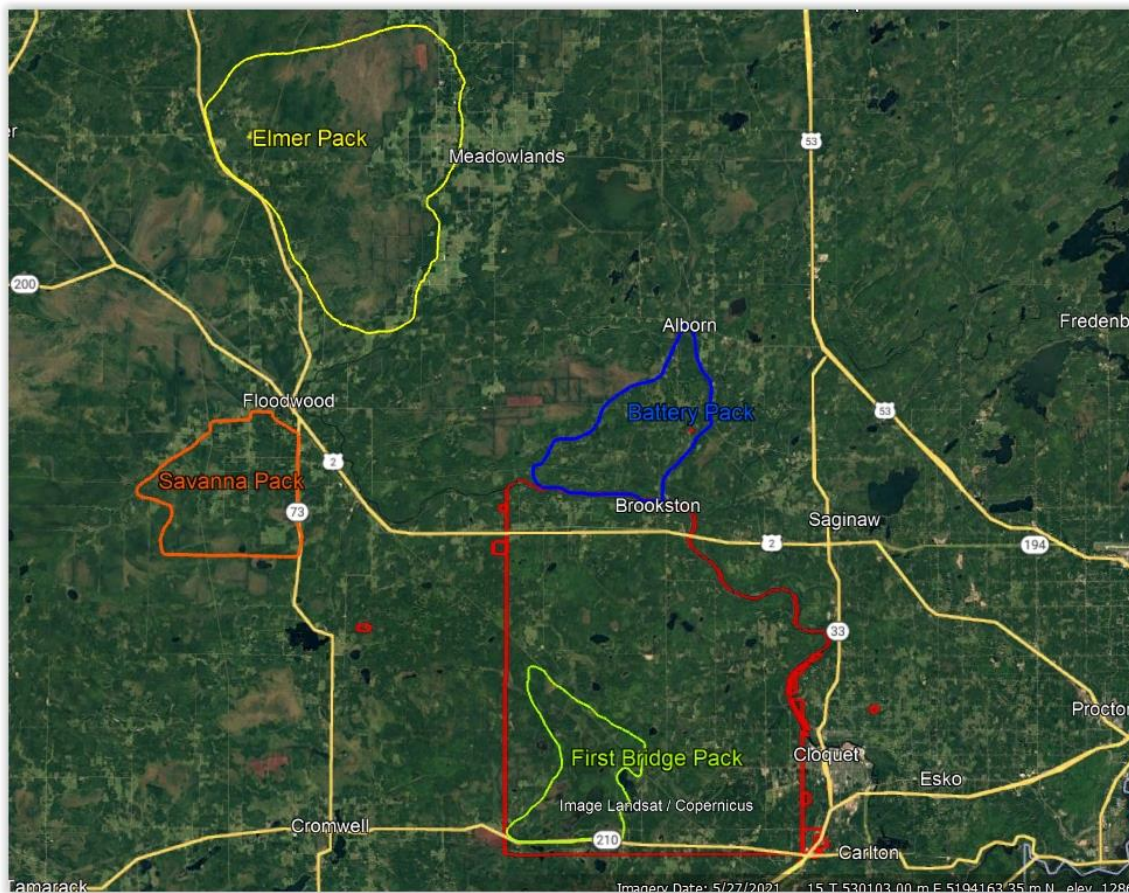


Hi Folks,

Below is an update on the Fond du Lac Resource Management Division's ongoing ma'iingan (wolf) study. The Resource Management Division uses information from collared wolves on and around the Reservation to annually estimate how many wolves are using the Reservation, the size and locations of their territories, what happens to them and how things are changing over time. In turn, this information can help guide the Division when determining how projects and activities will impact wolves. In addition to our own work, the Minnesota DNR uses pack and territory size data from collared wolves at FDL and elsewhere around the state to annually estimate statewide wolf populations.

The tracking collars worn by the adult wolves in our study report in at intervals via the Iridium satellite network to my computer with an update of each animal's recent Global Positioning System (GPS) locations. As a backup, each collar also emits a unique Very High Frequency (VHF) radio signal which we can track from an airplane or on the ground if necessary. The batteries in these collars should last about 2.5 to 3 years. Before the batteries are exhausted, the collar is programmed to break apart and drop off the wolf so we can recover it, and the wolf isn't permanently collared. Between the GPS and VHF locations, we're able to determine movements and locations of each individual animal and once we have enough locations, their home territories and locations of things like their dens. If an animal stops moving long enough, I get a text alert on my cellphone and an email advising me of a possible mortality to investigate.

This study currently has 4 different wolves wearing tracking collars whose territories are shown below. In addition, we continue to monitor wolves using other means such as trail cameras and your



reports. In addition to what's shown on the previous map, we know the Gist Pack is still present on the east side of Twin Lakes Drive. Based on trail camera pictures there's at least 2 adults and 5 pups, maybe more, in that bunch. There are still wolves using the Cloquet Forestry Center, but I don't have enough information yet to estimate how many or what their current territory looks like. FDL005 was captured back in May, 2021 on the Reservation near the Gist Rd. He was likely off exploring as he quickly moved to an area south of Grand Lake in Solway Township and largely remained there until his collar quit working in July, 2022. He turned up again this past spring on a trail camera, still in the Grand Lake area, and keeping company with at least three pups and one or two other adults.

FDL001 maintains a territory of about 85mi² west of Meadowlands between the St. Louis River and Hwy 73. However, there's a big peat bog in the middle of his territory that he's rarely located on. The amount of country he regularly uses is probably closer to 40mi². I've named his pack the Elmer Pack. Counting FDL001, there were two and possibly 3 adults in the Elmer Pack last winter. The pack clearly had pups by April 17, but a couple weeks later FDL001's locations indicated the pups had probably died. We never found out why, but our late spring may have been a factor as I'm pretty sure the pups were born on top of the ground in a spruce swamp.

In February, one of our bait sites lured a big red wolf along with two others south across the ice on the St. Louis River to the Paupores Rd. west of the Reservation. They liked it enough to come back, and we caught the red one, a 90lb male, in early March. He's now FDL015. He's on the right in the photo below a couple weeks prior to his capture. Another member of his pack is preoccupied chasing away the ravens from our bait.



FDL015 is an older wolf with broken, yellow teeth, a torn ear and a patchy, lice infested hide. With his looks, I don't think he'll ever grace the magazine cover of a well heeled environmental organization. He crossed the river a few more times down to the McCamus Rd. before the ice went out, but since then he's stayed north of the river primarily using a roughly 24mi² area between Brookston and Alborn. St. Louis County has a logging road they call the Battery Forest Rd. in part of his territory, and the opportunity to name a wolf pack, the Battery Pack, was just too good to pass up. There are a

number of small drainages running through his territory, and his location patterns strongly suggest to me that he specializes in hunting beaver. The Battery Pack produced pups very early in the season on about March 18. We were still using snowmobiles and snowshoes at that time, and the pups didn't last very long. Like the Elmer Pack pups, I suspect they were born on top of the ground and exposure to the weather could have been a factor in their deaths.

In September, 2022 we caught and collared male FDL012 who was born in 2021 in the Headquarters Pack which roams between the Brandon and Johnson Rds on the south side of Hwy 2. His mother, wolf 1331, had been on the air in this study for 2.5 years until her collar dropped off in February. FDL012 left home on brief trips in January and February traveling north of Floodwood and down towards Cromwell. By mid-February he left his home territory for good and settled into a new territory of about 29mi² south of Floodwood between Hwy 73 and the Savanna River. He connected with one or more other adult wolves which I've named the Savanna Pack.

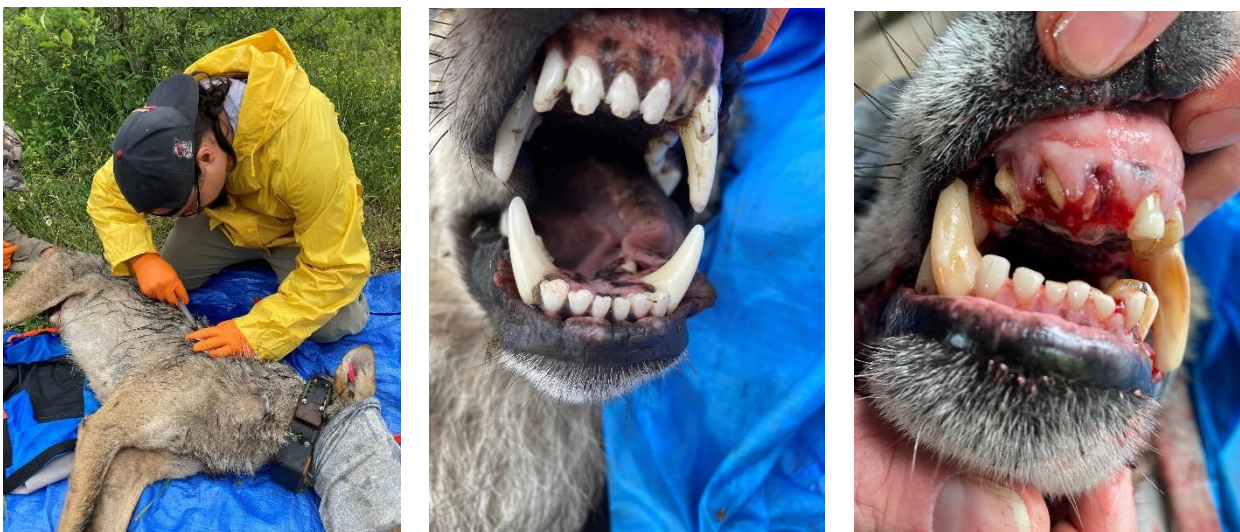
We continue to collaborate with the 1854 Treaty Authority on their wolf pup survival study. Locations from FDL012's collar clearly indicated the Savanna Pack had pups around April 22. She moved her pups after a couple weeks to a new den, and when the pups were about 4 weeks old, we went looking for them accompanied by members of FDL's Indigenous Conservation Corps and students from FDLTCC's Environmental Institute. We located the 5 pups in their new den underneath some blown over trees and collected sex, weight and body measurements and each pup got microchipped and a small, expandable radio collar. Below two FDLTCC students take body measurements while another pup models it's new bling.



I'm commonly asked how the adult wolves react to our den visits. Usually we never see them as they've quietly slipped away during our approach or were miles away hunting. A couple times upset mothers have stood out of sight in the woods and barked at us, but we've never had an adult wolf stand it's ground or otherwise threaten us. The adults are typically back at the den within a few hours of our leaving, and so far, Mom has always moved her pups to a new den within a day or two. After some initial concern, which often includes peeing or pooping on whichever student or volunteer is holding them, the pups typically settle down and sometimes nod off to sleep.

FDL024 was a yearling male and member of the Gist Pack in the northeast corner of the Reservation when we caught him near the Lund Road last August. Except for a couple brief trips back, he largely left the Reservation and his home territory in December of last year. He spent most of the winter in the company of at least two other wolves in an area of about one square mile in the woods across the river from the Sappi plant. By all accounts there were a lot of deer wintering there last winter, and he probably didn't have much reason to leave. Occasionally, he'd cross the ice on the reservoir behind the Scanlon dam and nose around just south of the plant buildings. I called them the Sappi Pack, and they established a den and had pups in that same square mile patch of woods about April 9. Later that month, FDL024 was shot outside of Esko for looking like a coyote. In Minnesota, coyotes can be taken year-round for any reason. Human related mortality in various forms; such as hit by cars or trains, livestock depredation trapping or illegal killing has been responsible for almost all of the adult wolf deaths in this study. We managed to locate the Sappi Pack's den, but by the time we got there, the remaining adults had moved the pups and without a collared animal in the pack, we could no longer track them. I saw a video taken recently from Esko of a wolf jumping into the air to strip junenberries off a bush, so I suspect the pack may still be around.

In June we caught a rail thin 72lb young male next to Rice Portage Lake and gave him eartags to identify him as FDL009. He's remained in the area using an approximately 20mi² territory centered about on First Bridge. So far, his territory looks a lot like the territory of the old Deadfish Pack after they got pushed east from their original range by neighboring wolves in 2022. It wouldn't surprise me if there's a survivor from the Deadfish Pack, possibly female wolf FDL004, with him. We caught a couple the pack's pups in the same location, and a recent sighting from the area suggest the First Bridge Pack numbers at least five or six animals. Below on the left, FDL Natural Resource technician Shaun Himango inserts a microchip under the skin between FDL009's shoulder blades. The center photo is of FDL009's bright white teeth. I estimated his age at perhaps two years old. The photo on the right is a comparison with the much more stained (and broken) teeth of the older Battery Pack wolf FDL015.



This past year, local students Grace Lavan, Finley Holz and Jeremiah Bents used location data generated by this study and a computer mapping program to develop their science fair projects and test their hypotheses. Finley and Jeremiah won top middle school awards for their project, *Wolf (Canis lupus) Tendencies on the Fond du Lac Reservation* at both the northeast regional and the state science

fair competitions. Grace went on to compete in the Genuis Olympiad in Rochester, New York with her project, *A Continuation Study of the Effects of Line 3 Oil Pipeline Construction on Gray Wolves (Canis lupus) on the Fond du Lac Reservation*. Congratulations to all three young scientists on their hard work. It's been a pleasure to be around their enthusiasm.

Our plans for the remainder of this summer and fall include continued monitoring of wolves already on the air and trying to catch a few more animals to add to the study. These past months this study owes a great deal to the help and cooperation of several private landowners, Minnesota Power, the Cloquet Forestry Center, 1854 Treaty Authority biologists Morgan Swingen and Sammi Shimota, USDA-Wildlife Services biologist John Hart, DNR biologists John Erb and Carolin Humpal, FDL Natural Resource technicians; Terry Perrault, Matt Weske, John Goodreau, Eli Goodreau, Jeff Reynolds, Shaun Himango and Ramiro Pacheco, Environmental Specialist Intern Katelynn Reddick and volunteers; Grace Lavan, Finley Holz, Jeremiah Bents, Richard Polson and Lena Thurmond. Lastly, thank you to everyone who has expressed interest in this project, and for sharing your own wolf observations, photos and stories. They're helpful and always welcomed.



Mike Schrage
Wildlife Biologist
Fond du Lac Resource Management Division
1720 Big Lake Rd.
Cloquet, MN 55720
218-878-7103
mikeschrage@fdlrez.com