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Submitted via Email

January 30, 2024

Shauna Marquardt
United States Fish and Wildlife Service
4101 American Boulevard East
Bloomington, MN 55425

Reference: Biological Opinion Annual Report
FWS No. 03E19000-2016-B-001 NorthMet Project and Land Exchange

This document transmits NewRange Copper Nickel LLC's annual report to the U.S. Fish and Wildlife Service (USFWS) per the Biological Opinion Terms and Conditions (T&C) 2c.

Following a conversion and name change under Minnesota Statutes §§ 302A.682-692 in February 2023, Poly Met Mining, Inc. is now NewRange Copper Nickel LLC (NewRange). NewRange is "for all purposes the same entity that existed before the conversion." Minn. Stat § 302A.691, subd.1. This and subsequent submittals and associated documents will now reference NewRange Copper Nickel LLC.

NewRange (PolyMet) completed the Land Exchange with the U.S. Forest Service in June 2018 and had received all necessary permits to construct the NorthMet Project (Project). The final permit received being the U.S. Army Corps of Engineers (USACE) Section 404 permit on March 21, 2019; however, some permits are being held up (stayed, suspended, revoked or remanded) due to ongoing litigation, including the Section 404 permit, and therefore NewRange has not yet commenced construction. We continue to follow measures to minimize the potential for take of Canada lynx, grey wolf, and northern long-eared bat regardless of the project permitting status at this time. Activities completed per the Project's Conservation Measures, Reasonable and Prudent Measures, and Terms and Conditions are listed below:

Conservation Measures

1. **Reclaim Project Area**

   No mining-related construction activities occurred in the Project area in 2023.

2. **Maintain Vegetated Buffers**

   The Project design continues to maintain vegetative buffers.

3. **Limit Public Access to Project Area**

   Public access is restricted from the Project area at all times. NewRange has security staff on site 24 hours a day, seven days a week to patrol the property for trespassers. The only access to the site is through private roads which are either guarded by security staff or are gated and locked. There are signs at all entrance roads to the property identifying it as private lands and that no trespassing is allowed. Camera systems are also in use to alert security staff about trespassers.

4. **Minimize Road Construction and Reclaim Unused Roads**

   No new roads were constructed in 2023 in the Project area. Project design will continue to plan for minimizing disturbance and limiting road construction.

5. **Educate Employees and Public**

   NewRange posts and maintains speed limits of 40 miles per hour or less on Project roads, which minimizes the risk of vehicle mortality to Canada lynx and wolves. NewRange has also developed educational materials specifically to ensure both employees and contractors: 1) are aware of the importance of the area to wildlife such as Canada lynx and wolves, 2) understand that they need to and how to report sick, injured, or dying wildlife along Project area roads or railroads to a NewRange environmental manager, 3) ensure that wastes or other harmful materials are properly disposed of or stored securely, and 4) raise awareness of other actions that could be harmful to wildlife or their habitats. The importance of following these practices is conveyed to employees and contractors, and all contractors to the site are required to review these materials and sign a waiver stating they will follow them.

   No sick, injured, dying, or dead animals near roads within the Project area were reported in 2023.

6. **Canada Lynx Monitoring**

   NewRange (PolyMet) and the U.S. Forest Service (USFS) entered into a funding agreement for the purpose of conducting Canada lynx surveys. NewRange (PolyMet) provided funding in 2019 and again in 2022 in accordance with this agreement, which was extended through September 15, 2027.

   NewRange provided the USFS with access to our Project area in 2023 for the purposes of continued Canada lynx monitoring. Vehicles and snowmobiles were used by the USFS to travel to the mine site and record observations of Canada lynx. The 2023 Canada lynx monitoring report from the USFS is included as an attachment to this submittal.

7. **Preserve and Protect Habitat**

   The Project plan continues to avoid and minimize impacts to habitats as practicable. No trees were cleared during the northern long-eared bat's pup season in 2023.

<u>Reasonable and Prudent Measures</u>

RPM 1. Implement proposed action Conservation Measures to reduce the likelihood of vehicle collisions with lynx and wolf.

As described in the response to Conservation Measures above, NewRange has developed education materials to train employees and contractors, maintained appropriate speed limits on Project area roads, and limited public access in order to reduce the likelihood of vehicle collisions.

RPM 2. Implement measures to reduce the likelihood of injuring or killing any northern long-eared bats during vegetation removal, other mining-related activities, and forest management.

Some vegetation was removed during brushing along access roads, however no large trees were removed during the long-eared bat pup season. Mining-related construction activities did not occur, and no forest management activities took place in 2023.

Terms and Conditions

T&C 1. Hibernacula

No hibernacula have been found in or within 0.25 miles of the Project area.

T&C 2. Reporting

a. No vehicles collisions with Canada lynx or wolf occurred at the Project area in 2023.

b. Personnel and contractors have been trained to report sick, injured, and/or dead bats to NewRange environmental department. One dead bat was reported in the Project area in 2023. The dead bat was found March 30, 2023 in the E16 tunnel at the NorthMet Plant Site and provided to the environmental department for identification and reporting. The bat appeared to have been dead for an extended time prior to discovery and was identified as a tittle brown bat (*Myotis lucifugus*). The bat was photographed and reported to the Minnesota Department of Natural Resources (MDNR) Wildlife Office in Tower, MN, and by their direction, also reported on the MDNR website's Bat Observation Report page.

c. This letter provides a summary of activities completed per the Conservation Measures and the Reasonable and Prudent Measures/Terms and Conditions. No additional wildlife monitoring data was collected for the NorthMet Project in 2023 beyond the USFS' continued Canada lynx surveys.

d. This letter is being provided to the USFWS prior to the January 31, 2024 deadline for the 2023 reporting year.

Should the USFWS have any questions or concerns regarding this transmittal, please do not hesitate to contact me at 218-471-2178 or cam.trembath@newrangecoppernickel.com.

Sincerely,

Cam Trembath

Cam Trembath
Compliance Lead
NewRange Copper Nickel LLC

Attachment: 2023 Canada Lynx Monitoring – New Range Copper Nickel LLC and Surrounding Area

2023 Canada Lynx Monitoring – New Range Copper Nickel LLC (formerly Polymet) and Surrounding Area

Prepared by: Daniel Ryan, Wildlife Biologist, USFS – Superior National Forest

Date: January 26, 2024

Introduction

In 2006, a comprehensive Canada lynx (lynx, *Lynx canadensis*) survey was completed on the PolyMet project site and surrounding townships (see Fig. 1) by ENSR (2006) in preparation for the completion of an Environmental Impact Statement for a proposed mine. Following a conversion and name change in February 2023, Poly Met Mining, Inc. is now NewRange Copper Nickel LLC (NewRange). This and subsequent reports and associated documents will now reference NewRange Copper Nickel LLC. This report summarizes that 2006 survey and compares it to more recent lynx survey work by the United States Forest Service (USFS) from 2015 to present. Through an agreement between New Range and the USFS, New Range provides funding for lynx monitoring in the New Range project area and throughout the rest of the Superior National Forest. This monitoring will continue for a minimum of ten years (until 2029, see project budget below) in accordance with the Biological Opinion (USFWS 2016) and will be summarized in this and future annual reports.

Study Area and Methods

2006 Survey

ENSR studied Canada lynx abundance, movement, and habitat use in the vicinity of the PolyMet Mining Company, Inc. (now New Range Copper Nickel LLC), NorthMet Mine and Ore Processing Facilities Project site in St. Louis County, Minnesota (ENSR 2006).

The study area extended out approximately 6 miles (9.6 kilometers [km]) from the project site and encompassed an area of approximately 250 square miles (647 square km). Field surveys were conducted from January through March 2006. Seven townships within the study area were intensively surveyed for lynx tracks. When lynx or other felid tracks were found, tracks were followed for at least 1.5 miles (2.5 km), or until a scat or hair sample was found. Scat was collected and the DNA was analyzed to determine the species, age, sex, and to determine relatedness of lynx.

Recent Surveys (2015-2023)

USFS incidentally surveyed some of the same areas that were surveyed in 2006 as part of the Forest-wide lynx occupancy survey, which was initiated in 2015 (Hostetter et al. 2020). Starting in 2019, a more concerted effort was made to survey within these townships to prepare for more intensive lynx surveys identified in the Polymet Biological Opinion under Conservation measures (USFWS 2016). New Range agreed to provide funding to assist the USFS with lynx monitoring in the project area and Forest-wide.

Results

Snow Tracking Survey

2006 Survey

Snow tracking surveys were conducted from January 26 to March 25, 2006 (ENSR 2006). ENSR surveyed transects on 33 days and snow-tracked lynx on 11 days with both activities occurring on some days. Approximately 539 miles (862 km) of transect were surveyed in the study area, and 77 miles (123 km) were surveyed in townships adjacent the study area (Table 1, Figures 1). Within the study area, ENSR averaged approximately 16 miles (30 km) of transect per day. Track intercepts were recorded by noting the locations where the lynx approached and left the transect. Lynx track intercepts were found at 22 locations (Figures 7 through 14 in ENSR 2006).

Recent Surveys (2015-2023)

USFS conducted snow track surveys starting in 2015 as part of a Forest-wide Canada lynx occupancy survey following the protocols listed in Hostetter et al. (2020). Surveys were conducted yearly starting as early as November and continuing into April based on personnel and snow conditions (USFS 2020). Tables and figures will use the spring year for identification (e.g. survey period Nov. 2019 to April 2020 will show as 2020). During winter 2019/2020 and winter 2022/2023 two wildlife technicians were hired to conduct a more intensive Forest-wide lynx survey which allowed us to increase miles surveyed. Miles surveyed within the New Range survey area ranged from 96 to 312 miles per year and Forest-wide ranged from 1,970 to 5,384 miles per year (Table 1, Figure 2). Track intercepts per year within the New Range survey area ranged from 0 to 26 between 2015 and 2023.

Table 1. Miles surveyed and track intercepts by Township from 2006 Survey and more recent surveys (2015-2023)

	Miles surveyed (track intercepts) by year and Township									
Township Surveyed	**2006**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Township 58 North, Range 13 West	103.6 (14)	38.0 (3)	37.9	40.1	38.5	59.3 (4)	87.2	38.1	28.7 (1)	75.8 (4)
Township 59 North, Range 12 West	60.9	32.6	1.7	22.1	22.5 (3)	19.9	48.6 (4)	21.6 (1)	1.8	33.0 (11)
Township 59 North, Range 13 West	80.9	11.4	4.4	10.0	13.9	28.1 (1)	36.6 (7)	17.8 (5)	12.0 (8)	45.0 (8)
Township 59 North, Range 14 West	57.0	4.0	7.8	0	3.4	26.8	29.2	11.5	11.5	37.1 (3)
Township 60 North, Range 12 West	103.1 (8)	47.9 (5)	30.9	21.0	24.6	41.9 (6)	40.8	29.2 (1)	37.0	38.5
Township 60 North,	62.9	0	0	1.8	0	0	28.9	8.0	13.8	33.0

Range 13 West										
Township 60 North, Range 14 West	70.6	0	0	8.6	0	0.2	38.3	12.4 (1)	23.5	48.8
TWP TOTALS	**539.0**	**133.9**	**96.7**	**103.6**	**102.9**	**176.2**	**280.4**	**138.6**	**128.3**	**311.2**
Intercepts per mile surveyed in 7 townships	**0.04**	**0.06**	**0**	**0**	**0.03**	**0.06**	**0.04**	**0.06**	**0.07**	**0.08**
Forest wide totals	**N/A**	**1,970**	**2,044**	**2,279**	**2,601**	**2,064**	**5,032**	**3,532**	**3,794**	**5,384**
Intercepts per mile surveyed Forest wide	**N/A**	**0.20**	**0.13**	**0.10**	**0.13**	**0.14**	**0.09**	**0.13**	**0.11**	**0.10**

Figure 1. General location of surveys in 2006 (ENSR 2006).

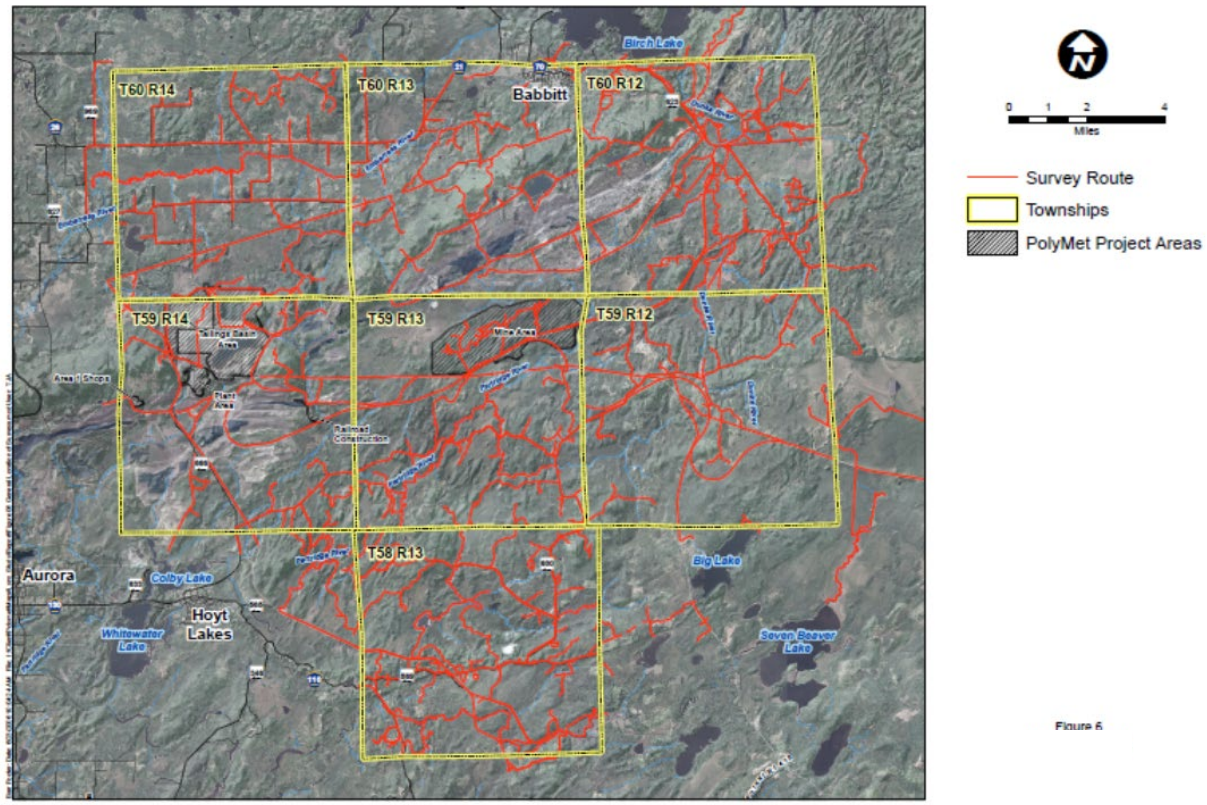
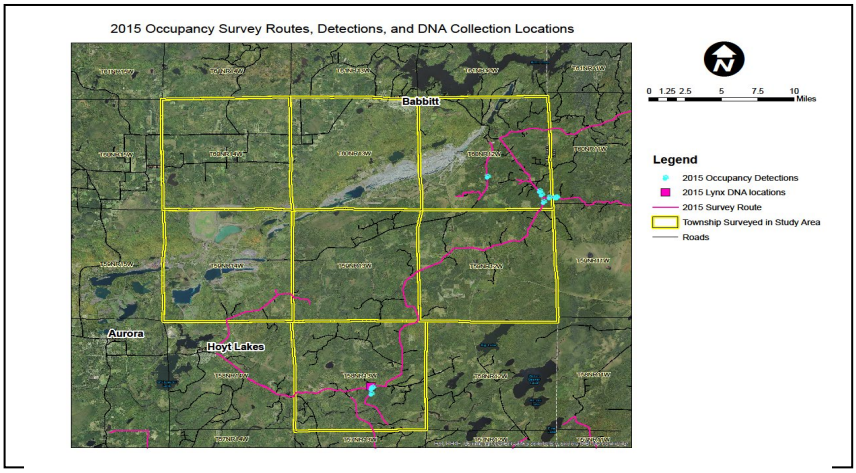
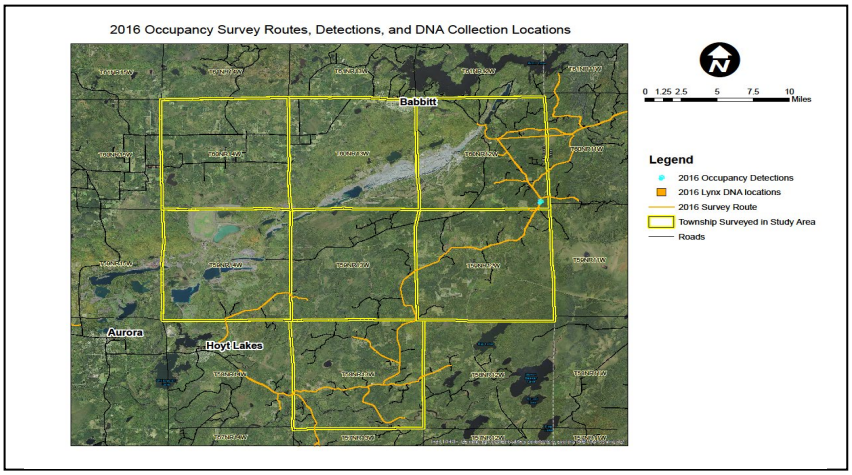


Figure 2. General location of surveys, track detections and DNA locations from 2015-2022

2015



2016



2017

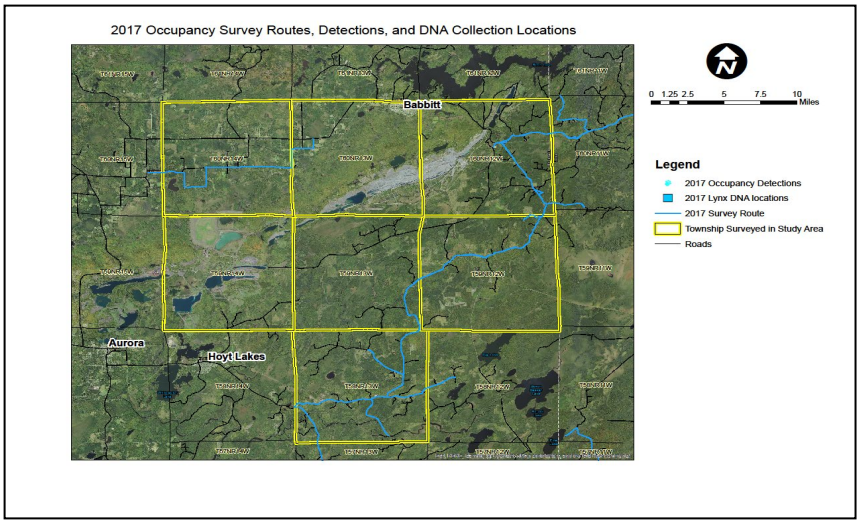
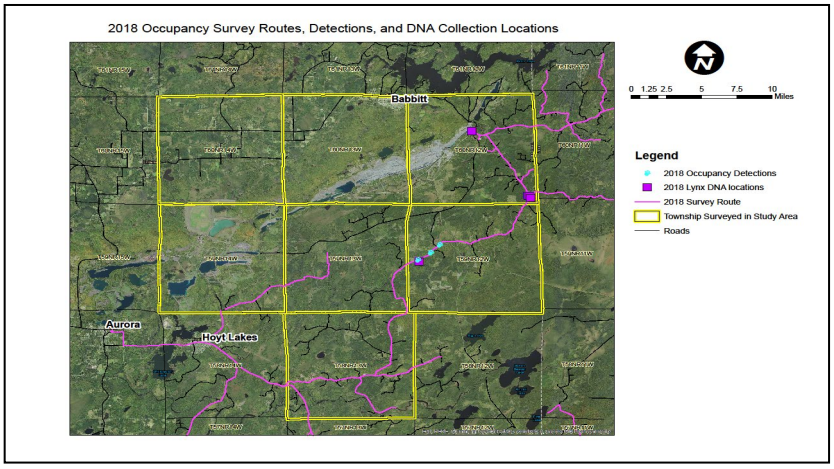
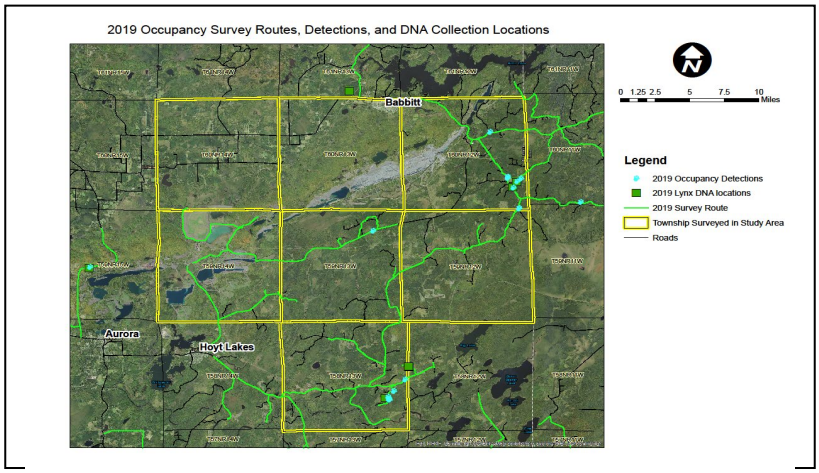


Figure 2. Continued.

2018



2019



2020

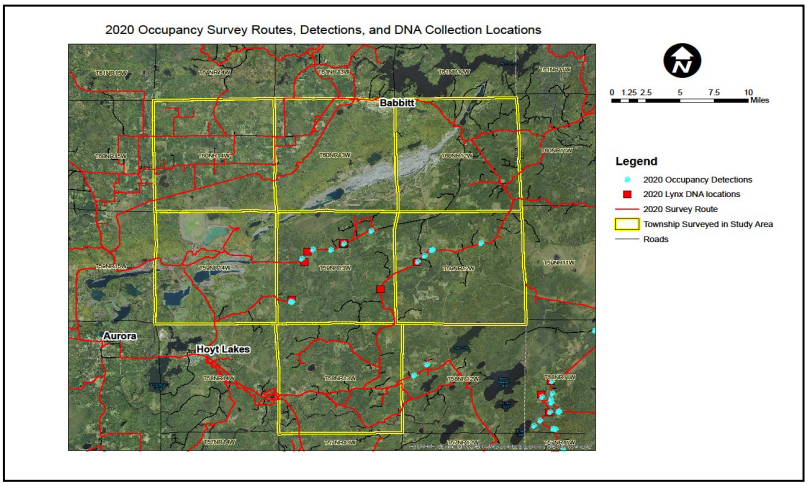
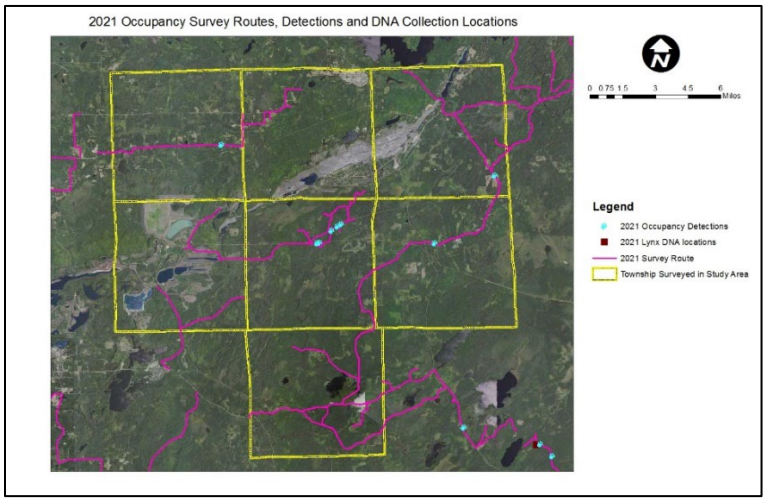
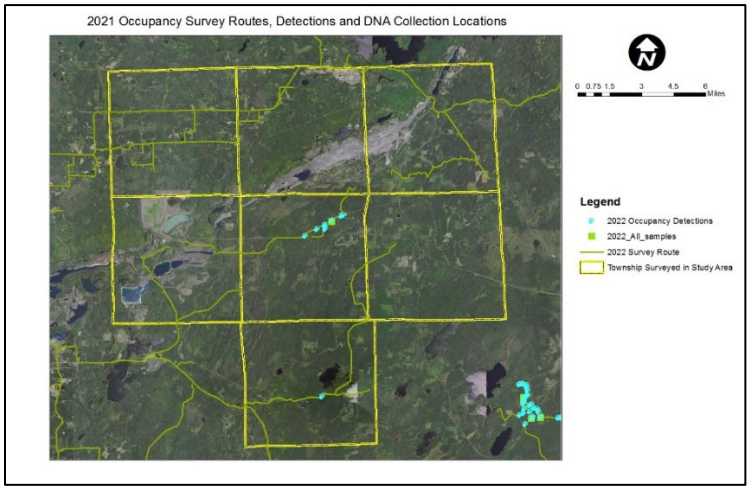


Figure 2. Continued.

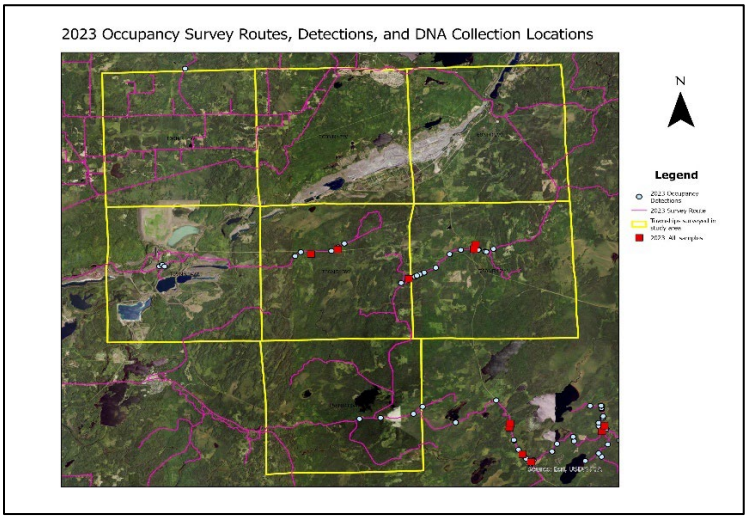
2021



2022



2023



DNA Analysis

2006 Survey

Five scats were collected within the survey area in 2006 (Table 2, Figure 3). Three unique female lynx were identified from the five scats within the survey area.

Recent Surveys (2015-2022)

Zero to 16 scats per year were collected within the survey area from 2015 to 2023 (Appendix A, Figure 4). A total of 22 unique lynx were identified from the 38 total scats collected between 2015-2023 in the survey area. Two family groups with different mothers were in the survey area. One family group was found in 2019 consisting of a female and at least 2 kittens in T58N R13W. The other family group was found in 2020 consisting of a female and at least 3 kittens in T59N R13W. A listing of all individuals found in the project area is included in Appendix A.

Figure 3. Canada lynx locations based on DNA collection in 2006.

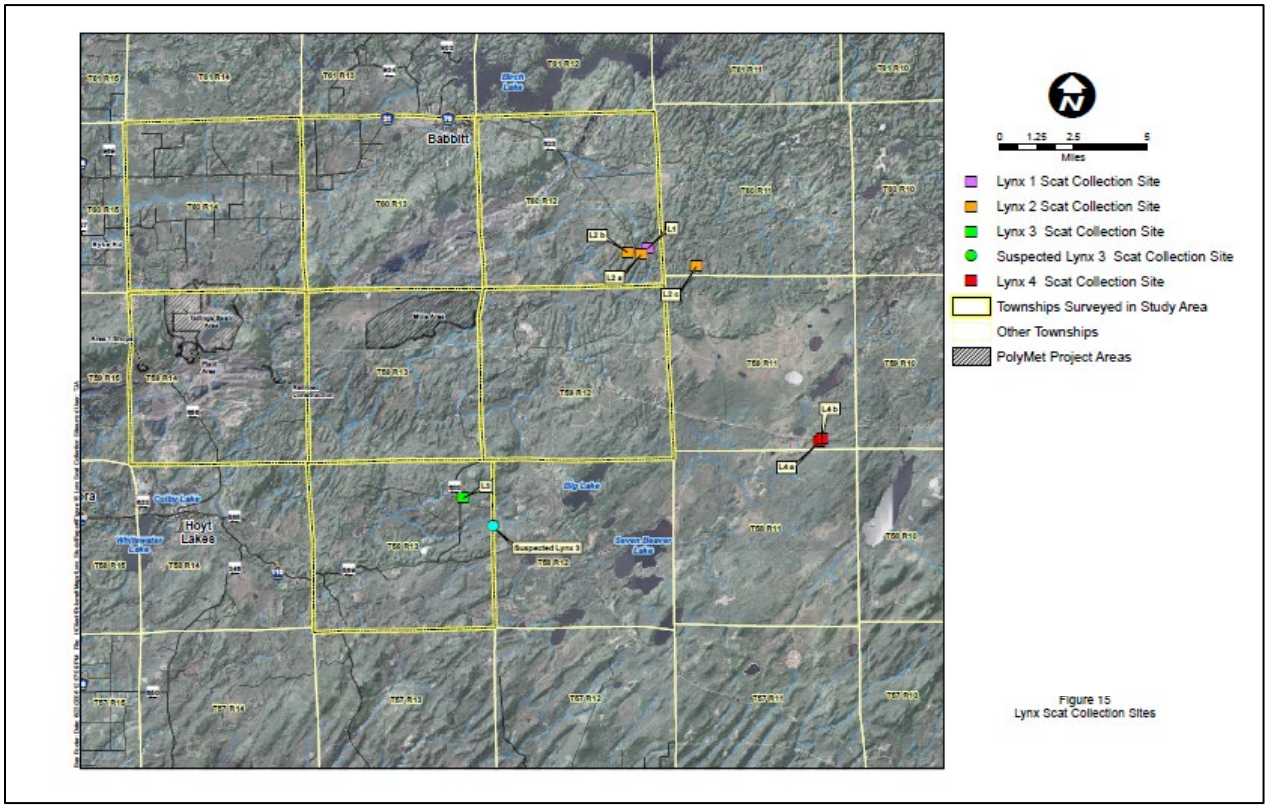
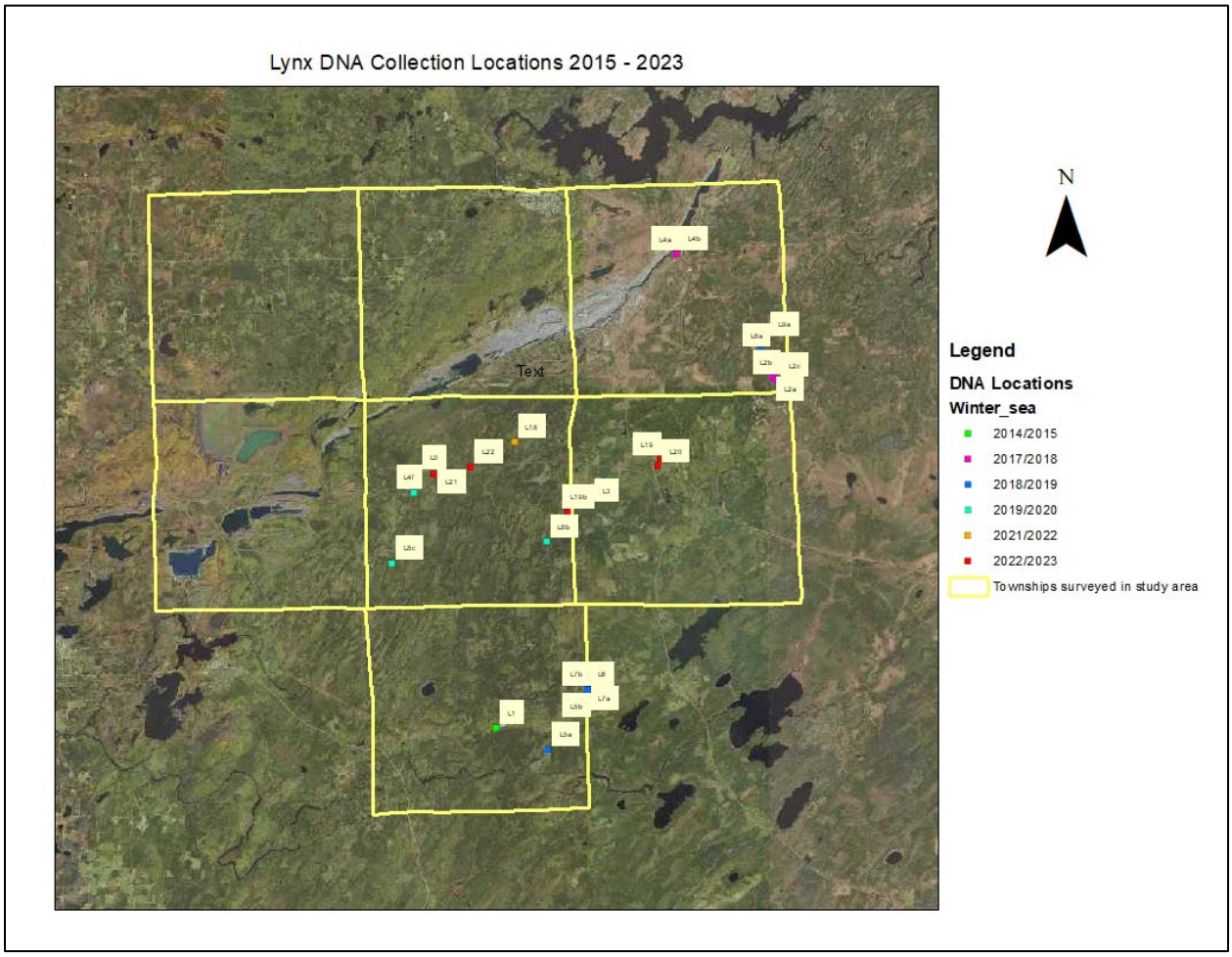


Figure 4. Lynx DNA collection locations 2015-2023.



Project Budget

Two wildlife technicians were hired during the winter of 2019/2020 and winter of 2022/2023 to increase the intensity of lynx occupancy surveys. Winter 2025/2026 is the next planned intensive survey year which would require hiring technicians again.

Year	Salary	Supplies/Vehicle	DNA	**TOTAL**
2019/2020	**$29,293**	**$1,717**	**$4,500**	**$35,510**
2020/2021	**$0**	**$0**	**$0**	**$0**
2021/2022	**$0**	**$0**	**$0**	**$0**
2022/2023	**$23,718**	**$5,199**	**$0**	**$28,917**
2023/2024 (planned)	$0	$0	$3,000	$3,000
2024/2025 (planned)	$0	$0	$3,000	$3,000
2025/2026 (planned)	$30,000	$2,000	$4,000	$36,000
2026/2027 (planned)	$0	$0	$3,000	$3,000
2027/2028 (planned)	$0	$0	$3,000	$3,000
2028/2029 (planned)	$30,000	$3,073	$4,500	$37,573
			TOTAL	$150,000

Discussion

The New Range study area is a small part (less than 1%) of the larger forest-wide occupancy survey (18 km^2 of 22100 km^2), which provides annual estimates of occupancy at the Forest level (Hostetter et al. 2020). This funding helps provide a better estimate of lynx occupancy by increasing survey intensity every three years. Results of the occupancy survey will be reported in the Annual Summary of the Superior National Forest DNA Database and Population Monitoring report and a brief summary is included in Appendix B of this report.

The monitoring project on the Superior National Forest has also allowed us to use non-invasive genetic capture-mark-recapture to estimate abundance, trend and density estimates for lynx in northeast Minnesota (Barber-Meyer et al. 2018). Appendix C shows a population estimate chart generated from these data updated with information from 2022/2023 regarding the larger core areas consistently surveyed since 2015 and the smaller core areas that have been consistently surveyed since 2012.

The study area specific information such as locations, habitat use, and reproduction in this report has the potential to be used in the future to document changes in lynx use of the area. It will provide a good baseline measure of occupancy conditions for the seven-township area. There are several factors besides mine development that can influence lynx numbers: they're naturally cyclic in nature, vegetation management on other ownerships, other development on private lands, weather conditions, etc. Future discussions will need to take these variables into consideration, as well. The most important use of this information will be at the larger Forest-wide scale.

References

Barber-Meyer, S., D. Ryan, D. Grosshuesch, T. Catton and S. Malick-Wahls. 2018. Use of non- invasive genetics to generate core-area population estimates of a threatened predator in the Superior National Forest. Canadian Wildlife Biology & Management. 7 (1): pp.46–55.

ENSR. 2006. 2006 Canada Lynx Assessment. Report Prepared for PolyMet Mining Co., Inc. Hoyt Lakes, MN. Redmond, WA.

Hostetter, N.J., D. Ryan, D. Grosshuesch, T. Catton, S. Malick-Wahls, T.A. Smith and B. Gardner. 2020. Quantifying spatiotemporal occupancy dynamics and multi-year core-use areas at a species range boundary. Diversity and Distributions. 26 (7): pp.795-805.

USFS. 2020. Summary of the Superior National Forest's 2019 Canada lynx (Lynx canadensis) DNA database and population monitoring.

USFWS. 2016. BIOLOGICAL OPINION: Effects to Canada Lynx, Gray Wolf, and Northern Long-eared Bat From the Proposed NorthMet Project and Land Exchange. FWS No. 03E19000-2016-B-0001

Appendix A. Individual lynx identified by year within the survey area.

Winter Season	Individual	Identifier**	Collection Date	Species	Sex	Sample	Township
2006	Loch-S-06/P	**L1**	2/4/2006	Lynx	Female	Loch-S-06/P	Township 60 North, Range 12 West
	Loch-S-08/P	**L2a**	2/7/2006	Lynx	Female	Loch-S-08/P	Township 60 North, Range 12 West
	Loch-S-08/P	**L2b**	2/8/2006	Lynx	Female	Loch-S-09/P	Township 60 North, Range 12 West
	GLNR-S-199	**L3**	3/13/2006	Lynx	Female	Loch-S-14/P	Township 58 North, Range 13 West
	Unknown*	**L0**	3/11/2006	Lynx	Unknown	Loch-S-13/P	Township 58 North, Range 13 West
2015	GLNR-S-736	**L1**	1/14/2015	Lynx	Male	GLNR-S-736	Township 58 North, Range 13 West
2016	none						
2017	none						
2018	GLNR-S-1085	**L2a**	12/8/2017	Lynx	Male	GLNR-S-1085	Township 60 North, Range 12 West
	GLNR-S-1085	**L2b**	12/8/2017	Lynx	Male	GLNR-S-1092	Township 60 North, Range 12 West
	GLNR-S-1085	**L2c**	12/8/2017	Lynx	Male	GLNR-S-1093	Township 60 North, Range 12 West
	GLNR-S-1163	**L3**	1/23/2018	Lynx	Male	GLNR-S-1163	Township 59 North, Range 12 West
	GLNR-S-1216	**L4a**	2/10/2018	Lynx	Male	GLNR-S-1216	Township 60 North, Range 12 West
	GLNR-S-1216	**L4b**	2/10/2018	Lynx	Male	GLNR-S-1217	Township 60 North, Range 12 West
2019	GLNR-S-1295re	**L5a**	2/1/2019	Lynx	Female	GLNR-S-1295re	Township 58 North, Range 13 West
	GLNR-S-1295re	**L5b**	2/11/2019	Lynx	Female	GLNR-S-1297reB	Township 58 North, Range 12 West
	GLNR-S-1298reB	**L6**	2/11/2019	Lynx	Female	GLNR-S-1298reB	Township 58 North, Range 12 West
	GLNR-S-1299reB	**L7a**	2/11/2019	Lynx	Female	GLNR-S-1299reB	Township 58 North, Range 12 West
	GLNR-S-1299reB	**L7b**	2/11/2019	Lynx	Female	GLNR-S-1300reB	Township 58 North, Range 12 West
	GLNR-S-1330	**L8a**	2/1/2019	Lynx	Male	GLNR-S-1330	Township 60 North, Range 12 West
	GLNR-S-1336	**L9a**	2/15/2019	Lynx	Female	GLNR-S-1336	Township 60 North, Range 12 West
	GLNR--1216	**L4c**	2/27/2019	Lynx	Male	GLNR-S-1396	Township 61 North, Range 13 West
	GLNR-S-1296re	**L10**	2/2/2019	Lynx	Male	GLNR-S-1296re	Township 59 North, Range 15 West

2020	GLNR-S-1330	**L8b**	12/26/2019	Lynx	Male	GLNR-S-1477	Township 59 North, Range 13 West
	GLNR-S-1330	**L8c**	2/11/2020	Lynx	Male	GLNR-S-1529	Township 59 North, Range 13 West
	GLNR--1216	**L4d**	2/4/2020	Lynx	Male	GLNR-S-1502	Township 59 North, Range 12 West
	GLNR--1216	**L4e**	2/20/2020	Lynx	Male	GLNR-S-1532	Township 59 North, Range 13 West
	GLNR--1216	**L4f**	2/20/2020	Lynx	Male	GLNR-S-1534	Township 59 North, Range 13 West
	GLNR-S-1159	**L11a**	2/10/2020	Lynx	Male	GLNR-S-1530re	Township 58 North, Range 11 West
	GLNR-S-1159	**L11b**	2/10/2020	Lynx	Male	GLNR-S-1531re	Township 58 North, Range 11 West
	GLNR-S-1533	**L12**	2/20/2020	Lynx	Female	GLNR-S-1533	Township 59 North, Range 13 West
	GLNR-S-1535re	**L13a**	2/20/2020	Lynx	Female	GLNR-S-1535re	Township 59 North, Range 13 West
	GLNR-S-1535re	**L13b**	2/20/2020	Lynx	Female	GLNR-S-1539re	Township 59 North, Range 13 West
	GLNR-S-1336	**L9b**	2/20/2020	Lynx	Female	GLNR-S-1536re	Township 59 North, Range 13 West
	GLNR-S-1537	**L14**	2/20/2020	Lynx	Female	GLNR-S-1537	Township 59 North, Range 13 West
	GLNR-S-1538	**L15**	2/20/2020	Lynx	Male	GLNR-S-1538	Township 59 North, Range 13 West
	GLNR-S-1540re	**L16**	2/20/2020	Lynx	Male	GLNR-S-1540re	Township 59 North, Range 13 West
	GLNR-S-1542	**L17**	2/10/2020	Lynx	Male	GLNR-S-1542	Township 58 North, Range 11 West
	Lynx 0*	**L0**	2/20/2020	Lynx	Unknown	GLNR-S-1543re	Township 59 North, Range 13 West
2021	none						
2022	GLNR-S-1510	**L18**	3/4/22	Lynx	Male	GLNR-S-1996	Township 59 North, Range 13 West
2023	GLNR-S-2052	**L19**	12/12/2022	Lynx	Female	GLNR-S-2052	Township 59 North, Range 12 West
	GLNR-S-2071	**L20**	12/8/2022	Lynx	Male	GLNR-S-2071	Township 59 North, Range 12 West
	GLNR-S-2052	**L19b**	2/2/2023	Lynx	Female	GLNR-S-2250	Township 59 North, Range 13 West
	GLNR-S-2261	**L21**	2/22/2023	Lynx	Male	GLNR-S-2261	Township 59 North, Range 13 West
	GLNR-S-2071	**L22**	2/22/2023	Lynx	Male	GLNR-S-2262	Township 59 North, Range 13 West

*poor DNA unable to ID sex

** Identifier is only for labeling on the figures and is not comparable between years. The Individual column is the unique lynx identifier given by the lab.

Appendix B. Occupancy Survey Results

Survey Effort

Table B. Annual and cumulative survey effort across the 884 grid cells.

Winter	Start	End	KM surveyed	Days with Surveys	Unique cells surveyed	Cells with detections
2014-15	11/20/2014	3/11/2015	3,170	45	242	66
2015-16	11/20/2015	4/7/2016	3,290	50	286	39
2016-17	11/20/2016	3/14/2017	3,668	49	267	38
2017-18	10/30/2017	4/5/2018	4,186	60	304	71
2018-19	11/8/2018	4/3/2019	3,367	38	299	74
2019-20	11/5/2019	3/30/2020	7,897	89	476	76
2020-21	10/20/2020	3/25/2021	5,633	77	427	83
2021-22	11/15/2021	4/28/2022	5,947	68	382	86
2022-23	11/18/2022	4/24/2023	8,665	73	562	131
Total			45,824	549	628	223

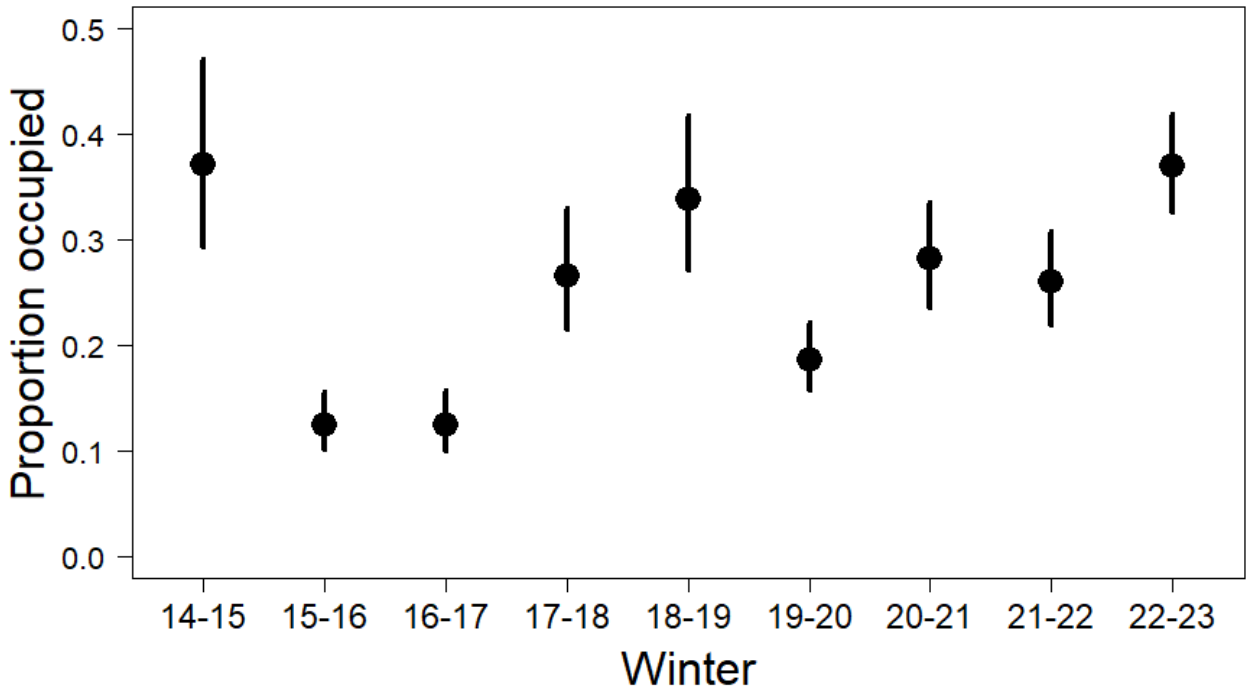


Fig B. Proportion of sites occupied (median, 95% credible intervals)

Appendix C. Mark Recapture Results

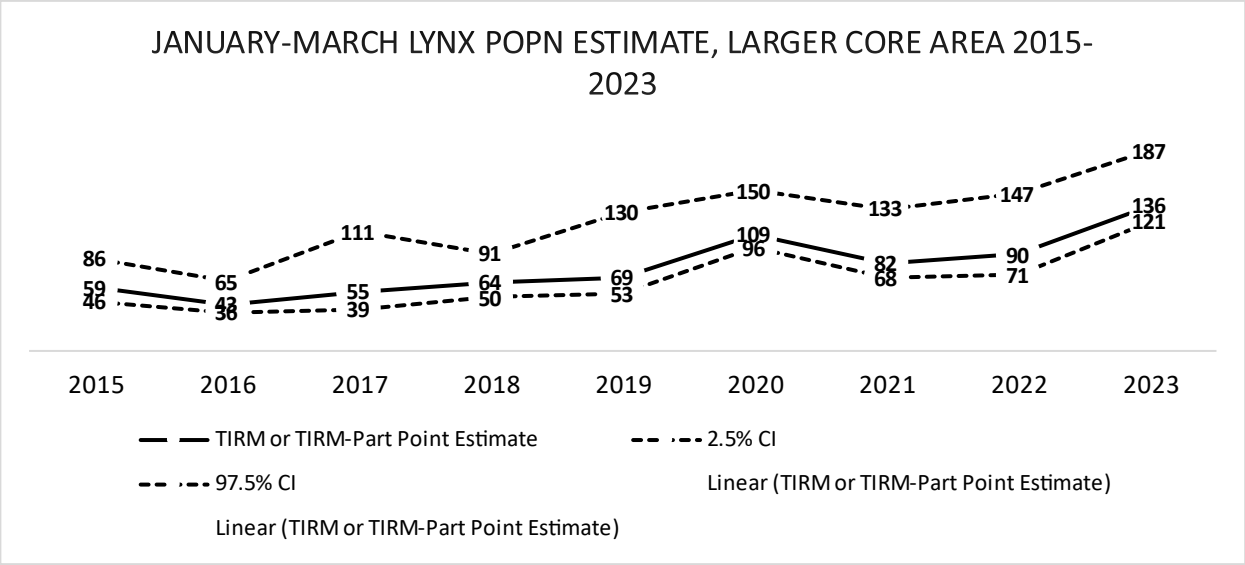


Figure C. Lynx population point estimates and 95% confidence intervals generated using capture-mark-recapture analysis of genetic samples for larger core areas consistently surveyed from January-March of 2015-2023 in the Superior National Forest, Minnesota, USA. Adapted from Barber-Meyer et al. 2018.

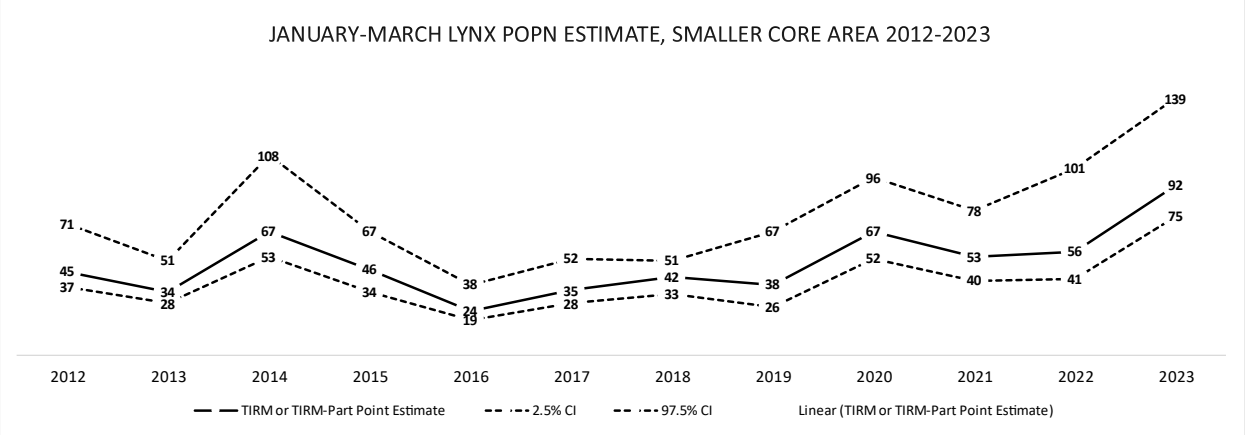


Figure C2. Lynx population point estimates and 95% confidence intervals generated using capture-mark-recapture analysis of genetic samples for smaller core areas consistently surveyed from January-March of 2012-2023 in the Superior National Forest, Minnesota, USA. Adapted from Barber-Meyer et al. 2018.