

# JESSIE LAKE WATERSHED ASSOCIATION

# JESSIE JABBER



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## GREETINGS FROM PRESIDENT HAROLD GOETZMAN:

I am honored to be writing to you, as I will continue to serve another year as President of the Jessie Lake Watershed Association (JLWA). In addition, the other officers and directors have agreed to continue serving for another year and we have added Bill Nichols as a director. I must point out this has been a wonderful group of people to work with and they deserve much of the credit for the successful year we have just completed. Please don't hesitate to thank them for their efforts as they all enjoy a few warm fuzzies. Thanks also to everyone who helped out on the various projects. Please feel free to contact any Board member or me with your project suggestions and concerns about the watershed.

Looking back at the past three years of our existence we have been blessed with a great deal of outside support for such a short time. If we add up all the grant monies that have been provided there will have been over \$200,000 of project work completed in the watershed by the end of next year. As you know we have just completed the first year of work on the Minnesota Pollution Control Agencies (PCA) Clean Water Partnership grant. This has taken a great deal of effort and together with other project activities our members have contributed over 800 hours of volunteer time. Some people would call it work, but when you get involved in these activities you will find it to be enjoyable and usually educational. We have discussed ways to get more people involved and in particular serve on the Board. Hopefully, you will all keep in mind that it is your organization and continue to provide support in any way you can. Precious weekend time and health problems can make it difficult for some to participate and that is understood. However, I would like to remind everyone that stewardship is the key to maintaining our environment and we all need to do our part. If each of us looks after our small part, the total impact will be remarkable and we can be proud of how we leave these resources to future generations.

In the coming months there will be a survey sent out by the Itasca County Soil and Water Conservation District (ICSWCD). I hope everyone will try to return the questionnaire and provide the necessary information requested. It will be important to the success of this project to have the details of how much time people spend at the lake and update the County records on septic systems and wells.

I am looking forward to next spring at the lake, but in the meantime I hope you all have a great Holiday Season and a prosperous New Year.

## ANNUAL MEETING

By Bill Nelson

President Harold Goetzman called the Annual Meeting to order on September 2 at 11:15 A.M. Harold welcomed the attendees and introduced the JLWA officers and directors. Harold then thanked Randy Harju, owner of the Bowstring Store, for donating the food and utensils for the potluck, which was held after the meeting.

Bill Nelson read the minutes of the last meeting and Neil Gustafson gave the treasurer's report stating that the association has a balance of \$911.80; Jim Anderson reported that the JLWA now has 75 members.

Jim Anderson reported that he sent out a questionnaire to determine the usage of the wood duck boxes that the JLWA has distributed. Eleven individuals responded that 15 of 34 boxes were occupied. There were 6 goldeneyes, 6 wood ducks and 3 unknown species, which produced 30 goldeneyes, and 10 wood ducks. Jim also reported that one pair of loons produced two young on Jessie Lake with 5-7 other adult loons present.

Bill Nelson distributed a graph comparing this years' water levels on Jessie Lake with those previously observed. The water level for 2000 was relatively stable between 1324 and 1324.5 feet above mean sea level, or about one foot below the ordinary high water level.

Harold Goetzman reported that water quality sampling under our Clean Water Partnership Grant has been conducted throughout the summer on all four lakes and the four streams in the watershed.

Harold mentioned that a 1967 DNR report mentioned that Jessie Lake then had 13 houses, 12 cabins, and eight resorts. With the increase to over 70 building sites at this time, the cultural impact on the lake can be significant.

Harold said the ICSWCD would be sending out a questionnaire this winter or next spring to all residents in the watershed requesting information on their septic systems.

The shoreline restoration projects at Jessie View Resort and the Weber, Lichtsheidel, and Nelson properties had been completed.

Neil Gustafson reported that he has undertaken completing the historical review of the watershed that the U. S. Forest Service (USFS) had started but failed to complete.

Harold Goetzman suggested JLWA members consider placing loon-nesting platforms in the watershed lakes to improve their nesting success. An estimate provided by the USFS of the breeding population and production of Bald Eagles in the watershed was presented. The planned marking of the old railroad trestles located in the south end of Jessie Lake should be done next summer.

A slate of officers identical to the present situation was presented. This slate of Harold Goetzman President, Jim Anderson Vice-president, Neil Gustafson Treasurer, Bill Nelson Secretary, and Gloria Dallas and John Lichscheidel as two-year directors was approved unanimously on a voice vote. Harold appointed Bill Nichols to fill the vacant director's position reserved for the past president. Tim Onraet and Ed Bick will serve out the last year of their two-year terms as directors.

Harold asked those in attendance to volunteer their services as officers or directors of the JLWA. He also initiated a discussion with the attendees about the fact that the officers are unchanged since formation of the JLWA. Members in attendance indicated complete satisfaction on the direction and progress the JLWA has made since its inception under the present leadership and had no desire for a change.

A member suggested the JLWA develop a website and Harold indicated that this idea would be explored.

Harold adjourned the meeting at 12:30 and the 55 members in attendance enjoyed an excellent variety of food provided by those in attendance as well as visiting and getting acquainted with their neighbors.

## **WATER QUALITY**

**By Harold Goetzman**

We have continued to measure water quality during the past summer on Peterson, Spring, Little Spring, and Jessie lakes. Most of the data has not been evaluated for this year. However, the early samples from Jessie Lake indicated that water quality had declined slightly from the 1999 season. One of the disconcerting factors was the numerous times we experienced green water or algae blooms. Even during the late fall months we saw days that were green along shore, which is unusual for that time of the year. This appears to be due to a recycling of nutrients off the bottom that get mixed into the water column during windy periods. Dr. Miki Hondzo and his University of Minnesota students were studying this aspect of internal phosphorous loading and the effect on water quality in our current project. Unfortunately, a good portion of the data for this project was lost when the raft containing the instruments sank in high winds on Aug.14 this year. Fortunately, we were able to retrieve the instruments but much of the data were lost.

The major measurement of water quality is the amount of phosphorous in the water. This is generally a value of 25 to 30 parts per billion, which may seem like a small number. However, an increase of ten units in phosphorous content can have a large impact on the amount of algae present that in turn reduces water clarity. Secchi disk measurements (lowering the white eight-inch disk into the water until it has

reached a depth where it can no longer be seen) estimates water clarity. This year the readings declined from 18.5-feet in the spring to 6-feet in late summer and early fall when the water was green with algae.

In addition to the natural inputs, soil erosion and septic systems can be sources of nutrients such as phosphorus. One of the objectives of the current studies is to determine the distribution of the various phosphorous contributors to the lake. Thus, we have continued to sample and measure flows in the streams entering and leaving Jessie Lake. A complete evaluation of the water sampling data will be carried out by the ICSWCD this winter.

## **SHAPED BY RAILS**

**By Neil Gustafson**

A century ago the Itasca County landscape was being dramatically transformed from a forest wilderness into tree stumps, pastures, and fields. Logging companies bought much of the timbered acreage and methodically cleared the landscape of white pine, red pine, and other commercially valuable trees, then sold the land to settlers for prospective agricultural use.

The largest of the logging companies was the Itasca Lumber Company, which was established in 1887 by William T. Joyce of Muskegon, Michigan, and Healy C. Akeley of Minneapolis. Logs were customarily cut during the winter, piled up on stream banks and floated downstream via tributaries to the Mississippi River and on to mills located primarily in Minneapolis. But as logging operations pushed farther north, approaching the continental divide that traverses Itasca County, stream flow was inadequate for that method of logging. So in 1890 the Itasca Lumber Company began constructing a railroad northward from Cohasset for the purpose of transporting logs to the Mississippi. By 1897 this rail line extended about 18 miles north, winding around hills, lakes and wetlands. The manager of the Itasca Lumber Company, J. P. Sims, sought to acquire better facilities on the Mississippi in Cohasset, but was unable to reach an agreement, so he abruptly ordered operations moved to Deer River and began constructing a parallel route. Perhaps the more important reason for moving operations to Deer River, however, was the fact that it was more accessible to northern and western Itasca County where substantial stands of timber waited to be harvested. The land surface was relatively level north of Deer River and potential construction costs were assumed to be much less than extending the Cohasset line farther into a very hilly area.

Over the next few years' construction of the rail line progressed steadily northward from Deer River keeping just ahead of logging operations as timber supplies were depleted and new timber stands needed to be accessed. The main line extended about 17 miles north to Jessie Junction (now Alder, about three miles south of Marcell) where the line split, one branch continuing north toward Marcell, Bigfork, Effie, and Craig on the Bigfork River, which was reached in 1912. The other branch extended west from Jessie Junction to "Coal Dock" (later Mack), on to Jessie Lake, along the east side of the lake to the Jessie Lake station near the north end of the lake, then on to Spring Lake, Bass lake and Stanley (now Wirt). A short spur from Stanley to Pomeroy was constructed in 1916, giving access to the Bigfork River. Reaching the Bigfork River was important because Itasca County logs could then be floated north down the Bigfork and Rainy rivers, across Lake of the Woods to Kenora, then east by rail to Montreal and on to Europe.

Branching out from the main rail line were many spur lines, constructed to make access to timber easier. Spur lines might be used for several years, and then abandoned as the timber supply was exhausted. Ties were often laid out on frozen ground in winter without proper ballast. As a result, tracks would buckle under the weight of a full load during the spring thaw, and trains were at risk of tumbling over. The remains of one locomotive is still beneath the mud north of Cohasset. Derailments and accidents were not uncommon. The most serious accident occurred in March 1907 with a head-on collision between north and southbound trains near Lake Jessie. Both the conductor and engineer of the heavily loaded southbound train were killed.

Stations were erected at convenient locations along the rail line and small communities sprang to life to serve the nearby population. Some of these communities survive to the present day, but most do not. Now, for example, there is little evidence that Jessie Junction was once a bustling community, headquarters for section crews, with a boarding house, grocery store and various storage buildings. At the crossing of Turtle River, about a mile and a half west of Jessie Junction, was a stop for locomotives to take on water, and further west the locomotive fuel supply was stored at Coal Dock. The name was changed from Coal Dock to Mack in 1912 when a post office was established there. Mack at one time had a railroad station, general store, lunch room, post office, bunk houses for a logging camp, a CCC camp nearby, and as many as 100 homesteaders in the area. Nothing remains now but a few building foundations, most of which have been covered over during the recent reconstruction of state highway 6. The death knell for Mack began about 1915 when the newly constructed Deer River - Northome road intersected with the Jessie Lake - Marcell road about three miles north of Mack. This intersection became known as Hoover's Corner (later Hayslip's Corner) and much of the local commerce began to shift there. When the railroad closed down in 1932 and the post office moved to Hayslip's corner in 1938, Mack was no more. About a year later the post office was renamed Talmoon.

According to the June 28, 1939 issue of the Herald-Review, the word Talmoon is a phonetic spelling of the Swedish colloquial expression Tal Moen, which means a clearing in the woods, especially pinewoods. Swedish families on and near Little Turtle Lake had one or two cows each and would bring them to graze on the grassy knoll just south of the crossroads. This common gathering place thus inspired the unique name of this community - the only Talmoon in the entire nation. Some

say that the citizens preferred a pastoral image to overcome the corner's past reputation. Each community, existing or departed, on or near the rail line, has its own story - but more on that later.

In order to serve the potential year-round population, the Itasca Lumber Company railway needed to be licensed by the state and meet the requirements of being a common carrier. So the Minneapolis and Rainy River Railway (known as the M & R) was incorporated separately from, but still owned by, the Itasca Lumber Company. The name reflected its grand ambitions of stretching from the state's economic center to the Canadian border, taking a cue from its larger and successful role model, the Duluth and Winnipeg Railroad. At one time M & R manager Sims sought to construct a facility in Deer River to facilitate the transfer of goods between the two rail lines. When Sims request was rebuffed, he pointed out that the M & R might not be as long, but it was just as wide as the D & W. That apparently persuaded them to do business with the M & R and Sim's request was promptly attended to.

At the peak of operations in 1911, the M & R had eleven locomotives, 272 log (Russell) cars, 92 flat cars, eight box cars, four passenger cars and four miscellaneous cars. By 1914 the railroad had a surplus of equipment and began to sell some rolling stock. At its peak, the railroad ran four trains a day each way. By 1918 service had been cut back to two trains a day from Deer River to Alder - one following the west branch, and one following the east (north) branch. By 1924 all logging cars were gone and service was available only three days a week. On Monday, Wednesday and Friday the train ran up and back on one branch and on Tuesday, Thursday and Saturday it ran up and back on the other. After several years of losing money, and the depression smothering economic activity, the M & R, as a common carrier, petitioned the state Railroad and Warehouse Commission in early 1932 to abandon its remaining 63 miles of track. The request was granted about six months later and the rails and remaining equipment were promptly removed and sold for scrap.

Until about 1915, the railroad was the primary means of transportation into central and northern Itasca County, at which time serious road building was just getting underway. The Deer River - Northome road had been authorized by the county and was under construction. This route was surveyed straight north from Deer River along the section lines as far as Jessie Lake, then taking a one-mile jog to the east, continuing north into what later became Koochiching County, then straight west to Northome. Straight-line routes were preferred in road construction because they did not dissect property and cause inconvenience to owners. The Deer River - Northome route followed very closely the present route of State Highways 6 and 1. The main construction obstacle lay just north of Deer River, and was known as the "big bog", which was difficult to traverse in the spring or after rainfall. A reporter from the Grand Rapids Herald-Review, on an expedition to survey economic development in outlying areas of the county in 1914 wrote: "When one inquires at Deer River whether it is possible to drive to Jessie Lake, the answers received are varied. Some say that it is not safe to start over the Big Bog, especially after a rain. The livery man at Deer River said that the bog is about eight miles wide and could be difficult to cross, but the first four and a half miles before reaching the bog were quite passable." Several miles of Highway 6 were later relocated up to three miles west to bypass much of the bog. The M & R had conquered the bog a few years earlier. The roadbed was constantly sinking and thousands of huge logs and countless trainloads of sand and gravel were hauled in for fill. It was finally necessary to build a trestle with deep pilings, the costs of which undoubtedly exceeded by far the earlier estimates. The bog was thereafter referred to as "the big sink hole".

Building corduroy roads was a simple and practical way to traverse wet areas, though the resulting ride was slow and uncomfortable. Corduroy roads were so called because they resembled the small ridges in the fabric of that name. Small trees were cut and laid across the roadway. These were about 16 feet long (permitting two vehicle widths and room for passing) and 4 to 8 inches in diameter. The roughness in riding over the logs was somewhat overcome by adding a layer of dirt on top of the logs. In difficult situations it might be necessary to lay poles lengthwise first, over which the shorter timbers were placed. These roads, according to the Herald-Review of September 12, 1946, "would shake rigs and people to the extent of damage and great discomfort."

The Itasca Lumber Company (ILC) not only owned a great deal of property, but set about acquiring even more from other logging companies. At one time the ILC owned some 60,000 acres of cutover land. The land was classified for its agricultural potential and an intensive campaign to induce settlers was undertaken. They expected a rush of land-hungry settlers after the timber was cleared from the land, then hoped to serve the settlers' needs for supplies and access to markets. This could assure the ongoing profitability of the M & R. after the great pine forest was gone. Immigrants and others eagerly bought the land and began erecting homes, removing stumps, growing hay, oats, potatoes, and vegetables, and keeping a cow or two for milk and several chickens for eggs. The principal market for the produce was the nearby lumber camps whose men and horses consumed large quantities of food. At its peak the ILC operated 15 to 20 lumber camps, each averaging about 100 men - and there were smaller loggers in the area as well.

Whereas most logging companies farther south operated only during the winter months, transport by rail permitted year-round logging - in fact required it in order to give a reasonable return on investment. This, in turn, accelerated the rate of tree depletion. ILC logging camps were known for their abundant good food that was important in attracting and keeping competent lumberjacks. In the early years fresh meat for the camps was supplied by hunting moose. As the forest was depleted, however, the moose were eradicated. The cutover lands, however, provided abundant habitat for a wide variety of native vegetation, the numbers of deer increased rapidly, and venison appeared more frequently on the table at lumber camps. Procuring and keeping fresh meat during the summer, however, was a problem. Until electricity and refrigeration arrived at Jessie Lake after World War II it was seldom that anyone had fresh meat during the summer because there was no way to keep it from spoiling. Generally speaking, food during the summer was not very appealing. Root vegetables and canned goods were kept in deep cellars where year-round temperatures were about 45 degrees. Cold spring water, where available, was best

for keeping perishables - especially milk - and springs were a particular attraction around Jessie and Spring lakes. Anyone who owned such a spring had a prized possession. Ice was cut from the lakes during the winter and packed in sawdust for use in home iceboxes. Fresh meat, however, would not keep satisfactorily under any of these conditions. Providing fresh meat during the summer to ravenous lumberjacks was a special problem. So instead of the usual salted, smoked or dried meats, the Itasca Lumber Company secured well-seasoned processed meats for its hard working crews, i.e. sausage - especially liver sausage, which was relatively cheap as well as nutritious. The sausage was delivered by the M & R, thus its nickname, the "gut and liver" line. With some disdain, lumberjacks are reported to have announced the train's arrival by declaring, "here comes the gut and liver."

While white and red pine were the species preferred by loggers, all species were utilized - but not sent down the river because they became waterlogged and would sink before arriving at the mills hundreds of miles downstream. Logs less than about six inches in diameter were used for corduroy roads, tamarack being preferred. Cedar, when available, was used for local building construction. Other logs were cut into lumber at the sawmill in Deer River and shipped out on the D&W. Birch, oak, and maple were preferred for firewood. The Itasca Lumber Company not only logged its own timber, but contracted with other companies to log their trees as well. Likewise, the M & R hauled timber not only for the ILC, but also for anyone else who would pay the freight.

Life on the frontier was complicated by poor access. Before the railroad arrived at Jessie Lake shortly after 1900, access was over foot trails that wandered through the woods, by oxen pulling wagons over "tote roads" which wound around trees and swamps, or by canoes that could be dragged over rapids and shallow areas. Most, however, chose to travel by foot - even after the train arrived. Walkers would typically carry 100 to 150 pounds on their backs taking a full day to hike from Jessie Lake into Deer River. Foot travel was cheaper and often more convenient than the railroad, it was quicker and more comfortable than riding in a wagon over rough corduroy roads, and more adaptable than traveling by water, especially since streams of any size do not cross the continental divide. The railroad ultimately failed because it had exhausted its principal resource and source of revenue - trees. It could not compete with the flexibility of trucks in hauling freight and the convenience of automobiles for transporting people. Neither agricultural development nor population growth reached expectations, and the demand for service declined as the Great Depression tightened its grip. Though the M & R has been gone for nearly 70 years, its footprints remain on the landscape.

Note: this is the first of several short articles on local history that will be printed in the Jessie Jabber. Comments and personal stories are eagerly sought.

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## **DNR STOCKS WHERE IT WORKS NOT WHERE IT WASTES**

**By Jeff Tillma, Fisheries Biologist, Minnesota Department of Natural Resources**

During the 1980's the Minnesota Department of Natural Resources (DNR) stocked as many fish as it could raise. But some anglers and most fisheries managers didn't think that was a smart approach. In many lakes, stocking didn't work, or only helped boost populations a tiny bit. Because only a small percentage of stocked walleye ever live long enough to reach catchable size, the DNR estimated that it was costing about \$18 for every stocked walleye that was actually caught. Think about that: The cost of catching one stocked walleye was more than what an angler paid for an individual fishing license.

During the 1990's, the public demanded government agencies such as the DNR be able to defend all spending. It also demanded agencies base their decisions on good scientific information. The DNR realized that it had an obligation to spend angler dollars wisely and stock walleye only where they could improve fishing to some significant extent. In other words, to spend \$ 2,000 to \$5,000 stocking a lake so that a few people catch a few more fish each year was not deemed a good use of that money.

Why didn't stocking work in some lakes? Many lakes stocked during the 1980's were small bass-panfish lakes that have muck bottoms. This is poor walleye habitat where walleye don't do well. After a decade of stocking these lakes at a cost of millions of dollars statewide, walleye numbers remained low. Anglers caught few of the fish stocked in these lakes.

Some anglers ask, "How expensive could it be to stock my one small lake?" The answer is that the expense comes from stocking dozens of lakes each year in Itasca County. In all, the DNR stocks nearly

1,000 lakes statewide. The cost adds up. To make the most use of limited fishing license dollars, the DNR discontinued stocking many lakes where the practice wasn't working.

Another type of lake stocked by the DNR actually did have walleye habitat and natural walleye reproduction. In many of these lakes, stocking can be redundant, like sowing corn in a field that's already been planted. But it's hard to know exactly how well stocking does or doesn't work because of the difficulty of telling if an adult fish is from a hatchery or was hatched naturally.

The DNR needed to learn whether stocked fish increased the walleye population in these lakes and, if so, what was the right number and frequency to stock. One way we do that is to do test netting and compare how fish abundance from stocked years compare in abundance to fish from non-stocked years. However, evaluating natural reproduction vs. stocking in the 1980's was nearly impossible, because many lakes were stocked every year.

For the DNR to understand the contribution of stocked walleye vs. natural reproduction, stocking had to be reduced on some lakes. This gap in stocking allowed us to determine what the lake was capable of producing naturally. To account for natural fluctuations in year classes due to environmental factors such as May water temperatures, the gap in walleye stocking needed to be at least 4 to 6 years.

Reducing the stocking frequency on lakes was not a popular decision, nor was it an easy decision to make. However, if we are ever to learn the natural capability of our lakes to produce walleye and then use that information to spend angler dollars wisely, we need to evaluate natural reproduction.

Today most of our evaluations are nearing completion and we know which lakes benefit from stocking and which don't. In 2000 and 2001, we will be stocking more lakes in this area than have been stocked since 1992. So far we've learned that stocking in lakes where walleye previously did not exist was successful only half the time (48%). We also have learned that stocking to maintain a population that has little or no natural reproduction was successful about a third of the time (32%). And that stocking to supplement existing natural reproduction was almost never successful (5% of the time).

What all this means is that, yes, the DNR will continue stocking fish in Itasca County. Some lakes will always require stocking. On the other hand, others have sufficient natural reproduction to provide a quality fishery without stocking. In these lakes, stocking just doesn't make sense.

The long term, cost-effective way to improve walleye fishing is to improve spawning habitat and other conditions that increase natural walleye reproduction. We're working on that, but it's often extremely difficult and often requires changes in land use in a lake's entire watershed, and the DNR simply doesn't have much say in that. But by evaluating our walleye stocking, we have been able to stock walleye more efficiently and effectively, and balance short-term needs with long term solutions.

## **MUSSEL (CLAM) SURVEY**

**By Chantel Cook, Forest Fisheries Biologist, Chippewa National Forest**

In last fall's newsletter, I reported on the fish sampling at Spring Lake Creek that Karl Koller, fisheries biologist with the DNR, and I completed in 1998. The diversity of fish species that we collected indicated that the biological community within Spring Lake Creek was in excellent condition at that time. In 1999, Mark Hove, a research biologist from the University of Minnesota, and I sampled the diversity of the freshwater mussel fauna in Spring Lake Creek (near the County Road 135 bridge), Poole's Creek, and the Jessie Lake outlet (Jessie Brook), in addition to 16 other sites within the Chippewa National Forest. The purpose of this sampling was to describe the mussel fauna of streams within the Forest. Mussels were collected while conducting timed searches using snorkeling, wading, or SCUBA equipment; they were identified on site and returned to the stretch of stream where they were collected.

Freshwater mussel populations are dependent upon a diverse fish community. Mussel eggs develop into larvae within the brood pouch of the female. They are later released by the female in the spring or summer and attach to the gills or fins of host fishes. The larvae form cysts on the gills or fins and within 1 to 25 weeks metamorphose into juveniles, at which time they drop off the host fish and burrow into the stream bottom. Larvae of different mussel species attach to specific fish hosts. Therefore, a healthy fish community is required to support a diverse mussel assemblage.

Three of the mussel species found on the Chippewa National Forest are listed as U, S Forest Service Regional Forester Sensitive Species as well as Species of Special Concern by the DNR, because of their rarity or susceptibility to environmental degradation. These include the creek heelsplitter, fluted shell, and black sandshell. Of these three only the creek heelsplitter was found during the 1999 survey. This is not surprising because the black sandshell and fluted shell are likely to be found in larger rivers than those we sampled in the Jessie Lake watershed.

Spring Lake Creek

Of the medium-sized streams we sampled in 1999, Spring Lake Creek had the highest mussel diversity (live and dead species combined), with six species collected. We found only dead (empty) shells of three3 of those species, including the creek heelsplitter (Table 1).

Poole’s Creek

At Poole’s Creek, we found only two mussel species. All of the mussels were live (Table 1). No Species of Special Concern were collected.

Jessie Brook

We found five mussel species in Jessie Brook, but found only dead (empty) shells for one (Table 1). No Species of Special Concern were collected.

**TABLE 1.** Mussels sampled in Jessie Lake Watershed Streams, 1999.

<b>Mussel Species</b>	<b>Spring Lake Creek</b>		<b>Poole’s Creek</b>		<b>Jessie Brook</b>	
	<i>Live</i>	<i>Dead*</i>	<i>Live</i>	<i>Dead*</i>	<i>Live</i>	<i>Dead*</i>
Creek heelsplitter	0	3	0	0	0	0
Cylindrical papershell	1	1	2	0	3	2
Fatmucket	72	0	0	0	41	10
Giant floater	2	10	1	0	7	2
Paper pondshell	0	5	0	0	1	0
White heelsplitter	0	9	0	0	0	1
<b>TOTAL ALL SPECIES</b>	75	28	3	0	52	15

\* Dead shells were collected only when no or few live animals were observed. The number of dead shells generally represents only a portion of those found in the stream.

Conclusion

The diversity of the mussel fauna in Spring Lake Creek mirrors the diversity of its fishes. Mussels require stable substrates, moderate stream flow, and a good oxygen supply in order to filter food particles from the water. The habitats in Spring Lake Creek are diverse and substrates are a relatively stable mix of gravel, sand, and some silt. The substrate at Poole’s Creek was silty sand and appeared to be unstable (the stream appears to have a heavy, shifting sand bed load), and the substrate at Jessie Brook was silty with heavy vegetation growth.

Because relatively few sites have been surveyed for freshwater mussels within the Chippewa National Forest, it is difficult to “rate” the health and abundance of the streams sampled in 1999. More survey work is needed to adequately characterize the mussel fauna of the Chippewa National Forest. In addition, more surveys are needed to accurately portray the abundance (or lack thereof) of the species collected

only as dead shells, especially the creek heelsplitter (Minnesota Species of Special Concern) and the white heelsplitter. These species are thought to be especially sensitive to pollution and sedimentation.

### **CHIPPEWA EAGLES**

**By Jeremy Cable, Wildlife Biologist, Chippewa National Forest**

The Chippewa National Forest has one of the largest Bald Eagle populations of any area in the country. Each spring USFS biologists survey the forest by air to check on eagle activity and later to determine nesting productivity. This year the activity flights checked on 312 eagle nest sites across the forest and found 140 nests were active, 103 nests appeared inactive and 60 nests were gone. The productivity flights were completed in July and in the Marcell District there were 18 pairs that produced 21 young. In the Deer River District there were 53 pairs and they produced 42 young.

In the Jessie Lake area we have tracked four nests. This year the nests on Little Spring Lake and the northeast end of Jessie Lake were gone. The nests on the west side of Jessie Lake and on CR 35 were active in the spring. No young were seen in the west side nest while the nest on CR 35 produced one young eagle. We are not aware of any eagle nests on Spring or Peterson lakes. If anyone in the JLWA has seen other eaglets or eagle nest sites in the watershed please let the USFS know by calling 832-3161.

### **ITASCA COUNTY WELL LOCATION PROJECT COMPLETED**

**By Art Norton, District Manager, Itasca Soil and Water Conservation District**

The ICSWCD recently completed a two-year project to locate water wells throughout the county. The project was part of a statewide effort to compile existing groundwater data. The Minnesota Department of Health (MDH) coordinated and funded the study. Sixty-four wells were located in the Jessie Lake watershed during the project.

Statewide, there are tens of thousands of wells that will be located through this project. In Itasca County, 2,738 wells were located in about two-thirds of the county. The DNR is conducting the same process in the remainder of the county, as part of a study of groundwater and surface water interactions in the mine pit lakes along the Mesabi Iron Range.

Only wells for which there is an existing MDH driller's log were located. These records were started in about 1976, so older wells are not located. Wells were located by using a Geographic Positioning System (GPS) field instrument, and only after a positive confirmation of the well identification was made.

Geologic and hydrologic data contained on the drill logs provide valuable information about groundwater levels and flow directions, buried aquifers, and sensitive groundwater recharge areas. The geologic well log also provides useful information. Very few private wells in Itasca County contain water quality information, but the state is beginning a program to sample selected wells for a wide variety of elements, in order to build a database of groundwater quality.

In the Jessie Lake area, a preliminary look at the well records revealed that the flowing wells on the east side of the lake are mostly tapping into water-bearing sands about 100 feet below the surface. On the west side of the lake, however, the flowing wells are at depths of about 200 feet. This information, along with other groundwater sampling that is being done by the PCA, will help determine the contribution of groundwater to Jessie Lake.

### **LOW INTEREST LOANS AVAILABLE FOR SEPTIC SYSTEM UPGRADES**

**By Art Norton, District Manager, Itasca Soil and Water Conservation District**

American Bank, ICSWCD and the Minnesota Department of Agriculture have entered into an agreement for a low interest loan program. Funds are to be used to upgrade or replace existing non-conforming individual septic systems in Itasca County. The focus of the program is on lakeshore properties, but anyone with non-conforming septic systems may apply. Interest rate on the loans is at 3% fixed for up to a five year term. In addition, borrowers will pay a 0.5% origination fee along with any closing costs that may be incurred by the bank. The ICSWCD must approve projects and American Bank must approve a credit application prior to any work beginning on the project. For more information, contact Joyce Rhodes or Art Norton at 326-0017.



## **DID YOU KNOW?**

**By Harold Goetzman**

- The DNR carried out their fish-shocking project this fall on Jessie Lake and found no fingerlings, indicating a very poor spawning year for 2000.
- Large waves during a storm on August 14 sank the water-sampling raft that was part of our current water quality project. On September 7 the raft was located in 35-feet of water and four SCUBA divers brought the equipment to the surface. The University of Minnesota project team salvaged the entire \$30,000 instrument package, but a \$3,000 data logger was ruined. People from the JLWA, USFS, DNR, ICSWCD, and University of Minnesota participated in the recovery effort.
- Eagle nests can be over 10-feet in diameter and can weigh more than 4,000 pounds.
- Loons are the oldest living birds with an ancestry dating back fifty to eighty million years. The oldest loon fossils date back twenty million years.
- There is no such thing as a safe and effective septic system additive. Do not use starters, feeders, cleaners and other additives that are promoted to homeowners through direct mail and telephone.
- All septic tanks should be cleaned or pumped at least every 3 years (more frequently for some systems). Insist that the tank be back flushed and pumped through the manhole if it has one.
- An adult goose can produce about 2 pounds of excrement per day!
- A major update will be made to the Itasca County Water Plan this winter. New projects will be developed to implement the goals in the new County Comprehensive Plan relating to lake carrying capacities, septic systems and shoreland development standards.
- The new DNR survey shows wide public support for the agency. More than five times as many Minnesotans are satisfied with the state's angling opportunities than are dissatisfied. Only 12% of those interviewed were dissatisfied with the fishing in Minnesota. Survey respondents said the top environmental issues for the DNR should be protecting lakes and rivers, surface water use, and protecting shore lands.
- Due to the heavy fall rains the level of Jessie Lake has risen over 14-inches and is now above the ordinary high water level.

## **MEMBERSHIP**

The JLWA presently has 75 paid members. If you have not paid your past dues or would like to pay your upcoming 2001 dues send your \$10 to Neil Gustafson, 47521 Tilly Road, Talmoon, MN 56637.