Appendix G10

Report: 2014 Hamlet of Baker Lake Harvest Study – Creel Results

Nunavut ENVIRONMENTAL CONSULTING LTD

MEMORANDUM

TO: Jeffrey Pratt – Agnico Eagle
Ryan Vanengen – Agnico Eagle

DATE: 26 March 2015

FROM: Martin Gebauer

Subject: 2014 Hamlet of Baker Lake Harvest Study – Creel Results

Nunavut Environmental Consulting Ltd. is pleased to provide Agnico Eagle Mines Ltd. (Agnico Eagle) with this brief memorandum summarizing the 2014 creel results from the annual hunter harvest study conducted in the Hamlet of Baker Lake.

Background

In March 2007, a harvest study was initiated by Agnico Eagle in association with the Baker Lake Hunters and Trappers Organization (HTO) in order to monitor and document the spatial distribution, seasonal patterns, and harvest rates of hunter kills before and after construction of the Meadowbank All Weather Access Road (AWAR). The harvest study is conducted annually and is open to Inuit and non-Inuit residents of Baker Lake who are at least 16 years of age. The harvest study focuses primarily on terrestrial wildlife harvests; however, creel results are also recorded by the harvest study administrator in support of on-going creel surveys. In previous years, the creel results were included in the annual Meadowbank Wildlife Monitoring Summary Report; however, since 2009, results have been provided in a standalone memorandum.

In late 2009, AREVA Resources Canada Inc. (AREVA) entered into a data and cost-sharing agreement with Agnico Eagle; however, the implementation of the harvest study has remained the same. Agnico Eagle and AREVA recognize that communication with participants is of utmost importance to ensure study success through adequate participation rates and accurate reporting.

Fish Species

The four species included in the harvest study are Arctic Char (*Salvelinus alpinus*), Arctic Grayling (*Thymallus arcticus*), Lake Trout (*Salvelinus namaycush*), and Lake Whitefish (*Coregonus clupeaformis*).

2014 Results

Creel results for 2014 are summarized in **Table 1** for the four main fish species. Parameters for fishing effort, including number of participants and number of fishing trips, are summarized in **Table 2**. Results from previous years are provided for comparative purposes.

In 2014, creel results were collected from nine (9) participant records over the course of the year. For comparison, 23 participants recorded fish harvests in 2013, and the maximum number of participants during the study was 38 in 2011 (**Table 2**). The number of participants from whom creel results were collected dramatically decreased this year. Lower numbers are likely a reflection of participant fatigue and declining response rate, given the length of time the study has been ongoing. Additional effort will be made in 2015 to increase the number of participants.

Table 1: 2014 Creel Results and Historical Results to Date

Fish Species	Counts							
	2014	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**	**2007**
Arctic Char	22	96	24	113	103	117	24	3
Arctic Grayling	-	-	1	1	3	1	-	-
Lake Trout	353	490	1,014	1,710	860	525	825	210
Lake Whitefish	651*	50	471	460	326**	52	192	-
TOTALS	**1,026**	**636**	**1,510**	**2,284**	**1,292**	**694**	**1,041**	**213**

* One participant reported 648 Lake Whitefish caught over the year, mostly in November and December.

** Single report of 300 Lake Whitefish captured via nets south of Baker Lake.

Table 2: 2014 Fishing Effort and Historical Results to Date

Parameter	Total							
	2014	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**	**2007**
Total Fish Catch	1,026	636	1,510	2,284	1,292	694	1,041	213
Number of Participants	9	23	31	38	30	24	10	16
Number of Trips	128	93	177	400	155	144	102	29
Number of Trips per Participant	14.2	4.0	5.7	10.5	5.2	6.0	10.2	1.8
Number of Fish per Trip	8.0	6.8	8.5	5.7	8.4	4.8	10.2	7.3

Discussion

Total fish harvest was highest in November and December 2014 (**Figure 1**). The high catch numbers for these two months have skewed the total reported fish catch, which is higher than 2013 despite dramatically lower participation rates (**Table 1** and **2**). Excluding these two months of records, reported total fish catch decreased, as would be expected with a decrease in participation. In previous years, both a summer and winter peak in fish catch have been observed, and have often been comparable. In 2014, the summer fish harvest was much lower than the winter. A smaller peak in total fish caught was observed in May/June, although total catch was lower due to decreased participation (**Figure 1**).

When data are standardized for fish harvested by the number of participants each month, results indicate that the highest number of catches per participant occurred in November and December, when fewer participants are fishing but catches are higher (**Figure 2**); however, these data are based on only two participants' reported fish catch in November and December. The participant harvest rate in December was the maximum observed to date in the historical dataset (2007 to 2014 inclusive). Excluding these two months, seasonal patterns are similar to those observed in other years with the highest number of catches per participant occurring in June. The average monthly catch per participant was generally comparable to median monthly trends for most of the year (**Figure 2**). Most fishing activity (i.e., most number of participants) occurred in May (six participant records)

Total catch for each species is considered in context with changes in participation and reporting rates. Arctic Grayling catch continues to remain low across years. Arctic Char catch in 2014 was lower than previous years. Lake Trout harvest rates increased in 2014, although total catch was still low compared to other years with higher participation. Lake Whitefish catch continues to vary widely. One participant reported catching 648 Lake Whitefish (mostly during regular fishing trips in November), resulting in the highest reported total annual harvest for this species, despite the lowest year for participation.

Although participation levels were lower this year, overall fishing effort per participant increased (**Table 2**). The assumption is that the participants recording creel harvests in 2014 were those hunters who are more likely to fish frequently and successfully – their fishing effort is likely at these levels most years of the study. More (successful) fishing trips per participant were reported in 2014 than in previous years and the overall number of fishing trips in 2014 was higher than last year. The number of fish harvested per trip has remained fairly constant over the course of the study (7.4 fish per trip on average).

The geographic distribution of harvests from 2014 creel data is presented in **Figure 3**. Data are presented as the average number of fish caught per fishing trip, to represent both the frequency of visits as well as the success. Fishing trips, regardless of relative success rate, did not venture beyond the immediate areas of Baker Lake, Whitehills Lake, and along the AWAR between these two lakes. The number of fishing trips in the study area in 2014 and total fish catch for the season for each area visited are presented in **Figure 4**. Most fish reported harvested in 2014 were caught near the Hamlet of Baker Lake (total of 856 caught). No fishing trips were reported north of Whitehills Lake in 2014, possibly reflecting overall lower fishing effort but likely a result of low participation in the creel study. Cumulative harvest distribution for all years of the creel study is presented in **Figure 5** and **Figure 6**.

The majority of participants continue to fish around the perimeters of Baker and Whitehills lakes. High fishing rates were also reported for Whitehills Lake in 2007 and 2008 prior to AWAR construction. No participants traveled north of Whitehills Lake in 2014. Thus, unless fishing trips are tied to hunting trips, it would appear that study participants are less willing to travel long distances to catch fish, regardless of AWAR access, likely due to the abundance of fish in close proximity to the Hamlet of Baker Lake (as evidenced by total fish caught in this area over the course of the study). Fishing trips in 2014 continued to be centred along the southern portion of the AWAR. Based on the number of reported trips in the 2014 creel survey, study participation and reporting rates are on the decline.

We trust this provides the information you currently require. Should you have any questions, please do not hesitate to contact the undersigned at 604-261-2716.

Respectfully submitted,

Martin Gebauer, M.Sc., R.P.Bio.
Nunavut Environmental Consulting Ltd.

Figure 1: Fish Harvests per Month (2007 to 2014)

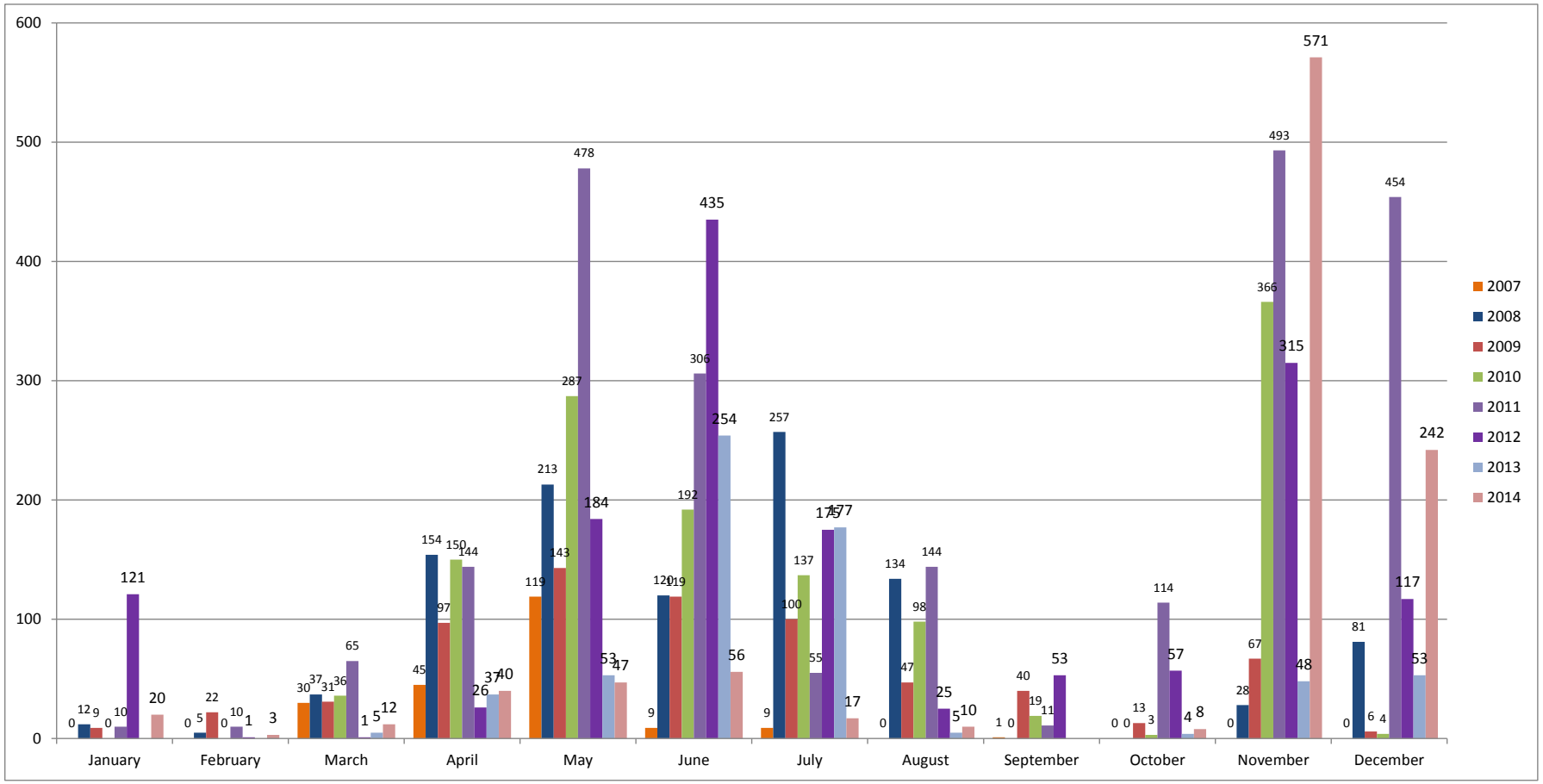
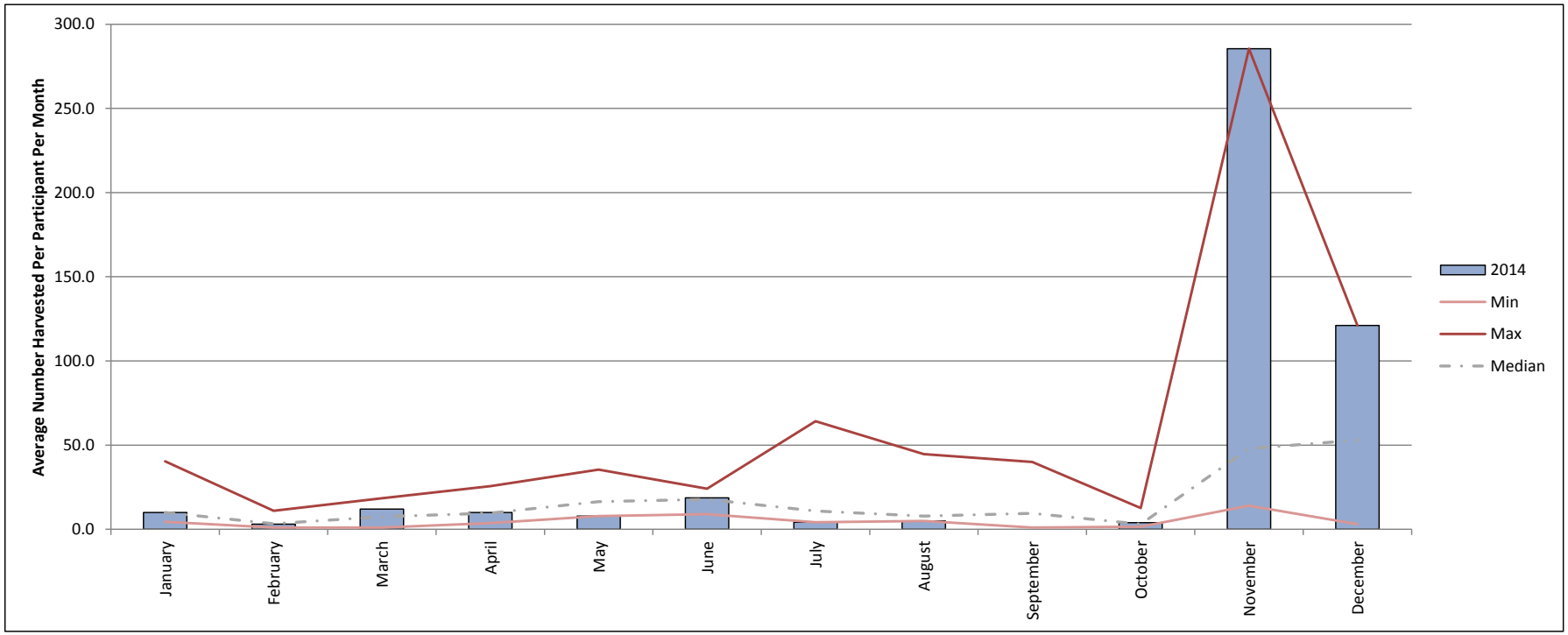
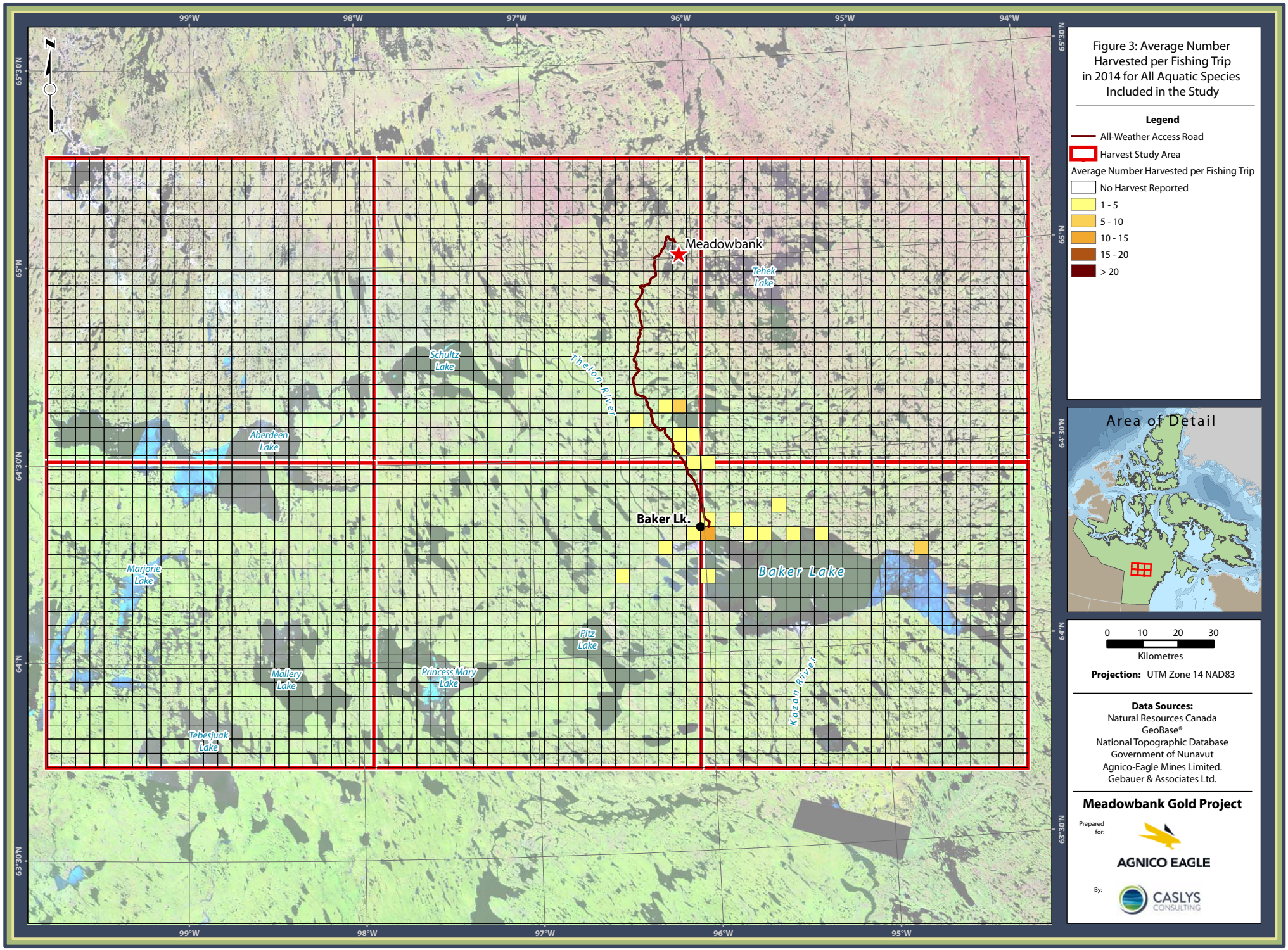


Figure 2: Fish Harvests per Month per Participant in 2014 Compared to Historic Data Averages (2007 to 2014)




99°W
98°W
97°W
96°W
95°W
94°W
65°30'N
65°N
64°30'N
64°N
63°30'N
N
Meadowbank
Tehek Lake
Schultz Lake
Thelon River
Aberdeen Lake
Baker Lk.
Baker Lake
Marjorie Lake
Pitz Lake
Mallery Lake
Princess Mary Lake
Kazan River
Tebesjuak Lake
Figure 3: Average Number Harvested per Fishing Trip in 2014 for All Aquatic Species Included in the Study
Legend
All-Weather Access Road
Harvest Study Area
Average Number Harvested per Fishing Trip
No Harvest Reported
1 - 5
5 - 10
10 - 15
15 - 20
> 20
Area of Detail
0 10 20 30
Kilometres
Projection: UTM Zone 14 NAD83
Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Government of Nunavut
Agnico-Eagle Mines Limited.
Gebauer & Associates Ltd.
Meadowbank Gold Project
Prepared for:
AGNICO EAGLE
By:
CASLYS CONSULTING

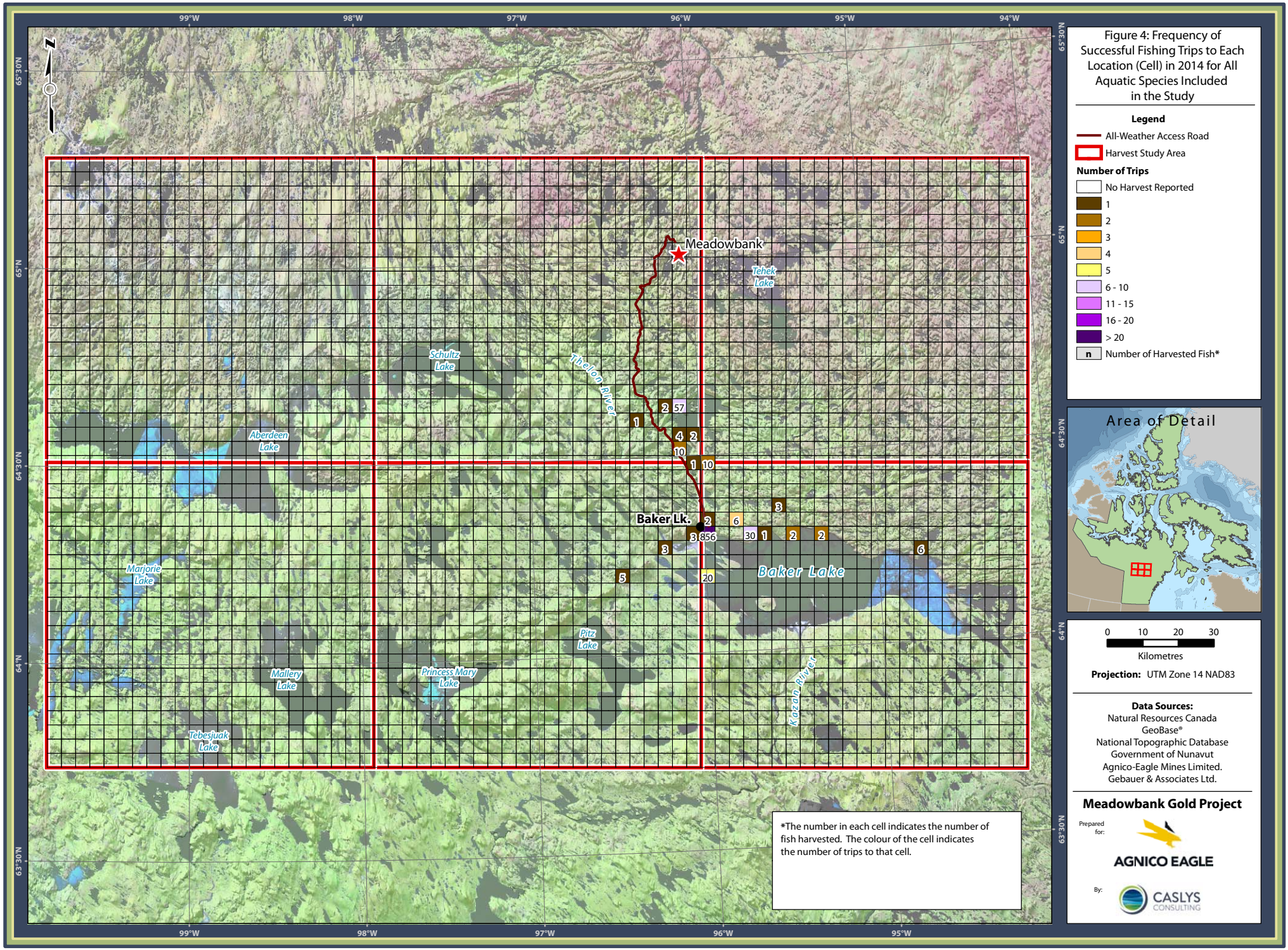


Figure 4: Frequency of Successful Fishing Trips to Each Location (Cell) in 2014 for All Aquatic Species Included in the Study

Legend

- All-Weather Access Road
- Harvest Study Area

Number of Trips

- No Harvest Reported
- 1
- 2
- 3
- 4
- 5
- 6 - 10
- 11 - 15
- 16 - 20
- > 20
- n — Number of Harvested Fish*

0 10 20 30

Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
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National Topographic Database
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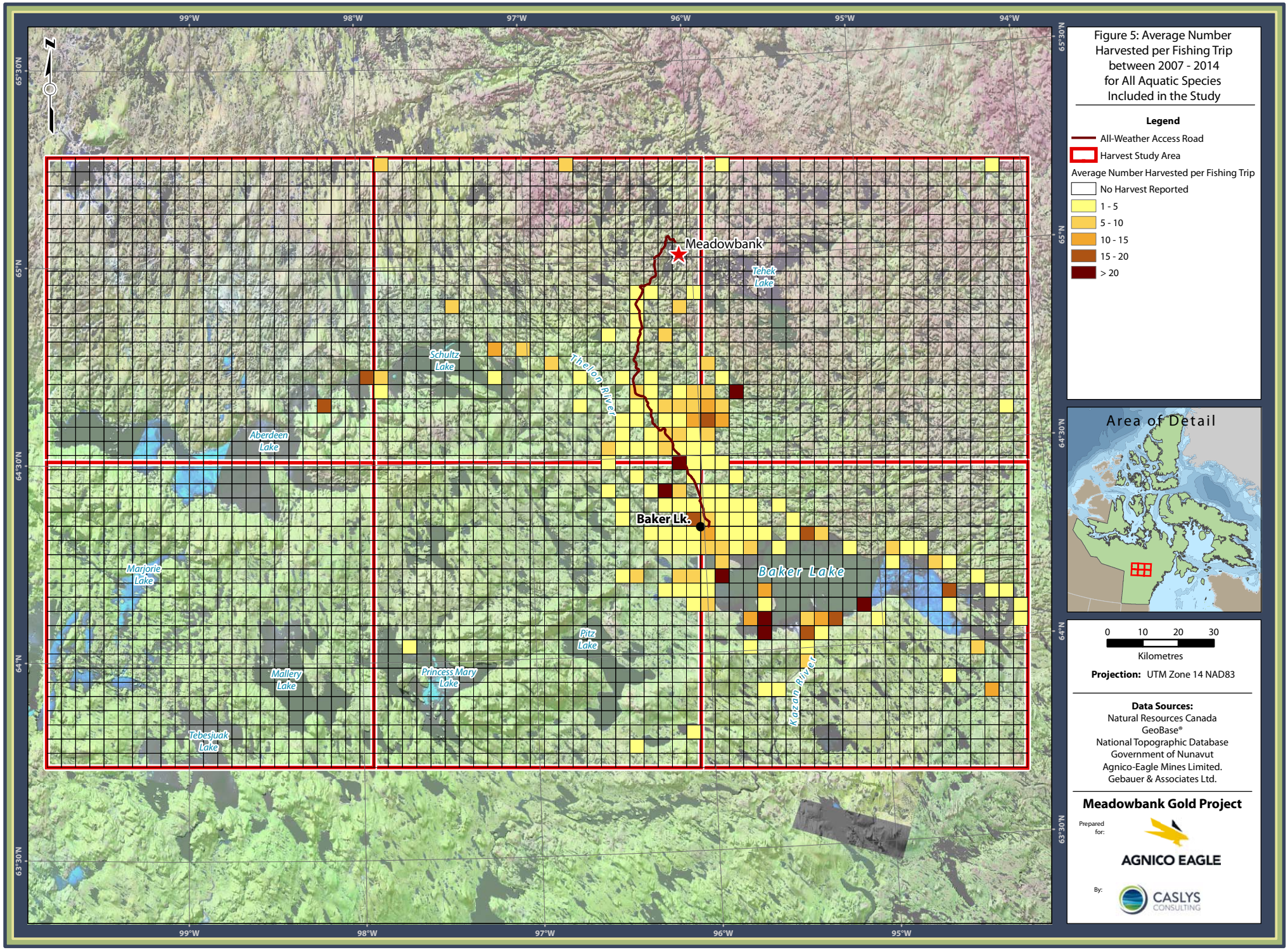

Figure 5: Average Number Harvested per Fishing Trip between 2007 - 2014 for All Aquatic Species Included in the Study

Legend

- All-Weather Access Road
- Harvest Study Area

Average Number Harvested per Fishing Trip

- No Harvest Reported
- 1 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- > 20

0 10 20 30

Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
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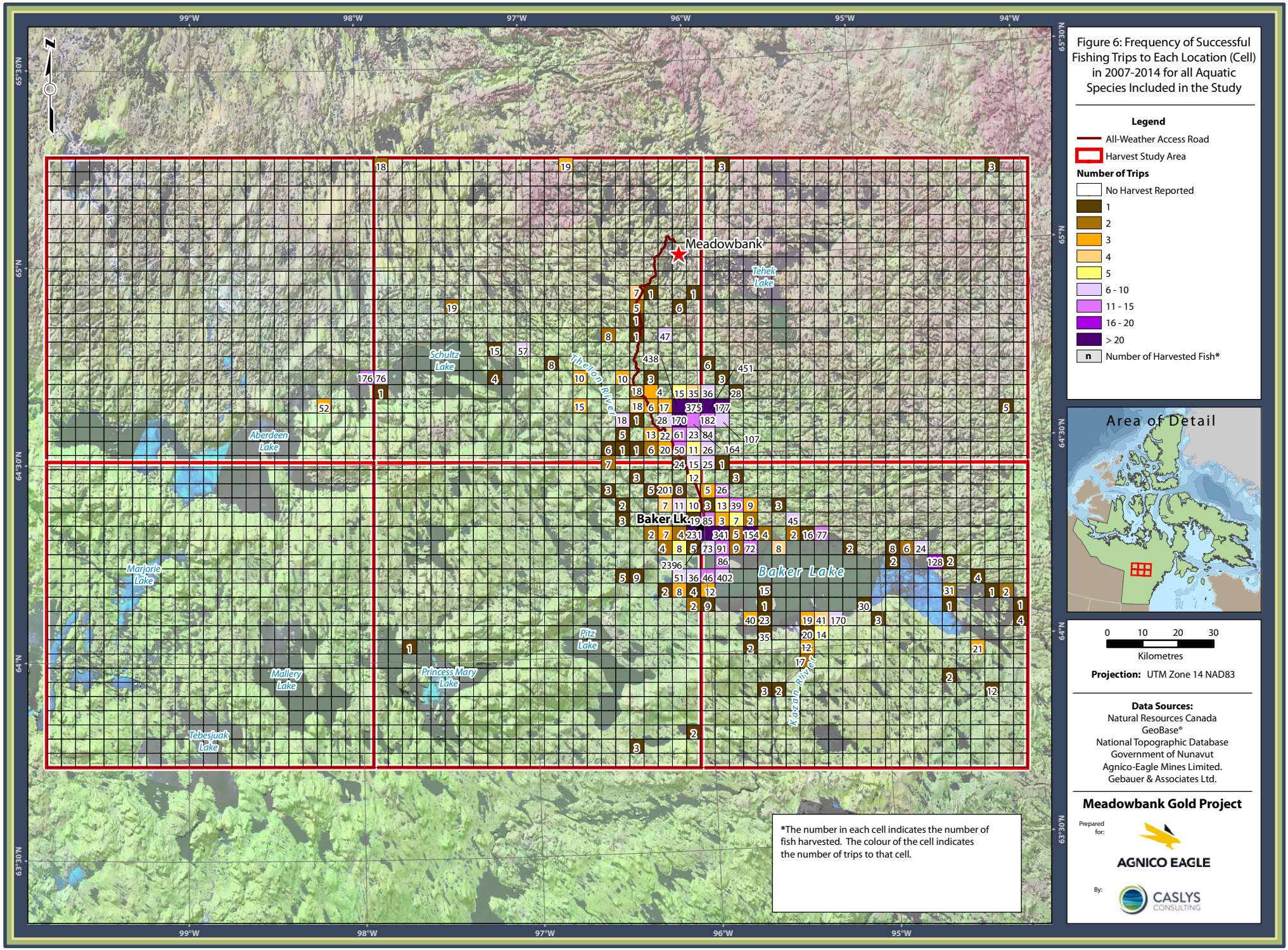

Figure 6: Frequency of Successful Fishing Trips to Each Location (Cell) in 2007-2014 for all Aquatic Species Included in the Study

Legend

- All-Weather Access Road
- Harvest Study Area

Number of Trips

- No Harvest Reported
- 1
- 2
- 3
- 4
- 5
- 6 - 10
- 11 - 15
- 16 - 20
- > 20
- n — Number of Harvested Fish*

0 10 20 30

Kilometres

Projection: UTM Zone 14 NAD83

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