MARITIME HERITAGE MINNESOTA

Ann Merriman
Christopher Olson

CLEAN WATER LAND & LEGACY AMENDMENT

Minnesota Suburban Lakes Projects Series

Lake Minnewashta Sonar Survey Project Report

Acknowledgments

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"...grants have allowed a small St. Paul-based nonprofit, Maritime Heritage Minnesota (MHM), to re-establish the discipline of underwater archaeology in Minnesota. Without this support, MHM could not have conducted its groundbreaking nautical archeological and maritime historical research."

~Steve Elliott, Former Minnesota Historical Society CEO and Director, January 2015

Introduction

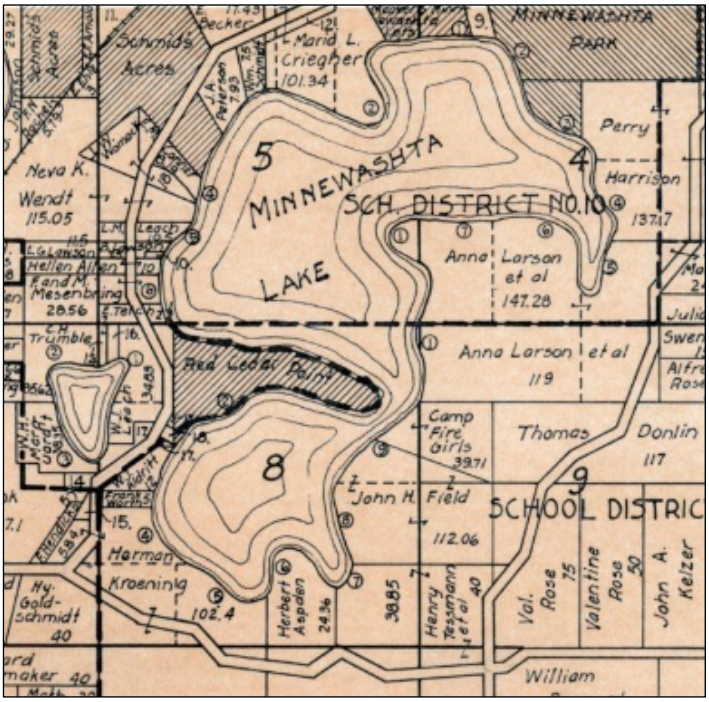
Wrecks and the artifacts associated with them tell a story. Removing or otherwise disturbing artifacts, treating them as commodities that can be sold, obliterates that story. Nautical archaeological and maritime sites are finite, and are significant submerged cultural resources. Nautical, maritime, underwater, maritime terrestrial – Maritime Heritage Minnesota's (MHM) deals with all of these types of sites throughout the State of Minnesota. MHM's Mission is to document, conserve, preserve, and when necessary, excavate these finite cultural resources where the welfare of the artifact is paramount. MHM is concerned with protecting our underwater and maritime sites – our shared Maritime History – for their own benefit in order for all Minnesotans to gain the knowledge that can be obtained through their study. MHM's study of wrecks does not include the removal of artifacts or damaging the sites in any way. MHM does not raise wrecks or 'hunt' for 'treasure'. Submerged archaeological sites in Minnesota are subject to the same State statues as terrestrial sites: the Minnesota Field Archaeology Act (1963), Minnesota Historic Sites Act (1965), the Minnesota Historic District Act (1971), and the Minnesota Private Cemeteries Act (1976) if human remains are associated with a submerged site. Further, the case of *State v. Bollenbach* (1954) and the Federal Abandoned Shipwrecks Act of 1987 provide additional jurisdictional considerations when determining State oversight and "ownership" of resources defined by law as archaeological sites (Marken, Ollendorf, Nunnally, and Anfinson 1997, 3-4). Therefore, just like terrestrial archaeologists working for the State or with contract firms, underwater archaeologists are required to have the necessary education, appropriate credentials, and hold valid licenses from the Office of the State Archaeologist (OSA).

Research Design

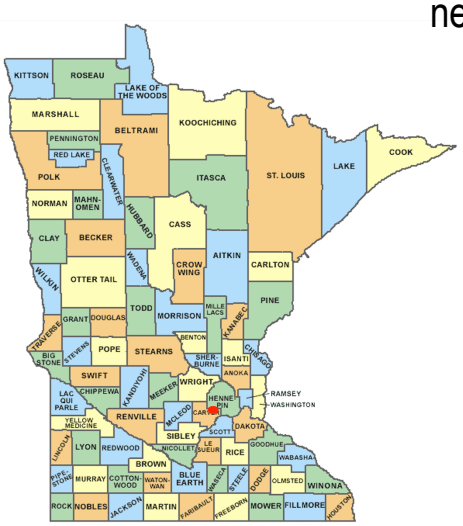
The Lake Minnewashta Sonar Survey (LMwashtaSS) in Carver County is part of the MHM series of Minnesota Suburban Lakes Survey Projects (MSLS). The LMwashtaSS is a pre–disturbance Phase 1 underwater archaeological side and down imaging sonar survey; Crystal Lake in Dakota County and Lotus Lake in Carver County were also surveyed. Additionally, MHM conducted dive reconnaissance in Forest Lake in Washington County that was surveyed in Spring 2020. This project is a primary step toward the identification and documentation of submerged cultural resources in Minnesota. The purpose of the MSLS Project is to increase the collective maritime archaeological and historical knowledge of Minnesotans through the remote-sensing documentation of suburban lakes. The specific goal of sonar survey is the recording of anomalies on the lake bottoms and identifying their possible natures. The side and down-imaging sonar unit creates high-resolution digital images; the sonar data accumulated during the fieldwork will be reviewed and analyzed with the intention of

identifying anomalies that may be human-made sites such as wrecks (dugout canoes, steamers, sailboats, rowboats, canoes, barges, motorboats), maritime infrastructure (pier/dock remains, water intakes), other maritime-related artifacts (steam boilers, fish houses), vehicles (cars, trucks, snowmobiles), and other objects. In the future, the positive identification – and significance – of the anomalies will be confirmed for Lake Minnewashta, Lotus Lake, and Crystal Lake through underwater archaeological reconnaissance fieldwork using SCUBA, digital video, measured drawings, and maritime historical research. Regarding Forest Lake, of the 49 anomalies identified after reviewal of the sonar data, MHM investigated 8 targets for this project using SCUBA. The lakes evaluated and assessed during this MSLS Project were chosen for investigation because of their size, location, and the confirmed maritime activities occurring on and around them, determined by graphic and preliminary historical research.

A 1916 plat map of Lake Minnewashta (Hixson 1916).



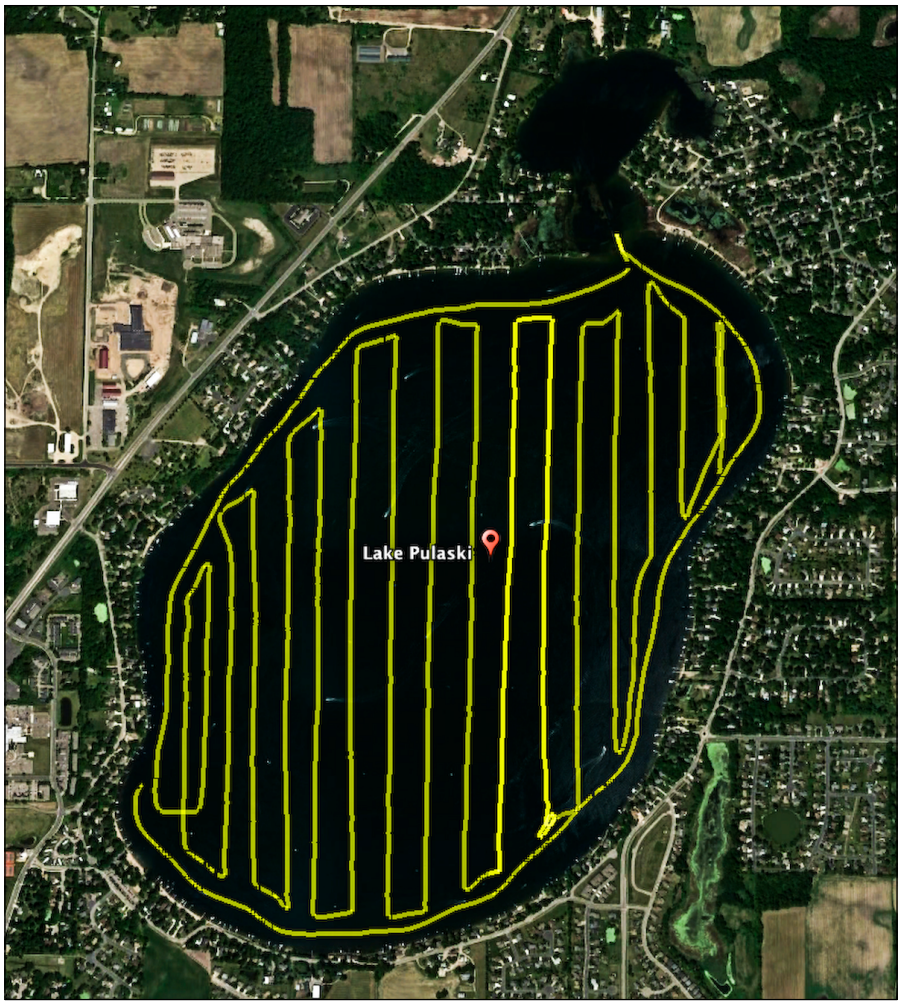
A 1926 plat map that also marks the lake's neighborhoods (Hudson Map Company 1926).



The red circle marks the location of Lake Minnewashta in Chanhassen in Carver County.

Methodology

MHM completed the remote sensing side and down-imaging sonar scanning survey of the 679.70-acre Lake Minnewashta in Chanhassen in Carver County on October 16-17, 2020. MHM has developed a strategy when sonar scanning lakes that produces the clearest images of the bottom and thorough coverage. Firstly, MHM's research boat *Anomaly 51*, with a sonar transducer attached to the hull that extended below the vessel's centerline, scanned the periphery of the lake with a 50-100 foot side-imaging beam on both port and starboard. This 100 or 200-foot area also covered the bottom below the boat with the transducer's down-imaging beam. After the completion of the peripheral scanning, transects running as close to either north-south or east-west as the wind allowed, depending on the shape of the lake. While it is not impossible to scan with the wind hitting the boat from port or starboard in the case of strong winds (and other boat's wakes), the sonar footage that recorded in rough waters can be distorted and of low quality. In the case of Lake Minnewashta, east-west transects were chosen for the main body of the lake because of wind direction, while short north-south transects were used in the small northern-most protected bay. During sonar data reviewal, MHM recognized 14 anomalies that might be wrecks, maritime sites, and other submerged cultural resources.



An example of north-south transects, also known as 'Mowing the Lawn'.

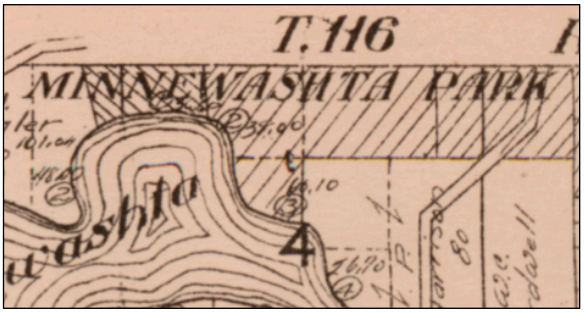
Archaeology and History

In archaeological terms, the area around Lake Minnewashta in Carver County west of Minneapolis was populated during the state's prehistory. Numerous prehistoric sites - most of them consisting of burial mounds of the Woodland Period - have been recorded at nearby Lake Minnetonka and other, smaller bodies of water in southern Hennepin County. To the west of Lake Minnewashta, 1 burial mound (21-CR-6) was reported to the Office of the State Archaeologist in 1952, along with the information that sherds and worked stone had been discovered by land owners (Arzigian and Stevenson 2003, 354; OSA 1952).

The first frame-built house on Lake Minnewashta in 1863 (MNHS 3852A).

Minnewashta/Minnewashta Park

A Post-Contact site on the north shore of the lake - the 'Ghost Town' site of Minnewashta (21-CR-I) was "a village mainly of summer homes". No physical remains of the town have been located, but it is noted on at least 2 contemporary maps where it was called 'Minnewashta Park'. Further, O.C. Meaker divided and platted his parcel on the north side of the lake in 1884 and "Meaker's Minnewashta Lake lots" were on the market in 1889; part of this land may have been Minnewashta/Minnewashta Park. Minnewashta Park was also referred to as 'the upper lake neighborhood of Minnewashta" since it was placed between both Lake Minnewashta and Lake Minnetonka - and "the ladies of the neighborhood of Minnewashta" were referred to as a group in social situations, and "the people of the Minnewashta neighborhood held a picnic". As far back as 1870, Lake Minnewashta joined Lake Minnetonka, Christmas Lake, and Clearwater Lake (Lake Waconia) as a destination for a day trip out of the Twin Cities. In newspaper social columns, sometimes referred to as "Lakelets", parties "of gentlemen from St. Louis went to



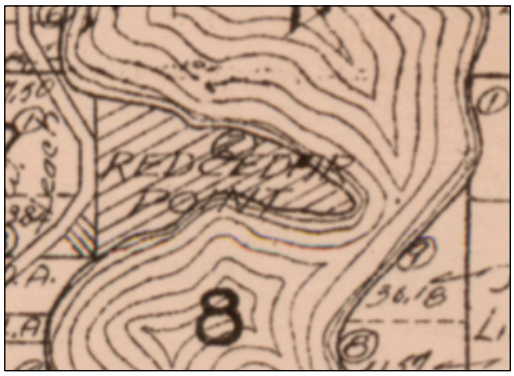
The Minnewashta Park 'Ghost Town' on the northeast corner of the lake (Hixson 1916).

Minnewashta and caught a very fine string which contained thirty splendid black bass" (Hixson 1916; *Minneapolis Daily Tribune* 1870; *Minneapolis Journal* 1904; *Minneapolis Tribune* 1881, 1889a, 1904a-b; OSA ND; *St. Paul Daily Globe* 1884; Upham 1920, 83).

However, in February 1887, the Minnesota Senate passed a bill "to prohibit the catching of fish in Lake Minnewashta, Carver county". Apparently the Senate bill did not pass the Minnesota House because efforts "to regulate the catching of fish in Lakes Virginia and Minnewashta" or "To protect and preserve the fish in Lakes Virginia and Minnewashta" were still being considered in 1889. Evidence of the existence of 'Minnewashta Park' is seen in registered land transactions; it seems the Lathams were liquidating their land holdings in 1887 and 1890, selling 9 lots for $7,930. Community activities were described in social columns. Particularly interesting was a baseball game hosted at Minnewashta, when the "Minnewashta club and a scrub nine from Excelsior crossed bats Sunday afternoon on the Minnewashta grounds in a five-inning game. the batteries were Mellie Harrison and Fred Shepherd for Excelsior and Leach and Merritt for Minnewashta. The Excelsior nine won by a score of 25 to 18". Another game was briefly mentioned in 1894. A notable land owner on the lake, beginning in April 1902, was former Minnesota Governor John Lind; Lind purchased 160 acres of farm land with existing sugar plants and planned to construct a seasonal country home. Efforts to alleviate a low pike population in Lake Minnewashta was undertaken using eggs collected from Otter Tail Lake in May 1902 as part of the re-stocking of lakes in the southern 3/4 of the state. Farm land around Lake Minnewashta was found to be well-suited for fruit production as part of "Lake Minnetonka fruit country", including raspberries, apples, cherries, plums, grapes, currants, blackberries, and strawberries. Additionally, in 1902, large tracts of farm fields, meadows, and timberland - often associated with the shoreline - were offered for sale around the lake. Many instances of people living on Lake Minnewashta being referred to as 'from Minnewashta' or 'of Minnewashta' can be fond in contemporary newspaper accounts, particularly in relation to sports and education - "of the Minnewashta school" and "young people from Minnewashta" (*Little Falls Transcript* 1889; *Minneapolis Journal* 1902a, 17 May; 1902b, 28 May; 1903, 26 June; *Minneapolis Morning Tribune* 1911; *Minneapolis Tribune* 1889b-c, 1894, 1903; *Mower County Transcript* 1902; *New Ulm Review* 1887, 1902; *St. Paul Sunday Globe* 1887, 1890a, 1890b; *Willmar Tribune* 1902).

Red Cedar Point

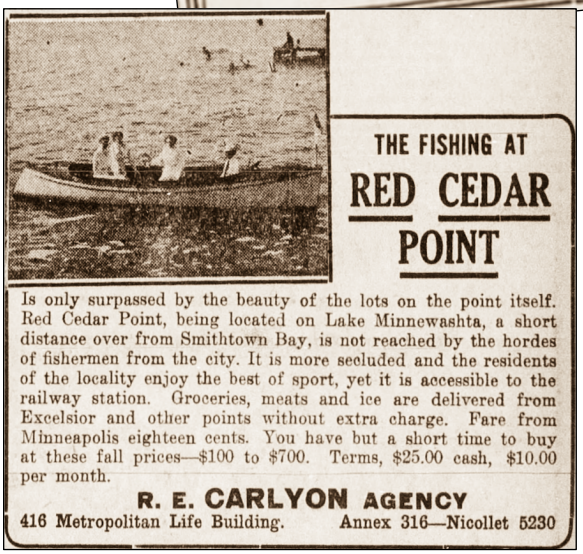
The neighborhood of Red Cedar Point was established on the west side of Lake Minnewashta on a prominent peninsula; its development began in 1913. The lake's sandy shoreline led to higher land where residential lots were platted, and the area was filled with red cedar, oak, and linden trees. Lakeshore lots were selling for $400 - $700, while 'interior' lots cost between $100 and $230. Selling points for choosing a Red Cedar Point residential lot were the conveniences offered to buyers due to the proximity of Lake Minnewashta to the busy and 'connected' Lake Minnetonka.



The location of the Red Cedar Point development on the peninsula (Hixson 1916).

Included in these amenities were the free delivery of ice, meat, groceries and supplies from Excelsior, nearby - cheap (18¢ one-way) rail service into the Twin Cities on the Minneapolis and St. Louis Railway, ad the private bathing beach. An even bigger selling point for the development was its secluded area on the west side of Lake Minnewashta that is "not reached by the hordes of fisherman from the city" - yet still close enough to Minneapolis for a daily commute (*Minneapolis Sunday Tribune* 1913a-c; *Minneapolis Morning Tribune* 1914a-b).

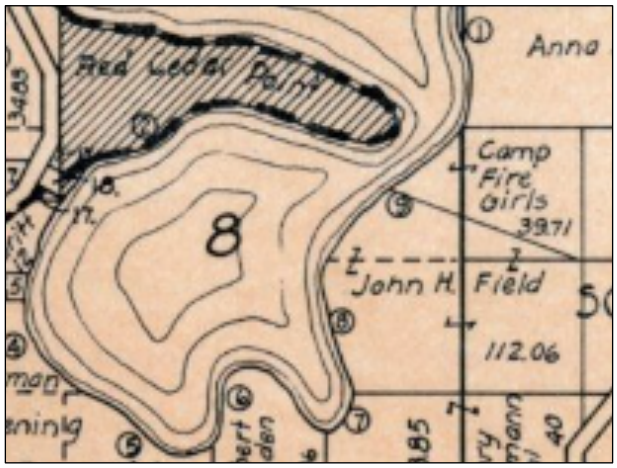
(*Minneapolis Sunday Tribune* 1913 a-c)



A picnic on Lake Minnewashta in 1916 (MNHS GV4.11r63).

Camp Tanadoona

Camp Tanadoona on Lake Minnewashta, opened in 1924, was the summer lodge for the local Camp Fire Girls troop. In the summer of 1926, the Rotary Club was purchased boats and canoes for the Camp and the lodge was undergoing remodeling. The camp served Minnesota girls from out-state towns such as Springfield and Crookston, and in 1926, the Camp Minneapolis Council. Also during the summer of 1926, the Camp Fire Girls held "a water carnival in which rowboats, canoes and floats were decorated...by the campers from Springfield to Crookston, the old Minneapolis campers and the counsellors". Later that summer, Tanadoona hosted the Okihi Camp Fire group during a weekend outing. The girls swam, studied nature, and went on a 'treasure hunt'. Interestingly, during the summer of 1927, the Camp Fire Girls were trained in solar reflecting oven bread-baking, and it was noted that a lifesaving boat had been acquired for the camp, only to be used in cases of emergency. These early years of the development of Camp Tanadoona set up the foundation for decades of kid's camps that still continue; Camp Fire Girls and Boys are still busy at Lake Minnewashta, 97 years after its founding (*Minneapolis Daily Star* 1926; *Minneapolis Sunday Tribune* 1926a-b, 1927).



The large tract of land acquired by the Camp Fire Girls on the southeastern side of the lake, across from the Red Cedar Point peninsula (Hudson Map Company 1926).

Camp Fire Girls on Last Outing of Season at Lodge on Lake Minnewashta

Camp Fire Girl scenes at Camp Tanadoona (*Minneapolis Sunday Tribune* 1926c).

Lake Minnewashta Sonar Survey Results

MHM has located and identified small watercraft wrecks on the bottom of smaller Minnesota suburban lakes including nearby Christmas Lake, Medicine Lake, Lake Johanna, Forest Lake, and Prior Lake. MHM has also identified and documented small wrecks in larger lakes including Lake Minnetonka, White Bear Lake, and Lake Waconia. In early August 1928, a major storm moved through the Lake Minnewashta area and caught 2 fishing boats on the water. Both boats were swamped and their 4 occupants were thrown into the lake; they did not survive. The boats did not sink, however, and were found floating capsized the calm morning after the storm. Over the following 2 weeks, the bodies of the 1 woman and 3 men who drowned during the storm were recovered, the last floating up to Red Cedar Point 13 days after the accident. Two small children were orphaned due to this event (*Minneapolis Morning Tribune* 1928; *Minneapolis Star* 1928a-b; *Minneapolis Sunday Tribune* 1928; *St. Cloud Daily Times* 1928). The 2 boats associated with this accident were likely retrieved from the lake, but others have made it to the lake bottom.

2 BOATS CAPSIZE
IN MINNEWASHTA

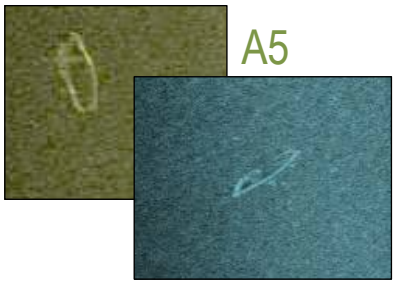
FOUR LIVES ARE
LOST IN STORMS

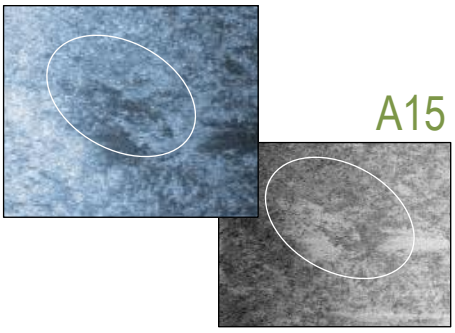
Two Empty Row Boats Tell
Mute Story of Tragedy
Near Excelsior.

The boating accident was reported in different newspapers for a few weeks (*Minneapolis Star* 1928a; *St. Cloud Daily Times* 1928).

MHM has identified 14 anomalies in the sonar footage recorded during the remote sensing survey of Lake Minnewashta. MHM has determined that the acoustical signatures of 2 anomalies indicate they are wrecks (A1, A5), another 2 targets are probable wrecks (A3, A13), 1 may be a dock (A2), 1 target is rectangular (A14), 7 objects stand into the water column (A6, A7, A8, A9, A10, A11, A12), and 1 other anomaly (A4). The investigation of these 14 anomalies using SCUBA will take place in the near future, prioritized by color so that the chosen targets will answer the most archaeological questions pertaining to their nature, age, condition, and historical significance: High **(1)**, Medium **(2)**, Low **(3)**.

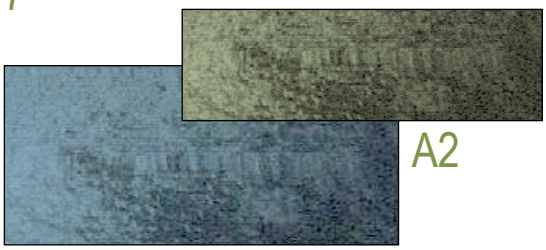

A1


A5

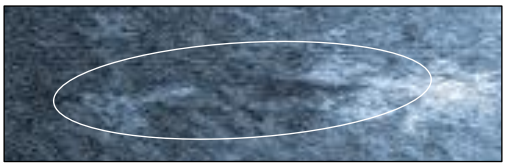

A15


A19


A17

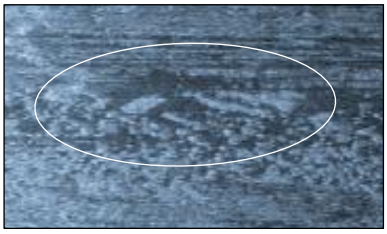

A2

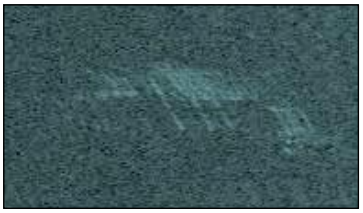

A3


A13


A16

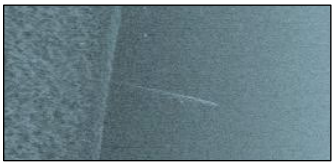

A7


A14


A4

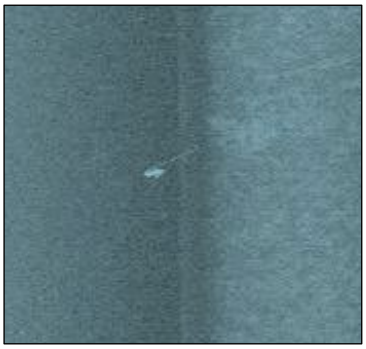

A18


A8


A6


A10


A9


A11


A12

Conclusion

During the Lake Minnewashta Sonar Survey, MHM recorded several interesting and promising anomalies using remote sensing side and down-imaging sonar. Of the 14 anomalies recognized in the data after review, A1, A5, A15, A19, A17, A3, A13, and A2, will produce the greatest amount of archaeological data that will assist in future research and diving planning. In particular, the 3 wrecks (A1, A5, A15) will greatly enhance our shared knowledge of Minnesota's Maritime History. The investigation of A1 will answer archaeological questions since it is a wreck, she is solidly-built, appears to be heavy, and could be construction of wood, metal, or fiberglass. The wreck appears to be an open hull, but that supposition is not definitive. Anomaly 5 is very lightly built, and her design suggests she may be a canoe. The lack of intensity in the sonar signature would point to wooden construction over metal or fiberglass; but again, this idea is not definitive. Anomaly 15 presents as a boat-shaped outline in the vegetation; again, not definitive, but the target strongly suggests it is a wreck. MHM will use SCUBA reconnaissance will be used to determine the materials used to construct the wrecks and to determine their functions on Lake Minnewashta, and determine the nature of A15.

Four anomalies - that may be wrecks - may also be trees or parts of trees. Anomaly 19 appears to have a pointed end and a square end, good indicators that it might be a wreck. Anomaly 17 appears to be partially buried, sharp-ended, and hollow. If it is a wreck, it may be constructed of fiberglass or metal as indicated by the brightness of its sonar signature. Anomaly 3 may be a long watercraft; its curved shape suggests the sheerline of a wreck. However, that type of curve is also evident in tree trunks and substantial tree branches.[1] Additionally, Anomaly 13 is a canoe-shaped target, but this type of signature may also be a lake bottom contour and at times, these anomalies are tree sections. Underwater reconnaissance will answer the questions about A19, A17, A3 and A13. Anomaly 2 appears to be a wooden dock, or sections of a dock, that may have loosened from the shoreline during a storm. Or, as MHM has seen in Lake Johanna, the dock may be an extension constructed to lie on the lake bottom during the drought of the 1930s; once the lake level rose, the dock was submerged. The signature of A16 appears to be ambiguous due to the proliferation of vegetation around it, but the sonar data suggests there is a wreck-shaped target located there. Contrastingly, the acoustical signature of Anomaly 4 is rather clear, but due to its odd shape, MHM cannot identify it at this time. It is large, however.

Anomaly 18 may be a human-made object, possibly a wreck, but the sonar signature also suggests it could be a log. Anomaly 14 is oddly-shaped and is located in a rock bed; it may be comprised primarily of rocks, but the 2 long features within the target make it worthy of investigation. The signatures of Anomalies 6 and 7 suggest they are mooring lines for watercraft, like Anomalies 8-12 appear to be - or sections of cable that are often laid down on the bottom of lakes, and often become buoyant. However, A6 and A7 may be more substantial than a single mooring lines or cables. MHM has identified several wrecks and vehicles that are imbedded into the lake bottom or weighed down by their heaviest end, and stand up into the water column; A6 and A7

[1]MHM staff also recognize that the acoustical signature of Anomaly 3 resembles a dugout canoe.

may be something similar. Using SCUBA, video, photographs, measurements, and historical research in the near future will allow MHM to understand these anomalies by determining their nature, function, condition, and placement into the underwater archaeological and maritime historical record.

MHM has recognized 116 anomalies on the bottom of the 4 lakes documented during this MSLS Project: Lake Minnewashta, Crystal Lake, Lotus Lake, and Forest Lake. Particularly important is the identification of 16 wrecks through their distinctive sonar signatures, another 26 possible wrecks, 19 probable wrecks, 2 boat lifts, canopies, fish houses, vehicles, and other maritime sites. Further, the underwater archaeological reconnaissance of Forest Lake confirmed the identifies of 6 wrecks and 1 boat lift. The exact nature of the remaining wrecks and other sites will be determined during subsequent projects centered on their investigation by using SCUBA. These future studies will greatly enhance our shared maritime history through the recognition of submerged cultural resources and the stories behind their construction and disposition on the bottom of these particular 4 Minnesota lakes. The diversity of nautical, maritime, and underwater sites so far identified by MHM in Minnesota's lakes are tangible examples of the rich maritime history of the area. Through research, diving on wrecks and anomalies to collect pertinent data, and ensuring that the collected information is accessible by the public, MHM will continue to investigate Minnesota's submerged cultural resources into the future. The results of the MSLS Project summarized above is connected to all the work that will come after its completion. It is clear – through this Phase 1 remote sensing survey – that the types of sites that exist in the 4 smaller lakes documented during the project are diverse, archaeologically and historically significant, and worthy of great attention. Lastly, the significant data produced during this Lake Minnewashta project has and will be used for comparison purposes as MHM identifies wrecks and maritime resources on the bottom of other Minnesota lakes. To date, these bodies of water include Christmas Lake, Prior Lake, Lake Johanna, Medicine Lake, Lake Pulaski, White Bear Lake, Lake Waconia, and Lake Minnetonka.

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