

## PROJECT PROGRESS REPORT

**PROJECT NUMBER:** 2-14-05

**RESEARCHER:** Stephen Atkinson

**TITLE:** Genetic mark-recapture survey of polar bears in Kane Basin

**ORIGINALLY FUNDED:** 2014-2015

**NWMB FUNDING:** \$65,000

**PROJECT SUMMARY:** This is a three year research project that began in 2012 to provide updated information on the Kane Basin polar bear sub-population. The objectives of this research are to: 1) estimate the abundance and composition of polar bears in Kane Basin; 2) compare new estimates of abundance with those derived from earlier studies in-order to gain insight into population trend; 3) estimate survival and reproductive parameters (to the extent possible) in-order to facilitate population viability analyses; 4) delineate the boundaries of the Kane Basin sub-population and reassess the validity of this area as a demographic unit; and 5) evaluate polar bear distribution and habitat use with respect to environmental variables, particularly ice conditions, topography and food availability distribution

### FINANCIAL REPORT:

<b>Amount from NWMB:</b>	\$ 65,000
<b>Amount from Others:</b>	\$286,300
<b>TOTAL</b>	\$ 351,300
<b>Expenses:</b>	\$ 311,720
<b>Difference</b>	+ \$36,102 (\$6,679.84 to be returned to NWMB)

**COMMENTS:** 2014 was the final year of data collection for the study. Between April 28 and May 19, a total of 84 polar bears of various age classes and both sexes were encountered. Of these, 59 were biopsy darted to obtain DNA for the genetic mark-recapture. The remaining 25 individuals were cubs-of-the-year too small to safely dart. Concurrent with the mark-recapture sampling, an aerial survey was conducted for comparison purposes. A total of 71 bears in 41 groups were observed during the survey. Twelve collars deployed in 2012 and 2013 are still collecting data and are due to release or be removed in 2015. Analyses of mark-recapture, aerial survey and telemetry data are ongoing and final results are expected in the spring of 2015. As indicated in the interim financial report, the amount of fuel caching anticipated in the budget was reduced because a source of fuel already cached in Greenland was identified.

### RECOMMENDATIONS:

1. NWMB Wildlife staff do not have any recommendations for this reporting period. The project leader has met all of the reporting requirements to date. A final financial report will be required by June 30<sup>th</sup> 2015 as per the NWRT policy. Project results will be captured in the final project report which is required by September 30<sup>th</sup>, 2015.

**CONSULTATIONS:** Sarah Spencer, Wildlife Management Biologist, NWMB

**PREPARED BY:** Karla Letto, Wildlife Management Biologist, NWMB