

MX-13 Population Survey Report: Executive Summary

Prior to the enactment of protection in 1917, muskox populations throughout the central arctic were hunted to near extirpation. Muskox populations throughout Nunavut are currently re-colonizing much of their historical range, but there remain gaps in information on the status of muskox populations in much of the eastern Mainland. At its greatest extent, the distribution and abundance of muskox in the Kivalliq region of Nunavut has occurred within an area extending south of Latitude 66° north, west to the Northwest Territories/Thelon Game Sanctuary boundaries, east to the Hudson Bay coastline and south to the Manitoba border. Distribution and abundance of muskox within the Kivalliq reliably occurs within a slightly smaller geographic area that has been expanding for over 50 years.

Kivalliq muskox subpopulation abundances were estimated using fixed-width line transect surveys in July of 1985, July 1986, July 1991, and July 1999. By 2010, concerns were raised over the ten-year lapse of information coupled with hunters' observations of muskox closer to communities. A re-evaluation of the central Kivalliq muskox status was conducted in July 2010, and July/August 2016, while a re-assessment of the Northern Kivalliq Muskox subpopulation was undertaken in July 2012 and most recently in July/August 2017. Based on these most recent survey results, central Kivalliq muskox numbers steadily increased up to July 2010, and then appeared to have stabilized between 2010 and 2016. The most recent survey of the northern Kivalliq subpopulation also show an increasing trend between July 2000 and 2012.

To date, there are no indications of health problems within the herd. A research program examining the distribution of the lungworm (*Omingmakstrongylus pallikuukensis*) amongst mainland muskox has been initiated in MX-10 but all tests have shown no indication of presence in the Kivalliq subpopulations. Future research should continue to examine the extent to which muskox have occupied range outside presently defined management areas.

Recently, hunters have been reporting increased observations of muskox closer to their communities both south and east of previously known distributions. Ideally, communities in the Kivalliq region would like to have easier access to healthy muskox populations. Both population estimates and distribution observations discussed in their respective reports will provide information that will enable regional wildlife organizations, local HTOs and biologists to determine the potential long-term effects of current harvest regimes on muskox populations in the Kivalliq while providing information on the continued expansion of muskox into their historical range.

Based on the results derived from strip transect quantitative methods, total allowable harvests for the 2 populations of muskox within the Kivalliq region (one north of the Thelon/Chesterfield Inlet waterways (Northern Kivalliq – MX-10) and the second south (Central Kivalliq – MX-13) are currently based on 5% of the

estimated adult muskox population (lower 95% confidence limit). At present within the Nunavut Wildlife Act and Regulations, a total allowable harvest (TAH) of 182 muskox is recommended for the central Kivalliq muskox population (MX-13).

At this time, and based on the 2016 population re-assessment of muskox in the central Kivalliq region, which shows that population is stable, there is no recommended change to the TAH of 182 and no other, new management recommendations being made by the DOE to the Nunavut Wildlife Management Board regarding MX10.

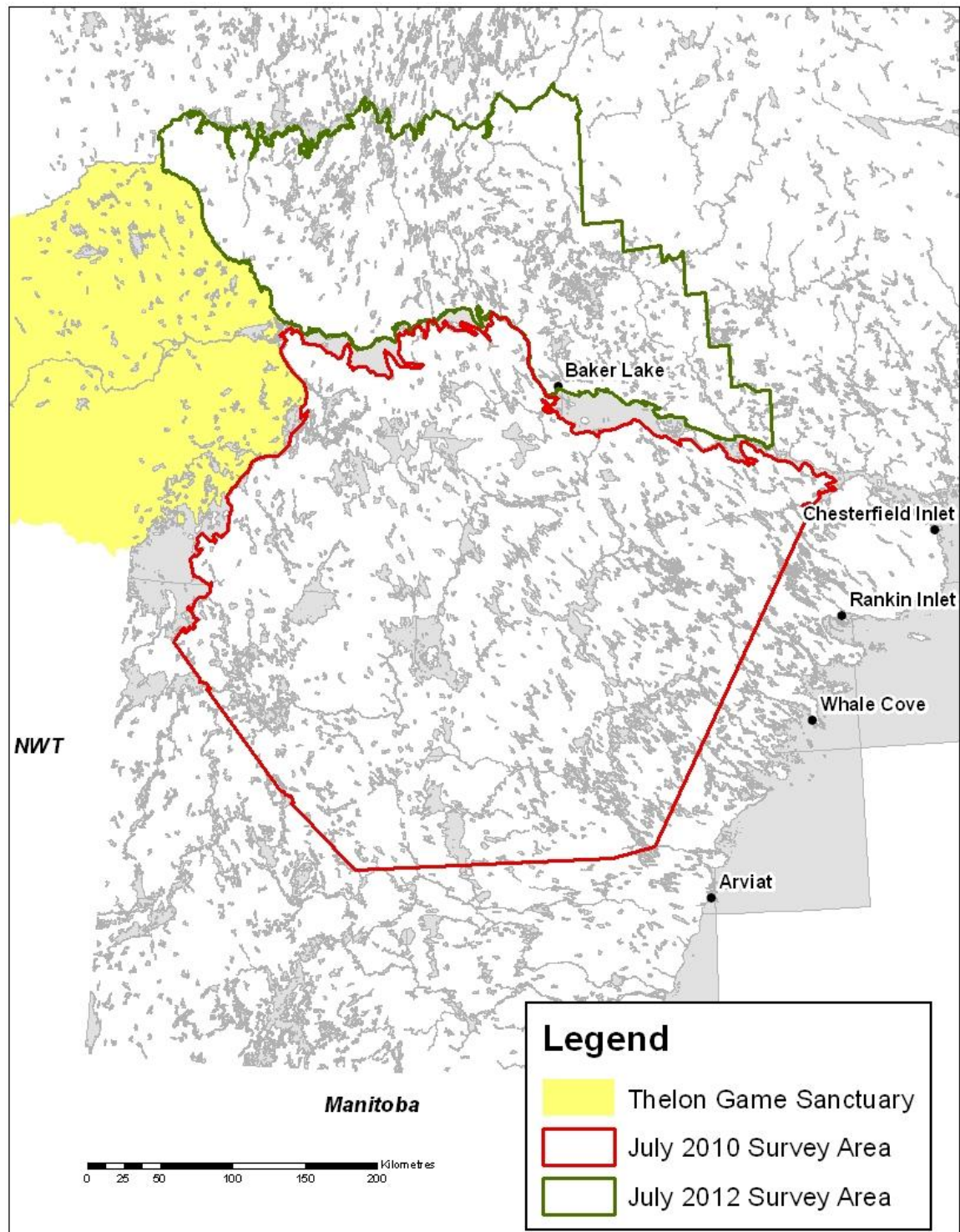


Figure 1. Survey study areas for the central (July 2010 &16) and northern (July 2012) Kivalliq muskox subpopulations (MX-13 & MX-10).

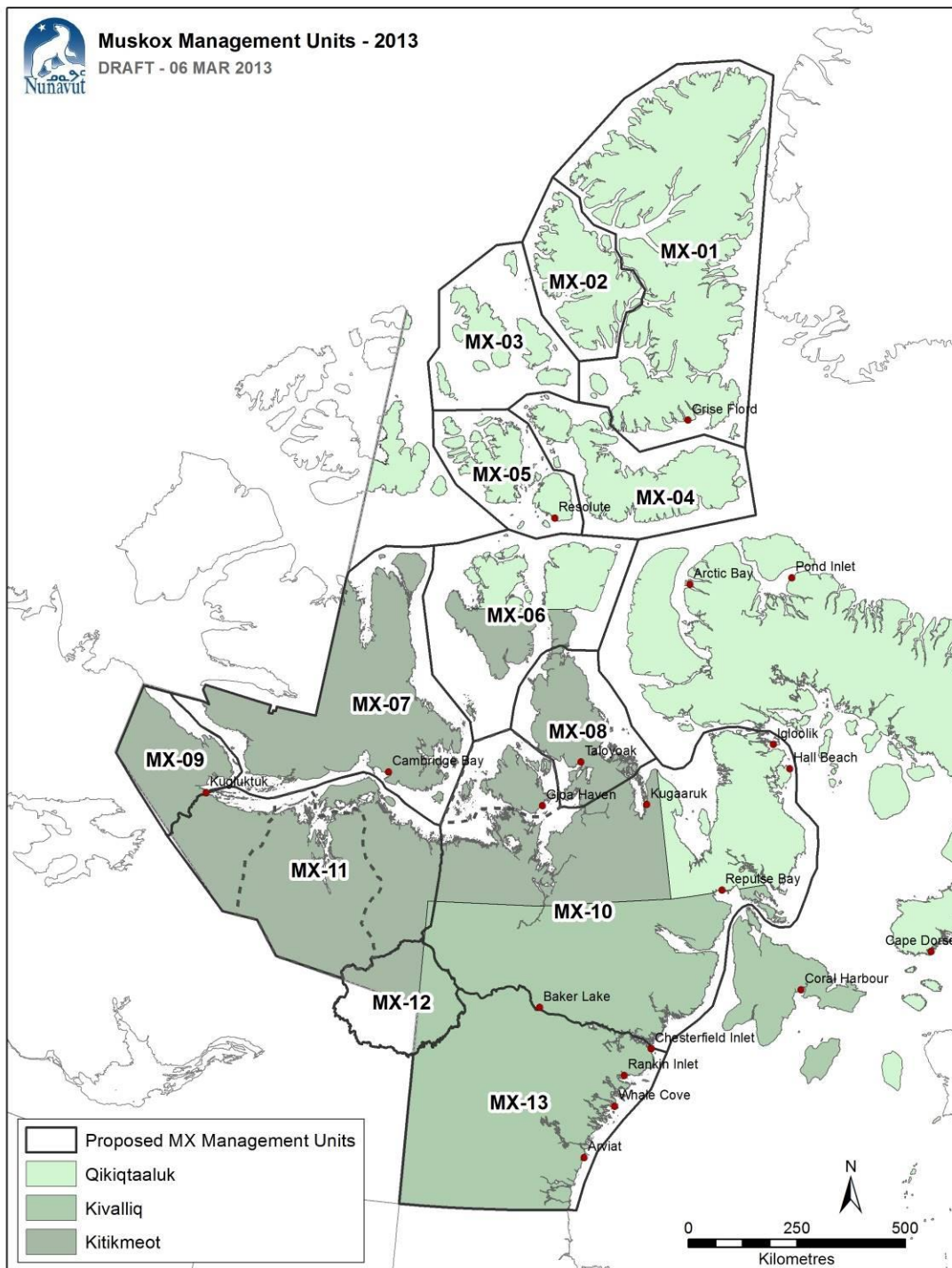


Figure 2. Nunavut Muskox Management Units. The Northern Kivalliq muskox subpopulation extents are represented by MX-10, and the central Kivalliq muskox subpopulation extents are represented by MX-13.