

2016 Socio-Economic Monitoring Report for the Mary River Project

March 2017

Prepared For:
Baffinland Iron Mines Corporation
2275 Upper Middle Road East, Suite 300
Oakville, Ontario
L6H 0C3

Jason Prno
CONSULTING SERVICES LTD

420 George Street, Suite 210
Peterborough, Ontario • K9H 3R5
(519) 983-8483 • www.jpchl.com

Report Contributors

This report has been prepared by Jason Prno (PhD) of Jason Prno Consulting Services Ltd. on behalf of Baffinland Iron Mines Corporation. This report has been reviewed and edited by Baffinland Iron Mines Corporation and contains various company statements.

Suggested Citation

Jason Prno Consulting Services Ltd. 2017. *2016 Socio-Economic Monitoring Report for the Mary River Project*. Report prepared for Baffinland Iron Mines Corporation. March 2017.

EXECUTIVE SUMMARY

This report has assessed the socio-economic performance of the Mary River Project in 2016, as well as Baffinland's compliance with various Project Certificate conditions. Performance was assessed using socio-economic indicators for a number of Valued Socio-Economic Components (VSECs) included in the Final Environmental Impact Statement (EIS):

- Population demographics
- Education and training
- Livelihood and employment
- Contracting and business opportunities
- Human health and well-being
- Community infrastructure and public services
- Resources and land use
- Economic development and self-reliance
- Benefits, royalty, and taxation

The information presented in this report supports many of the Final EIS predictions for these VSECs and identifies positive effects the Project has had. For example, approximately 1,881,506 hours of Project labour were performed by Baffinland employees and contractors in Nunavut in 2016, which was equal to approximately 905 full time equivalent positions. Of this total, 305,836 hours were worked by residents of the Local Study Area (LSA). In addition, approximately \$7.6 million in payroll was provided to Baffinland LSA employees (not including contractors) and \$64.4 million was spent on procurement with Inuit-owned businesses and joint ventures in 2016.

Employment in the LSA is one area where Project activities didn't fully match Final EIS predictions in 2016. For example, LSA employment hours in 2016 were slightly lower than originally predicted (although North Baffin LSA employment hours *did* correspond with Final EIS predictions). Likewise, there were several Inuit employee departures in 2016. Baffinland continues to take positive steps to address the issue of Inuit employment and is in the process of finalizing an Inuit Human Resources Strategy (IHRS) and Inuit Contracting and Procurement Strategy (ICPS). These documents will describe goals and initiatives that will be used to increase Inuit employment and contracting at the Project. The ongoing establishment of an annual Minimum Inuit Employment Goal (MIEG) with the QIA should also assist with increasing Inuit employment. However, additional monitoring will be necessary to track the success of these and other Baffinland Inuit employment programs. Baffinland will also continue to track employee turnover causes and outcomes, moving forward.

Where appropriate, trends have been described for the indicators assessed in this report. These trends (i.e. pre-development, post-development, and since the previous year) demonstrate whether an indicator has exhibited change and describes the direction of that change. Trend analyses can also be useful for assessing potential Project influences on an indicator. The table that follows summarizes the information and trends observed in 2016 relative to previous years. In some cases, additional data and monitoring will be necessary before the Final EIS predictions presented in this report can be fully verified. In others, direct correlations between the Project and data trends were either unable to be identified or were unclear. The process of socio-economic monitoring often requires many years of data to effectively discern trends and causality. Even then, various factors may be found to influence causality and some of these may not be easy to measure. Successful socio-economic monitoring for the

Project will require appropriate long-term data, the regular input of all Project stakeholders, and a focus on continuous improvement.

2016 Socio-Economic Monitoring Reporting Summary for Baffinland Iron Mines Corporation's Mary River Project

VSEC	Indicator(s)	Pre-Development Trend	Post-Development Trend	Trend Since Previous Year	Scale	Summary
Population Demographics	Known in-migrations of non-Inuit Project employees and contractors	n/a	No change	No change	North Baffin LSA	Since 2015, a net of zero known non-Inuit employees/contractors have in-migrated to the North Baffin LSA
	In-migration of non-Inuit to the North Baffin LSA	n/a	n/a	n/a	North Baffin LSA	Limited data currently available. However, the percentage of Inuit vs. non-Inuit residents in the North Baffin LSA has remained relatively constant.
	Known out-migrations of Inuit Project employees and contractors	n/a	↑	↑	North Baffin LSA	Since 2015, a net of three known Inuit employees/contractors have out-migrated from the North Baffin LSA
	Out-migration of Inuit from the North Baffin LSA	n/a	n/a	n/a	North Baffin LSA	Limited data currently available. However, the percentage of Inuit vs. non-Inuit residents in the North Baffin LSA has remained relatively constant.
	Population estimates	↑	↑	↑	North Baffin LSA Iqaluit	Population numbers continue to increase across the territory
	Nunavut annual net migration	↓	↓	↓	Territory	A downward trend in Nunavut annual net migration is occurring
	Employee changes of address, housing status, and migration intentions	n/a	n/a	n/a	Project	20.9% of Employee Information Survey respondents (43 surveys total) housing situation changed in the past 12 months. 16.3% moved (either to different housing or a different community) and 7.0% moved to a different community. 16.3% intend to move to a different community in the next 12 months. 7.0% intend to move away from the North Baffin LSA. No individuals intend to move into the North Baffin LSA. Over two-thirds of respondents currently live in public housing.
	Employee origin	n/a	n/a	n/a	Project	An average of 1180 individuals worked at the Project in 2016, of which 182 were Inuit. Most the Project's Inuit employees and contractors were based in the North Baffin LSA communities. Most of the Project's non-Inuit employees and contractors were based in Canadian locations outside of Nunavut.
Education and Training	Participation in pre-employment training	n/a	↑	n/a (not offered 2014-2016)	Project	Since 2012, there have been 277 graduates of Baffinland pre-employment training programs. A new Work Ready program will be delivered in local communities in 2017.
	Number of secondary school graduates	↑ ↓	↓ ↓	↑ ↑	North Baffin LSA Iqaluit	A long-term decrease in graduation numbers is apparent in Iqaluit and was evident prior to the Project. A decrease in the North Baffin LSA has occurred since the Project, after experiencing a prior increase. However, a similar decrease has occurred throughout the territory as a whole.
	Secondary school graduation rate	↓	↓	↑	Region	A long-term decrease in graduation rates is apparent in the region and was evident prior to the Project
	Hours of training completed by Inuit employees	n/a	↑	↓	Project	Inuit received 2,434 hours of training in 2016 and a total of 11,843 training hours since Project development
	Types of training provided to Inuit employees	n/a	↑	No change	Project	Inuit continue to receive various forms of Project-related training
	Apprenticeships and other opportunities	n/a	↑	↓	Project	One Inuit apprentice worked at the Project in 2016
	Education and employment status prior to Project employment	n/a	n/a	n/a	Project	37.2% of Employee Information Survey respondents (43 surveys total) had no certificate, diploma or degree, 23.3% of respondents had a high school diploma or equivalent, and 34.9% of respondents had higher than a high school diploma or equivalent. 20.9% resigned from a previous job placement to take up employment with the Project (no individuals resigned from an academic or vocational program).
Livelihood and Employment	Total hours of Project labour performed in Nunavut	n/a	↑	↑	Project	1,881,506 hours of labour were performed in Nunavut in 2016 and 6,456,646 hours of labour have been performed since Project development
	Project hours worked by LSA employees and contractors	n/a	↑ ↑	↑ ↓	North Baffin LSA Iqaluit	230,732 hours of labour were performed by North Baffin LSA residents (12.3% of total) and 75,104 hours of labour were performed by Iqaluit residents (4.0% of total) in 2016
	Inuit employee promotions	n/a	↑	No change	Project	14 Inuit employee promotions occurred in 2016
	Inuit employee turnover	n/a	↑	↑ (total number of departures)	Project	There were 44 Inuit employee departures in 2016, equating to an Inuit employee turnover rate of 45%
	Hours worked by female employees and contractors	n/a	↑	↓ (% hours worked compared to Q4 2015)	Project	151,128 hours were worked by female employees and contractors in 2016 (8.0% of total), 68,862 hours of which were worked by Inuit females (3.7% of total)
	Childcare availability and costs	n/a	n/a	n/a	Project	This topic continues to be tracked through the QSEMC process and Baffinland's community engagement program

Contracting and Business Opportunities	Value of procurement with Inuit-owned businesses and joint ventures	n/a	↑	↓	Project	Baffinland awarded \$64.4 million to Inuit-owned businesses and joint ventures in 2016; a total of \$431.9 million has been awarded to Inuit-owned businesses and joint ventures since Project development
	LSA employee payroll amounts	n/a	↑	↓	Project	Approximately \$7.6 million in payroll was provided to LSA residents in 2016. Since 2014, Baffinland has provided approximately \$25 million in payroll to its Inuit employees.
	Number of registered Inuit firms in the LSA	n/a	↑ ↑	↑ ↑	North Baffin LSA Iqaluit	There were 40 NTI registered Inuit firms in the North Baffin LSA in 2016 and 116 in Iqaluit
Human Health and Well-Being	Total number of youth charged	↓ ↓	↓ ↓	↑ ↓	North Baffin LSA Iqaluit	A long-term decrease in the number of youth charged is apparent in the LSA and was evident prior to the Project
	Proportion of taxfilers with employment income	↓ ↓	↓ ↓	↓ No change	North Baffin LSA Iqaluit	A long-term decrease in the proportion of taxfilers with employment income is apparent in the LSA and was evident prior to the Project
	Median employment income	↓ ↑	↑ ↑	↑ ↑	North Baffin LSA Iqaluit	A long-term increase in median employment income is apparent in Iqaluit and was evident prior to the Project. An increase in the North Baffin LSA has occurred since the Project, after experiencing a prior decrease.
	Percentage of population receiving social assistance	↓ ↓	↓ ↓	↑ ↓	North Baffin LSA Iqaluit	A long-term decrease in the percentage of the population receiving social assistance is apparent in the LSA and was evident prior to the Project
	Number of drug and alcohol related contraband infractions at Project sites	n/a	↑	↑	Project	There were 11 drug and alcohol related contraband infractions at Project sites in 2016
	Number of impaired driving violations	↑ ↓	↑ ↓	↑ ↑	North Baffin LSA Iqaluit	A long-term increase in the number of impaired driving violations is apparent in the North Baffin LSA, while a long-term decrease is apparent in Iqaluit. Both trends were evident prior to the Project.
	Number of drug violations	↑ ↑	↑ ↓	↑ ↑	North Baffin LSA Iqaluit	A long-term increase in the number of drug violations is apparent in the North Baffin LSA and was evident prior to the Project. A decrease in Iqaluit has occurred since the Project, after experiencing a prior increase.
	Absence from the community during work rotation	n/a	n/a	n/a	Project	These topics continue to be tracked through the QSEMC process and Baffinland's community engagement program
	Prevalence of gambling issues	n/a	n/a	n/a	Project	
	Prevalence of family violence	n/a	n/a	n/a	Project	
	Prevalence of marital problems	n/a	n/a	n/a	Project	
	Percent of health centre visits related to infectious diseases	↓ ↓	↓ ↓	No change ↓	North Baffin LSA Iqaluit	A long-term decrease in the percent of health centre visits related to infectious diseases is apparent in the LSA and was evident prior to the Project
	Rates of teenage pregnancy	n/a	n/a	n/a	Project	This topic continues to be tracked through the QSEMC process and Baffinland's community engagement program
Crime rate	↑ ↓	↑ ↓	↑ ↑	North Baffin LSA Iqaluit	A long-term increase in crime rates in the North Baffin LSA and long-term decrease in Iqaluit are apparent and were evident prior to the Project.	
Community Infrastructure and Public Services	Number of Project employees who left positions in their community	n/a	↑	n/a	Project	The 2017 Employee Information Survey (43 surveys total) indicated 9 Project employees (or 20.9%) left positions in their communities to pursue employment at the Project. Of these, 3 were casual/part-time positions and 6 were full-time positions.
	Number of health centre visits (total)	↑ ↑	↑ ↑	↑ ↑	North Baffin LSA Iqaluit	A long-term increase in the total number of health centre visits is apparent in the LSA and was evident prior to the Project
	Number of health centre visits (per capita)	↑ ↑	↑ ↑	↑ ↑	North Baffin LSA Iqaluit	A long-term increase in the per capita number of health centre visits is apparent in the LSA and was evident prior to the Project
	Number of visits to Project site medic	n/a	↑	↑	Project	There were 4,012 visits to the Project site medic in 2016 (801 visits by Inuit)
	Baffinland use of LSA community infrastructure	n/a	↑	No change	Project	Baffinland continued to use some LSA community infrastructure to support Project operations in 2016
	Number of Project aircraft movements at LSA community airports	n/a	↑	↓	Project	There were 1,254 Project fixed-wing aircraft movements at LSA airports in 2016
Resources and Land Use	Number of recorded land use visitor person-days at Project sites	n/a	↑	↑	Project	There were 293 recorded land use visitor person-days at Project sites in 2016
	Number of wildlife compensation fund claims	n/a	↑	n/a (fund began in 2016)	Project	Two claims were submitted to QIA for review in 2016. One claim was approved and resulted in compensation of \$600.00 being paid, while the second claim was reviewed and denied.
Economic Development and Self-Reliance	Project harvesting interactions and food security	n/a	n/a	n/a	Project	This topic continues to be tracked through the QSEMC process and Baffinland's community engagement program
Benefits, Royalty, and Taxation	Annual payroll and corporate taxes paid by Baffinland to the territorial government	n/a	↑	n/a	Project	Approximately \$1.135 million in employee payroll tax was paid to the GN in 2016. Baffinland expects increased tax amounts will be paid once the Company enters full commercial production and becomes profitable.

Guide to Using the Table:

VSEC: Refers to 'Valued Socio-Economic Component' and includes a selection of VSECs assessed in the Mary River Project Final EIS.

Indicator(s): Indicators are an important aspect of socio-economic monitoring. Indicators are metrics used to measure and report on the condition and trend of a VSEC.

Trend: Refers to whether the indicator(s) has exhibited change and describes the direction of that change. Black arrows (↑↓) indicate the direction of change that has occurred. Where there is no discernable or significant change 'No change' is used. Where there are insufficient data or other issues preventing a trend analysis, 'n/a' is used. 'Pre-development trend' refers to the five-year period preceding Project construction (i.e. 2008 to 2012) and is calculated using available indicator data for those five years. 'Post-development trend' refers to the period after Project construction commenced (i.e. 2013 onwards), is calculated using available indicator data from that period, and may be in reference to a baseline calculated from pre-development period data. 'Trend since previous year' refers to the two most recent years in which indicator data are available.

Scale: 'Territory' refers to data that are available for Nunavut. 'Region' refers to data that are available for the Qikiqtaaluk Region. 'North Baffin LSA' refers to data that are available for the North Baffin Local Study Area communities of Arctic Bay, Clyde River, Hall Beach, Igloodik, and Pond Inlet. 'Project' refers to data that are available for the Mary River Project.

Summary: A brief description of the trend and/or related data.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	II
TABLE OF CONTENTS.....	VII
LIST OF TABLES	XI
LIST OF FIGURES.....	XI
1. INTRODUCTION.....	1
1.1 MARY RIVER PROJECT OVERVIEW.....	1
1.2 SOCIO-ECONOMIC MONITORING REQUIREMENTS	1
1.3 REPORT OBJECTIVES AND ORGANIZATION.....	3
1.4 SOCIO-ECONOMIC MONITORING PLAN.....	4
2. METHODS.....	7
2.1 ANALYSIS OF PROJECT EFFECTS	7
2.2 DATA SOURCES	8
2.3 DATA LIMITATIONS	8
3. VSEC – POPULATION DEMOGRAPHICS.....	10
3.1 DEMOGRAPHIC CHANGE.....	10
3.1.1 Project Certificate Condition.....	10
3.1.2 Indicator Data	10
3.1.3 Analysis	13
3.2 IN-MIGRATION OF NON-INUIT PROJECT EMPLOYEES INTO THE NORTH BAFFIN LSA	13
3.2.1 Predicted Effect and Mitigation Measures	13
3.2.2 Indicator Data	13
3.2.3 Analysis	14
3.3 OUT-MIGRATION OF INUIT RESIDENTS FROM THE NORTH BAFFIN LSA	15
3.3.1 Predicted Effect and Mitigation Measures	15
3.3.2 Indicator Data	15
3.3.3 Analysis	16
3.4 EMPLOYEE CHANGES OF ADDRESS, HOUSING STATUS, AND MIGRATION INTENTIONS.....	16
3.4.1 Project Certificate Condition.....	16
3.4.2 Indicator Data	17
3.4.3 Analysis	18
3.5 EMPLOYEE ORIGIN	18
3.5.1 Project Certificate Condition.....	18
3.5.2 Indicator Data	19
3.5.3 Analysis	19
4. VSEC – EDUCATION AND TRAINING	21
4.1 IMPROVED LIFE SKILLS AMONGST YOUNG ADULTS	21
4.1.1 Predicted Effect and Mitigation Measures	21
4.1.2 Indicator Data	21
4.1.3 Analysis	21
4.2 INCENTIVES RELATED TO SCHOOL ATTENDANCE AND SUCCESS.....	22

4.2.1	Predicted Effect and Mitigation Measures	22
4.2.2	Indicator Data	22
4.2.3	Analysis	24
4.3	OPPORTUNITIES TO GAIN SKILLS	25
4.3.1	Predicted Effect and Mitigation Measures	25
4.3.2	Indicator Data	25
4.3.3	Analysis	26
4.4	EDUCATION AND EMPLOYMENT STATUS PRIOR TO PROJECT EMPLOYMENT	28
4.4.1	Project Certificate Condition.....	28
4.4.2	Indicator Data	28
4.4.3	Analysis	29
5.	VSEC – LIVELIHOOD AND EMPLOYMENT	30
5.1	CREATION OF JOBS IN THE LSA	30
5.1.1	Predicted Effect and Mitigation Measures	30
5.1.2	Indicator Data	30
5.1.3	Analysis	30
5.2	EMPLOYMENT OF LSA RESIDENTS	31
5.2.1	Predicted Effect and Mitigation Measures	31
5.2.2	Indicator Data	31
5.2.3	Analysis	31
5.3	NEW CAREER PATHS	34
5.3.1	Predicted Effect and Mitigation Measures	34
5.3.2	Indicator Data	34
5.3.3	Analysis	35
5.4	BARRIERS TO EMPLOYMENT FOR WOMEN	35
5.4.1	Project Certificate Condition.....	35
5.4.2	Indicator Data	36
5.4.3	Analysis	37
6.	VSEC – CONTRACTING AND BUSINESS OPPORTUNITIES	39
6.1	EXPANDED MARKET FOR BUSINESS SERVICES TO THE PROJECT	39
6.1.1	Predicted Effect and Mitigation Measures	39
6.1.2	Indicator Data	39
6.1.3	Analysis	39
6.2	EXPANDED MARKET FOR CONSUMER GOODS AND SERVICES	40
6.2.1	Predicted Effect and Mitigation Measures	40
6.2.2	Indicator Data	40
6.2.3	Analysis	42
7.	VSEC – HUMAN HEALTH AND WELL-BEING	43
7.1	CHANGES IN PARENTING	43
7.1.1	Predicted Effect and Mitigation Measures	43
7.1.2	Indicator Data	43
7.1.3	Analysis	44
7.2	HOUSEHOLD INCOME AND FOOD SECURITY	44
7.2.1	Predicted Effect and Mitigation Measures	44
7.2.2	Indicator Data	45

7.2.3	Analysis	47
7.3	TRANSPORT OF SUBSTANCES THROUGH PROJECT SITES	48
7.3.1	Predicted Effect and Mitigation Measures	48
7.3.2	Indicator Data	48
7.3.3	Analysis	49
7.4	AFFORDABILITY OF SUBSTANCES / ATTITUDES TOWARD SUBSTANCES AND ADDICTIONS	49
7.4.1	Predicted Effect and Mitigation Measures	49
7.4.2	Indicator Data	49
7.4.3	Analysis	51
7.5	ABSENCE FROM THE COMMUNITY DURING WORK ROTATION	52
7.5.1	Predicted Effect and Mitigation Measures	52
7.5.2	Indicator Data	52
7.5.3	Analysis	52
7.6	PREVALENCE OF GAMBLING ISSUES	53
7.6.1	Project Certificate Condition.....	53
7.6.2	Indicator Data	53
7.6.3	Analysis	54
7.7	PREVALENCE OF FAMILY VIOLENCE	54
7.7.1	Project Certificate Condition.....	54
7.7.2	Indicator Data	54
7.7.3	Analysis	54
7.8	PREVALENCE OF MARITAL PROBLEMS.....	55
7.8.1	Project Certificate Condition.....	55
7.8.2	Indicator Data	55
7.8.3	Analysis	56
7.9	RATES OF SEXUALLY TRANSMITTED INFECTIONS AND OTHER COMMUNICABLE DISEASES	56
7.9.1	Project Certificate Condition.....	56
7.9.2	Indicator Data	56
7.9.3	Analysis	58
7.10	RATES OF TEENAGE PREGNANCY.....	58
7.10.1	Project Certificate Condition.....	58
7.10.2	Indicator Data	58
7.10.3	Analysis	58
7.11	OTHER - CRIME.....	58
7.11.1	Project Certificate Condition.....	58
7.11.2	Indicator Data	59
7.11.3	Analysis	59
8.	VSEC – COMMUNITY INFRASTRUCTURE AND PUBLIC SERVICES	61
8.1	COMPETITION FOR SKILLED WORKERS.....	61
8.1.1	Predicted Effect and Mitigation Measures	61
8.1.2	Indicator Data	61
8.1.3	Analysis	61
8.2	LABOUR FORCE CAPACITY.....	62
8.2.1	Predicted Effect and Mitigation Measures	62
8.2.2	Indicator Data	62
8.2.3	Analysis	62

8.3	PRESSURES ON EXISTING HEALTH AND SOCIAL SERVICES PROVIDED BY THE GN THAT MAY BE IMPACTED BY PROJECT-RELATED IN-MIGRATION OF EMPLOYEES.....	63
8.3.1	Project Certificate Condition.....	63
8.3.2	Indicator Data	63
8.3.3	Analysis	65
8.4	PROJECT-RELATED PRESSURES ON COMMUNITY INFRASTRUCTURE.....	66
8.4.1	Project Certificate Condition.....	66
8.4.2	Indicator Data	66
8.4.3	Analysis	67
9.	VSEC – RESOURCES AND LAND USE	68
9.1	VARIOUS RESIDUAL EFFECTS.....	68
9.1.1	Predicted Effect and Mitigation Measures	68
9.1.2	Indicator Data	68
9.1.3	Analysis	69
10.	VSEC – ECONOMIC DEVELOPMENT AND SELF-RELIANCE	70
10.1	PROJECT HARVESTING INTERACTIONS AND FOOD SECURITY	70
10.1.1	Project Certificate Condition.....	70
10.1.2	Indicator Data	70
10.1.3	Analysis	71
11.	VSEC – BENEFITS, ROYALTY, AND TAXATION	73
11.1	PAYMENTS OF PAYROLL AND CORPORATE TAXES TO THE TERRITORIAL GOVERNMENT	73
11.1.1	Predicted Effect and Mitigation Measures	73
11.1.2	Indicator Data	73
11.1.3	Analysis	73
12.	CONCLUDING REMARKS	74
12.1	SUMMARY	74
12.1.1	Report Summary	74
12.1.2	Summary of Regional and Cumulative Economic Effects	75
12.2	ADAPTIVE MANAGEMENT	76
12.3	FUTURE MONITORING AND REPORTING	76
12.4	CONCORDANCE WITH PROJECT CERTIFICATE CONDITIONS ON SOCIO-ECONOMIC MONITORING	77
13.	REFERENCES	78
	APPENDIX A: TERMS OF REFERENCE FOR THE MARY RIVER SOCIO-ECONOMIC MONITORING WORKING GROUP.....	82
	APPENDIX B: CONCORDANCE WITH PROJECT CERTIFICATE CONDITIONS RELATED TO SOCIO-ECONOMIC MONITORING	86
	APPENDIX C: BAFFINLAND EMPLOYEE INFORMATION SURVEY.....	88

LIST OF TABLES

Table 1: Socio-economic monitoring plan for the Mary River Project	6
Table 2: 2016 population estimates	11
Table 3: Nunavut annual net migration estimates (2008/2009 to 2015/2016)	12
Table 4: Known in-migrations of Project employees and contractors to the North Baffin LSA (2015 to 2016)	14
Table 5: Known out-migrations of Project employees and contractors from the North Baffin LSA (2015 to 2016)	15
Table 6: Changes in employee housing situation and/or address (2017 employee information survey results)	17
Table 7: Current employee housing status (2017 employee information survey results)	18
Table 8: Employee migration intentions (2017 employee information survey results)	18
Table 9: Mary River Project employees and contractors by origin and ethnicity in 2016.....	20
Table 10: Hours of training completed (2013 to 2016)	25
Table 11: Highest level of education obtained (2017 employee information survey results)	28
Table 12: Resignation from a previous job placement or educational institution (2017 employee information survey results).....	29
Table 13: Total hours of Project labour performed in Nunavut (2013 to 2016).....	30
Table 14: Hours of Project labour performed in Nunavut (2013 to 2016)	33
Table 15: Baffinland Inuit employee promotions (2014 to 2016)	34
Table 16: Number of Baffinland Inuit employee departures (2013 to 2016)	35
Table 17: Hours worked by Project employees and contractors in Nunavut, by ethnicity and gender (2013 to 2016).....	38
Table 18: Procurement with Inuit-owned businesses and joint ventures (2013 to 2016)	40
Table 19: NTI registered Inuit firms in the LSA (2013 to 2016).....	42
Table 20: Number of drug and alcohol related contraband infractions at Project sites (2013 to 2016) ...	48
Table 21: Number of visits to Project site medic (2013 to 2016)	65
Table 22: Number of Project aircraft movements at LSA community airports (2014 to 2016)	67
Table 23: Number of recorded land use visitor person-days at Project sites (2013 to 2016)	69

LIST OF FIGURES

Figure 1: Total population (2008 to 2016)	11
Figure 2: Percentage of Inuit versus non-Inuit residents in the North Baffin LSA (2008 to 2016)	12
Figure 3: Secondary school graduates (2008 to 2015)	23
Figure 4: Secondary school graduation rates (2008 to 2015).....	24
Figure 5: Types and hours of training provided (2016)	27
Figure 6: Baffinland LSA employee payroll, by community (2016).....	41
Figure 7: Total number of youth charged, by community (2008 to 2015)	44
Figure 8: Proportion of taxfilers with employment income (2008 to 2014).....	46
Figure 9: Median employment income (2008 to 2014).....	46
Figure 10: Percentage of population receiving social assistance (2008 to 2013).....	47
Figure 11: Number of impaired driving violations (2008 to 2015)	50
Figure 12: Number of drug violations (2008 to 2015)	51
Figure 13: Percent of health centre visits related to infectious diseases (2008 to 2014)	57
Figure 14: Number of actual violations per 100,000 persons (2008 to 2015)	59

Figure 15: Number of health centre visits (2008 to 2014)..... 64
Figure 16: Per capita number of health centre visits (2008 to 2014) 64

1. INTRODUCTION

1.1 MARY RIVER PROJECT OVERVIEW

The Mary River Project (the Project) is an operating open pit iron ore mine with associated project components that is owned and operated by Baffinland Iron Mines Corporation (Baffinland or the Company). The Project is located in the Qikiqtaaluk Region of Nunavut on northern Baffin Island. The mine site is located approximately 160 km south of Pond Inlet (Mittimatalik) and 1,000 km north of the territorial capital of Iqaluit.

The Project consists of three currently active main project locations - the Mine Site, the 100-km long Milne Inlet Tote Road, and Milne Port. The Project also includes a proposed railway and Steensby Port, both located to the south of the mine site. At the end of 2012, the Nunavut Impact Review Board (NIRB) issued Project Certificate No. 005 authorizing the construction, operation, and closure of an 18 million tonne per annum (Mt/a) operation which included a 149-km railway and year-round shipping of iron ore from a port facility at Steensby Inlet (Steensby Port). Mine construction began in 2013.

In 2013, Baffinland applied to the NIRB to amend its Project Certificate to allow for an Early Revenue Phase (ERP) operation, which included the additional production of up to 4.2 Mt/a of iron ore, ore haulage over the Milne Inlet Tote Road, and open water shipping of ore from Milne Port. On May 28, 2014, the NIRB issued an amended Project Certificate No. 005 approving the ERP. Mining of ore began in the last quarter of 2014 and the first shipment of ore occurred in the summer of 2015. The amended Project Certificate allows for the future development of the 18 Mt/a railway operation, for a total combined production rate of 22.2 Mt/a. However, the mine is currently working toward the 4.2 Mt/a production rate via Milne Port associated with the ERP.

In the fall of 2014, Baffinland announced its intention to seek approval for a second phase of the ERP. 'Phase 2' consists of an expansion of the 4.2 Mt/a ERP operation by 7.8 Mt/a to 12 Mt/a of ore. This ore will be transported to Milne Port by rail and then delivered to market over an expanded shipping season. The Phase 2 proposal is part of Baffinland's approach to develop the Mary River Project in a phased and economically feasible manner. A Phase 2 Project Description was submitted to the NIRB on October 29, 2014, and on November 30, 2016 a Project Update on the Phase 2 proposal was provided. Baffinland expects to submit an Environmental Impact Statement (EIS) for Phase 2 in 2017. Additional information on Baffinland's regulatory submissions and approvals can be found on the NIRB public registry: <http://www.nirb.ca/>.

1.2 SOCIO-ECONOMIC MONITORING REQUIREMENTS

Project-related socio-economic monitoring requirements originate from the Nunavut Agreement and NIRB Project Certificate No. 005. The Nunavut Agreement is a comprehensive land claims agreement signed in 1993 between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada. As a result of signing the Nunavut Agreement, Inuit exchanged Aboriginal title to all their traditional land in the Nunavut Settlement Area for a series of rights and benefits. The Nunavut Agreement also created various 'institutions of public government' such as the NIRB and Nunavut Water Board and established conditions for the review and oversight of resource development projects. Article 12, Part 7 of the Nunavut Agreement provides details on monitoring programs which may be required under a NIRB project certificate and notes the purpose of these programs shall be:

- (a) to measure the relevant effects of projects on the ecosystemic and socio-economic environments of the Nunavut Settlement Area;
- (b) to determine whether and to what extent the land or resource use in question is carried out within the predetermined terms and conditions;
- (c) to provide the information base necessary for agencies to enforce terms and conditions of land or resource use approvals; and
- (d) to assess the accuracy of the predictions contained in the project impact statements.

As noted previously, NIRB issued an amended Project Certificate No. 005 (i.e. NIRB 2014) approving the ERP on May 28, 2014. NIRB (2014) and Section 12.4 of this report should be consulted for further information on the terms and conditions specific to socio-economic monitoring that were included in the Project Certificate.

Several conditions included in Project Certificate No. 005 relate to Baffinland's engagement with the Qikiqtaaluk Socio-Economic Monitoring Committee (QSEMC). The QSEMC is one of three regional socio-economic monitoring committees in Nunavut. These committees were established in 2007 to address project certificate requirements for project-specific monitoring programs and to create a discussion forum and information sharing hub that supports impacted communities and interested stakeholders to take part in monitoring efforts (SEMCs 2016). Baffinland is actively involved in the QSEMC and regularly participates in its meetings. Most recently, Baffinland participated in the QSEMC's July 2016 meeting in Iqaluit.

The Mary River Socio-Economic Monitoring Working Group (Mary River SEMWG, or Working Group) Terms of Reference also provides guidance on Baffinland's socio-economic monitoring program. Baffinland, in addition to the Government of Nunavut, the Government of Canada, and the Qikiqtani Inuit Association (QIA), is a member of the Mary River SEMWG. The Mary River SEMWG is intended to support the QSEMC's regional monitoring initiatives through project-specific socio-economic monitoring. The Mary River SEMWG also supports the fulfillment of terms and conditions set out in Project Certificate No. 005 that relate to socio-economic monitoring. Baffinland is actively involved in the Mary River SEMWG and regularly participates in its meetings. Most recently, Baffinland met with the Mary River SEMWG in July 2016 in Iqaluit. A Terms of Reference for the Mary River SEMWG can be found in Appendix A. It describes the Working Group's purpose; membership and member roles; objectives; and reporting, communication, and meeting requirements. Furthermore, Section 4.1 of the Terms of Reference notes that Baffinland:

"...will prepare an annual socio-economic report, presenting performance data, to the Nunavut Impact Review Board for review...containing data on the indicators selected by the Working Group for the previous calendar year (January to December). These reports will further describe the Company's participation in the [QSEMC], other collaborative monitoring processes and any activities related to better understanding of socio-economic processes."

As established in the Mary River SEMWG Terms of Reference, the Working Group members agreed that collaboration is required to effectively monitor the socio-economic performance of the Mary River Project. It was acknowledged that Baffinland is best able to collect and provide data concerning employment and training in relation to the Project, and the Government of Nunavut and the Government of Canada are best able to report public statistics on general health and well-being, food security, demographics, and other socio-economic indicators at the community and territorial level. The

QIA was noted to be best able to provide information and data relating to Inuit land use and culture at the community and regional level

This *2016 Socio-Economic Monitoring Report for the Mary River Project* helps fulfill Project-related socio-economic monitoring requirements associated with the Nunavut Agreement and NIRB Project Certificate No. 005, and follows the guidance provided by the Mary River SEMWG Terms of Reference, described above. Baffinland will continue to review and address its socio-economic monitoring requirements moving forward.

1.3 REPORT OBJECTIVES AND ORGANIZATION

This is the fourth annual socio-economic monitoring report prepared by Baffinland for the Mary River Project. Project-specific socio-economic monitoring programs in Nunavut are generally expected to focus on two areas: ‘effects monitoring’ and ‘compliance monitoring’. Effects monitoring keeps track of the socio-economic effects of a project to see if management plans are working or if any unexpected effects are occurring. Compliance monitoring occurs to make sure proponents follow the terms and conditions of the licences, decisions, and certificates issued by authorizing agencies (NIRB 2013). This focus is commensurate with socio-economic monitoring best-practice (e.g. Noble 2015; Vanclay et al. 2015) and can assist companies with achieving their sustainable development goals.

Socio-economic monitoring also supports adaptive management, as findings can alert project proponents to the emergence of unanticipated effects and help initiate a management response. Furthermore, regular review of monitoring plans will help determine whether existing socio-economic indicators and monitoring methods remain appropriate (Vanclay et al. 2015).

In consideration of the above, this report aims to meet the following objectives:

1. Evaluate the accuracy of selected socio-economic effect predictions presented in the Mary River Project Final EIS¹ and identify any unanticipated effects.
2. Help identify areas where Baffinland’s existing socio-economic mitigation and management programs may not be functioning as anticipated.
3. Assist regulatory and other agencies in evaluating Baffinland’s compliance with socio-economic monitoring requirements for the Project.
4. Support adaptive management, by identifying potential areas for improvement in socio-economic monitoring and performance, where appropriate.

This 2016 report presents information related to VSECs assessed in the Final EIS. Throughout this report, predicted residual VSEC effects and associated mitigation measures from the Final EIS are described. In some other cases, socio-economic Project Certificate conditions are described instead of effect predictions. This is followed by a presentation of indicator data (where available) and an analysis of that data. This structure allows Baffinland’s reporting to align with the Final EIS predictions and Project Certificate conditions, and increases comparability between them and currently available data. However, Baffinland also acknowledges the structure and content of its socio-economic monitoring report may benefit from refinement in the future (see Section 1.4 for further information).

¹ References to the Mary River Project Final EIS in this report include any revisions that were made to the Final EIS for the original ERP addendum.

This report is organized in the following manner:

- Section 1 (i.e. this section) introduces the report and the scope of its contents.
- Section 2 describes the methods used in this report and how they support the conclusions that are reached.
- Sections 3 to 11 assess the socio-economic performance of VSECs included in the Final EIS.
- Section 12 provides a report summary, comments on adaptive management and future monitoring plans, and summarizes how Baffinland has addressed Project Certificate terms and conditions specific to socio-economic monitoring.

1.4 SOCIO-ECONOMIC MONITORING PLAN

Baffinland will continue to conduct comprehensive socio-economic monitoring for the Project. A long-term socio-economic monitoring plan is presented in Table 1 and summarizes indicators and data sources for all VSECs assessed in the Final EIS (or notes where monitoring is not required or other forms of issue tracking and monitoring will take place). More specifically, indicators are proposed for VSEC-related residual effects and information that has been requested through the Project Certificate.

Prior to finalizing the Project's socio-economic monitoring plan, Baffinland solicited feedback from members of the Mary River SEMWG on a draft version of the plan presented in the 2015 monitoring report (i.e. Jason Prno Consulting Services Ltd. 2016). Baffinland also identified several internal refinements to this plan and its approach to socio-economic monitoring prior to finalization. Some of these refinements include the modification of previously proposed indicators and/or addition of new indicators, aggregation of some community-level data to a more appropriate scale of analysis (e.g. presenting aggregated data for the North Baffin LSA rather than for individual communities), and the introduction of data trends analyses.

However, Baffinland acknowledges the structure and content of its socio-economic monitoring report may benefit from additional refinement in the future; suggestions from reviewers on how indicators and data sources could potentially be improved are welcome. It is further acknowledged that any significant changes to the Project's socio-economic monitoring program require discussion with the Mary River SEMWG. Likewise, Table 1 includes several instances where indicators haven't been identified by Baffinland for various reasons (e.g. sufficient monitoring is already conducted elsewhere, no residual effects were identified in the Final EIS, insufficient data availability). In some additional cases, other forms of issue tracking will take place (e.g. through the QSEMC process or Baffinland's community engagement program). Should indicators be required for these topics in the future, they will be selected in consultation with the Mary River SEMWG.

VSEC	Residual Effect or Project Certificate Condition	Topic	Indicator(s)	Data Source
Population Demographics	Residual Effect	In-migration of non-Inuit Project employees into the North Baffin LSA	Known in-migrations of non-Inuit Project employees and contractors	Baffinland
		Out-migration of Inuit residents from the North Baffin LSA	In-migration of non-Inuit to the North Baffin LSA	Limited data currently available
			Known out-migrations of Inuit Project employees and contractors	Baffinland
		Project Certificate Condition	Demographic change	Population estimates
	Nunavut annual net migration			NBS (2016b)
	Education and Training	Residual Effect	Improved life skills amongst young adults	Participation in pre-employment training
LSA employment and on-the-job training				Baffinland
Incentives related to school attendance and success			Number of secondary school graduates	NBS (2016c)
			Secondary school graduation rate	NBS (2016d)
Opportunities to gain skills			Hours of training completed by Inuit employees	Baffinland
		Types of training provided to Inuit employees	Baffinland	
	Apprenticeships and other opportunities	Baffinland		
Project Certificate Condition	Education and employment status prior to Project employment	Education and employment status prior to Project employment	Baffinland	
Livelihood and Employment	Residual Effect	Creation of jobs in the LSA	Total hours of Project labour performed in Nunavut	Baffinland
		Employment of LSA residents	Project hours worked by LSA employees and contractors	Baffinland
		New career paths	LSA employment	Baffinland
			Inuit employee promotions	Baffinland
			Inuit employee turnover	Baffinland
	Project Certificate Condition	Barriers to employment for women	Hours worked by female employees and contractors	Baffinland
Contracting and Business Opportunities	Residual Effect	Expanded market for business services to the Project	Value of procurement with Inuit-owned businesses and joint ventures	Baffinland
		Expanded market for consumer goods and services	LSA employee payroll amounts	Baffinland
			Number of registered Inuit firms in the LSA	NTI (2016)
Human Health and Well-Being	Residual Effect	Changes in parenting	Total number of youth charged	Statistics Canada (2016a)
		Household income and food security	Proportion of taxfilers with employment income and median employment income	NBS (2016e)
			Percentage of population receiving social assistance	NBS (2014)
		Overall effects on children	N/A – Monitoring already conducted through other ‘human health and well-being’ indicators	
		Transport of substances through Project site	Number of drug and alcohol related contraband infractions at Project sites	Baffinland
		Affordability of substances	Number of impaired driving violations	NBS (2016f)
		Attitudes toward substances and addictions	Number of drug violations	NBS (2016f)
	Absence from the community during work rotation	Topic will continue to be tracked through the QSEMC process and Baffinland’s community engagement program. Should indicators be required in the future, they will be selected in consultation with the Mary River SEMWG.		
	Project Certificate Condition	Prevalence of substance abuse	N/A – Monitoring already conducted through other ‘human health and well-being’ indicators	
		Prevalence of gambling issues	Topics will continue to be tracked through the QSEMC process and Baffinland’s community engagement program. Should indicators be required in the future, they will be selected in consultation with the Mary River SEMWG.	
		Prevalence of family violence		
Prevalence of marital problems				
Rates of sexually transmitted infections and other communicable diseases		Percent of health centre visits related to infectious diseases	NBS (2016g)	
Rates of teenage pregnancy		Topic will continue to be tracked through the QSEMC process and Baffinland’s community engagement program. Should indicators be required in the future, they will be selected in consultation with the Mary River SEMWG.		
High school completion rates	N/A – Monitoring already conducted through other ‘education and training’ indicators			
Community Infrastructure and Public Services	Residual Effect	Other	Crime rate	NBS (2016h)
		Competition for skilled workers	Number of Project employees who left positions in their community	Baffinland
		Labour force capacity	Training and experience generated by the Project	Baffinland
			Inuit employee turnover	Baffinland

	Project Certificate Condition	Pressures on existing health and social services provided by the GN that may be impacted by Project-related in-migration of employees	Number of health centre visits (total and per capita)	NBS (2016g)
		Project-related pressures on community infrastructure	Number of visits to Project site medic	Baffinland
			Baffinland use of LSA community infrastructure	Baffinland
			Number of Project aircraft movements at LSA community airports	Baffinland
Cultural Resources	N/A	N/A	N/A – Monitoring already conducted through annual archaeology reports	
Resources and Land Use	Residual Effect	Quantity of caribou harvested per level of effort	N/A – Potential effects on caribou will continue to be tracked through Baffinland’s terrestrial wildlife monitoring program	
		Safe travel around Eclipse Sound and Pond Inlet	Number of recorded land use visitor person-days at Project sites Number of wildlife compensation fund claims	Baffinland QIA
		Safe travel through Milne Port		
		Emissions and noise disruption at camps		
		Sensory disturbances and safety along Milne Inlet Tote Road		
		Detour around mine site for safety and travel		
		Difficulty and safety relating to railway crossing		
		Detour around Steensby Port		
		HTO cabin closures		
		Restriction of camping locations around Steensby Port		
Cultural Well-Being	N/A	N/A	N/A – No monitoring required. No residual effects identified in the Final EIS.	
Economic Development and Self-Reliance	Residual Effect	Increased pressure on the land	N/A – As noted in the Final EIS, monitoring is already conducted through other VECs/VSECs	
		Changes to land-based economy		
		Increased opportunities for youth		
		Education and training opportunities		
		Increased wealth and well-being		
		Increased wealth in community		
		Rotational absence of residents		
		Increased local business opportunities		
	Expanded economic activity, flows, and opportunities			
Project Certificate Condition	Project harvesting interactions and food security, which includes broad indicators of dietary habits	Topic will continue to be tracked through the QSEMC process and Baffinland’s community engagement program. Should indicators be required in the future, they will be selected in consultation with the Mary River SEMWG.		
Benefits, Royalty, and Taxation	Residual Effect	Payments of payroll and corporate taxes to the territorial government	Annual payroll and corporate taxes paid by Baffinland to the territorial government	Baffinland
Governance and Leadership	N/A	N/A	N/A – No monitoring required. No residual effects identified in the Final EIS.	

Table 1: Socio-economic monitoring plan for the Mary River Project

2. METHODS

2.1 ANALYSIS OF PROJECT EFFECTS

This report assesses the socio-economic performance of the Mary River Project in 2016. It does so primarily through an analysis of Project-related socio-economic effects that were originally predicted to occur in the Final EIS. To help focus this analysis, only residual effects that were identified in the Final EIS are assessed; ‘subjects of note’ and other potential effects are not reviewed. Furthermore, only the direction (e.g. positive, negative) and magnitude (where appropriate)² of these residual effects are evaluated.

One or more monitoring indicators are then identified for each of these residual effects and recent indicator data is presented for consideration against the original effect predictions that were made. Structuring the report in this manner allows the effect predictions to be more readily verified (or refuted) and provides insight into the effectiveness of existing mitigation measures. This report also presents information that was requested through the Project Certificate. This information is evaluated in a similar manner to the residual effects mentioned above, although comparisons against Final EIS predictions were not required.

‘Indicators’ are an important aspect of socio-economic monitoring. Indicators are metrics used to measure and report on the condition and trend of a Valued Component (VC)³, and help facilitate the analysis of interactions between a project and a selected VC (BCEAO 2013). Indicators can also provide an early warning of potential adverse effects and are considered the most basic tools for analyzing change (Noble 2015). Noble (2015) suggests that good indicators are:

- *Measurable, either in a qualitative or quantitative fashion*
- *Indicative of the VC of concern*
- *Sensitive and detectable in terms of project-induced stress*
- *Appropriate to the spatial scale of the VC of concern*
- *Temporally reliable*
- *Diagnostic to change*
- *Applicable across different types of development projects*
- *Cost-effective to collect, measure, or analyze*
- *Predictable and accurate with an acceptable range of variability*
- *Understandable by non-scientists*
- *Useful for informing management actions or decisions*

The socio-economic monitoring indicators presented in this report were selected with this guidance in mind. The analyses presented in this report also generally focus on one of two spatial scales: a Local Study Area (LSA) or Regional Study Area (RSA). As identified in the Final EIS, the LSA includes the North Baffin point-of-hire communities of Arctic Bay, Clyde River, Hall Beach, Igloolik, and Pond Inlet, in addition to the City of Iqaluit (which is also a point-of-hire). References to the ‘North Baffin LSA’ include all these communities but Iqaluit. In some cases, data for the North Baffin LSA

² Effect magnitude is only assessed where quantitative metrics were provided in the Final EIS.

³ Valued Components are typically referred to as Valued Ecosystem Components (VECs) and Valued Socio-Economic Components (VSECs) in Nunavut.

communities have been aggregated to facilitate trend analyses in this report. The RSA includes the entire territory of Nunavut.

Indicator ‘trends’ are discussed throughout this report and describe whether an indicator has exhibited change (and the direction of that change). For example, a ‘pre-development’ trend in this report refers to the five-year period preceding Project construction (i.e. 2008 to 2012) and is calculated using available indicator data for those five years. In some cases, this data has also been averaged, so that a baseline is created to measure a ‘post-development’ trend against. Likewise, a ‘post-development’ trend refers to the period after Project construction commenced (i.e. 2013 onwards) and is calculated using available indicator data from that period. A trend ‘since previous year’ refers to the two most recent years in which indicator data are available. Many trends in this report have been assessed using a line of best fit (e.g. using the trendline function in Microsoft Excel).

Trend magnitude (e.g. using qualifiers such as ‘large’ or ‘small’) is generally not described in this report; trends are often simply referred to as increasing/decreasing. Available data and trends are then assessed to see if the Project is having an influence on the indicator(s) in question. However, it is important to note that Project construction only began in 2013 and there is a minimal amount of post-development data currently available. Socio-economic indicators can also be influenced by many different factors. Correlations (if any) between the Project and socio-economic indicators presented in this report may only come to light with the analysis of additional annual data.

2.2 DATA SOURCES

Data for this report have been obtained from Company, government, Inuit organization, and other sources. Data are presented in textual, graphical, or tabular formats, with a source identified for each. Company data sources include human resources records, site files, and information obtained from other Company documents and employees. Some 2013 and 2014 Project-specific data were also drawn from previous socio-economic monitoring reports prepared for the Project (e.g. Brubacher Development Strategies Inc. 2015). Results from Baffinland’s community engagement program are also referenced throughout this report and include information received from public and stakeholder meetings on the Project, North Baffin community surveys, or other forums. This information has been accessed through Baffinland’s stakeholder information management system (StakeTracker) and other relevant sources (e.g. topic-specific reports prepared by the Company).

Government data have been obtained primarily from the Nunavut Bureau of Statistics, the Government of Nunavut’s central statistical agency. The Nunavut Bureau of Statistics posts current Nunavut population data, economic data, labour force and employment data, social data, census data, and Nunavut Housing Survey data on its website (<http://www.stats.gov.nu.ca/en/home.aspx>) for the public to use. Reports from the QSEMC annual meetings (e.g. Government of Nunavut 2016) were also reviewed, with the goal of integrating relevant data and insights where appropriate. Some data have also been obtained from Nunavut Tunngavik Inc. (e.g. on registered Inuit firms) and from other sources (e.g. QIA, federal government agencies, third party groups such as mining associations).

2.3 DATA LIMITATIONS

Some data limitations were identified during the preparation of this report. Notably, comprehensive government data on in-migration and out-migration of Inuit and non-Inuit residents in the North Baffin LSA were not available in 2016 (these data gaps are described in more detail in Sections 3.2 and 3.3).

Some 2013 and 2014 Company data have also been drawn from previous socio-economic monitoring reports prepared for the Project (e.g. Brubacher Development Strategies Inc. 2015). However, comparisons against some of this data should be made with a degree of caution. This is because the socio-economic data collection and analysis methods employed by Baffinland have changed in some instances.⁴ Furthermore, some of the (primarily historic) Company data presented in this report is of a limited nature, or reflects information that was only available for certain periods of time (due to ongoing development of Baffinland's human resources data management system).

Baffinland continues to refine its socio-economic data management and reporting systems. Improvements to the methods used for tracking employee hours are currently being investigated by Baffinland, as some inconsistencies in existing systems have been identified. However, Baffinland has attempted to present conservative employment data and/or identify data limitations wherever possible in this report. Finally, data are presented in this report for the most recent years that are currently available. Lag times in data availability exist for some data sources and 2016 data were not available in all cases.

⁴ Tables 13, 14, and 17 present 2013 and 2014 data from Brubacher Development Strategies Inc. (2015). However, comparisons against this data should be made with a degree of caution. This is because some calculation methods used by Baffinland have changed and some historic data makes assumptions with regards to hours worked at the Project. Hours worked by non-Inuit in 2013 in Table 17 also do not add up completely (i.e. 144 hours are unaccounted for), for unknown reasons. 2016 calculations for these tables include individuals who worked on the Project in Nunavut in 2016, but do not include individuals who worked on the Project outside of Nunavut, Baffinland corporate head office staff, or account for turnover.

3. VSEC – POPULATION DEMOGRAPHICS

Two residual effects associated with the VSEC ‘Population Demographics’ were assessed in the Final EIS. These include ‘in-migration of non-Inuit Project employees into the North Baffin LSA’ and ‘out-migration of Inuit residents from the North Baffin LSA’. These are reviewed more fully below, in addition to information on three other topics requested through the Project Certificate (i.e. demographic change; employee changes of address, housing status, and migration intentions; and employee origin). However, community and territorial demographic change data are first reviewed for greater context.

3.1 DEMOGRAPHIC CHANGE

3.1.1 Project Certificate Condition

Project Certificate condition #131 requests that monitoring occur on:

...demographic changes including the movement of people into and out of the North Baffin communities and the territory as a whole.

Population estimates and other demographic change measures are included in many socio-economic monitoring initiatives. This is because of their importance in helping understand broad socio-economic trends. As such, this section provides an overview of some of the major demographic changes that are occurring in Nunavut and the LSA communities. Sections 3.2 and 3.3, however, review the Final EIS predictions made regarding in-migration and out-migration in the North Baffin LSA in more detail.

3.1.2 Indicator Data

Population Estimates

Population estimates for Nunavut and the LSA communities of Arctic Bay, Clyde River, Hall Beach, Igloolik, Pond Inlet, and Iqaluit are provided by the Nunavut Bureau of Statistics (2016a)⁵ and presented in Table 2. 2016 is the most recent year for which Nunavut population estimates were available. In 2016, the North Baffin LSA communities had a total population of 6,608, of which approximately 94.5% were Inuit and 5.5% were non-Inuit. Iqaluit had a total population of 7,590, of which approximately 55.4% were Inuit and 44.6% were non-Inuit. Nunavut had a total population of 37,082, of which approximately 84.2% were Inuit and 15.8% were non-Inuit.

Between 2012 and 2016, the North Baffin LSA communities grew from a total population of 6,050 to 6,608 (or 9.2%). Iqaluit grew from a total population of 7,013 to 7,590 (or 8.2%), while Nunavut grew from a total population of 34,707 to 37,082 (or 6.8%). Average annual growth rates over this period for the North Baffin LSA communities (2.3%), Iqaluit (2.1%), and Nunavut (1.7%) were considerably higher than the Canadian average (1.1%) (Statistics Canada 2016b). Figure 1 displays the total population in these locations from 2008 to 2016.

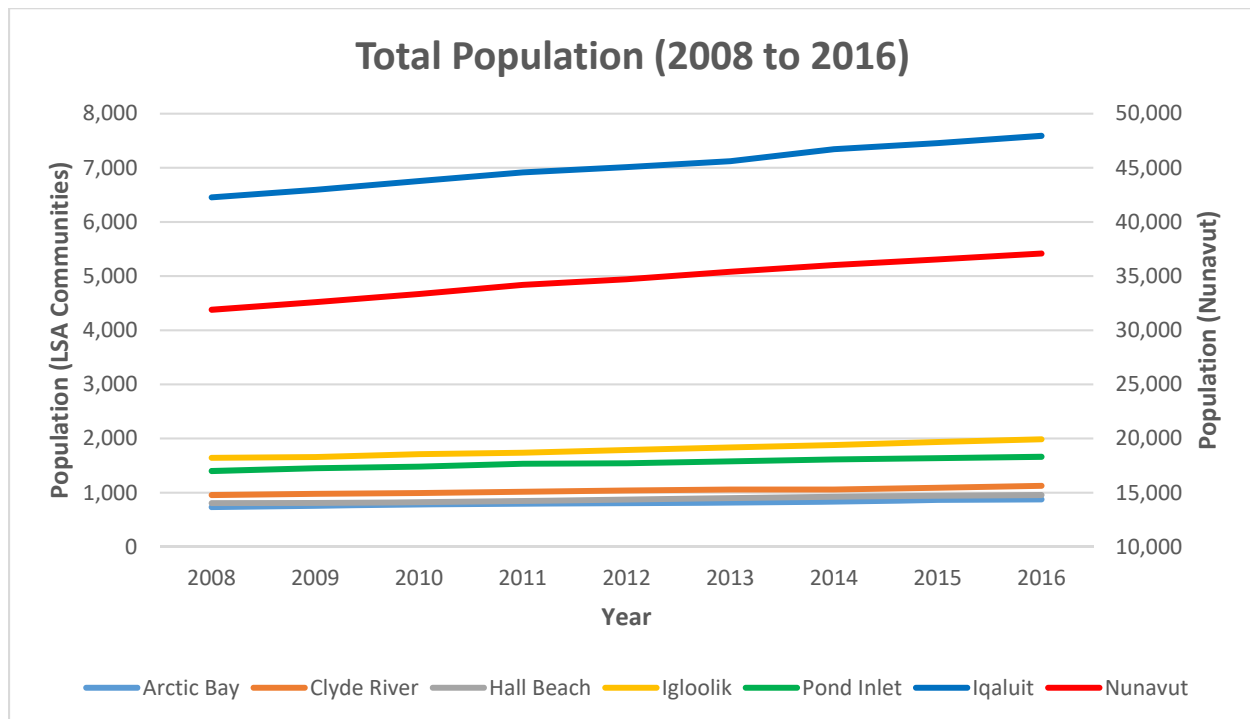
⁵ The Nunavut Bureau of Statistics (2016a) notes that community population estimates are preliminary and subject to revision. 2016 estimates, in particular, are suggested to be viewed with some caution, as these are in early preliminary stages.

2016 Population Estimates			
Community	Total Population	Inuit	Non-Inuit
North Baffin LSA	6,608	6,247	361
· Arctic Bay	876	828	48
· Clyde River	1,127	1,085	42
· Hall Beach	956	915	41
· Igloolik	1,986	1,850	136
· Pond Inlet	1,663	1,569	94
Iqaluit	7,590	4,208	3,382
Nunavut	37,082	31,234	5,848

Source: Nunavut Bureau of Statistics (2016a)

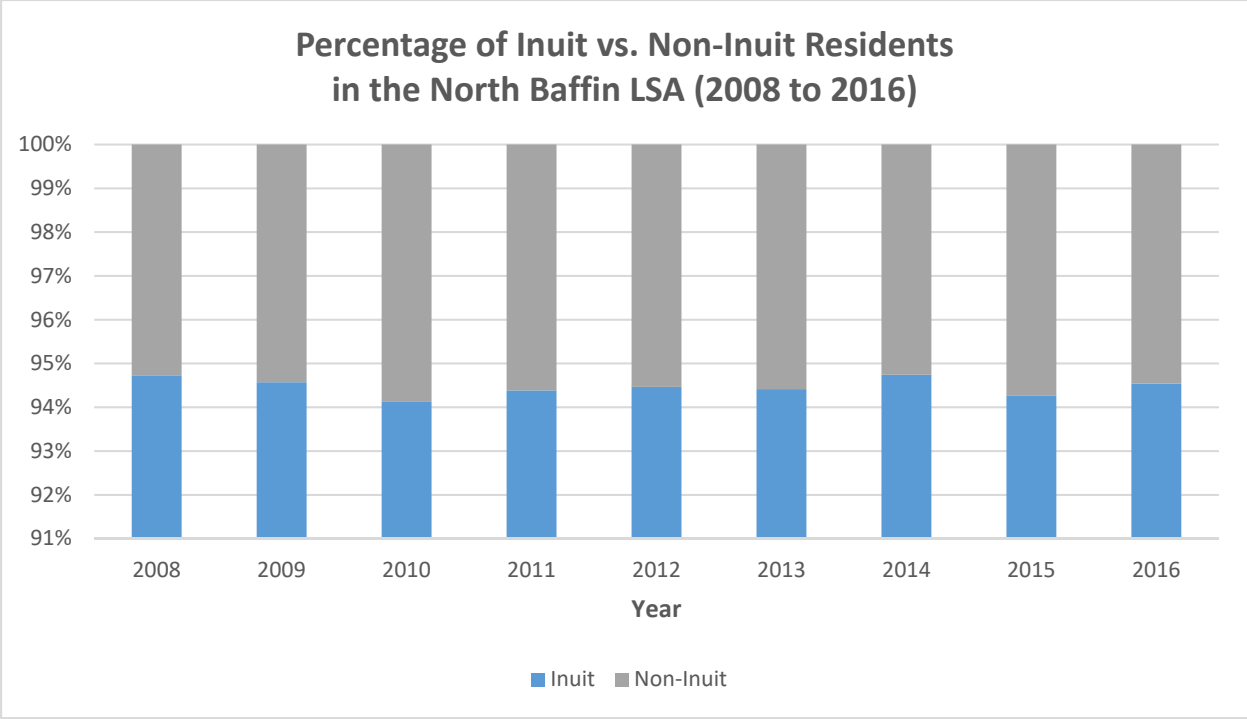
Table 2: 2016 population estimates

The percentage of Inuit versus non-Inuit residents in the North Baffin LSA communities remains high. 94.5% of North Baffin LSA residents were Inuit in the pre-development period, while an equal 94.5% were Inuit in 2016. Since the pre-development period, a slight increasing trend in the percentage of Inuit versus non-Inuit residents has occurred. Figure 2 displays the percentage of Inuit versus non-Inuit residents in the North Baffin LSA communities from 2008 to 2016.



Source: Nunavut Bureau of Statistics (2016a)

Figure 1: Total population (2008 to 2016)



Source: Nunavut Bureau of Statistics (2016a)

Figure 2: Percentage of Inuit versus non-Inuit residents in the North Baffin LSA (2008 to 2016)

Nunavut Annual Net Migration

Territorial annual net migration estimates provide insight into the broad migration patterns that are occurring in Nunavut. Table 3 displays annual net migration estimates for Nunavut from 2008/2009 to 2015/2016, which have been obtained from the Nunavut Bureau of Statistics (2016b). A net of -174 individuals were estimated to have migrated into Nunavut in 2015/2016. However, estimates for the preceding seven years have been variable, from a net of 71 individuals migrating into Nunavut in 2010/2011, to a net of -112 individuals migrating into the territory in 2014/2015. 2015/2016 had the highest number of interprovincial/interterritorial out-migrants, with 1,642. 2015/2016 also had the highest number of interprovincial/interterritorial in-migrants, with 1,443. Since the pre-development period, a negative decreasing trend in Nunavut annual net migration has occurred.

Nunavut Annual Net Migration Estimates							
2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
12	-27	71	-108	23	-6	-112	-174

Source: Nunavut Bureau of Statistics (2016b)

Table 3: Nunavut annual net migration estimates (2008/2009 to 2015/2016)

3.1.3 Analysis

The populations of the North Baffin LSA communities, Iqaluit, and Nunavut have continued to grow since Project development. The percentage of Inuit versus non-Inuit residents in the North Baffin LSA communities has also remained high since that time. However, a negative downward trend in Nunavut annual net migration has occurred. No linkage to Project activities is currently evident with any of these indicators. Population growth was occurring throughout Nunavut prior to Project development, and the percentage of Inuit versus non-Inuit residents in the North Baffin LSA communities was similarly high during this period. Likewise, annual net migration estimates are currently conducted at too coarse a scale (i.e. territorial) to ascertain any Project-related influences.

3.2 IN-MIGRATION OF NON-INUIT PROJECT EMPLOYEES INTO THE NORTH BAFFIN LSA

3.2.1 Predicted Effect and Mitigation Measures

The Final EIS predicted that some in-migration of non-Inuit employees hired to work at the Project could occur in the North Baffin LSA, but would be of low magnitude (i.e. <5% change in the non-Inuit baseline population). Associated mitigation measures developed by Baffinland include the designation of Iqaluit and an additional southern location as 'points of hire', with free transportation provided to employees from these points of hire to the mine site.

3.2.2 Indicator Data

Known In-Migrations of Non-Inuit Project Employees and Contractors

Data on the movement of Project employees and contractors can provide insight into potential in-migration trends occurring in the North Baffin LSA. Table 4 presents data on known in-migrations of Project employees and contractors to the North Baffin LSA. These data were provided by Baffinland Community Liaison Officers (BCLOs) located in each North Baffin LSA community. More specifically, the BCLOs were asked to report on the number of Project employees and contractors they knew who had moved into and out of each of their communities. BCLOs were also asked to identify whether individuals were Inuit or non-Inuit and locations where these individuals had moved to and from, if known.⁶

Table 4 indicates one Inuit employee is known to have moved into the North Baffin LSA communities in 2016. This individual moved from a location outside of Nunavut. No non-Inuit employees or contractors and no Inuit contractors hired to work at the Project are known to have moved into the North Baffin LSA communities in 2016.

⁶ Family members that may have migrated with employees were not accounted for.

Known In-Migration of Project Employees and Contractors to the North Baffin LSA		
Year	Inuit	Non-Inuit
2015	3	0
2016	1	0
Total	4	0

Source: Baffinland records

Table 4: Known in-migrations of Project employees and contractors to the North Baffin LSA (2015 to 2016)

In-Migration of Non-Inuit to the North Baffin LSA

Annual in-migration data for non-Inuit North Baffin LSA residents were not available from the Nunavut Bureau of Statistics in 2016. However, some insight into this topic may be obtained by assessing changes in the percentage of Inuit versus non-Inuit residents in the North Baffin LSA communities since Project development. If substantial non-Inuit in-migration (as per this section) and Inuit out-migration (as per Section 3.3) were occurring because of the Project, the ratio of Inuit to non-Inuit residents in the North Baffin LSA communities would be expected to noticeably decrease. As seen in Figure 2, however, the percentage of Inuit residents in the North Baffin LSA communities has remained relatively constant between 2008 and 2016 (ranging between a low of 94.1% Inuit and a high of 94.7% Inuit). In fact, a slight increasing trend in the percentage of Inuit residents has been identified since the pre-development period.

3.2.3 Analysis

The Final EIS predicted a <5% change in the non-Inuit baseline population could occur in the North Baffin LSA because of Project activities. In 2012, the Project baseline year, 5% of the North Baffin non-Inuit population would have equaled approximately 28 individuals. Cumulative Baffinland data available since 2015⁷ indicates a net of zero non-Inuit employees/contractors have in-migrated to the North Baffin LSA. Data on changes in the percentage of Inuit versus non-Inuit residents in the North Baffin LSA communities have also failed to reveal a Project-induced trend at this time.

However, this data presents only a partial assessment of migration trends and more detailed in-migration data for the North Baffin LSA communities are currently unavailable from the Nunavut Bureau of Statistics. Furthermore, the factors involved in deciding to migrate can be complex and specific to an individual. While these limitations are acknowledged, available migration data appears to support the Final EIS predictions that were made.

⁷ 2013-2014 Baffinland migration data was presented in Brubacher Development Strategies Inc. (2015). However, comparisons with this data should be made with some caution as this report did not identify whether its migration calculations included both Inuit and non-Inuit individuals and/or both employees and contractors. Furthermore, the number of migrating individuals were rounded and calculated using different methods than subsequent Baffinland socio-economic monitoring reports. From 2013 to 2014, Brubacher Development Strategies Inc. (2015) notes less than five individuals moved into the North Baffin LSA from other North Baffin LSA communities. This report also notes less than five individuals moved into the North Baffin LSA from Iqaluit during this period, while less than five individuals moved out of the North Baffin LSA to other North Baffin LSA communities. Five to ten individuals also moved from the North Baffin LSA to Iqaluit during this period, while less than five individuals moved from the North Baffin LSA to Ottawa.

3.3 OUT-MIGRATION OF INUIT RESIDENTS FROM THE NORTH BAFFIN LSA

3.3.1 Predicted Effect and Mitigation Measures

The Final EIS predicted that some out-migration of Inuit residents from the North Baffin LSA could occur, but would be of moderate magnitude (i.e. 1% to <5% of the total population). Mitigation developed by Baffinland regarding this effect includes the designation of all North Baffin LSA communities as 'points of hire', with free transportation provided to employees from these points of hire to the mine site.

3.3.2 Indicator Data

Known Out-Migrations of Inuit Project Employees and Contractors

Data on the movement of Project employees and contractors can provide insight into potential out-migration trends occurring in the North Baffin LSA. Table 5 presents data on known out-migrations of Project employees and contractors from the North Baffin LSA. As noted previously, these data were provided by BCLOs located in each North Baffin LSA community. More specifically, the BCLOs were asked to report on the number of Project employees and contractors they knew who had moved into and out of each of their communities. BCLOs were also asked to identify whether individuals were Inuit or non-Inuit and locations where these individuals had moved to and from, if known.⁶

Four Inuit employees and one Inuit contractor are known to have moved out of the North Baffin LSA communities in 2016. Of these individuals, two moved to another North Baffin LSA community (these individuals will not be counted as North Baffin LSA out-migrants), one moved to another community in Nunavut, and two moved to a location outside of Nunavut. No non-Inuit employees or contractors are known to have moved out of the North Baffin LSA communities in 2016. However, Table 4 also indicates the out-migration of these three Inuit individuals was offset by the in-migration of one Inuit individual to the North Baffin LSA in 2016. Thus, a net of two Inuit individuals out-migrated from the North Baffin LSA in 2016.

Known Out-Migration of Project Employees and Contractors from the North Baffin LSA		
Year	Inuit	Non-Inuit
2015	4	0
2016	3	0
Total	7	0

Source: Baffinland records

Table 5: Known out-migrations of Project employees and contractors from the North Baffin LSA (2015 to 2016)

Out-Migration of Inuit from the North Baffin LSA

Annual out-migration data for Inuit North Baffin LSA residents were not available from the Nunavut Bureau of Statistics in 2016. However, some insight into this topic may be obtained by assessing changes in the percentage of Inuit versus non-Inuit residents in the North Baffin LSA communities since Project development. If substantial Inuit out-migration (as per this section) and non-Inuit in-migration (as per Section 3.2) were occurring because of the Project, the ratio of Inuit to non-Inuit residents in the North Baffin LSA communities would be expected to noticeably decrease. As seen in Figure 2, however,

the percentage of Inuit residents in the North Baffin LSA communities has remained relatively constant between 2008 and 2016 (ranging between a low of 94.1% Inuit and a high of 94.7% Inuit). In fact, a slight increasing trend in the percentage of Inuit residents has been identified since the pre-development period.

3.3.3 Analysis

The Final EIS predicted 1% to <5% of the total, primarily Inuit, North Baffin LSA baseline population could migrate out of the North Baffin LSA because of the Project. In 2012, the selected population baseline year, 5% of the total North Baffin LSA population would have equaled approximately 306 individuals. As mentioned previously, a net of two Inuit employees/contractors out-migrated from the North Baffin LSA in 2016. Cumulative Baffinland data available since 2015⁷ indicates there have been a net of three Inuit employees/contractors who have out-migrated from the North Baffin LSA. Data on changes in the percentage of Inuit versus non-Inuit residents in the North Baffin LSA communities have also failed to reveal a Project-induced trend at this time.

However, this data presents only a partial assessment of migration trends and more detailed out-migration data for the North Baffin LSA communities are currently unavailable from the Nunavut Bureau of Statistics. Furthermore, the factors involved in deciding to migrate can be complex and specific to an individual. While these limitations are acknowledged, available migration data appears to support the Final EIS predictions that were made.

3.4 EMPLOYEE CHANGES OF ADDRESS, HOUSING STATUS, AND MIGRATION INTENTIONS

3.4.1 Project Certificate Condition

No specific predictions related to employee changes of address, housing status, and migration intentions were presented in the Final EIS. However, Project Certificate condition #133 states:

“The Proponent is encouraged to work with the Qikiqtaaluk Socio-Economic Monitoring Committee and in collaboration with the Government of Nunavut’s Department of Health and Social Services, the Nunavut Housing Corporation and other relevant stakeholders, design and implement a voluntary survey to be completed by its employees on an annual basis in order to identify changes of address, housing status (i.e. public/social, privately owned/rented, government, etc.), and migration intentions while respecting confidentiality of all persons involved. The survey should be designed in collaboration with the Government of Nunavut’s Department of Health and Social Services, the Nunavut Housing Corporation and other relevant stakeholders. Non-confidential results of the survey are to be reported to the Government of Nunavut and the NIRB.”

3.4.2 Indicator Data

Employee Changes of Address, Housing Status, and Migration Intentions

Baffinland has developed a voluntary *Employee Information Survey* (see Appendix C) to address Project Certificate condition #133. The latest version of this survey⁸ was administered by Baffinland representatives at Project sites in February/March 2017. A total of 43 surveys were ultimately completed by employees.⁹

Table 6 summarizes results pertaining to changes in employee housing situation and/or address. Of the 43 surveys received, 9 individuals (20.9%) indicated their housing situation had changed in the past 12 months. Of these 9 individuals, 7 (16.3% of the total) indicated they had recently moved (either to different housing or a different community). 3 individuals (7.0%) indicated they had moved to a different community in the past 12 months, 2 of whom (4.7%) moved from a North Baffin LSA community to outside of the North Baffin LSA. No individuals moved from outside the North Baffin LSA to a North Baffin LSA community. Of the 9 individuals who indicated their housing situation had changed in the past 12 months, 2 indicated ‘rent increase’ when explaining the nature of this change although it’s unclear what exactly they were referring to. 1 individual did not provide an explanation for how their housing situation had changed.

Changes in Employee Housing Situation and/or Address (2017 Employee Information Survey Results)	
Type of Change	Number of Individuals (43 Surveys Received)
Housing situation has changed in the past 12 months	9
Moved to a different community in the past 12 months	3
Moved from North Baffin LSA to outside of North Baffin LSA	2
Moved from outside of North Baffin LSA to North Baffin LSA	0

Source: Baffinland records

Table 6: Changes in employee housing situation and/or address (2017 employee information survey results)

Table 7 summarizes results pertaining to current employee housing status. Of the 43 surveys received, 1 individual (2.3%) indicated they lived in a private dwelling owned by them, 4 individuals (9.3%) indicated they lived in a private dwelling owned by another individual, 6 individuals (14.0%) indicated they were renting from a private company, 29 individuals (67.4%) indicated they were living in public housing, and results were unclear/unknown for 3 individuals (7.0%).

⁸ Results from earlier versions of this survey have been presented in previous Baffinland socio-economic monitoring reports. The content of the Employee Information Survey continues to evolve, based on feedback obtained from members of the Mary River SEMWG and through internal refinements.

⁹ This survey was offered to a) Inuit employees residing in Nunavut, b) Inuit employees residing outside of Nunavut, and c) non-Inuit employees residing in Nunavut. It was not offered to contractors. Efforts were made to capture all rotations of current employees, but individuals on vacation or medical leave at the time of the survey would not have been captured in the survey results. A small number of questions were not filled out by those who completed the survey. Where survey answers were not provided or were unclear, results were recorded as ‘unknown’. Survey results are for general informational purposes only and should not be considered representative of any particular population.

Current Employee Housing Status (2017 Employee Information Survey Results)	
Current Housing Status	Number of Individuals (43 Surveys Received)
Privately owned – Owned by you	1
Privately owned – Owned by another individual	4
Renting from a private company	6
Public housing	29
Government of Nunavut staff housing	0
Other staff housing	0
Other/unknown	3

Source: Baffinland records

Table 7: Current employee housing status (2017 employee information survey results)

Table 8 summarizes results pertaining to employee migration intentions. Of the 43 surveys received, 7 individuals (16.3%) indicated they intended to move to a different community in the next 12 months. 3 of these individuals (7.0% of the total) were intending to move from a North Baffin LSA community to outside of the North Baffin LSA. No individuals intended to move from outside the North Baffin LSA to a North Baffin LSA community, and 1 individual indicated they were still determining where they would move to.

Employee Migration Intentions (2017 Employee Information Survey Results)	
Migration Intentions	Number of Individuals (43 Surveys Received)
Intend to move to a different community in the next 12 months	7
Intend to move from North Baffin LSA to outside of North Baffin LSA	3
Intend to move from outside of North Baffin LSA to North Baffin LSA	0

Source: Baffinland records

Table 8: Employee migration intentions (2017 employee information survey results)

3.4.3 Analysis

Information obtained from Baffinland's *Employee Information Survey* in 2017 indicates that some employees have changed their housing situation and/or address in the past 12 months, or have migration intentions. The survey also provided an overview of respondents' current housing status and demonstrated over two-thirds of respondents reside in public housing. Surveys conducted in future years are expected to provide additional data to compare these results against.

3.5 EMPLOYEE ORIGIN

3.5.1 Project Certificate Condition

No specific prediction related to employee origin was presented in the Final EIS. However, Project Certificate condition #134 states:

The Proponent shall include with its annual reporting to the NIRB a summation of employee origin information as follows:

- a. The number of Inuit and non-Inuit employees hired from each of the North Baffin communities, specifying the number from each;*
- b. The number of Inuit and non-Inuit employees hired from each of the Kitikmeot and Kivalliq regions, specifying the number from each;*
- c. The number of Inuit and non-Inuit employees hired from a southern location or other province/territory outside of Nunavut, specifying the locations and the number from each; and*
- d. The number of non-Canadian foreign employees hired, specifying the locations and number from each foreign point of hire.*

3.5.2 Indicator Data

Employee Origin

Data on the origin, number, and ethnicity of Project employees and contractors who worked at the Project in 2016 are presented in Table 9. An average of 1180 individuals worked at the Project in 2016, of which 182 (15.4%) were Inuit. In 2016, most of the Project's Inuit employees and contractors were based in the North Baffin LSA communities. Most of the Project's non-Inuit employees and contractors were based in Canadian locations outside of Nunavut, with Ontario having the greatest number and Yukon having the fewest. However, some non-Inuit employees and contractors were based in the North Baffin LSA communities and Iqaluit, and a small number of Inuit employees and contractors resided outside of Nunavut. There were a small number of non-Inuit international contractors, and various employees and contractors whose origin was unknown. Within the North Baffin LSA, Hall Beach had the greatest average number of employees and contractors (37), while Igloolik had the fewest (26). Several employees and contractors also resided in Iqaluit (52).

3.5.3 Analysis

The Project employed several Inuit from the LSA communities in 2016, which is a likely reflection of the Inuit hiring commitments Baffinland has made for those locations. Most non-Inuit individuals in 2016 came from Canadian provinces and territories other than Nunavut. A mine like Mary River requires many employees with various skill sets. Individuals with advanced mining and/or more technical skill sets are in limited supply in Nunavut (e.g. Gregoire 2014, MacDonald 2014, MIHR 2014, Conference Board of Canada 2016). The large number of Baffinland employees from outside of Nunavut would at least partly reflect this skills gap.

Mary River Project Employees and Contractors by Origin and Ethnicity in 2016																		
Origin		Baffinland								Contractors								Yearly Average
		Inuit				Non-Inuit				Inuit				Non-Inuit				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Nunavut	Arctic Bay	22	21	19	18	1	3	2	3	5	6	10	7	1	7	8	7	35
	Clyde River	18	18	17	15	0	1	3	3	3	10	8	8	3	13	6	3	32
	Hall Beach	11	9	9	9	0	1	2	2	27	25	15	14	1	6	6	9	37
	Igloolik	15	13	12	8	0	1	1	1	14	11	11	4	1	5	4	4	26
	Pond Inlet	16	17	15	20	0	0	2	0	14	18	15	10	2	3	3	2	34
	Iqaluit	12	13	12	12	0	2	2	3	24	24	16	21	9	15	23	18	52
	Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Canadian Provinces and Territories	Alberta	0	0	0	0	17	25	29	32	0	0	0	0	35	37	52	62	72
	British Columbia	0	0	0	0	31	33	35	28	0	1	1	1	36	30	38	24	65
	Manitoba	0	0	0	0	13	13	11	10	0	0	0	0	7	6	5	5	18
	New Brunswick	0	0	0	0	24	21	21	22	0	0	0	0	17	14	5	4	32
	Newfoundland	1	1	1	1	45	40	41	37	0	0	0	0	11	16	23	10	57
	Northwest Territories	0	0	0	0	1	1	1	2	0	0	0	0	3	2	8	5	6
	Nova Scotia	0	0	0	0	38	43	44	44	0	0	0	0	17	19	14	18	59
	Ontario	7	7	7	10	246	250	258	263	3	3	3	0	156	173	126	118	408
	Prince Edward Island	0	0	0	0	1	2	3	4	0	0	0	0	2	3	2	2	5
	Quebec	0	0	0	0	21	19	22	22	0	0	0	0	25	25	34	24	48
	Saskatchewan	0	0	0	0	4	4	5	5	0	0	0	0	4	5	1	5	8
Yukon	0	0	0	0	1	1	1	0	0	0	0	0	1	0	2	1	2	
International	Other	0	0	0	0	2	1	0	0	0	0	0	0	4	0	0	3	3
Unknown	Unknown	0	1	1	4	43	60	93	109	0	0	2	0	76	88	129	124	183
Quarterly Totals		102	100	93	97	488	521	576	590	90	98	81	65	411	467	489	448	
Average		98				544				84				454				
AVERAGE TOTAL		1180																

Source: Baffinland records. This table includes individuals who worked on the Project in Nunavut in 2016. This table does not include individuals who worked on the Project outside of Nunavut, Baffinland corporate head office staff, or account for turnover.

Table 9: Mary River Project employees and contractors by origin and ethnicity in 2016

4. VSEC – EDUCATION AND TRAINING

Three residual effects associated with the VSEC ‘Education and Training’ were assessed in the Final EIS. These include ‘improved life skills amongst young adults’, ‘incentives related to school attendance and success’, and ‘opportunities to gain skills’. These are reviewed more fully below, in addition to information on one other topic requested through the Project Certificate (i.e. education and employment status prior to Project employment).

4.1 IMPROVED LIFE SKILLS AMONGST YOUNG ADULTS

4.1.1 Predicted Effect and Mitigation Measures

The Final EIS predicted that positive effects on life skills development amongst young adults in the LSA would arise from the Project. This would occur primarily through access to industrial work supported by pre-employment preparation and on-the-job training. Associated mitigation measures developed by Baffinland include the provision of job readiness training, creation of a supportive work environment, a ‘second chance’ hiring policy, and development of a no drugs/no alcohol policy on site.

4.1.2 Indicator Data

Participation in Pre-Employment Training

Participation in pre-employment training is a useful indicator of life skills development because some individuals may have lacked basic employment skills prior to participating. Baffinland successfully carried out a ‘Work Ready’ pre-employment training program with North Baffin LSA residents in 2012 and 2013. There were 277 graduates of the program and 150 of those graduates went on to be employed at the Project in 2013. From 2014 to 2016, Baffinland focused on revising and improving its Work Ready program. The revised program is intended to provide future Inuit employees with an advanced understanding of some of the demands of working at the Project. A new Work Ready program is targeted to be delivered in local communities beginning in 2017.

LSA Employment and On-the-Job Training

Employment and on-the-job training are also important components of life skills development amongst young adults, as they provide additional opportunities for gaining valuable experience. In 2016, approximately 305,836 hours were worked by LSA residents at the Project. Likewise, 2,434 hours of on-the-job training were delivered to Inuit in 2016. Sections 4.3 and 5.2 of this report should be reviewed for additional information on Project-related employment and on-the-job training provided in 2016.

4.1.3 Analysis

In 2016, Baffinland continued to provide and/or develop various programs to support the development of life skills amongst LSA residents (including employment). These opportunities are notable, especially when considering the lack of employment and mining-related training opportunities that have historically existed in the North Baffin LSA. Furthermore, Baffinland maintains a healthy and supportive work environment. The Company provides employees and their dependents with ongoing access to an

Employee and Family Assistance Program and established on-site elder positions to provide counsel and support to Inuit employees.

Definitions of ‘youth’ and ‘elder’ in Inuit culture can be subjective and often based more on personal knowledge and experience rather than an exact age. While not all individuals who received pre-employment training, employment, and on-the-job training from Baffinland can be considered ‘youth’, it can reasonably be assumed that many of these individuals stood to benefit from the life skills development opportunities that were provided. It is further acknowledged that the development of life skills for some individuals can take time to achieve. However, there are indications that positive effects on life skills development amongst young adults in the LSA continue to result from the Project, as predicted in the Final EIS.

4.2 INCENTIVES RELATED TO SCHOOL ATTENDANCE AND SUCCESS

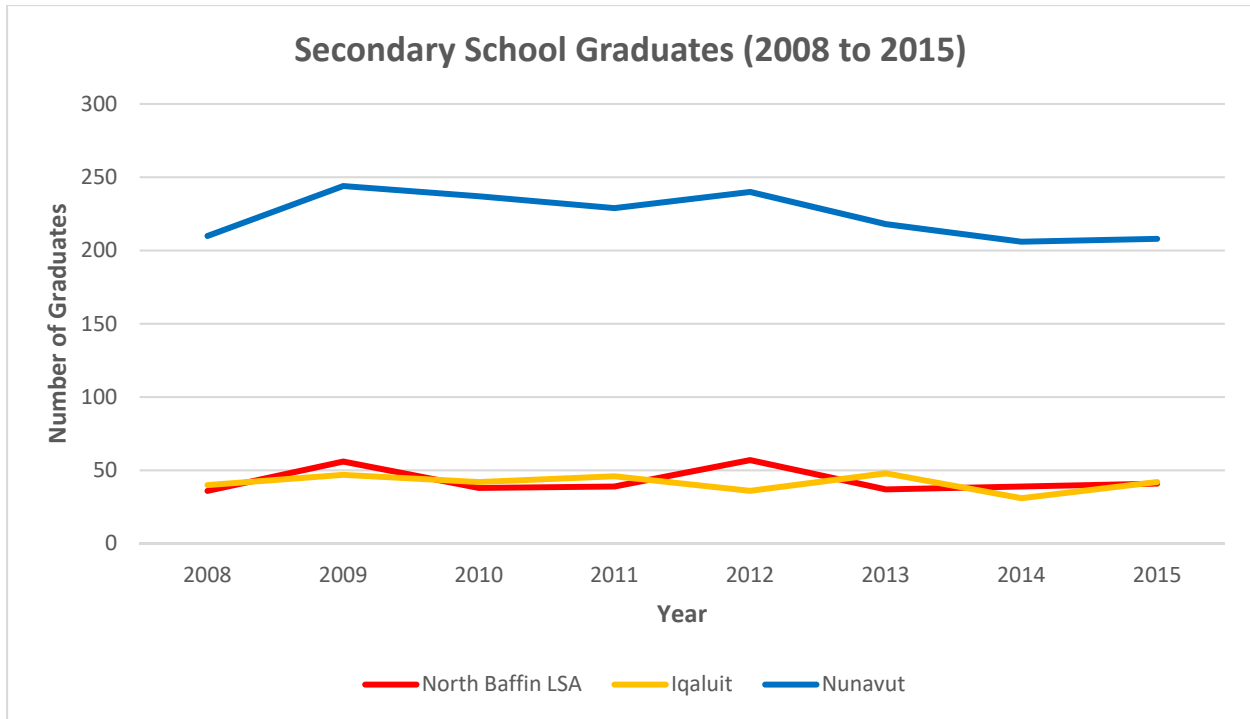
4.2.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project would have a positive effect on education and skills development across the LSA by providing incentives related to school attendance and success. While there is some potential that individuals may drop out of school or forego further education to work at the Project, the overall effect of the Project will be to increase the value of education and thereby the ‘opportunity cost’ of dropping out of school. Associated policies or mitigation measures developed by Baffinland include the establishment of a minimum age (i.e. 18) for Project employment, provision of career planning services, and priority hiring for Inuit. Furthermore, Baffinland continues to support a number educational and training initiatives through its donations program and the Inuit Impact and Benefit Agreement (IIBA) it negotiated with the QIA.

4.2.2 Indicator Data

Number of Secondary School Graduates

The number of secondary school graduates in the LSA is a useful indicator of school attendance and success. 2015 was the most recent year for which data on secondary school graduates was available from the Nunavut Bureau of Statistics (2016c). Figure 3 displays the number of secondary school graduates by community from 2008 to 2015. In the North Baffin LSA communities in 2015, there were 41 total graduates, up from 39 in 2014. There were a low of 4 graduates in Arctic Bay and Igloolik, and a high of 20 graduates in Pond Inlet in 2015. In Iqaluit, there were 42 graduates in 2015, up from 31 in 2014. Compared to pre-development period averages, there has been a decreasing trend in the number of graduates in the North Baffin LSA communities and Iqaluit.



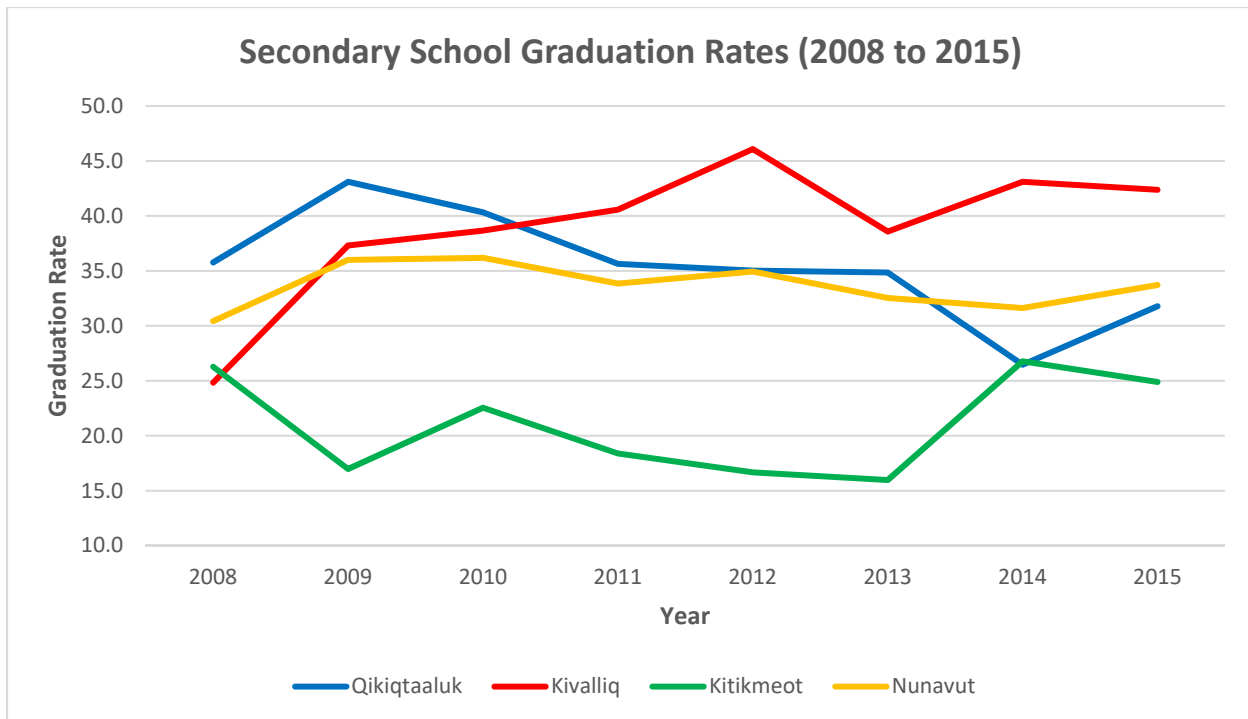
Source: Nunavut Bureau of Statistics (2016c)

Figure 3: Secondary school graduates (2008 to 2015)

Secondary School Graduation Rate

Secondary school graduation rates¹⁰ are another useful indicator of school attendance and success. These have been obtained from the Nunavut Bureau of Statistics (2016d) and are presented in Figure 4. However, data are only available for Nunavut and the Qikiqtaaluk, Kivalliq, and Kitikmeot regions. In 2015, the Kivalliq Region had the highest graduation rate in the territory (42.4), followed by the Qikiqtaaluk Region (31.8), and Kitikmeot Region (24.9). Compared to 2014, graduation rates in the Qikiqtaaluk Region were up (by 5.3). Compared to pre-development period averages, there has been a decreasing trend in graduation rates in the Qikiqtaaluk Region, but increasing trends in the Kivalliq and Kitikmeot Regions.

¹⁰ The Nunavut Bureau of Statistics (2016d) notes the ‘graduation rate’ is calculated by dividing the number of graduates by the average of estimated 17 and 18 year-old populations (the typical ages of graduation). ‘Graduates’ include students who completed secondary school but excludes those who completed equivalency or upgrading programs. Due to the small population of Nunavut, however, the Nunavut Bureau of Statistics (2016d) notes that graduation rate changes from year to year must be interpreted with caution.



Source: Nunavut Bureau of Statistics (2016d)

Figure 4: Secondary school graduation rates (2008 to 2015)

4.2.3 Analysis

While there have been decreasing trends in the number of graduates in Iqaluit and in graduation rates in the Qikiqtaaluk Region in the post-development period, decreasing trends were also evident in these indicators in the five years preceding Project development. This implies factors other than the Project are likely driving these trends. While the number of graduates in the North Baffin LSA has undergone a trend reversal in the post-development period (i.e. it was previously increasing), it should be noted that a similar trend reversal occurred for all of Nunavut during this period. This suggests factors other than the Project are again likely driving this trend. As Project construction only began in 2013, there is a minimal amount of post-development data currently available. School attendance and success can also be influenced by many socio-economic factors. Correlations between Project effects and school attendance and success, if any, will only come to light with the analysis of additional yearly data.

However, there are positive indications Baffinland’s various initiatives continue to provide incentives for youth to stay in school, as predicted in the Final EIS. Baffinland continued to support several educational and training initiatives through its donations program and IIBA in 2016. For example, since 2007 Baffinland has donated laptops to secondary school graduates in the North Baffin LSA communities to motivate youth to complete their high school educations. Baffinland provided 46 laptops to newly graduated grade 12 students in 2016 and 42 laptops in 2015. In 2015, Baffinland also partnered with Mining Matters¹¹ to deliver a two-day *Mining Rocks Earth Science Program* to high school students and a

¹¹ Mining Matters is a charitable organization dedicated to bringing knowledge and awareness about Canada’s geology and mineral resources to students, educators, and the public. See <http://www.pdac.ca/mining-matters/about-us> for more information.

Teacher Training Workshop in four communities (i.e. Iqaluit, Hall Beach, Igloodik, and Arctic Bay). A total of 411 students, educators, and community members participated. The intention of this program was to increase the awareness of earth science and the diverse careers available in the mining industry. As per the IIBA, Baffinland also continued contributing to an annual scholarship fund for Nunavut Inuit in 2016 (with priority given to applications from the North Baffin LSA communities). Seven scholarships valued at \$5,000.00 each were provided in 2016.

4.3 OPPORTUNITIES TO GAIN SKILLS

4.3.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project would have a positive effect on education and skills development, by providing opportunities for training and skills acquisition amongst LSA residents. Associated mitigation measures developed by Baffinland include the provision of training programs, upgrading opportunities, and career counselling to employees, and summer experience to community members. Furthermore, Baffinland continues to support several educational and training initiatives through its donations program and through compliance with IIBA provisions respecting training and education.

4.3.2 Indicator Data

Hours of Training Completed by Inuit Employees

The number of training hours completed by Project employees is a useful indicator of the magnitude of Baffinland’s annual training efforts. Hours of training completed on site from 2013 to 2016 for Inuit and non-Inuit employees (not including contractors) are presented in Table 10. In 2016, a total of 27,966 hours of training were completed at the Project site, of which 2,434 hours (or 8.7%) were provided to Inuit. There has been a total of 79,553 hours of training provided since Project development, of which 11,843 hours (or 14.9%) were provided to Inuit.

Hours of Training Completed				
Employee Ethnicity	2013	2014	2015	2016
Inuit	1,283	3,596	4,530	2,434
Non-Inuit	4,555	20,271	17,352	25,532
Total	5,838	23,867	21,882	27,966

Source: Baffinland records

Table 10: Hours of training completed (2013 to 2016)

Types of Training Provided to Inuit Employees

The types of training provided by Baffinland help reveal the full scope of learning opportunities available at the Project. Types and hours of training provided to Inuit and non-Inuit employees in 2016 are displayed in Figure 5. Training programs continued to evolve in 2016 based on operational needs and schedules. Training programs with the highest levels of Inuit participation in 2016 included heavy equipment operator (681 hours), 5 day basic MRT training (275 hours), mobile support equipment (254 hours), and ore haul truck (214 hours). Training programs are expected to continue to evolve at the Project as operations advance, employment increases, and feedback from Inuit employees is considered.

Apprenticeships and Other Opportunities

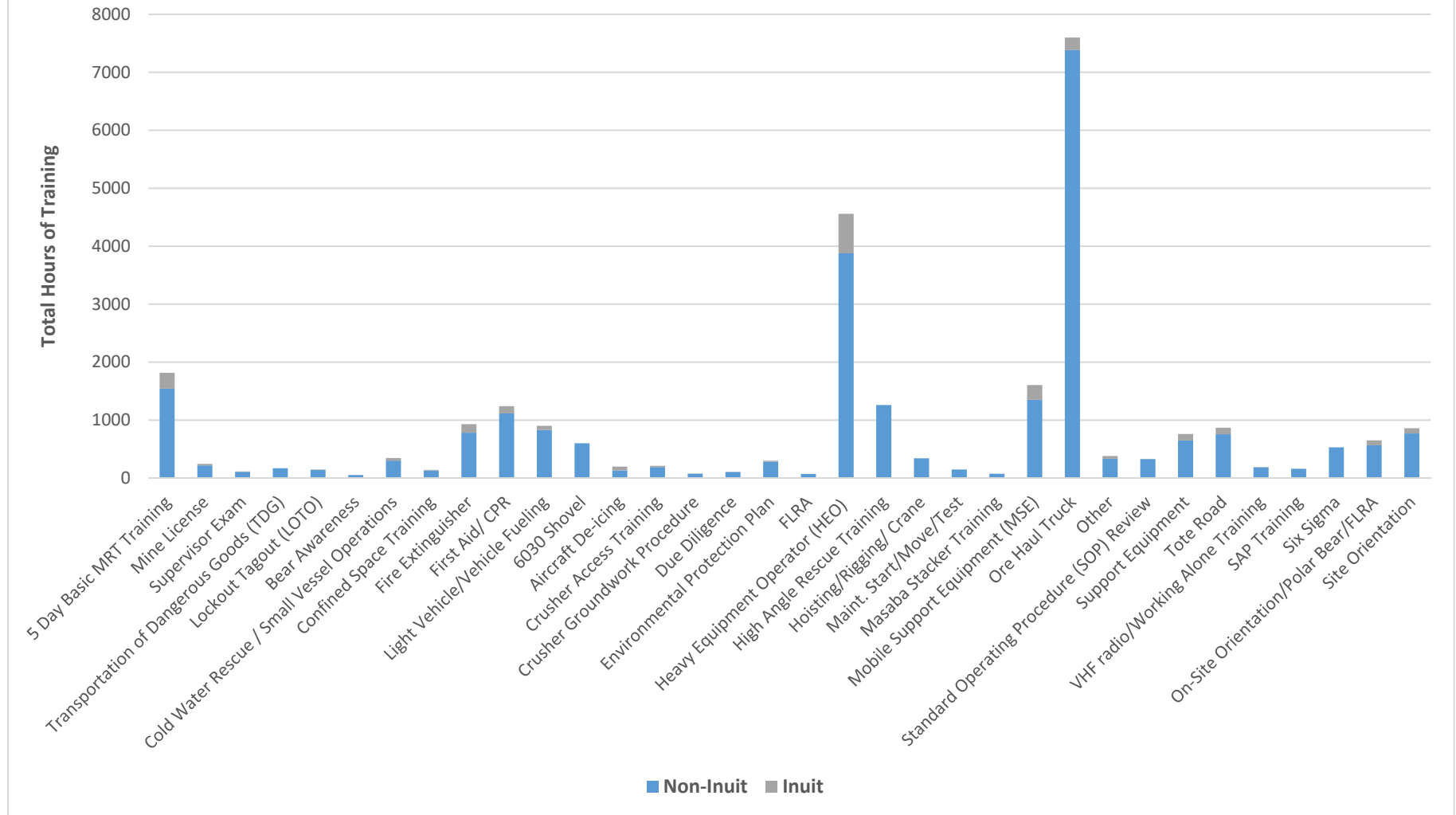
In 2015, Baffinland committed to support its first group of apprentices in the following trades: oil burner mechanic, welder, and heavy-duty equipment mechanic. In 2015, there were four Inuit apprentices enrolled in various stages of the program. In 2016, Baffinland employed one Inuit apprentice.

4.3.3 Analysis

The Final EIS predicted positive effects on training and skills acquisition amongst LSA residents would arise from the Project. In 2016, Baffinland continued to provide many training and skills development opportunities to its Inuit employees. Furthermore, Baffinland employees are regularly exposed to various 'informal' training and skills development opportunities through contact with more experienced coworkers and the process of everyday work. Several other Baffinland programs and IIBA initiatives have also contributed to the development of a more experienced Inuit workforce. As noted previously, Baffinland delivered a 'Work Ready' pre-employment training program to local residents in 2012 and 2013 and anticipates delivering a revised version of this training in 2017. Skills upgrading (GED and language) has also been identified as a priority for 2017.

It is evident the Project has had a positive effect on education and skills development amongst LSA residents, as was predicted in the Final EIS. The opportunities provided by the Project are notable, particularly when considering the current mining skills 'gap' that exists in Nunavut (e.g. Gregoire 2014, MacDonald 2014, MIHR 2014, Conference Board of Canada 2016).

Types and Hours of Training Provided (2016)



Source: Baffinland records. Training programs totalling >50 hours have been included under 'Other'.

Figure 5: Types and hours of training provided (2016)

4.4 EDUCATION AND EMPLOYMENT STATUS PRIOR TO PROJECT EMPLOYMENT

4.4.1 Project Certificate Condition

No specific prediction related to employee education and employment status prior to Project employment was presented in the Final EIS. However, Project Certificate condition #140 states:

The Proponent is encouraged to survey Nunavummiut employees as they are hired and specifically note the level of education obtained and whether the incoming employee resigned from a previous job placement or educational institution in order to take up employment with the Project.

4.4.2 Indicator Data

Education and Employment Status Prior to Project Employment

Baffinland has developed a voluntary *Employee Information Survey* (see Appendix C) to address Project Certificate condition #140. The latest version of this survey⁸ was administered by Baffinland representatives at Project sites in February/March 2017. A total of 43 surveys were ultimately completed by employees.⁹

Table 11 summarizes results on the highest level of education obtained by survey respondents. Of the 43 surveys received, 16 individuals (or 37.2%) had no certificate, diploma, or degree. 10 individuals (or 23.3%) had a high school diploma or equivalent, 7 individuals (or 16.3%) had an apprenticeship or trades certificate or diploma, and 8 individuals (or 18.6%) had a college, CEGEP, or other non-university certificate or diploma. There were no individuals who indicated they had any type of university certificate, diploma, or degree, and 2 individuals (or 4.7%) had unknown educational levels.

Table 12 summarizes results on whether survey respondents resigned from a previous job placement or educational institution to take up employment with the Project. Of the 43 surveys received, 9 individuals (or 20.9%) indicated they resigned from a previous job placement to take up employment with the Project and no individuals indicated they resigned from an academic or vocational program to take up employment at the Project.

Highest Level of Education Obtained (2017 Employee Information Survey Results)	
Highest Level of Education	Number of Individuals (43 Surveys Received)
No certificate, diploma or degree	16
High school diploma or equivalent	10
Apprenticeship or trades certificate or diploma	7
College, CEGEP or other non-university certificate or diploma	8
University certificate or diploma below bachelor level	0
University certificate, diploma or degree - Bachelor's degree	0
University certificate, diploma or degree above bachelor level	0
Unknown	2

Source: Baffinland records

Table 11: Highest level of education obtained (2017 employee information survey results)

Resignation from a Previous Job Placement or Educational Institution (2017 Employee Information Survey Results)	
Pre-Employment Status	Number of Individuals (43 Surveys Received)
Resigned from a previous job placement to take up employment at the Project	9
Resigned from an academic or vocational program to take up employment at the Project	0

Source: Baffinland records

Table 12: Resignation from a previous job placement or educational institution (2017 employee information survey results)

4.4.3 Analysis

The employees who completed Baffinland’s *Employee Information Survey* have varied educational and pre-employment backgrounds. As noted previously, 37.2% of respondents had no certificate, diploma or degree, 23.3% of respondents had a high school diploma or equivalent, and 34.9% of respondents had higher than a high school diploma or equivalent. By comparison, data from the 2011 National Household Survey indicate the proportion of Nunavut’s population (aged 25 to 64 years) with no certificate, diploma or degree is 46%; with a high school certificate or equivalent is 12.4%; and with higher than a high school certificate or equivalent is 41.5% (Nunavut Bureau of Statistics 2013).

Furthermore, 20.9% of respondents were employed elsewhere at the time of being hired to work at Mary River. Nunavut’s Inuit population employment rate¹² 3 month moving average ending in January 2017, by comparison, was 55.3% (Nunavut Bureau of Statistics 2017). Baffinland will continue to track the education and employment status of its Inuit employees prior to Project employment to see if any future trends emerge. Surveys conducted in future years are expected to provide additional data to compare these results against.

¹² The Nunavut Bureau of Statistics (2009) defines ‘employment rate’ as the “number of employed persons expressed as a percentage of the population 15 years of age and over”. ‘Employed persons’ are defined as those who “(a) did any work at all at a job or business, that is paid work in the context of an employer-employee relationship, or self-employment; or (b) had a job but were not at work due to factors such as own illness or disability, personal or family responsibilities, vacation, labour dispute or other reasons (excluding persons on layoff, between casual jobs, and those with a job to start at a future date).”

5. VSEC – LIVELIHOOD AND EMPLOYMENT

Three residual effects associated with the VSEC ‘Livelihood and Employment’ were assessed in the Final EIS. These include ‘creation of jobs in the LSA’, ‘employment of LSA residents’, and ‘new career paths’. These are reviewed more fully below, in addition to information on one other topic requested through the Project Certificate (i.e. barriers to employment for women).

5.1 CREATION OF JOBS IN THE LSA

5.1.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project would have a positive effect on wage employment in the LSA by introducing new job opportunities and assisting local residents to access these jobs. During ERP operations, the Project was predicted to generate a total labour demand of approximately 0.9 million hours per year. With the addition of the 18 Mt/a phase, annual labour demand will increase to 2.9 million hours. Labour demand during the Construction Phase will average roughly 4.1 million hours per year over a six-year period, but will reach a peak of approximately 7.3 million hours per year. Closure phase labour demand estimates do not currently exist but will be developed by Baffinland in the future. Mitigation measures developed by Baffinland associated with this prediction include the designation of all LSA communities as points-of-hire.

5.1.2 Indicator Data

Total Hours of Project Labour Performed in Nunavut

Total hours of labour performed each year is a useful indicator of the Project’s labour demand. It also helps reveal the extent to which new job opportunities have become available to LSA residents. Table 13 presents the total hours of Project labour performed in Nunavut from 2013 and 2016, and is inclusive of both Baffinland employees and contractors. In 2016, 1,881,506 hours of labour were performed, which is equal to approximately 905 full time equivalent (FTE) positions.¹³ There were 37,425 more hours of labour performed in 2016 than in 2015. A total of 6,456,646 hours of labour have been performed since Project development.

Total Hours of Project Labour Performed in Nunavut			
2013	2014	2015	2016
863,177	1,867,882	1,844,081	1,881,506

Source: Baffinland records⁴

Table 13: Total hours of Project labour performed in Nunavut (2013 to 2016)

5.1.3 Analysis

The Final EIS predicted a positive effect on the creation of jobs in the LSA would occur because of the Project. In 2016, the Project continued to generate a substantial number of employment opportunities and labour hours. The generation of 1,881,506 hours of labour in 2016 exceeds the Final EIS prediction

¹³ FTE’s were calculated assuming 2,080 hours of employment per person annually. Because these FTE calculations do not include paid time off-site (e.g. vacations) they may underestimate the Project’s labour contributions.

of 0.9 million hours per year during ERP operations by 981,506 hours. As such, the positive effect on LSA job creation predicted to occur in the Final EIS is confirmed.

5.2 EMPLOYMENT OF LSA RESIDENTS

5.2.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project would have a positive effect on wage employment in the LSA by introducing new job opportunities and assisting local residents to access these jobs. The Project is predicted to result in the employment of an estimated 300 LSA residents each year. These residents would supply approximately 342,000 hours of labour to the Project, of which 230,000 hours will be provided by North Baffin LSA residents. Associated mitigation measures developed by Baffinland include management commitments and Company policies related to Inuit hiring, and the development of an Inuit employee recruitment and retention strategy.

5.2.2 Indicator Data

Project Hours Worked by LSA Employees and Contractors

Data on the number of hours worked on the Project provides insight into the varying labour contributions of LSA and non-LSA employees and contractors. Table 14 summarizes the number and percentage of hours worked by individuals on the Project from 2013 to 2016. Table 14 also includes information on the origin and ethnicity of these individuals, where applicable. This information is inclusive of Baffinland employees and contractors and is for work conducted in Nunavut only (including community-based Baffinland positions).

In 2016, a total of 305,836 hours were worked by LSA residents (both Inuit and non-Inuit), representing 16.3% of the total number of hours worked on the Project (i.e. 1,881,506). Of these, 230,732 hours were worked by North Baffin LSA residents (representing 12.3% of the total) and 75,104 hours were worked by Iqaluit residents (representing 4.0% of the total). Project hours worked by North Baffin LSA residents increased (by 17,340 hours) since 2015, while Project hours worked by Iqaluit residents decreased (by 19,074 hours) since 2015. Inuit individuals worked 277,454 Project hours in 2016 (representing 14.7% of the total).

5.2.3 Analysis

The Final EIS predicted a positive effect on the employment of LSA residents would occur because of the Project. In 2016, a total of 305,836 hours were worked by LSA residents, 230,732 of which were worked by North Baffin LSA residents. While these numbers don't fully reflect the Final EIS predictions (i.e. LSA residents would provide 342,000 hours of work, of which 230,000 would be provided by North Baffin LSA residents), Baffinland continues to refine its Inuit human resources programs and remains committed to meeting Inuit employment targets. Furthermore, it will likely take many years to fully realize the Project's Inuit employment potential (mine production only began in late 2014). The establishment of an annual Minimum Inuit Employment Goal (MIEG) with the QIA (which was 25% in 2016 and will remain at 25% in 2017) and finalization of Baffinland's Inuit Human Resources Strategy (IHRS) and Inuit Contracting and Procurement Strategy (ICPS) should assist in increasing LSA employment over time. The IHRS and ICPS will describe goals and initiatives designed to increase Inuit employment and contracting (and Inuit content in contracting) at the Project.

Comments shared during recent QSEMC meetings held in Iqaluit and Pond Inlet provide additional insight into this matter. For example, the 2016 QSEMC meeting report notes “the economic benefits of employment and contracts to local businesses have been interpreted as largely positive in the LSA” (Government of Nunavut 2016: 9). During the community roundtable portion of the April 2015 QSEMC meeting it was also noted that in Pond Inlet “the benefits of Mary River from increased employment and money in the community have been noticed and appreciated” (Government of Nunavut 2015: 16). In Igloolik it was noted that “residents and businesses have benefited from more money coming into town from Mary River employment” (Government of Nunavut 2015: 17).

The 2016 North Baffin community survey conducted by Baffinland provides some additional insight. For example, 57% of survey respondents indicated the Project has provided positive change for their community (only 8% indicated the Project has resulted in negative change, while 35% said they saw no change as a result of the Project). Positive changes noted by respondents included new jobs for local Inuit and youth, income and work-related benefits for families and communities, and new skills development opportunities for local residents.

Some comments related to the employment of LSA residents at the Project were also captured in a recent report commissioned by Baffinland on the experience of Inuit residents employed at the Project as perceived by employees, their spouses, managers and supervisors at Mary River. The report, *Mary River Experience – The First Three Years* (i.e. Brubacher Development Strategies Inc. 2016: 6), notes:

“Individuals spoke about various types of benefits arising from employment. These range from the material rewards that come with increased income, to the mental health benefits of participating on a team and having hope and plans to achieve goals, to the satisfaction associated with learning new things and having an avenue to put one’s skills to good use.”

Insights such as these, combined with the data presented above, confirm the positive effects the Project has had on the employment of LSA residents. While the hours worked by LSA residents in 2016 don’t fully reflect the Final EIS predictions, this situation is expected to be temporary. Baffinland will continue to monitor LSA employment for future trends.

Hours of Project Labour Performed in Nunavut								
Employee Ethnicity & Origin (if applicable)	2013		2014		2015		2016	
	Hours Worked	% of total (863,177)	Hours Worked	% of total (1,867,882)	Hours Worked	% of total (1,844,081)	Hours Worked	% of total (1,881,506)
Inuit – North Baffin LSA	125,870	14.6%	281,679	15.1%	208,278	11.3%	198,618	10.6%
Inuit – Iqaluit	38,799	4.5%	80,796	4.3%	85,088	4.6%	51,216	2.7%
Inuit – Other	9,696	1.1%	17,131	0.9%	37,542	2.0%	27,620	1.5%
Inuit (Total)	174,365	20.2%	379,606	20.3%	330,908	17.9%	277,454	14.7%
Non-Inuit – North Baffin LSA	—	—	—	—	5,114	0.3%	32,114	1.7%
Non-Inuit – Iqaluit	—	—	—	—	9,090	0.5%	23,888	1.3%
Non-Inuit – Other	—	—	—	—	1,498,969	81.3%	1,548,050	82.3%
Non-Inuit (Total)	688,812	79.8%	1,488,276	79.7%	1,513,173	82.1%	1,604,052	85.3%
Number of Hours (Total)	863,177	—	1,867,882	—	1,844,081	—	1,881,506	—

Source: Baffinland records.⁴ Data for non-Inuit LSA residents were not available for 2013 and 2014 and are included in the non-Inuit total instead.

Table 14: Hours of Project labour performed in Nunavut (2013 to 2016)

5.3 NEW CAREER PATHS

5.3.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project would have a positive effect on the ability of LSA residents to progress in their jobs and careers. This effect will occur because of new career paths that will be introduced to the region, from entry-level through step-by-step advancement to higher level jobs. Associated mitigation measures developed by Baffinland include management commitments and Company policies related to Inuit hiring and promotions, the provision of individual career support programs and the creation of a ‘second chance’ hiring policy.

5.3.2 Indicator Data

LSA Employment

Data on the employment of LSA residents at the Project provides insight into the new career paths made available to LSA residents. This is because some Project jobs may represent an opportunity for individuals to improve their existing employment status (e.g. from unemployed to employed, from part-time to full-time, from lower-skilled to higher-skilled positions) and/or form the basis of future promotion and advancement at the Project. As noted in Section 5.2, a total of 305,836 hours were worked by LSA residents in 2016.

Inuit Employee Promotions

The number of annual Inuit employee promotions is also an important indicator of career progression at the Project. Data on Baffinland Inuit employee promotions (not including contractors) from 2014 to 2016 are presented in Table 15. In 2016, 14 Inuit employee promotions occurred, which was the same number of promotions that occurred in 2015.

Baffinland Inuit Employee Promotions		
2014	2015	2016
9	14	14

Source: Baffinland records. Includes temporary promotions. Inuit promotion data were not available for 2013.

Table 15: Baffinland Inuit employee promotions (2014 to 2016)

Inuit Employee Turnover

Annual Inuit employee turnover provides additional insight into Inuit career progression. The term ‘turnover’ is inclusive of many different components including resignation, layoff, termination, end of contract, and retirement. High turnover would indicate that fewer individuals are maintaining stable employment and able to take advantage of potential advancement opportunities. Low turnover, conversely, would indicate a greater number of individuals are maintaining stable employment and able to take advantage of potential advancement opportunities. Table 16 displays information on Baffinland Inuit employee departures from 2013 to 2016 (not including contractors).

Number of Baffinland Inuit Employee Departures			
2013	2014	2015	2016
9	45	41	44

Source: Baffinland records. 2013 and 2014 numbers are for indeterminate employees only.

Table 16: Number of Baffinland Inuit employee departures (2013 to 2016)

In 2016, there were 44 Inuit employees whose employment with Baffinland ended for various reasons (e.g. resignation, layoff, termination, end of contract, retirement). This equates to a 45% Inuit employee turnover rate.¹⁴

Some of the most commonly cited reasons Inuit employees had for resigning in 2016 included family-related reasons, obtaining a job in their home community, not being happy with working at site, finding rotational work difficult, and dissatisfaction with position responsibilities. Some of these reasons were similar to those provided in 2015 (i.e. family/personal issues at home, obtaining a job in their home community - either a new job or going back to a job they had prior to working for Baffinland). For turnover due to dismissal by Baffinland or for involuntary terminations, typically cited reasons in 2016 included absenteeism and not passing probation (including not passing equipment training). Some of these reasons were similar to those provided in 2015 (i.e. absenteeism, poor job performance).

5.3.3 Analysis

The Final EIS predicted the Project would have a positive effect on the ability of LSA residents to progress in their jobs and careers. In 2016, many Inuit were employed by the Project and a number were promoted to new positions. The career opportunities introduced to the region represent a positive effect of the Project and are a likely result of the mitigation measures Baffinland has developed regarding local employment.

However, there were several Baffinland Inuit employee departures in 2016. High rates of employee turnover have been an issue for other Nunavut organizations in the past, including the Government of Nunavut and Agnico Eagle Mines Limited (e.g. Bell 2012, Government of Nunavut 2014). Baffinland will continue to monitor employee turnover causes and outcomes, and is committed to reducing turnover and increasing Inuit employment where feasible. The Inuit Human Resources Strategy (IHRS) currently being finalized by Baffinland will include several goals and initiatives directed to this end. Future monitoring will be necessary to track the success of this and other Baffinland career advancement programs.

5.4 BARRIERS TO EMPLOYMENT FOR WOMEN

5.4.1 Project Certificate Condition

No specific prediction related to barriers to employment for women was presented in the Final EIS. However, Project Certificate condition #145 states:

¹⁴ The Inuit employee turnover rate has been calculated using guidance provided by Taylor (2002). More specifically, the total number of Inuit employee departures in the calendar year (44) were divided by the average number of Inuit employees employed in the same calendar year (98 – see Table 9), multiplied by 100.

The Proponent is encouraged to work with the Government of Nunavut and the Qikiqtaaluk Socio-Economic Monitoring Committee to monitor the barriers to employment for women, specifically with respect to childcare availability and costs.

5.4.2 Indicator Data

Hours Worked by Female Employees and Contractors

The number of hours worked by female employees and contractors at the Project can provide insight into the potential employment barriers females may face compared to their male counterparts. Table 17 displays the hours (and percentage of hours) worked by women and men in Nunavut on the Project from 2013 to 2016. In 2016, approximately 8.0% of hours worked on the Project were worked by women, which is 1.1% less than percentages documented for Q4 2015. The percentage of hours worked by Inuit and non-Inuit women in 2016 were similar (i.e. 3.7% and 4.4%, respectively). However, the percentage of hours worked by Inuit women compared to Inuit males on the Project (approximately 24.8% of this total) was much higher than non-Inuit women compared to non-Inuit males (approximately 5.1% of this total) in 2016. A similar trend was noted from 2013 to 2015.

Childcare Availability and Costs

Appropriate community-level indicator data are currently unavailable for this topic. As such, this topic will continue to be tracked through the QSEMC process and Baffinland's community engagement program. Should indicators be required in the future, they will be selected in consultation with the Mary River SEMWG. However, Baffinland acknowledges securing access to adequate child care remains an issue in some parts of Nunavut and can act as a barrier to employment for women (e.g. Pauktuutit et al. 2014; Sponagle 2016). The national non-profit organization representing Inuit women in Canada, Pauktuutit (undated), further notes "an additional barrier for [Inuit] women attaining lasting, full-time employment is inadequate childcare facilities for rotational work schedules".

Some information related to childcare availability and costs has been captured in the report *Mary River Experience – The First Three Years* (Brubacher Development Strategies Inc. 2016: 49), which notes:

"The limited access to daycare services was noted... In some instances this may add to the challenge of arranging adequate child care when a parent is working away from home for two weeks. One manager / supervisor identified childcare as a key issue leading to people not making it for their rotation. This is seen as a challenge for many employees, but seems to get amplified for Inuit from LSA communities. Another manager / supervisor also identified childcare as a key issue associated with unplanned absenteeism."

One comment on childcare availability and costs was also captured during Baffinland's 2016 community engagement meetings:

"Couldn't go back to work at Mary River because didn't have babysitter and because couldn't pay house bills. Prices went up. Would like to go back but can't afford it. People need to make enough to cover cost." [Hall Beach Public Meeting Participant]

5.4.3 Analysis

While Baffinland has continued to encourage the employment of women at the Project, women worked considerably fewer hours on the Project (approximately 8.0% of the total) than their male counterparts in 2016. However, women remain under-represented in the Canadian mining industry as a whole. The Mining Industry Human Resources Council (2016) notes that women comprise only 17% of the total Canadian mining workforce, which is significantly lower than the total participation of women in the general Canadian workforce, at 48%. Aboriginal women are also less likely than non-Aboriginal women to be employed in Canada (Statistics Canada 2016c).

Employment levels can be influenced by many different factors, including the existence of barriers faced by certain demographic groups. While Baffinland will continue to track this issue in future socio-economic monitoring reports, it is apparent that women continue to face barriers to employment in the Canadian mining industry as a whole. Inadequate access to childcare in the LSA may also be creating some barriers to increased employment of women at the Project. However, the new employment opportunities being created for women in the LSA because of the Project should also be acknowledged. The *Mary River Experience – The First Three Years* report (Brubacher Development Strategies Inc. 2016: 45 and 46) notes:

“The Mary River Project has opened up new opportunities for women in North Baffin communities. Several people spoke about how they perceived that opportunities for women in the hamlets are sometimes limited by gender role expectations... Even if some paths to employment may have the indirect effect of excluding women, the Project as a whole is opening new avenues of work for women from LSA communities.”

Hours Worked by Project Employees and Contractors in Nunavut, by Ethnicity and Gender									
Employee Ethnicity & Gender		2013		2014		Q4 2015¹⁵		2016	
		Hours Worked	% of total (863,177)	Hours Worked	% of total (1,867,882)	Hours Worked	% of total (430,244)	Hours Worked	% of total (1,881,506)
Inuit	Male	124,754	14.5%	267,169	14.3%	54,794	12.7%	208,592	11.1%
	Female	49,611	5.8%	112,437	6.0%	20,732	4.8%	68,862	3.7%
Non-Inuit	Male	639,468	74.1%	1,394,204	74.6%	336,124	78.1%	1,521,786	80.9%
	Female	49,200	5.7%	94,072	5.0%	18,594	4.3%	82,266	4.4%
TOTAL		863,177	—	1,867,882	—	430,244	—	1,881,506	—

Source: Baffinland records⁴

Table 17: Hours worked by Project employees and contractors in Nunavut, by ethnicity and gender (2013 to 2016)

¹⁵ As Baffinland's human resources data management system was in the process of being developed, some information gaps were unable to be reconciled in 2015. In 2015, gender data related to hours worked was only available for Q4.

6. VSEC – CONTRACTING AND BUSINESS OPPORTUNITIES

Two residual effects associated with the VSEC ‘Contracting and Business Opportunities’ were assessed in the Final EIS. These include ‘expanded market for business services to the Project’ and ‘expanded market for consumer goods and services’. These are reviewed in more detail below.

6.1 EXPANDED MARKET FOR BUSINESS SERVICES TO THE PROJECT

6.1.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project would have a positive effect on creating market opportunities for businesses in the LSA and RSA to supply goods and services to the Project. Mitigation measures designed by Baffinland to support this prediction include the implementation of several Inuit contracting policies. These policies have been designed to assist Inuit firms in developing capacity in the bidding process and to provide opportunities for large contracts to be broken down into smaller components which can then be bid on by Inuit firms. Baffinland’s IIBA with the QIA also includes provisions related to local business development. For example, a Business Capacity and Start-Up Fund has been created (which is administered by Kakivak, a subsidiary of the QIA) to assist Designated Baffin Inuit Firms. This fund provides up to \$500,000.00 annually to help with start-up capital and financing, management development, ongoing business management, financial management, contracts and procurement or human resources management.

6.1.2 Indicator Data

Value of Procurement with Inuit-Owned Businesses and Joint Ventures

The value of Project-related procurement with Inuit-owned businesses and joint ventures is a useful indicator of the business opportunities created by the Project. Table 18 summarizes the procurement that has occurred with Inuit-owned businesses and joint ventures from 2013 to 2016. Nine contracts worth approximately \$64.4 million were awarded to Inuit-owned businesses and joint ventures in 2016. Of these nine contracts, all were awarded to Inuit-owned businesses and joint ventures in the LSA. Procurement values in 2016 were lower than in 2015 (i.e. by \$39.1 million). Total procurement (with Inuit *and* non-Inuit firms) in 2016 totaled \$190.7 million. Since Project development, a total of \$431.9 million worth of contracts have been awarded to Inuit-owned businesses and joint ventures. The differing values in Table 18 are at least partly reflective of the construction activities that have occurred during varying periods on site (e.g. 2013 was a major construction year) and the transition to increased operational activities that occurred in 2015.

6.1.3 Analysis

The Project continued to procure a substantial amount of goods and services from Inuit-owned businesses and joint ventures in 2016. Likewise, Baffinland procurement data suggests the Project has had a positive effect on creating market opportunities for businesses in the LSA and RSA to supply goods and services to the Project, as was predicted in the Final EIS. Baffinland is also in the process of finalizing an Inuit Contracting and Procurement Strategy (ICPS) which is expected to further enable (if not enhance) the continued provision of these business opportunities.

Procurement with Inuit-Owned Businesses and Joint Ventures				
Procurement Details	Year			
	2013	2014	2015	2016
Value of Procurement with Inuit-Owned Businesses and JVs	\$200 million	\$64 million	\$103.5 million	\$64.4 million
Total Number of Contracts with Inuit-Owned Businesses and JVs	13	19	12	9
Number of Contracts with Inuit-Owned Businesses and JVs in the LSA	6	3	5	9

Source: Baffinland records

Table 18: Procurement with Inuit-owned businesses and joint ventures (2013 to 2016)

6.2 EXPANDED MARKET FOR CONSUMER GOODS AND SERVICES

6.2.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project would expand the market for consumer (i.e. non-Project related) goods and services across the LSA. While no specific mitigation measures related to this prediction were proposed in the Final EIS, Company commitments related to Inuit employment and contracting support the development of an expanded market for consumer goods and services in the LSA. This is because of the increased purchasing power local residents are expected to have due to Project-induced direct and indirect employment income.

6.2.2 Indicator Data

LSA Employee Payroll Amounts

Yearly payroll expenditures to LSA employees are a useful indicator of the degree to which an expanded market for consumer goods and services may have been created by the Project. Through the creation of new jobs in the LSA, the Project has also created a new source of economic wealth for local residents. Thus, it is reasonable to expect that some of this new wealth will become available for residents to spend on consumer goods and services.

Baffinland's LSA employee payroll expenditures (in Canadian dollars, not including contractors, but including both Inuit and non-Inuit employees) totaled \$7,586,379.00 in 2016. Compared to 2015, this was a decrease of \$1,739,782.00. While contractor wages are not included in these amounts, the value of procurement with Inuit-owned businesses and joint ventures in 2016 was nevertheless substantial (\$64.4 million, as described in Section 6.1) and represents another important benefit provided by the Project. Figure 6 displays the proportion of Baffinland's employee payroll earned by each LSA community in 2016. The top three LSA payroll recipient communities in 2016 were Arctic Bay, Pond Inlet, and Clyde River (in 2015 they were Arctic Bay, Pond Inlet, and Iqaluit, respectively). The highest earning community (Arctic Bay) received \$1,800,199.00, while the lowest earning community (Hall Beach) received \$901,337.00 in 2016. Baffinland's Inuit employee payroll (including LSA and non-LSA communities) is also notable, and totaled \$7,841,203.00 in 2016. Since 2014, Baffinland has provided \$24,947,468.00 in payroll to Inuit.

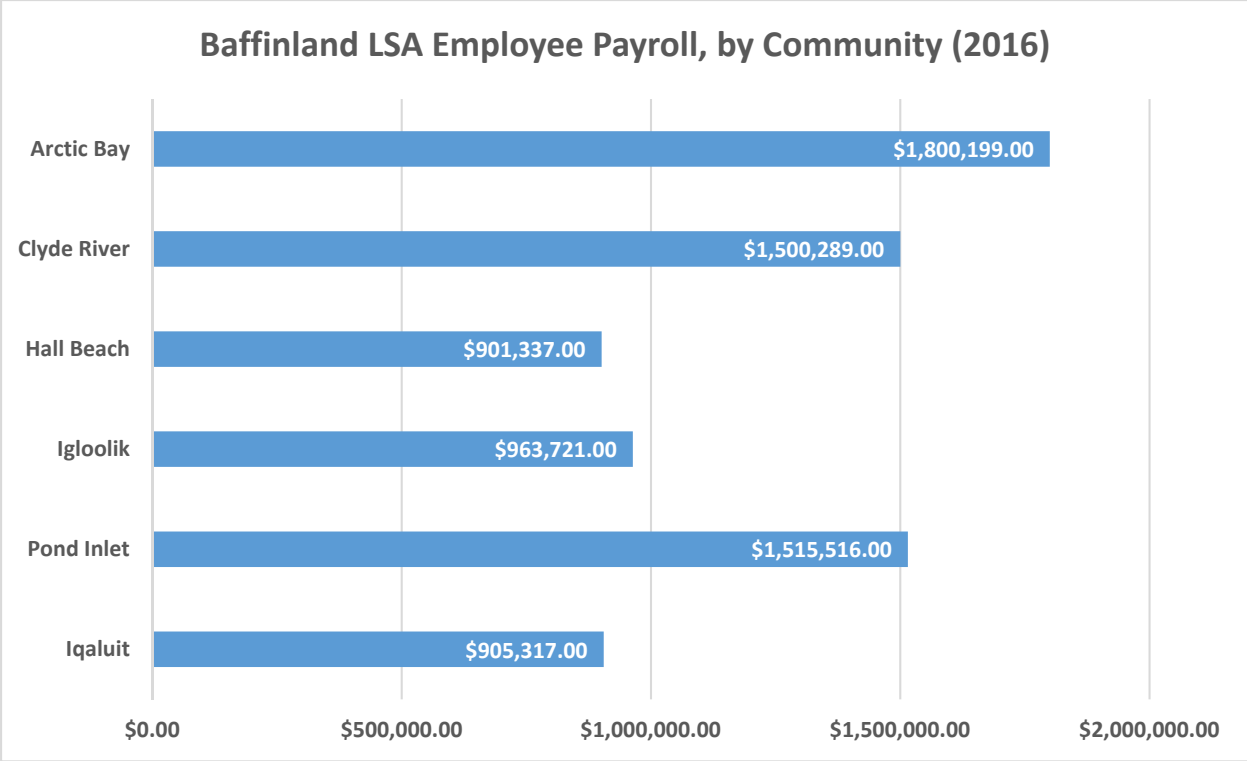


Figure 6: Baffinland LSA employee payroll, by community (2016)

Number of Registered Inuit Firms in the LSA

The number of registered Inuit firms in the LSA is another useful indicator of the degree to which an expanded market for consumer goods and services may have been created by the Project. This is because new Project-generated consumer discretionary income would be expected to result in increased demand for (and spending on) local goods and services. Subsequently, the number and offerings of local businesses would be expected to increase to meet this demand.

Nunavut Tunngavik Incorporated (NTI) maintains an Inuit firm¹⁶ registry database for Nunavut. This database (i.e. NTI 2016) provides the name of each registered Inuit firm, describes each firm’s area of business operations, and location where the firm is based. The number of registered Inuit firms in the LSA from 2013 to 2016 are summarized in Table 19. Information for 2013 to 2015 was obtained directly from NTI (E. Egeesiak 2016, personal communication), while information for 2016 was obtained from the NTI database (i.e. NTI 2016).

In 2016, a total of 156 active Inuit firms were registered with NTI in the LSA. Forty of these firms were based in the North Baffin LSA communities and 116 were based in Iqaluit. The number of active Inuit firms registered in the North Baffin LSA communities has increased by 11 since 2013, while the number of active Inuit firms registered in Iqaluit has increased by 32 since 2013.

¹⁶ As noted by NTI (2016), ‘Inuit firm’ means an entity which complies with the legal requirements to carry on business in the Nunavut Settlement Area, and which is a limited company with at least 51% of the company’s voting shares beneficially owned by Inuit, or a cooperative controlled by Inuit, or an Inuk sole proprietorship or partnership.

NTI Registered Inuit Firms in the LSA				
Location	Number of Firms			
	2013	2014	2015	2016
North Baffin LSA Communities	29	29	31	40
Iqaluit	84	108	95	116
Total	113	137	126	156

Source: E. Egeesiak (2016, personal communication), NTI (2016)

Table 19: NTI registered Inuit firms in the LSA (2013 to 2016)

6.2.3 Analysis

The Project continued to expand the market for consumer goods and services across the LSA in 2016. Considerable amounts were spent both on Baffinland’s LSA employee payroll (approximately \$7.6 million) and contracting with Inuit-owned businesses and joint ventures (approximately \$64.4 million) in 2016. These new contributions to the Nunavut economy are a direct result of Project development and represent a positive effect. This is because increased income from direct and indirect Project employment provides LSA residents with a greater capacity to purchase local goods and services. Increased income can also act to stimulate further business growth (e.g. existing businesses may expand to meet increased consumer demand or new businesses may emerge, wealth generated through employment may increase an individual’s ability to start new businesses).

The number of active Inuit firms registered in the LSA communities also increased between 2013 and 2016, which suggests a potential positive Project effect. Anecdotal evidence shared with Baffinland by its suppliers indicates that at least some new Inuit firms were registered because of Project-related contracting opportunities. However, it is acknowledged that various factors can contribute to the decision to start (or not start) a new business.

As predicted in the Final EIS, the positive effect of the Project on creating an expanded market for consumer goods and services across the LSA is confirmed for this reporting period. It is possible that continued monitoring may uncover additional positive Project effects (e.g. it may take an extended period for some businesses to respond to emerging commercial opportunities); this matter will be assessed further in future reports.

7. VSEC – HUMAN HEALTH AND WELL-BEING

7.1 CHANGES IN PARENTING

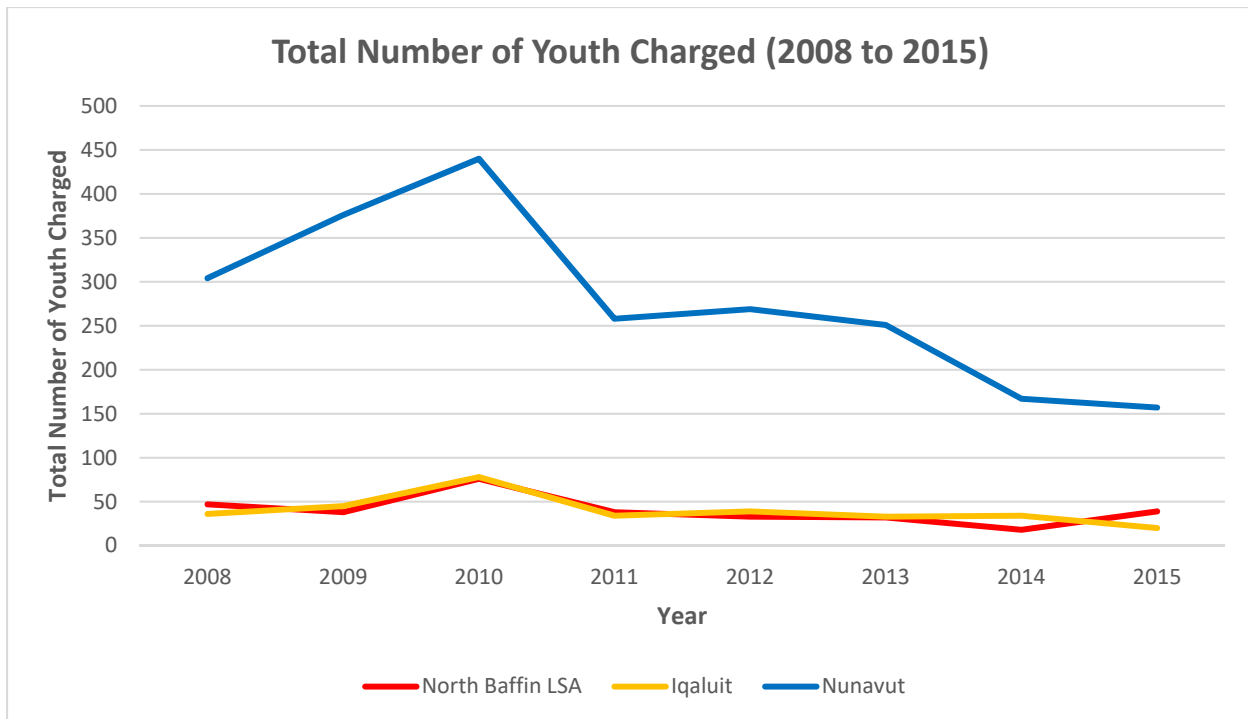
7.1.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project would have a positive effect on parenting (particularly as it applies to well-being of children) in the LSA communities (e.g. from increased confidence and financial independence gained through employment, improved mental well-being from having a job and income). The Final EIS also predicted the Project could have some negative effects on parenting, but these would be of a non-significant nature. To help mitigate potential adverse effects from fly-in/fly-out employment, Baffinland has provided a predictable rotational schedule, meaningful local employment and incomes, job readiness training for LSA residents considering employment at the Project (e.g. to familiarize workers and their families with the fly-in/fly-out lifestyle), has implemented an Employee and Family Assistance Program for workers and their dependents, and contributes to the *Ilagiiktunut Nunalinnullu Pivalliajutisait Kiinaujat* (INPK) fund through the IIBA negotiated with QIA (which provides up to \$750,000.00/year for projects in the Qikiqtaaluk Region which enhance community wellness).

7.1.2 Indicator Data

Total Number of Youth Charged

The number of youth charged is a useful indicator of parenting performance in the LSA communities. This is because children with stable homes and effective parents can be expected to have fewer encounters with the law. 2015 was the most recent year for which data on the number of youth charged by community was available from Statistics Canada (2016a). In the North Baffin LSA in 2015, Pond Inlet and Igloolik had the highest number of youth charged (15 each), while Clyde River had the fewest (0). The average number of youth charged in the North Baffin LSA communities in 2015 was 7.8. Iqaluit had 20 youth charged in 2015 and Nunavut as a whole had 157. Compared to the previous year (2014), there has been an increase in the number youth charged in the North Baffin LSA communities (by 21) but a decrease in Iqaluit (by 14) and Nunavut (by 10). Compared to pre-development period averages, there has been a decreasing trend in the number of youth charged in the North Baffin LSA, Iqaluit, and Nunavut. Figure 7 displays the total number of youth charged from 2008 to 2015.



Source: Statistics Canada (2016a)

Figure 7: Total number of youth charged, by community (2008 to 2015)

7.1.3 Analysis

While there has been a decreasing trend in the number of youth charged in the North Baffin LSA and Iqaluit in the post-development period, this decreasing trend was also evident in the five years preceding Project development (and throughout Nunavut). This implies factors other than the Project are likely driving these trends. However, crime rates can be influenced by many different socio-economic factors. As Project construction only began in 2013, there is a minimal amount of post-development data currently available. Correlations between the Project and youth crime rates, if any, will only come to light with the analysis of additional annual data. Regardless, there are positive indications the Project is contributing to the enhanced well-being of children, by providing LSA residents (and parents) with opportunities to obtain meaningful employment and incomes. These opportunities can help reduce the various family stresses and uncertainties associated with un- and under-employment. Baffinland has also implemented an Employee and Family Assistance Program for workers and their family members who may require family-related or other forms of personal assistance.

7.2 HOUSEHOLD INCOME AND FOOD SECURITY

7.2.1 Predicted Effect and Mitigation Measures

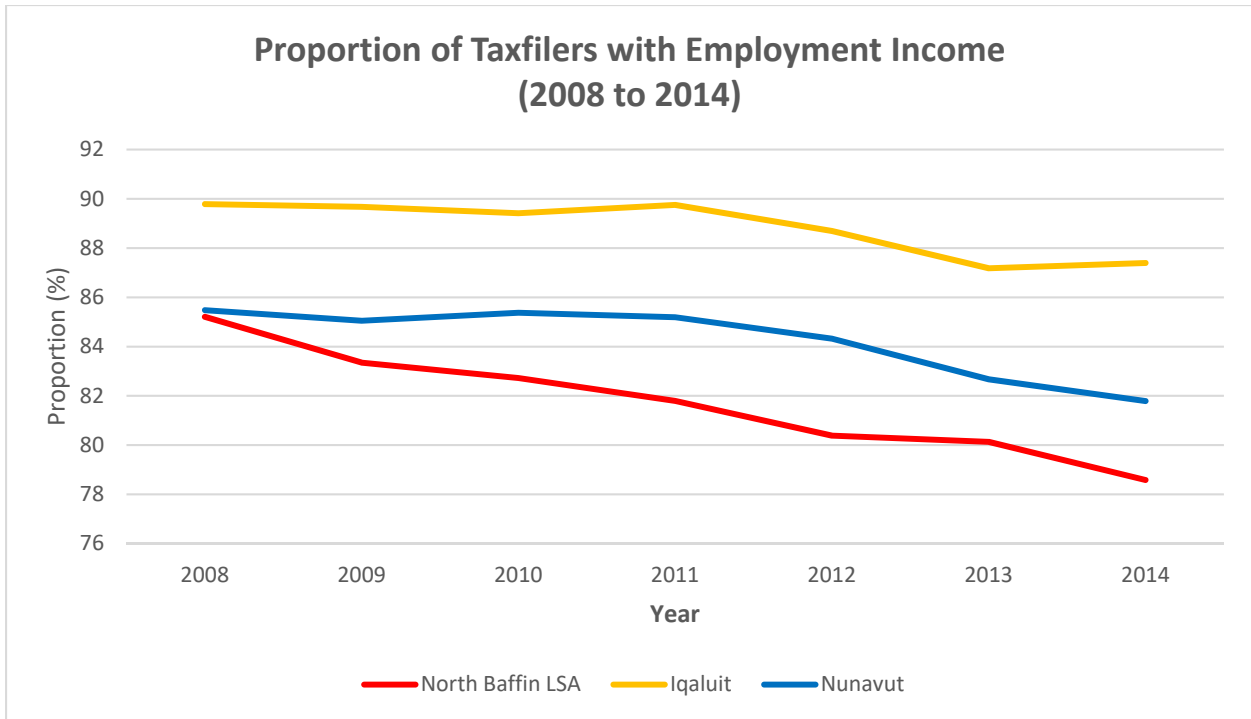
The Final EIS predicted the Project would have a positive effect on increased household income and food security (particularly as they apply to well-being of children) in the LSA. To help mitigate potential adverse effects, Baffinland has provided meaningful local employment and incomes, job readiness training for LSA residents considering employment at the Project (e.g. which has included a financial management module), and contributes to the INPK fund through the IIBA negotiated with the QIA.

7.2.2 Indicator Data

Proportion of Taxfilers with Employment Income and Median Employment Income

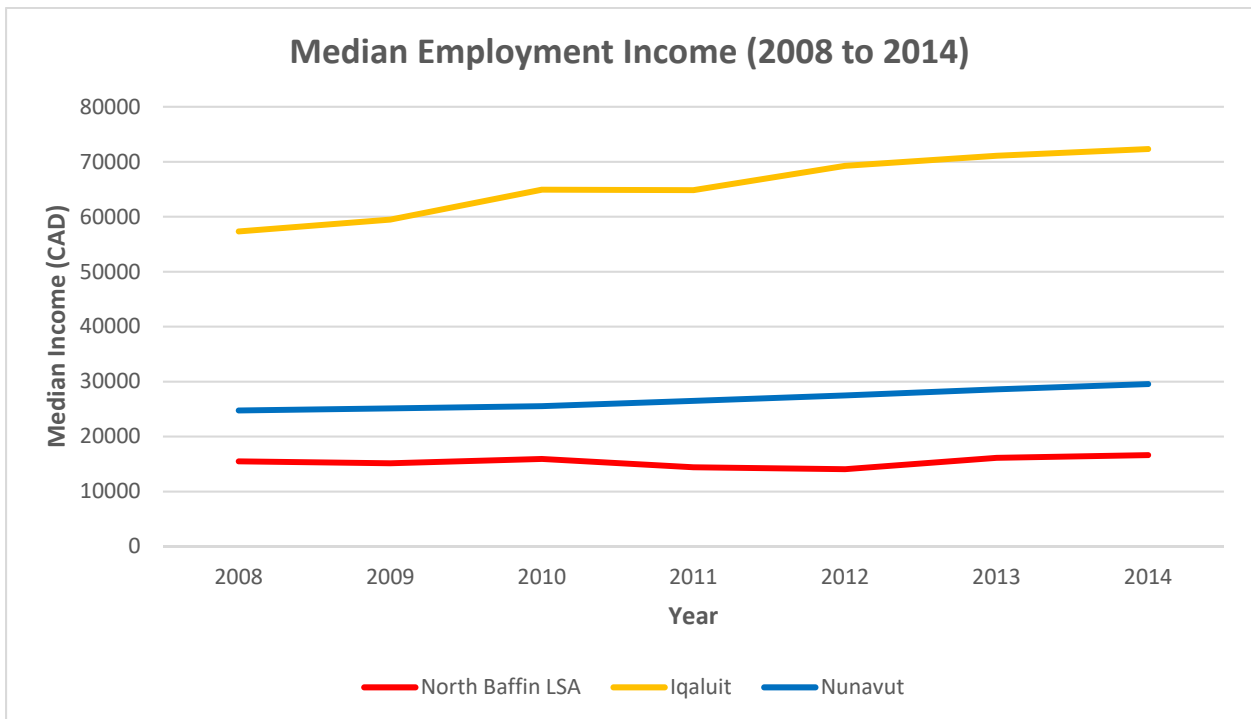
Employment income indicators are useful for tracking household financial performance in the LSA communities. 2014 was the most recent year for which data on the proportion of taxfilers with employment income was available from the Nunavut Bureau of Statistics (2016e). In the North Baffin LSA in 2014, Arctic Bay, Clyde River, Igloolik, and Pond Inlet were tied for the highest proportion of taxfilers with employment income (80%), while Hall Beach had the lowest (73%). The proportion of taxfilers with employment income in Iqaluit in 2014 was 87%, which was higher than the North Baffin LSA community average (79%) and Nunavut average (82%). Compared to the previous year (2013), there has been a decrease in the average proportion of taxfilers with employment income in the North Baffin LSA (by 1%) and Nunavut (by 1%), while Iqaluit has remained the same (at 82%). Compared to pre-development period averages, there has been a decreasing trend in the average proportion of taxfilers with employment income in the North Baffin LSA, Iqaluit, and Nunavut. Figure 8 displays the proportion of taxfilers with employment income from 2008 to 2014.

Likewise, 2014 was the most recent year for which data on median employment income was available from the Nunavut Bureau of Statistics (2016e). In the North Baffin LSA in 2014, Pond Inlet had the highest median employment income (\$18,970), while Arctic Bay had the lowest (\$15,160). Iqaluit's median employment income in 2014 was \$72,310 and was significantly higher than the North Baffin LSA community average (\$16,620) and Nunavut average (\$29,550). Compared to the previous year (2013), there has been an increase in median employment income in the North Baffin LSA (by \$486), Iqaluit (by \$1,230) and Nunavut (by \$970). Compared to pre-development period averages, there has been an increasing trend in median employment income in the North Baffin LSA, Iqaluit, and Nunavut. Figure 9 displays median employment income by community and territory from 2008 to 2014.



Source: Nunavut Bureau of Statistics (2016e)

Figure 8: Proportion of taxfilers with employment income (2008 to 2014)

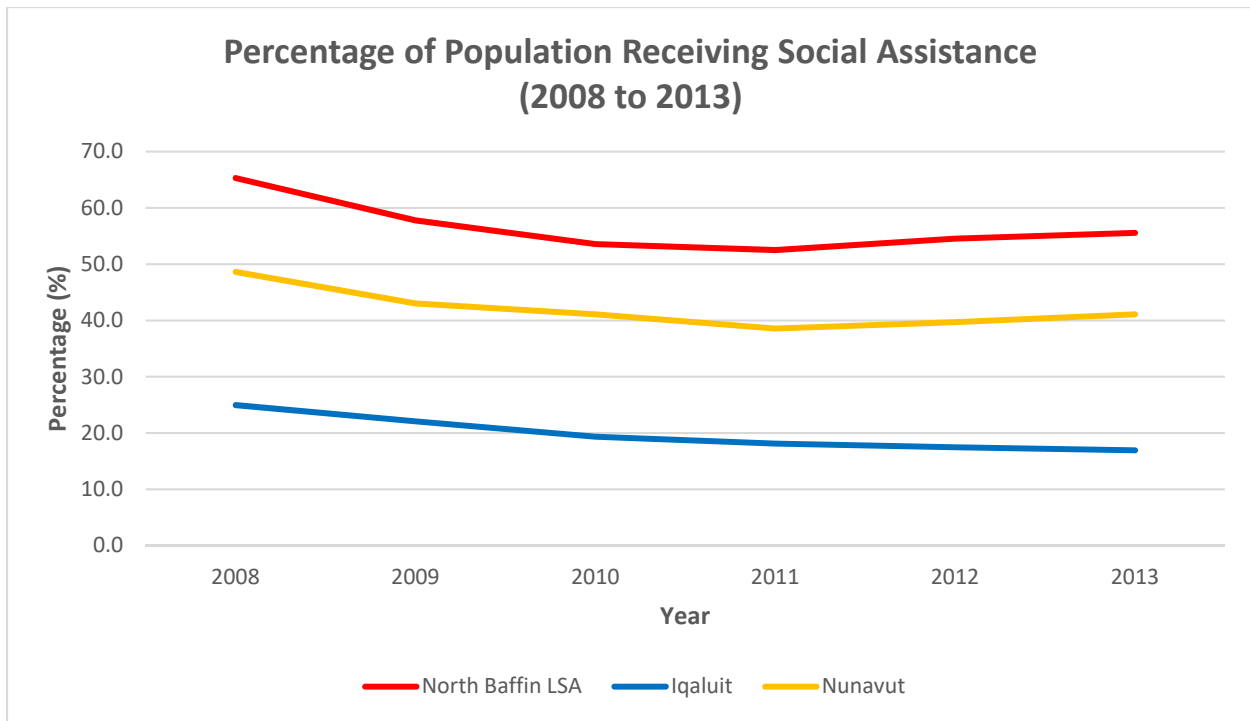


Source: Nunavut Bureau of Statistics (2016e)

Figure 9: Median employment income (2008 to 2014)

Percentage of Population Receiving Social Assistance

The percentage of the population receiving social assistance is also a useful indicator of household financial performance. 2013 was the most recent year for which data on the percentage of social assistance recipients in Nunavut was available from the Nunavut Bureau of Statistics (2014). In the North Baffin LSA in 2013, Clyde River had the highest percentage of population receiving social assistance (65.3%), while Hall Beach had the lowest (44.6%). The percentage of individuals receiving social assistance in Iqaluit in 2013 was 16.9%, which was significantly lower than the North Baffin LSA community average (55.6%) and Nunavut average (41.1%). Compared to the previous year (2012), there has been an increase in the percentage of the population receiving social assistance in the North Baffin LSA (by 1.1%) and Nunavut (by 1.4%), but a decrease in Iqaluit (by 0.6%). Compared to pre-development period averages, there has been a decreasing trend in the percentage of the population receiving social assistance in the North Baffin LSA, Iqaluit, and Nunavut. Figure 10 displays the percentage of the population receiving social assistance from 2008 to 2013.



Source: Nunavut Bureau of Statistics (2014)

Figure 10: Percentage of population receiving social assistance (2008 to 2013)

7.2.3 Analysis

While there has been a decreasing trend in the average proportion of taxfilers with employment income in the North Baffin LSA and Iqaluit in the post-development period, these trends were also evident in the five years preceding Project development (including throughout Nunavut). This implies factors other than the Project are likely driving these trends. Likewise, while there has been an increasing trend in median employment income in the North Baffin LSA and Iqaluit in the post-development period, this trend was also evident in Iqaluit in the five years preceding Project development. However, this trend was not evident in the North Baffin LSA (i.e. it was decreasing). These factors imply the Project may be

having a positive effect in the North Baffin LSA, where employment opportunities have historically been limited.

Similarly, while there has been a decreasing trend in the percentage of the population receiving social assistance in the post-development period in the North Baffin LSA and Iqaluit these trends were also evident in the five years preceding Project development (including throughout Nunavut). This implies factors other than the Project are likely driving these trends, although potential positive Project employment effects will continue to be tracked through future monitoring.

As Project construction only began in 2013, there is a minimal amount of post-development data currently available. Employment income and social assistance rates can also be influenced by many different socio-economic factors. Direct correlations between the Project and employment income and social assistance rates, if any, will only come to light with the analysis of additional annual data. There is currently no indication the Final EIS prediction is not being met. In fact, there are positive indications the Project continues to improve household income and food security in the LSA. This has occurred by providing LSA residents with meaningful employment opportunities and through contributions to community wellness initiatives. Increased employment income facilitates the purchase of store bought food and other family goods, while also providing an improved means to participate in harvesting if desired.

7.3 TRANSPORT OF SUBSTANCES THROUGH PROJECT SITES

7.3.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project could increase availability of substances such as alcohol and illegal drugs in the North Baffin LSA due to their possible transportation through Project sites. Related mitigation measures developed by Baffinland include a no drugs/no alcohol policy on site and baggage searches for all employees and contractors arriving at site.

7.3.2 Indicator Data

Number of Drug and Alcohol Related Contraband Infractions at Project Sites

The number of drug and alcohol related contraband infractions at Project sites is a useful indicator of the degree to which the transport of substances may be occurring at the Project. Table 20 displays the total number of drug and alcohol related contraband infractions at Project sites from 2013 to 2016. In 2016, 11 drug and alcohol related contraband infractions occurred at Project sites amongst employees and contractors. This was 9 infractions higher than in 2015.

Number of Drug and Alcohol Related Contraband Infractions at Project Sites	
Year	Total
2013	5
2014	12
2015	2
2016	11

Source: Baffinland records. 2013 records are for a partial year.

Table 20: Number of drug and alcohol related contraband infractions at Project sites (2013 to 2016)

7.3.3 Analysis

While all contraband infractions are of concern and taken seriously by Baffinland, the 11 infractions that occurred in 2016 represent only a small number of individuals from the Project workforce. All individuals who do not comply with Baffinland's no drugs/no alcohol policy are immediately removed from site and disciplinary action (up to and including termination) is commenced. This management response supports Baffinland's goal of 'Safety First, Always' while also preventing further transport of contraband substances through Project sites.

7.4 AFFORDABILITY OF SUBSTANCES / ATTITUDES TOWARD SUBSTANCES AND ADDICTIONS

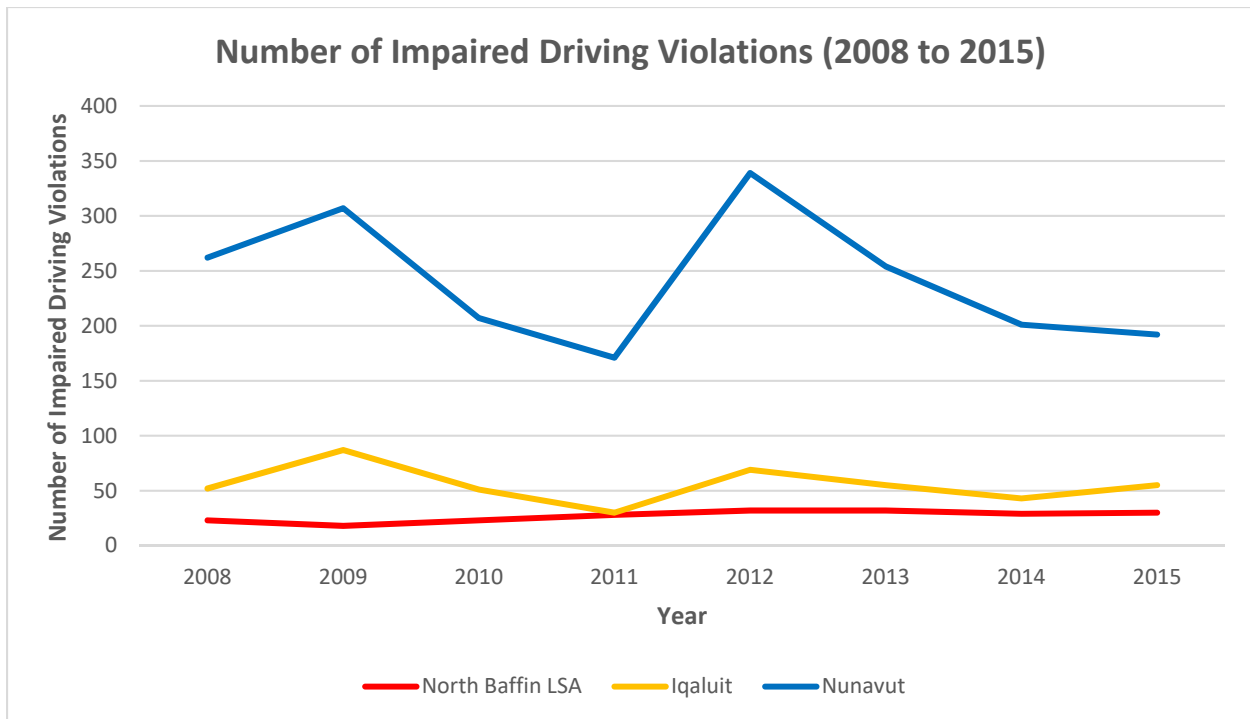
7.4.1 Predicted Effect and Mitigation Measures

The Final EIS predicted increased income from employment at the Project could increase the ability of LSA residents to afford substances such as alcohol and illegal drugs. However, the Final EIS also predicted the Project could improve attitudes toward substances and addictions in the LSA (i.e. by providing positive incentives for individuals to reduce substance abuse). Related mitigation measures developed by Baffinland include a no drugs/no alcohol policy and baggage searches for all employees and contractors arriving at site. Baffinland has also implemented an Employee and Family Assistance Program for workers and their family members, and contributes to the INPK community wellness fund through the IIBA negotiated with QIA.

7.4.2 Indicator Data

Number of Impaired Driving Violations

The number of impaired driving violations in the LSA provides some insight into whether rates of alcohol abuse are changing. 2015 was the most recent year for which data on the number of impaired driving violations by community was available from the Nunavut Bureau of Statistics (2016f). In the North Baffin LSA in 2015, Arctic Bay had the highest number of impaired driving violations (17), while Hall Beach had the fewest (0). The average number of impaired driving violations in the North Baffin LSA communities in 2015 was 6. Iqaluit had 55 impaired driving violations in 2015 and Nunavut as a whole had 192. Compared to the previous year (2014), there has been an increase in the total number of impaired driving violations in the North Baffin LSA communities (by 1) and Iqaluit (by 12) and a decrease in Nunavut (by 9). Compared to pre-development period averages, there has been an increasing trend in the number of impaired driving violations in the North Baffin LSA, and decreasing trends in Iqaluit and Nunavut. Figure 11 displays the number of number of impaired driving violations from 2008 to 2015.

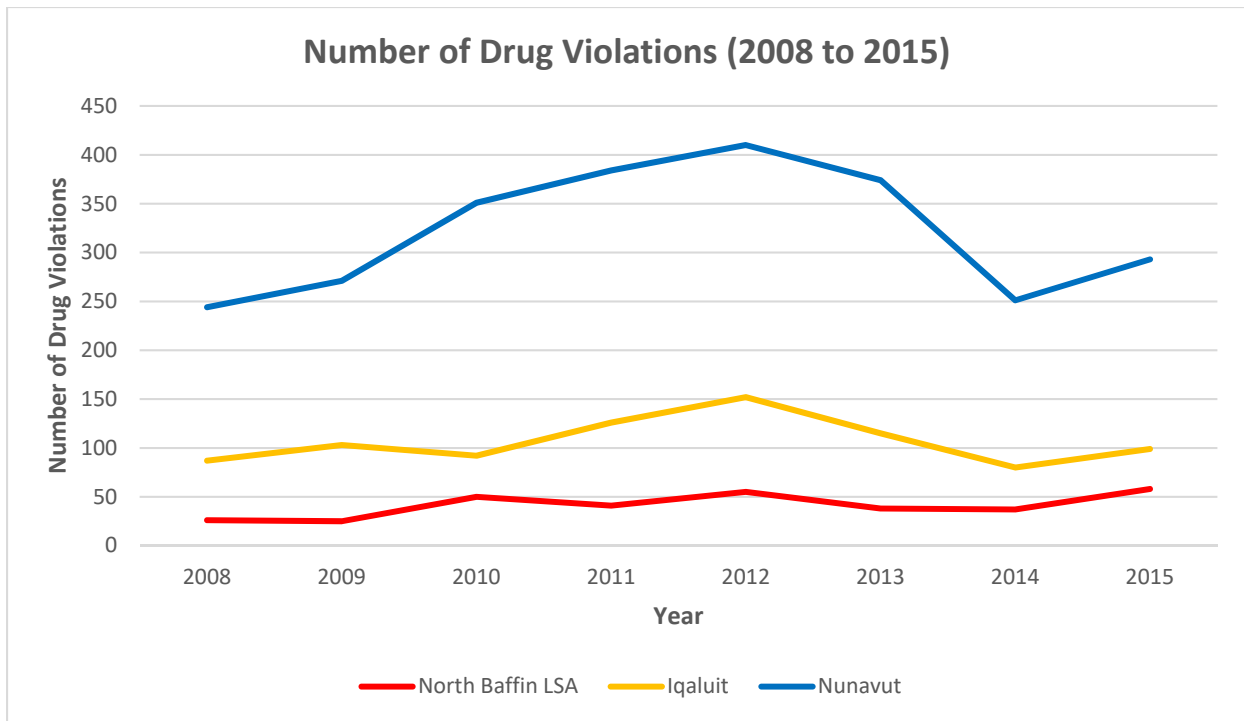


Source: Nunavut Bureau of Statistics (2016f)

Figure 11: Number of impaired driving violations (2008 to 2015)

Number of Drug Violations

The number of drug violations in the LSA provides some insight into whether rates of drug abuse are changing. 2015 was the most recent year for which data on the number of drug violations by community was available from the Nunavut Bureau of Statistics (2016f). In the North Baffin LSA in 2015, Pond Inlet had the highest number of drug violations (18), while Hall Beach had the fewest (4). The average number of drug violations in the North Baffin LSA communities in 2015 was 11.6. Iqaluit had 99 drug violations in 2015 and Nunavut as a whole had 293. Compared to the previous year (2014), there has been an increase in the total number of drug violations in the North Baffin LSA communities (by 21), Iqaluit (by 19) and Nunavut (by 42). Compared to pre-development period averages, there has been an increasing trend in the number of drug violations in the North Baffin LSA, and decreasing trends in Iqaluit and Nunavut. Figure 12 displays the number of number of drug violations from 2008 to 2015.



Source: Nunavut Bureau of Statistics (2016f)

Figure 12: Number of drug violations (2008 to 2015)

7.4.3 Analysis

While there has been an increasing trend in the number of impaired driving violations in the North Baffin LSA and a decreasing trend in Iqaluit in the post-development period, these trends were also evident in the five years preceding Project development. Likewise, while there has been an increasing trend in the number of drug violations in the North Baffin LSA in the post-development period, this trend was also evident in the five years preceding Project development. This implies factors other than the Project are likely driving these trends.¹⁷ However, the number of drug violations in Iqaluit have experienced a decreasing trend in the post-development period, after experiencing an increasing trend in the five years preceding Project development. This implies the Project may be having a positive effect on this trend.

As Project construction only began in 2013, there is a minimal amount of post-development data currently available. Drug and alcohol-related violations can also be influenced by many different socio-economic factors. Direct correlations between the Project and drug and alcohol violations, if any, will only come to light with the analysis of additional annual data. However, there are positive indications

¹⁷ At the 2016 QSEMC, several communities including Arctic Bay, Hall Beach, and Pond Inlet cited substance abuse as a concern for their communities. However, no direct link to increases in substance abuse issues since the beginning of the Project were noted (Government of Nunavut 2016). For further context, the 2016 North Baffin community survey conducted by Baffinland found that 65% of survey respondents said they did not have any concerns about how the Project was affecting their community and environment. A much smaller number (17%) had concerns about how the Project was affecting their community, which included concerns on substance abuse and other issues.

the Project continues to improve attitudes toward substances and addictions in the LSA, by providing LSA residents with meaningful employment opportunities within a drug and alcohol free environment. Baffinland also provides access to an Employee and Family Assistance Program for workers and their family members who may require assistance with drug and alcohol-related issues.

7.5 ABSENCE FROM THE COMMUNITY DURING WORK ROTATION

7.5.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the absence of workers from communities during their work rotations may lead to some moderate negative effects on community processes (e.g. local coaching, politics, and social organizations) in the LSA. However, it was also predicted that organizations and activities would be able to adapt and carry on their functions in light of these effects. Related mitigation measures developed by Baffinland include a short (two week in / two week out) rotation that allows employees to spend considerable time in their home communities. Baffinland also contributes to the INPK community wellness fund through the IIBA negotiated with QIA.

7.5.2 Indicator Data

Absence from the Community During Work Rotation

Appropriate community-level indicator data are currently unavailable for this topic. As such, this topic will continue to be tracked through the QSEMC process and Baffinland's community engagement program. Should indicators be required in the future, they will be selected in consultation with the Mary River SEMWG. No comments related to the absence of workers from communities during their work rotations were made at the 2016 QSEMC meeting or during Baffinland's 2016 community engagement activities (although some comments were made on family-related and other effects, as noted in other sections of this report). In fact, two comments were received during public meetings held by Baffinland in 2016 about potentially increasing the length of employment rotations. Absence from the community does not appear to be an issue for at least some individuals:

"Two weeks in, two weeks out seems to be too short. It would be better to work for six months and then go back to the community. If they were to work more than two weeks than it would save a lot of money." [Hall Beach Public Meeting Participant]

"When they are going in two weeks in two weeks out. Can we increase the number of weeks? It is too short of a break." [Igloolik Public Meeting Participant]

7.5.3 Analysis

Baffinland acknowledges the absence of workers from communities during their work rotations may lead to some negative effects on community processes. However, there is no available evidence to suggest there have been any related long term or significant impacts because of the Project. The INPK fund also continues to provide support to various community wellness initiatives across the Qikiqtaaluk Region that may assist in this regard. This issue will continue to be tracked in future socio-economic monitoring reports.

7.6 PREVALENCE OF GAMBLING ISSUES

7.6.1 Project Certificate Condition

No specific prediction related to the prevalence of gambling issues was presented in the Final EIS. However, Project Certificate condition #154 states:

The Proponent shall work with the Government of Nunavut and the Qikiqtaaluk Socio-Economic Monitoring Committee to monitor potential indirect effects of the Project, including indicators such as the prevalence of substance abuse, gambling issues, family violence, marital problems, rates of sexually transmitted infections and other communicable diseases, rates of teenage pregnancy, high school completion rates, and others as deemed appropriate.

7.6.2 Indicator Data

Prevalence of Gambling Issues

Appropriate community-level indicator data are currently unavailable for this topic. As such, this issue will continue to be tracked through the QSEMC process and Baffinland's community engagement program. Should indicators be required in the future, they will be selected in consultation with the Mary River SEMWG. Some comments related to the Project and the prevalence of gambling issues were made at the 2016 QSEMC (Government of Nunavut 2016: 25):

"Discussions then took place regarding observed increases in substance abuse, gambling and marital issues in Qikiqtaaluk communities. Communities are concerned with the relation between working at Mary River and an increase in substance and gambling abuse issues. Community representatives explained that this is an ongoing issue not directly related to Mary River and that hamlets are working with the RCMP in an attempt to reduce and eliminate substance abuse."

Some comments related to the Project and the prevalence of gambling issues were also made in the recent *Mary River Experience – The First Three Years* report (i.e. Brubacher Development Strategies Inc. 2016: 32):

"You get into the problems of gambling, drugs, alcohol of the family here. The guy who goes off to work sees his family having a helluva good time drinking and gambling and drugs that he's working and paying for. So the resentment and jealousy? You bet." [Community Resident]

"But sometimes I hear the spouses of the ones working at Mary River... They're going on the radio saying they want to borrow money until their spouse gets back from the mine site... Probably like this because the spouse [at home] might spend all the money on drugs or gambling." [Community Resident]

7.6.3 Analysis

Baffinland acknowledges gambling issues remain a concern for some Project stakeholders. However, there is no available evidence to suggest there has been a long term or significant increase in gambling issues because of the Project. Gambling abuse is also a complex issue that can be influenced by many different factors. While this issue will continue to be monitored, it should be noted Baffinland continues to provide its employees and their immediate family members with access to an Employee and Family Assistance Program and has established on-site elder positions to provide counsel and support to its employees. Gambling-related or other forms of personal assistance can be obtained through these programs, as needed.

7.7 PREVALENCE OF FAMILY VIOLENCE

7.7.1 Project Certificate Condition

No specific prediction related to the prevalence of family violence was presented in the Final EIS. However, Project Certificate condition #154 requests this topic be monitored.

7.7.2 Indicator Data

Prevalence of Family Violence

Appropriate community-level indicator data are currently unavailable for this topic. As such, this issue will continue to be tracked through the QSEMC process and Baffinland's community engagement program. Should indicators be required in the future, they will be selected in consultation with the Mary River SEMWG. No comments related to the Project and the prevalence of family violence were made at the 2016 QSEMC meeting or during Baffinland's 2016 community engagement activities. However, some data on this topic is available at the territorial level. Statistics Canada (2016d) notes there were 911 incidents of police-reported family violence in Nunavut in 2014, which equates to a rate of 2,491 incidents per 100,000 population. This rate is substantially higher than the overall Canadian rate of 243 incidents per 100,000 population.

7.7.3 Analysis

Baffinland acknowledges family violence remains a concern for some Project stakeholders. However, there is no available evidence to suggest there has been a long term or significant increase in family violence rates because of the Project. Family violence is also a complex issue that can be influenced by many different factors. While this issue will continue to be monitored, it should be noted Baffinland continues to provide its employees and their immediate family members with access to an Employee and Family Assistance Program and has established on-site elder positions to provide counsel and support to its employees. Family-related and other forms of personal assistance can be obtained through these programs, as needed.

7.8 PREVALENCE OF MARITAL PROBLEMS

7.8.1 Project Certificate Condition

No specific prediction related to the prevalence of marital problems was presented in the Final EIS. However, Project Certificate condition #154 requests this topic be monitored.

7.8.2 Indicator Data

Prevalence of Marital Problems

Appropriate community-level indicator data are currently unavailable for this topic. As such, this issue will continue to be tracked through the QSEMC process and Baffinland's community engagement program. Should indicators be required in the future, they will be selected in consultation with the Mary River SEMWG. Some comments on this topic were made at the 2016 QSEMC meeting. For example, one individual from Hall Beach noted that one or more Project employees have left their spouse for a new relationship and moved to a new community:

"But a few years into the Mary River Project and we are now dealing [with] some of the impacts that were not expected. Employees moving to new communities and breaking up families has been something that is happening" (Government of Nunavut 2016: 14).

Some comments related to the Project and the prevalence of marital problems were also made during Baffinland's 2016 community engagement program. For example:

"Something has to be done if someone goes to work for Baffinland and then they decide that they want to separate from their spouse. There are lots of impacts, people don't pay their spouses for child support. We are talking about community wellness here. Families should not be broken because they work for Baffinland. The families are now separated and there is no more help for the family left behind. This is not fair. When I went to Arctic Bay to a workshop, we were told that everything would be run to the best of their abilities and the communities would not be harmed... Something has to be done, because their children get hurt for life. If their father goes to work for Baffinland and then just never comes back." [Hall Beach Public Meeting Participant]

"As a wife, my husband worked for Milne Inlet for 2.5 years, those years there was a lot of cheating though connector (Facebook) and it almost ruined my marriage. There is a lot of cheating happening in Baffinland and it had ruin so many relationships. You need to take a good look on their site to make sure cheating is not happening in BL." [Igloolik Survey Respondent]

The recent *Mary River Experience – The First Three Years* report (i.e. Brubacher Development Strategies Inc. 2016) also contained some comments related to the Project and the prevalence of marital problems. For example, the report notes (page 24):

"Being separated every two weeks can put pressure on relationships. Anxiety around a partner being faithful can be heightened by the unknown nature of life at the mine site... Life at site may not be any more conducive to forming relationships than any other environment."

But it may also not be any less so. Couples who are apart half the time may not survive. Breakups may arise from either or both partners.”

One community resident was also quoted as saying (page 24):

“It depends on how strong the relationship is between the man and the woman. One I know, when the man started working at Mary River, she found another man [in the community] and ended up breaking up. But others maybe want to stay with them more because they’re making a lot of money.” [Community Resident]

The report also notes that relationships have sometimes become stronger because of the Project. Effective communication was noted to be particularly important to successful relationship outcomes (pages 25 and 21):

“Some couples express that positive effects on their relationship have emerged out of the Mary River Project employment experience. This was suggested during two conversations.”

“Maintaining good communication during the work rotation was also raised as a central part of making the fly-in/fly-out lifestyle work. This communication encompassed both the spouse as well as with the children.”

Some data on this topic are also available at the territorial level. For example, the Nunavut Bureau of Statistics (2016i) notes approximately 38% of the Nunavut population aged 15 or over were married or living common law in 2016, while 2.7% were separated or divorced. In 2012, approximately 36.8% of the Nunavut population aged 15 or over were married or living common law, while 2.5% were separated or divorced.

7.8.3 Analysis

Baffinland acknowledges the potential for increased marital problems remains a concern for some Project stakeholders. However, there is no available evidence to suggest there has been a long term or significant increase in the prevalence of marital problems because of the Project. Marital issues can also be complex and influenced by many different factors. While this issue will continue to be tracked, it should be noted Baffinland continues to provide its employees and their immediate family members with access to an Employee and Family Assistance Program and has established on-site elder positions to provide counsel and support to its employees. Family-related or other forms of personal assistance can be obtained through these programs, as needed.

7.9 RATES OF SEXUALLY TRANSMITTED INFECTIONS AND OTHER COMMUNICABLE DISEASES

7.9.1 Project Certificate Condition

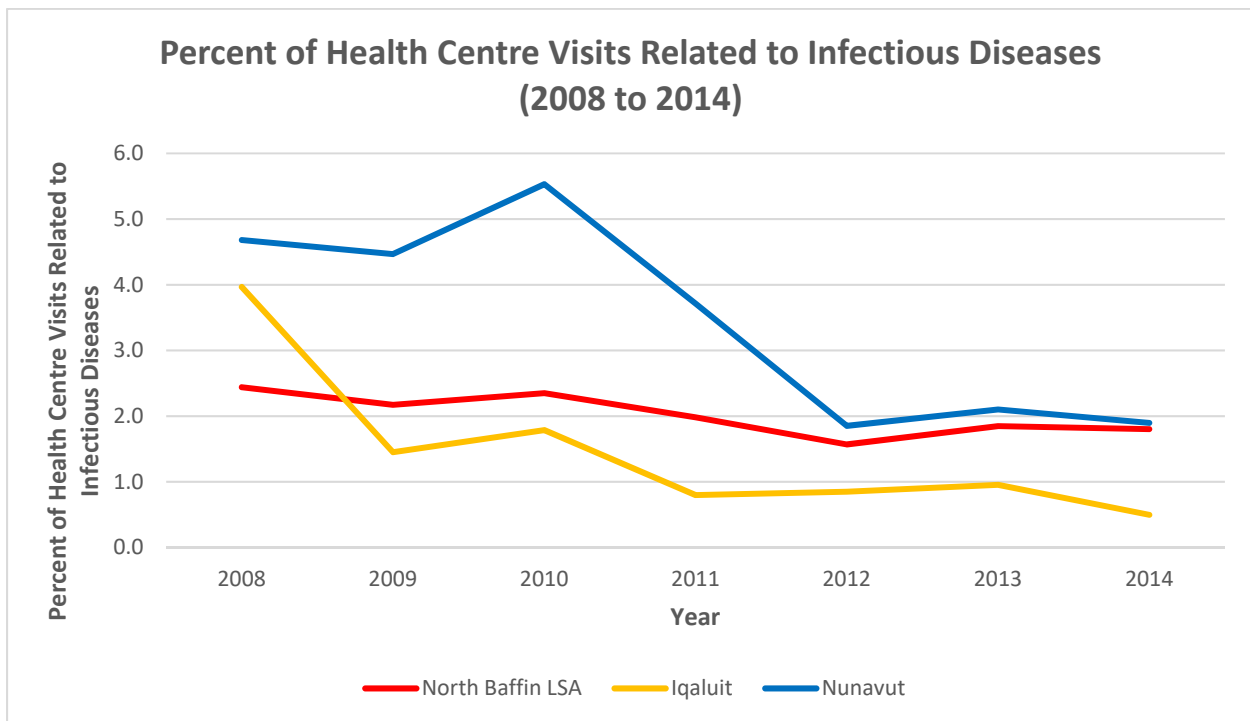
No specific prediction related to rates of sexually transmitted infections and other communicable diseases was presented in the Final EIS. However, Project Certificate condition #154 requests this topic be monitored.

7.9.2 Indicator Data

Percent of Health Centre Visits Related to Infectious Diseases

Data on community health centre visits can be used to identify whether health issues are increasing or decreasing in a community. Information on how the Project may affect rates of sexually transmitted infections and other communicable diseases in the LSA has been specifically requested in the Project Certificate. As such, data on the percentage of health centre visits by the diagnostic group ‘infectious diseases’ is a useful indicator to track.

2014 was the most recent year for which data on the percentage of health centre visits related to infectious diseases was available from the Nunavut Bureau of Statistics (2016g). In the North Baffin LSA in 2014, Arctic Bay had the highest percentage of health centre visits related to infectious diseases (2.3%), while Clyde River had the lowest (1.1%). The average percentage of health centre visits related to infectious diseases in the North Baffin LSA communities in 2014 was 1.8%. Iqaluit¹⁸ had 0.5% of health centre visits related to infectious diseases in 2014, while Nunavut as a whole had 1.9%. Compared to the previous year (2013), there was no change in the percentage of health centre visits related to infectious diseases in the North Baffin LSA communities (1.8%), but decreases occurred in Iqaluit (by 0.5%) and Nunavut (by 0.2%). Compared to pre-development period averages, there has been a decreasing trend in the percentage of health centre visits related to infectious diseases in the North Baffin LSA, Iqaluit, and Nunavut. Figure 13 displays the percentage of health centre visits related to infectious diseases from 2008 to 2014.



Source: Nunavut Bureau of Statistics (2016g)

Figure 13: Percent of health centre visits related to infectious diseases (2008 to 2014)

¹⁸ The Nunavut Bureau of Statistics (2016g) notes that only visits to Iqaluit’s community health centre are reported on, while visits to Iqaluit’s hospital are not.

7.9.3 Analysis

While there has been a decreasing trend in the percentage of health centre visits related to infectious diseases in the North Baffin LSA and Iqaluit in the post-development period, this decreasing trend was also evident in the five years preceding Project development (and throughout Nunavut). This implies factors other than the Project are likely driving these trends. However, infectious disease rates can be influenced by many different socio-economic factors. As Project construction only began in 2013, there is a minimal amount of post-development data currently available. Correlations between the Project and infectious disease rates, if any, will only come to light with the analysis of additional annual data. However, it is worth noting the Project continues to provide workers with regular access to a site medic, to whom they can confidentially visit with health-related (including sexual health) issues.

7.10 RATES OF TEENAGE PREGNANCY

7.10.1 Project Certificate Condition

No specific prediction related to teenage pregnancy rates was presented in the Final EIS. However, Project Certificate condition #154 requests this topic be monitored.

7.10.2 Indicator Data

Rates of Teenage Pregnancy

Appropriate community-level indicator data are currently unavailable for this topic. As such, this issue will continue to be tracked through the QSEMC process and Baffinland's community engagement program. Should indicators be required in the future, they will be selected in consultation with the Mary River SEMWG. No comments related to the Project and teenage pregnancy rates were made during Baffinland's 2016 community engagement program or during the 2016 QSEMC. However, some data on this topic are available at the territorial level. Statistics Canada (2016e) notes 22.0% of all Nunavut live births in 2013 (the most recent year data were available) were to mothers under the age of 20. By comparison, only 3.1% of all Canadian live births in 2013 were to mothers under the age of 20.

7.10.3 Analysis

Baffinland acknowledges teenage pregnancy remains a concern for some Project stakeholders. However, there is no available evidence to suggest there has been a long term or significant increase in teenage pregnancy rates because of the Project. Teenage pregnancy rates can also be influenced by many different socio-economic factors. This topic will continue to be tracked in future monitoring reports.

7.11 OTHER - CRIME

7.11.1 Project Certificate Condition

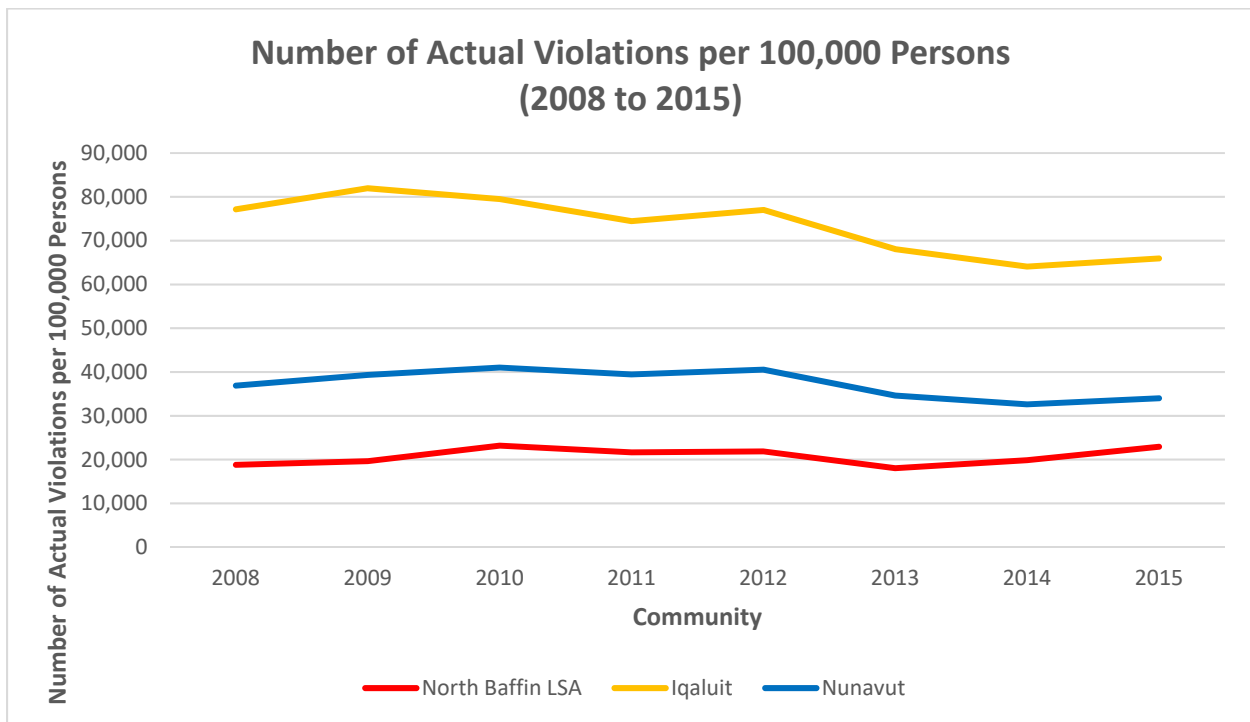
No specific prediction related to crime was presented in the Final EIS. However, Project Certificate condition #154 states other indicators (such as crime) should be monitored "as deemed appropriate".

The Mary River SEMWG has requested community crime rate data be included in Baffinland’s socio-economic monitoring program.

7.11.2 Indicator Data

Crime Rate

Data on community crime rates are useful for providing an indication of whether crime is increasing or decreasing. 2015 was the most recent year for which data on the number of actual violations per 100,000 persons was available from the Nunavut Bureau of Statistics (2016h). In the North Baffin LSA in 2015, Arctic Bay had the highest number of actual violations per 100,000 persons (28,764), while Hall Beach had the fewest (12,591). Iqaluit had 65,929 actual violations per 100,000 persons in 2015, which was significantly higher than the North Baffin LSA community average (22,917) and for Nunavut (34,007). Compared to the previous year (2014), there was an increase in the number of actual violations per 100,000 persons in the North Baffin LSA communities (by 3,065), Iqaluit (by 1,859), and Nunavut (by 1,393). Compared to pre-development period averages, there has been a trend of increasing crime rates in the North Baffin LSA, but decreasing crime rates in Iqaluit and Nunavut. Figure 14 displays the number of actual violations per 100,000 persons from 2008 to 2015.



Source: Nunavut Bureau of Statistics (2016h)

Figure 14: Number of actual violations per 100,000 persons (2008 to 2015)

7.11.3 Analysis

While there has been a trend of increasing crime rates in the North Baffin LSA and decreasing crime rates in Iqaluit in the post-development period, these trends were also evident in the five years preceding Project development. This implies factors other than the Project are likely driving these

trends. However, crime rates can be influenced by many different socio-economic factors. As Project construction only began in 2013, there is a minimal amount of post-development data currently available. Correlations between the Project and crime rates, if any, will only come to light with the analysis of additional annual data.

8. VSEC – COMMUNITY INFRASTRUCTURE AND PUBLIC SERVICES

8.1 COMPETITION FOR SKILLED WORKERS

8.1.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project could negatively affect the ability of hamlets to maintain their staff in the short term, due to increased competition for skilled workers created because of the Project. Associated mitigation measures developed by Baffinland include the provision of ongoing skills training to local residents, combined with work experience generated by the Project. These measures are expected to increase the pool of skilled workers in the local labour force in the medium to long-term and negate any short-term, negative Project effects.

8.1.2 Indicator Data

Number of Project Employees Who Left Positions in their Community

Based on the 2017 Employee Information Survey conducted by Baffinland (43 surveys received), 9 Project employees (or 20.9%) indicated they had left positions in their communities to pursue employment at the Project. Of these, 3 were casual/part-time positions, while 6 were full-time positions.

The recent *Mary River Experience – The First Three Years* report (i.e. Brubacher Development Strategies Inc. 2016) also provides some insight into this topic. For example, the report notes:

“...the potential that the Mary River Project may draw employees away from other local employers seems evident.” [Page 37]

However, the report also describes the lack of full time hamlet work (and other job opportunities) in many communities and important role the Project plays in filling this gap:

“One current Mary River employee spoke about how permanent employment in the community seemed to be out of reach. As more and more people gained drivers’ licenses the practice of sharing hamlet work around a pool of people was leading to slimmer and slimmer employment duration.” [Page 35]

“There are no jobs in the hamlets... and if you do get a job it’s part-time, its casual, you can’t get social assistance... and you may get very little work... you might get 40 hours this week and next week you’ll only get 5 hours.” [Key Person Interviewed, Page 35]

“For some, the advantage of Mary River is that it offers jobs that simply are not available in the small, local economies of North Baffin LSA communities.” [Page 37]

8.1.3 Analysis

While some Project employees have left positions in their communities to pursue employment at the Project, there is no available evidence to suggest there has been a long term or significant impact on

community staffing because of the Project. Furthermore, some of the community positions departed were of a casual/part-time nature, rather than full-time, permanent employment. Community engagement conducted by Baffinland further indicates there remains a high demand for employment opportunities in the LSA. It is also expected that ongoing training and experience generated by the Project, in addition to regular employee turnover (see Section 8.2), will continue to increase the pool of skilled workers in the local labour force and negate any short-term, negative Project effects.

8.2 LABOUR FORCE CAPACITY

8.2.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project could positively affect the ability of hamlets to maintain their staff in the medium to long term, due to the increased labour force capacity created because of the Project. Associated mitigation measures developed by Baffinland include the provision of ongoing skills training to local residents, combined with work experience generated by the Project. Together, these are expected to increase the overall pool of skilled workers in the local labour force from which hamlets (and other local and regional organizations) can draw upon.

8.2.2 Indicator Data

Training and Experience Generated by the Project

As noted in Sections 4 and 5, the Project continues to generate substantial training and experience opportunities for its employees. Since 2013, the Project has cumulatively generated 79,553 hours of training for Project employees, 11,843 hours (or 14.9%) of which were completed by Inuit employees (this does not include the additional training and experience gained by Project contractors). Likewise, 6,456,646 hours of labour have been cumulatively performed in Nunavut because of the Project since 2013, 1,162,333 hours (or 18.0%) of which were performed by Inuit employees and contractors.

Inuit Employee Turnover

As noted in Section 5.3, employee turnover continues to occur at the Project. While high rates of employee turnover are undesirable in most workplaces, some degree of turnover is expected and considered normal. In 2016, there were 44 Inuit employee departures (not including contractors) at the Project.

8.2.3 Analysis

The Project continues to generate substantial training and experience opportunities for its employees. Employee turnover also continues to occur at the Project, which ensures at least some previous Project employees become available for employment elsewhere. Together, these help increase the overall pool of skilled workers in the local labour force from which hamlets (and other local and regional organizations) can draw upon.

8.3 PRESSURES ON EXISTING HEALTH AND SOCIAL SERVICES PROVIDED BY THE GN THAT MAY BE IMPACTED BY PROJECT-RELATED IN-MIGRATION OF EMPLOYEES

8.3.1 Project Certificate Condition

No specific prediction related to pressures on existing health and social services provided by the GN that may be impacted by Project-related in-migration of employees was presented in the Final EIS. However, Project Certificate condition #158 states:

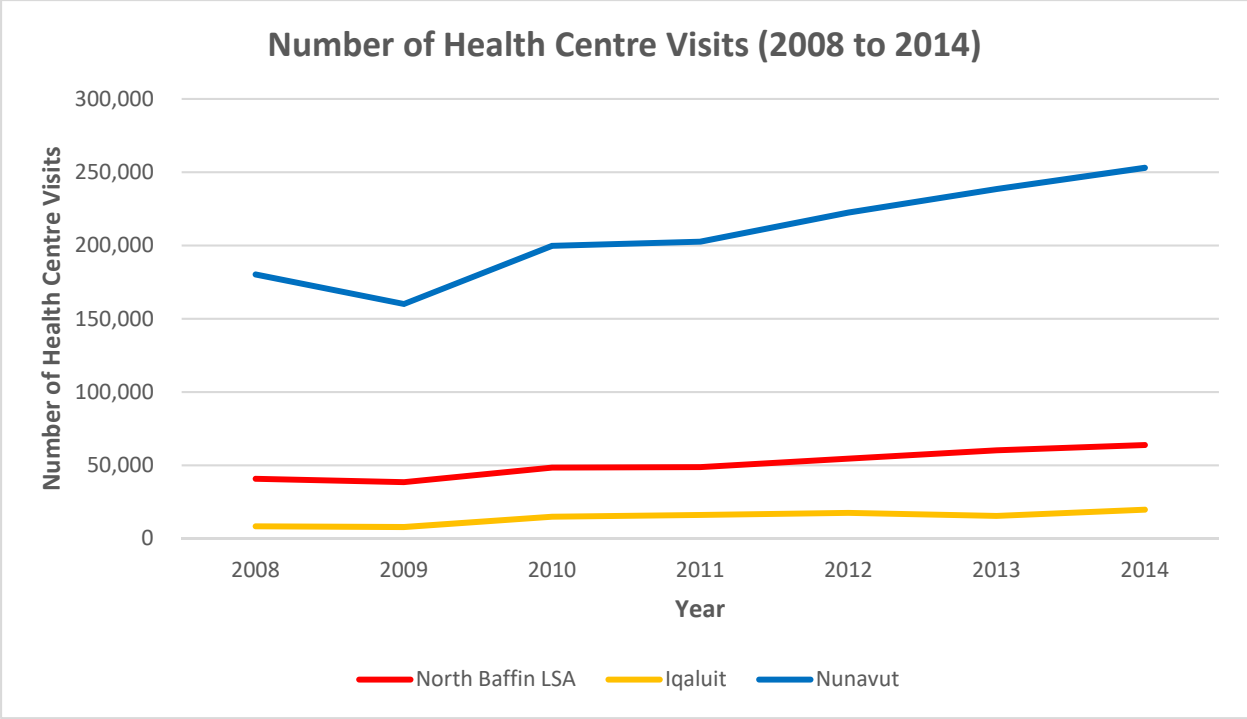
The Proponent is encouraged to work with the Government of Nunavut and other parties as deemed relevant in order to develop a Human Health Working Group which addresses and establishes monitoring functions relating to pressures upon existing services and costs to the health and social services provided by the Government of Nunavut as such may be impacted by Project-related in-migration of employees, to both the North Baffin region in general, and to the City of Iqaluit in particular.

8.3.2 Indicator Data

Number of Health Centre Visits (Total and Per Capita)

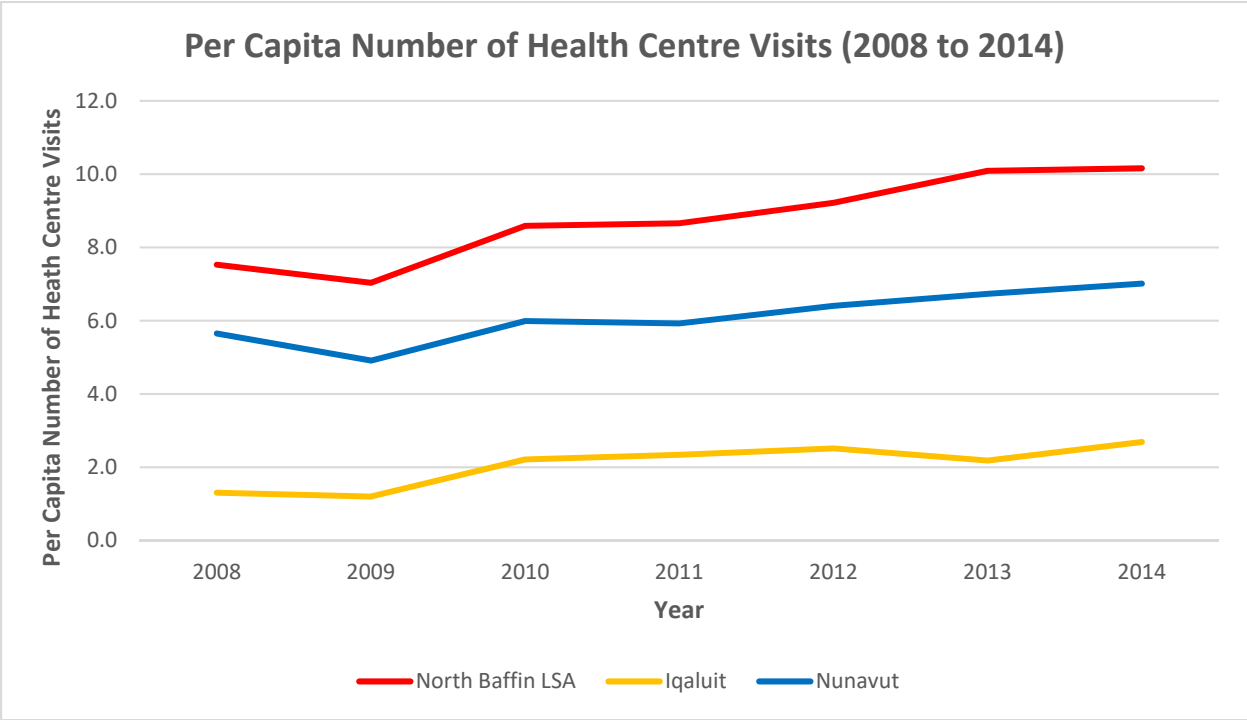
Health centre utilization data can be used to track changes to demands placed on community health services. 2014 was the most recent year for which data on the number of health centre visits was available from the Nunavut Bureau of Statistics (2016g). In the North Baffin LSA in 2014, Pond Inlet had the highest number of health centre visits (20,725), while Hall Beach had the fewest (6,203). The total number of health centre visits in the North Baffin LSA in 2014 was 63,891. Iqaluit had 19,794 health centre visits¹⁸ in 2014 and Nunavut had 253,014. Compared to the previous year (2013), the number of health centre visits have increased in the North Baffin LSA (by 3,561), Iqaluit (by 4,270), and Nunavut (by 14,466). Compared to pre-development period averages, there has been an increasing trend in the number of health centre visits in the North Baffin LSA, Iqaluit, and Nunavut. Figure 15 displays the number of health centre visits from 2008 to 2014.

2014 was also the most recent year for which data on per capita number of health centre visits were available from the Nunavut Bureau of Statistics (2016g). In the North Baffin LSA in 2014, Pond Inlet and Clyde River had the highest number of per capita health centre visits (12.6 each), while Hall Beach had the fewest (6.7). The average number of per capita health centre visits in the North Baffin LSA in 2014 was 10.2. Iqaluit had 2.7 per capita health centre visits¹⁸ in 2014 and Nunavut had 7.0. Compared to the previous year (2013), the per capita number of health centre visits have increased in the North Baffin LSA (by 0.1), Iqaluit (by 0.5), and Nunavut (by 0.3). Compared to pre-development period averages, there has been an increasing trend in the per capita number of health centre visits in the North Baffin LSA, Iqaluit, and Nunavut. Figure 16 displays the per capita number of health centre visits from 2008 to 2014.



Source: Nunavut Bureau of Statistics (2016g)

Figure 15: Number of health centre visits (2008 to 2014)



Source: Nunavut Bureau of Statistics (2016g)

Figure 16: Per capita number of health centre visits (2008 to 2014)

Number of Visits to Project Site Medic

The number of annual Project site medic visits can be used to track demands placed on Project-related health care services. This data also provides insight into the role played by the Project in reducing demands placed on local health care services. In 2016, there were 4,012 recorded visits to the Project site medic, an increase of 587 visits since 2015. Table 21 displays the number of recorded visits to the Project site medic from 2013 to 2016.

Number of Visits to Project Site Medic				
Ethnicity	2013	2014	2015	2016
Inuit	342	1,158	845	801
Non-Inuit	870	2,125	2,580	3,211
Total	1,212	3,283	3,425	4,012

Source: Baffinland records

Table 21: Number of visits to Project site medic (2013 to 2016)

8.3.3 Analysis

While there have been increasing trends in the number of total and per capita health centre visits in the North Baffin LSA and Iqaluit in the post-development period, these trends were also evident in the five years preceding Project development (and throughout Nunavut). This implies a longer-term, territory-wide trend is likely occurring rather than a Project-induced one. However, health centre utilization rates can also be influenced by many different socio-economic factors. As Project construction only began in 2013, there is a minimal amount of post-development data currently available. Correlations between the Project and health centre utilization, if any, will only come to light with the analysis of additional annual data.

In any case, the primary means through which the Project could negatively influence health service provision – in-migration of workers – has been shown (in Section 3.2) not be occurring in any significant manner. In fact, the Project may be having a positive effect on LSA health service provision, by providing employees with regular access to an on-site Project medic. This access allows LSA residents to have at least some of their health needs addressed on-site, thereby reducing demands placed on local health care providers.

8.4 PROJECT-RELATED PRESSURES ON COMMUNITY INFRASTRUCTURE

8.4.1 Project Certificate Condition

No specific prediction related to Project-related pressures on community infrastructure was presented in the Final EIS. However, Project Certificate condition #159 states:

The Proponent is encouraged to work with the Government of Nunavut to develop an effects monitoring program that captures increased Project-related pressures to community infrastructure in the Local Study Area communities, and to airport infrastructure in all point-of-hire communities and in Iqaluit.

8.4.2 Indicator Data

Baffinland Use of LSA Community Infrastructure

Baffinland continues to utilize some community infrastructure in the LSA to support ongoing Project operations. In 2016, this included:

- Full-time rental of five offices for Baffinland Community Liaison Officers (BCLOs) in the North Baffin communities of Arctic Bay, Clyde River, Hall Beach, Igloolik, and Pond Inlet, and one office for Baffinland's Northern Affairs team in Iqaluit
- Short-term rental of meeting rooms for Baffinland community meetings and/or workshops held in various North Baffin communities in May, July, and November 2016. Baffinland also utilized other local services during these events (for meals, accommodations, transport, etc.)
- Use of meeting rooms and local facilities for other events held in the LSA (e.g. Baffinland's participation in annual QSEMC meetings and IIBA forums)

A more detailed breakdown of stakeholder meetings and activities undertaken by Baffinland can be found in the company's *Annual Report to the Nunavut Impact Review Board*.

Number of Project Aircraft Movements at LSA Community Airports

To support the movement of workers, freight, and other materials to/from the Project, Baffinland is required to utilize community airport infrastructure in the LSA. This is due to the remote location of the Project and lack of viable alternative transportation methods (aside from seasonal marine re-supply). In 2016, there were 1,254 Project aircraft movements¹⁹ at LSA community airports. This includes only fixed-wing aircraft (e.g. passenger, cargo, and 'combi' type); records for rotary-wing aircraft (e.g. helicopters used for site activities) were not available. Table 22 provides information on the number of Project aircraft movements at LSA community airports from 2014 to 2016.

¹⁹ An aircraft movement is defined as a takeoff or landing at an airport. For example, one aircraft arrival and one departure is counted as two movements.

Number of Project Aircraft Movements at LSA Community Airports			
Community	2014	2015	2016
Arctic Bay	122	126	120
Clyde River	114	112	112
Hall Beach	130	122	122
Igloolik	118	106	114
Pond Inlet	212	136	134
Iqaluit	876	708	652
Total	1,572	1,310	1,254

Source: Baffinland records. Complete records are only available for fixed-wing aircraft movements and from 2014 onwards.

Table 22: Number of Project aircraft movements at LSA community airports (2014 to 2016)

8.4.3 Analysis

Like previous years, Baffinland continued to use some LSA community infrastructure to support ongoing Project operations in 2016. This use is small in comparison to other ongoing community uses and adds only minimal incremental pressure on LSA facilities. For example, Baffinland’s rental of office spaces in the LSA is generally limited to small facilities (i.e. to support individual BCLOs and Northern Affairs staff), and the use of local meeting rooms and accommodations is often intermittent (e.g. community meetings may only occur a few times or less per year) and short-term in nature. Furthermore, the use of these spaces can be considered a positive economic contribution of the Project to local economies (e.g. through payments of rental fees, purchase of related goods and services).

LSA community airports also regularly accommodate various non-Project passenger, cargo, and other aircraft (both scheduled and charter). Project-related aircraft movements add only minimal incremental pressure on these facilities. For example, in 2015 (the most recent year in which data is available) there were a total of 24,458 aircraft movements in the LSA. This includes 6,056 aircraft movements at North Baffin LSA airports (Statistics Canada 2016f) and 18,402 aircraft movements at the Iqaluit airport (Statistics Canada 2016g). Project-related aircraft movements at community airports in the LSA in 2015 represent only a small portion (5.4%) of this total.

9. VSEC – RESOURCES AND LAND USE

9.1 VARIOUS RESIDUAL EFFECTS

9.1.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project could have some negative effects on Inuit travel and camping. These include effects on safe travel around Eclipse Sound and Pond Inlet, safe travel through Milne Port, emission and noise disruption at camps, sensory disturbances and safety along the Milne Inlet tote road, detouring around the mine site for safety and travel, difficulty and safety relating to railway crossing, and detouring around Steensby Port.

Shipping-related mitigation measures developed and/or proposed by Baffinland include the provision of community public safety awareness campaigns (e.g. informing the community of vessel movements, tracking the route and timing of passage, periodic public meetings and information sessions), commitments to placing reflective markers around the ship track, establishing a detour around Steensby Port and providing food, shelter, and fuel to detouring travellers. Road and rail-related mitigation measures developed and/or proposed by Baffinland include the development of a roads management plan (e.g. establishing speed control and signage, ensuring truck operator vigilance, reporting of non-Project individuals), public education, and the addition of six railway crossing locations. Mine site-related mitigation measures developed by Baffinland include various public safety mechanisms (e.g. establishing signage and access barriers, restrictions on entering industrial sites), and the development of a mine closure plan.

9.1.2 Indicator Data

Number of Recorded Land Use Visitor Person-Days at Project Sites

The number of recorded land use visitor ‘person-days’ at Project sites provides an indication of how often the Project area continues to be accessed for land use activities. Because groups of individuals may travel together and/or utilize Project sites over multiple days, person-days are useful for calculating the extent of site visitations in a year (i.e. one person-day is equal to one person visiting a site during one day, while ten person-days could equal one person visiting a site during ten days or five people visiting a site during two days). Baffinland maintains a ‘Human Use Log’ to track all land use parties that pass through or use Project areas. Table 23 presents the number of recorded land use visitor person-days at Project sites from 2013 to 2016. In 2016, a total of 293 land use visitor person-days were recorded at Project sites, which is 77 person-days more than in 2015.

Number of Wildlife Compensation Fund Claims

The number of annual Wildlife Compensation Fund claims²⁰ provides insight into harvesting issues which may be arising because of the Project. In 2016, two claims were submitted to QIA for review. One claim was approved and resulted in compensation of \$600.00, while the second claim was reviewed and denied.

²⁰ The Wildlife Compensation Fund, established under the IIBA, is administered by the QIA and functions to compensate Inuit for incidents where Project activities interfere with or inhibit harvesting activities.

Number of Recorded Land Use Visitor Person-Days at Project Sites			
Year	Mary River	Milne Port	Total
2013	41	0	41
2014	14	57	71
2015	4	212	216
2016	15	278	293

Source: Baffinland records. This table only includes recorded land use visitors at selected Project sites; as such, it may underestimate the total number of land users accessing all Project sites.

Table 23: Number of recorded land use visitor person-days at Project sites (2013 to 2016)

9.1.3 Analysis

Monitoring data suggests Inuit land use and harvesting coexists with the Project. Local land users continued to access Project sites in 2016 and the number of land use visitor person-days have increased every year since record-keeping was commenced. However, Baffinland acknowledges the potential for future wildlife-related impacts from the Project and has contributed \$750,000.00 to a Wildlife Compensation Fund (administered by the QIA under the terms of the IIBA) to address this issue. While two Wildlife Compensation Fund claims were made in 2016, only one of these was eventually approved (for a relatively small amount of compensation - \$600.00). Furthermore, annual terrestrial and marine monitoring programs conducted by Baffinland have failed to reveal any significant Project-related impacts on terrestrial or marine resources utilized by residents of the LSA.

10. VSEC – ECONOMIC DEVELOPMENT AND SELF-RELIANCE

10.1 PROJECT HARVESTING INTERACTIONS AND FOOD SECURITY

10.1.1 Project Certificate Condition

No specific prediction related to Project harvesting interactions and food security was presented in the Final EIS. However, Project Certificate condition #148 states:

The Proponent is encouraged to undertake collaborative monitoring in conjunction with the Qikiqtaaluk Socio-Economic Monitoring Committee’s monitoring program which addresses Project harvesting interactions and food security and which includes broad indicators of dietary habits.

10.1.2 Indicator Data

Project Harvesting Interactions and Food Security

Appropriate community-level indicator data are currently unavailable for this topic. As such, this topic will continue to be tracked through the QSEMC process and Baffinland’s community engagement program. Should indicators be required in the future, they will be selected in consultation with the Mary River SEMWG. However, some indicator data related to Project harvesting interactions and food security have already been presented in this report. For example, Section 7.2 discussed household income and food security and provided indicator data on *proportion of taxfilers with employment income, median employment income, and percentage of population receiving social assistance*. Section 9.1 discussed the topic of resources and land use and provided indicator data on *number of recorded land use visitor person-days at Project sites and number of Wildlife Compensation Fund claims*. Please refer directly to these sections for additional information.

Comments on harvesting and food security continue to be received through Baffinland’s community engagement program. For example, the following comments on the importance of harvesting were made during recent community workshops held by Baffinland (see Jason Prno Consulting Services Ltd. 2017):

“...we care about the ocean in front of us because that’s where our wildlife and food comes from. The ocean is like our farm. We live off what grows from there. For that reason, it’s our life too. It’s part of our culture. That’s how we are different from southerners.” [Pond Inlet Meeting Participant]

“We historically relied on the game, we still do. We still hunt to survive. We’re still like that. It’s part of our Inuit system. We still eat country food. If that were to be affected in some way we would be very concerned.” [Pond Inlet Meeting Participant]

“We can’t stop hunting as we need the food.” [Pond Inlet Meeting Participant]

“When you’re used to eating caribou, it is much more delectable than eating store-bought food. Some of the caribou hunters are very hard-pressed. They are tired of relying on social income and want to eat healthy food.” [Pond Inlet Meeting Participant]

“We Inuit know we have full access to wildlife in the area, but when you’re short of money, it’s hard to keep up with the food. And you can only survive if you help each other with money. The youth are more centred on money nowadays. Before, we survived more on wildlife.”
[Pond Inlet Meeting Participant]

Some data also exists on this topic at the territorial level. For example, data from the 2012 Aboriginal Peoples Survey (Statistics Canada 2015a) indicates approximately 66% of Nunavummiut hunted, fished, or trapped in the past year, while approximately 37% of Nunavummiut hunted, fished, or trapped at least once a week during the season. Likewise, approximately 43% of Nunavummiut gathered wild plants in the past year, while approximately 29% of Nunavummiut gathered wild plants at least once a week during the season.

Achieving food security remains a pressing issue in Nunavut (e.g. Nunavut Food Security Coalition 2016). The Nunavut Food Security Coalition (2016) notes that food security exists when all people at all times have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life. Food insecurity exists when these conditions fail to be met. Data from the 2012 Aboriginal Peoples Survey (Statistics Canada 2015b) indicates approximately 25% of Nunavummiut have very low food security, 26% have low food security, while 41% have high or marginal food security.

The 2016 North Baffin community survey conducted by Baffinland provides some additional insight into this topic. For example, 65% of survey respondents indicated they were not concerned about how the Project was affecting their community or environment. 18% indicated they had concerns about Project effects on the environment. These concerns included effects on terrestrial and marine wildlife due to dust, changes in water quality, shipping, and blasting noise. 17% of survey respondents indicated they had concerns about Project effects on the community, which included effects on harvesting and other issues.

Some comments on potential Project-harvesting interactions have also been documented through Baffinland’s community engagement program. For example, some participants in recent community workshops held by Baffinland (see Jason Prno Consulting Services Ltd. 2017) described negative effects that have been experienced because of the Project. In one instance, hunters said they were unable to execute a successful hunt because the wake of a passing Baffinland ship caused excessive movement of their boat and prevented them from shooting their targeted species. Another incident of concern involved narwhal hunters in a boat near the Milne Inlet port site being approached by Baffinland employees and being told they could not hunt in that location.

More generally, it was noted that Pond Inlet residents no longer use the Milne Inlet area as much as they did in the past because of the Project activities that now occur there. Some residents have also questioned whether Baffinland has been responsible (because of shipping and other Project activities) for recently observed changes to marine wildlife. These have included fewer narwhal being observed, a noted increase in harp seals in Eclipse Sound, and several dead sculpin and fish that were found in the Eclipse Sound area in the summer of 2015.

10.1.3 Analysis

It’s evident that harvesting and consumption of country food remains a valued and important part of the Inuit culture and diet. As noted in Section 7.2, there are indications the Project continues to improve

household income and food security in the LSA, by providing LSA residents with meaningful incomes (through employment) that enable the purchase of food and support the participation in harvesting activities. Baffinland also contributes to various community wellness initiatives (e.g. through the INPK Fund in the IIBA), which may assist individuals not directly benefiting from Project employment. Some concern has been expressed about potential negative effects of the Project on local harvesting. Concerns have also been expressed about declining rates of country food consumption and the lack of food security in Nunavut, generally.

Monitoring data presented in Section 9.1 also suggests Inuit land use and harvesting coexists with the Project. Local land users continued to access Project sites in 2016 and the number of land use visitor person-days have increased every year since record-keeping was commenced. However, Baffinland acknowledges the potential for future wildlife-related impacts from the Project and has contributed \$750,000.00 to a Wildlife Compensation Fund to address this issue. Furthermore, annual terrestrial and marine monitoring programs conducted by Baffinland have failed to reveal any significant Project-related impacts on terrestrial or marine resources utilized by residents of the LSA.

11. VSEC – BENEFITS, ROYALTY, AND TAXATION

11.1 PAYMENTS OF PAYROLL AND CORPORATE TAXES TO THE TERRITORIAL GOVERNMENT

11.1.1 Predicted Effect and Mitigation Measures

The Final EIS predicted the Project would have a beneficial effect on revenues (e.g. through taxes) flowing to the territorial government. No specific mitigation measures have been developed to support this prediction.

11.1.2 Indicator Data

Annual Payroll and Corporate Taxes Paid by Baffinland to the Territorial Government

The value of annual payroll and corporate tax payments by Baffinland to the territorial government helps demonstrate the effect the Project has on revenues flowing to the territorial government. In 2016, Baffinland paid \$1,134,975.08 in employee payroll tax to the Government of Nunavut (i.e. a 2% payroll tax levy; other payroll taxes are paid to the federal government). Baffinland did not pay any corporate income tax in 2016 (as the Company is not yet profitable) or property tax (as lease payments are made to the QIA and not the Government of Nunavut).

11.1.3 Analysis

The Project continued to pay taxes to the Government of Nunavut in 2016. As predicted in the Final EIS, the positive effect of the Project on revenues flowing to the territorial government is confirmed for this reporting period. Baffinland expects increased tax amounts will be paid once the Company enters full commercial production and becomes profitable.

12. CONCLUDING REMARKS

12.1 SUMMARY

12.1.1 Report Summary

This report has assessed the socio-economic performance of the Mary River Project in 2016, as well as Baffinland's compliance with various Project Certificate conditions. Performance was assessed using socio-economic indicators for a number of VSECs included in the Final EIS:

- Population demographics
- Education and training
- Livelihood and employment
- Contracting and business opportunities
- Human health and well-being
- Community infrastructure and public services
- Resources and land use
- Economic development and self-reliance
- Benefits, royalty, and taxation

The information presented in this report supports many of the Final EIS predictions for these VSECs and identifies positive effects the Project has had. For example, approximately 1,881,506 hours of Project labour were performed by Baffinland employees and contractors in Nunavut in 2016, which was equal to approximately 905 full time equivalent positions. Of this total, 305,836 hours were worked by residents of the LSA. In addition, approximately \$7.6 million in payroll was provided to Baffinland LSA employees (not including contractors) and \$64.4 million was spent on procurement with Inuit-owned businesses and joint ventures in 2016.

Employment in the LSA is one area where Project activities didn't fully match Final EIS predictions in 2016. For example, LSA employment hours in 2016 were slightly lower than originally predicted (although North Baffin LSA employment hours *did* correspond with Final EIS predictions). Likewise, there were several Inuit employee departures in 2016. Baffinland continues to take positive steps to address the issue of Inuit employment and is in the process of finalizing an Inuit Human Resources Strategy (IHRS) and Inuit Contracting and Procurement Strategy (ICPS). These documents will describe goals and initiatives that will be used to increase Inuit employment and contracting at the Project. The ongoing establishment of an annual Minimum Inuit Employment Goal (MIEG) with the QIA should also assist with increasing Inuit employment in the future. However, additional monitoring will be necessary to track the success of these and other Baffinland Inuit employment programs. Baffinland will also continue to track employee turnover causes and outcomes, moving forward.

Where appropriate, trends have been described for the indicators assessed in this report. These trends (i.e. pre-development, post-development, and since the previous year) demonstrate whether an indicator has exhibited change and describes the direction of that change. Trend analyses can also be useful for assessing potential Project influences on an indicator. In some cases, additional data and monitoring will be necessary before the Final EIS predictions presented in this report can be fully verified. In others, direct correlations between the Project and data trends were either unable to be identified or were unclear. The process of socio-economic monitoring often requires many years of data

to effectively discern trends and causality. Even then, various factors may be found to influence causality and some of these may not be easy to measure. Successful socio-economic monitoring for the Project will require appropriate long-term data, the regular input of all Project stakeholders, and a focus on continuous improvement.

The objectives of this 2016 report (presented in Section 1.3) have been accomplished in several ways. First, this report provided an analysis (in Sections 3 to 11) of selected socio-economic effects that were predicted to occur in the Project's Final EIS. Second, this analysis provided insight into the functioning of Baffinland's existing socio-economic mitigation and management programs (again, in Sections 3 to 11). Third, this report provided information that will assist regulatory and other agencies in evaluating Baffinland's compliance with socio-economic monitoring requirements for the Project (found throughout the report, but Appendix B summarizes how Baffinland has addressed Project Certificate conditions related to socio-economic monitoring). Finally, this report supports Baffinland's adaptive management objectives for the Project, as all issues identified in this report will continue to be monitored and opportunities for potential performance improvements will be assessed.

12.1.2 Summary of Regional and Cumulative Economic Effects

This section provides a summary of regional and cumulative economic effects related to the Project. This is in relation to Project Certificate condition #169, which states:

The Proponent provide an annual monitoring summary to the NIRB on the monitoring data related to the regional and cumulative economic effects (positive and negative) associated with the Project and any proposed mitigation measures being considered necessary to mitigate the negative effects identified.

The Project continued to make positive contributions to the Nunavut economy in 2016. As noted earlier, 1,881,506 hours of Project labour were performed by Baffinland employees and contractors in Nunavut in 2016, which was equal to approximately 905 full time equivalent positions. In addition, approximately \$7.6 million in payroll was provided to Baffinland LSA employees and \$64.4 million was spent on procurement with Inuit-owned businesses and joint ventures in 2016. When compared to annual economic outputs for Nunavut as a whole, these values are notable. In 2015 (the most recent year for which estimates are available), for example, there were a total of 15,815 jobs held in Nunavut and 28,338,000 total hours worked (Nunavut Bureau of Statistics 2016j), with average weekly earnings of \$1,256.70 per employee (Nunavut Bureau of Statistics 2016k). By comparison, hours worked by Baffinland's employees and contractors in Nunavut in 2015 (i.e. 1,844,081) represent 6.5% of the Nunavut total. Average weekly earnings of Baffinland's Inuit employees in 2015 were also higher than the Nunavut average, at \$1,851.57.²¹

²¹ Baffinland Inuit employee numbers (92) and payroll amounts (\$8,857,916.00) for 2015 were presented in Baffinland's 2015 Socio-Economic Monitoring Report. Employee numbers in 2015 were calculated based on regular full-time employees on staff at the end of December 2015. Weekly employee earnings are thus an estimate and may not fully reflect average amounts for the year.

Mining remains an important contributor to the Nunavut economy. Nunavut's real gross domestic product²² (GDP) for all industries in 2015 was \$2,027.2 million. Of this amount, 'mining, quarrying, and oil and gas extraction' was responsible for contributing \$337.4 million, while 'construction' was responsible for \$261.0 million (Nunavut Bureau of Statistics 2016). The Mary River Project has been an important contributor to these amounts, as has Agnico Eagle Mines Limited's Meadowbank Mine (Nunavut's only other operating mine), and several other Nunavut-based mining projects that are in various stages of development. Mining in Canada, generally, contributed \$57 billion to the country's GDP, or 3.5% of total Canadian GDP (in 2014). The industry also employs some 375,000 individuals and remains the largest proportional private sector employer of Aboriginal peoples in the country (Mining Association of Canada 2016).

No negative regional or cumulative economic effects associated with the Project were identified in 2016. As such, no mitigation measures are being proposed to mitigate negative effects.

12.2 ADAPTIVE MANAGEMENT

This report identifies several positive effects the Project has had on VSECs described in the Final EIS and supports many of the Final EIS predictions that were made. The information contained in this report also suggests the mitigation and management measures established by Baffinland for these VSECs are functioning largely as anticipated (or require additional time to have their potential fully realized). However, LSA employment and Inuit employee turnover are areas Baffinland will continue to address in 2017. Implementation of Baffinland's Inuit Human Resources Strategy (IHRS) and Inuit Contracting and Procurement Strategy (ICPS), and ongoing establishment of a Minimum Inuit Employment Goal (MIEG) with the QIA should assist with increasing LSA employment over time. Continued monitoring of LSA employment hours, causes of employee turnover, and the initiatives described in the IHRS and ICPS will be necessary to ensure successful socio-economic outcomes. Opportunities for potential performance improvements in these areas will also be assessed throughout 2017.

While additional monitoring will be required to confirm the findings presented in this report over the long-term, no need has been identified to update any of the Final EIS predictions or to significantly modify Baffinland's existing management approach. However, Baffinland will continue to use adaptive management as a tool for improving the Project's overall socio-economic performance in the future.

12.3 FUTURE MONITORING AND REPORTING

As noted previously, Baffinland has developed a socio-economic monitoring plan for the Project (see Section 1.4) which addresses the VSECs assessed in the Final EIS. Using this plan, Baffinland will continue to monitor and report on Project-related socio-economic performance on an annual basis. Regular engagement with the Mary River SEMWG and QSEMC on socio-economic matters will also occur.

²² The Bank of Canada (2016) notes real GDP is "the most common way to measure the economy...GDP is the total value of everything - goods and services - produced in our economy. The word "real" means that the total has been adjusted to remove the effects of inflation." ISEDC (2011) adds that GDP *by industry* "measures the value of output of an industry less the value of intermediate inputs required in the production process." The real GDP amounts by industry presented by the Nunavut Bureau of Statistics (2016) are in chained 2007 dollars.

Effectiveness of the Project's socio-economic monitoring program will be evaluated in an on-going manner. Should the need arise to modify this program, both the Mary River SEMWG and QSEMC will be consulted. Feedback obtained through this evaluation process may lead to future modifications of the Project's socio-economic monitoring plan, indicators used, and/or methods of analysis employed. Baffinland also anticipates that monitoring may cease for some indicators in the future, especially in cases where monitoring has sufficiently verified Final EIS predictions over time.

12.4 CONCORDANCE WITH PROJECT CERTIFICATE CONDITIONS ON SOCIO-ECONOMIC MONITORING

Submission of this report helps achieve concordance with several Project Certificate conditions related to socio-economic monitoring. A summary of each Project Certificate condition related to socio-economic monitoring, a description of how Baffinland has addressed each of these conditions, and 2016 socio-economic monitoring report references for these conditions (where applicable) can be found in Appendix B.

13. REFERENCES

- Bank of Canada. 2016. Measuring Economic Growth. Accessed February 1, 2016.
<http://www.bankofcanada.ca/core-functions/monetary-policy/measuring-economic-growth/>
- Bell, J. 2012. Meadowbank a reality check for Nunavut mining: AEM executive. *Nunatsiaq News*. April 20, 2012. Accessed February 4, 2016.
http://www.nunatsiaqonline.ca/stories/article/65674meadowbank_a_reality_check_for_nunavut_mining_aem_executive/
- British Columbia Environmental Assessment Office (BCEAO). 2013. *Guideline for the Selection of Valued Components and Assessment of Potential Effects*. Accessed January 14, 2016.
http://www.eao.gov.bc.ca/VC_Guidelines.html
- Brubacher Development Strategies Inc. 2015. *Baffinland Iron Mines Corporation Mary River Project 2014 Socio-Economic Monitoring Report*. Prepared for Baffinland Iron Mines Corporation. March 2015.
- Brubacher Development Strategies Inc. 2016. *Baffinland Iron Mines Corporation Mary River Project: Mary River Experience – The First Three Years*. January 18, 2016.
- Conference Board of Canada. 2016. Education and Skills in the Territories. Accessed February 16, 2016.
<http://www.conferenceboard.ca/hcp/provincial/education/edu-territories.aspx>
- Egeesiak, E. 2016. Inuit Firm Registry Coordinator, Nunavut Tunngavik Incorporated. Personal communication: February 2016.
- Government of Nunavut. 2014. *Public Service Annual Report 2013-2014*. Prepared by the Department of Finance. Accessed February 4, 2016.
http://www.gov.nu.ca/sites/default/files/public_service_annual_report_2013-14_english.pdf
- Government of Nunavut. 2015. *Qikiqtaaluk Socio-Economic Monitoring Committee Spring 2015 Report*. Produced by the Government of Nunavut Department of Economic Development & Transportation. July 2015.
- Government of Nunavut. 2016. *Qikiqtaaluk Socio-Economic Monitoring Committee 2016 Annual Meeting Report*. Produced by the Government of Nunavut Department of Economic Development & Transportation. April 4, 2016.
- Gregoire, L. 2014. Nunavut premier says targeted training needed to build the future. *Nunatsiaq News*. January 30, 2014. Accessed February 16, 2016.
http://www.nunatsiaqonline.ca/stories/article/65674nunavut_premier_says_targetted_training_needed_to_build_future/
- Innovation, Science and Economic Development Canada (ISED). 2011. Canadian Industry Statistics – Glossary of Terms. Accessed February 1, 2016.
https://www.ic.gc.ca/eic/site/cissic.nsf/eng/h_00005.html#rindex
- Jason Prno Consulting Services Ltd. 2016. *Draft 2015 Socio-Economic Monitoring Report for the Mary River Project*. Report prepared for Baffinland Iron Mines Corporation. March 2016.
- Jason Prno Consulting Services Ltd. 2017. *Results of Community Workshops Conducted for Baffinland Iron Mines Corporation's Phase 2 Proposal*. Report prepared for Baffinland Iron Mines Corporation. January 2017.
- MacDonald, J. 2014. Occupational demand in the Nunavut mining sector: Developing the labour force. Presentation to the Nunavut Mining Symposium. Iqaluit, Nunavut. April 8, 2014.
- Mining Association of Canada. 2016. *Facts and Figures of the Canadian Mining Industry 2015*. Accessed February 5, 2016. <http://mining.ca/sites/default/files/documents/Facts-and-Figures-2015.pdf>
- Mining Industry Human Resources Council (MIHR). 2014. *Nunavut Mining Hiring Requirements and Available Talent Forecasts 2014*. Prepared for and in partnership with the Government of Nunavut. Accessed February 16, 2016.

- http://www.gov.nu.ca/sites/default/files/nunavut_mining_hiring_requirements_and_available_talent_forecasts_web.pdf
- Mining Industry Human Resources Council. 2016. *Exploring Gender Inclusion*. Accessed January 4, 2017. https://www.mihrc.ca/pdf/MiHR_Gender_Report_EN_WEB.pdf
- Noble, B.F. 2015. *Introduction to Environmental Impact Assessment: A Guide to Principles and Practice*. Third ed. Toronto, Ontario: Oxford University Press.
- Nunavut Bureau of Statistics (NBS). 2009. *Guide to the Labour Force Survey in Nunavut*. Accessed February 17, 2016. <http://www.stats.gov.nu.ca/en/Labour%20survey.aspx>
- Nunavut Bureau of Statistics (NBS). 2013. *Community Tables_Education_2011 NHS (2 tables).xlsx*. Accessed February 17, 2016. <http://www.stats.gov.nu.ca/en/Census%202011NHS.aspx>
- Nunavut Bureau of Statistics (NBS). 2014. *Nunavut Social Assistance Recipients, 2005 to 2013.xlsx*. Prepared by Nunavut Bureau of Statistics December 11, 2014. Accessed February 14, 2017. <http://www.stats.gov.nu.ca/en/Social%20assistance.aspx>
- Nunavut Bureau of Statistics (NBS). 2016a. *Nunavut Population Estimates by Inuit and Non-Inuit, Region and Community, 2001 to 2016 (3 tables).xlsx*. Prepared by Nunavut Bureau of Statistics December 1, 2016. Accessed December 8, 2016. <http://www.stats.gov.nu.ca/en/Population%20estimate.aspx>
- Nunavut Bureau of Statistics (NBS). 2016b. *Nunavut Annual Migration Estimates, 1999 to 2016.xlsx*. Prepared by Nunavut Bureau of Statistics October 3, 2016. Accessed November 9, 2016. <http://www.stats.gov.nu.ca/en/Population%20migration.aspx>
- Nunavut Bureau of Statistics (NBS). 2016c. *Nunavut Secondary School Graduates by Community, 1999 to 2015_ Revised.xlsx*. Prepared by Nunavut Bureau of Statistics October 18, 2016. Accessed November 9, 2016. <http://www.stats.gov.nu.ca/en/Social%20education.aspx>
- Nunavut Bureau of Statistics (NBS). 2016d. *Nunavut Secondary School Graduates, 1999 to 2015 (2 tables)_ Revised.xlsx*. Prepared by Nunavut Bureau of Statistics October 18, 2016. Accessed November 9, 2016. <http://www.stats.gov.nu.ca/en/Social%20education.aspx>
- Nunavut Bureau of Statistics (NBS). 2016e. *Nunavut Taxfilers with Employment Income by Region and Community, 2006 to 2014.xls*. Prepared by Nunavut Bureau of Statistics November 3, 2016. Accessed November 15, 2016. <http://www.stats.gov.nu.ca/en/Economic%20income.aspx>
- Nunavut Bureau of Statistics (NBS). 2016f. *Nunavut Criminal Violations by Type and Community, 1999 to 2015 (26 tables).xlsx*. Prepared by Nunavut Bureau of Statistics August 4, 2016. Accessed November 15, 2016. <http://www.stats.gov.nu.ca/en/Social%20crime.aspx>
- Nunavut Bureau of Statistics (NBS). 2016g. *Nunavut Community Health Centre Visits, 2003 to 2014 (28 tables).xlsx*. Prepared by Nunavut Bureau of Statistics May 30, 2016. Accessed November 15, 2016. <http://www.stats.gov.nu.ca/en/Social%20health.aspx>
- Nunavut Bureau of Statistics (NBS). 2016h. *Nunavut Criminal Violations by Region and Community, 1999 to 2015 (16 tables).xls*. Prepared by Nunavut Bureau of Statistics July 22, 2016. Accessed November 15, 2016. <http://www.stats.gov.nu.ca/en/Social%20crime.aspx>
- Nunavut Bureau of Statistics (NBS). 2016i. *Nunavut Population Estimates by Sex and Marital Status, 2001 to 2015 (3 tables).xls*. Prepared by Nunavut Bureau of Statistics November 2, 2016. Accessed January 10, 2017. <http://www.stats.gov.nu.ca/en/Population%20estimate.aspx>
- Nunavut Bureau of Statistics (NBS). 2016j. *Nunavut Number of Jobs and Hours Worked, 1999 to 2015.xls*. Prepared by Nunavut Bureau of Statistics June 28, 2016. Accessed November 8, 2016. <http://www.stats.gov.nu.ca/en/Labour%20and%20employment.aspx>
- Nunavut Bureau of Statistics (NBS). 2016k. *Nunavut Employment and Earnings, 2001 to 2015.xls*. Prepared by Nunavut Bureau of Statistics February 25, 2016. Accessed November 8, 2016. <http://www.stats.gov.nu.ca/en/Labour%20and%20employment.aspx>

- Nunavut Bureau of Statistics (NBS). 2016l. *Nunavut Real GDP by Industry, 2011 to 2015.xls*. Prepared by Nunavut Bureau of Statistics May 12, 2016. Accessed November 8, 2016. <http://www.stats.gov.nu.ca/en/Economic%20GDP.aspx>
- Nunavut Bureau of Statistics (NBS). 2017. *Labour Force Tables for Nunavut, 3MMA Ending in January 2016 and 2017 (4).xls*. Prepared by Nunavut Bureau of Statistics February 10, 2017. Accessed February 24, 2017. <http://www.stats.gov.nu.ca/en/Labour%20survey.aspx>
- Nunavut Food Security Coalition. 2016. *Homepage*. Accessed January 9, 2016. <https://www.nunavutfoodsecurity.ca/>
- Nunavut Impact Review Board (NIRB). 2013. *Monitoring: NIRB Public Guide Series*. Accessed January 7, 2015. <http://www.nirb.ca/guides>
- Nunavut Impact Review Board (NIRB). 2014. *Project Certificate No. 005 for the Mary River Project, Amendment Number 01*. Issued by the Nunavut Impact Review Board to Baffinland Iron Mines Corporation on May 28, 2014.
- Nunavut Tunngavik Incorporated (NTI). 2016. Inuit Firm Registry Database – Search the Registry. Accessed December 31, 2016. <http://inuitfirm.tunngavik.com/search-the-registry/>
- Pauktuutit, K. Czyzewski, F. Tester, N. Aaruaq, and S. Blangy. 2014. *The Impact of Resource Extraction on Inuit Women and Families in Qamani'tuaq, Nunavut Territory: A Qualitative Assessment*. Accessed January 26, 2017. <http://pauktuutit.ca/wp-content/blogs.dir/1/assets/Report-Final-Jan-2015.pdf>
- Pauktuutit. Undated. *Impacts of Resource Extraction on Inuit Women*. Accessed January 26, 2017. http://pauktuutit.ca/wp-content/blogs.dir/1/assets/08-Mining-Fact-Sheet_EN.pdf
- Socio-Economic Monitoring Committees (SEMCs). 2016. About. Accessed January 5, 2016. http://nunavutsemc.com/?page_id=4
- Sponagle, J. 2016. No childcare forces Iqaluit mom to leave town. *CBC News North*, July 11, 2016. Accessed January 26, 2017.
- Statistics Canada. 2015a. *Table 576-0006 - Aboriginal peoples survey, harvesting activities by age group and sex, Inuit population aged 15 years and over, Canada and Inuit Nunangat, occasional*, CANSIM (database). Date modified November 9, 2015. Accessed January 9, 2017. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=5760006&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=>
- Statistics Canada. 2015b. *Table 577-0010 - Aboriginal peoples survey, food security, by age group, sex, and number of persons in household, Inuit population aged 6 years and over, Canada and Inuit Nunangat, occasional*, CANSIM (database). Date modified November 6, 2015. Accessed January 9, 2017. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=5770010&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=>
- Statistics Canada. 2016a. *Table 252-0082 – Incident-based crime statistics, by detailed violations and police services, Territories, annual (number unless otherwise noted)*, CANSIM (database). Date modified July 19, 2016. Accessed November 14, 2016. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=2520082>
- Statistics Canada. 2016b. *Table 051-0001 - Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual (persons unless otherwise noted)*, CANSIM (database). Date modified September 28, 2016. Accessed November 9, 2016. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0510001&pattern=&csid=>
- Statistics Canada. 2016c. *Women in Canada: A Gender-Based Statistical Report. First Nation, Métis and Inuit Women*. Produced by Paula Arriagada. Catalogue no. 89-503-X. Release date February 23, 2016. Accessed January 26, 2017. <http://www.statcan.gc.ca/pub/89-503-x/2015001/article/14313-eng.pdf>

- Statistics Canada. 2016d. *Family Violence in Canada: A Statistical Profile, 2014*. Produced by the Canadian Centre for Justice Statistics. Catalogue no. 85-002-X. Release date January 21, 2016. Accessed January 10, 2017.
- Statistics Canada. 2016e. *Table 102-4503 – Live births, by age of mother, Canada, provinces and territories, annual*, CANSIM (database). Date modified October 26, 2016. Accessed January 10, 2017.
<http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=1024503&pattern=&csid=>
- Statistics Canada. 2016f. *Table 401-0037 – Annual aircraft movements, by class of operation and type of operation, airports without air traffic control towers, occasional (number)*, CANSIM (database). Date modified June 16, 2016. Accessed December 13, 2016.
<http://www5.statcan.gc.ca/cansim/a26?id=4010037&retrLang=eng&lang=eng>
- Statistics Canada. 2016g. *Table 401-0030 Aircraft movements, by class of operation, airports with NAV CANADA flight service stations, annual (number)*, CANSIM (database). Date modified. June 1, 2016. Accessed December 13, 2016.
<http://www5.statcan.gc.ca/cansim/a26?id=4010030&retrLang=eng&lang=eng>
<http://www.statcan.gc.ca/pub/85-002-x/2016001/article/14303-eng.pdf>
- Taylor, S. 2002. *The Employee Retention Handbook*. London, England: Chartered Institute of Personnel and Development.
- Vanclay, F., Esteves, A.M., Aucamp, I. & Franks, D. 2015 *Social Impact Assessment: Guidance for Assessing and Managing the Social Impacts of Projects*. Fargo ND: International Association for Impact Assessment.

APPENDIX A: TERMS OF REFERENCE FOR THE MARY RIVER SOCIO-ECONOMIC MONITORING WORKING GROUP

December 3, 2012

MARY RIVER SOCIO-ECONOMIC MONITORING WORKING GROUP TERMS OF REFERENCE

1. PURPOSE

1.1 This document sets the Terms of Reference for the Mary River Socio-Economic Monitoring Working Group (the "Working Group"). The Working Group will support the Qikiqtaaluk Socio-Economic Monitoring Committee's (QiSEMC) regional monitoring initiatives through project-specific socio-economic monitoring. It is intended to provide a forum for Working Group members to engage in the work of the QiSEMC through identification of areas of mutual interest and socio-economic monitoring priorities related to the Mary River project, communities, and the Baffin region as a whole.

1.2 The Working Group will support the fulfillment of Terms and Conditions set out in the Mary River Project Certificate that relate to socio-economic monitoring.

2. WORKING GROUP MEMBERSHIP AND MEMBER ROLES AND RESPONSIBILITIES

2.1 The Working Group will include as members:

- a. Baffinland Iron Mines Corporation (BIMC) or the successor owner/operator of the Mary River project;
- b. Government of Nunavut;
- c. Government of Canada; and
- d. Qikiqtani Inuit Association.

2.2 Each organization is responsible for their own costs of participating in activities of the Working Group.

2.3 Role of BIMC or the successor owner/operator of the Mary River project:

- a. Identify indicators and share project-specific data that can contribute to priorities identified by QiSEMC, where appropriate;
- b. Participate in the analysis of data arising from collaborative monitoring;
- c. Review the effectiveness of socio-economic mitigation measures;
- d. Participate and prepare presentations of project-related data/issues for the QiSEMC.

2.4 Role of the Government of Nunavut:

- a. Identify indicators and share data that can contribute to priorities identified by the QiSEMC, where appropriate;
- b. Participate in the analysis of data arising from collaborative monitoring;
- c. Participate in the analysis of effectiveness of socio-economic mitigation measures.

2.5 Role of the Government of Canada:

- a. Work with the Working Group to identify and align indicators and share relevant data from the Nunavut General Monitoring Plan (NGMP);
- b. Participate in the analysis of data arising from collaborative monitoring;
- c. Participate in the analysis of effectiveness of socio-economic mitigation measures.

2.6 Role of the Qikiqtani Inuit Association:

- a. Identify indicators and share data that can contribute to priorities identified by QiSEMC, where appropriate;
- b. Participate in the analysis of data arising from collaborative monitoring;
- c. Participate in the analysis of effectiveness of socio-economic mitigation measures.

2.7 Protection of Personal Information

It is recognized that, in collecting and sharing of any information and data under these Terms of Reference, each of the members of the Working Group is required to comply with any rules governing the collection, use, and disclosure of personal information, applicable to each member respectively, in accordance with the provisions of privacy legislation.

2.8 Information

The members acknowledge that:

- a. BIMC is best able to collect and provide data concerning employment and training in relation to the Project;
- b. the Government of Nunavut and the Government of Canada are best able to report public statistics on general health and well-being, food security, demographics and other socio-economic indicators at the community and territorial level; and
- c. the Qikiqtani Inuit Association is best able to provide information and data relating to Inuit land use and culture at the community and regional level.

3. OBJECTIVES

3.1 The Working Group has the overall goal of contributing to the ongoing expansion of knowledge related to interactions between communities in Nunavut and the Mary River Project. The priority is on knowledge that will ultimately assist in directing socio-economic benefit from the Project, enhance the accuracy of subsequent predictions related to socio-economic impact assessment, and improve the focus and efficiency of socio-economic monitoring.

3.2 The Working Group aims to undertake collaborative monitoring in order to identify and access priority data that will be useful in improving the socio-economic performance of the Mary River Project. This will involve combining Project-specific performance data with data generated by other member agencies. The resulting insight will be useful in supporting adaptive management measures implemented by member agencies to minimize adverse effects and maximize benefits from the project. The goal will be to analyze the monitoring data in order to assess the effectiveness of current practices; obtain early warning should mitigation measures not be achieving their intended outcome; and provide timely detection of unanticipated outcomes.

3.3 The Working Group aims to improve understanding of priority socio-economic issues in order to increase confidence in socio-economic assessment predictions. The Working Group will identify priority predictions contained in the Mary River Final Environmental Impact Statement (FEIS) and will then work to address how these predictions can be validated or how unanticipated trends/observations can be described.

3.4 The Working Group will provide monitoring data and objective analysis in a manner that is focused, efficient and cost-effective.

3.5 The Working Group will ensure that project-specific monitoring aligns, where appropriate, with QiSEMC priorities, such as, but not limited to:

- a. Health and well-being;
- b. Education, life skills, and training;
- c. Employment and career progression;
- d. Demographics;
- e. Land use, culture, food security; and
- f. Other priorities that may be identified by the QiSEMC.

4. REPORTING AND COMMUNICATION

4.1 BIMC or the successor owner/operator of the Mary River project will prepare an annual socio-economic report, presenting performance data, to the Nunavut Impact Review Board for review. These annual reports will be due on 30 June of each year, containing data on the indicators selected by the Working Group for the previous calendar year (January to December). These reports will further describe the Company's participation in the QiSEMC, other collaborative monitoring processes and any activities related to better understanding of socio-economic processes.

4.2 Following Project Certificate issuance and BIMC's decision to proceed with the construction of the Mary River project, annual reporting will commence following the start of site activities.

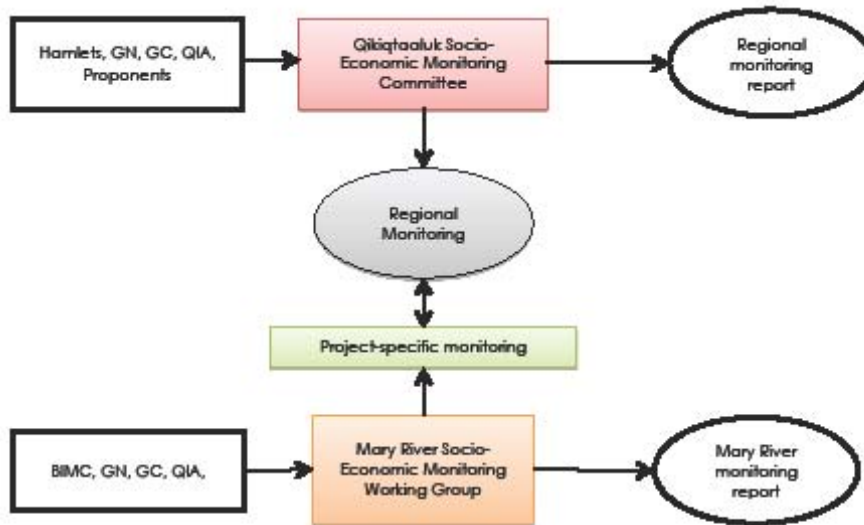
4.3 As appropriate, the Working Group may communicate with, and request data from, other issue-specific working groups that may arise throughout the life of the project.

5. MEETINGS

5.1 The first official meeting will be held within six (6) months of Certificate issuance or at the next QiSEMC following issuance, whichever is first.

5.2 The Working Group is to initially meet twice a year, preferably immediately prior to or immediately after the QiSEMC meetings. This meeting schedule may be changed at a later date if agreed to by all members.

5.3 BIMC will designate a Chair and optionally a Secretary for these meetings. BIMC's appointment of the Chair (which could include itself) recognises the significance of the weight of responsibility for reporting by the Company.



6. RELATION TO IIBA OBLIGATIONS

6.1 The parties recognize that this ToR is separate from any obligations under the Inuit Impact and Benefit Agreement (IIBA) between the proponent and the Qikiqtani Inuit Association and that the mandate of the Working Group shall not include monitoring of the IIBA.

6.2 Any sharing of information with the Working Group related to the IIBA will be solely at the discretion of the Qikiqtani Inuit Association and Baffinland Iron Mines Corporation or successor.

7. REVIEW OF TORS

7.1 These Terms of Reference may be reviewed by Working Group members periodically for any required changes that may be applicable as the Project evolves from construction, through operations and closure.

APPENDIX B: CONCORDANCE WITH PROJECT CERTIFICATE CONDITIONS RELATED TO SOCIO-ECONOMIC MONITORING

Condition No.	Category	Condition	2016 Socio-Economic Monitoring Report Reference	Baffinland Comments
129	Population Demographics – Qikiqtaaluk Socio-Economic Monitoring Committee	The Proponent is strongly encouraged to engage in the work of the Qikiqtaaluk Socio-Economic Monitoring Committee along with other agencies and affected communities, and it should endeavour to identify areas of mutual interest and priorities for inclusion into a collaborative monitoring framework that includes socio-economic monitoring priorities related to the Project, communities, and the North Baffin region as a whole.	Section 1.2 Section 1.4 Appendix A	Baffinland continues to engage with the QSEMC and participates in the Mary River SEMWG, a sub-set of the QSEMC whose members include Baffinland, the Government of Nunavut, the Government of Canada, and the QIA. A Terms of Reference for the Mary River SEMWG (which identifies socio-economic monitoring priorities and objectives for the Project) has been finalized. Baffinland incorporated feedback from Mary River SEMWG members in 2016 to finalize the Project's socio-economic monitoring plan.
130	Population Demographics – Project-specific monitoring	The Proponent should consider establishing and coordinating with smaller socio-economic working groups to meet Project specific monitoring requirements throughout the life of the Project.	Section 1.2	Baffinland continues to work with the QSEMC and the Mary River SEMWG on socio-economic monitoring initiatives. In addition, Baffinland regularly engages the Pond Inlet-based Mary River Community Group and other committees which operate under provisions of the IIBA, on various socio-economic topics.
131	Population Demographics – Monitoring demographic changes	The Qikiqtaaluk Socio-Economic Monitoring Committee is encouraged to engage in the monitoring of demographic changes including the movement of people into and out of the North Baffin communities and the territory as a whole. This information may be used in conjunction with monitoring data obtained by the Proponent from recent hires and/or out-going employees in order to assess the potential effect the Project has on migration.	Section 3.1 Section 3.2 Section 3.3 Section 3.4 Appendix C	Baffinland has provided demographic change information in the 2016 socio-economic monitoring report. Baffinland also implemented a revised voluntary Employee Information Survey, which collected information related to employee changes of address, housing status, and migration intentions.
133	Population Demographics – Monitoring demographic changes	The Proponent is encouraged to work with the Qikiqtaaluk Socio-Economic Monitoring Committee and in collaboration with the Government of Nunavut's Department of Health and Social Services, the Nunavut Housing Corporation and other relevant stakeholders, design and implement a voluntary survey to be completed by its employees on an annual basis in order to identify changes of address, housing status (i.e. public/social, privately owned/rented, government, etc.), and migration intentions while respecting confidentiality of all persons involved. The survey should be designed in collaboration with the Government of Nunavut's Department of Health and Social Services, the Nunavut Housing Corporation and other relevant stakeholders. Non-confidential results of the survey are to be reported to the Government of Nunavut and the NIRB.	Section 3.4 Appendix C	Baffinland implemented a revised voluntary Employee Information Survey, which collected information related to employee changes of address, housing status, and migration intentions.
134	Population Demographics – Employee origin	The Proponent shall include with its annual reporting to the NIRB a summation of employee origin information as follows: a. The number of Inuit and non-Inuit employees hired from each of the North Baffin communities, specifying the number from each; b. The number of Inuit and non-Inuit employees hired from each of the Kitikmeot and Kivalliq regions, specifying the number from each; c. The number of Inuit and non-Inuit employees hired from a southern location or other province/territory outside of Nunavut, specifying the locations and the number from each; and d. The number of non-Canadian foreign employees hired, specifying the locations and number from each foreign point of hire.	Section 3.5	Baffinland has presented employee origin information in the 2016 socio-economic monitoring report.
140	Education and Training – Survey of Nunavummiut employees	The Proponent is encouraged to survey Nunavummiut employees as they are hired and specifically note the level of education obtained and whether the incoming employee resigned from a previous job placement or educational institution in order to take up employment with the Project.	Section 4.4 Appendix C	Baffinland implemented a revised voluntary Employee Information Survey, which collected information related to employee education and employment status prior to taking up employment with the Project.
145	Livelihood and Employment – Barriers to employment for women	The Proponent is encouraged to work with the Government of Nunavut and the Qikiqtaaluk Socio-Economic Monitoring Committee to monitor the barriers to employment for women, specifically with respect to childcare availability and costs.	Section 5.4	Baffinland has presented information on women employed at the Project and potential barriers they may face in the 2016 socio-economic monitoring report. Furthermore, specific reference is made in the Mary River Project IIBA to women in the workplace and the associated barriers they may face. This topic is addressed by Baffinland and QIA through section 7.15 of the IIBA.
148	Economic Development and Self-Reliance, and Contracting and	The Proponent is encouraged to undertake collaborative monitoring in conjunction with the Qikiqtaaluk Socio-Economic Monitoring Committee's monitoring program which addresses Project harvesting interactions and food security and which includes broad indicators of dietary habits.	Section 7.2 Section 9.1 Section 10.1	Baffinland has presented information on Project harvesting interactions and food security in the 2016 socio-economic monitoring report. Baffinland has also presented related information on household income and food security, and land user-Project interactions in this report.

	Business Opportunities – Food security			
154	Human Health and Well-being – Indirect impacts to health and well-being	The Proponent shall work with the Government of Nunavut and the Qikiqtaaluk Socio-Economic Monitoring Committee to monitor potential indirect effects of the Project, including indicators such as the prevalence of substance abuse, gambling issues, family violence, marital problems, rates of sexually transmitted infections and other communicable diseases, rates of teenage pregnancy, high school completion rates, and others as deemed appropriate.	Section 4.2 Section 7.3 Section 7.4 Section 7.6 Section 7.7 Section 7.8 Section 7.9 Section 7.10 Section 7.11	Baffinland has presented information on the prevalence of substance abuse, gambling issues, family violence, marital problems, rates of sexually transmitted infections and other communicable diseases, rates of teenage pregnancy, high school completion rates, and other topics (e.g. crime rates) in the 2016 socio-economic monitoring report.
158	Community Infrastructure and Public Services – Impacts to health services	The Proponent is encouraged to work with the Government of Nunavut and other parties as deemed relevant in order to develop a Human Health Working Group which addresses and establishes monitoring functions relating to pressures upon existing services and costs to the health and social services provided by the Government of Nunavut as such may be impacted by Project-related in-migration of employees, to both the North Baffin region in general, and to the City of Iqaluit in particular.	Section 8.3	Baffinland has presented information on pressures related to existing health and social services provided by the Government of Nunavut in the 2016 socio-economic monitoring report. A Memorandum of Understanding was also signed with the Government of Nunavut Department of Health in November 2013 regarding site health services.
159	Community Infrastructure and Public Services – Impacts to infrastructure	The Proponent is encouraged to work with the Government of Nunavut to develop an effects monitoring program that captures increased Project-related pressures to community infrastructure in the Local Study Area communities, and to airport infrastructure in all point-of-hire communities and in Iqaluit.	Section 8.4	Baffinland has presented information on Project-related pressures on community infrastructure in the 2016 socio-economic monitoring report.
168	Governance and Leadership – Monitoring program	The specific socioeconomic variables as set out in Section 8 of the Board’s Report, including data regarding population movement into and out of the North Baffin Communities and Nunavut as a whole, barriers to employment for women, project harvesting interactions and food security, and indirect Project effects such as substance abuse, gambling, rates of domestic violence, and education rates that are relevant to the Project, be included in the monitoring program adopted by the Qikiqtani Socio-Economic Monitoring Committee.	Section 3.1 Section 3.2 Section 3.3 Section 3.4 Section 4.2 Section 5.4 Section 7.2 Section 7.3 Section 7.4 Section 7.6 Section 7.7 Section 10.1	Baffinland has presented information on demographic change, barriers to employment for women, Project harvesting interactions and food security, and potential indirect Project effects such as substance abuse, gambling, rates of domestic violence, and education rates in the 2016 socio-economic monitoring report.
169	Governance and Leadership – Monitoring economic effects	The Proponent provide an annual monitoring summary to the NIRB on the monitoring data related to the regional and cumulative economic effects (positive and negative) associated with the Project and any proposed mitigation measures being considered necessary to mitigate the negative effects identified.	Section 12.1.2	Baffinland has provided a summary of regional and cumulative economic effects in the 2016 socio-economic monitoring report.

APPENDIX C: BAFFINLAND EMPLOYEE INFORMATION SURVEY



Baffinland Employee Information Survey

This survey is voluntary. It is being conducted because Baffinland is required to collect survey information from its employees under the terms of its Project Certificate issued by the Nunavut Impact Review Board (NIRB). This survey is being offered to all Baffinland employees (not contractors) who fall into one of the following categories:

- Inuit employees residing in Nunavut
- Inuit employees residing outside of Nunavut
- Non-Inuit employees residing in Nunavut

You can choose to complete this survey on your own or with the assistance of Baffinland staff. Please let the Mary River Human Resources Office know if you require assistance. If you choose to complete this survey, you will remain confidential and your name will not be used. However, the information you provide may be used by Baffinland publicly and for regulatory reporting purposes (e.g. NIRB annual reports). If you have any questions you can contact the Mary River Human Resources Office.

1. Gender:

- Male Female

2. Are you:

- Inuit Non-Inuit

a. If you are Inuit, are you enrolled under the Nunavut Agreement?

- Yes No

3. How long have you been employed at the Project?

4. Highest education level obtained (check only one):

No certificate, diploma, or degree

- No certificate, diploma or degree

High school diploma or equivalent

- High school diploma or equivalent

Postsecondary certificate, diploma, or degree

- Apprenticeship or trades certificate or diploma
- College, CEGEP or other non-university certificate or diploma
- University certificate or diploma below bachelor level
- University certificate, diploma or degree - Bachelor's degree
- University certificate, diploma or degree above bachelor level



5. Current community of residence:

- Arctic Bay
- Clyde River
- Hall Beach
- Igloolik
- Pond Inlet
- Iqaluit
- Other: _____

6. Employee work location

a. Location

- Mary River – Mine Site
- Mary River – Port Site
- Community Location
- Corporate Office (Oakville)

b. Department

7. What type of housing do you currently live in?

- Privately owned – Owned by you
- Privately owned – Owned by another individual
- Renting from a private company
- Public housing
- Government of Nunavut staff housing
- Other staff housing
- Other: _____

8. Has your housing situation changed in the past 12 months?

- Yes
- No

a. If you answered 'Yes' to Question 8, please explain (e.g. Have you moved? Has the type of housing you live in changed?)

9. Have you moved to a different community in the past 12 months?

- Yes
- No

a. If you answered 'Yes' to Question 9, which community did you move from?

10. Do you intend to move to a different community in the next 12 months?

- Yes
- No



a. If you answered 'Yes' to Question 10, which community do you intend to move to?

11. Did you resign from an academic or vocational program in order to take up employment with the Project?

Yes No

a. If you answered 'Yes' to Question 11, what program were you enrolled in and where were you enrolled?

12. Did you resign from a previous job placement in order to take up employment with the Project?

Yes No

a. If you answered 'Yes' to Question 12 what was your previous employment status (check one):

Casual Part-Time Full-Time

b. If you answered 'Yes' to Question 12, what was your previous job title?

c. If you answered 'Yes' to Question 12, who was your previous employer?

**Thank you for taking the time to complete this survey.
Please return this survey to the Mary River Human Resources Office.**