 - Nov. 30	1	34 inches
Northern Pike	May 1 - March 6	5	None

A brief summary of selected fishing regulations for Upper Buckatabon Lake is included above (Table 1). While the regulatory information provided was current at the time the surveys were conducted, it is not comprehensive and should not be used as a substitute for the current fishing regulation pamphlet. You may obtain a copy of current fishing regulations when you purchase your fishing license, or download a copy from our web site at:

http://www.dnr.wi.gov/fish/regulations/

This report is interim only; data and findings should not be considered final. Results of creel surveys should be available by June 2011. Spring survey and creel survey summaries will be posted at:
http://dnr.wi.gov/fish/nor/northern.html
or contact:

Mike Coshun, Treaty Fisheries Biologist
Wisconsin Department of Natural Resources
8770 Highway J
Woodruff, WI 54568
(715) 356-5211 Ext. 209
Email: Michael.Coshun@dnr.state.wi.us

For answers to questions about fisheries management activities and plans for Upper Buckatabon Lake, Vilas County, contact:

Steve Gilbert, Fisheries Biologist
Wisconsin Department of Natural Resources
8770 Highway J
Woodruff, WI 54568
(715) 356-5211 Ext. 229
Email: Stephen.Gilbert@Wisconsin.gov

Drafted: July 12, 2010
By: Mike Coshun

File: U_Buckatabon_Spring_Summary_2010

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
CREEL SURVEY REPORT

UPPER BUCKATABON LAKE

VILAS COUNTY

2010-11

Treaty Fisheries Publication

Compiled by Tim Tobias
Treaty Fisheries Technician

CONTENTS

SUMMARY TABLES

Cover Art: Steve Hilt, Minocqua, WI
Fish Graphics: Virgil Beck, Stevens Point, WI

INTRODUCTION

Fish populations can fluctuate due to natural forces (weather, predation, competition), management actions (stocking, regulations, habitat improvement), inappropriate development (habitat degradation), and harvest impacts. Wisconsin Department of Natural Resources fisheries crews regularly conduct fishery surveys on area lakes and reservoirs to gather the information needed to monitor changes, identify concerns, evaluate past management actions, and to prescribe good fishery management strategies. Netting and electrofishing surveys are used to gather data on the status of fish populations and communities (species composition, population size, reproductive success, size/age distribution, and growth rates). But the other key component of the fishery that we often need to measure is the harvest.

On many lakes in the Ceded Territory of northern Wisconsin, harvest of fish is divided between sport anglers and the six Chippewa tribes who harvest fish under rights granted by federal treaties. The tribes harvest fish mostly using a highly efficient method, spearing, during a relatively short time period in the spring. Every fish in the spear harvest is counted – a complete "census" of the harvest.

We also measure the sport harvest to assess its impact on the fishery. But because it would be highly impractical and very costly to conduct a complete census of every angler who fishes on a lake, we conduct creel surveys.

A creel survey is an assessment tool used to sample the fishing activities of anglers on a body of water and make projections of harvest and other fishery parameters. Creel survey clerks work on randomly-selected days and shifts, forty hours per week during the open season for gamefish from the first Saturday in May through the first Sunday in March, except during the month of November when fishing effort is low and ice conditions are often unsafe. The survey is run during daylight hours, and shift times change from month to month as day length changes.

Creel survey clerks travel their lakes using a boat or snowmobile to count numbers of anglers on a lake at predetermined times, and to interview anglers who have completed their fishing trip to collect data on what species they fished for, catch, harvest, lengths of fish harvested, marks (finclips or tags), and hours of fishing effort. Collecting completed-trip data provides the most accurate assessment of angling activities, and it avoids the need to disturb anglers while they are fishing.

A computer program is used to make projections of total catch and harvest of each species, catch and harvest rates, and total fishing effort, by month and for the year in total. Keep in mind that these are only projections based on the best information available, and not a complete accounting of effort, catch, and harvest. Accurate projections require that we sample a sufficient and representative portion of the angling activity on a lake. The accuracy of creel survey results, therefore, depends on good cooperation and truthful responses by anglers when a creel clerk interviews them.

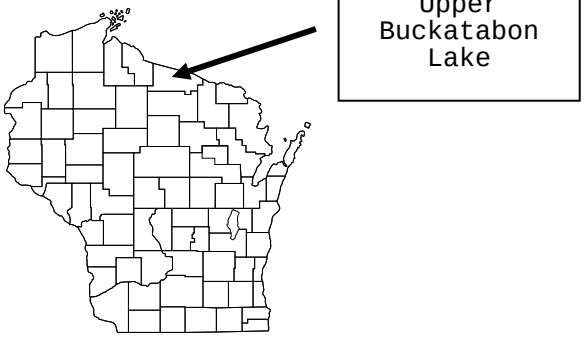
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a moment of your time and it gives the Department valuable information needed for management of the fishery.

This report provides projections of:

1. Overall fishing effort (pressure)
2. Fishing effort directed at each species
3. Catch and harvest rates
4. Numbers of fish caught and harvested

Also included are a physical description of Upper Buckatabon Lake; discussion of results of the survey; and detailed summaries, by species of fishing effort, catch and harvest.

GENERAL LAKE INFORMATION



Location

Upper Buckatabon Lake, which is connected to Lower Buckatabon, is located in Vilas County three miles southwest of the Town of Conover.

Physical Characteristics

Upper Buckatabon Lake is a 494-acre drainage lake with a maximum depth of 47 feet. Littoral substrate consists primarily of sand, muck and with very little gravel. Upper Buckatabon Lake has alkaline, clear water of moderate transparency.

Seasons Surveyed

The period referred to in this report as the 2010-11 fishing season ran from May 1, 2010 through March 6, 2011. The open water creel survey ran from May 1 through October 31, 2010 and the ice fishing creel survey ran from December 1, 2010 through March 6, 2011.

Weather

Ice-out on Upper Buckatabon Lake was around March 30, 2010. Fishable-ice formed on Upper Buckatabon Lake in early December.

Sportfishing Regulations

The following seasons, daily bag limits, and length limits were in place on Upper Buckatabon Lake during the 2010-fishing season:

Largemouth Bass&	5/01-6/18	Catch&Release	
Smallmouth Bass	6/19-3/06	5	14"
Musky	5/29-11/30	1	34"
Northern Pike	5/01-3/06	5	none
Walleye	5/01-3/06	3*	15"
Panfish	year round	25	none
Rock Bass	year round	none	none

* The statewide bag limit was 5 walleye, but due to tribal declarations it was reduced on Upper Buckatabon Lake.

SPECIES CATCH AND HARVEST INFORMATION

Angling effort, catch, and harvest information is summarized for each species in Table 2 and Figures 1-10. Information presented about species whose fishing season extends beyond March 6 should be considered minimum estimates. Each species page has up to five graphs depicting the following:

1. PROJECTED FISHING EFFORT
Total calculated number of hours during each month that anglers spent fishing for a species.

2. PROJECTED SPECIFIC CATCH AND HARVEST RATES
Calculated number of hours it takes

an angler to catch or harvest a fish of the indicated species. Only information from anglers who were specifically targeting that species is reported.

3. **PROJECTED CATCH AND HARVEST**
Calculated number of fish of the indicated species caught or harvested by all anglers, regardless of targeted species.

4. **LENGTH DISTRIBUTION OF HARVESTED FISH**
All fish of a species that were measured by the clerk during the entire creel survey season.

5. **LARGEST AND AVERAGE LENGTH OF HARVESTED FISH**
Monthly largest and average length of harvested fish of a species. Only those fish measured by the creel survey clerk are reported.

CREEL SURVEY RESULTS AND DISCUSSION

Survey Logistics

The creel survey went well. We encountered no unusual problems conducting the survey or calculating the projections contained in the report. This was the first time the Department conducted a creel survey on Upper Buckatabon Lake.

General Angler Information

Anglers spent 21,897 hours or 44.3 hours per acre fishing Upper Buckatabon Lake during the 2010 season (Table 1). That was more than the Vilas County average of 34.5 hours per acre. July was the most heavily fished month (11.1 hours per acre). Fishing effort was lightest in February (0.5 hours per acre).

RESULTS BY SPECIES

Walleye (Table 2, Figure 1)

Anglers spent 1,719 hours targeting walleyes during the 2010 season. The greatest fishing effort for walleyes was in May (344 hours). September had no walleye effort.

Total catch of walleyes was 115 fish with a harvest of 103 fish. Highest catch (68 fish) and harvest (68 fish) occurred in December. Anglers fished 17.4 hours to catch and 17.7 hours to harvest a walleye during 2010.

The mean length of harvested of walleyes was 21.2 inches and the largest walleye measured was a 29.5-inch fish.

Northern Pike (Table 2, Figure 2)

Fishing effort directed at northern pike was 2,295 hours during the 2010 season. Northern pike fishing effort was greatest in July (1,000 hours).

Total catch of northern pike was 1,829 fish with a harvest of 103 fish.

The mean length of harvested northern pike was 23.1 inches and the largest northern pike measured was a 29.7-inch fish.

Muskellunge (Table 2, Figure 3)

Anglers spent 7,850 hours targeting muskellunge during the 2010 season. Muskellunge fishing effort was greatest in August (2,139 hours).

Total catch of muskellunge was 102 fish. Highest catch (50 fish) occurred in July. Anglers fished 117.6 hours to catch a muskellunge during 2010.

Smallmouth Bass (Table 2, Figure 4)

Fishing effort targeted at smallmouth bass

was 2,306 hours during the 2010 season. Smallmouth bass fishing effort was greatest in June (908 hours).

Total catch of smallmouth bass was 747 fish. Highest catch (237 fish) occurred in July. Anglers fished 4.2 hours to catch a smallmouth bass during 2010.

Largemouth Bass (Table 2, Figure 5) Fishing effort directed at largemouth bass was 6,110 hours during the 2010 season. Largemouth bass fishing effort was greatest in July (1,830 hours).

Total catch of largemouth bass was 10,281 fish with a harvest of 53 fish. Highest catch (3,299 fish) occurred in June. Anglers fished 1.1 hours to catch a largemouth bass during 2010.

Panfish (Table 2, Figures 6-10)

Black crappies were the most sought after species during the survey. Fishing effort directed at black crappies was 8,131 hours.

Anglers caught 10,858 black crappies and harvested 5,098 fish. The mean length of black crappie harvested was 9.2 inches.

Bluegills were the second most sought after panfish species during the survey. Fishing effort directed at bluegills was 5,669 hours.

Total catch of bluegills was 18,857 fish with 5,664 harvested. The mean length of bluegills harvested was 6.7 inches.

Yellow perch were the third most sought after panfish species during the survey. Fishing effort directed at yellow perch was 3,621 hours.

Total catch of yellow perch was 1,712 fish with 784 harvested. The mean length of yellow perch harvested was 8.0 inches.

Pumpkinseeds and rock bass were also caught during the 2010 season.

ACKNOWLEDGMENTS

Completion of this survey was possible because of the efforts of the technical staff of the fisheries management and Treaty Fisheries Unit. Treaty staff responsible for ensuring completion of this survey included Jeff Blonski, Steve Kramer, Joelle Underwood, Marty Kiepke, Jason Halverson, and Tim Tobias. Lynn Robinson and Doug Day were the creel clerks on Upper Buckatabon Lake during the survey period.

We also thank Dave Coon, Cathy Wendt and Dan Plamann of the Wisconsin Valley Improvement Company who worked in conjunction with the creel survey performing in-water sampling of the fish community.

We also thank all the anglers who took the time to offer information about their fishing trip to the survey clerk. Without their cooperation the survey would not have been possible.

The department thanks the cooperators, Karl J. Boehm of Buckatabon Lodge and Debra Kretsch & Robert Chrystler of Deer Path Resort who generously allowed the department to keep a boat and snowmobile respectively on their property during this survey.

This creel report was reviewed by, Steve Gilbert and Dennis Scholl of the Wisconsin Department of Natural Resources, Woodruff, Wisconsin.

Additional copies of this report and those covering other local lakes can be obtained from the Woodruff DNR or online at:

http://dnr.wi.gov/fish/ceded/reports.html

Table 1. Sportfishing effort summary, Upper Buckatabon Lake, 2010-11season.

Month	Total Angler Hours	Total Angler Hours/Acre	Vilas County Average Hours/Acre	Statewide Average Hours/Acre
May	2403	4.9	5.3	5.8
June	4479	9.1	6.8	6.1
July	5496	11.1	7.4	6.4
August	5092	10.3	6.4	5.4
September	2239	4.5	4.1	3.8
October	1169	2.4	2.0	1.6
December	306	0.6	0.5	1.7
January	287	0.6	0.8	1.5
February	232	0.5	1.0	1.3
March	196	0.4	0.2	**
*Summer Total	20877	42.3	32.1	29.1
*Winter Total	1020	2.1	2.4	4.5
Grand Total	21897	44.3	34.5	33.6

*"Summer" is May-October; "Winter" is December-March
**Too few lakes have been surveyed in March to give a meaningful statewide average.

Total Angler Hours is the estimated total number of hours that anglers spent fishing on Upper Buckatabon Lake during each month surveyed.

Total Angler Hours/Acre is the total angler hours divided by the area of the lake in acres. This is useful if you wish to compare effort on Upper Buckatabon Lake to other lakes.

County Average Hours/Acre is the average angler effort in hours per acre for county lakes that have been surveyed since 1990. This value can be useful in comparisons as well.

Statewide Average Hours/Acre is the average angler effort in hours per acre for inland lakes in the state surveyed between 1990 and 1995. This value can be used to compare Upper Buckatabon Lake to other lakes statewide.

Table 2. Creel survey synopses, Upper Buckatabon Lake, 2010-11 fishing seasons.

CREEL YEAR: 2010-11

SPECIES	DIRECTED EFFORT (Hours)	PERCENT OF TOTAL	TOTAL CATCH	SPECIFIC CATCH RATE (Hrs/Fish) *	TOTAL HARVEST	SPECIFIC HARVEST RATE (Hrs/Fish) **	MEAN LENGTH OF HARVESTED FISH
Walleye	1719	4.49%	115	17.4	103	17.7	21.2
Northern Pike	2295	5.99%	1829	4.1	103	117.6	23.1
Muskellunge	7850	20.50%	102	117.6	0		
Smallmouth Bass	2306	6.02%	747	4.2	0		
Largemouth Bass	6110	15.96%	10281	1.1	53	227.3	14.7
Yellow Perch	3621	9.46%	1712	2.4	784	4.9	8.0
Bluegill	5669	14.81%	18857	0.3	5664	1.0	6.7
Pumpkinseed	331	0.86%	328	1.9	103	9.7	6.6
Rock Bass	257	0.67%	3059	1.5	187	4.3	7.3
Black Crappie	8131	21.24%	10858	0.8	5098	1.6	9.2

* A blank cell in this column indicates that no fish of a given species were caught by anglers who specifically targeted that species.

** A blank cell in this column indicates that no fish of a given species were harvested by anglers who specifically targeted that species.

WALLEYE

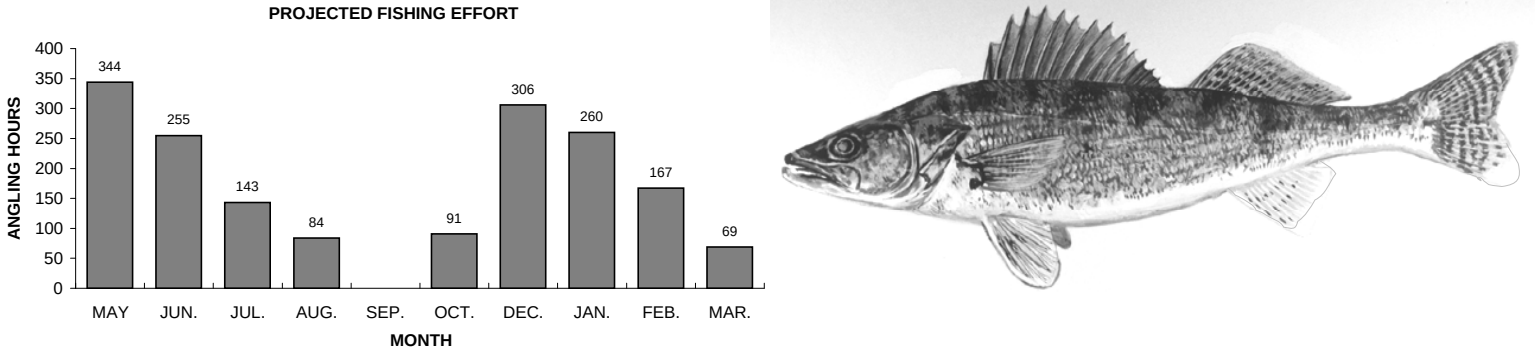
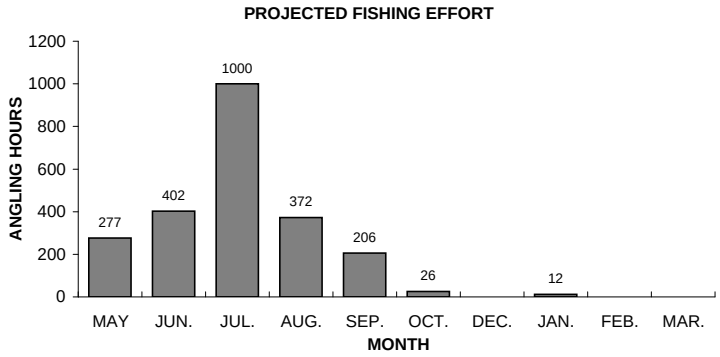
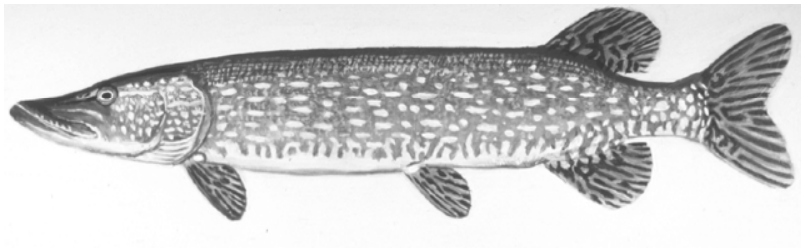
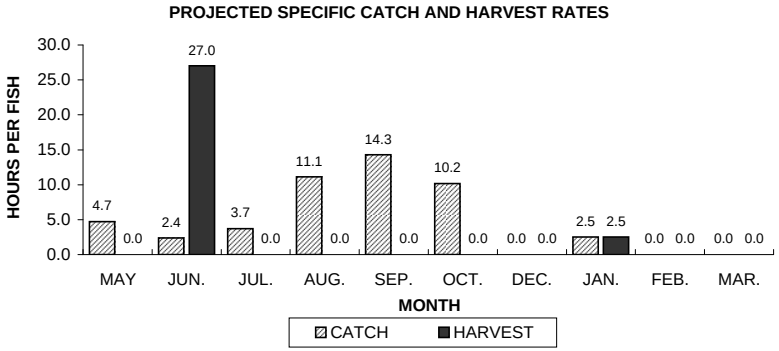


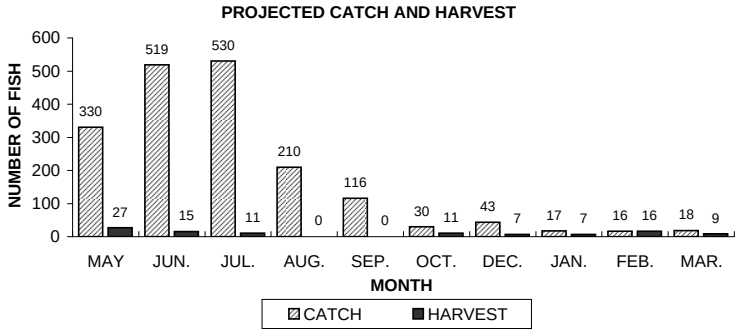
Figure 1. Walleye sportfishing effort, catch, harvest, and length distribution, Upper Buckatabon Lake, during 2010-11.

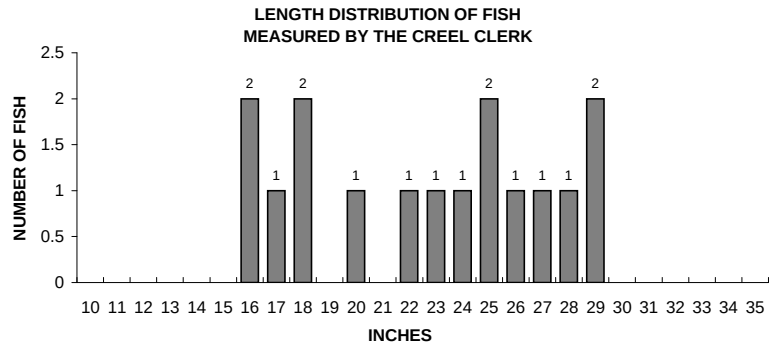


NORTHERN PIKE









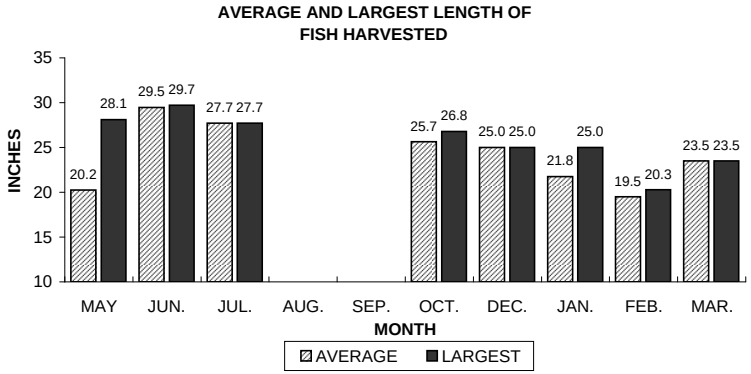
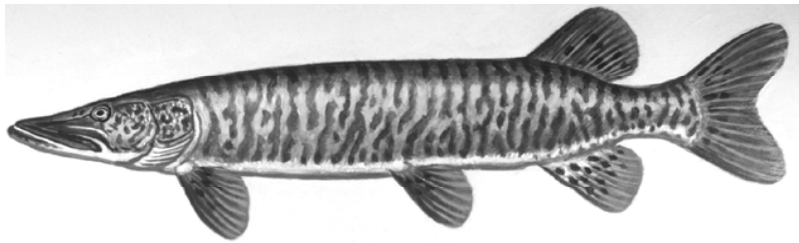
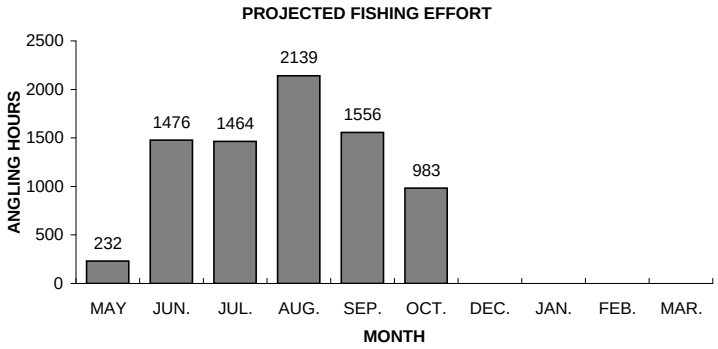
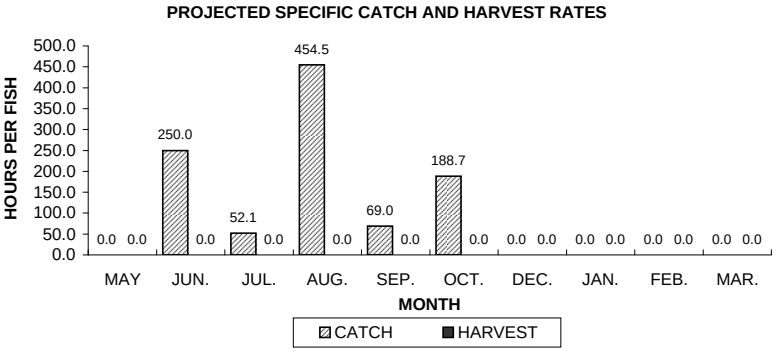


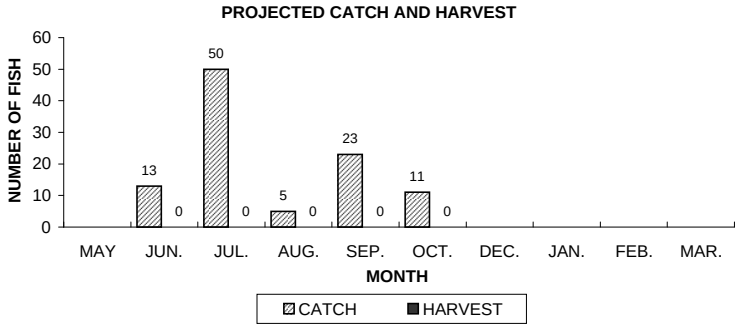
Figure 2. Northern pike sportfishing effort, catch, harvest, and length distribution, Upper Buckatabon Lake, during 2010-11.

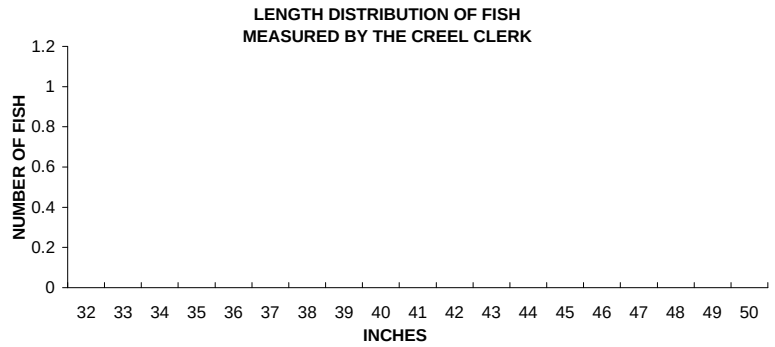
MUSKELLUNGE











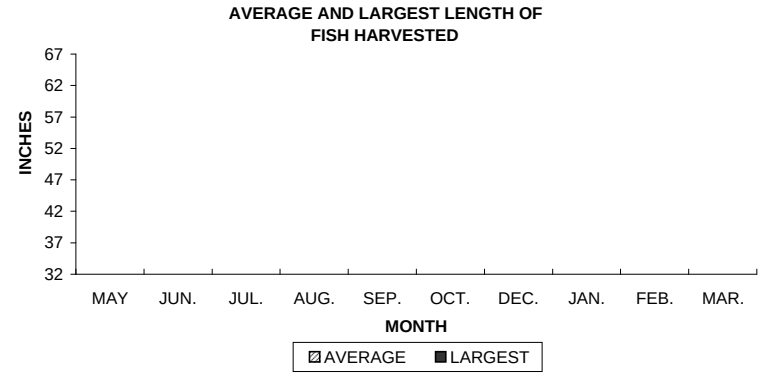
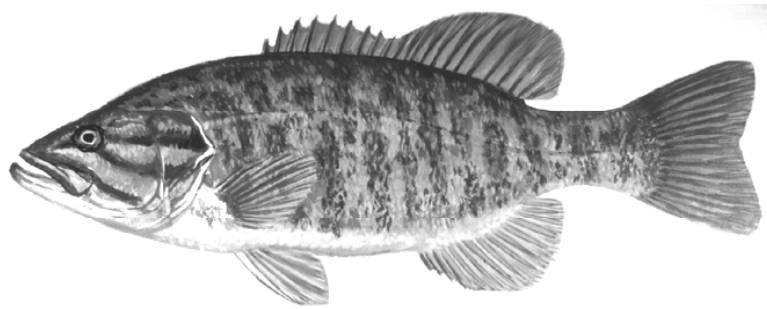
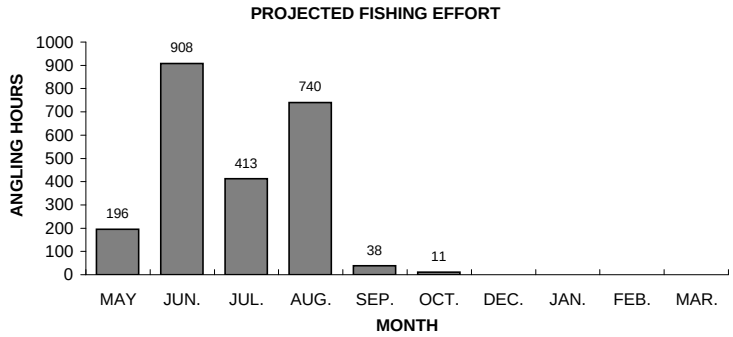
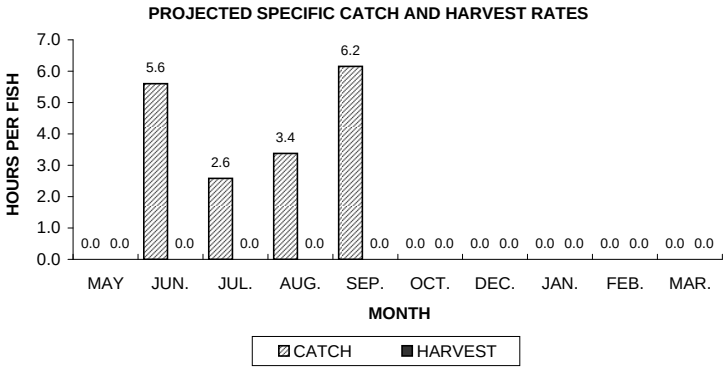


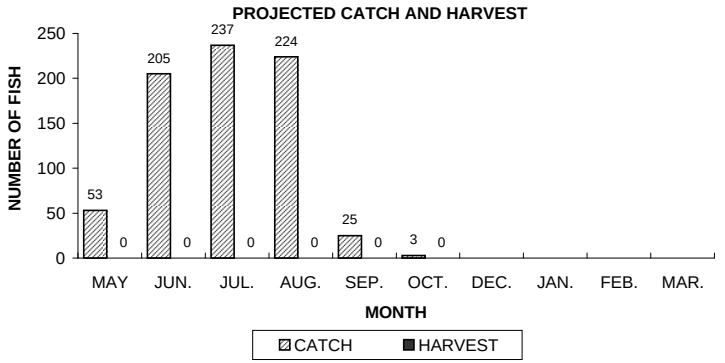
Figure 3. Muskellunge sportfishing effort, catch, harvest, and length distribution, Upper Buckatabon Lake, during 2010-11.

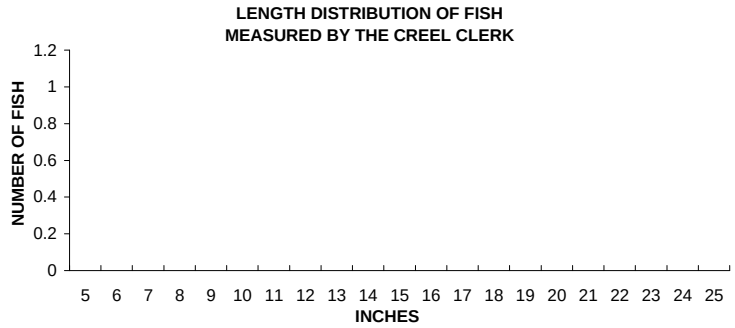
SMALLMOUTH BASS











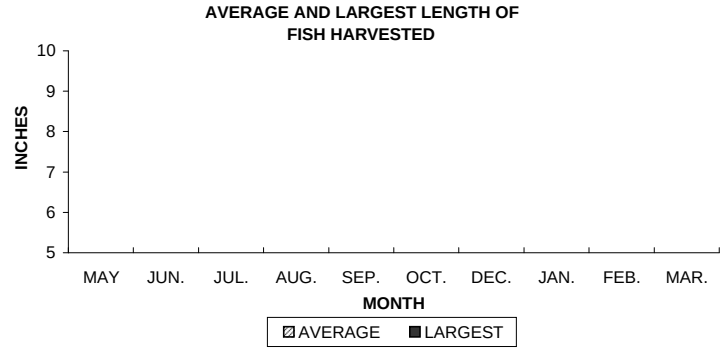
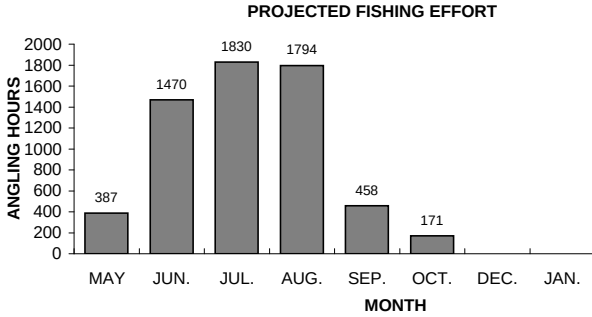
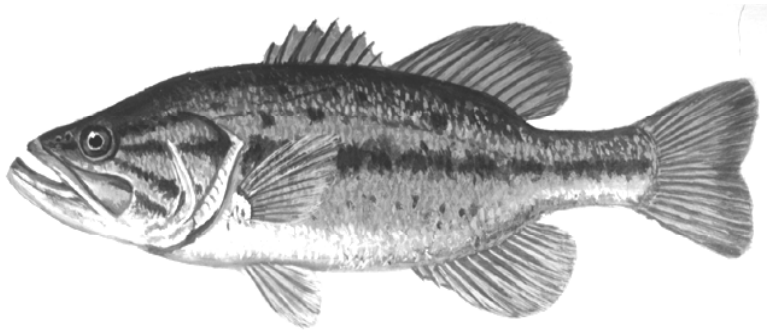
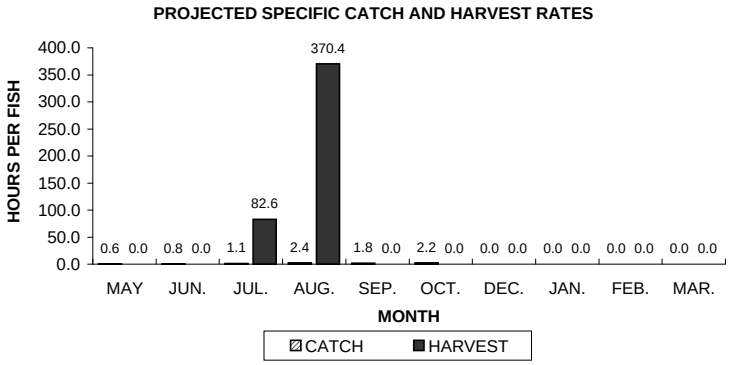


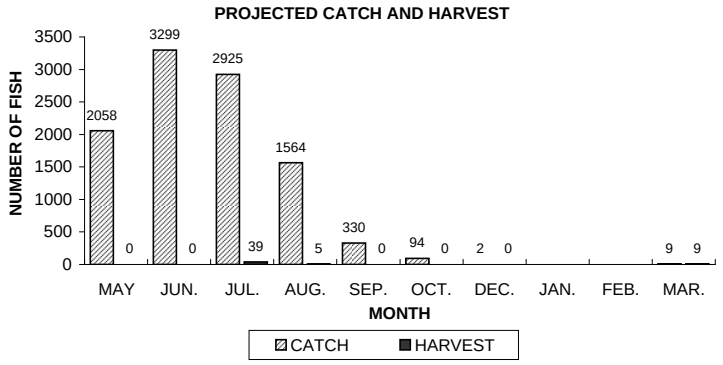
Figure 4. Smallmouth bass sportfishing effort, catch, harvest, and length distribution, Upper Buckatabon Lake, during 2010-11.

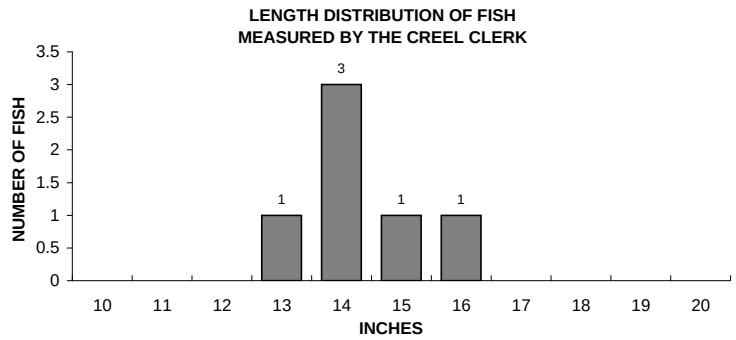
LARGEMOUTH BASS











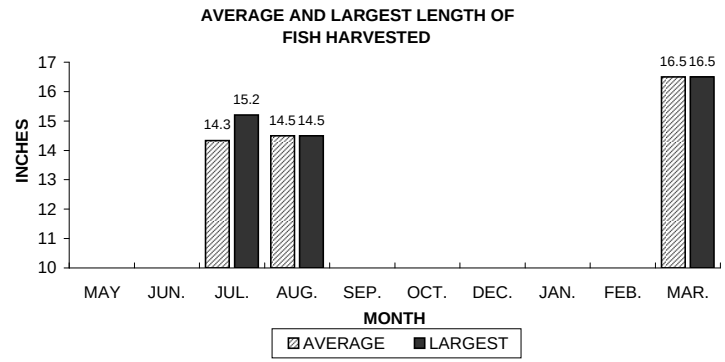
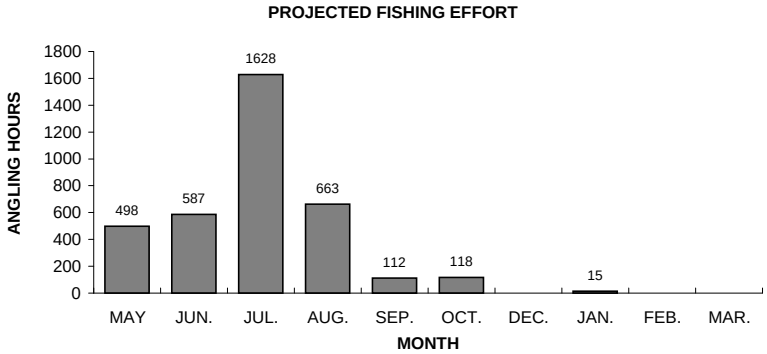
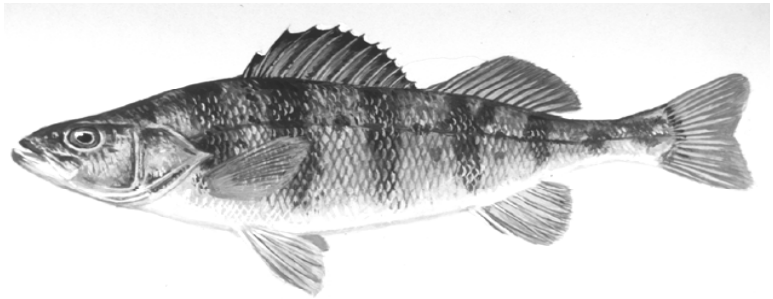
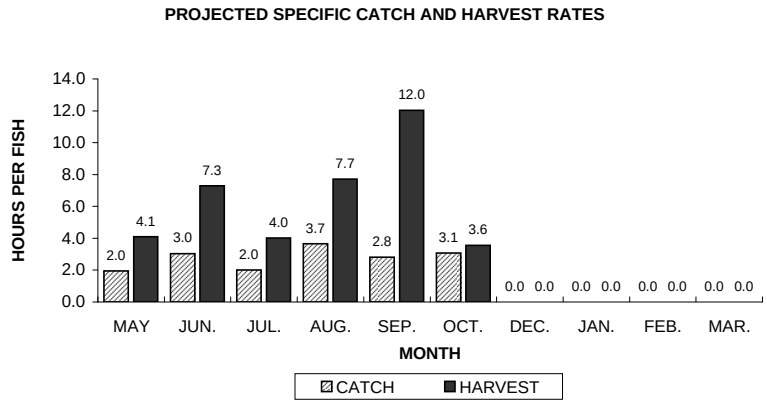


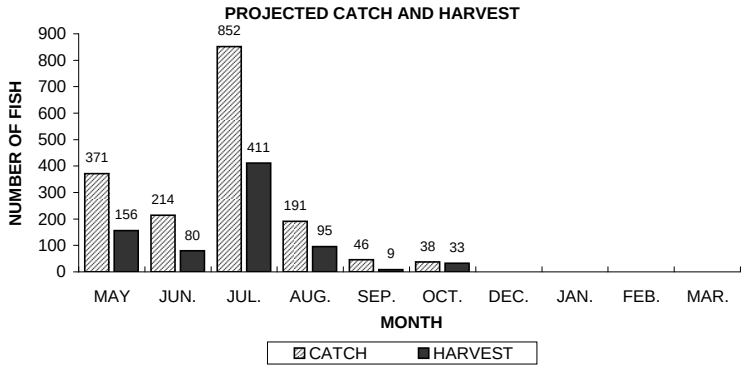
Figure 5. Largemouth bass sportfishing effort, catch, harvest, and length distribution, Upper Buckatabon Lake, during 2010-11.

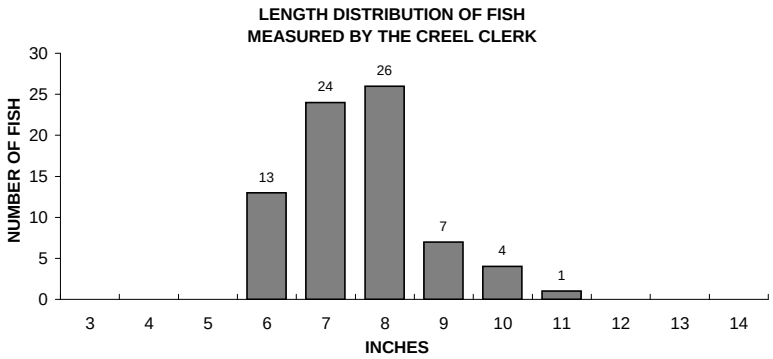
YELLOW PERCH











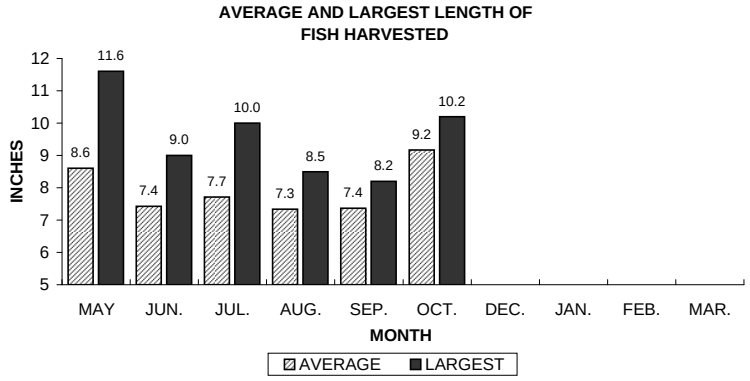
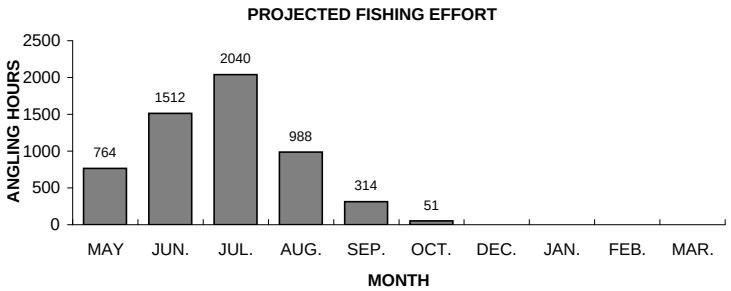
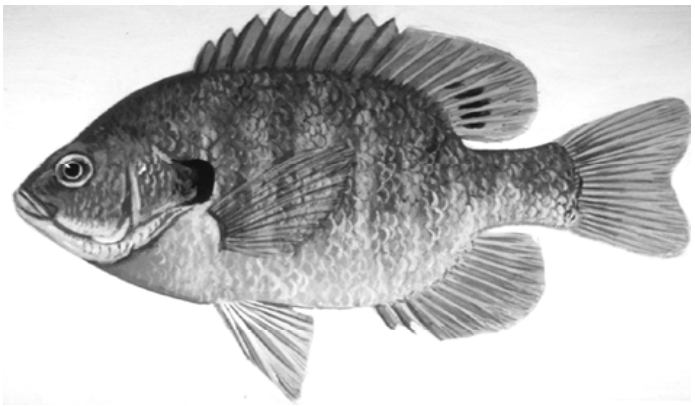
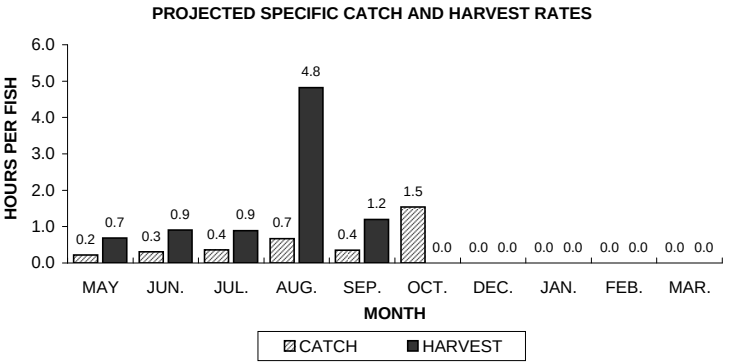


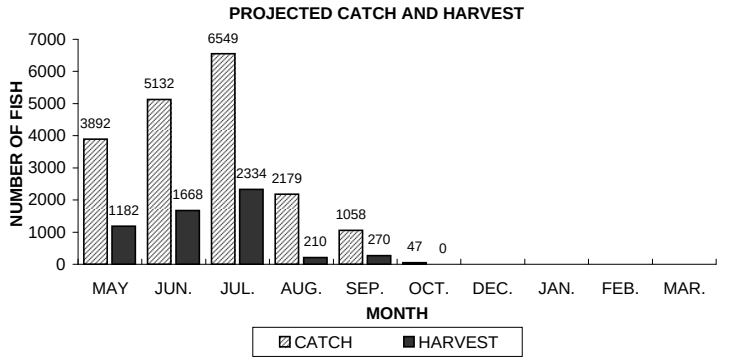
Figure 6. Yellow perch sportfishing effort, catch, harvest, and length distribution, Upper Buckatabon Lake, during 2010-11.

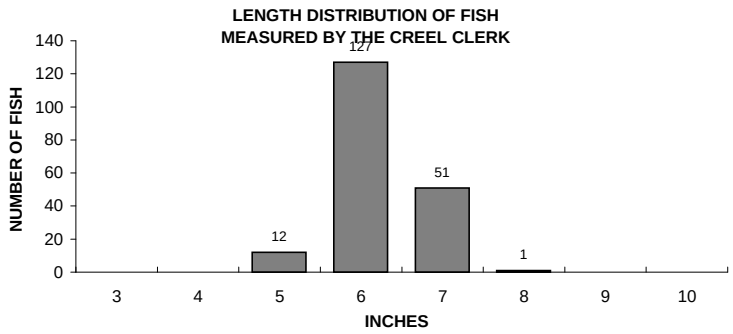
BLUEGILL











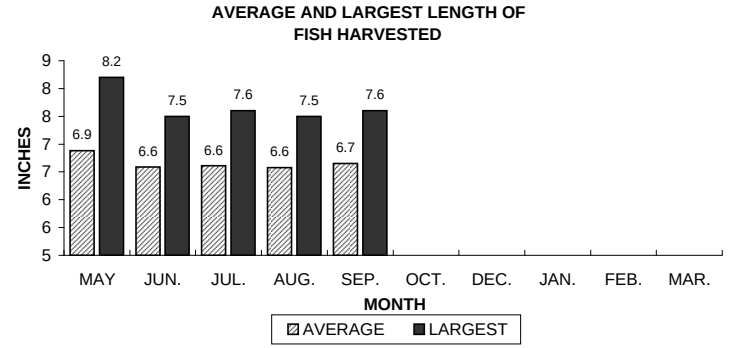
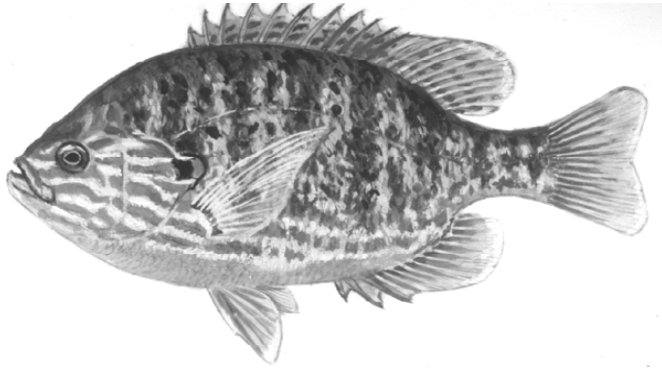
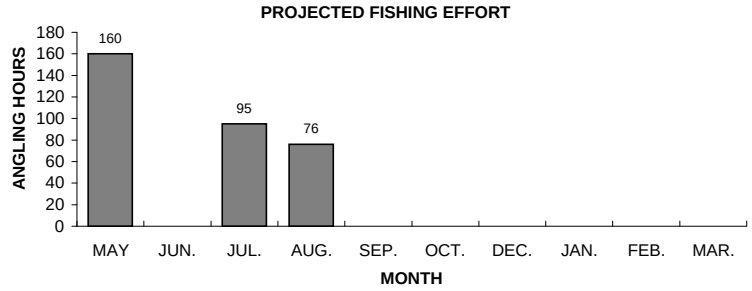
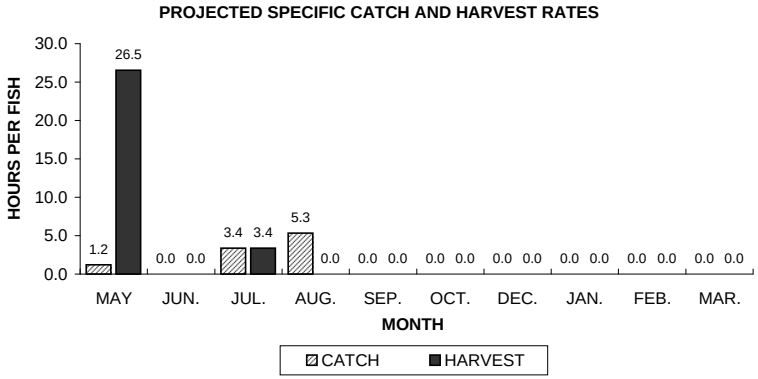


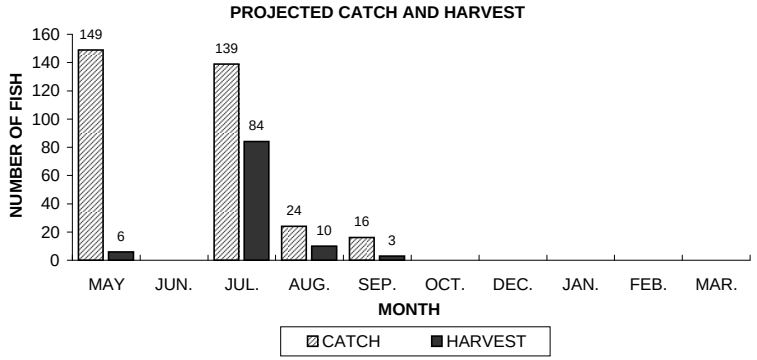
Figure 7. Bluegill sportfishing effort, catch, harvest, and length distribution, Upper Buckatabon Lake, during 2010-11.

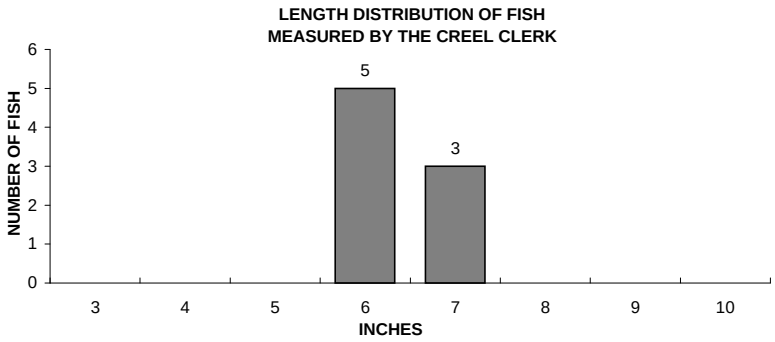
PUMPKINSEED











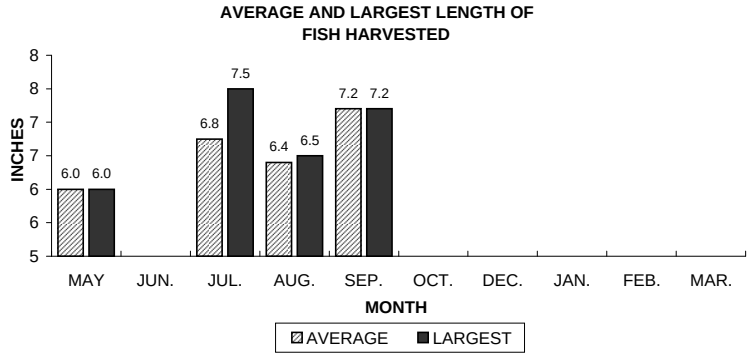
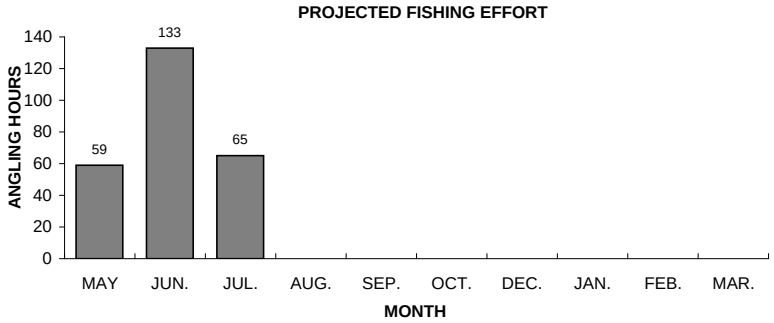
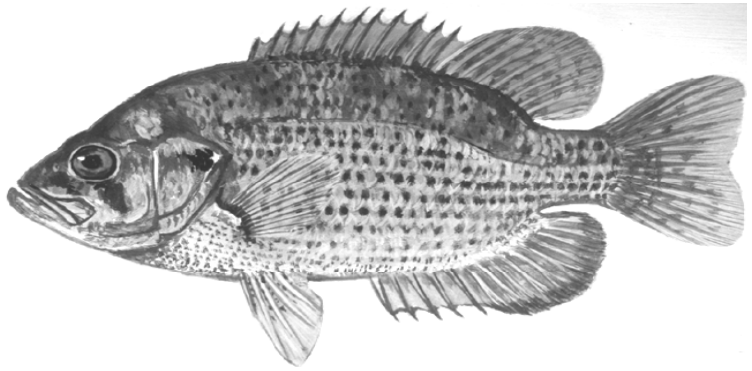
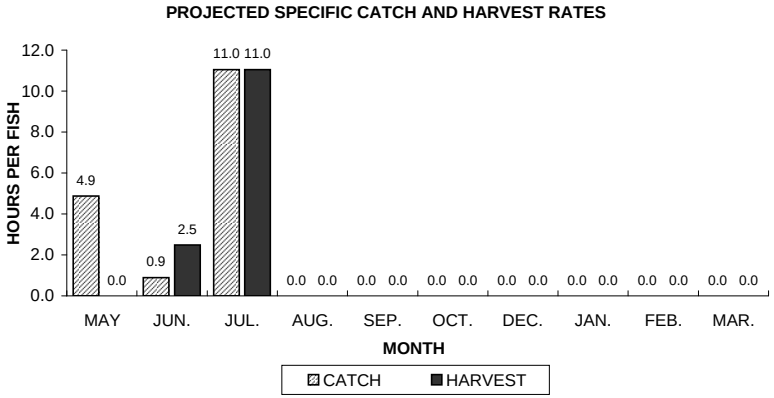


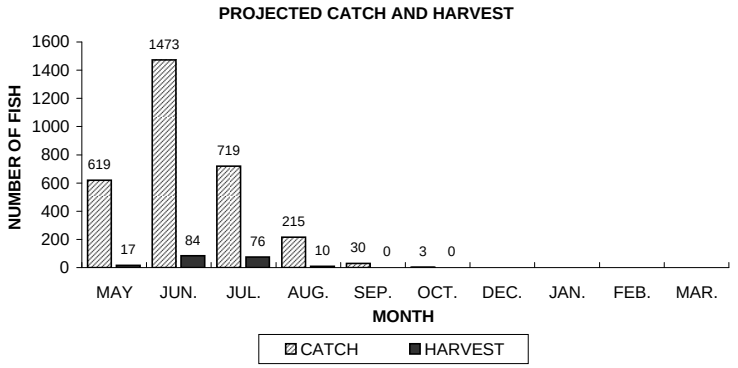
Figure 8. Pumpkinseed sportfishing effort, catch, harvest, and length distribution, Upper Buckatabon Lake, during 2010-11.

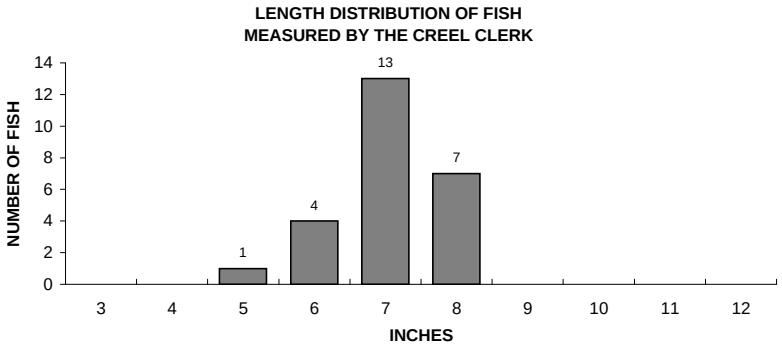
ROCK BASS











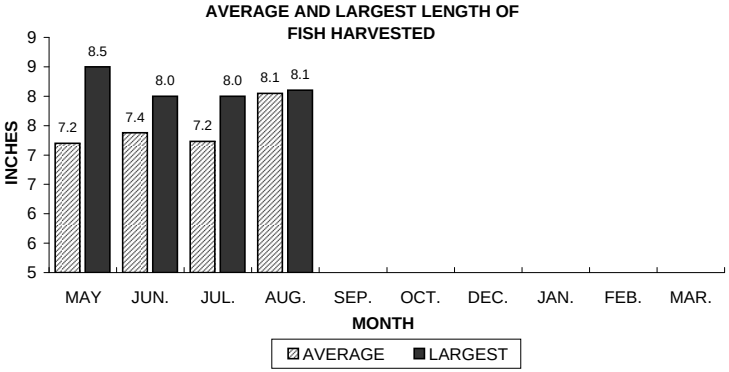
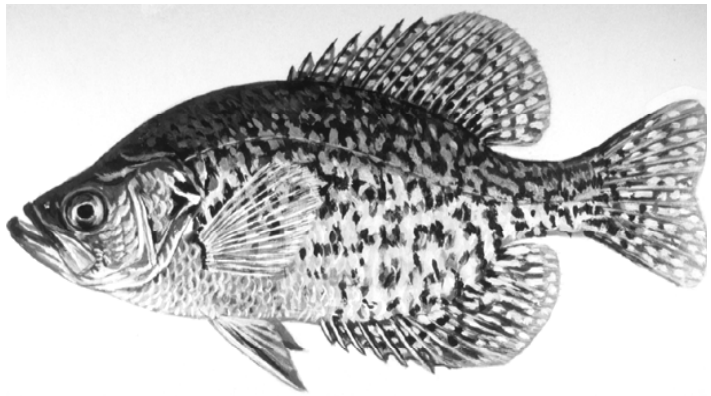
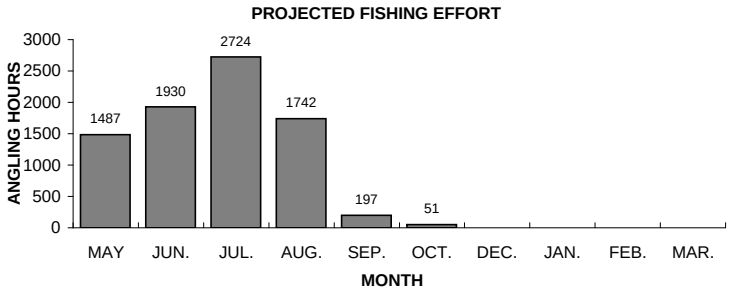
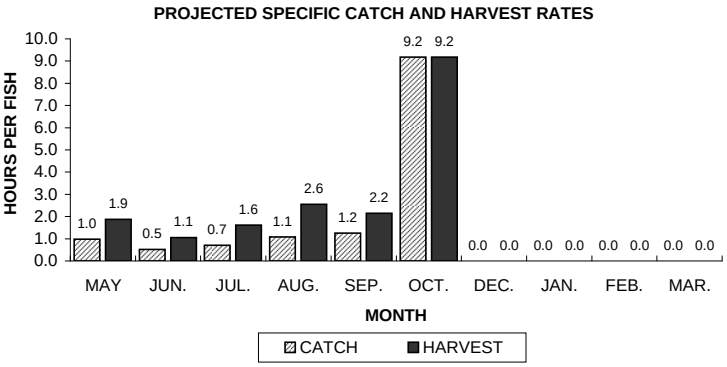


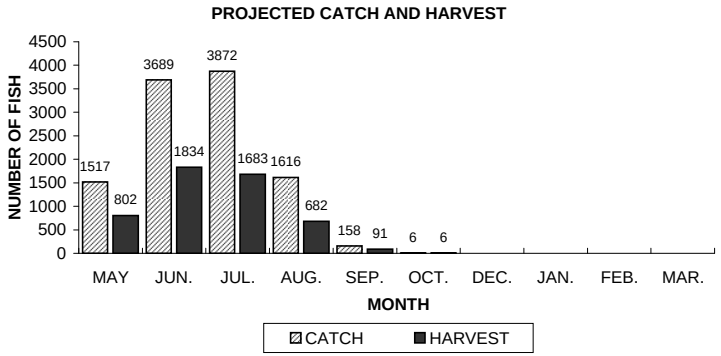
Figure 9. Rock bass sportfishing effort, catch, harvest, and length distribution, Upper Buckatabon Lake, during 2010-11.

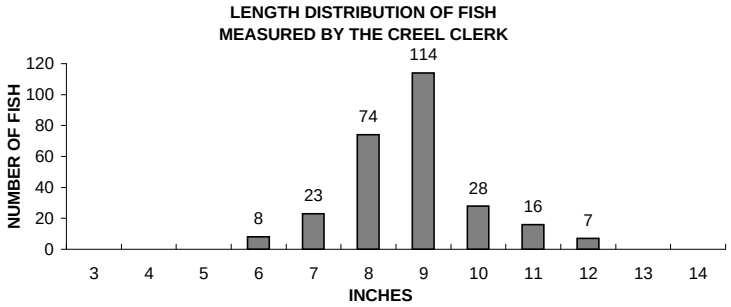
BLACK CRAPPIE











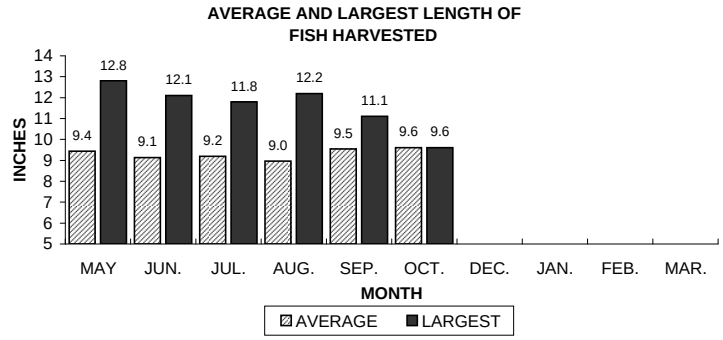


Figure 10. Black crappie sportfishing effort, catch, harvest, and length distribution, Upper Buckatabon Lake, during 2010-11.