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Red Lake Department of Natural Resources

Ziigwan
Spring 2019

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Mazina'igan onji Odaakewigima
Letter from Director

Boozhoo! Spring is finally here! The good news is many of our lakes, ponds, and rivers are back to normal water levels after the wet fall and winter snowfalls. Many tribal contractors and loggers enjoyed the first part of winter with cold temperatures and average snowfall that created frozen ground conditions, but early in 2019, the weather changed with record snowfall that made for difficult conditions.

The forestry program was busy this winter with a shearing project being done in areas that were damaged from the wind storms last summer near the Clearbrook Road and Gonvick Truck Trail. Over 290 acres were completed this winter with more acres to be added next winter. The Fire Program plans to burn the pushed piles next winter when the piles dry.

The Fisheries Program fall test netting results were encouraging and the walleye population remains very healthy! We are seeing signs that the fish community is starting to come back into balance and we expect the walleye population to continue to decline slightly over the next few years. This is a good thing, and we hope that the yellow perch population will respond positively to the decrease in the walleye population. The 2018 walleye harvest on the reservation was approximately 500,000 pounds.

The Wildlife Program applied for and received a Tribal Wildlife Grant to continue the golden-winged warbler work that has been ongoing on the reservation since 2015. Almost 1,700 acres of lowland habitat for golden-winged warblers has been created since then and with this grant an additional 243 acres of upland habitat was created last fall for golden-winged warblers and American woodcock as well as several other wildlife species. This important work will continue into the future.

With the unfortunate discovery of zebra mussels in Upper Red Lake, extra efforts will be implemented to monitor their development and prevent their spread to other lakes on the Reservation. Please remember to follow the clean, drain, dispose, dry protocols discussed in the zebra mussels article in this newsletter. These protocols will help prevent the spread of other invasive species as well. While it's still unclear how much of an effect zebra mussels will have on Upper and Lower Red Lake, both the Red Lake DNR and Minnesota DNR are working hard to monitor and assess the situation.

The Red Lake DNR would like to thank all of our volunteers, presenters, Concordia Language Villages' staff and especially the Beltrami County Soil & Water Conservation District for making the Water Festival event a huge success. About 235 fifth-grade students and 25 teachers and chaperones from Red Lake Elementary, Ponemah Elementary, St. Mary's, and other nearby schools participated in the day-long festival and had the opportunity to learn about watersheds.

If you plan to do any burning this spring, please make sure to obtain a Red Lake Burning Permit. Burning permits can be obtained at the new Red Lake Fire Center (next to Red Lake Elementary School) or online: www.redlakednr.org/burning-permit. If you have any questions, stop by the Red Lake Fire Center or call us at 679-3381.

Miigwetch!

Al Pemberton

Ezhi-ayaag-gidakiiminaan
Environmental

WATER FESTIVAL AT CONCORDIA LANGUAGE VILLAGES WAS A SUCCESS

The Red Lake DNR would like to thank all of our volunteers, presenters, Concordia Language Villages staff and especially the Beltrami County Soil & Water Conservation District for making this event a huge success. Fifth grade students from Red Lake Elementary, Ponemah Elementary, St. Mary's, and other nearby schools participated in the day-long Festival on October 23rd had the opportunity to learn about watersheds. Fifteen presenter stations helped the students understand the important connections between watersheds and healthy soils, fisheries, forests, water wildlife, and other topics; presenters represented many organizations, including the Red Lake DNR, Minnesota DNR, Natural Resources Conservation Service, Beltrami County, Minnesota Department of Health, Headwaters Science Center and Concordia Language Villages. About 235 students and 25 teachers and chaperones participated this year, which made this one of our biggest (and busiest!) Water Festivals yet.

BELTRAMI RED LAKE Water Festival

SUBMIT ENVIRONMENTAL CONCERNS (SEC)

The Red Lake Environmental Response Program (RLERP) wishes to remind community members of our new tool for people to Submit Environmental Concerns (SEC) to be investigated! The form may be set up to be accessed on your mobile device like an APP and it is quick and easy to use… It only takes a SEC! The RLERP will automatically receive your submission by email so that our staff can investigate your concern and begin assessment and mitigation as necessary. You have the option to include your name (can remain anonymous if you wish), a brief description of the area and type of concern and a photo of the threat. We require only a location so that we can find and address your concerns (must allow the form to access your location). This tool is easy and quick to use if you should discover something that is a potential threat to the environment. With your input, the RLERP will be better able to find and address problems that threaten the health and environment of Red Lake Nation. Please remember, it only takes a SEC!

RED LAKE WALLEYE POPULATION REMAINS STRONG FOR 2019

The 2018 total walleye harvest on the reservation was approximately 500,000 pounds (Figure 1). This was lower than the total average harvest between 2008 and 2018 of 700,000 pounds. The harvest by ice anglers was average, despite very late ice off. The ice did not go off until the 2nd week of May in 2018, which is over two weeks late. Cooler water temps and lots of wind last spring keep the anglers off the lake and harvest by anglers was below average for the 2018 season. The net crews had equipment issues early in the season, which lowered the commercial fisheries harvest, but by September they were running at full strength, and were catching approximately 60,000 pounds of walleye a month. Unfortunately, the ice came early last fall, and fishing ceased by the first week in November, cutting the netting season short. In summary we harvested about 50% of the million pounds of walleye that we were targeting for the 2018 harvest season.

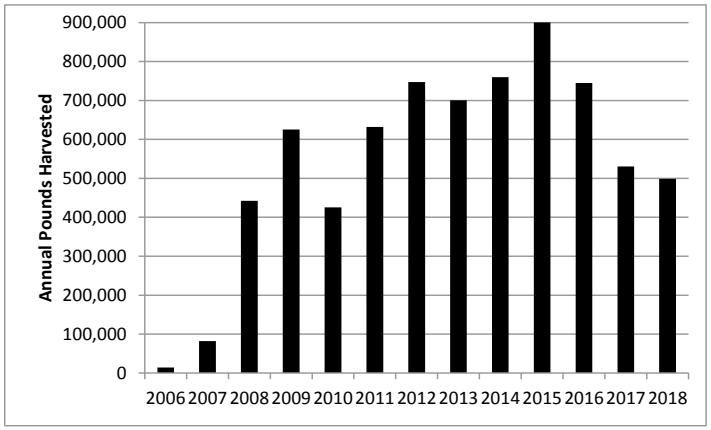


Figure 1. *Annual walleye harvest from the Red Lake Reservation 2006-2018.*

Fall test netting results were very encouraging this year and the walleye population remains very healthy (Figure 2.). The walleye population has decreased slightly compared to recent years, but this is what we have been trying to accomplish with our regulations, both on and off the Reservation. We have had two very large year classes of walleye present in the lake for the last 7 years. The 2009 and 2011 year classes have been carrying the fishery, but now many of the 2009 fish have been harvested or have died from natural mortality. Over the next few years, the 2011 year class will meet the same fate, but we have a broad spawning base to replace these individuals. We are seeing signs that the fish community is starting to come back into balance and we expect the walleye population to continue to decline slightly over the next few years. This is a good thing, and we hope that the yellow perch population will respond positively to the decrease in the walleye population.

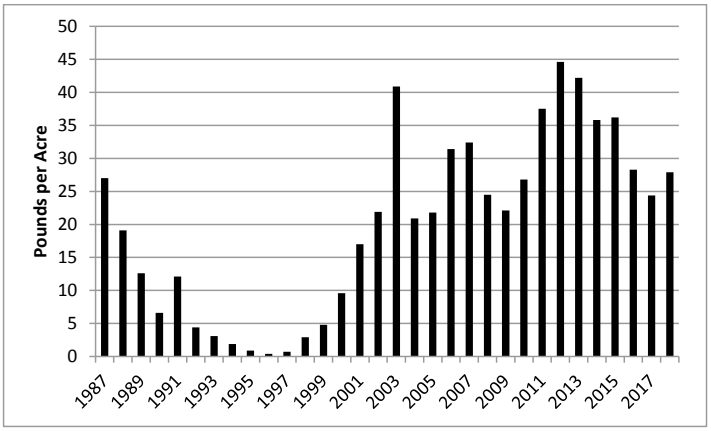


Figure 2. *Estimated walleye biomass in the Red Lakes, 1987-2018.*

Ice fishing was difficult through much of the winter this year ('18-'19) with deep snow, cold temperatures, and difficult travel on the lake. However, conditions improved during the last week of March and the first week of April, and anglers were able to get out and were able to catch and turn in over 82,000 pounds to the Fishery. Fishing opener will be on Saturday, May 4th, 2019. Fishing should be good this spring with lots of larger fish in the population to be caught.

Cooperation has been an important part of the successful management of this world class walleye fishery. Please protect, respect, and enjoy the Red Lake Walleye so future generations can enjoy this fishery as we have. Share your experience and take a kid fishing this year.

Good luck and stay safe!

RESERVATION WALLEYE FISHING REGULATIONS

Upper and Lower Red Lake and Tributaries

SEASON

- The summer fishing season will open on May 4th, 2019 at 12:01 AM
- Ice fishing continues until the last Saturday in March.

BAG LIMIT

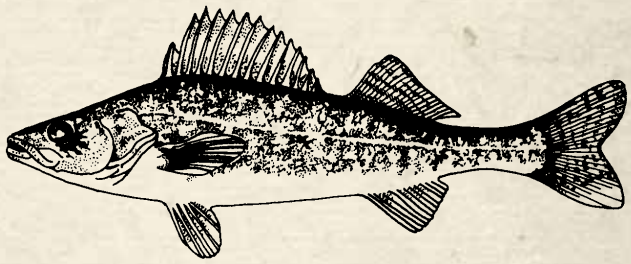
- **Personal Use:** 10 walleyes a day, 30 walleyes in possession.
- **Commercial: 150** walleyes a day, must be turned into the Fisheries.

SIZE LIMIT

- Personal Use: Walleye smaller than 22 inches may be kept, walleyes between 22 and 28 inches must be released, and only one walleye over 28 inches may be kept daily.
- Commercial: Only walleyes between 13 and 22 inches will be accepted at the Fisheries. This may change based on markets by the Fisheries manager.
- There is no size limit on walleyes caught below the Red Lake Dam in the Red Lake River west to the reservation boundary, but bag limits still apply.

ADDITIONAL REGULATIONS

- Only Red Lake Band members may fish on the reservation waters of Upper and Lower Red Lake and its tributaries.
- The Red Lake River below the Dam does not close to fishing.
- Hook and Line is the only legal way of fishing.
- Fish must be transported to a residence before they are filleted.
- One proper fitting life vest is required for each person in any type of watercraft, including but not limited to boats, canoes, inflatables, jet skis and kayaks.



Protect, respect and enjoy the Red Lake walleye into the future!

Miskwaagamiiwi-zaaga'iganing Mitigokewin | *Forestry*

2018 STORM DAMAGE

On June 29th, 2018 a severe storm containing straight line winds measuring up to 100 mph damaged large areas of forest throughout the southern portions of the Red Lake Indian Reservation. Red Lake DNR Forestry personnel were mobilized to help clear roads in these areas.

Ground and air reconnaissance was conducted to assess and map the extent of the damage. Many of the trees in and around home sites and developments had significant damage along with hundreds of acres of the Red Lake Forest. The lowland aspen and black ash stands along the Clearbrook Road and Highway 1 in the southwestern portion of the Reservation were among the hardest hit.

The primary mission of the Forestry program is to maintain a healthy, sustainable and productive forest. This includes mitigating damage due to natural disasters. A significant volume of storm damaged trees has created the potential for a huge amount of fuel in these areas and an eventual increased risk of a forest fire. Also, the extensive damage severely diminishes the ability of these areas to ever become fully stocked and healthy without additional disturbance. Timber harvest for these areas is not practical because of the damage to most trees making them unfit as a pulpwood product and the increased danger of logging in storm damaged environments. Two objectives were identified: 1) To reduce the amount of fuel created from all the broken and blown down trees

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and 2) To begin regenerating these stands as soon as possible to become fully stocked and healthy.

Winter shearing and piling of the material was determined to be the solution to address these objectives. This method provides for the least impact to the soil because it occurs during frozen conditions, minimizing soil compaction. It also allows for efficient and clean piling of the material while not dragging excess soil into the piles. The fire crew plans to burn the piles next winter. Secondly, this method provides for full sunlight to the ground necessary for the existing root system to sprout new growth, an adaptation strategy for aspen evolved from natural disasters such as wind and fire. Much of the undisturbed hardwoods within the storm damaged areas, oak and ash primarily, can be salvaged and are left for diversity of tree species within these stands and also for their benefits to wildlife.

Mitch Wilson, Timber Sales Administrator

Craig Nuebert retires after 22 years of service!

Craig Neubert (Timber Sales Administrator) retired 4/1/19 after 22 years of service at the Red Lake Forestry Office. Best wishes for a happy and relaxing retirement to Craig! Mitch Wilson has taken over timber sales administration.

RED LAKE BURNING PERMITS

Attention Red Lake Tribal Members: If you plan to do any burning this spring, please make sure to obtain a Red Lake Burning Permit. Please follow the recommendations that accompany the permit, and make sure that the fire is all the way extinguished before leaving it unattended. BURNING CAN BE DONE EACH DAY BETWEEN THE HOURS OF 6:00PM to 10:00AM.

Burning permits can be obtained at the new Red Lake Fire Center (next to Red Lake Elementary School) or online: www.redlakednr.org/burning-permit. If you have any questions, stop by the Red Lake Fire Center or call us at 679-3381.

TRIBAL CODE 504.05 T- SETTING FIRES

Subdivision 1. Permit Required. Any person who shall start a fire without first obtaining a burning permit from the Red Lake Band of Chippewa Indians is guilty of a (petty) misdemeanor and shall be subject to a mandatory fine of $200.00 (and/or serve three (3) months jail).

Subdivision 2. Control of Fires. Any person who shall intentionally or negligently set a fire and fails to properly control it and extinguish it is guilty of a misdemeanor. In addition to the criminal penalties provided from herein, the perpetrator of the fire may be held civilly liable for any damage caused by the failure to properly control and extinguish said fire. If convicted, the perpetrator shall be subject to a mandatory fine of $500.00 and/or six (6) months in jail, and include the suppression costs associated for an escaped debris burn or wildfire.

Subdivision 3. Current or future funds held in trust or by the Band for the benefit of any minor child found to have set a forest/grass fire which requires fire suppression efforts, or does damage to the forest shall be made available to cover any court judgment made pursuant to Chapter 504.05, subdivision 2.

Subdivision 4. The parent or guardian of any minor child found to have started a forest/grass fire shall be subject to a civil penalty to cover the cost of fighting the fire and the damage done to the forest, but not to exceed one thousand dollars.

(The term Indian changed to Person pursuant to Resolution No. 62-2000, dated March 31, 2000)
(Subdivision 3 and 4 added pursuant to Resolution No. 62-2000, dated March 31, 2000)
(Section 504.05, Subd. 1 and 2 amended by Resolution 103-09, dated June 9, 2009)

Culvert replacement at the Mud River/Fireline road crossing

NONPOINT SOURCE (NPS) PROGRAM

This program works to implement best management practices (BMPs, which are methods or techniques that are the most practical and cost effective) to reduce nonpoint source (NPS) pollution impacts. Examples of NPS pollution include excess fertilizer and other agricultural runoff, sediment from eroding stream banks or improperly managed construction sites, bacteria and nutrients from livestock or faulty septic systems, etc.; that is, pollution sources that do not come from a single source such as a pipe or ditch and are often considered 'diffuse.' The program addresses NPS pollution of waters within the Reservation and waterbodies not on the Reservation but having direct impact on tribal land through prevention, control, and reduction of nonpoint sources of pollution. Additionally, outreach and education is an important part of the program because prevention helps us avoid expensive rehabilitation in the future.

Nonpoint Source Projects: Completed

Since 2008, when the first NPS Management Plan was written, competitive grants available through the US Environmental Protection Agency (EPA) have funded much of the NPS work that has been completed on the Reservation. The most notable accomplishment has been the Mud River restoration, however several other smaller projects have been completed that help reduce sedimentation and erosion. The smaller projects include road crossings/culvert replacements (on Mud River and Pike Creek) and several boat ramp improvements (located on Kinney, Bass Lake, Fullers, and Red Lake). These projects have prevented washouts at culvert sites, have made lakes more accessible, and have improved the habitat for many mussels, fish and invertebrates that live in or on the water for part of their lives (dragonflies, stoneflies, mayflies, etc.) - making these projects a win-win for both people and the natural environment.

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Flooding upstream of Mud River/South Boundary road crossing. Once properly sized culverts are installed, this site will be less prone to flooding and look more like the Fireline road crossing.

Ezhi-Ganawenjigaadeg-Nibi
Water Resources

Boat ramp at Kinney Lake where concrete planks were installed

NONPOINT SOURCE (NPS) PROGRAM

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Nonpoint Source Projects: Looking Forward…

This summer, we are planning to replace culverts at the Mud River/ South Boundary road crossing. The project will be very similar to the Mud River/Fireline road crossing culvert replacement and will not only decrease sedimentation input, washouts, and scouring of the banks of the Mud River, it will also reconnect all portions of the Mud River on the Reservation. The lake access to Red Lake in Ponemah is scheduled to be improved and by the end of the summer will have concrete planks installed. Also, education and outreach will continue as we begin planning for another successful Water Festival in the Fall of 2019. For more information on the Water Festival see pages 2-3.

Scouring of the Mud River bank at the South Boundary. After improvements are made this summer, this site will feature larger culverts and stabilized, erosion-resistant banks.

BELTRAMI RED LAKE Water Festival

ZEBRA MUSSELS

Photo Credit: Bruce Anspach

Zebra mussels were discovered in Upper Red Lake from a plankton sample collected by Red Lake Department of Natural Resources (RL DNR) staff during regular water quality sampling in the summer of 2018. The Red Lake Water Resources Program has been working in conjunction with the Minnesota Department of Natural Resources (MN DNR) since 2001 to collect and identify plankton in both Upper and Lower Red Lake basins in an early detection effort of invasive species. In a single sample from Upper Red Lake, 8 veligers (microscopic young zebra mussels) were identified by MN DNR personnel. While no adults have been located in either basin, RL DNR believes that they are present due to the high number of veligers found in a single sample from the center of the lake.

How did this happen?

It is unfortunate but not altogether unexpected that zebra mussels made their way into Red Lake. It's impossible to know exactly how zebra mussels were introduced to the lake. There are a number of area lakes already infested that are potential sources including Leech, Cass, Bemidji, and Winnibigoshish. Beltrami County has been very active in their efforts to prevent the spread of this and other invasive species and have worked closely with the RL DNR to determine appropriate prevention practices. Their activities have included extensive boat inspections at public lake accesses and inspection of docks and boat lifts. Unfortunately, those efforts were not enough.

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Photo Credit: D.P. Molloy

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What problems could they cause?

Below are some of the common problems caused by zebra mussels and some discussion of how those impacts might occur in Red Lake. While it's impossible to predict impacts without knowing how successful the zebra mussels will be in the lake, some general assumptions can be made.

- Clog drinking water intakes
  - There are no known drinking water intakes in Red Lake. This is unlikely to be a major impact.
- Attach to rocks, plants, other mussels
  - Red Lake has a large natural mussel population that may be damaged by zebra mussel attachment. The lakes have a large number of rocks and boulders that could provide significant habitat for zebra mussels.
- Attach to boat hulls and motors, docks and lifts, swim rafts, and ladders
  - If left in the water for long periods (more than a day), boats could become attachment points for zebra mussels in the lake. Docks, lifts, swim rafts, and ladders are not particularly common in Red Lake, especially on the Reservation, and shouldn't be heavily impacted. This may be of more concern off the Reservation.
- Sharp shells cover beaches and can cut feet
  - If the zebra mussels colonize swimming areas, swimming could become hazardous. However, most of the areas, like the Cutoff and Sandy, should be minimally impacted because the bottom is mostly sand and not rock which the zebra mussels need for colonization.

- Harm native fish by consuming food that young fish eat and kill native mussels, crayfish, and snails
  - It is too early to tell how the infestation is likely to impact the fish populations in the lake. The Red Lake DNR and MN DNR will be diligently monitoring the situation and will share the results of that monitoring annually.
  - Adult sheepshead, lake sturgeon, and lake whitefish will eat adult zebra mussels, which may help to control them if them become established.

What can you do?

Right now we are in a "wait and watch" mode at RL DNR. We have increased our monitoring and will be working hard this summer to determine if there are colonies of adult zebra mussels in either Upper or Lower Red Lake. If you think you have found an example of an adult zebra mussel, please take a photo and share it along with the location (GPS coordinates would be very helpful) with the RL DNR either through email at rldnr@redlakenation.org or through our Facebook page using Facebook Messenger. Please do not remove the suspected zebra mussel from the lake! It is very important that we are able to get to the location and identify whether more zebra mussels are present. It also increases the possibility of accidentally spreading the mussels to other lakes. Adult zebra mussels may be able to survive for days out of the water.

What do they look like?

- A small clam with a yellowish or brownish "D"-shaped shell, usually with dark and light-colored stripes (See images below).
- Up to 2 inches long but most are under one inch and as small as 1/8" long
  - Most are fingernail-sized
- Grow in clusters

What do they do and how do they spread?

- A single zebra mussel can filter one quart of water per day while feeding primarily on algae
- Attached to manmade (boat, docks, etc.) and natural (rocks, wood, plants, other mussels) substrates
- Spread primarily by attaching to boat hulls, aquatic plants, docks, and lifts
- Adults can survive for days out of water under certain conditions

Photo Credit: Bruce Anspach

- A female can produce 100,000 to 500,000 eggs per year
  - Fertilized eggs develop into microscopic, free-living larvae, called veligers that form shells
  - After 2-3 weeks, veligers settle and attach to a firm surface using tiny fibers call byssal threads
  - Zebra mussel beds can reach tens-of-thousands within a single square yard

How do you prevent their spread?

- **Clean** all aquatic plants, animals and mud from watercraft, trailers, docks, lifts, and anchors before leaving the access
- **Drain** water-related equipment (boat, ballast tanks, portable bait containers, motor) and drain bilge, livewell and baitwell by removing drain plugs before leaving water access and leave plug out during transport
- **Dispose** of unwanted bait in the trash
- **Dry** boats for 5 days before moving to another waterbody
- **Dry** docks, lifts, swim rafts and other equipment for 21 days before placing into another waterbody

RED LAKE BAND OF CHIPPEWA GOLDEN-WINGED WARBLER & AMERICAN WOODCOCK HABITAT GRANT ACCOMPLISHMENTS

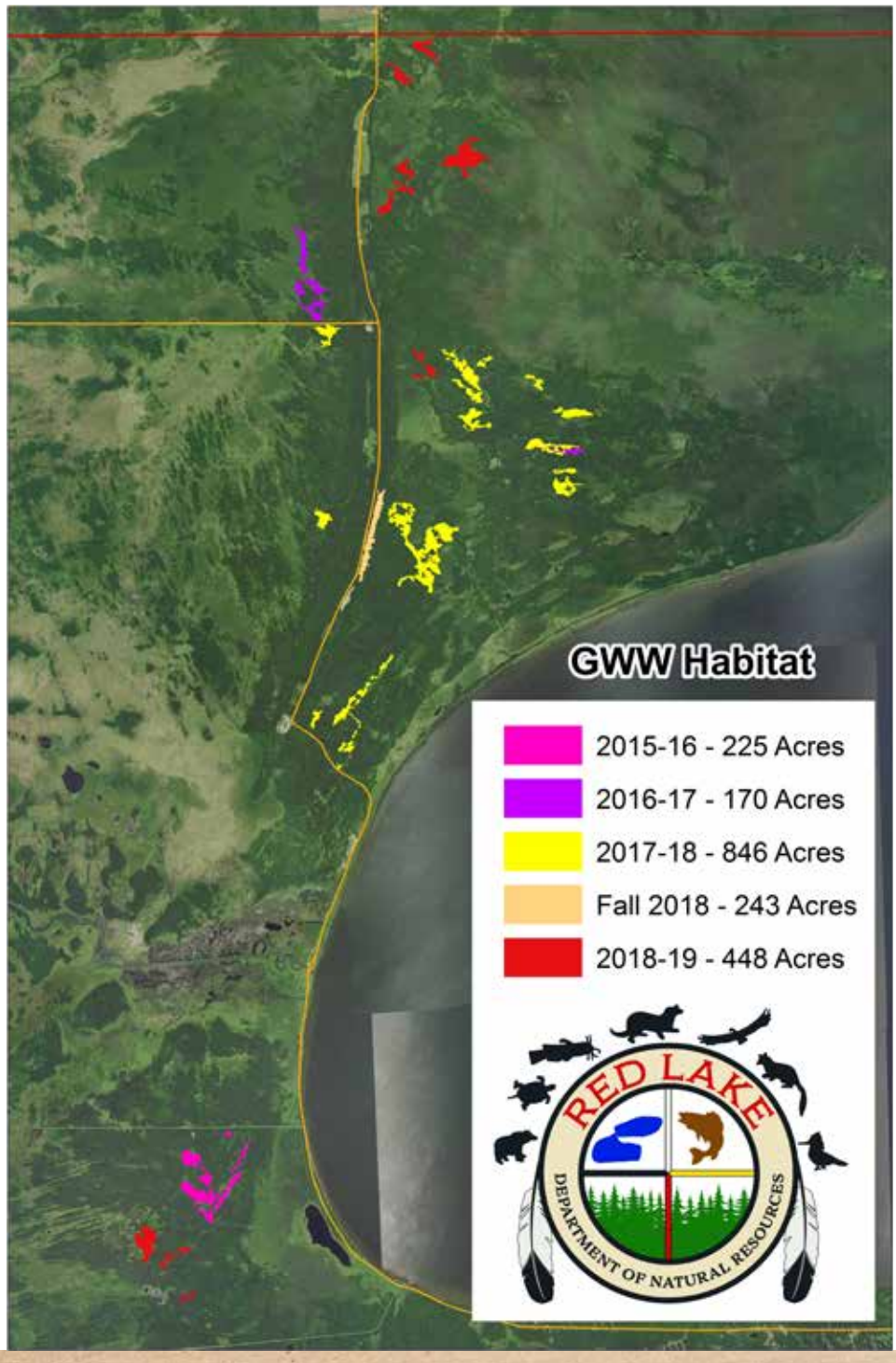
Since the mid-1960's, golden-winged warblers have declined 60% across their historic range. The species is listed as threatened in Canada and on the verge of being listed on the Endangered Species List in the United States. Currently, the Great Lakes golden-winged warbler population is estimated to represent around 95% of the entire global breeding population. Minnesota contains less than 10% of the golden-winged warbler's breeding range, but supports an estimated 47% of the entire global breeding population. Research suggests that conservation and management activities conducted in Minnesota will be crucial for the survival of this species.

The golden-winged warbler is a small songbird with striking yellow and black features. Adults are about 5 inches long, weigh between 0.3 and 0.4 ounces, and are slightly smaller than the well-known black-capped chickadee. They are neotropical migrants, spending three to four months (mid-May to mid-September) in the United States during the breeding season, then wintering in Central and South America. They typically nest on the ground in dense herbaceous vegetation and lay 3 to 6 eggs. Eggs are incubated for 10-12 days and hatchlings stay in the nest for 8-9 days. Golden-winged warblers feed on non-flying insects and insect larvae.

American woodcocks are a chunky bird, about 11" long, with a long bill, bars across their crown, and large eyes set high up on their head. They have rounded wings and are a nocturnal and secretive bird that are common in moist woodlands. At dusk and dawn, males fly up abruptly and their wings make a twittering sounds. In the spring, the woodcock makes a call that sounds like a nasal peent. Hens nest in exposed sites on the ground, usually in young, shrubby, deciduous forests. They lay between 1-5 eggs and incubate them for 20-22 days. They feed mainly on earthworms, but also snails, millipedes, spiders, flies, beetles, and ants. The number of American woodcocks has been steadily declining since 1966 with the loss of habitats to urbanization, agricultural development and maturing forests.

During the winters of 2015/16, 2016/17 and 2017/18, the Red Lake DNR participated in a partnership with the American Bird Conservancy and Tamarac National Wildlife Refuge to restore almost 1,700 acres of lowland young forest habitat on the Red Lake Reservation. This was the beginning of long-term, large-scale efforts to create and maintain young lowland forest habitats at Red Lake. To continue this important work, the Red Lake Band of Chippewa Indians applied for and received a U.S. Fish and Wildlife Service Tribal Wildlife Grant for golden-winged warbler and American woodcock monitoring, critical habitat restoration, and young forest education on the reservation.

In the fall of 2018, the Red Lake DNR – Wildlife Program conducted research on 44,000 acres of tribal land to identify potential American woodcock and golden-winged warbler habitat restoration sites. In the fall of 2018, tribal contractors created 243 acres of upland young forest habitat at four different sites on the west side of the reservation. Breeding bird counts will begin this spring to evaluate restoration efforts and wildlife use at the restoration sites. Work in these areas will create early successional upland habitats, with interspersed clumps of shrubs and saplings and areas of grasses and forbs. The vegetation types created within these treatment areas will benefit many different wildlife species, including moose, deer, grouse and songbirds. Additionally, the research will help Red Lake update their management plan for both golden-winged warblers and American woodcocks on the reservation. An important long-term goal is to maintain habitat diversity and promote early successional species in the treated areas.



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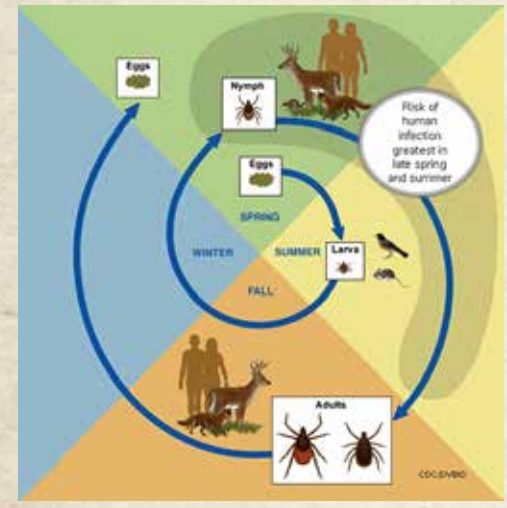
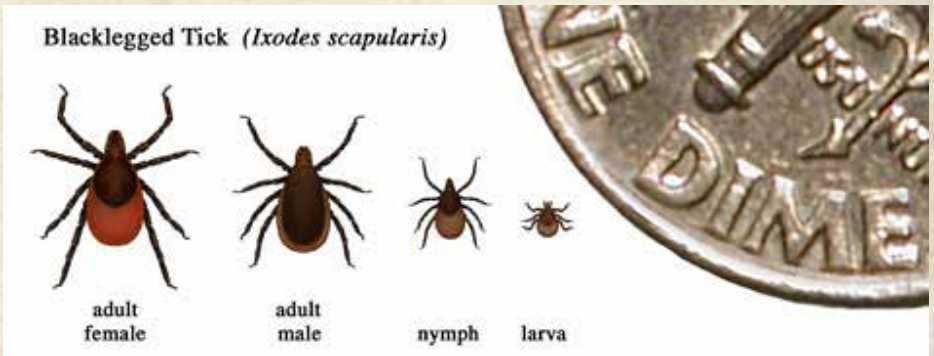
TICK SEASON IS HERE!

Red Lake DNR staff would like to advise the public that deer ticks (also known as blacklegged ticks) are active and abundant in the woods now. Deer ticks are the main carrier of Lyme disease, and may transmit other diseases such as Human Anaplasmosis, Babesiosis, Ehrlichiosis, and Powassan Virus.

Red Lake, and the surrounding counties of Beltrami, Clearwater and Itasca, are classified by the Minnesota Department of Health as having the highest risk of Tick-Borne Diseases in Minnesota.

Please check yourself and your children after being outside. Deer ticks are small, and during the nymph stage of their life cycle can be very difficult to find. If you find a tick embedded in the skin, or want more information about deer ticks, please visit the following websites or go to your local health care practitioner (IHS). Symptoms to look for include headaches, fever, joint aches, fatigue, and raised/welted skin around the bite. Physicians may be able to prescribe antibiotics to treat the diseases.





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