	ᓄᓇᕗᒻᒥ ᐅᒪᓲᓕᓐᓴᕐᕕᖏᓂᑦ ᑲᑎᒪᔨᖏᑦ	
	ᑲᑎᒪᓲᕐᓂᖏᑦ: ᑲᑎᒪᓂᖅᓯᓐᓇᓕᖏᓐᓄᑦ ᑲᑎᒪᓂᖅ 003-2022	
	ᓯᑎᐱᓐ 8, 2022	
	ᓯᓂᑕᕐᕕᒃ ᑐᓴᕐᒥᕕᒃ, ᑲᖏᖅᑕᓂᖅ, ᓄᓇᕗᑦ	

ᖃᐅᔨᓪᓚᕆᖅᓯᑦ	ᐃᓱᐅᑦ	ᓯᓇᓕᓐᓂᖅ/ᑭᓯᓕᓐᓂᖅ:	ᒪᑲᐱᒡᖅ	ᐅᓂᒃᖃᓂᐊᖅᑐᑦ	ᐊᑯᓂᐅᓂᓕᒃ
9:00 - 9:02 ᐅᓪᓗᑯᑦ	1	ᒪᑐᐃᖅᑕᐅᓂᖓ ᑲᑎᒪᓂᐅᕐᑦ		ᐃᒃᓯᕿᐅᑕᓕᕆᐅᑲᐃᓇᖅᑐᖅ	2 ᒥᓂᔪᓐ
9:02 - 9:04 ᐅᓪᓗᑯᑦ	2	ᓇᓗᓇᐃᕆᐃᓂᖅ ᑲᑎᐊᒪᕿᑕᐅᓕᒪᔨᓂᒃ ᐃᓕᐅᕆᓕᐊᖅᖃᖓᓐᓂᖅ		ᐃᒃᓯᕿᐅᑕᓕᕆᐅᑲᐃᓇᖅᑐᖅ	2 ᒥᓂᔪᓐ
9:04 - 9:05 ᐅᓪᓗᑯᑦ	3	ᑲᑎᒪᓲᕐᓂᖅᓯᑦ ᖃᑭᒋᐊᖅᑕᐅᓂᖓᓄᑦ ᐊᖓᑭᑕᐅᓂᖓᓄᑦᓗ: RM003-2022	1	ᐃᒃᓯᕿᐅᑕᓕᕆᐅᑲᐃᓇᖅᑐᖅ	1 ᒥᓂᒥᒃ
9:05 - 10:00 ᐅᓪᓗᑯᑦ	4	ᑐᒃᓯᕋᐅᑎᑦ ᐃᓱᒪᓕᐅᕈᑕᐅᕋᐊᓂᖅ ᐊᖓᑭᖅᑕᐅᕋᑯᓕᓄᑦ ᐊᐅᓕᕐᓂᐊᓂᒃᓯᓂᖅ ᓴᐅᕋᕋᓂᒃ ᑲᓇᑕᒥ ᐊᑐᕋᓗᑎᒃ ᐅᒪᔨᐋᓕ ᐊᒥᓱᖏᓪᓗᐊᓕᕋᓂᖏᓐᓄᓐᓂᑦ ᒪᓕᓚᐃᓕ (ᐃᓱᒪᓕᐅᕈᑕᐅᓂᒍᑦ)	2	ᐊᐸᑎᓕᓚᓴᕋᐊᖅᑯᑦ ᓱᓕᐅᓕᓪᓗ ᐊᓱᓴᖅᓯᓪᓕᐊᓂᖓ ᑲᓇᑕᒥ	55 ᒥᓂᓱᑦ
10:00 - 10:15 ᐅᓪᓗᑯᑦ		**ᓄᕐᑲ�untranslated᐀ᓄᖅ**			15 ᒥᓂᓱᑦ
10:15 - 11:15 ᐅᓪᓗᑯᑦ	4	ᑐᒃᓯᕋᐅᑎᑦ ᐃᓱᒪᓕᐅᕈᑕᐅᕋᑯᓕᓄᑦ ᐊᖓᑭᖅᑕᐅᕋᑯᓕᓄᑦ ᐊᐅᓕᕐᓂᐊᓂᒃᓯᓂᖅ ᓴᐅᕋᕋᓂᒃ ᓯᓚᕆᐊᕐᕋᓂᖅ ᑲᓇᑕᒥ ᐊᑐᕋᓗᑎᒃ ᐅᒪᔨᐋᓕ ᐊᒥᓱᖏᓪᓗᐊᓕᕋᓂᖏᓐᓄᓐᓂᑦ ᒪᓕᓚᐃᓕ (ᐃᓱᒪᓕᐅᕈᑕᐅᓂᒍᑦ)	3	ᐊᐸᑎᓕᓚᓴᕋᐊᖅᑯᑦ ᓱᓕᐅᓕᓪᓗ ᐊᓱᓴᖅᓯᓪᓕᐊᓂᖓ ᑲᓇᑕᒥ	60 ᒥᓂᓱᑦ
11:15 ᐅᓪᓗᑯᑦ - 12:00 ᐅᓗᓂᑦ	5	ᓄᓇᖅᐱᐅᓂᕆᒥ ᐅᐊᖏᓇᖏᓕᑕ ᑲᓇᖏᖅᓯᓂᖏᓐᓄᑦ ᕿᓐᓂ 2021-ᒥ ᑐᒃᑐᐃᑦ ᐊᒥᓂᓄᑦ ᖃᑲᐅᓴᖅᑕᐅᓕᐅᖅᑐᑦ (ᖃᑲᐅᓴᒪᓕᐊᖅᑲᐃᑦ)	4	ᓄᓇᕗᑦ ᓴᖅᓕᐃᑦ	45 ᒥᓂᓱᑦ
12:00 - 1:30 ᐅᓗᓂᑦ		**ᐅᓪᓗᑕᒥᑕᕐᓇᒃ**			1 ᐃᑲᖅᕆᒥ ᐊᒪᓚᓗ 30 ᒥᓂᓱᑦ
1:30 - 2:30 ᐅᓗᓂᑦ	6	ᑕᒪᐃᓐᓂᒃ ᖃᑎᖅᓯᓂᑦ ᐱᓇᓱᐊᖅᑕᐅᕈᓐᓇᖅᓂᖏᓂᑦ ᐊᒪᓚᓗ 100 ᑕᓐᓂᒃ ᐅᖅᑯᓚᐃᓐᓂᒋᑦ ᐱᓇᓱᐊᕐᓇᐅᕈᓐᓂᖏᓂᑦ ᓇᒋᖅᓇᐃᑦ ᐃᓚᖅᓂ ᖃᑲᓂᓐᓄᖅᓴᐅᕈᓂ 0-ᒥ 2023-ᒥ ᐊᒪᓚᓗ 2024-ᒥ ᐱᓇᓱᐊᕐᓇᐅᕈᓐᓇᖅᑐᒥ (ᐃᓱᒪᓕᐅᕈᑎᖅᓴᖅ/ᐊᑐᓕᕐᑯᓕᐅᕐᓇᕐᓴᖅᓴᖅ)	5	ᐃᖅᑲᓇᓕᓚᓴᕋᐊᖅᑯᑦ ᐃᓚᒋᐅᑕᓕᓚᓴᖅᑯᓕᓗ	60 ᒥᓂᓱᑦ

2:30 - 3:00 ᐅᓗᓂᑦ	7	ᑲᓱᓯᐊᖅᑎᑕᐅᖅᑲᓐᓂᖅᑎᑦ ᐅᖏᓚᒪᐊᖅᑕᐅᓗᓂᑎᒃ ᐊᑐᖅᑕᐅᓂᖅᑎᒃ ᐅᑭᐅᖅᑕᖅᑐᒥ ᑭᖑᓂᖅᑐᓂᖅᓯᒪᓂᖅ ᑕᒪᐅᕆᒥ ᐱᓕᕆᑕᐅᓗᓂᑦ ᓯᑯᓯᒪᓂᖏᓕ ᐊᐅᓴᖅᖁᓂᖏᓐᓄᓕ ᖃᐅᔨᓴᓂᖏᓐᓄᓕᓂᒃ (ᖃᐅᐅᓕᒫᓱᑎᒃᓴᐃᐸ)	6	ᐃᖃᓗᓐᓂᒪᓕᕆᐊᒃᑯᑦ ᐃᓚᖏᐅᑕᓂᒪᓕᒃᑯᑦᓗ	30 ᒥᓂᔨᑦ
3:00 - 3:15 ᐅᓗᓂᑦ		**ᓄᖃᖅᓱᐅᐃᖅᓯᒪᓂᖅ**			15 ᒥᓂᔨᑦ
3:15 - 4:00 ᐅᓗᒃᑯᑦ	8	ᐅᑭᐅᖅᑕᖅᑐᒥ ᖃᐅᐅᓕᕐᐅᓂᖅᑎᓄᓂᒃ ᑲᓇᑕᒥ ᐅᓂᒃᑲᓕᐊᑦ 2022 (ᖃᐅᐅᓕᒫᓱᑎᒃᓴᐃᐸ)	7	ᐅᑭᐅᖅᑕᖅᑐᑐᒍᓂᒥᒃ ᖃᐅᐅᓕᕐᐅᓕᐊᑦ ᑲᓇᑕᒥ	45 ᒥᓂᔨᑦ
	9	ᐃᓱᓕᓄᓂᖅ RM003-2022-ᒥ ᑲᑎᒪᓂᖅ		ᐃᒃᓱᖏᐅᑕᓕᕐᐅᑲᐃᐃᓇᖅᑐᖅ	

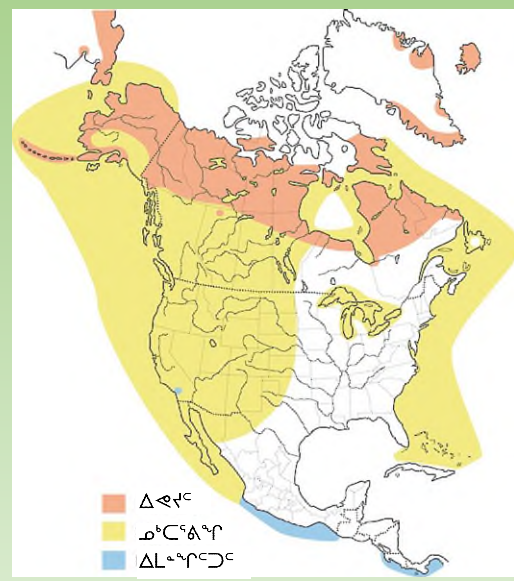
ᑐᓂᔭᐅᔪᖅ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ

ᐅᕘᖓ

ᑐᓴᒐᒃᓴᖓ: **ᐃᓱᒪᓕᐅᕈᑎᒃᓴᖅ: X**

ᐱᔾᔪᑎ: ᑐᒃᓯᕋᖅᑐᑦ ᐃᓱᒪᓕᐅᕈᑎᒃᓴᖅ ᐊᖏᖅᑕᐅᓗᓂ ᐊᐅᓚᕐᑎᔾᔪᑎᒃᓴᓄᑦ ᐸᕐᓇᐅᑎᒥᒃ ᐊᐅᐸᓗᒃᑐᖅ ᓴᐅᕐᕋᖅ ᑲᓇᑕᒥ ᐊᑖᒍᑦ ᒪᕙᒪᑐᖅᑲᒃᑯᑦ ᐆᒪᔪᑦ ᐃᓅᓯᒡᓕᓗᐊᕐᑯᓇᒋᑦ ᐱᕐᑯᔭᖅ.

ᐊᕐᓇᕕᐊᖅ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᑦ© Willow



ᓇᒨᕆᓯᒪᓂᖏᑦ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᑦ (ᑕᐃᑲᖓᑦ ᑯᐊᓂᐅ ᖃᐅᔨᓴᕐᕕᖓ - ᑎᖏᒥᐊᑦ ᑲᓇᑕᒥ ᐊᒥᐊᓕᒪᓂᓄ ᖃᕆᑕᐅᔭᖃᕐᕕᖓ, ᐅᓗᐱᖓ ᐊᓯᖏᓪᓗ 2000)

ᖃᓄᐃᓐᓂᕆᓯᒪᔭᖓ:

- ᑲᓇᑕᒦᑦᑐᑦ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᐃᑦ ᑎᑭᐅᑎᓯᒪᕙᑦ ᐅᑭᐅᖅᑕᖅᑐᐊᓄᑦ ᑲᓇᑕ (ᓂᒋᐊᓂ ᓄᓇᕗᑦ, ᓄᓇᑦᓯᐊᖅ, ᔫᑳᓐ, ᐅᐊᖓᓇᖓ ᓴᒃᑳᑦᓯᐊᓐ, ᐅᐊᖓᓇᖓᓂ ᒫᓂᑑᐸ, ᐅᐊᖓᓇᖓᓂ ᐋᓐᑎᐅᕆᐅ, ᑯᐸᐃᒃ ᑕᕐᕋᖓᓂ ᐊᒻᒪᓗ ᐅᐊᖓᓇᖓᓂ ᑳᐸᑐᐊ). ᐃᓗᐊᓂ ᓄᓇᕗᑦ, ᑕᑯᔭᐅᓲᑦ ᑕᒪᐃᓐᓂ ᐱᖓᓱᓂ ᐊᕕᒃᑐᖅᓯᒪᔪᓂ (ᕿᑎᕐᒥᐅᑦ, ᑭᕙᓪᓕᖅ ᐊᒻᒪᓗ ᕿᑭᖅᑖᓗᒃ).
- ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᐃᑦ ᒫᓐᓇ ᑎᑎᕋᖅᑕᐅᓯᒪᓕᖅᐳᑦ ᐃᓱᒫᓗᑕᐅᓪᓗᑎᒃ (2019) ᐊᑖᒍᑦ ᒪᕙᒪᑐᖅᑲᒃᑯᑦ ᐆᒪᔪᑦ ᐃᓅᓯᒡᓕᓗᐊᕐᑯᓇᒋᑦ ᐱᕐᑯᔭᖅ. ᑕᐃᑲᓂ 2014, ᐅᑯᐊ ᑲᑎᒪᔨᕋᓛᑦ ᓄᖑᓕᖅᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ ᖃᐅᔨᓴᓚᐅᖅᑐᑦ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᓂᒃ ᐃᓱᒫᓗᑎᑦᓯᔭᐅᓕᖅᓱᑎᒃ ᑕᐃᑲᓂ 2014 ᐱᔾᔪᑎᒋᓗᐊᖅᓱᒍ ᐊᑯᓂᐅᔪᒥᒃ ᐅᓄᕈᓐᓃᖅᐸᓪᓕᐊᖏᓐᓇᕐᒪᑕ ᑕᐃᑲᓂ ᐱᒪᕆᐅᔪᒥ ᑲᑎᖕᖓᕕᒋᕙᒃᑕᖏᓐᓂ. ᐅᑯᐊ ᑎᖕᒥᐊᑦ ᓅᑦᑎᓯᒪᔪᑦ ᐊᑦᑕᕐᓇᖅᑐᓂᒃ ᓯᓚᐅᑉ ᐅᕐᑰᓯᕙᓪᓕᐊᓂᖓᓄᑦ ᐊᓯᕈᖅᑐᓄᑦ ᐊᐃᕙᓪᓕᐊᖓᑕ ᐃᕙᕕᒋᕙᒃᑕᖏᑦ ᓇᔪᖅᐸᒃᑕᖏᑦ, ᐊᒻᒪᓗ ᐃᓚᖃᓕᕐᒪᑕ ᓱᕈᖅᓯᒪᔪᓂᒃ ᐊᒻᒪᓗ ᐅᓯᐊᓗᒃᓴᓂᒃ ᑕᐃᑲᓂ ᓄᒃᑕᖅᓱᑎᒃ ᐊᒻᒪᓗ

ᐅᑭᐅᒃᑯᑦ. ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ ᐊᖏᖅᐳᑦ ᐃᓂᓕᐅᖅᓯᒪᓕᖅᐳᑦ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᐃᑦ ᐃᓱᒫᓘᑕᐅᓪᓗᑎᒃ ᐊᑖᒍᑦ *ᐆᒪᔪᑦ ᐃᓅᓭᓪᓚᓗᐊᕐᑯᓇᒋᑦ ᐱᕐᑯᔭᖅ* ᑕᐃᑲᓂ 2016.

- ᑕᐃᒪᓐᓇᐅᔭᕆᐊᖃᕋᒥᒃ ᐊᑖᒍᑦ *ᐆᒪᔪᑦ ᐃᓅᓭᓪᓚᓗᐊᕐᑯᓇᒋᑦ ᐱᕐᑯᔭᖅ* ᑖᒃᑯᐊ ᐆᒪᔪᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᓗᑎᒃ ᐃᓱᒫᓘᑕᐅᓂᖏᓐᓄᑦ ᐊᐅᓚᑦᑎᔾᔪᑎᓭᖃᕐᓗᑎᒃ ᐸᕐᓇᐅᑎᓂᒃ ᓴᕿᑦᑎᓚᐅᖅᑐᑦ (ᐅᐃᒎᖅ A). ᐅᓇ ᓇᐃᓈᖅᓯᒪᔪᖅ ᑕᒡᕙᓂ ᑎᑎᕋᖅᓯᒪᔪᖅ ᓇᓂᔭᐅᔪᓐᓇᖅᑐᖅ ᐅᐃᒎᖅ B.
- ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓄᑦ ᐸᕐᕼᐅᑭᒃ ᐃᓄᓂᖃᓐᖏᑦᑐᑦ ᓇᓗᓇᐃᔭᖅᓯᒪᔪᓂᒃ ᐊᑦᑕᕐᓇᖅᑑᖏᒪᖖᑕ ᓇᔪᖅᑕᖏᑦ ᑕᐃᒪᓗ ᑎᑎᕋᖅᓯᒪᒋᐊᑐᓐᖏᑦᑐᑦ ᐊᑖᒍᑦ ᐃᓱᒫᓘᑕᐅᓂᖏᑦᑕ.

ᑐᑭᓯᓇᓱᐊᖅᑎᒌᖕᓂᖅ:

<u>ᓯᕗᓪᓕᖅ ᓄᓇᖃᑎᒌᓐᖏᑦᑐᓂᑦ ᖁᒥᕐᕈᐊᖅᑕᐅᓯᒪᔪᖅ (ᓯᕗᓪᓕᖅᐹᖅ ᑎᑎᕋᖅᑕᐅᔪᖅ)</u>

- ᐅᓇ ᐆᒃᑑᑎ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓄᑦ ᐸᕐᓇᐅᑎ ᓯᕗᓪᓕᖅᐹᖅ ᓄᓇᖃᑎᒌᓐᖏᑦᑐᓂᑦ ᖁᒥᕐᕈᐊᖅᑕᐅᓯᒪᔪᖅ ᑐᓂᐅᖃᐅᑕᐅᓯᒪᓪᓗᓂ ᒫᑦᓯ 2020 ᐊᒻᒪᓗ ᐃᓚᖃᓚᐅᖅᑐᖅ ᓱᓕᔪᓂᒃ ᑎᑎᖃᖏᓐᓂᒃ ᑕᒪᕐᒥᒃ ᖃᓪᓗᓈᑎᑐᑦ ᐊᒻᒪᓗ ᐃᓄᒃᑎᑐᑦ ᐅᑯᓄᖓ:
  - ᐊᐃᕚᑦ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᐊᐃᕙᖅ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᐊᕿᒋᖅ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᐊᕐᕕᐊᑦ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᖃᒪᓂᑦᑐᐊᖅ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᕿᓐᖓᐅᖅ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᐃᖃᓗᒃᑑᑦᑎᐊᖅ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᐊᒪᕈᖅ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᐃᔅᓴᑎᒃ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᐊᕿᒡᒋᐊᖅ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᖁᕐᓗᖅᑑᖅ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᒪᔪᕆᓕᒃ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᐅᒥᖕᒪᒃᑑᖅ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᐸᖕᓂᖅᑑᖅ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᓴᓂᑭᓗᐊᖅ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᐅᖅᓱᖅᑑᖅ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᓴᓂᕋᔭᒃ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᐃᒡᓗᓕᒃ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᐃᑲᔪᖅᑏᑦ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᖁᑕᐃᒎᒃᔪᐊᖅ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᓯᐱᓐᓯ ᐸᐃ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᒥᑦᑎᒪᑕᓕᒃ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᓇᓐᒪᐅᑕᖅ ᐊᖑᓇᓱᒃᑐᓕᕇᒃᑯᑦ
  - ᕿᑭᖅᑕᕐᔪᐊᖅ ᐆᒪᔪᕐᓂᐊᑎᒃᑯᑦ
  - ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᑦ
  - ᕿᑎᕐᒥᐅᑦ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ
  - ᑭᕙᓪᓕᖅ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ
  - ᕿᑭᖅᑖᓗᒃ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ
  - ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ

- ᑕᐃᑲᓂ ᒫᑦᓯ 2020, ᕿᑭᖅᑕᓂ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ ᑭᐅᓚᐅᖅᑐᑦ ᑐᓂᓯᔪᓐᓇᖏᓐᓂᕋᖅᐳᑎᒃ ᐅᖃᐅᓯᒃᓴᓂᒃ ᑕᒪᑐᒧᖓ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᔪᓄᑦ ᐸᕐᓇᐅᑎᒥᒃ ᐱᔾᔪᑎᒋᓪᓗᒍ ᐊᔾᔨᑐᐃᓐᓇᕆᓂᖏᓐᓄᑦ ᓯᕗᓪᓕᐅᑎᔭᕆᐊᖅᑐᑦ

- ᑕᐃᑲᓂ ᐊᐃᕆᓕ 2020, ᐊᕐᕕᐊᑦ ᑭᐅᓚᐅᖅᑐᖅ ᑖᒃᑯᓄᖓ ᑲᑎᒪᔨᓄᑦ ᑭᐅᓯᔾᔪᑎᒃᓴᖄᖏᓂᕋᖅᓱᑎᒃ/ᐅᖃᐅᓯᒃᓴᖄᖏᓂᕋᖅᓱᑎᒃ
- ᑕᐃᑲᓂ ᒪᐃ 2020, ᐅᑯᐊ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦᑕ ᐃᖅᑲᓇᐃᔭᖅᑎᖏᑦ ᑭᐅᓚᐅᖅᑐᑦ ᐅᖃᐅᓯᒃᓴᓂᒃ ᐊᒻᒪᓗ ᐋᕿᒋᐊᑲᓐᓂᖅᓱᒍ ᐸᕐᓇᐅᑎ
  - ᐅᖃᐅᓯᖏᑦ ᐱᔭᐅᔪᑦ ᑖᒃᑯᓇᖓᑦ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦᑕ ᐃᖅᑲᓇᐃᔭᖅᑎᖏᑦ ᐱᓯᒪᓂᖃᑐᐃᓐᓇᖅᑐᑦ ᑎᑎᖃᖏᓐᓂᒃ ᐋᕿᒋᐊᖅᓯᓪᓗᑎᒃ ᐊᒻᒪᓗ ᐃᓚᓕᐅᑎᓪᓗᑎᒃ ᑖᒃᕙᓂ ᑎᑎᕋᖅᓯᒪᔪᒧᑦ ᓈᒻᒪᒃᓯᑎᓪᓱᒍ.
- ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᑦ ᑭᐅᓯᔪᑦ ᓄᕕᐱᕆ 2020 ᑕᒪᑐᒥᖓ ᖃᓄᐃᒃᓴᖏᓐᓂᕋᖅᓱᑎᒃ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ ᐅᑯᐊᓗ ᓴᕿᔮᖅᑎᑕᐅᔪᑦ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᖃᕐᒪᖔᑕ
- ᐅᐃᒍᖅ D ᑎᑎᕋᖅᓯᒪᔪᑦ ᐅᖃᐅᓯᐅᓂᕕᓂᖏᓐᓂᒃ ᑎᑎᕋᖅᓯᒪᔪᑦ ᐊᒻᒪᓗ ᑎᑎᖃᖏᑦ ᑐᓂᔭᐅᓚᐅᖅᑐᑦ ᓄᓇᖃᑎᒌᓐᖏᑦᑐᓂᑦ ᕿᒥᕐᕈᐊᖅᑕᐅᓂᐊᕐᒪᑕ.

ᑐᒃᓯᕋᐅᑎᑦ ᓴᕿᔮᖅᑎᑕᐅᖁᔪᒋᑦ (90-ᐅᓪᓗᓄᑦ ᐃᓄᓕᒫᑦ ᐅᖃᕐᕕᖃᖅᑐᑦ ᐊᑯᓂᐅᑎᒋᓂᖓ)

- ᐅᓇ ᑐᒃᓯᕋᐅᑎ ᐅᓄᖅᓯᑎᑦᑎᑲᓂᕈᑎᒃᓴᓄᑦ ᑎᑎᕋᖅ ᓴᕿᑎᑕᐅᓯᒪᔪᑦ ᐆᒪᔪᑦ ᐊᑦᑕᕐᓇᖅᑑᓕᖅᑐᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᕕᖓᓂ ᑕᐃᑲᓂ ᔫᓄᐊᕆ 20, 2022 ᑕᐃᒪᓗ 90-ᐅᓪᓗᓄᑦ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᓂᒃ ᐅᑕᕿᓚᐅᖅᑐᑦ, ᑕᐃᑲᓂᓗ ᐃᓱᓕᕕᖃᖅᓱᓂ ᐊᐃᕆᓕ 20, 2022. ᐅᑯᐊ 60-ᐅᓪᓗᓄᑦ ᐅᖃᐅᓯᒃᓴᖃᕐᑎᑦᑎᓂᖓ ᐅᖓᕙᕆᐊᓚᐅᖅᑐᖅ ᐱᔾᔪᑎᒋᓪᓗᒍ ᑲᔪᓲᓇᓚᐅᕐᓂᖔᓄᑦ ᓄᕙᒡᔪᐊᕐᓇᖅ-19 ᐃᓂᖃᕐᑎᑦᑎᑲᓂᓕᓚᐅᖅᑐᑦ ᓄᐊᑦᑎᓗᑎᒃ ᐅᖃᐅᓯᐅᔪᓂᒃ.
- ᑕᐃᑲᓂ ᕕᕗᐊᕆ 9, 2022, ᖃᕆᓴᐅᔭᒃᑯᑦ ᐊᐅᓪᓚᕐᑎᑦᑎᕕᓪᓗᒋᑦ ᑐᒃᓯᕋᐅᑎ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᖅ ᐸᕐᓇᐅᑎᒥᒃ, ᐊᒻᒪᓗ ᓇᐃᓈᖅᓯᒪᔪᖅ ᓱᓕᔪᓂᒃ ᑎᑎᕋᖅᓯᒪᔪᖅ ᑕᒪᐃᓐᓂᒃ ᖃᓪᓗᓈᑎᑐᑦ ᐊᒻᒪᓗ ᐃᓄᒃᑎᑐᑦ, ᑐᓂᔭᐅᓚᐅᖅᑐᑦ ᑕᒪᐃᓐᓄᑦ ᐅᑯᐊᓗ ᒋᑎᑕᐅᒋᓪᓗᑎᒃ ᑎᑎᖃᒥᒃ ᓯᕗᓪᓕᕐᒥ ᐊᕕᒃᑐᖅᓯᒪᔪᑦ ᕿᒥᕐᕈᐊᖅᑎᓪᓗᒋᑦ ᐅᑯᐊᓗ:
  - ᓄᓇᕗᑦ ᑐᓐᖓᕕᒃ ᑎᒥᖓ
  - ᕿᑎᕐᒥᐅᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ
  - ᑭᕙᓪᓕᖅ ᑲᑐᔾᔨᖃᑎᒌᑦ
  - ᕿᑭᖅᑕᓂ ᑲᑐᔾᔨᖃᑎᒌᑦ
  - Hᐋᒻᓚᒃᑯᑦ ᐃᒃᐱᐊᕐᔪᒃ
  - Hᐋᒻᓚᒃᑯᑦ ᑲᖏᖅᑐᒫᐱᒃ
  - Hᐋᒻᓚᒃᑯᑦ ᖃᐅᓯᐃᑦᑐᖅ
  - Hᐋᒻᓚᒃᑯᑦ ᐊᐅᔪᐃᑦᑐᖅ
  - Hᐋᒻᓚᒃᑯᑦ ᒥᑦᑎᒪᑕᓕᒃ
  - Hᐋᒻᓚᒃᑯᑦ ᐃᖃᓗᒃᑑᑦᑎᐊᖅ
  - Hᐋᒻᓚᒃᑯᑦ ᐅᖅᓱᖅᑑᖅ
  - Hᐋᒻᓚᒃᑯᑦ ᑰᒑᕐᔪᒃ
  - Hᐋᒻᓚᒃᑯᑦ ᑕᓗᕐᔪᐊᖅ
  - Hᐋᒻᓚᒃᑯᑦ ᐊᕐᕕᐊᑦ
  - Hᐋᒻᓚᒃᑯᑦ ᑲᒪᓂᑦᑐᐊᖅ
  - Hᐋᒻᓚᒃᑯᑦ ᐃᒡᓗᓕᒑᕐᔪᒃ
  - Hᐋᒻᓚᒃᑯᑦ ᑲᖏᖅᖠᓂᖅ
  - Hᐋᒻᓚᒃᑯᑦ ᓇᐅᔮᑦ
  - Hᐋᒻᓚᒃᑯᑦ ᑎᑭᕋᕐᔪᐊᖅ
- ᑕᐃᑲᓂ ᕕᕗᐊᕆ 9, 2022, ᖁᑕᐃᕈᒃᔪᐊᖅ ᐊᖑᓇᓱᒃᑐᓕᕆᔨᒃᑯᑦ ᑐᒃᓯᕋᖅᑐᑦ ᑕᒪᐃᓐᓂᒃ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ ᐊᐅᓪᓚᖅᑎᑕᐅᓗᑎᒃ ᐃᓄᒃᑎᑑᖅᑐᑦ. ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ ᑐᓂᓯᓚᐅᖅᑐᑦ ᐃᓄᒃᑎᑑᖓᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑕᐅᓂᐊᖅᑐᓄᑦ ᐸᕐᓇᐅᑎ ᑖᒃᑯᓄᖓ ᖁᑕᐃᕈᒃᔪᐊᖅ ᐊᖑᓇᓱᒃᑐᓕᕆᔨᒃᑯᑦ ᑕᐃᑲᓂ ᒫᑦᓯ 30, 2022, ᐅᖓᕙᕆᐊᓚᐅᖅᑕᖓ ᐃᓱᐊᓄᐊᕈᒧ ᒪᐃ 2022. ᖁᑕᐃᕈᒃᔪᐊᖅ ᐊᖑᓇᓱᒃᑐᓕᕆᔨᒃᑯᑦ ᐅᖃᐅᓯᒃᓴᖄᖏᑦᑐᑦ ᐅᒡᕙᓘᓐᓃᑦ ᐃᓱᒫᓗᑎᖄᖏᑦᑐᑦ.

- ᐅᐃᒍᖅ D ᑎᑎᕆᖅᓯᒪᔪᓂ ᐅᖃᐅᓯᐅᔨᓂᖅ ᐊᓚᒪᓗ ᑎᑎᕆᖅᓯᒪᓕᕐᓗᓂ ᐃᓄᓕᒫᑦ ᐅᖃᐅᓯᕐᓴᖅᑎᓂ (ᖃᓪᓚᕿᐅᖅᓴᖅᑯᓂ). ᒥᑭᔪᒥᖅ ᐊᓯᖏᐃᓪᓕᐅᖅᑐᑦ ᓴᐳᓂᓂᐅᖏᐊᑎᓂᖅᓴᓄᓂ ᐊᑐᖅᑕᐅᑭᐊᓕᓂ ᑎᑎᕆᖅᓯᒪᔪᖏᑦᓂᓂᖅ ᐃᓕᓴᓂᓂᖅᓵᑐᒍ ᐅᖃᐅᓯᕐᓴᖅᓂᖅ ᐱᓯᒪᔪᓂ ᓯᓚᐃᓂᐅᑐᓂ ᐊᓯᖏᓐᓄᑦᑕ ᐊᓯᒪᓗ ᐊᑎᖅᓯᑎᓂᑎᓂᖅ ᐊᐅᖅᑕᔪᓂᖅ ᓯᖏᖅᓴᐃᔪᓂᖅ.

ᑭᖑᓪᓕᖏᑦ ᐱᓕᕆᐊᖑᔪᐊᓂᖅᑐᑦ:

- ᐊᐸᑎᓕᕆᔨᓂᑦ ᐊᓚᒪᓗ ᓯᓚᐅᑉ ᐅᖃᐅᓯᐸᓪᓕᐊᓂᖑᓐᓇ ᐊᓯᖏᖅᑐᑦ ᑲᓇᑕ ᐃᓐᓇᓇ ᑎᑎᕆᖅᓴᓐᓂ ᓴᖅᑭᑕᐅᓂᐊᓂᖅᑐᓂ ᐅᓇᖅᓯᑎᓂᕆᑲᖅᓯᕐᓂᐊᖅᓯᓴᓄᓂᖅ ᑎᑎᕆᖅᑕᐅᓯᓚᕐᓂ ᑎᑎᕆᖅᑕᐅᓯᓚᕐᓂ ᑭᖑᓪᓕᖏᑦ ᐱᓕᕆᐊᖑᔪᐊᓂᖅᑐᑦ ᑎᑎᕆᖅᑕᐅᓯᓚᕐᓂ ᐊᑐᖅᑕᐅᓯᓚᕐᓂ 5.2.34

ᐊᑐᓕᖁᓕᐅᔪᓂ:

- ᑕᐅᓯᐊ ᓇᓇᐳᓗ ᐅᒪᔪᓕᓪᓕᔪᐊᐅᓯᓂ ᑲᑎᒪᔨᖏᑦ ᐊᖏᑭᖅᓯᔪᓂ ᑭᖑᓴᓕᕆᖅᓯᒪᔪᓂᐅᑦ ᐊᐅᓪᓂᕐᑎᐊᑕᐅᔪᓇᓂ ᕿᖏᓇᐅᑎ ᑕᐅᓯᑕᐅᓂ ᓴᐅᖅᑎᐃᓂ, ᑲᓇᑕᒥ ᐊᑕᒍᑭᓂ ᑲᓇᒪᑐᖅᑲᐅᓯᓂᐅᑦ ᐅᒪᒪᔪᓂᖅᑐᓂᓂ ᐱᓕᔪᓂ ᐃᓐᓇᐃᓪᓕᐊᓂᖅᑐᓂ ᐊᖏᑭᖅᓯᔪᓂᖅᑐᓂᓂ 5.2.3.

ᑎᑎᕆᖅᑐᑦ ᑕᒪᑐᒥᖏᑐ:
ᑲᓇᑕᒥ ᐅᒪᔪᓕᓪᓕᔪᐊᐅᓯᓂ, ᐃᖅᑲᓗᐃᑦ, ᔪᓕᐃ 2022

ᑐᓴᕋᐅᑕᐅᔪᖅ

ᐅᒪᔨᓕ ᐅᓗᓂᐊᓪᓚᖅᑐᑦᑕᓄᑦ ᐱᖃᓐᓇᕐᓂᖅ
ᐊᐅᓚᕆᓂᖅᓄᑦ ᐸᖏᐅᑎᑦ

ᐊᐅᓚᕆᓂᖅᓄᑦ ᐸᖏᐅᑎᑐᑎ ᐃᓚᔨᑦᑕᓄᑦ (*Phalaropus lobatus*) ᑲᓇᑕᒥ

ᓇᓗᓚᔨᖅᑐᑦ

2022

Government of Canada Gouvernement du Canada
ᑲᓇᑕᐅᑦ ᑲᓪᓚᒃᑯᖓᑦ

ᑲᓇᑕ Canada

ᑎᓕᐅᕈᑕᐅᓂᕐᓂᑦ ᐅᖃᖅᓴᐅᓂᕐᓂᑦ:

ᐊᓂᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔨᕐᓂᖏᓪᓄᑦ ᑲᓇᑕᒥ 2022. ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᓴᖅᓇᐅᑎ ᓇᒪᓯᑐᑕᓄᑦ (*Phalaropus lobatus*) ᑲᓇᑕᒥ [ᐊᑐᖅᑕᐅᔪᓂᑦ]. ᐃᒪᓂᓄᑦ ᐅᓗᓀᐊᓇᖅᑐᑕᓄᑦ ᐱᖓᕐᓂᐊᖅ ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᓴᖅᓇᐅᑎᑦ. ᐊᓂᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔨᕐᓂᖏᓪᓄᑦ ᑲᓇᑕᒥ, ᐊᑐᓂᓵ iv + 40 ᒪᑲᐱᒃᖦ.

ᐊᑐᖅᑕᐅᓪᓚᓪᒌᑐᖅ ᐅᓂᒃᑲᖅ

ᐊᑐᖅᑕᐅᓪᓚᓪᒌᑐᖅ ᐅᓂᒃᑲᖅ ᐅᑎᖅᑎᑕᐅᔪᓄᑦ ᑎᑎᕋᓄᑦ ᑕᐃᓐᓇᐅᐳᖅ ᑎᑎᕋᖅᓯᒪᔪᖅ PDF ᒧᑦ. ᑕᒪᒃᑭᑦ ᖃᓄᑕᐅᕗᒃᑯᑦ ᑕᑯᓇᒧᑎᑦ ᐊᑐᓕᐅᖅᑐᑦ ᐅᓪᓗᐊᓂ ᑎᑎᕋᖅᑕᐅᕐᐸᕐᓂᑕ.

ᐊᑐᖅᑕᐅᓪᓚᓪᒌᓂᑐᖅ ᐅᓂᒃᑲᖅ

ᐊᑐᓪᓚᓪᒌᓂᑐᖅ ᐅᓂᒃᑲᖅ ᐅᑎᖅᑎᑕᐅᔪᓄᑦ ᑎᑎᕋᓄᑦ ᑎᑎᕋᖅᓯᒪᔪᖅ HTML ᒧᑦ ᑕᒪᒃᑭᑐᓗ ᖃᓄᑕᐅᕗᒃᑯᑦ ᑕᑯᓇᒧᑎᑦ ᐊᑐᓕᐅᖅᑐᑦ ᐅᓪᓗᐊᓂ ᑎᑎᕋᖅᑕᐅᕐᐸᕐᓂᑕ.

ᐊᒃᓴᖅᓯᓂᑦ ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᓴᖅᓇᐅᑎᐅᓪᓕ, ᓯᓚᒃᑲᓂᕐᓂᓪᓕᐅᓂᑦ ᖃᐅᔨᒪᔪᐅᔪᓄᑦ ᐅᒪᔪᔪᓄᑦ ᐅᓗᓀᐊᓇᖅᑐᑦᓯᑕᓄᑦ, ᐱᖓᓱᐅᓪᓚᑎᓂᖓᓯᓂᓄᑦ ᓄᓇᕗᖅᑐᑕᓄᑦ ᐅᒪᔪᔪᓄᑦ ᖃᓄᑕᐅᕗᒃᑯᑦ ᐅᓗᓀᐊᓇᖅᑐᑦ ᑲᑎᕋᖅᑕᐅᕗᒃᑯᑦ ᐅᓂᒃᑲᓄᑦ, ᖃᓄᑕᐅᑭᐊᓂᓂᓄᑦ ᓴᖅᓇᐅᑎᓄᑦ, ᐊᓯᓄᓪᓗ ᐊᑦᑐᐊᔪᓂᒃ ᐅᑎᖅᑎᑕᐅᔪᓄᑦ ᑎᑎᕋᓄᑦ, ᑕᑯᔪᒃ ᐅᓇ [ᐅᒪᔪᑦ ᐅᓗᓀᐊᓇᖅᑐᑕᓄᑦ ᑭᒃᑯᐊᔪᓂᒃ ᐊᑎᓕᐅᖅᑐᑦ](#)[1].

Également disponible en français sous le titre
« Plan de gestion du Phalarope à bec étroit (*Phalaropus lobatus*) au Canada [Proposition] »

ISBN
ᑐᖅᔪᖅᓯᒪᓕᖅᑕ ᓴᐃᓴᐅᑎᐊ:

ᐃᓄᓕᕐᓂᑦ (ᐱᖁᔨᐅᑎᕐᓂᑕᑦ ᐊᓯᔨᖏᐊᑦ) ᐊᑐᖅᑕᐅᔪᓴᖅᑐᑦ ᐊᖏᕐᖅᑕᐅᔪᓯᒪᓂᕐᓂᓄᑦ, ᓴᓱᒪᑦᑐᓄᑦ ᓴᓴᓕᐅᖅᑐᑦ ᐱᖓᓱᐅᓪᓚᑎᓂᖓᓯᓂᓄᑦ.

[1] www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html

ᐱᒋᐊᓚᐅᖏᓐᓂᖓᓂ

ᒐᕙᒪᑐᖃᒃᑯᑦ, ᐅᑭᐅᖅᑕᖅᑐᒦᓐᓂᖅᓴᑦ ᐊᕕᔅᓯᒪᔪᓪᓗ ᒐᕙᒪᖏᓐᓄᑦ ᐊᑎᓕᐅᖅᑏᑦ ᐃᓗᐊᓂ ᐊᖏᖃᑎᒌᒍᑎ ᓴᐳᔾᔨᓂᖏᓐᓄᑦ ᐆᒪᔪᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᓄᑦ (1996)[2] ᐊᖏᓚᐅᖅᑐᑦ ᓴᓇᔪᒪᓪᓗᑎᒃ ᐃᑲᔫᑎᐅᓂᐊᖅᑐᓂᒃ ᐱᖁᔭᓕᐊᓂᒃ ᐱᓕᕆᓂᕐᓂᓪᓗ ᓴᐳᔾᔨᑦᓯᐊᕈᓐᓇᖅᑐᓄᑦ ᐆᒪᔪᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᓄᑦ ᑲᓇᑕᐅᑉ ᐃᓗᐊᓂ. ᐃᓗᐊᓂ ᐆᒪᔪᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᓄᑦ ᐱᖁᔭᖅᔪᐊᑉ (S.C. 2002, c.29) ᒐᕙᒪᑐᖃᒃᑯᓐᓂᑦ ᐊᔪᖏᑦᑐᑦ ᒥᓂᔅᑕᑦ ᐱᓕᕆᐊᔅᓴᖅᐳᑦ ᐸᕐᓇᒃᑕᐅᓂᖏᓐᓄᑦ ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᐸᕐᓇᐅᑏᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᓄᑦ ᐆᒪᔪᓄᑦ ᐃᓱᒫᓘᑕᐅᓗᐊᖅᑐᓄᑦ ᐅᖃᐅᓯᕆᔭᕆᐊᖃᖅᑐᕆᓪᓗ ᓯᕗᒧᐊᖅᐸᓪᓕᐊᓂᕐᓄᑦ ᐃᓗᐊᓂ ᑕᓪᓕᒪᑦ ᐊᕐᕌᒍᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᓕᖅᐸᑦ ᑭᖑᓪᓕᖅᐹᒍᑦ ᑎᑎᕋᖅᓴᕐ ᐃᓄᓕᒫᓄᑦ ᓇᓗᓇᐃᖅᓯᕚᓪᒥ.

ᒥᓂᔅᑕᖓᑦ ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄᑦ ᒥᓂᔅᑕᓗ ᑲᒪᓕᕆᐊᒃᓴᓕᒃ ᒥᕐᖑᐃᖅᓯᕚᓕᕆᔨᒃᑯᑦ ᑲᓇᑕᒥᒃᑯᓐᓂᒃ ᐊᔪᖏᑦᑑᕗᖅ ᒥᓂᔅᑕ ᐃᓗᐊᓂ ᐆᒪᔪᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᓄᑦ ᐱᖁᔭᖅᔪᐊᑉ ᓇᓘᒪᓱᖅᑐᓄᑦ ᐸᕐᓇᔅᓯᒪᓪᓗᒍᓗ ᑖᓐᓇ ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᐸᕐᓇᐅᑎ, ᒪᓕᑦᑐᒍ ᐊᕕᔅᓯᒪᔪᖅ 65 ᐆᒪᔪᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᓄᑦ ᐱᖁᔭᖅᔪᐊᕐᒥ. ᐱᕚᖃᕈᓐᓇᕐᓂᖓ ᒪᓕᑦᑐᒍ, ᐸᕐᓇᒃᑕᐅᓯᒪᔪᖅ ᑲᑐᔾᔨᖃᑎᒋᓪᓗᒋᑦ ᐃᖃᓗᓕᕆᔨᒃᑯᑦ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᓗ, ᐱᓕᕆᕝᕙᖓ ᑲᓇᑕᒥ ᓴᐳᔾᔩᑦ, ᐊᕕᔅᓯᒪᔪᓄᑦ ᒐᕙᒪᖏᑦ ᐊᐅᐴᑕᐅᑉ, ᐳᕆᑎᔅ ᑲᓚᒻᐱᐊᑉ, ᒫᓂᑑᐸᐅᑉ, ᓄᓇᑦᓯᐊᑉ, ᓄᓇᕗᑉ, ᓴᔅᑲᑦᓯᐗᓐ, ᔫᑳᓐ, ᐆᒪᔪᓄᑦ ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᑲᑎᒪᔩᑦ, ᓄᓇᖃᖅᑳᖅᓯᒪᔪᓪᓗ ᑎᒦᑦ ᒪᓕᑦᑐᒍ ᐊᕕᔅᓯᒪᔪᖅ 66(1) ᐆᒪᔪᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᓄᑦ ᐱᖁᔭᖅᔪᐊᕐᒥ.

ᑲᔪᓯᓂᖅ ᓄᖑᔾᔭᐃᖅᑕᐅᓂᖏᑎᒍᑦ ᑖᒃᑯᐊ ᐆᒪᔪᑦ ᑐᙵᕗᑦ ᐊᖏᖅᓯᒪᓂᕐᓄᑦ ᑲᑐᔾᔨᖃᑎᒌᓐᓂᕐᓄᓪᓗ ᐅᓄᖅᑐᓄᑦ ᓄᓇᓄᑦ ᐃᓚᐅᓂᐊᖅᑐᓄᑦ ᐊᑐᓕᖅᑎᑦᓯᓂᕐᓂᒃ ᑎᓕᐅᕈᑎᓂᒃ ᐋᖅᑭᒃᑕᐅᔪᓂᒃ ᑕᕝᕙᓂ ᐸᕐᓇᐅᑎᒥ ᐱᓕᕆᔭᐅᔾᔭᖏᓪᓗᑎᓪᓗ ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄᑦ ᑲᓇᑕᒥᒃᑯᓐᓄᑦ, ᒥᕐᖑᐃᖅᓯᕚᓕᕆᔨᒃᑯᑦ ᑲᓇᑕᒥᒃᑯᓐᓄᑦ, ᐊᓯᓄᓪᓘᓐᓃᑦ ᓇᓪᓕᐊᑐᐃᓐᓇᖅ ᒐᕙᒪᓕᒃ ᐃᓄᑑᓗᓂ. ᑲᓇᑕᒥᐅᓕᒫᑦ ᐃᓚᐅᖁᔭᐅᕗᑦ ᐃᑲᔪᖅᑐᕐᓗᑎᒃ ᐊᑐᓕᖅᑎᑦᓯᓗᑎᓪᓗ ᑖᔅᓱᒥᙵ ᐸᕐᓇᐅᑎᒥᒃ ᐱᕚᓪᓗᕈᑕᐅᓂᐊᕐᒪᑕ ᓴᖀᓕᒫᓄᑦ ᑲᓇᑕᐅᓪᓗ ᐃᓄᖏᓐᓄᑦ ᐃᓗᐃᑦᑐᒃᑯᑦ.

ᐊᑐᓕᖅᑎᑦᓯᓂᖅ ᑖᔅᓱᒥᙵ ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᐸᕐᓇᐅᑎᒥᒃ ᑐᙵᕗᖅ ᑎᒍᓯᓂᕐᓄᑦ, ᐊᔅᓱᕉᑕᐅᔪᓄᑦ ᑮᓇᐅᔭᓄᓪᓗ ᐸᕐᓇᔅᓯᒪᔪᓄᑦ ᐊᔅᓱᕈᕐᓇᕐᓂᕐᓄᑦ ᐃᓚᐅᔪᓄᑦ ᒐᕙᒪᓕᖕᓄᑦ ᑎᒥᓄᓪᓗ.

[2] www.canada.ca/en/environment-climate-change/services/species-risk-act-accord-funding.html#2

ᐃᓕᓴᖅᓯᓃᑦ

ᑖᓐᓇ ᑎᑎᕋᖅᑕᐅᓚᐅᖅᑐᖅ ᐊᒥᓕᐊ ᑲᒃᓱᒧᑦ (ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄ ᑲᓇᑕᒥ, ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᓄᑦ ᐱᕚᑦᓯᕋᕐᓃᑦ – ᑲᓇᑕᒥ ᒐᕙᒪᒃᑯᕕᒻᒥ).

ᑎᑎᕋᖅᑕᐅᔪᑦ ᕿᒥᕐᕈᔭᐅᓚᐅᖅᑐᑦ ᐃᑲᔫᑎᓖᓪᓗ ᐃᓱᒪᒋᔭᐅᔪᑦ ᐅᖃᐅᓯᐅᓚᐅᖅᑐᑦ ᐅᓄᖅᑐᓄᑦ ᐃᓄᓐᓄᑦ: ᒪᖅ-ᐊᓐᑐᕋᐃ ᓯᐅᕐ, ᑯᓇᙳᑎᐋ ᐊᕐᑐᓱ, ᔮᐊᓂᕗ ᐳᕈᕚᓯᓗ (ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄ ᑲᓇᑕᒥ, ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᓄᑦ ᐱᕚᑦᓯᕋᕐᓃᑦ —ᑲᓇᑕᒥ ᒐᕙᒪᒃᑯᕕᒻᒥ), ᐊᓐ ᒪᑭᐊᓗ, (ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄ ᑲᓇᑕᒥ, ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᓄᑦ ᐱᕚᑦᓯᕋᕐᓃ ᑦ —ᓄᓇᑭᑦᑐᓂ), ᔦᓕ ᐸᑭᐊᑦ (ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄ ᑲᓇᑕᒥ, ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᓄᑦ ᐱᕚᑦᓯᕋᕐᓃᑦ —ᐊᑦᓛᓐᑎᒃ ᓄᓇᓂ), ᓯᐅᓇ ᒍᕋᑐ-ᑐᓇᐊᕗ (ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄ ᑲᓇᑕᒥ, ᑭᓕᓯᓂᐊᕐᓃᑦ ᓴᓇᓯᒪᔦᓗ—ᓄᓇᑭᑦᑐᑦ ᐅᐊᓐᓇᒥᐅᓗ), Hᐃᐊᑐ ᐳᓇᒃ ᓵᐱ ᕙᔅᑐᓗ (ᐃᖃᓗᓕᓇᔾᒃᑯᑦ ᐃᒪᕐᒥᐅᑕᓕᓇᔾᒃᑯᓗ ᑲᓇᑕᒥ), ᔭᓐ ᓂᐅᓪ (ᔦᑕ ᐱᓕᓇᕝᕕᖓᑦ ᓄᓇᓂᑦ ᐊᑐᒐᔅᓴᓄᑦ-ᐆᒪᒧᓂᑦ ᐊᑐᒐᔅᓴᑦ), ᕝᕙᓗ ᐃᙵᓯᓗ (ᑲᕈᑖ ᓯᓚᑦᑐᖅᓴᕝᕕᔾᔦᐊᖅ).

ᐃᓕᓴᓇᐊᐅᕗᑦ ᓇᑯᕐᒦᓪᓗ ᑕᐃᕝᑦ ᔫᓐᓯᒧᑦ (ᐊᐅᐿᑕ ᐊᕙᑎᓄᑦ ᒥᕐᖑᐃᖅᓯᕝᕕᓕᓇᔨᓄᓪᓗ), ᐃᔅᓯᑎᕋ ᓴᐃᓐᑦ ᓗᐃ (ᐳᓇᑎᔅ ᑲᓛᐱᐊ ᒥᓂᔅᑐᓇᙵ ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄᑦ), ᑕᖕᑲᓐ ᒪᑯᓪ, ᔦᓕ ᔅᑐᕝᕝ (ᐳᓇᑎᔅ ᑲᓛᐱᐊ ᓇᐹᖅᑐᓃᑦ, ᓄᓇᐃᑦ ᓄᓇᓂᑦ ᐊᑐᒐᔅᓴᓄᑦ ᐊᐅᓚᓃᑦ), ᐊᓐ ᒪᑭᐊᓗ (ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄ ᑲᓇᑕᒥ, ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᓄᑦ ᐱᕚᑦᓯᕋᕐᓃᑦ -ᓄᓇᑭᑦᑐᓂ), ᐃᐅᓇᒃ ᒍᕈᔅ (ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄ ᑲᓇᑕᒥ, ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᓄᑦ ᐱᕚᑦᓯᕋᕐᓃᑦ —ᐸᓯᕝᒃ ᓄᓇᓂ), ᒐᕙᒪᙵᑦ ᓄᓇᑦᓯᐊᑉ - ᓄᓇᐃᑦ, ᑲᐃᑦᓕᓐ ᑰᐳ (ᒍᓇᑦᑎᓐ ᓄᖑᔭᖏᑦᑐᓄᑦ ᐊᑐᒐᒃᓴᓄᑦ ᑲᑎᒪᔨᖏᑦ), ᑳᑕ ᓇᒪ (ᒍᓇᑦᑎᓐ ᐃᓄᖏᑕ ᑲᑎᒪᔨᖏᑦ), ᑎᒻ ᕘᓕ (ᒪᓂᑐᐸᒥ ᐱᕈᖅᑐᓂᒃ ᐊᑐᒐᒃᓴᓂᒡᓗ ᓴᓇᓃᑦ), ᑕᓂᑲ Hᐅᒐᓐ (ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄ ᑲᓇᑕᒥ, ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᓄᑦ ᐱᕚᑦᓯᕋᕐᓃᑦ -ᐅᐊᓐᓇᒥ ᓄᓇᓂ), ᑲᐃᐅᓪ ᓇᑦᑎ (ᓄᓇᕗᒥ ᐆᒪᔪᓕᕆᓂᕐᓄᑦ ᑲᑎᒪᔨᖏᑦ), ᐃᕝᔅ ᐊᐅᐳᓇ, ᒥᓯᐊᓪ ᕈᐱᐊᕐ, ᕙᕋᓂᒃ ᑲᓇᓕ (ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄ ᑲᓇᑕᒥ, ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᓄᑦ ᐱᕚᑦᓯᕋᕐᓃᑦ -ᑯᐱᐊᒃ ᓄᓇᖕᒐ), ᔭᓐ ᐳᓇᐊᑦ (ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄ ᑲᓇᑕᒥ, ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᓄᑦ ᐱᕚᑦᓯᕋᕐᓃᑦ -ᐊᓐᑎᐊᓇᐅ ᓄᓇᓂ), ᓯᐊᓕ ᒐᕐᓚᓐ (ᒐᕙᒪᖕᒐᑦ ᓂᐅᕙᐅᓛᓐ ᓚᐸᑐᐊᓗ), ᐊᐅᓅᐊᓕ ᓴᒡᓇᓐ-ᓚᕗᐊᑦᑑᓐ, ᑳᓖᓐ ᒧᕐᓯᓴᓐ, ᓕᐊ ᑎ ᕗᐊᓇᔅᑦ, ᒪᑦ ᕙᐊᑉ, ᐲᑦ ᓯᓐᑭᓐᔅ, ᐊᓕᓴᓐ ᑳᓯᑎ, ᔭᐃ ᕗᕋᓐᓴᓐᓗ (PCA) ᐊᓐᓃᓚ ᐸᕋᑲᑦᓗ, ᑕᒪᔅ ᑯᓪᑐ, ᒥᒐᓐ ᔅᑕᓐᓕ, ᕆᓇ ᔅᑲᒃᓗ (ᐊᕙᑎᓄᑦ ᓯᓚᐃᓪᓗ ᐊᓯᔾᔨᕐᓂᖏᓐᓄ ᑲᓇᑕᒥ, ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᓄᑦ ᐱᕚᑦᓯᕋᕐᓃᑦ —ᐆᒪᔦᑦ ᐅᓗᓇᐊᓇᖅᑐᕖᑦᑐᓄᑎ ᑎᑎᕋᕝᕕᓗᐊᑕᖅ) ᐅᖃᐅᓯᒃᓴᖃᓚᐅᕐᒪᑕ ᒐᕙᒪᖃᑎᓖᓄᑦ ᕿᒥᕐᕈᔭᐅᑎᓗᒋᑦ.

ᓯᕗᓕᖅᑎᓄᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ

ᓇᓘᒪᓱᖅᑐᑦ (*Phalaropus lobatus*) ᐊᑯᓐᓂᖅᓱᖅᑐᓂ ᓯᔾᔭᕆᐊᖑᔪᖅ ᐃᓚᒌᓂᑦ ᖁᓗᐸᓯᑕᐃᓂᑦ. ᓇᓘᒪᓱᖅᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᕿᑐᕐᖏᐅᓲᖅ ᐃᕙᕙᑦᑐᓂ ᐅᐊᓐᓇᓂ ᓄᓇᓂ ᐊᒥᐊᓕᒐᐅᑉ ᐅᐊᓐᓇᖓᓂ, ᑕᕆᐅᑉ ᐊᑭᐊᓂ ᐊᐃᓯᐊᒥᓗ. ᐊᒥᐊᓕᒐᐅᑉ ᐅᐊᓐᓇᖓᓂ ᐃᕙᓲᖅ ᓯᔾᔭᓕᒫᖏᓐᓂ ᐊᓚᒃᑲᒥᑦ ᓂᐅᕙᐅᓚᓐᒧᑦ ᓄᓇᐃᓐᓇᕐᓂᓗ ᖂᑲᓐᑯᑦ ᒪᓂᑐᐸᐅᑉ ᐅᐊᓐᓇᖓᒍᑦ, ᐊᓐᑎᐊᕆᐅᒃᑯᑦ ᑯᐸᐃᒡᓗ ᓚᐸᑐᐊᑉ ᓯᔾᔭᖏᓐᓄᑦ. ᓇᓘᒪᓱᖅᑐᑦ ᐊᓯᐊᓄᐊᓲᖅ ᐊᑦᓚᓐᑎᒃ ᐸᓯᕕᒡᓗ ᓯᔾᔭᖏᑎᒍᑦ ᓄᓇᐃᓐᓇᒃᑯᓪᓗ ᐊᒥᐊᓕᒐᐅᑉ ᐊᐅᓐᓇᖓᓂ ᐅᑮᓪᓗᐊᑕᖅᑐᑎᒃ ᑕᕆᐅᕐᒥ Hᐊᓪᐳᓪᑦ ᐃᖏᕐᕋᓂᖓᓂ, ᓯᔾᔭᖏᑕ ᓵᖏᓐᓂ ᐃᐊᑯᐃᑐᐊ ᐳᕈ, ᓯᓕᓗ.

ᓇᓘᒪᓱᖅᑐᑦ ᓇᓗᓇᐃᖅᑕᐅᓚᐅᖅᑐᑦ ᐊᑐᐃᓐᓇᖏᑦᑐᓄᑦ ᐃᓱᒫᓘᑕᐅᔪᑦ ᑲᑎᒪᔩᓂᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ (COSEWIC) 2014ᒥ ᓇᓗᓇᐃᖅᓯᒪᓚᐅᕆᓪᓗᑎᓪᓗ ᑕᐃᒪᓐᓇ ᐸᕐᓇᒃᓯᒪᔪᑦ 1ᒥ ᐆᒪᔪᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᕌᑦᑐᓄᑦ ᐱᖁᔭᕐᔪᐊᒥ 2019ᒥ. 2004ᒥᓂᑦ, IUCN ᐊᐅᐸᖅᑐᓄᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᑦ ᑲᑎᖅᓱᖅᓯᒪᕙᐃᑦ ᓄᓇᕐᔪᐊᕐᒥ ᓯᔾᔭᕆᐊᖑᖃᑎᕆᑦ ᐃᓱᒫᓗᓐᓇᖈᖑᕐᒋᑦᑐᑦ ᓇᐃᑦᑐᓲᕝ ᑲᑎᖅᓱᖅᓯᒪᓪᓗᓂᕆᓪᓗ ᓯᔾᔭᕆᐊᖑᖃᑎᕆᑦ G4 ᑐᑦ- ᐅᓗᕆᐊᓇᖏᑦᑑᑦᑐᑦ 2001ᒥᓂᑦ. ᓇᓘᒪᓱᖅᑐᑦ ᓴᐳᔾᔭᐅᓯᒪᔪᑦ ᑲᓇᑕᒥ ᐃᓗᐊᓂ *ᐊᓯᐊᓄᐊᓲᑦ ᑎᒻᒥᐊᓄᑦ ᑲᑎᒪᓂᕐᓂᑦ ᐱᖁᔪᐊᕐᔪᐊᕐᒥ.*

ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔪᑦ 2.3 ± 0.7 ᒥᓕᐊᓐ ᓇᓘᒪᓱᖅᑐᑦ ᕿᑐᕐᖏᐅᖅᑐᑦ ᑲᓇᑕᒥ ᒪᓕᑦᑐᕆᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᓕᕆᓂᖅ ᐊᕙᒃᓯᒪᔪᓄᑦ ᓄᓇᕐᔪᐊᕐᒥᐅᓄᓪᓗ ᓯᔾᔭᒥᐅᓂᒃ ᑎᒻᒥᐊᓂᒃ ᖃᐅᔨᓴᕐᓃᑦ. ᒪᓕᑦᑐᕆᑦ ᐱᑕᖃᓗᐊᖏᑦᑐᑦ ᖃᐅᔨᒪᔭᐅᔪᑦ, ᐅᓄᕐᓂᖏᑦ ᐅᓄᕈᓐᓂᖅᐸᓪᓕᐊᓇᓱᕆᔭᐅᔪᑦ. ᐊᑦᓚᓐᑎᒃ ᑲᓇᑕᒥ ᓄᓇᕐᔪᐊᕐᒥᓗ ᓯᔾᔭᒥᐅᑕᓄᑦ ᑎᒻᒥᐊᓄᑦ ᖃᐅᔨᓴᕐᓃᑦ ᓇᓗᓇᐃᖅᓯᖅᑮᔭᔪᑦ ᐅᓄᕈᓐᓂᖅᐸᓪᓕᐊᔪᑐᑦ 7.6 ᐳᓴᓄᑦ ᐊᕐᕋᒍᑕᒫᑦ ᐃᓚᖓᒍᑦ ᓄᓇᕆᔭᕆᑎᒍᑦ. ᖃᐅᔨᓴᕐᓃᑦ ᑲᖏᖅᑐᐊᓂ ᕙᓐᑕᐃᒥ, ᓂᐅ ᐳᕋᓐᓵᒃᒥ, ᐅᑭᐊᒃᓵᒃᑯᑦ ᓅᑦᑐᓄᑦ ᓄᖅᑲᖓᕗᕚᓪᓚᕆᐊᓗᒃ, ᐅᖃᖅᑰᔾᔨᑦ ᐅᓄᕈᓐᓂᓪᓚᓚᐅᖅᑐᑦ ᐅᓄᕐᓂᖏᓐᓂᑦ 1980 ᐱᕆᐊᕐᓂᖏᓐᓂ. ᐃᓱᒪᓯᒪᔪᑦ ᐅᓄᕈᓐᓂᕐᓃᑦ ᑕᐃᒪᐃᑎᑕᐅᔪᕚᓃᑦ ᓵᙱᔪᓪᓚᓐᓄᑦ ᐃᐊᓪ ᓃᓄᒥᑦ ᖃᓄᐃᑦᑐᓄᑦ 1982ᒥᑦ 1983ᒧᑦ, ᓯᓚᐃᑦ ᖃᓄᐃᓕᕆᐊᖅᓯᓂᖏᓐᓄᑦ ᓂᕿᖅᓴᖃᕈᓐᓃᕈᑕᐅᓪᓗᑎᒃ ᐅᑮᕝᕕᕆᖃᑦᑕᖅᑕᖏᓐᓂ. ᑖᒃᑯᐊ ᐅᓄᕈᓐᓂᕐᓃᑦ ᐅᓄᕐᓂᕐᓄᑦ ᐅᓗᕆᐊᓇᕈᑕᐅᓯᒪᑐᐃᓐᓇᕆᐊᓖᑦ ᐅᓄᕐᓃᑦ ᐅᓄᕈᓐᓂᖅᐸᓪᓕᐊᖏᓐᓇᖅᑰᕈᓪᓚᑕ.

ᖃᓄᐃᒻᒪᓪᓚᑦᑖᖅ ᐅᓄᕈᓐᓂᖅᐸᓪᓕᐊᓪᒪᖖᑕ ᓇᓗᔭᐅᔪᖅ. ᓯᓚᐃᑦ ᐊᓯᔾᔨᕐᓂᖏᑦ ᓱᕋᐃᓪᒪᑕ ᓈᒪᔅᓱᑐᑦ ᐃᓂᖏᓐᓂᒃ ᓂᕿᖃᕈᓐᓃᑦᓯᑐᐃᓐᓇᕆᐊᖃᕆᓪᓗᑎᒃ ᓂᕿᖏᓪᓗ ᐱᐅᖏᓐᓂᖅᓴᐅᓕᖅᑎᓪᓗᒋᑦ. ᑕᐃᒪᐃᖏᓐᓇᐅᔭᖅᑐᓂᑦ ᓇᑭᓪᓗᐊᑦᕐᓗ ᐅᖅᓱᓄᑦ ᓱᕈᐃᓐᓂᑦ ᐅᓗᕆᐊᓇᓪᓚᒃᐳᑦ ᓯᔾᔭᕆᐊᓄᑦ, ᐱᓗᐊᖅᑐᒥᒃ ᐅᑺᕖᖏᓐᓂ ᑕᒪᒃᐹᑲᓴᑦ ᐊᒥᐊᓕᒐᐅᑉ ᐅᐊᓐᓇᖓᓂ ᐃᕙᓲᑦ ᑲᑎᕝᕕᖏᓐᓂ. ᐊᐅᒃᑕᖌᓂᑦ ᓱᕈᐃᓐᓂᑦ ᓇᓂᕈᓘᔾᔪᒪᑕ ᑕᕆᐅᕐᒥ ᐃᑲᔫᑕᐅᓪᓗᑎᓪᓗ ᐊᓐᓇᐅᒪᖏᓐᓂᕐᓄᑦ ᑎᒥᒃᑯᓪᓗ ᖃᓄᐃᓂᕐᓗᒃᑎᑦᓯᓪᓗᑎᒃ. ᓄᓇᓕᓐᓂ ᐃᓚᖏᑦ ᓄᖅᑲᕝᕙᐅᔫᑦ ᑕᓰᑦ ᐸᓂᕐᒪᑕ ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖏᓐᓄᑦ ᒪᕐᑯᑦᑎᑕᐅᖏᑦᑐᓄᑦ ᐊᒻᒪᓗ ᐅᕙᓘᓐᓂᑦ ᐃᒥᕐᓂᒃ ᐊᐅᓚᑦᓯᑦᓯᐊᖏᑦᑐᓄᑦ ᑲᖑᐃᓪᓗ (*Chen caerulescens*) ᕿᑐᕐᖏᐅᕝᕕᖏᑦ ᐳᔪᓐᓃᓕᖅᑐᑎᒃ ᐃᓚᖏᓐᓂ ᓄᓇᓂ. ᒨᑯᑎᒧᑦ ᓱᕈᐃᕈᓘᔭᖅᑐᑦ ᓇᒧᕈᓘᔭᖅ ᑭᓯᐊᓂ ᓱᕈᐃᓐᓂᑦ ᑎᒫᓃᑦᑐᒃᓴᐅᔪᑦ ᐅᓗᕆᐊᓇᖅᑐᓂᑦ.

ᐊᐅᓚᑦᓯᓂᒃᑯᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᑦ ᐱᓗᑎᒃ ᑐᙵᓯᑦᓯᐊᖅᑐᒥᒃ ᐅᓄᖅᓯᕙᓪᓕᐊᔪᓂᓪᓘᓐᓂᑦ ᐅᓄᕐᓂᕐᓂᒃ, ᖃᐅᔨᓴᖅᑕᐅᓗᑎᒃ 10 ᐊᕐᕋᒍᓄᑦ, 2040 ᑎᑭᓪᓗᒍ. ᐊᔾᔨᒌᙱᕈᓘᔭᖅᑐᓄᑦ ᖃᓄᖅᑑᕈᑎᑦ ᓇᓗᓇᐃᖅᑕᐅᔪᑦ ᑕᕝᕙᓂ ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᐸᕐᓇᐅᑎᒥ ᑐᕌᖅᐳᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖏᓐᓄᑦ ᐅᓄᕐᓂᖏᓐᓄᑦ ᖃᓄᐃᑉᐸᓪᓕᐊᓂᖏᓐᓄᓪᓗ, ᐃᓂᖏᑦ ᓱᕋᔾᔭᐃᕐᓗᒋᑦ, ᑲᑎᖃᑎᒋᓗᒋᑦ ᐃᓄᓕᒫᑦ, ᓱᕈᐃᔪᓄᑦ ᐅᓗᕆᐊᓇᖏᑦᑎᑎᓪᓗᒋᑦ ᓯᔾᔭᕆᐊᖃᑎᖏᑦ, ᖃᐅᔨᓴᕐᓗᑎᓪᓗ ᓱᓕᒃᑲᓂᕐᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᓄᑦ. ᐅᓄᕐᓂᕐᓄᑦ ᖃᐅᔨᓴᕐᓃᑦ ᐊᓱᐴᑕᐅᑳᖑᕗᑦ ᓄᑖᓂᒃ ᑐᓴᕈᑎᒃ ᐊᓯᔾᔮᑐᐃᓐᓇᕆᐊᖃᕐᒪᑕ ᓯᔾᔭᕆᐊᖑᖃᑎᕆᑦ ᓴᐳᔾᔭᐅᓯᒪᓂᖏᑕ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ.

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ᐅᓪᓗᐊ ᕿᒥᕐᕈᔭᐅᓂᐅᑉ: ᓅᕕᒻᐱᕆ 2014

ᐊᑎᕆᒐᔭᒃᑕᖓ: (ᐅᓄᕐᓂᖏ): ᓇᔫᒪᓱᖅᑐᑦ

ᑭᓪᓕᓯᓂᐊᕐᓂᒃᑯᑦ ᐊᑎᖓ: *Phalaropus lobatus*

ᑲᑎᒪᔩᑦ ᖃᓄᐃᓕᖕᒪᓂᖏᓐᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒥᑦᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ ᖃᓄᐃᓕᖕᒪᓂᖏᑦ:
ᐊᑐᐃᓐᓇᖏᑦᑐᒃᑯᑦ ᐃᓯᒫᔫᑕᐅᔪᑦ

ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓂᖓᓄᑦ:
ᑖᓐᓇ ᑎᖕᒥᐊᖅ ᓄᖑᑉᐸᓪᓕᐊᓯᒪᔪᖅ 40 ᐊᕐᕌᒍᓂ ᕿᒪᑦᑕᑦᑎᓐᓂ ᐊᑑᑎᖃᑦᑎᐊᖅᑐᒥ ᑕᖃᐃᖅᓯᕚᖓᓂ; ᑭᓯᐊᓂ ᐃᓗᐃᑦᑐᒃᑯᑦ ᐅᓄᕐᓂᖏᓐᓄᑦ ᖃᓄᐃᑉᐸᓪᓕᐊᔪᑦ ᐱᖓᓱᑦ ᑭᖑᕚᓃᓂ ᓇᓗᓇᐅᔪᑦ. ᑎᖕᒥᐊᖑᖃᑎᒌᑦ ᐅᓗᕆᐊᓇᑐᐃᓐᓇᕆᐊᓕᖕᓂᒃ ᓵᙵᔪᑦ ᕿᑐᕐᖏᐅᕚᖑᒥ ᐱᖃᓯᐅᑦᑐᒋᑦ ᐃᓂᖏᑦ ᓱᕋᑦᑎᔪᑦ ᐊᑦᑐᐊᔪᓄᑦ ᓯᓚᐃᑦ ᐊᓯᔾᔨᕐᓂᖏᓐᓄᑦ. ᓱᐳᓄᑦᑕᐅᖅ ᖃᕗᑦᑕᐅᔫᓇᕆᓪᓗᑎᒃ ᑭᓂᖅᑐᓄᓪᓗ ᑯᕚᔪᓄᑦ ᐊᓯᐊᓄᙱᓚᐅᑎᓪᓗᒋᑦ ᐅᑭᐅᒃᑯᓪᓗ. ᑕᐃᒪᐃᑉᐳᖅ ᑎᒥᐊᑦ ᐅᓄᖅᑐᐊᓘᓪᓗᑎᒃ ᑲᑎᖃᑦᑕᕋᒥᒃ ᑕᕆᐅᒥ, ᐱᓗᐊᖅᑐᒥᒃ ᐃᖏᕐᕋᓃᑦ ᑲᑎᖅᓱᐃᕚᖏᓐᓄᑦ ᓱᕈᓂᒃ.

ᑲᓇᑕᒥ ᐱᑕᖃᖃᑦᑕᕐᓂᖏᑦ:
ᔫᑳᓐ, ᓄᓇᑦᓯᐊᖅ, ᓄᓇᕗᑦ, ᐳᕆᑎᔅ ᑲᓚᒻᐱᐊ, ᐊᐅᐹᑕ, ᓴᔅᑳᑎᕗᐊᓐ, ᒫᓂᑑᐸ, ᐋᓐᑎᐊᕆᐅ, ᑯᐱᐊᒃ, ᓂᐅ ᐳᕋᓐᔅᕕᒃ, ᐳᕆᓐᔅ ᐃᑐᐊᑉ ᕿᑭᖅᑕᖓ, ᓅᕙ ᔅᑰᓯᐊ, ᓂᐅᕙᐅᓐᑳᓐ ᑳᐳᑐᐊᓗ, ᐸᓯᕕᒃ ᑕᕆᐅᖓ, ᐅᑭᐅᖅᑕᖅᑑᑉ ᑕᕆᐅᖓ, ᐊᑦᓛᓐᑎᒃ ᑕᕆᐅᖓ

ᑲᑎᒪᔩᑦ ᖃᓄᐃᓕᖕᒪᓂᖏᓐᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒥᑦᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ ᖃᓄᐃᓕᖕᒪᓂᖏᑦ ᕿᒪᑦᑕᑦᑎᓐᓂ:
ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᑦ ᐊᑐᐃᓐᓇᖏᑦᑐᒃᑯᑦ ᐃᓯᒫᔫᑕᐅᔪᑦ ᓅᕕᒻᐱᕆ 2014ᒥ.

* ᑲᑎᒪᔩᑦ ᖃᓄᐃᓕᖕᒪᓂᖏᓐᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒥᑦᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ (Committee on the Status of Endangered Wildlife in Canada (COSEWIC))

2. ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᖃᓄᐃᓕᖕᒪᓂᖏᓐᓄᑦ ᖃᐅᔨᒪᔭᐅᔪᑦ

ᑲᓇᑕᒥ ᓇᔫᒪᓱᖅᑐᑦ (*Phalaropus lobatus*) ᓇᓗᓇᐃᖅᑕᐅᓚᐅᖅᑐᖅ ᐊᑐᐃᓐᓇᖏᑦᑐᒃᑯᑦ ᐃᓯᒫᔫᑕᐅᔪᑦ[3] ᐃᓗᐊᓂ ᐸᕐᓇᒃᓯᒪᔪᑦ *ᐆᒪᔪᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒥᑦᑐᓄᑦ ᐱᕐᑯᔭᕐᔪᐊᖅ* (S.C. 2002, C.29) 2019ᒥ ᓇᓗᓇᐃᖅᑕᐅᓪᓗᑎᓪᓗ ᐊᑐᐃᓐᓇᖏᑦᑐᒃᑯᑦ ᐃᓯᒫᔫᑕᐅᔪᑦ ᑲᑎᒪᔩᑦ ᖃᓄᐃᓕᖕᒪᓂᖏᓐᓄᑦ ᑲᑎᒪᔩᑦ

[3] ᐆᒪᔪᑦ ᐊᑐᐃᓐᓇᖏᑦᑐᒃᑯᑦ ᐃᓯᒫᔫᑕᐅᔪᑦ ᑲᐸᐊᓇᖅᑐᒦᑐᐃᓐᓇᕆᐊᓕᖕᓄᑦ ᓄᖑᓕᕐᓗᑎᓪᓘᓐᓂᑦ ᑲᑎᙱᓚᔪᓄᑦ ᐆᒪᔪᓄᑦ ᖃᓄᐃᓕᖕᒪᓂᕐᓄᑦ ᓇᓗᓇᐃᖅᑕᐅᔪᓄᓪᓗ ᐅᓗᕆᐊᓇᖅᑐᓄᑦ.

ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ ᐅᓄᕆᐊᓇᖅᑐᒦᑦᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ 2014ᒥ. ᐊᕕᒃᓯᒪᔪᓂ, ᓇᓘᒪᑏᖅᑐᑦ ᑐᖑᔭᖅᑕᓂ ᓇᓄᓇᐃᖅᑕᐅᓯᒪᕗᖅ ᐆᒪᔫᖃᑎᒌᓄᑦ ᐳᓇᑎᒃ ᑲᓚᒻᐱᐊᒥ ᓇᓄᓇᐃᖅᑕᐅᓯᒪᓪᓗᓂᓗ ᐊᑐᐃᓐᓇᖏᑦᑐᒃᑯᑦ ᐃᓱᒫᓘᑕᐅᔪᑦ ᐋᓐᑎᐊᕆᐅᒥ. ᑯᓕᒃᑲᓐᓂᖅ, ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᓇᓄᓇᐃᖅᑕᐅᓯᒪᕗᑦ ᐊᔾᔨᒌᑕᐅᔪᑦ ᑎᒻᒥᐊᖑᖃᑎᒌᑦ 10ᓂ ᑎᒻᒥᐊᓄᑦ ᓴᐳᔾᔭᐅᓯᒪᔪᓂ.[4]

ᓄᓇᕐᔪᐊᕐᒥ, ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᓇᓄᓇᐃᖅᑕᐅᓯᒪᕗᑦ G4ᑐᑦ—ᐅᓄᕆᐊᓇᖏᑦᑐᒦᑦᑐᕉᖅ ᓇᐃᑐᓯᕗᑯᓂᑦ (ᕿᒥᕐᕈᔭᐅᔪᑦ 2016ᒥ; ᑕᑯᒃᑭᑦ ᓇᓄᓇᐃᖅᓯᒪᔪᑦ 1 ᑯᓕᒃᑲᓐᓂᕐᓄᑦ ᐃᓄᒃᑲᓐᓂᐊᒍᑦ ᓇᓄᓇᐃᖅᓯᒪᔪᓄᑦ). IUCN ᐊᐅᐸᖅᑐᑦ ᓇᓄᓇᐃᖅᓯᒪᔪᑦ ᑲᑎᔩᑎᓯᒪᔭᖓᑦ ᑖᒃᑯᐊ ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᐃᓱᒫᓘᑕᐅᖏᑦᑐᑕᑦ 2004 ᒥᓂᑦ; ᐅᓄᕆᐊᓇᖏᑦᑐᒦᓐᓂᖅᓴᐅᓯᒪᔪᑦ/ ᐃᓱᒫᓘᑕᐅᖏᑦᑐᑦ ᓯᕗᓪᓕᖅᐹᒧᑦ ᑲᑎᖅᓱᖅᓯᒪᔪᕐᓄᐊᖅᑕᐅᓚᐅᕐᓂᖓᓂᑦ 1988ᒥ (BirdLife International 2018).

ᓇᓄᓇᐃᖅᓯᒪᔪᑦ 1. ᓇᐃᓈᖅᓯᒪᔪᑦ ᑲᓇᑕᒥ ᐊᕕᔅᓯᒪᔪᓂ ᐅᕝᕙᓘᓐᓂᑦ ᐊᒥᐊᓕᒐᓂ ᐊᕕᔅᓯᒪᔪᓂ ᓇᐃᑐᓰᕝ ᓇᓄᓇᐃᖅᐸᐃᑦ ᓇᓘᒪᑏᖅᑐᑦ ᐱᑕᖃᕝᕕᖏᓐᓂ ᐊᒥᐊᓕᑲᐅᑉ ᐅᐊᓐᓇᖓᓂ. ᐱᕝᕕᐅᔪᖅ: ᓇᐃᑐᓰᕝ, 2020.

ᓄᓇᕐᔪᐊᒥ (G) ᓇᓄᓇᐃᖅᓯᒪᓂᖓ	**ᒐᕙᒪᖃᑎᒌᓂ (G) ᓇᓄᓇᐃᖅᓯᒪᓂᖓ**	**ᒐᕙᒪᖃᑎᒌᑦ ᐃᓗᐊᓂ (G) ᓇᓄᓇᐃᖅᓯᒪᓂᖓ**
G4	**ᑲᓇᑕ** N4N5B, N3N4N, N4N5M	ᐊᐅᓪᓘᐳᑕ (SU), ᐳᓇᑎᒃ ᑲᓚᒻᐱᐊ (S3S4B), ᓂᐅᕗᐅᓐᓚᓐ (S3S4N), ᓚᐸᑐᐊ (S4B,S4M), ᓛᓂᑑᐸ (S3S4B), ᓂᐅ ᐳᕋᓐᔅᕕᒃ (S3M), ᓄᓇᑦᑎᐊᖅ (S3B), ᓅᕙ ᔅᑰᓯᐊ (S2S3M), ᓄᓇᕗᑦ (S3B,S3M), ᐋᓐᑎᐊᕆᐅ (S3S4B), ᐳᕆᓐᔅ ᐃᑐᐊᕐ ᕿᑭᖅᑕᖓ (SNA), ᑯᐸᐃᒃ (S3B), ᓴᔅᑲᑦᑐᕗᐊᓐ (S4B,S3M), ᔫᑳᓐ (S3B)
	ᐊᒥᐊᓕᒐᑦ N4N5B	ᐊᓚᐸᒪ (S4S5B), ᐊᓛᔅᑲ (S4S5B), ᐊᕆᔭᓇ (S4S5M), ᐋᑳᓐᓵ (SNA), ᑲᓕᕗᐊᓂᐊ (SNRN), ᑲᓄᕋᑐ (SNA), ᑎᐊᓚᕕᐊ (SNA), ᑲᓚᒻᐱᐊ (S1N), ᕗᓗᐊᕆᑕ (SNRN), ᔪᐊᔫᐊ (SNRN), ᐊᐃᑕᕼᐅ (S3M), ᐃᓚᓄᐊᐃ (SNA), ᐃᓐᑎᐊᓇ (SNA), ᐊᐃᐅᐊ (S1N), ᑲᓐᓴᔅ (SNA), ᑭᓐᑕᑭ (SNA), ᒪᐃᓐ (S3S4N), ᒥᕆᓚᓐᑦ (SNA), ᒪᓴᓲᓴᓯᔅ (S4N), ᒥᓯᑲᓐ (SNRN), ᒥᓂᓱᑕ (SNRM), ᒥᓱᕆ (SNA), ᒪᓐᑖᓇ (SNA), ᓇᕙᕼᐅ ᓇᐃᓴᓐ (S4M), ᓂᐳᕊᔅᑲ (SNRN), ᓂᕗᑕ (S4M), ᓂᐅ ᕼᐊᒻᔅᓴᐃᐅ (SNA), ᓂᐅ ᔪᓯ (S4N), ᓂᐅ ᒥᐊᒃᓯᑯ (S4N), ᓂᐅ ᔪᐊᒃ (SNRN), ᑭᐊᕈᓚᐃᓇ ᐅᐊᓐᓇᖓ (SNA), ᑕᕐᑯᑕ ᐅᐊᓐᓇᖓ (SNRM), ᐅᕼᐃᐅ (SNA), ᐅᒃᓚᕼᐆᒪ (S2N), ᐅᕆᒐᓐ (SNA), ᐱᐊᓐᓯᕗᐃᓇ (S4M), ᕈᑦ ᕿᑭᖅᑕᖅ (SNA), ᑭᐊᕈᓚᐃᓇᐅᑉ ᓂᒋᐊ (SNRN), ᑕᑯᑕ ᓂᒋᐊ (SNA), ᑎᐊᒃᓴᔅ (SNA), ᔪᑕ (S3N), ᕗᒪᓐᑦ

[4] ᑕᐃᒃᑯᐃᐊ ᑎᒻᒥᐊᓄᑦ ᓴᐳᔾᔭᐅᓯᒪᕝᕕᑦ ᐅᑯᐊᖑᕗᑦ: ᐅᑭᐅᖅᑕᖅᑐᒥ ᓄᓇᑭᑦᑐᑦ ᖁᖅᑲᐃᓪᓗ, ᐊᑦᓚᓐᑎᒃ ᐅᐊᖕᓇᒥ ᓇᑲᖅᑐᓃᑦ, ᓇᑲᖅᑐᓃᑦ ᕵᕝᑦᒍᑦ ᓴᐳᔾᔨ, ᓇᑲᖅᑐᓃᑦ ᑕᐃᒐ ᓄᓇᑭᑦᑐᑦ, ᓇᖅᓴᕐᔪᐊᖅ, ᐅᐊᖕᓇᒥ ᐸᓯᕕᒃ ᓄᓇᐃᓐᓇᕐᒥ ᓇᑲᖅᑐᓃᑦ, ᓄᓇᑭᑦᑐᓂ ᐃᑎᖅᓴᑦ, ᔅᑯᓯᐊᓐ ᓄᓇ, ᑕᐃᒐ ᓴᐳᔾᔨ ᕼᐊᑦᓴᓐᒥᓗ ᓄᓇᑭᑦᑐᑦ.

		(SNA), ᕗᔨᓂᐊ (SNA), ᕗᐊᓱᖕᑕᓐ (S4N), ᕕᔅᑳᓐᓯᓐ (SNA), ᕙᐃᐅᒥᖕ (S3N)

ᒐᕙᒪᖃᑎᒌᓂ (N) ᐊᕕᔅᓯᒪᔪᓂ (S) ᓇᐃᑐᓲᕐ ᓇᐃᓴᖅᓯᒪᓂᖏᑎᒍᑦ ᓇᓗᓇᐃᖅᓯᒪᓃᑦ: 1 – ᔅᓗᕆᐊᓇᖅᑐᒦᓪᓚᑦᑖᖅᑐᑦ, 2 – ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᑦ, 3 – ᑲᐸᐊᓇᖅᑐᒦᑦᑐᑦ, 4 – ᐅᓗᕆᐊᓇᖏᑦᑐᒦᑦᑐᑦ 5 – ᖃᓄᐃᖏᑦᑐᑦ – ᓇᓗᓇᐃᖅᓯᒪᖏᑦᑐᖅ , ᐱᑕᖃᖏᑦᑐᖅ – ᐊᑐᖏᑦᑐᖅ, SU – ᑕᑯᓇᒃᑕᐅᔪᖅ. ᑕᐃᒪᐃᖃᑦᑕᖅᑐᓄᑦ ᑕᐃᒨᓲᑦ: ᑉ –ᕿᑐᕐᓂᐅᖅᑐᑦ, ᒻ – ᓅᓲᖅ. N3N4B ᐱᕕᖃᕐᓂᖓ ᓇᓗᓇᐃᖅᓯᔪᖅ ᖃᓄᑎᒋ ᑐᑭᓯᔭᐅᖏᓐᓂᖓᓄᑦ ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓄᑦ.

3. ᑎᒻᒥᐊᖑᖃᑎᒌᓄᑦ ᑐᓴᒐᒃᓴᑦ

3.1. ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᓇᓗᓇᐃᖅᓯᒪᓂᖏᑦ

ᓇᓘᒪᓲᖅᑐᑦ ᐊᑯᓐᓂᖅᓱᖅᑑᔪᖅ ᓱᒃᔭᕆᐊᖅ ᐃᓚᒌᓂᑦ ᔅᑯᓗᐸᓯᑕᐃᓂᑦ ᓴᖅᑮᖅᑎᑦᑎᓲᑦ ᓄᓕᐊᕇᓐᓂᕐᓂᒃ ᑕᐅᖅᓲᓂᕐᒥᓂᒃ, ᐊᖑᑏᑦ ᐸᖅᑭᔨᐅᓪᓗᑎᒃ ᐱᐊᕋᒥᓂᒃ ᐊᕐᓇᐃᓪᓗ ᓄᓕᐊᒐᒃᓴᖅᓯᐅᖅᑐᑎᒃ. ᐃᓕᖅᑯᓯᕆᒻᒪᕆᑦ ᑎᒻᒥᐊᑦ ᓄᓕᐊᕇᓐᓂᕐᓂᒃ ᑕᐅᓲᓲᑦ, ᓈᒪᔅᓱᑦᑐᑦ ᐊᕐᓇᐃᑦ ᐊᖏᓂᖅᓴᐅᕗᕐᔪᑦᑐᑦ ᐊᖑᑎᓂᑦ(~40 ᒡ ᓴᓂᐊᓂ ~33 ᒡ) ᑕᑯᒃᓴᐅᓂᖅᓴᐅᓪᓗᑎᓪᓗ ᓱᓗᖏᑦ ᓄᓕᐊᖅᑎᓪᓗᒋᑦ (Rubega *et al.* 2000). ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᐊᑎᖃᖅᑎᑕᐅᔪᑦ ᓴᖅᑮᑦᑎᐊᖅᑐᒧᑦ ᑲᔪᕈᔪᒃ ᐊᐅᐸᖅᑐᒧᑦ ᓱᓗᓄᑦ ᖁᖓᓯᐊᓂᑦ ᐱᒋᐊᕐᓂᙶᖅᑐᓂ ᑭᓇᖓᑕ ᓴᓂᐊᓄᐊᖅᑐᑎᒃ ᓄᓕᐊᖅᑎᓪᓗᒋᑦ. ᓄᓕᐊᖅᑎᓪᓗᒋᑦ, ᓂᐊᕐᑯᐊ, ᑐᓄᐊ, ᐃᓴᕈᖏᑦ, ᐸᒥᐅᖓᓗ ᓯᐊᕐᓇᕆᒃᑑᔪᑦ ᕿᕐᓂᖅᑐᑎᓪᓘᓐᓃᑦ ᒎᓗᓂᓪᓗ ᑕᖅᓴᓕᓐᓂᒃ ᓱᓗᖃᕐᓂᖅᓴᐅᓪᓗᓂ ᑐᓄᐊᒍᑦ ᐊᑦᑎᓐᓂᖅᓴᒃᑯᑦ ᑐᐃᒥᒍᓪᓗ ᓱᓗᖃᓗᐊᖅᑐᓂ. ᐃᓴᕈᖏᑕ ᐊᑎᖏᑦ ᖃᑯᖅᑐᑦ ᓯᒡᒍᐊᓗ, ᓈᖓ, ᐃᔨᖏᑕᓗ ᐊᕙᓗᐊᓂ (ᐃᓛᓐᓂ ᑐᑭᓕᐊᖅᑐᒥᒃ ᑕᖅᓴᓕᒃ). ᕿᑐᕐᖏᐅᕐᓇᐅᖏᑦᑐᒥ ᐃᓐᓇᐃᑦ ᐊᖑᑏᑦ ᐊᕐᓇᐃᓪᓗ ᑕᐅᑦᑐᒃᑯᑦ ᐊᔾᔨᒌᒃᑲᓴᑦᑎᐊᖅᑑᒃ, ᖃᐅᓪᓗᖅᑕᒥᒃ ᓂᐊᕐᑯᖃᖅᑐᑎᒃ ᕿᕐᓂᖅᑕᒥᒃ ᑐᑭᓕᐊᖅᑐᒥᒃ ᑕᖅᓴᖃᖅᑐᑎᒃ ᐃᔨᐊᒍᑦ ᑐᓄᐊᒍᓪᓗ. ᕿᕐᓂᕐᓂᖃᖅᑐᓂ ᑲᔾᔨᐊᒍᑦ. ᖁᖓᓯᖅ ᓴᕝᕕᓪᓗ ᖃᑯᖅᑐᑦ, ᓯᐊᕐᓇᓂᒃ ᐃᓴᕈᖃᖅᑐᑎᒃ ᑐᓄᐊᓗ. ᐃᓐᓇᐅᖏᑦᑐᑦ ᓱᓗᖏᑦ ᐊᔾᔨᐸᓗᒋᕙᐃᑦ ᓄᓕᐊᙱᑎᓪᓗᒋᑦ ᑕᖅᓴᕆᔭᐅᔪᓄᑦ, ᑭᓯᐊᓂ ᐃᓐᓇᐅᖏᑦᑐᑦ ᓱᓗᖃᕐᓂᖅᓴᓂᒃ ᑐᑭᒧᑦ ᑕᖅᓴᖃᖅᑐᑎᒃ ᑐᓄᐊᓂ. ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᕿᕐᓂᖅᑕᓂᒃ ᓂᐅᖁᑦ ᑕᑭᔪᓂᓪᓗ ᒥᖅᑯᑎᐅᖅᑯᔨᔪᒥᒃ ᓱᒡᒍᖃᖅᑐᑎᒃ.

198 ## 3.2. ᑎᒍᐊᖏᖅᑎᑦ ᐅᓄᖅᓯᖏᑦ ᓇᓂᖅᓯᖏᓪᓗ

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200 **ᐊᐳᖏᐊᖅ 1.** ᖃᑐᖅᑭᐅᖅᑐᑦ ᓇᓂᓂᖅᑭᑦ ᓇᓕᓕᖅᑐᑦ ᐊᒥᐊᓕᑎᐃᓂ. Bateman *et al.* 2019.

201 ᓇᓂᓂᖅᑭᑦ

202 ᓇᓕᓕᖅᑐᑦ ᓄᓇᕋᐊᖏᑎ ᐅᑭᐅᖅᑕᖅᑐᖅᓂᑎᐅᑕᑦ ᖃᑐᖅᑭᐅᓕᖅᑎᑦ ᐅᐸᐃᓕᓴᑕᑐᑦ ᑲᓇᕐᒥ, ᑲᓀᕐᓂᑦ
203 ᓄᓇᖏᓂ, ᓴᐱᖅᓴᖏᒥ, ᐊᐃᓴᓕᒥ, ᓴᐄᑭᒥ, ᓄᐊᕐᐊᐃᒥ, ᐃᓴᑐᓂᐊᒥ, ᖁᓕᐊᒥ ᐊᓀᓴᑲᒥᓗ
204 (COSEWIC 2014). ᐊᒥᐊᓕᓴᐃᓂ, ᑎᒍᐊᖏᖅᑎᑦ ᖃᑐᖅᑭᐅᖅᑐᑦ ᑕᐅᕐᓂᖅᓯᒪᖅ ᓯᓚᖅᓂᑦ ᐊᓀᓴᑲᒥᑦ ᑲᓐ>
205 ᓂᖅᓯᑕ ᐊᓂᐊᓂᑦ ᐸᑐ ᐅᖅᓂᐃᐃᒻᒪᑦ ᓀᐸᑐᐊᒪᑦ (ᐊᐳᖏᖅᑐᖅ 1). ᖃᑐᖅᑭᐅᖅᓯᓂᒃ ᐅᖅᓯᑕᓄᐊᖅᑭᑦᑐᑦ
206 ᐅᐊᓪᓇᖅᓴᓄᑦ ᓂᒋᐊᓂᓀᖅᓄᑦ ᑭᓕᓂᕐᒥ ᓂᒋᐊᓂᓗ ᖃᑭᖅᑕᒃᓴᐹ. ᓄᓇᐃᓪᓇᒥ, ᖃᑐᖅᑭᐅᓂᑦ ᐊᓀᓴᑲᐅᐹ
207 ᖃᑎᓕᒻᖅᓯᑦ ᓱᑲᓪᒪᑦ ᐅᐊᓪᓇᖅ ᑲᓇᓪᓇᖅᓄᓪᓗ ᐃᓂᑐᐸᐅᐹ, ᐅᐊᓪᓇᖅᓄᓂ ᐊᓴᑎᐊᑕᐅ, ᓂᒋᐊᓂ ᓂᓴᖅᓂᓄ
208 ᕼᐊᑦᓴᓪ ᑲᑭᖅᑐᐹ, ᓂᒋᐊᓂᓗ ᑯᐸᐃᑲ ᐃᓴᑐᐊ ᓂᓴᖅᓂᓄᑦ. ᑕᑯᔪᑲ ᐊᑕᐋᖅ B ᓇᓕᐊᓪᓗᐊᓄᑦ ᐊᐃᖅᓯᒪᐋᓂ
209 ᖃᑐᖅᑭᐅᕐᕿᐃᐅᔪᓄᑦ ᒪᓕᓪᑐᑦ ᐃᓭᔪᓄᑦ ᑎᒍᐊᓄᑦ ᓄᓇᖕᒪᐊᑦ ᐊᑕᐋᖅ ᑕᓗ ᖃᑐᖅᑭᐅᕐᕿᐃᐅᔪᓄᑦ
210 ᓇᓂᓂᖅᑭᓂᓄᑦ ᒪᓕᓪᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᓕᕆᓂᖅ ᐊᐃᓴᓕᒪᔪᓄᑦ ᓄᓇᕋᐊᖅᑎᐅᓄᓪᓗ ᓂᓴᒥᐅᑕᓂᓂᑦ
211 ᑎᒍᐊᓂᑦ ᖃᐅᔨᓴᓂᓂᒃ (PRISM). ᖃᖓᓕᑎᐊᒥᑦ ᑐᓴᖅᑕᐅᔪᑦ ᐃᓭᔪᓄᑦ ᑎᒍᐊᓄᑦ ᓄᓇᖕᒪᐊᖅᑎᓂᑦ

ᓇᓗᓇᐃᖅᓯᐅᒃ ᓇᓂᓕᓂᑦ ᓂᑎᓗᐊᖅᓂᖅᑕᐅᓚᒪᑕ ᓇᐸᖅᑐᓪᓗᓄᑦ ᓇᐸᖅᑐᖏᑦᑐᑐᓄᓪᓕᓪᓗ ᐃᓱᒪᑎᐅᓕᐅᖅᑐᓂᑦ.

ᓇᓚᒪᓱᖅᑐᑦ ᐊᐅᓪᓕᓪᓗᐊᑕᓱᑦ ᑕᓇᐅᖅᓗᑦ, ᒪᓕᓪᑐᑎᑦ ᓇᓕᐊᑐᐃᓇᓐᓇᖅ ᐊᑦᓕᓐᑎᑦ ᐸᓱᕐᓴ ᓱᓴᓚᓐᓂᓪᓂ ᑭᓱᐊᓂ ᐃᓕᓐᑎᑦ ᐅᓱᓐᓂᖅᓴᓪᓂ (Rubega *et al.* 2000). ᑎᑎᐊᑦ ᓱᖅᑲᐃᓪᑐᑎᖅ ᐅᓱᓐᓂᖅᓴᓪᓂ, ᐸᖅᓇᕐᓂᖅᑐᑎᑲ ᓂᖅᑐᑎᒥᓂᖅᑐᑦ ᐃᖅᑲᓱᐃᓐᓇᖅᑐᑦ ᓇᓇᐃᓇᖅᑎᑦᑐᓄᓪᓕ, ᑕᓇᐅᖅᓂ ᑕᓱᖅᓂ ᐊᓱᓂᓗ ᐃᒪᖅᓂ (Smith *et al.* 2014; van Bemmelen *et al.* 2019). ᑲᓇᐅᓇᖅᑎ ᓱᖅᓴᒥ, ᑲᖏᑦᑐᐊ ᓂᓕᑕᐃ, ᐊᑯᓂᐅᐊᓂ ᓅᓐᓄᑦ ᐅᑭᐊᖅᓴᓂᑦ ᓇᖅᑲᖅᑕᕐᓂᓕᕆᓚᐅᐊᓗᓄᑦ ᑎᑎᐊᑦ ᑕᐃᑲᓂᑐᑎᑦ 11ᓂᑦ 20ᓇᑦ (Mercier 1985; Hunnewell *et al.* 2016). ᖃᒪᓕᑦᑕᑎᓂᓂ, ᐊᑕᖏᑲᓴᖅᑐᑎᓄᑦ ᑎᑎᐊᑦ ᓇᖅᑲᖅᓯᖅᑕᓕᐅᖅᑐᑦ ᐸᓴᒪᑯᐊᑎ ᑲᖏᑎᓂᓕᒥ, ᑕᓇᐅᖅᑭᓂᓂᖅᓴᒥ ᑲᖏᖅᓂᓕᐊᓂ ᓂᓕᑕᐃ, ᑭᓕᐅᖅᑭᑲᓂᓕᕆᓂᖅ ᐊᑕᖏᑲᓴᖅᑐᑎᓄᑦ ᓕᓴᕆᓚᐊᑦ ᓇᖅᑲᖅᓯᓂᓕᕆᓂᖅ ᖃᓄᖅᑕᐅᓕᐸᑦ, ᐊᓴᒡᑕᐅᖅ ᑕᓇᐅᖅᑭᓂᓂᖅᓴᒥ ᑲᖏᖅᓂᓕᐊᓂ ᓂᓕᑕᐃ, ᖃᓄᖅᑲᓂᓂ ᑯᓂᐃᓐᓇᖅᑐᓂ ᐅᓇᐅᐳ ᖃᐅᖅᑕᐅᐸᑦ, ᐊᓴᒡᑕᐅᖅᑭᑲᓂᓕᕆᓂᖅ ᑕᐅᖅᑭᑲᓂᓕᕆᓂᖅ ᐊᑦᑐᔪᑎᑕᒪᑦ (Rubega *et al.* 2000).

ᐊᖅᓱᖓᐊᖅ 2. ᓇᓂ ᐅᑭᐃᖏᑦᑐᓂ ᓇᓕᓴᓂᑦᑐᓂ ᐊᒥᐊᓕᓚᐃᓂ. ᐊᖅᑭᑎᐊᖅᑕᐅᐳᓴᑦ Rubega *et al.* 2000.

ᓇᓚᒪᓱᖅᑐᑦ ᐅᑭᖅᑕᓕᖏᑕ ᑕᓇᐅᓕᒥ, ᐊᓕᓴᕐᑕᐅᐳᓪᓚᓂᓂ ᓇᓂᓕᓪᒃᖅ ᐅᑭᐃᖏᑦᑐᓂ ᓇᓚᒪᐃᕿᓴᑦᑐᓂᑦ. ᓚᓪᓇᐅᐳᖅᖅ, ᑎᑎᐊᑦ ᖃᑐᖅᖏᐅᖅᑐᑦ ᐊᒥᐊᓕᓚᑲᐳᑦ ᐅᐊᓪᓚᖏᓂ ᐅᑭᖅᑕᓕᕿᓴᑦᑐᐳᓴᑦ ᕿᐊᓕᐳᓪᓕᑦ ᐃᓄᖅᐳᑦᑐᓂᑦ ᐃᐊᓕᔪᑐᐊ ᑕᓇᐅᖏᓂᓂ, ᐱᑭᓗᓪ, ᓱᓕᓗᓪ (ᐊᖅᓱᖓᐊᖅ 2). ᐅᐸᐱᓱᓚᐊᖅᑕᓕᓚᐅᖏᓪᓕᒪᓕᑕ ᓱᓴᓚᐊᑦ ᑲᓇᑐᑎᓂᑦ ᐅᑭᖅᓚᓕᑕᖅᑕᓕᖅᓴᖏᓐᓂ ᐸᓱᐊᓂᓪᓚᑲᓂᑦ ᐅᑭᐃᖅᓯᒪᔪᐅᖅᑐᓂᑦᑐᑦ ᐅᑭᐃᖅᖃᖅᓴᖏᓐᓂᑕ. ᑭᓱᐊᓂ, ᓄᖅᑲᖅᓯᖅᑕᓕᖅᓴᖏᓐᓂᓂ ᐊᑎᓕᔪᓂ ᓇᓚᒪᔪᓂᑦ ᑎᑎᐊᑦ ᐱᓇᓚᖏᓂᑦ ᓱᑦᑭᑦ, ᑲᓪᓚᑦᑕᓂ ᓄᓇᕗᑦ (Smith *et al.* 2014;

van Bemmelen *et al.* 2019). ᑕᐃᒪᐃᑦᑐᑦ ᓅᓐᓂᖕᒋᑦ ᐅᖃᖅᑰᔩᕗᖅ ᐊᑐᓂ ᑎᒻᒥᐊᑦ ᕿᑐᕐᖕᒋᐅᖅᑐᑦ ᐊᒥᐊᓕᒃᑲᐅᑉ ᐅᐊᓐᓇᖕᒐᓂ ᓄᑉᐸᑦᑐᑎᓪᓗ ᐊᑦᓚᓐᑎᒃ ᓯᔾᔭᖕᒐᒍᑦ ᐅᐆᖃᑦᑕᕐᒥᒻᒪᑕ Hᐊᒻᐳᓪᑦ ᐃᖕᒋᕐᕋᓂᕐᒥ. ᐃᒪᐃᑦᑐᓐᓇᕆᕗᖅ ᐃᓚᖕᒋᑦ ᐱᓇᓐᓇᕐᒥ ᕿᑐᕐᖕᒋᐅᓲᑦ ᓅᓲᖑᑐᐃᓐᓇᕆᐊᓖᓪᑦ ᓴᐃᐱᐅᕆᐊᓐ ᓯᔾᔭᕆᐊᖕᒋᑦ ᐱᖃᑎᒋᓪᓗᒋᑦ ᐃᓐᑐᓂᓯᐊᔪᑦ (Mu *et al.* 2018), ᑭᓯᐊᓂ ᒫᓐᓇᐅᔪᖅ ᑕᐃᒪᓐᓇ ᖃᐅᔨᒪᔭᐅᔪᖃᕋᓂ ᑕᐃᒪᐃᓐᓂᕋᐃᔪᒥᒃ. ᓯᔾᔭᕆᐊᑦᑕᐅᖅ ᑲᑎᖃᑦᑕᕐᒥᔪᑦ ᐅᓄᖕᒋᓐᓂᖅᓴᐅᓪᓗᑎᒃ ᑕᑯᔭᐅᓯᒪᔪᑦ ᐅᑮᔪᑦ ᐸᓯᕕᒃ ᑕᕆᐅᖕᒐᓂ ᐊᒥᐊᓕᒃᑲᐅᑉ ᕿᑎᐊᓂ, ᒥᐊᒃᓯᑰᒥ ᑳᓕᕗᐊᓂᐊᒥᓗ (Rubega *et al.* 2000), ᑭᓯᐊᓂ ᓇᒧᖖᒐᐅᔪᑦ ᖃᐅᔮᓴᐅᑎᓄᑦ ᖃᐅᔮᔭᐅᔪᑦ ᐅᖃᖅᑰᔩᑦ ᑖᒃᑯᐊ ᑎᒻᒥᐊᑦ ᐅᐆᖃᑦᑕᑐᐃᓐᓇᕆᐊᓖᓪᑦ Hᐊᒻᐳᓪᑦ ᐃᖕᒋᕐᕋᓅᕐᒥ ᑭᓯᐊᓂ ᐅᐸᒃᓯᒪᕙᑦᑐᑎᒃ ᐅᐊᖕᒐᖕᒐᓂ Hᐊᒻᐳᓪᑦ ᐃᖕᒋᕐᕋᓂᐅᑉ ᐱᒋᐊᕐᓂᖕᒐᓂ ᐃᓱᐊᓂᓗ ᐅᐆᓐᓇᐅᑉ (van Bemmelen *et al.* 2019).

ᐅᓄᕐᓂᖕᒋᑕ ᐊᖕᒋᓂᖕᒋᑦ ᖃᓄᐃᑉᐸᓕᐊᓃᓪᓗ

ᓇᓘᒪᓱᖅᑐᑦ ᖃᐅᔨᓴᕐᓂᖕᒋᒻᒪᑕ ᓲᖃᐃᒻᒪ ᑎᒻᒥᐊᖑᖃᑎᕆᑦ 8 ᑕᖅᑭᓂᒃ ᐊᕐᕌᒍᒥ ᑕᕆᐅᕐᕕᓲᖑᒻᒪᑕ ᕿᑐᕐᖕᒋᐅᖅᐸᑦᑐᑎᓪᓗ ᓯᓕᑦᑐᐊᓗᓐᓂ ᐅᖕᒐᓱᑦᑐᓂ ᓄᓇᓂ. ᑕᐃᒪᐃᒻᒪᑦ, ᖃᐅᔨᒪᔭᐅᔪᑦ ᐅᓄᕐᓂᖕᒋᑕ ᐊᖕᒋᖕᒋᑦ ᖃᓄᐃᑉᐸᓪᓕᐊᓂᖕᒋᓪᓗ ᐱᑕᖃᓗᐊᙱᓚᑦ.

ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᓕᕆᓂᖅ ᐊᕕᔅᓯᒪᔪᓄᑦ ᓄᓇᕐᔪᐊᕐᒥᐅᓄᓪᓗ ᓯᔾᔭᒥᐅᑕᓂᒃ ᑎᒻᒥᐊᓂᒃ ᖃᐅᔨᓴᕐᓃᑦ ᖃᐅᔨᓴᓚᐅᖅᑐᑦ ᓄᑖᓂᒃ ᑲᓇᑕᒥ ᐅᓄᕐᓂᖕᒋᓐᓄᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᓂᒃ 2020ᒥ. ᒫᓐᓇᐅᔪᖅ, ᓇᓚᐅᑦᑖᖅᑕᐅᔪᑦ 2.3 ± 0.7 ᒥᓕᐊᓐᓂᒃ ᓇᓘᒪᓱᖅᑐᖃᕋᓱᒋᔭᐅᓪᓗᓂ ᕿᑐᕐᖕᒋᐅᖅᑐᑦ ᑲᓇᑕᒥ (Paul Allen Smith and Jennie Rausch ᓇᖕᒥᓂᖅ ᑐᓴᐅᒪᑎᑦᑎᓂᖅ) ᐊᒻᒪᓗ 1.3 (95% ᖁᓯᙱᓐᓂᖅ ᐊᑯᓐᓂᖕᒐᒍᑦ = 1.1-2) ᒥᓕᐊᓐ ᕿᑐᕐᖕᒋᐅᖅᑐᑦ ᐊᓖᔅᑲᒥ (ᒫᓐᓇᐅᔪᖅ ᐱᖃᓯᐅᔾᔨᔪᖅ ᐅᐊᓐᓇᖕᒐᓂ ᓯᕕᖕᒐᓂᖅ, ᔫᑳᓐᒥ ᑰᑉ ᐊᑯᐊᓂ ᐊᓛᔅᑲᒥᓗ ᐃᑭᕋᓴᖕᒐᓂ; Brad Andres ᓇᖕᒥᓂᖅ ᑐᓴᐅᒪᑎᑦᑎᓂᖅ). ᐱᓕᕆᓂᖅ ᐊᕕᒃᓯᒪᔪᓄᑦ ᓄᓇᕐᔪᐊᕐᒥᐅᓄᓪᓗ ᓯᔾᔭᒥᐅᑕᓂᒃ ᑎᒻᒥᐊᓂᒃ ᖃᐅᔨᓴᕐᓃᑦ ᓇᓚᐅᑦᑖᕐᓃᑦ ᑐᙵᔪᑦ ᖃᐅᔨᓴᕐᓂᕐᓄᑦ ᕿᑐᕐᖕᒋᐅᕝᕕᐅᔪᓂ. ᑭᓯᐊᓂ ᐱᓕᕆᓂᖅ ᐊᕕᒃᓯᒪᔪᓄᑦ ᓄᓇᕐᔪᐊᕐᒥᐅᓄᓪᓗ ᓯᒡᔭᒥᐅᑕᓂᒃ ᑎᒻᒥᐊᓂᒃ ᖃᐅᔨᓴᕐᓃᑦ ᖃᐅᔨᓴᖃᑦᑕᖕᒋᒻᒪᑕ ᓂᒋᕐᒥ ᕿᑐᕐᖕᒋᐅᕝᕕᐅᔪᓂᒃ ᓇᓘᒪᓱᖅᑐᓄᑦ ᑲᓇᑕᒥ ᑕᐃᒪᐃᒻᒪᑦ ᐅᓄᙱᓗᐊᖅᑎᑦᑐᒋᖅᑲᐃ ᓇᓚᐅᑦᑖᖅᑕᐅᕗᑦ. ᑭᓯᐊᓂ, ᓄᑖᕈᕆᐊᖅᓯᒪᔪᑦ ᐱᓕᕆᓂᖅ ᐊᕕᒃᓯᒪᔪᓄᑦ ᓄᓇᕐᔪᐊᕐᒥᐅᓄᓪᓗ ᓯᔾᔭᒥᐅᑕᓂᒃ ᑎᒻᒥᐊᓂᒃ ᖃᐅᔨᓴᕐᓃᑦ ᓇᓚᐅᑖᖅᑕᖕᒋᑦ ᐅᓄᕐᓂᖅᓴᓪᓚᐅᕗᑦ ᕿᒪᑦᑕᑦᑎᓐᓂ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᓂᑦ, ᐃᒻᒪᖃᖃᐃ ᕿᒪᒃᑕᑦᑎᓐᓂ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᑦ ᑐᙳᓚᐅᕐᒪᑕ ᓇᐃᓯᐊᔪᓂᑦ ᓄᖅᑲᕚᓪᓗᐊᑕᓂ ᐅᑭᐊᖁᓵᒃᑯᑦ ᐅᓄᙱᓗᐊᖅᑐᕆᓪᓗ ᓇᓚᐅᑦᑖᖅᑐᕆᑦ ᑎᒻᒥᐊᑦ ᐅᓄᕐᓂᖕᒋᑦ ᓅᓚᐅᖕᒋᑦᑐᓄᑦ ᓄᖅᑲᕚᓪᓗᐊᑕᕐᓄᑦ (Morrison *et al.* 2006; Andres *et al.* 2012a; COSEWIC 2014).

ᑐᙵᓪᓗᑎᒃ ᐊᑦᓚᓐᑎᒃ ᑲᓇᑕᒥ ᓯᔾᔭᒥᐅᓄᑦ ᖃᐅᔨᓴᕐᓂᕐᒥᑦ ᓄᓇᕐᔪᐊᕐᒥ ᓯᔾᔭᒥᐅᓄᑦ ᖃᐅᔨᓴᕐᓂᕐᓂᓪᓗ, 1974ᒥᑦ 1998ᒧᑦ, ᓇᓘᒪᓱᖅᑐᑦ ᓅᓲᑦ ᐅᐊᓐᓇᖕᒐᒍᑦ ᐊᑦᓚᓐᑎᒃ ᐅᓄᕈᓐᓃᓪᓚᒃᓯᒪᖕᒋᑦᑐᑦ, ᑭᓯᐊᓂ ᑕᐃᒃᑯᐊ ᓅᓲᑦ ᓄᓇᒃᑯᑦ ᐅᓄᕈᓐᓃᕐᓂᖅᓴᐅᓯᒪᓕᖅᑐᑦ 7.6 ᐳᓴᓐᑦᒧᑦ ᐊᑐᓂ ᐊᕐᕌᒍᒥ (Bart *et al.* 2007). ᐊᑦᓚᓐᑎᒃ ᑲᓇᑕᒥ ᓯᔾᔭᒥᐅᓄᑦ ᖃᐅᔨᓴᕐᓂᖅ ᐱᖃᓯᐅᔾᔨᒐᓗᐊᖅᑐᓂ ᑲᖕᒋᖅᑐᐊᓂᒃ ᕙᓐᑕᐃ, ᖃᐅᔨᓴᕐᓃᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᑦ ᓯᔾᔭᒥᑦ ᑕᑯᙱᑐᐃᓐᓇᕆᐊᖅᑐᑎᒃ ᑎᒻᒥᐊᓂᒃ ᓴᑦᑎᑦᑐᒦᒃᑯᑎᒃ. ᓱᓕᒃᑲᓐᓂᖅ, ᓇᓕᐊᑐᐃᓐᓇᖅ ᖃᐅᔨᓴᕐᓂᖅ ᐱᓕᕆᖕᒋᑦᑐᖅ ᐃᓗᐃᑦᑐᒃᑯᑦ ᓇᓘᒪᓱᖅᑐᑦ ᐅᐸᖃᑦᑕᖅᑕᖕᒋᓐᓂᒃ ᑕᑯᔭᐅᓯᒪᔫᓪᓗ ᐅᓄᕈᓐᓃᕐᓅᑦ ᐱᔾᔪᑎᖃᑐᐃᓐᓇᕆᐊᓖᓪᑦ ᐊᓯᔾᔨᕐᓂᕐᓄᑦ ᐊᖅᑯᑎᓂᒃ ᓅᒃᑖᕐᓂᕐᓄᓪᓘᓐᓂᑦ ᖃᓄᐃᑦᑐᓄᑦ ᖃᓄᐃᓲᓄᑦ [5].

[5] ᕚᓇᓚᔩ: ᑭᓪᓕᕆᓂᐊᕐᓂᖅ ᐱᓕᕆᔪᖅ ᖃᖕᒐᒃᑰᕐᓂᕐᓄᑦ ᐊᕐᕌᒍᑕᒫᑦ ᖃᓄᐃᑦᑐᓄᑦ ᓂᕐᓄᑎᓄᑦ ᐱᕈᖅᑐᓄᓪᓗ ᓲᕐᓗ ᐱᕈᕆᖅᑐᑦ ᑎᒻᒥᐊᓪᓗᑦ ᓅᑦᑐᑦ, ᐱᓗᐊᖅᑐᒥᒃ ᐊᑦᑐᐊᔪᓄᑦ ᓯᓚᓄᑦ ᖃᓄᐃᓕᖕᒐᓂᕐᓄᑦ.

ᖃᐅᔨᒪᔭᐅᔪᓂᒃ ᕿᒥᕐᕈᔾᔪᑎᖃᓂᒃ ᐱᑕᖃᓗᐊᕐᑭᒃᑲᓗᐊᖅᑐᓂ ᖃᓄᐃᑉᐸᓪᓕᐊᔪᓄᑦ ᐊᕐᑭᓂᖅᓴᓄᑦ ᓄᓇᓄᑦ, ᑲᕐᑭᖅᑐᐊ ᕙᓐᑕᐃᑉ ᓅᑦᑐᓄᑦ ᓄᖅᑲᑉᕕᐅᔪᖅ ᖃᐅᔨᓴᖅᑕᐅᓪᓚᒃᓯᒪᔪᖅ. ᓇᓘᒪᓱᖅᑐᑦ ᓄᖅᑲᖅᑐᑦ ᑕᐃᑯᕐᓚ ᐅᓄᕈᓐᓃᖅᓯᒪᔪᑦ 2ᒥᑦ 3 ᒥᓕᐊᓐᓄᑦ 1970ᓂ 1980ᓂᓗ 100,000ᒥᑦ 300,000ᓄᑦ 2008ᒥᑦ 2010ᒧᑦ (Duncan 1995; Nisbet and Veit 2015; Hunnewell *et al.* 2016). ᓄᓇᓂ ᖃᐅᔨᓴᕐᓃᑦ 1980ᓂ ᓇᓗᓇᐃᖅᓯᓚᐅᖅᑐᑦ ᐅᓄᕈᓃᕐᓂᖅᓴᓪᓚᐅᓚᐅᖅᑐᑦ ᐊᑯᓐᓂᐊᓂ 1985 1989ᓗ (Duncan 1995). Nisbet and Veit (2015) ᐅᖃᓚᐅᖅᑐᑦ ᑖᓐᓇ ᐅᓄᕈᓐᓃᕐᓂᓪᓛᓗᒃ ᑕᐃᒪᐃᓚᐅᖅᐳᖅ 1983ᒥ, ᓴᙱᔫᓪᓛᓗᒻᒥᒃ 1982-1983 ᐃᐅᓪ ᓂᓄ-ᓂᑭᕐᒥ ᐅᐃᔾᔫᕐᓂᖅᑕᖃᓚᐅᖅᑎᓪᓗᒍ[6] (ENSO), ᑕᐃᒪᐃᓗᐊᖅᑎᑕᐅᓪᓗᓂᓗ 1986-1987 ᐃᐅᓪ ᓂᓄ-ᓂᑭᕐᒥ ᐅᐃᔾᔫᕐᓂᕐᒧᑦ. ᐃᐅᓪ ᓂᓄ-ᓂᑭᕐᒥ ᐅᐃᔾᔫᕐᓂᕐᒥᑦ ᖃᓄᐃᑎᑕᐅᔪᑦ ᓄᖑᑎᑦᑎᔪᐊᓘᑐᐃᓐᓇᕆᐊᖃᕐᓂᕐᒪᑕ ᑕᕆᐅᕐᒥ ᕐᑯᐱᕐᕈᕋᓛᓂᒃ ᐅᑲᕙᐅᓲᓂ, ᓯᔾᔭᕆᐊᑦ ᓂᕿᓵᕿᑦᑐᐊᓘᓕᖅᑐᑎᒃ. ᖃᐅᔨᓴᓗᐊᕐᓇᑎᒃ ᕿᑐᕐᖏᐅᑐᑦ ᐅᓄᕐᓂᕐᖏᓐᓄᑦ ᖃᐅᔨᓴᕐᓃᑦ ᐅᖃᓚᐅᖅᑐᑦ ᐊᑯᓂᐅᕐᖏᑦᑐᒧᑦ ᐅᓄᕈᓐᓃᕐᓂᖅᓴᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᕿᑐᕐᖏᐅᖃᑎᕆᑦᑐᓂ ᓚ ᐱᕈᔅ ᑲᕐᑭᖅᓱᒻᒥ, ᒪᓂᑐᐸᒥ ᐊᑯᓐᓂᐊᓂ 1982 1984ᓗ, ᐃᑲᔪᑕᐅᑐᐃᓐᓇᕆᐊᖃᖅᑐᓂ ᐃᓱᒪᕆᔭᐅᔪᒧᑦ (Reynolds 1987). ᑭᓯᐊᓂ, ᐃᒪᐃᑦᑐᓐᓇᖅᑐᖅ ᓇᓘᒪᓱᖅᑐᑦ ᐊᓯᐊᒍᑦ ᐊᖅᑯᑎᖃᓕᕋᒃ ᐅᐸᖃᑦᑕᕈᓐᓃᖅᑐᒍᓗ ᑲᕐᑭᖅᑐᐊ ᕙᓐᑕᐃ ᐅᕝᕙᓘᓐᓃᑦ ᔩᕈᐹᒥᐅᑦ ᕿᑐᕐᖏᐅᖅᑐᑦ ᓯᔾᔭᕆᐊᑦ ᓅᓲᑦ ᐊᑦᓚᓐᑎᒃ ᓯᖕᔭᖖᒍᑦ ᐅᓄᕈᓐᓃᖅᐸᓪᓕᐊᓕᕐᒪᑕ, ᐅᓄᕈᓐᓃᕈᑕᐅᒃᑲᓐᓂᖅᑐᑎᒃ ᐅᓄᕈᓐᓃᖅᑐᕕᓂᕐᓄᑦ ᑲᓇᑕᒥ ᐃᕙᔪᓄᑦ ᓯᔾᔭᕆᐊᓂ.

ᓇᓕᐊᓪᓗᐊᕐᑐᑐᐊᖅ ᐅᓄᕈᓐᓃᑉᕕᐅᔪᖃᕐᓂᕋᖅᑕᐅᔪᑦ ᕿᑐᕐᖏᐅᑉᕕᐅᔪᓂ. Hᐅᓯ ᕿᑭᖅᑕᒥ, ᔪᑳᒥ, 1990ᓂ, ᐱᑕᖃᒐᔪᓚᐅᖅᑐᑦ ᓇᓘᒪᓱᖅᑐᑦ ᐊᓯᐅᓚᐅᖅᑐᖅ; ᑎᒻᒥᐊᖑᖃᑎᓖᑦ ᕿᑐᕐᖏᐅᖅᓯᒪᕐᖏᑦᑐᑦ ᑕᒫᓂ 1999ᒥᓂᑦ (Cooley *et al.* 2012). ᓇᓕᐊᓪᓗᐊᕐᑐᑐᐊᖅ ᐅᓄᕈᓐᓃᑉᕕᐅᔪᖃᕐᓂᕋᖅᑕᐅᒻᒥᔪᖅ ᐅᐊᓐᓇᖓᓂ ᓯᕕᖓᔪᓂ ᑯᕈ ᖏᓚᑦᓴᒥᓗ, ᔫᑳᓐ (Cooley *et al.* 2012; COSEWIC 2014). ᓰᓯᐅᒥ, ᒫᓂᑑᐸ, ᐊᕙᑎᑦᑎᐊᕐᑭᓐᓃᑦᑐᓪᓗ, ᓇᓘᒪᓱᖅᑐᑦ ᐅᓄᕐᓂᕐᑭ ᐅᓄᕐᑭᓐᓂᖅᓴᐅᓕᓚᐅᖅᑐᑦ 1930ᓂᑦ 1990ᓄᑦ ᑭᓯᐊᓂ ᑕᐃᒪᐃᕐᑭᓐᓇᖅᓯᒪᔪᑦ ᑕᐃᒪᙱᓂᑦ (Jehl and Lin 2001; COSEWIC 2014). ᑭᓯᐊᓂ, ᐅᓄᕈᓐᓃᕐᓃᑦ ᓰᔅᓯᓪᒥ ᓚ ᐱᕈᔅ ᑲᕐᑭᖅᓱᒻᒥ ᑕᕝᕙᓂᑐᐊᖑᖅᑯᔩᑦ ᑲᑎᙱᓂᑭᑦ ᐅᓄᕐᒪᑕ ᐊᕙᑎᓂ ᕿᑐᕐᖏᐅᑉᕕᐅᔪᓂ (Artuso 2018).

3.3. ᐱᔭᕇᐊᖃᖅᑕᕐᑭᑦ ᓇᓘᒪᓱᖅᑐᑦ

ᕿᑐᕐᖏᐅᖅᑐᑦ

ᓇᓘᒪᓱᖅᑐᑦ ᕿᑐᕐᖏᐅᓚᔪᓗᐊᖅᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᓇᐹᖅᑐᖃᕐᑭᑦᑐᒥ ᐃᒪᖅᓱᓐᓂ, ᐅᖓᑖᓂ 43 ᐳᓴᓐ ᓄᓇ ᐃᒫᓃᑐᓂ (Andres *et al.* 2012b). ᑕᕆᐅᖑᕐᑭᑦᑐᑦ ᑕᓱᑦ ᐊᑐᖅᐳᑦ ᐊᐃᑉᐸᖅᑖᕋᓱᑦᑐᓄᑦ ᐱᕕᖃᖅᑎᑦᑎᓪᓗᑎᒡᓗ ᓂᕿᓂᒃ ᕿᑐᕐᖏᐅᖅᑐᓄᑦ ᐊᐃᑉᐸᓅᓄᑦ ᕿᑐᕐᖓᕐᑭᓐᓄᓪᓗ. ᓇᓘᒪᓱᖅᑐᑦ ᓂᕈᐊᖅᑐᒃᓴᐅᓲᑦ ᕿᑐᕐᖏᐅᕈᒪᓪᓗᓂ ᓇᓕᐊᓪᓗᐊᓂ ᑕᓯᕐᓂ ᑐᙵᓪᓗᑎᒃ ᐱᑕᖃᕐᓂᕐᓄᑦ ᐊᓯᓂᒃ ᓯᔾᔭᕆᐊᓂᒃ (Walpole *et al.* 2008a). ᓄᓇᖃᓲᖑᕐᑭᑦᑐᑦ ᓇᒻᒥᓂᕆᓇᓱᒃᑕᒥᓂᒃ, ᑭᓯᐊᓂ ᐊᕐᑭᕐᕋᖃᕝᕕᖃᖅᑐᑎᒃ ᖃᓂᑭᔭᕐᑭᓐᓂ ᐃᒪᐃᑦ, ᐃᕕᕐᓚᐅᔭᓂᒃ ᐱᕈᖅᑐᖅᑐᓕᓐᓂ, ᐃᒪᕐᒥᐅᓂᒃ ᓴᖅᑭᔮᖅᑐᓂᒃ ᐃᒪᐃᑦ ᕐᑯᓛᓂᑦ, ᒪᕐᕋᖃᓗᐊᕐᑭᓪᓗᑎᒃ ᐱᕈᖅᑐᓂᓪᓘᓐᓂᑦ (Rodrigues 1994; Walpole *et al.* 2008b). ᐱᐅᑭᔭᐅᓂᖅᓴᐃᑦ ᐃᒪᕐᒥᐅᑦ ᐱᕈᖅᑐᑦ ᐱᖃᓯᐅᔾᔨᕗᑦ *Arctophila* (ᐃᓚᑭᔭᐅᔪᖅ ᐃᒪᕐᒥᐅᑦ ᐃᕕᓄᑦ) ᐃᒫᓂᓗ ᑭᓕᕐᓇᓕᓐᓂᒃ (*Carex aquatilis*) (Andres *et al.* 2012b). ᓄᓇᕐᑭᑦ ᐳᒃᑭᑦᑐᓃᒐᔪᑦᑐᑦ ᕿᑎᐊᓂ ᓄᓇᓂ ᐳᖅᑐᓂᐊᕐᔪᓐᓂ ᑕᐃᒪᐃᑎᑕᐅᔪᑦ ᕐᑯᐊᖃᑦᑕᖅᑐᓄᑦ ᐊᐅᖃᑦᑕᖅᑐᓄᓪᓗ (Gratto-Trever 1996). ᐃᕙᑉᕕᖃᖅᑐᑎᒃ

[6] ᐃᐅᓪ ᓂᓄ-ᓂᑭᕐᒥ ᐅᐃᔾᔫᕐᓂᖅ ᓯᓚᓗᙵᓂᕐᓄᑦ ᓇᓗᓇᐃᖅᓯᔪᖅ ᖃᖓᐅᓕᕖᖓᑦ ᐊᓯᔾᔨᕐᓂᕐᓄᑦ ᐊᓄᖏᓂ ᑕᕆᐅᓪᓗ ᖄᖓᑕ ᐆᓇᕐᓂᖏᓐᓄᑦ ᐅᖅᑰᔪᐊᓗᒃᑯᑦ ᑲᓇᓐᓇᕐᒥ ᐸᓯᕕᒃ ᑕᕆᐅᕐᒥ. ᐃᐅᓪ ᓂᓄ-ᓂᑭᕐᒥ ᐅᐃᔾᔫᕐᓂᖅ ᐃᐅᓪ ᓂᓄ-ᓂᑭᕐᒥ ᐅᐃᔾᔫᕐᓂᖅ ᐊᒃᑐᐃᓲᖅ ᓯᓚᐃᑦ ᖃᓄᐃᓕᖓᓂᕐᖏᓐᓂᒃ ᐊᒥᐊᓕᑲᓕᒫᑲᓴᓐᓂ.

ᐊᖏᕐᕋᖃᕝᕕᒋᔭᒥᓂ ᓄᓇᓂ ᐱᖃᕐᓂᖅᓴᓂᒃ ᐃᕕᖅᓚᐅᔭᓂᒃ ᐃᒪᐃᓪᓗ ᖃᖏᔭᙱᓃᓪᓗᑎᒃ; ᓱᓕᒃᑲᓐᓂᖅᓄᑦ ᐱᕈᖅᑐᓄᑦ ᓴᐳᔾᔭᐅᕗᖅ ᐃᕙᕝᕕᖓ ᑕᐅᑦᑐᒃᑯᑦ ᐊᖑᓇᓱᓰᓄᑦ (Walpole *et al.* 2008b).

ᓈᒪᓱᒃᐉᑦ ᑎᑎᕋᐅᑕᐅᓯᒪᒻᒥᔪᑦ ᕿᑐᖕᒋᐅᖅᑐᑎᒃ ᓇᐹᖅᑐᓂ ᓇᐹᖅᑐᓕᓐᓂ ᐊᖏᕐᕋᖃᕝᕕᒋᔭᖓᑕ ᓂᒋᐊᓂ (Artuso 2018; Michel Robert ᓇᖏᓂᖅ ᑐᓴᐅᒪᑎᑦᑎᓂᖅ). ᑕᐃᑲᓂ ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᐃᕙᕝᕕᖏᑦ ᐱᖃᖅᐳᑦ ᐃᔾᔪᓕᐅᓰᓂᒃ ᐃᒪᖅᓱᓂᒃ, ᐃᒪᖅᓱᓂᒃ ᐊᓯᓂᓪᓗ ᐃᒪᓕᓐᓂᒃ ᖃᓂᒋᔭᖏᓐᓂ ᐃᒪᖃᑦᑎᐊᖅᑐᓂ. ᒫᓂᑑᐸᒥ, ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᐃᕙᓲᖑᔫᑦ ᐱᕈᖅᑐᓕᓐᓂ ᖃᓂᒋᔭᖏᓐᓂ ᓱᐳᐄᑦ ᐊᓯᓄᓪᓗ ᐊᖏᓂᖅᓴᓄᑦ ᐱᕈᖅᑐᓄᑦ ᑭᓯᐊᓂ ᐅᐸᒃᐸᓚᓂ ᐱᕈᖅᑐᖃᓪᓚᑐᓂᒃ, ᐳᖅᑐᔪᓂᒃ ᐱᕈᖅᑐᓕᓐᓂᒃ (Artuso 2018). ᑯᐱᐊᒃᒥ, ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᐃᕙᓲᑦ ᐃᒪᖃᑦᑎᐊᖅᑐᓂ ᐊᕙᓗᔭᐅᓯᒪᔪᓄᑦ ᐃᕕᖅᓚᐅᔭᖅᓄᑦ (Michel Robert ᓇᖏᓂᖅ ᑐᓴᐅᒪᑎᑦᑎᓂᖅ). ᖃᐅᔨᒪᔭᐅᔪᓕᒫᑲᓴᑦ ᑎᒻᒥᐊᖑᖃᑎᒌᓄᑦ ᕿᑐᖕᒋᐅᕈᓯᖏᓐᓄᑦ ᑕᑯᔭᐅᔪᓐᓀᖅᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᓇᐹᖅᑐᖃᖏᑦᑐᓂ.

ᐊᔾᔨᖏᑎᑐᑦ ᐊᓱᑦ ᓯᔾᔭᕆᐊᑦ, ᓈᒪᓱᒃᐉᑦ ᓴᖅᑮᔭᖅᑎᑦᑎᔪᖅ ᑭᓲᓂᖏᓐᓂᒃ ᐅᑎᕆᐊᕈᑎᓂᒃ, ᑐᑭᖃᖅᑐᖅ ᐊᕐᓇᐃᑦ ᐱᔮᖅᓯᔪᑦ ᓄᓕᐊᕆᓄᑦ ᐊᖑᑎᓄᓪᓗ ᑲᒪᑦᑎᐊᖅᑐᓄᑦ ᐊᑎᖅᑕᖀᖏᓐᓄᑦ, ᐃᓚᐅᓪᓗᓂ ᒪᓐᓃᑦ ᐃᒍᓇᖅᓯᑎᓪᓗᑦ (Rubega *et al.* 2000). ᐊᕐᓇᐃᑦ ᐊᐃᑉᐸᖅᑖᕋᓱᓰᖑᓪᓗᑎᒃ ᐊᖑᑎᓪᓗ ᐸᖅᑭᕙᑦᑐᑎᒃ ᕿᑐᕐᖓᒥᓂᒃ, ᐱᖃᓯᐅᑐᒍ ᒪᓐᓂᓂᒃ ᐃᕙᓃᑦ (Reynolds 1987; Sandercock 1997). ᐊᑕᖏᑲᓴᑦᑐᑎᒃ ᑎᒥᐊᑦ ᑎᑭᓲᑦ ᐊᐃᑉᐸᖃᖏᑦᑐᑎᒃ, ᑭᓯᐊᓂ ᐃᓚᖏᑦ ᐊᐃᑉᐸᖅᑖᑐᐃᓐᓇᖅᑲᓃᑦ ᐃᕙᕝᕕᒋᔭᒥᓅᙱᐅᑎᓪᓗᒋᑦ (Hildén and Vuolanto 1972). ᐊᐃᑉᐸᕇᓕᑦᑎᐊᑲᐅᖅᑐᖅᐸᑦᑐᑎᒃ, ᐃᓖᓐᓂ ᐃᓗᐊᓂ 4 ᐃᑲᕐᕋᑦ ᐊᐃᑉᐸᕇᓚᓱᓕᓚᐅᖅᑎᓪᓗᒋᑦ (Reynolds 1987). ᐊᐃᑉᐸᕇᓕᓱᙱᕋᒥᒃ, ᐊᖑᑏᑦ ᐅᐸᒃᓯᒪᓲᖑᔪᑦ 5 ᒦᑕᑦ ᐅᖓᓯᓐᓂᕐᒥ ᐊᕐᓇᒧᑦ ᐊᐃᐸᒥᓄᑦ 75 ᐳᓴᓐᓄᑦ ᖃᙱᓕᒫᖅ, ᐊᖑᑏᑦ ᓴᐳᔾᔨᓪᓗᑎᒃ ᓄᓕᐊᑲᑕᓪᓚᑦᑐᑎᓪᓗ (Whitfield 1990; Schamel *et al.* 2004a). ᑕᐃᒪᐃᓕᐅᕐᓃᑦ ᐅᓄᖏᑦᑐᓪᓖᓗᓐᓂᒃ ᐊᓯᓂᒃ ᐊᐃᑉᐸᖅᑲᖏᔾᔪᑕᐅᔪᑦ (ᓲᕐᓗ , 98.3% ᒪᖑᓴᓴᓂᓴᑐᓴᓂᑎ ᐃᕙᔭᐅᔪᓂ ᐊᑖᑕᖃᖅᐳᑦ ᐊᖑᑎᒧᑦ ᐸᖅᑭᓲᒧᑦ; Schamel *et al.* 2004a).

ᐊᖑᑎᓂᑦ ᐃᕙᕚᑦ ᓴᓇᔭᐅᕙᑦᑐᑎᒃ, ᑭᓯᐊᓂ ᐊᕐᓇᐃᑦ ᐃᕙᕝᕕᒃᓴᒥᒃ ᕿᓂᖅᐸᑦᑐᑎᒃ (Rubega *et al.* 2000). ᐊᕐᓇᖅ ᑎᓴᒪᓂᒃ ᒪᓐᓂᖃᒃᒍᓪᓗᓂ, ᐊᖑᑎᐅᑉ ᐃᕙᑦᑐᓂᕆᑦ. ᐊᖑᑏᑦ ᐸᖅᑭᑦᑎᐊᖃᑦᑕᖅᐳᑦ ᕿᑐᕐᖓᒥᓂᒃ ᑭᓯᐊᓂ 18ᓂᒃ ᐅᓪᓗᖃᓕᕋᒥᒃ ᕿᑐᕐᖓᖏᑦ ᐊᔪᕈᓐᓃᑦᑎᐊᓲᖑᔪᑦ (Rubega *et al.* 2000). ᒪᓐᓂᖏᑦ ᑐᑭᖏᑦᑕᕌᖓᑕ, ᐊᖑᑏᑦ ᐃᕙᒃᑲᓐᓂᓲᖑᕕᑦ, ᓄᓕᐊᕙᔪᑦᑐᒍ ᐊᐃᑉᐸᓇᓚᐅᖅᑕᓂ ᑕᒫᓂᒃᑯᓂ ᓱᓕ ᐊᓯᐊᓂᐅᖏᑦᑐᖅ ᐊᓯᐊᓂᒃ ᐊᕐᓇᒥᒃ ᐊᐃᑉᐸᖃᓅᖅᑐᒥᒃ ᓄᓕᐊᔾᔭᖏᓐᓇᒥ (Hildén and Vuolanto 1972; Schamel *et al.* 2004b). ᑭᓯᐊᓂ, ᓲᕐᓗᐃᓪᒪ ᐃᕙᖃᑦᑕᖏᓪᒪᑕ ᐸᖅᑭᓇᓂᓕᓪᓗ ᕿᑐᕐᙵᓂ, ᐊᖑᑎᐅᑉ ᐊᐃᑉᐸᙱ ᐊᓯᐊᓄᐊᖅᓯᒪᕖᖅᑐᓵᐅᕗᖅ ᐊᐃᑉᐸᙱᓂᒃ ᐊᐃᑉᐸᖅᓯᐅᖅᑐᓂ (ᓇᓕᐊᑐᐃᓐᓇᖅ ᓯᕗᓂᕐᒥ ᐊᐃᑉᐸᖃᖏᑦᑐᕕᓂᕐᒥᒃ ᐊᓯᐊᓂᒡᓘᓐᓃᑦ ᐊᖑᑎᒥᒃ ᒪᓐᓂᖏᑦ ᑐᑭᓚᐅᖏᑦᑐᓂᒃ).

ᐊᖑᓇᓱᓐᓂᖅᓄᑦ ᒪᓐᓂᓐᓄᑦ ᑐᑭᕈᑕᐅᙱᖕᓃᖑᔪᖅ, ᐊᑦᑐᐃᓪᓗᑎᒃ ᐊᑯᓐᓂᖓᓂ 30 60 ᐳᓴᓐᓄᑦ ᐃᕙᕝᕕᓐᓂᒃ ᐊᕋᒍᑕᒫᑦ (Sandercock 1997; Walpole 2008b; Weiser *et al.* 2018). ᐃᕙᕝᕖᑦ ᐊᖑᓇᓱᒃᑕᐅᓂᖅᓴᐅᑐᐃᓐᓇᓂᐊᓖᑦ ᐊᕕᙱᑭᒃᑯᑎᒃ ᓲᖃᐃᒻᒪ ᐊᖑᓇᓱᒃᐉᑦ ᐱᔪᓐᓇᖏᑦᑕᕌᖓᒥᒃ ᓂᕿᑦᔪᒪᓂᖅᓴᒥᓂᒃ (ᐊᕕᙱᑦ), ᒪᓐᓂᓐᓂᒃ ᐱᓇᓱᙱᓲᖑᓪᒪᑕ ᑐᑭᖅᑐᕕᓂᖅᓂᓪᓗ. ᑕᐃᒪᐃᑦᑐᑦ ᑕᑯᔭᐅᓯᒪᔫᑦ ᐊᓯᓂ ᐅᑭᐅᖅᑕᖅᑐᒥ ᕿᑐᕐᖏᐅᕝᕕᐅᔪᓂ ᓯᔾᔭᒥᐅᓄᑦ ᐱᖃᓯᐅᑦᑐᑎᑦ ᓇᓄᒪᓱᖅᑐᑦ ᓇᓄᒪᓱᖅᑐᑦ ᑯᓄ ᓯᔾᔭᓇᐊᓪᓗ (Blomqvist *et al.* 2002) ᑭᓯᐊᓂ ᐳᐃᒍᔾᔭᐃᖅᓯᒪᓇᑎᒃ ᓇᓄᒪᓱᖅᑐᓂ.

ᓅᓐᓃᑦ

ᐊᖅᓇᐃᑦ ᐊᐅᑉᓪᓂᓯᒍᑦ ᓂᒋᔭᐊᓂ ᐊᖓᔪᖅ, ᐊᐅᑉᓪᓚᖓᑦᑐᑎᒃ ᐸᖅᑭᑉᓗᓂᑦ ᒪᑲᓂᑐᑦ ᖃᑐᖅᓯᒪᖓᑦ; ᒪᑲᓂᑐᑦ ᑭᖓᔪᑦᐸᐅᑉᓗᑎᒃ ᐊᐅᑉᓪᓗᓂᑦ (Rubega *et al.* 2000). ᓇᓕᒪᓂᖅᑐᑦ ᖃᖓᑕᓪᓂᒍᑦ 120-130 ᑭᓱᒥᑕᐸᐅᑉᓗᑎᒃ ᐊᐅᑉᓪᓗᓂᑦ (van Bemmelen *et al.* 2019). ᓇᓕᒪᓂᖅᑐᑦ ᓄᖅᑲᓂᒍᑦ ᓂᓚᓇᓂᑐᓄᓗ ᑕᖃᐃᖅᓂᖅᑐᓗ ᐊᑯᓂᐸᓗᒻᒧᑦ (ᓂᓪᓗ, ᐅᖓᑕᒃᓗ ᒪᑭᒃᑐ ᐅᑉᓄᒃ ᐅᖓᑕᒃᓗ) ᑕᐃᒪᐃᓚᓵᓂᖅᖁᐅᑉᓗᑎᒃ ᐅᑭᐊᖏᓴᑦ ᓄᑎᑉᓗᓂᑦ ᐅᐱᖅᓱᒥ ᓄᓵᓂᓄᑦ (van Bemmelen *et al.* 2019). ᐊᑕᖅᑭᑲᖏᑕᑐᑎᒃ ᓇᓕᒪᓂᖅᑐᑦ ᑕᓇᐅᖅᑎᐅᑕᐅᕗᑦ ᐅᑭᐊᖅᑎᒥᑦ ᑐᓴᕐᓂᒃ (Mercier and Gaskin 1985; Brown and Gaskin 1988). ᐃᓕᖅᑦ ᑎᒥᐊᖃᑎᒌᓂᑦ ᓄᓇᒃᓴᓂᒍᑦ ᓄᓇᓴᑦ ᐱᓇᓐᓇᖅᑐᑦ ᐊᑎᐊᓕᖅᑐᐊᒃ ᐅᐊᓐᓇᖅᓯᒪᔪᑦ, ᐅᓄᖅᑐᐊᓕᓇᐃᑦ ᑕᐅᐱᖅᑐᓂᑦ ᑕᓇᐅᑦ ᖃᓄᐃᓕᓐᓂᒃ ᓄᓇᐃᓐᓇᖅᑐᑦ ᑕᓇᐅᑦ (Rubega *et al.* 2000). ᑭᒃᓄᐊ ᓄᓇᐃᓐᓇᓱᒥ ᑎᑭᑦᑐᑦ ᓂᑭᖃᓕᕐᓂᖅᑕᖅᑐᓂᓪᓗ ᐃᓕᖅᑭᓐᓇᑦᑐᓗ ᐃᓕᓴᒥᓗ, ᑕᓕᒃᑭᓐ ᑕᓇᐅᖅᑎᑦ ᐃᓕᑦ, ᑭᓯᐊᓂᑦ ᑕᓇᐅᑦ ᖃᓄᐃᓕᓐᓂᒃ ᐃᓕᖅᑭᓐᓇᑦᑐᑦ ᑕᓇᐅᑦ (Page *et al.* 1999; Jehl 1986). ᐅᓄᓪᓚᑦᑐᓂᒃ ᑎᑭᓄᒃᓴᒥᑦ ᓴᓴᑦᑎᒃᓄᒃᓴᐊᓪᓚᑦ, ᐱᓗᐊᖅᑐᒥᒃ ᐅᐱᖅᑲᓴᒃᑯᑦ (Gratto-Trever *et al.* 2001). ᑕᓇᐅᖅᓯᓱᑦ ᑕᓄᑦ, ᐱᖅᓄᐅᑦᑐᑎᒃ ᒪᓇ ᑕᓄᖅ ᑕᓇᐅᖅ ᑕᓄᑦᓱᐊᖅᓗ, ᑲᓕᓂᐊᓂᐊᒥ ᓴᓪᓕᑐᑦ ᑕᓄᑦᓗ ᓴᓴᑦᑎᒃᓄᒃᓴᐊᓵᑦ, ᐅᓄᓗᐊᒪᓰᖅᑐᓗᓇᑦ ᐅᓪᓕᑦᑕᐅᓄᑦ ᓄᖅᑲᖅᓯᒪᔪᑦᑐᓗᓪᓗ (Jehl 1986; Beyersbergen and Duncan 2007; Frank and Conover 2019; A. McKellar ᓇᖕᒥᓂᖅ ᑐᓴᐅᒪᑎᑦᑎᓂᖅ). ᓄᓴᕆᐊᑦ ᓄᖅᑲᖅᓱᑦ ᑕᓇᐅᓂ ᑕᓄᑦᓂ ᓂᕈᑲᖅᓯᐅᑉᓱᓴᓪᓗ ᖃᓄᐃᓕᓐᓂᒃ ᐅᐱᖅᓯᒪᔪᓂᒃ ᐃᒥᓇᐊᖅᑐᓂᒃ ᐅᐊᓴᕆᐊᖅᑐᓂᒃ ᐅᐊᓴᕆᐊᖅᑐᓂᓪᓗ (Jehl 1986).

ᑲᓇᖅᓇᖅᒥ ᓄᓴᒥ, ᑲᖏᑦᓂᓄᐊᓂ ᕿᖅᑕᐃ, ᐊᑯᖅᓂᐊᓂ ᑯᓐ ᖁᑭᓄᐊ ᓂᐅ >ᕎᖅᓴᐃᖅᓗ ᓄᖅᑲᖕᓴᓪᓚᐊᓗᑕᖅᑐᑦ ᐅᑭᐊᖅᑎᓴᑦ ᑎᒍᐊᑦ ᑕᐃᑲᓂᑐᑎᒃ 11ᓂᑦ 22ᓄᑦ ᐅᓪᓗᓄᑦ (Mercier 1985; Hunnewell *et al.* 2016; van Bemmelen *et al.* 2019). ᑭᖅᓇᐅᑎᓪᓗᔪ, ᑎᒥᐊᑦ ᓂᕈᑭᖅᓂᐅᖅᓱᑦ ᐃᓕᑭᐊᖅᑐᓂᓪᓗᑐᓪᓗ ᐅᖅᓂᓂ 1 ᔪᕎᒥᒃ ᐅᓪᓗᓂᑦ (Mercier 1985). ᓄᑦᑐᑦ ᓇᓂᖅᓂᓄᑦ ᐱᓪᓕᓇᓂᑦ ᓇᓗᓇᐃᖅᓂᐊᓕᒍᑦ ᓂᓴᕆᐊᑦ ᓄᑦᑐᑦ ᑯᐊᑎᖅᑯᑦ ᑎᑎᒃᑦ ᓇᓕᐊᑐᐃᓇᐊᑦ ᐊᒥᐊᓕᑭᓐᓂᒃ ᐃᓕᓐᓂᐊᖅᑐᓂᒃ ᐅᐊᖅᓇᓂᓕᒍᑦ ᐊᓯᖏᑦᑐᑦ ᖃᑐᖅᓯᒪᔪᖅᑐᓂᓕᒍᑦ ᓄᓇᓕᓂᓕᒍᑦ (Smith *et al.* 2014; van Bemmelen *et al.* 2019).

ᖃᑐᖅᓯᒪᔪᖅᑐᑦ

ᑎᒥᐊᖏᖅᑎᑦᑎᓂᑦ ᐅᑭᐱᑦ ᑕᓇᐅᖅᓂᓗ. ᐅᑭᐱᑦ ᑎᒥᐊᑦ ᐅᐸᔪᓕᑐᐃᓚᐊᖅᑐᖅᑐᑦ ᐅᐊᖅᓇᓂᓄᐊᖅᑐᑦ ᐃᓕᖅᑭᓐᓇᑦᑐᑦ ᐅᑭᐊᖅᑎᓴᑦ ᓄᑦᑐᑎᒃ ᐸᓪᓕᒃ ᓄᖅᑲᖅᓯᒪᔪᓂᒃ ᐊᒥᐊᓕᑭᓐᓂᒃ ᐅᐱᖅᓯᒪᔪᓂᒃ ᐅᓪᓗᓂᑦ (van Bemmelen *et al.* 2019). ᓇᓕᒪᓂᖅᑐᑦ ᓂᕈᑭᖅᓂᐅᖅᓱᑦᑕᖅᑐᑦᑕᖅᖁᓪᓗ ᐃᓕᑦ ᐃᑎᐊᓂᒃᑯᑦᑕᖅᖁᓪᓗ ᓄᖅᑲᐃᓕᓐᓂᒃ ᐃᓕᑦ ᐃᑎᐊᓂᓕᒫᓂᖅᑐᑦ (Haney 1985). ᓄᑎᓪᓗᓂᑦ, ᒪᓕᓪᓗᔪ ᐊᑦᓪᓚᑎᒃ ᓄᖅᑲᖅᓱᒃ, ᓂᕈᓄᐅᑉᓗᑎᒃᖁᐅᑉᓗᑎᒃ *Sargassum* ᐃᖅᓄᖓᑦ, ᖃᐅᔨᖅᑕᑦ ᑲᑎᒪᔨᖅᑐᓂ (Haney 1986; Moser and Lee 2012).

ᓂᕈᖅᑦ

ᓇᓕᒪᓂᖅᑐᑦ ᓂᓚᓪᓗᐊᑕᓂᑦ ᐃᒪᖅᑎᑕᓂᒃ ᖃᐅᔨᖅᑐᓂᒃ, ᑭᖑᔪᓴᓪᓗᑎᒃ, ᐊᓇᖏᑦ ᖃᑎᖅᑭᓪᓚᖅᑦ, ᐊᓂᓂᓪᓗ ᖃᐅᔨᖅᑐᓂᒃ, ᐊᓇᖏᓪᓚᖅᑦ ᑐᓴᕐᓂᒃ ᑕᓇᐅᖅᑎᑦᑎᓂᑦ (Rubega *et al.* 2000). ᑕᓂᓪᓂᑎᓪᓚᑦᑐᑦ ᐃᒪᓐᓇᐅᓂ ᖃᑐᖅᓯᒪᔪᖅᑐᓂᒃ ᓂᓚᓪᓗᐊᑕᖅᑐᓂᓪᓗ ᑭᓯᐊᓂᒃ ᓄᓇᓕᓂᒃ ᑕᓇᐅᖅᑎᑦᑎᓂᑦ ᐃᓕᓐᓂᐊᖅᑐᑦ ᐃᓕᓐᓂᐊᖅᑐᑦ ᐃᓕᓐᓂᐊᖅᑐᑦ

Hildén and Vuolanto 1972). ᑲᖏᖅᑐᐊᓂ ᕿᓐᑕᐃ, ᓂᐅ ᐳᕆᓴᖅ, ᓄᓴᕆᐊᑦ ᓄᑦᑐᑦ ᑕᕆᐅᕗᑦ ᓂᕆᓚᓴᕐᑐᑦ ᓂᕆᓐᑎᐊᕿᓐᓄᑦ ᐅᓄᓪᓕᓄᓪᓗ ᑭᖑᓐᓄᑦ, *Calanus finmarchicus,* ᓂᖏᓪᓗᐊᑕᕆᓪᓗᑎᑦ (Mercier and Gaskin 1985). ᓄᓇᕗᑦ ᓄᑎᓪᓗᑎᑦ ᒪᓄ ᑕᓄᓕᒥ ᑲᓂᐅᐊᓂᐊ, ᑕᕆᐅᓕᒥᐅᑦ ᐊᓇᖏᑦ 90%ᓄᑦ ᓂᖏᑎᕿᐃᑦ (Jehl 1986). ᑕᕆᐅᓕᒥᐅᑦ ᑭᖑᓕᐸᐃᑦ ᐊᑐᐃᓇᐅᑎᑦᐊᕆᓚᐊᖅᑐᑎᑦ ᑕᕐᕿᓂ ᑕᕆᐅᓕᒥ, ᑕᕆᐅᒥᐅᑦ ᑭᖑᓕᐸᑦ ᓂᖏᑎᐊᕿᐅᖏᓪᓂᓴᖅᐅᓂᒃ ᑕᕆᐅᖏᒥᐅᑦ ᐊᓇᖏᑎᓂ ᓇᓚᒥᓗᐊᓪᓚᐅᓂᓚ ᐃᓕᓴᕐᓂᒃᑕᑦᑕᖏᓚ (Jehl 1986). ᓂᖏᑐᐊᖃᕈᑎᒃ ᑕᕆᐅᖏᒥᐅᑦ ᑭᖑᓕᐸᓂᒃ, ᓇᓚᒧᓴᖅᑐᑦ ᓴᓚᑎᕐᐸᕐᓂᐊᖅᑐᓂᓪᓚᐅ ᑐᓴᒪᓂᐅᑐᐃᓇᖅᑐᑦ ᑐᓴᐃᓴᖅᑐᑦ (Rubega and Inouye 1994). ᓄᑎᓪᓚᑦ ᓴᖅᑲᒧᑦ ᓴᖅᑲᓕᒥ ᑭᐊᕈᓕᐃᓇ ᐅᐊᖅᓚᖑᑕ, ᓄᓚᓪᓕᓴᕐᓄᑦ ᖃᓄᐅᑎᓄᑦ *Sargassum* ᐃᖏᓄᑎᑦ ᑕᕆᐅᖅᑭᓇᒥ ᓂᓚᓪᓚᐊᑕᖃᑦᑕᖅᑐᑦ ᓴᐃᓴᓴᑦ ᑭᖑᓕᐸᓂᒃ (*Latreutes fucorum*) ᐊᓕᒪ ᐅᒪᔪᐃᑦ ᐊᐢᓀᖅᑭᐊᖏᓪᓂᖅᑭᑦ ᐳᓪᓚᓪᓐᑦ (*Litiopa melanostoma*) ᐃᓚᒋᖏᐅᔪᑦ *Sargassum* ᐃᖏᓄᑎᓄᑦ (Moser and Lee 2012).

ᓄᓴᕆᐊᑦ ᖃᓴᓂᒃ ᐅᓴᑭᐊᓇᖅᑐᓂᒃ ᓂᓚᓇᓄᑎᖃᖏᒪᑕ. ᓇᓘᒪᓂᑐᑦ ᑭᓄᕿᑦᑐᑎᒃ ᓂᓚᓇᓄᒃᑕᒥᓂᒃ ᐃᒧᓂᑦ, ᐊᑐᖅᑐᒍ ᐃᒥᐅᐸᑦ ᒥᓗᓄᑎᓂᖓᓴ ᑭᕕᒍᑎᑕᓴᒍ ᓂᓚᓇᓄᑦᑕᓂ ᐃᒥᖏᒥ ᔪᓄᒥ ᖁᓘᒥ ᓄᓴᒥᓗᓂᑦ, ᓄᓴᒍᓂ ᒪᑐᐃᖏᓪᓗᐊᑦᑐᓂᒃᑐᒍ ᔪᓚᑎᑦᑕᓂᒃᑐᒍ ᐊᒥᐊᑎᑦ ᐃᒥᖅ (Rubega and Obst 1993). ᖁᔪᐱᖅᑕᖅᖃᑎᖏᑦᑕᕆᓚᑦ ᐃᒪᐅᐸᑦ, ᓇᓗᒪᓄᖅᑐᑦ ᐅᐃᓴᓄᓯᕕᐅᑦ ᐅᐃᓴᓄᑦᑐᑦ ᐱᖓᔪᐊᖅᑐᑦ ᖁᔪᓗᒥ ᐃᖏᖅᑕᓂᓕᕆᓚᑦ. ᑕᓐᓇ ᐃᓂᔪᕐᓂᖅ ᑲᑎᑎᓕᖅᑐᑦ ᓂᓚᓂᐊᖅᑕᒥᓂᒃ ᐃᒪᐅᐸᑦ 50 ᓄᐊᓐᑕᒋᑕᓂᑦ ᐃᑎᓕᓐᓂᑦ (Obst *et al.* 1996). ᐊᑐᓂ ᑎᓪᒥᐊᑦ ᐱᖅᑯᓄᖅᑐᐅᑦ, ᐅᐃᓴᖓᓐᓇᐅᓴᖅᑐᑎᒃ ᓇᓕᐊᑐᐊᔪᒥᑦ ᑐᑦᖅᑐᑎᒃ (Rubega *et al.* 2000). ᓂᓚᓇᓄᓕᖅᓚᒥ ᖃᓂᒋᓴᖓᓐᓂ *Sargassum* ᐃᖏᓄᓂ, ᑎᓪᒥᐊᑦ ᐳᓄᖃᑦᑕᖅᑐᑦ ᓂᓚᓂᐊᖅᑕᒥᓂᒃ ᐃᖏᓄᑎᓂᑦ, ᐅᐃᓴᖅᓴᓇᑎᒃ (Moser and Lee 2012).

4. ᐅᓗᕆᐊᓇᖅᑐᑦ

4.1. ᐅᓗᕆᐊᓇᖅᑐᓂᒃ ᕿᒥᕐᕈᓃᑦ

ᓇᓘᒪᓱᖅᑐᓄᑦ ᐅᓗᕆᐊᓇᕐᓂᕐᓄᑦ ᕿᒥᕐᕈᓂᖅ ᑐᙵᕕᖅ IUCN-CMP (ᓄᓇᕐᔪᐊᕐᒥ ᓄᖑᔾᔭᐃᖅᓯᓂᕐᓄᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ-ᓄᖑᔾᔭᐃᖅᓯᓂᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ) ᑲᑎᙶᕙᔪᓄᑦ ᐅᓗᕆᐊᓇᕐᓂᕐᓄᑦ ᑲᑎᙶᕙᔪᓅᖅᓯᓕᕆᓂᕐᓄᑦ. ᐅᓗᕆᐊᓇᕐᓃᑦ ᓇᓗᓇᐃᖅᑕᐅᔪᑦ ᑕᕝᕙᙵᑲᐅᑎᒋᒥᑦ ᐱᓕᕆᓂᖅᑎᑐᑦ ᐱᓕᕆᔾᔪᓯᖅᑐᓪᓘᓐᓃᑦ ᐃᒪᐃᑎᓯᒪᔪᑦ, ᐃᒪᐃᑦᑎᔪᑦ ᐃᒪᐃᑦᑎᑐᐃᓐᓇᕆᐊᖃᖅᑐᓪᓘᓐᓃᑦ ᓯᕗᓂᕐᒥ ᓱᕋᒃᑕᐅᓂᕐᓄᑦ, ᓱᕋᐃᓂᕐᓂᒃ, ᐱᐅᔫᓐᓃᖅᑎᑦᑎᓂᕐᓂᒃ, ᐊᒻᒪᓗ ᐅᕝᕙᓘᓐᓂᑦ ᐊᔪᓕᖅᑎᑦᑎᓂᖅ ᐆᒪᔪᒥᒃ ᐅᐊᔅᓯᔭᐅᔪᒧᑦ (ᐅᓄᕐᓂᖏ, ᑎᒻᒥᐊᕐᖑᖃᑎᒌᑦ, ᓄᓇᓕᙵ ᐆᒪᔫᖃᑎᒌᒡᕚᑦ) ᖃᐅᔨᓴᐅᓇᓱᑦᑐᓄᑦ (ᓄᓇᕐᔪᐊᕐᒥ, ᓴᕙᒪᖃᑎᒌᓂ, ᐊᕕᔅᓯᒪᔪᓂᓘᓐᓃᑦ ᓴᕙᒪᓄᑦ). ᐱᕕᑮᔾᔪᑕᐅᔪᑦ ᐃᓱᒪᒋᔭᐅᖏᑦᑐᑦ ᑕᕝᕙᓂ ᕿᒥᕐᕈᓯᓐᓂ. ᕿᒪᒃᑕᑦᑎᓐᓂ ᐅᓗᕆᐊᓇᖅᑐᕕᓃᑦ, ᑕᕝᕗᖓᑲᐅᑎᒋᐅᖏᑦᑐᖅ ᑲᑎᑉᐸᓪᓕᐊᔪᓪᓘᓐᓂᑦ ᐊᑦᑐᐃᓅᑦ ᐅᓗᕆᐊᓇᖅᑐᑦ, ᓇᓕᐊᑐᐃᓐᓇᓪᓘᓐᓃᑦ ᐊᑑᑎᓖᑦ ᖃᐅᔨᒪᔭᐅᔪᑦ ᑐᑭᓯᔾᔪᑕᐅᔪᓐᓇᖅᑐᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓂᒃ ᐅᓗᕆᐊᓇᖅᑐᑦ ᐅᖃᐅᓯᕆᓴᐅᕗᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᑦ ᐅᓗᕆᐊᓇᖅᑐᓂᒃᑯᕕᒻᒥ.

ᓇᓗᓇᐃᖅᓯᒪᔪᑦ 2: ᐅᓗᕆᐊᓇᖅᑐᓂᒃ ᖃᐅᔨᓴᐅᑎᒧᑦ ᕿᒥᕐᕈᓂᖅ

ᐅᓗᕆᐊᓇᖅᑑᑉ ᓇᐃᓴᐅᑐᖓ	ᐅᓗᕆᐊᓇᖅᑑᑉ ᖃᓄᐃᓕᖓᓂᖓ	ᐊᑦᑐᐃᓂᖅ [a]	ᐊᖏᓂᖓ [b]	ᐊᔅᓱᕈᕐᓂᖓ [c]	ᖃᖓᒃᑯᑦ [d]
7	ᓄᓇᒥᐅᑦ ᐃᓕᖅᑯᓯᖏᓐᓂᒃ ᐊᓯᔾᔨᓅᑦ	ᓇᓗᔭᐅᔪᖅ	ᒥᑭᑦᑐᖅ (1-10%)	ᓇᓗᔭᐅᔪᖅ	ᐳᖅᑐᔪᖅ (ᑲᔪᓯᔪᖅ)
7.2	ᓴᐳᒻᒋᑦ ᐃᒥᖕᒥᓗ ᐊᐅᓚᑕᐅᓂᖏᑦ/ᐊᑐᖅᑕᐅᓂᖏᑦ	ᓇᓗᔭᐅᔪᖅ	ᒥᑭᑦᑐᖅ (1-10%)	ᓇᓗᔭᐅᔪᖅ	ᐳᖅᑐᔪᖅ (ᑲᔪᓯᔪᖅ)
8	ᑕᒫᓂᕐᒥᐅᑕᐅᖏᑦᑐᑦ ᑎᑭᑦᑐᑦ ᐊᑲᐅᙱᓕᐅᕈᑕᐅᓲᓪᓗ ᖃᓂᒪᓇᖅᑐᑦ ᓯᕗᓂᕐᒥᓪᓗ ᑎᒥᓕᐅᕈᑏᑦ	ᐳᑉᑭᑦᑐᖅ	ᒥᑭᑦᑐᖅ (1-10%)	ᐊᑯᓂᖅᓱᖅᑐᖅ (11-30%)	ᐳᖅᑐᔪᖅ (ᑲᔪᓯᔪᖅ)
8.2	ᐊᑲᐅᙱᓕᐅᕈᑏᑦ ᑕᒫᓂᕐᒥᐅᑦ ᐱᕈᖅᑐᑦ ᓂᕐᔨᑎᓗ	ᐳᑉᑭᑦᑐᖅ	ᒥᑭᑦᑐᖅ (1-10%)	ᐊᑯᓂᖅᓱᖅᑐᖅ (11-30%)	ᐳᖅᑐᔪᖅ (ᑲᔪᓯᔪᖅ)
9	ᓱᕈᐃᓃᑦ	ᐊᑯᓂᖅᓱᖅ	ᓇᓂᕈᓘᔭᖅᑐᑦ (71-100%)	ᐊᑯᓂᖅᓱᖅᑐᖅ (11-30%)	ᐳᖅᑐᔪᖅ (ᑲᔪᓯᔪᖅ)
9.2	ᐴᒪᔫᖃᑎᒌ	ᓇᓗᔭᐅᔪᖅ	ᐱᕙᑭᑎᑕᐅᔪᖅ (11-30%)	ᓇᓗᔭᐅᔪᖅ	ᐳᖅᑐᔪᖅ (ᑲᔪᓯᔪᖅ)
9.4	ᓴᓂᑦ ᑎᓯᔪᓪᓗ ᓱᕈᑦ	ᐊᑯᓂᖅᓱᖅ	ᓇᓂᕈᓘᔭᖅᑐᑦ (71-100%)	ᐊᑯᓂᖅᓱᖅᑐᖅ (11-30%)	ᐳᖅᑐᔪᖅ (ᑲᔪᓯᔪᖅ)
9.5	ᓯᓚᒃᑰᖅᑐᑦ ᓱᕈᑦ	ᓇᓗᔭᐅᔪᖅ	ᓇᓂᕈᓘᔭᖅᑐᑦ (71-100%)	ᓇᓗᔭᐅᔪᖅ	ᐳᖅᑐᔪᖅ (ᑲᔪᓯᔪᖅ)

ᐅᓗᕆᐊᓇᖅᑑᑉ ᓇᐃᓴᐅᑐᖓ	**ᐅᓗᕆᐊᓇᖅᑑᑉ ᖃᓄᐃᓕᖓᓂᖓ**	**ᐊᑦᑐᐃᓂᖅ** [a]	**ᐊᖏᓂᖓ** [b]	**ᐊᒃᓱᕈᕐᓂᖓ** [c]	**ᖃᖓᒃᑯᑦ** [d]
11	ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓ	ᐊᑯᓐᓂᖅᓱᖅ	ᓇᓂᕈᓘᔮᖅᑐᑦ (71-100%)	ᐊᑯᓐᓂᖅᓱᖅᑐᖅ (11-30%)	ᐳᖅᑐᕙᖅ (ᑲᔪᓯᕙᖅ)
11.1	ᐆᒪᔪᕐᖃᑎᒌᒃᑲᐅᔪᓄᑦ ᐅᐸᒃᑕᐅᓃᑦ	ᐊᑯᓐᓂᖅᓱᖅ	ᓇᓂᕈᓘᔮᖅᑐᑦ (71-100%)	ᐊᑯᓐᓂᖅᓱᖅᑐᖅ (11-30%)	ᐳᖅᑐᕙᖅ (ᑲᔪᓯᕙᖅ)
11.3	ᐊᓯᔾᔨᕐᓃᑦ ᓯᓚᐅᑉ ᐅᖅᑰᓂᕆᖃᑦᑕᖅᑕᖏᓐᓂ ᓂᒡᓚᓱᓐᓂᕆᖃᑦᑕᖅᑕᖏᓐᓂᓗ	ᓇᓗᓴᐅᔭᖅ	ᓇᓂᕈᓘᔮᖅᑐᑦ (71-100%)	ᓇᓗᓴᐅᔭᖅ	ᐳᖅᑐᕙᖅ (ᑲᔪᓯᕙᖅ)
11.4	ᐊᓯᔾᔨᕐᓃᑦ ᒪᕐᑯᑦᑐᓂ ᖃᓐᓂᖅᑐᓂ ᐃᒦᓪᓗ ᐃᓚᖅᑯᓯᖏᓐᓂ	ᓇᓗᓴᐅᔭᖅ	ᐱᕚᕆᑎᑕᐅᔭᖅ (11-30%)	ᓇᓗᓴᐅᔭᖅ	ᐳᖅᑐᕙᖅ (ᑲᔪᓯᕙᖅ)
11.5	ᐱᓗᐊᖅᑐᑦ/ᓯᓚᓗᕈᓗᔭᓗᐊᒫᔮᑦ	ᓇᓗᓴᐅᔭᖅ	ᓇᓗᓴᐅᔭᖅ	ᓇᓗᓴᐅᔭᖅ	ᐳᖅᑐᕙᖅ (ᑲᔪᓯᕙᖅ)

[a] **ᐊᒃᑯᐃᓂᖅ** – ᖃᓄᑎᒋᒧᑦ ᐆᒪᔩᑕᑎᓕᑦ ᑕᑯᔭᐅᔪᑦ, ᑕᐃᒪᐃᓐᓇᓱᕆᔭᐅᔪᑦ, ᑲᖏᕆᔭᐅᔪᓪᓘᓐᓃᑦ ᑖᕝᕗᖓᑲᐅᑎᒋ ᑖᕝᕗᖓᑲᐅᑎᒋᐅᖏᑦᑐᕐᓘᓐᓃᑦ ᐅᓗᕆᐊᓇᕐᓂᕐᑏᑎᑕᐅᕙᑦ ᑐᑭᓯᔭᐅᔪᒪᔪᒧᑦ. ᐊᑦᑐᐃᓂᖅ ᐊᑐᓂ ᐅᓗᕆᐊᓇᖅᑐᒧᑦ ᑐᙵᔪᖅ ᐊᒃᓱᕈᕐᓂᖓᓄᑦ ᐊᖏᓂᖓᓄᓪᓗ ᐳᕐᑯᑐᓂᓕᐅᕐᓂᕐᓄᑦ ᐃᓱᒪᒋᓪᓗᒋᓪᓗ ᐅᑯᐊᑐᐊᖅ ᒫᓇᒥ ᓯᕗᓂᕐᒥᓗ ᐅᓗᕆᐊᓇᖅᑐᑦ. ᐅᓗᕆᐊᓇᖅᑐᑦ ᐊᑦᑐᐃᓂᖏᑦ ᓴᖅᑮᖅᑎᑦᑎᕗᑦ ᐅᓄᕈᓐᓂᕐᓂᖏᓐᓂᒃ ᐆᒪᔩᖃᑎᒋᑦ ᐅᓄᕐᓂᖏᓐᓂᒃ ᐅᖓᓗᓐᓃᑦ ᐅᓄᕈᓐᓂᕐᓂᖅᓴᐅᓚᕐᓂᕐᓂᒃ/ᐱᐅᔪᓐᓃᖅᑎᑕᐅᓂᖏᓐᓂᒃ ᐃᓂᖓᓂ ᐆᒪᔩᖃᑎᑲᐅᔩᑉ. ᖃᓄᑎᒋᐅᓚᔪᖕᓂᖓ ᐅᓄᕈᓐᓂᕐᓃᑦ ᐃᓂᒋᓴᐅᔪᓂᓘᓐᓃᑦ ᐅᓄᕈᓐᓂᕐᓂᖅᓴᐅᓗᑎᒃ. ᐅᓄᕈᓐᓂᕈᑕᐅᓚᔪᖅᑐᑦ ᐃᓃᓪᓘᓐᓃᑦ ᐅᓄᕈᓐᓃᕝᕙᐅᔪᑦ ᐊᑐᓂ ᑲᑎᙵᓚᔪᓄᑦ ᐊᖏᓂᖅᑎᒎᑦ ᐊᒃᓱᕈᕐᓂᖓᓄᓪᓗ ᒪᓕᑉᐳᑦ ᑲᒃᑯᓄᖓ ᐊᕙᔅᓯᒪᔪᓄᑦ ᐅᓗᕆᐊᓇᕐᓃᑦ ᐳᖅᑐᓂᖏᓐᓄᑦ. ᐳᖅᑐᔪᓪᓛᓗᒃ (75% ᐅᓄᕈᓐᓃᖅᑐᑦ), ᐳᖅᑐᔪᖅ (40%), ᐊᑯᓐᓂᖅᓱᖅᑐᖅ (15%), ᐳᒃᑭᑦᑐᕐᓗ (3%). ᓇᓗᓇᐅᔪᖅ: ᐊᑐᖅᑕᐅᔪᖅ ᐊᑦᑐᐃᓂᖅ ᓇᓗᓇᐃᖅᑕᐅᔪᓐᓇᖏᒃᑯᓂ (ᐆᒃᑑᑎᒋᓗᒍ, ᐊᑭᖏᑦ ᓇᓕᐊᕐᓄᑐᐃᓐᓇᖅ ᐱᓕᕆᐊᒃᓴᒧᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐱᕐᔪᐊᖅᑐᒧᑦ, ᖃᐅᔾᒪᔭᐅᙱᑦᑐᖅ); ᑲᑎᖅᓱᖅᑕᐅᓯᒪᙱᑉᐸᑦ: ᐋᒃᑐᐃᓂᖓ ᖃᐅᔾᔭᐅᓯᒪᙱᑦᑐᖅ ᐊᑦᑕᕐᓇᕐᓂᖓ ᖃᐅᔾᔮᖅᑕᐅᓂᐅᑉ ᐱᕚᒃᓴᖓᑕ ᓯᓚᑖᓃᓪᒪᑦ (ᓛᕐᓗ ᖃᖓᒃᑯᖓ ᐋᑐᑎᖃᖏᒃᑯᓂ/ᒥᑭᓗᐊᖅᐸᑦ ᐳᒃᑮᓗᓂᓘᓐᓃᑦ ᐅᓗᕆᐊᕐᓂᖅ ᐃᓱᒪᒋᔭᐅᓯᒥ ᕿᒪᑦᑕᑦᑎᓐᓂᑦᑐᑦ); ᒥᑭᓗᐊᖅᑐᖅ: ᐊᖏᓂᖓ ᐊᒃᓱᕈᕐᓂᖓᓗ ᒥᑭᓗᐊᕈᑎᒃ; ᐅᓗᕆᐊᓐᖏᑦᑐᖅ: ᐊᒃᓱᕈᕐᓂᖓ ᓇᓗᓇᐃᖅᑕᐅᒍᓂ ᓄᖅᑲᖓᔪᑦ ᐃᑲᔫᑕᐅᑐᐃᓐᓇᕆᐊᖃᕐᓗᓂᓘᓐᓃᑦ.

[b] **ᐊᖏᓂᖓ** – ᖃᓄᑎᒋᒧᑦ ᑎᒥᒥᐊᖑᖃᑎᒌᑦ ᓂᕆᐅᒋᔭᐅᔪᓐᓇᖅᑐᑦ ᐊᑐᖅᑕᐅᓂᐊᕐᓂᕐᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒧᑦ ᐃᓗᐊᓂ 10 ᐊᕐᕌᒍᑦ. ᓇᐃᓴᖅᑕᐅᓚᔪᑦᑐᑦ ᐃᓚᒋᓴᐅᓪᓗᑎᒃ ᑎᒥᒥᐊᖃᑎᒌᑦ ᐅᓄᕐᓂᖏᓐᓂᑦ ᖃᐅᔨᓴᐅᓇᓱᑦᑐᓄᑦ (ᓇᓂᕈᓘᔮᖅᑐᑦ = 71–100%; ᐊᖏᔪᖅ = 31–70%; ᐱᕚᕆᑎᑕᐅᔭᖅ = 11–30%; ᒥᑭᑦᑐᖅ = 1–10%; ᐊᑑᑎᖃᙱᑦ < 1%).

[c] **ᐊᒃᓱᕈᕐᓂᖓ** – ᐊᖏᓂᖓᑕ ᐃᓗᐊᓂ, ᓱᕋᓐᓂᖓ ᑎᒥᒥᐊᖑᓕᑏᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒥᑦ ᓂᕆᐅᒋᔭᐅᔪᓐᓇᖅᑐᒧᑦ ᐃᓗᐊᓂ 10 ᐊᕐᕌᒍᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐱᖓᓱᑦ ᑭᖑᕚᕆᑦ ᐃᓗᐊᓂ. ᓇᐃᓴᖅᑕᐅᓚᔪᑦᑐᑦ ᐅᓄᕈᓐᓃᖅᐸᓪᓕᐊᓂᖓᑦ ᑎᒥᒥᐊᖑᖃᑎᒌᑦ' ᐅᓄᕐᓂᖏᓐᓂᑦ. (ᓴᙱᓗᐊᒫᔮᖅᑐᖅ = 71–100%; ᐅᓗᕆᐊᓐᓚᑦᑐᖅ = 31–70%; ᐊᑯᓐᓂᖅᓱᖅᑐᖅ = 11–30%; ᒥᑭᑦᑐᖅ = 1–10%; ᐊᑑᑎᖃᙱᑦ < 1%; ᓄᖅᑲᖓᔪᖅ ᐃᑲᔫᑕᐅᑐᐃᓐᓇᕆᐊᖃᑐᕐᓗᓐᓃᑦ ≥ 0%).

[d] **ᖃᖓᒃᑯᑦ** – ᐳᖅᑐᒧᖅ = ᑲᔪᓯᕙᖅ; ᐊᑯᓐᓂᖅᓱᖅᑐᖅ = ᓯᕗᓂᕐᒥ ᑭᓯᐊᓂ (ᑕᐃᒪᐃᑦᑐᓴᖅᑐᖅ ᖃᖓᑦᑎᐊᒥ [<10 ᐊᕐᕌᒍᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐱᖓᓱᑦ ᑭᖑᕚᕆᑦ]) ᐅᕝᕙᓘᓐᓂᑦ ᓄᖅᑲᖅᑎᑕᐅᔪᖅ ᒫᓇ (ᐅᑎᖅᑎᑕᐅᑐᐃᓐᓇᕆᐊᓕᒃ ᖃᖓᑦᑎᐊᒥ); ᐳᒃᑭᑦᑐᖅ = ᓯᕗᓂᕐᒥ ᑭᓯᐊᓂ (ᑕᐃᒪᐃᑦᑐᓴᖅᑐᖅ ᐊᑯᓂᒥ) ᐅᕝᕙᓘᓐᓂᑦ ᓄᖅᑲᖅᑎᑕᐅᔪᖅ ᒫᓇ (ᐅᑎᖅᑎᑕᐅᑐᐃᓐ ᐊᑯᓂᒥ); ᐊᑑᑎᖃᙱᑦᑐᖅ /ᐊᑑᑎᖃᙱᑦ = ᕿᒪᑦᑕᑦᑎᓐᓂ ᑭᓯᐊᓂ ᐅᑎᕝᔫᔪᒃᓴᐅᓇᓂ, ᐅᕝᕙᓘᓐᓃᑦ ᐊᑦᑐᐃᑲᐅᑎᒋᖏᑦᑐᖅ ᑭᓯᐊᓂ ᐱᕚᖃᕝᕚᑭᑦᑐᖅ.

4.2. ᓇᓄᓇᐃᖅᓯᓃᑦ ᐅᓄᕆᐊᓇᖅᑐᓂᒃ

ᐃᓄᐃᑦᑐᒃᑯᑦ ᐅᓄᕆᐊᓇᕐᓂᕐᓄᑦ ᕿᒥᕐᕈᓂᕐᒥᑦ ᖃᐅᔾᔭᐅᖅ ᐊᑯᓂᖅᓱᖅᑐᑦ. ᑭᓱᓪᓚᑦᒑᓄᑦ ᓇᓘᒪᓱᖅᑐᑦ ᐅᓄᕈᓐᓃᕈᑎᖏᑦ ᓇᓄᔭᐅᔪᑦ ᑭᓯᐊᓂ ᐅᓄᕈᓐᓂᕐᓃᑦ ᑕᐃᒪᐃᑎᑕᐅᔫᒃᓴᐅᔪᑦ ᑲᑎᑦᑐᓄᑦ ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖏᓐᓄᑦ ᓱᕈᓂᓪᓗ. ᓯᓚᐃᑦ ᐊᓯᔾᔨᕐᓂᖏᑦ ᐅᓄᕆᐊᓇᖅᑐᖅ ᐃᓂᒋᔭᐅᔪᓄᑦ ᕿᑐᕐᖏᐅᕝᕙᓐᓂ ᐊᑦᑐᐃᓪᓗᑎᓪᓗ ᓂᕿᒃᓴᖅᑕᖃᕈᓐᓇᕐᓂᕐᓂᒃ. ᑕᕆᐅᕐᒦᒐᔪᑦᑐᐊᓘᒻᒪᑕ ᐃᓅᓯᐊᓂ ᐊᑯᓂᒧᑦ, ᑭᓂᖅᑐᑦ ᐊᐅᒃᑕᔫᓂᓪᓗ ᓱᕈᐃᑦ ᑕᒪᒃᑮᑦ ᐊᑦᑐᐃᕗᑦ ᑎᒻᒥᐊᙳᖃᑎᒌᓂᒃ. ᐊᓯᖏᑦᑕᐅᖅ ᒥᑭᑦᑐᑦ ᐅᓄᕆᐊᓇᖅᑐᑦ ᐱᖅᓯᐅᔾᔨᕗᑦ ᐃᒦᑦ ᐳᖅᑐᓂᖏᓐᓂᒃ ᓄᖅᑲᕝᕙᐅᓲᓂ ᑕᓯᕐᓂ ᑕᐃᒪᐃᑎᑕᐅᓪᓗᑎᒃ ᒪᕐᑯᖃᑦᑕᖏᓐᓂᕐᓄᑦ ᐃᒦᓪᓘᓐᓃᑦ ᐊᐅᓚᑕᐅᑎᐊᖏᓐᓂᖏᓐᓄᑦ, ᒨᑯᕆᒧᑦ ᓱᕈᐃᓂᕐᓄᑦ, ᐃᓂᖏᓐᓄᓪᓗ ᐱᐅᔪᓐᓂᖅᑎᑕᐅᓂᕐᓄᑦ ᑲᙳᓄᑦ (*Chen caerulescens*) ᕿᑐᕐᖏᐅᕝᕙᐅᔪᓂ. ᐅᓄᕆᐊᓇᖅᑐᑦ ᐊᑦᑐᐃᑐᐃᓐᓇᕆᐊᓖᑦ ᑎᒻᒥᐊᙳᖃᑎᒋᓂᒃ 10 ᐊᕐᕌᒍᑦ ᐃᓄᐊᓂ ᓇᓄᓇᐃᖅᑕᐅᔪᑦ ᐳᒃᑭᑦᑐᑦ, ᐳᖅᑐᓛᒥᑦ ᐳᒃᑭᑦᑐᒧᑦ ᐊᑦᑐᐃᓂᕐᓂᑦ. (ᓇᓄᓇᐃᖅᓯᒪᔪᑦ 2).

11. ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓ (ᐊᑦᑐᐃᓂᖅ: ᐊᑯᓐᓂᖅᓱᖅ)

11.1 ᐆᒪᔫᖃᑎᒌᕝᕙᐅᔪᓄᑦ ᐅᐸᑦᑕᐅᓃᑦ: (ᐊᑦᑐᐃᓂᖅ: ᐊᑯᓐᓂᖅᓱᖅ)

ᑕᐃᒪᐃᓐᓂᐊᕐᓂᖏᑎᑐᑦᑕᐅᖅ ᐅᓄᖅᑐᑦ ᕿᑐᕐᖏᐅᖅᑐᑦ ᑎᒥᐊᑦ, ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓ ᐊᓯᔾᔩᓪᓚᙱᓂᐊᖅᑐᖅ ᐃᓂᖃᕈᓐᓇᕐᓂᕐᓄᑦ ᓇᓘᒪᓱᖅᑐᓄᑦ. ᐊᒥᐊᓕᒃᑲᐅᑉ ᐅᐊᖕᓇᖓᓂ, ᓯᓚᐃᑦ ᓇᓂᓪᓗᐊᑕᒻᒧᑦ ᐋᖅᑭᙳᐊᖅᑕᐅᔪᓄᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᑦ ᐅᖓᑖᓂ 90% ᒫᐊᓐᓇᐅᔪᖅ ᕿᑐᕐᖏᐅᕝᕕᖏᑦ ᐊᑐᒐᒃᓴᐅᔪᓐᓇᓛᖏᑦᑐᑦ ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓᓄᑦ 2070ᒥ (Wauchope *et al.* 2017). ᑕᐃᒪᐃᑦᑐᐸᓗᐃᑦ ᐊᓯᔾᔨᕐᓃᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᓚᐅᕐᒥᔪᑦ ᖃᓐᑎᓇᐃᕙᐊᒥ (Virkkala *et al.* 2008). ᑭᓯᐊᓂ, ᑎᒥᐊᙳᖃᑎᒌᖏᑕ ᐃᓚᖏᑦ ᐊᓯᐊᓄᐊᕈᓇᑐᐃᓐᓇᕆᐊᓖᑦ, ᐱᓄᐊᖅᑐᒥᒃ ᓇᓘᒪᓱᖅᑐᑦ ᓴᖅᑮᔭᖅᑎᑦᑎᓪᓗᑕ ᐳᒃᑭᑦᑐᓂᒃ ᕿᑐᕐᖏᐅᓕᕌᖅᑐᑦ ᑐᑭᕝᕕᓯᓚᐅᖅᑕᒥᓄᑦ[7] ᐅᑎᓲᙳᓂᕐᒥᓂᒃ ᐊᑯᓐᓂᖅᓱᖅᑐᑎᓪᓗ ᐅᓄᐸᓗᑦᑐᓪᓗ ᐃᓐᓇᓄᑦ ᐅᑎᓲᙳᓂᕐᒥᓂᒃ ᕿᑐᕐᖏᐅᕝᕕᓯᖃᑦᑕᓚᐅᖅᑕᒥᓄᑦ[8] ᕿᑐᕐᖏᐅᕆᐊᖅᑐᖅᑐᑎᒃ ᐊᕐᕌᒍᒥᑦ ᐊᕐᕌᒍᒧᑦ (Colwell *et al.* 1988; Reynolds and Cooke 1988). ᓚᕗᒪᙵᑕ ᐋᑐᐸᓐ ᓴᓴᐃᐊᑎᙵᑕ ᐳᖅᑐᓂᖃᖅᑎᑕᙵ ᓇᓘᒪᓱᖅᑐᑦ ᐅᓄᕆᐊᓇᖅᑐᒦᓪᓚᑦᑐᑦ ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓᓄᑦ ᐋᖅᑭᙳᐊᖅᑐᕆᓪᓗ 3°ᒥᒃ ᐅᖅᑰᓯᕆᐊᕈᓂ ᕿᑐᕐᖏᐅᕝᕕᒃᓴᖃᖏᓐᓂᖅᓴᐅᓕᕋᔭᖅᑐᑦ 58%ᒧᑦ ᐱᕕᖃᓕᖅᑎᓪᓗᒋᓗ ᓱᓕᒃᑲᓂᕐᓂᒃ 11%ᒥᒃ ᐅᑭᐅᖅᑕᖅᑐᒥ ᕿᑐᕐᖏᐅᕝᕕᒃᓴᓄᑦ (Bateman *et al.* 2019). ᑖᒃᑯᐊ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᑦ ᐃᒪᐃᓐᓇᐃᓐᓂᐊᖅᑐᖃᐃᕐᒪᑕ ᑕᒪᕐᓃᑦ ᑕᒪᙱᓐᓂᓪᓗ ᓇᓚᐅᑦᑎᖏᓪᓚᒍᓐᓇᖅᑐᑦ.

ᐊᒥᐊᓕᒃᑲᐅᑉ ᐅᐊᖕᓇᖓᓂ, ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓ ᐊᓯᔾᔩᓚᒻᒪᑦ ᓇᓘᒪᓱᖅᑐᑦ ᕿᑐᕐᖏᐅᕝᕕᖏᓐᓂᒃ. ᐅᑭᐅᖅᑕᖅᑐᒥ ᑕᓲᑦ ᓯᔾᔭᕆᐊᑦ ᓂᕆᕝᕕᓕᕗᒃᑕᖏᑦ ᐃᒪᐃᕈᑎᓪᒪᑕ ᓲᖃᐃᒻᒪ ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓ ᓲᒃᑲᓕᓕᖅᑎᑦᑎᓪᒪᑦ ᐃᓕᖅᑯᓯᑐᖃᖏᓐᓂᒃ ᓱᕋᒃᐸᓪᓕᐊᓂᖏᓐᓂᒃ ᐊᐅᒍᓯᖏᓐᓂᓪᓗ ᑕᓲᑦ. ᐅᑦᕿᐊᓪᕕᒥ (ᐱᐊᕈᓚᐅᖅᑑᓚᓗᐊᖅ), ᐊᓛᔅᑲᒥ,1948ᒥᑦ 2013ᒧᑦ, ᑕᓲᑦ ᐅᓄᖏᓐᓂᖅᓴᐅᓕᓚᐅᖅᑐᑦ 15%ᒧᑦ ᑲᑎᑦᑐᒋᓪᓗ ᑕᓯᖃᕝᕕᐅᔪᑦ ᒥᑭᓕᕆᐊᓚᐅᖅᑐᑦ 30%ᒧᑦ, ᓲᖃᐃᒻᒪᓪᓗᐊᑕᖅ ᐃᑦᑕᕐᓂᓴᑦ ᑕᓲᑦ, ᐊᖏᖅᓴᐅᔪᑦ ᐊᓯᔾᔨᖃᑦᑕᖏᓐᓂᖅᓴᐅᓪᓗᑎᓪᓗ, ᐸᓂᓕᕐᒪᑕ (Anderson and Lougheed 2015). ᓯᓚᒧᑦ ᐃᒪᐃᔭᖅᐸᓪᓕᐊᓃᑦ ᐊᐅᔭᒃᑯᑦ, ᑕᐃᒪᐃᑎᑕᐅᔪᑦ ᐅᖅᑰᓂᖅᓴᓄᑦ ᓯᓚᓄᑦ ᐸᓂᖅᑎᑦᑎᓂᐊᕐᒥᒻᒪᑕ ᑖᒃᑯᓂᖓ

[7] ᓇᐃᑐᓪ ᕕᓄᐸᑐᕆ: ᕿᑐᕐᖏᐅᓕᕌᖅᑐᑦ ᑐᑭᕝᕕᓯᓚᐅᖅᑕᒥᓄᑦ ᐅᑎᓲᙳᓂᖏᓐᓄᑦ ᖃᓂᒋᔮᓄᑦ

[8] ᐃᓐᓇᖅ ᕕᓄᐸᑐᕆ: ᐃᓐᓇᓄᑦ ᐅᑎᓲᙳᓂᕐᒥᓂᒃ ᕿᑐᕐᖏᐅᕝᕕᓯᖃᑦᑕᓚᐅᖅᑕᒥᓄᑦ

ᑕᓯᕐᓂᒃ (AMAP 2012). ᑕᐃᒪᐃᑎᓪᓗᒍ, ᓄᑖᓂᒃ ᑕᓯᖅᑖᓕᖅᑐᑦ ᓄᓇᐃᑦ ᐃᓗᐊᓃᑐᑦ ᓯᕐᖢᑦ ᐊᐅᒃᑎᓪᓗᒋᑦ ᓱᓕᒃᑲᓂᕐᓂᒃ ᐃᓂᓕᐅᑐᐃᓐᓇᙵᐊᓕᒃ; ᐊᓴᓯᓪᓖᓛᒃ ᕿᓚᒥᒧᑦ (Morrison *et al.* 2019).

ᓄᓇᒥ, ᐊᐅᓗᐊᖅᑐᑦ ᓄᓇᐃᑦ ᓯᒻᒥᖏᑦ ᐱᕕᖃᖅᑎᑦᑎᔪᑦ ᐊᖏᓂᖅᓴᓂᒃ ᐱᕈᖅᑐᓂᒃ ᕿᔪᓕᓐᓂᓗ ᐱᕈᖅᑐᓂᑦ ᓇᒨᕆᐅᔪᓐᓇᕐᓂᕐᓄᑦ ᓇᐹᖅᑐᖃᖏᑦᑐᒥ. ᐅᑭᐅᖅᑕᖅᑐᖅ ᐅᖅᑰᓯᓕᖅᑎᓪᓗᒍ, ᐊᖏᓂᖅᓴᐃᑦ ᐱᕈᖅᑐᑦ ᐱᕈᖅᐸᑦ, ᐱᓗᐊᖅᑐᒥᖅ ᖃᐅᓯᖅᑐᓂ ᓄᓇᓂ (Elmendorf *et al.* 2012). ᐃᓗᐃᑦᑐᒃᑯᑦ, ᓇᐹᖅᑐᕋᓛᖑᖅᑰᔾᔪᑦ ᐱᕈᓕᖅᑐᑦ ᓂᓪᓚᓱᓛᓂ ᑕᑭᓂᖅᓴᐃᓪᓗ ᓇᐹᖅᑐᕋᓛᖑᖅᑰᔾᔪᑦ ᐱᕈᖅᐸᑦ ᐊᓯᓂ; ᓇᐹᖅᑐᕋᓛᑦ ᐱᕈᕐᓂᖏᑦ ᐊᑕᐅᑦᑎᒃᑰᒐᔪᑦᑐᖅ ᒫᓯᖃᕈᓐᓃᕐᓂᕐᓄᑦ, ᓚᐃᑲᓂᒃ ᐃᕕᕐᓚᐅᔾᔫᓂᓪᓗ (Elmendorf *et al.* 2012). ᑖᒃᑯᐊᓕᒫᖅ ᐊᑲᐅᙱᓕᐅᕈᑕᐅᔪᑦ ᕿᑐᕐᖏᐅᕈᒪᓂᖅᓴᐅᒐᒥᒃ ᐹᒃᑭᑦᑐᓂ ᐱᕈᖅᑐᓂ ᖃᓂᒋᔭᖏᓐᓂ ᑕᓱᑦ (Walpole *et al.* 2008b). ᐊᓯᖏᑦᑕᐅᖅ ᓯᔾᔭᒥᐅᑦ ᑎᒻᒥᐊᖑᖃᑎᒌᑦ, ᕚᐹᕚᐅᓪ (*Numenius phaeopus*) ᐹᐃᒍᔾᔭᐃᖅᑕᐅᓚᐅᖅᑐᖅ ᐊᓯᐅᔨᔪᑦ ᕿᑐᕐᖏᐅᕝᕕᖏᓐᓂᒃ ᑰᓪᔪᐊᕌᐱᓪᒥ, ᒦᓂᑑᐸᒥ, ᓇᐹᖅᑐᕋᓛᑦ ᖃᓪᓕᓕᕐᓂᖏᓐᓄᑦ ᐅᑭᐅᖅᑕᖅᑑᐸ ᐊᑎᑦᑎᐊᖖᓄᑦ (Ballantyne and Nol 2015). ᐊᑦᑐᐃᓂᖓᑦ ᐊᐅᓚᔪᓂ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᔪᓂᓗ ᐃᓂᒋᔭᐅᔪᓂ ᓇᔪᒪᓱᖅᑐᑦ ᐅᓄᕐᓂᖏᓐᓄᑦ ᐊᕐᒥᖅᑐᓂ 10 ᐊᕐᕌᒍᓂ ᐊᑯᓐᓂᖅᓱᖅᑐᖅ ᑭᓯᐊᓂ ᑖᓐᓇ ᐅᓗᓇᐊᓇᕐᓂᖅ ᐱᔾᔪᑎᓪᓗᐊᑕᐅᖃᑕᐅᔪᖅ ᐅᓄᕈᓐᓃᕐᓂᖏᓐᓄᑦ ᐊᑯᓂᐅᓂᖅᓴᒧᑦ ᐊᕐᒥᖅᑐᓄᑦ.

11.3 ᐊᓯᔾᔩᕐᓃᑦ ᐅᓐᓄᓂᐅᓲᓄᑦ (ᐊᑦᑐᐃᓂᖅ: ᓇᓗᔭᐅᔪᖅ)

ᓇᔫᒪᓱᖅᑐᑦ ᐊᑐᑐᐃᓐᓇᙵᐊᓖᑦ ᐆᒪᔪᑦ ᐃᓕᖅᑯᓯᖏᑎᒍᑦ ᐊᑕᐅᑦᑎᒃᑰᖏᓂᕐᒧᑦ[9] ᐱᒋᐊᕐᓂᖏᓐᓄᑦ ᑰᒃ ᓯᑯᖏᑦ ᓱᕋᑦᑎᖏᓐᓄᑦ, ᐊᐳᑎᐅᑉ ᐊᐅᓐᓂᖏᓐᓄᑦ ᐅᐱᕐᖓᒃᑯᓪᓗ ᑰᑦ ᓱᐱᓂᖏᓐᓄᑦ (Ely *et al.* 2018) ᕿᑐᕐᖏᐅᓯᓪᓗᑎᓪᓗ ᖃᖓᑦᑎᐊᒃᑯᑦ ᐅᐱᕐᖕᒥ ᐅᖅᑰᓃᑦ ᐅᖅᑰᓯᒍᑎᒃ ᐊᐳᑎᓂᒃ ᐊᐅᔾᔪᔪᓐᓇᖅᓯᓪᓗᑎᒃ (Liebezeit et al. 2014; Saafeld and Lanctot 2017; Kwon et al. 2018). ᓇᔫᒪᓱᖅᑐᑦ ᐊᔪᖏᖅᑰᔨᒐᓗᐊᖅᑐᑎᒃ ᑭᖑᕙᕆᐊᕐᓗᒍ ᕿᑐᕐᖏᐅᖅᓵᓕᔫᓐᓃᑦ ᓯᓚᐃᑦ ᖃᓄᐃᓐᓂᖏᓐᓄᑦ ᑕᐃᒪᐃᑎᑕᐅᓗᓂ, ᓇᓗᓇᐃᖅᓯᓯᒪᔪᖃᖏᑦᑐᖅ ᑖᒃᑯᐊ ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᕿᑐᙱᐅᕐᓂᖅᓴᐅᖏᓐᓇᕐᒪᖔᑕ ᖃᖓᒧᑦ (Saafeld and Lanctot 2017; Ely *et al.* 2018 ᑭᓯᐊᓂ ᑕᑯᒃ Liebezeit *et al.* 2014 ᑲᑎᓯᒪᔪᓄᑦ ᓇᔫᒪᓱᖅᑐᓄᑦ [*Phalaropus fulicarius*] ᐊᐅᐸᖅᑐᑦ ᓇᔫᒪᓱᖅᑐᑦ ᓇᔫᒪᓱᖅᑐᓪᓗ), ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓᑕ ᕿᓚᒻᒥᐅᓂᖅᓴᐅᑎᓕᕋᓗᐊᖅᑐᓂᐅᒃ ᐅᐱᕐᖔᒥ ᐊᕐᒥᖅᑐᖅ ᐊᐳᑎᐅᑉ ᐊᐅᓐᓂᐊᕐᓂᖓ (Saafeld and Lanctot 2017; Kwon *et al.* 2018) ᐅᐱᕐᖔᒥᓗ ᐅᖅᑰᓃᑦ ᐅᖅᑰᓯᓕᖅᑐᑎᒃ (Liebezeit *et al.* 2014). ᓇᔫᒪᓱᖅᑐᑦ ᐊᔪᕈᑎᒃ ᓯᕗᒧᐊᖅᑎᑦᑕᕆᐊᖅᑲᓴᖅ ᖃᖓᒥ ᐅᑎᖃᑦᑕᕐᓂᕐᒥᓂᒃ ᐃᕙᔭᖅᑐᕐᓗᑎᒃ ᖃᐅᔨᕙᓪᓕᐊᔪᓐᓇᕐᓗᒋᑦ ᐊᓯᔾᔨᖅᑐᑦ ᐅᐸᒃᓯᒪᔭᖓᑕ ᓯᓚᖏᓐᓂ ᑕᐃᒪᐃᑎᑕᐅᔪᓄᑦ ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓᓄᑦ, ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᐊᑐᑐᐃᓐᓇᙵᐊᓖᑦ ᐃᓕᖅᑯᓯᖏᑎᒍᑦ ᐊᑕᐅᑦᑎᒃᑰᖏᓂᕐᒥᒃ ᖁᐱᕐᕈᐃᑦ ᓂᕿᒋᔭᖏᓐᓄᑦ ᐊᑐᐃᓐᓇᐅᓖᖑᑎᓪᓗᒍ ᐃᕙᔭᖏᓪᓗ ᓂᕿᖃᕆᐊᖃᓪᓚᒃᑎᓪᓗᒋᑦ (ᓲᕐᓗ, Tulp and Schekkerman 2008). ᓇᔫᒪᓱᖅᑐᑦ ᐃᕙᔭᖏᑕ ᐊᓐᓇᐅᒪᔪᓐᓇᕐᓂᖏᑎᒍᑦ ᐅᓄᕈᓐᓃᕐᓂᖅᓴᐅᔪᖅ 1990ᓂᑦ, ᐃᒪᖔᖃᐃ ᐅᖃᖅᑰᔨᓪᓗᓂ ᑖᓐᓇ ᓇᓚᐅᑦᑎᖏᓐᓂᖅ ᑕᐃᒪᐃᐸᖅ (Kwon *et al.* 2018).

ᓂᕿᖅᓴᓪᓘᓐᓃᑦ ᐊᑐᐃᓐᓇᐅᔪᑦ ᕿᑐᕐᖏᐅᕝᕕᒻᒥ ᐊᓯᔾᔨᑐᐃᓐᓇᙵᐊᓖᑦ ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓᓄᑦ. ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓ ᐊᐅᒃᓯᓪᒪᑦ ᓄᓇᐅᑉ ᓯᒻᒥᖏᓐᓂᒃ ᓇᐹᖅᑐᖃᖏᑦᑑᑉ ᑕᓯᖏᑦ ᐱᑖᖅᑎᒃᑲᓂᖅᑐᓂᒋᑦ ᓱᓕᒃᑲᓂᕐᓂᒃ

[9] ᐃᓕᖅᑯᓯᖏᑎᒍᑦ ᐊᑕᐅᑦᑎᒃᑰᖏᓂᖅ:ᐃᓕᖅᑯᓯᖏᑎᒍᑦ ᐊᑕᐅᑦᑎᒃᑰᖏᓂᖅ ᑕᐃᓲᖑᔪᖅ ᐃᓕᖅᑯᓯᖏᑎᒍᑦ ᐊᑕᐅᑦᑎᒃᑰᖏᓂᖅ ᒪᕐᑮᖕᓄᑦ ᑲᑎᖃᑎᒌᓲᓄᑦ ᐆᒪᔫᖃᑎᒌᖏᑦᑐᓄᑦ ᐊᓯᔾᔨᕌᖓᑦ ᐆᒪᔫᖃᑎᒋᑦ ᐊᑕᐅᑦᑐᒃᑰᑦᑎᐊᕈᓐᓃᖅᑐᑎᒃ. ᑖᓐᓇ ᐊᓯᔾᔨᕐᓂᖅ ᑕᐃᒪᐃᑎᑕᐅᓚᔪᒃᑐᖅ ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓᓄᑦ (ᓲᕐᓗ ᑳᑐᐱᓗᐃᑦ ᓴᖅᑮᓴᓕᓪᓗᑎᒃ ᑕᐃᒪᐃᑎᑕᐅᓪᓗᑎᒃ ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓᓄᑦ ᑎᖏᐊᓪᓗ ᓂᕆᔾᔪᑦ ᑖᒃᑯᓂᖓ ᑳᑐᐱᓗᓂᒃ ᑭᖑᕙᓗᐊᖅᑐᑎᒃ ᕿᑐᕐᖏᐅᕝᕕᖕᓄᑦ ᑎᑭᑦᑐᑎᒃ ᓂᕆᓂᐊᕐᕋᒥᑦ ᑲᑐᐱᓗᐃᑦ).

487 ᓂᕈᑎᖅᐅᓱᓇᖅᑐᓂᒃ ᐱᑭᖅᑐᕆᓭᑦ ᐱᑭᓕᖅᑎᓵᓕᑎᑦ (Morrison *et al.* 2019). ᑕᐃᒪᐃᓴᐋᑎᑦᓵᑐᒍᖅᐃ
488 ᑕᐅᑯᐊ ᓂᕈᑎᖅᐅᓱᓇᖅᑐᖅᓱᒃᓵᓐᓂᓄᑦ ᐃᒪᐃᓵᓪ ᐅᓇᖅᓯᓂᓕᐊᓂᖏᓐᓄᑦ, ᖃᐅᐱᕐᕆᓭᑦ ᐊᓱᔪᖏᑎᑐᑦ
489 ᑲᑎᖏᓚᐅᑦ ᓇᔨᖅᑐᖅᑎᑎᑐᓂᒃ ᑕᓯᖅᓂ ᐊᓯᔪᖅᓯᒪᓵᓕᓪᑐᑦ (Lougheed *et al.* 2011; Taylor *et al.*
490 2016). ᐊᖓᔪᓕᓯᑦ ᕈᑎᑭᓵᓂᓪ ᐊᓱᔪᖏᑎᑐᑦ ᐊᐅᓕᑎᓕᕆᓪᒡ ᑕᑯᓂᖅᓯᒪᒃᑐᓂᒃ (Lougheed *et al.*
491 2011; Taylor *et al.* 2016). ᓇᓗᒪᓯᖅᑐᑦ ᓂᓚᔭᖏᖅᓯᐅᖅᑕᖅᑕᓪᓕᑦ ᐊᓱᔪᐸᖏᑭᑐᓗᓂᖅᑐᓂᒃ ᖃᐃᐱᕐᓂᒃ,
492 ᕆᓯᐊᓂ ᐅᖅᑯᓯᓂᓵᓂ ᓇᐃᒃᓕᑎᐊᖅᓯᔨᑎᒃ ᕈᑎᑭᓵᓕᐅᓂᐊᖅᓂᖏᓐᓂᒃ ᓂᓚᓇᓯᖅᑕᖅᑕᒥᓂᒃ ᖃᐃᐱᕐᓂᒃ
493 (Lougheed *et al.* 2011), ᐃᓕᓴᖅᑯᓯᖏᑎᔪᑦ ᐊᑕᐅᑦᑎᑯᑯᓂᓪᒧᑦ ᐊᑦᑐᐃᓂᖅᑐᐃᓇᓚᐅᐊᓕᓴᖅ
494 ᕈᑐᖅᖏᓐᐅᖅᑐᑦ ᐅᓄᖅᓂᖏᓐᓂᒃ.

495 ᐃᓯᒪᑎᕆᐅᓯᒪᔪᖅ ᐊᒥᐊᓕᓴᕆᐅᕐᓂ ᓇᓗᒪᓯᖅᑐᑦ ᐅᓄᑭᓵᓪᓕᐅᖅᓴᑦ ᒪᓕᑦᑐᒍ ᓴᖏᓪᓗᐊᒪᓱᖅᑐᒍᒪᑦ
496 ᐃᐅᓵ ᓂᓄ ᐊᖅᑦᕕᒍ ᓂᕈᐃᖅᑯᓵᓵᑎᕆᔨᓂᖅᑐᑦᑎᒋᑦ ᐅᕆᐃᖏᖏᓐᓂ (Nisbet and Veit 2015). ᓱᓕᐅᓵ
497 ᐊᓱᔪᖅᓂᖓᓂ, ᐃᐅᓵ ᓂᓄ-ᓂᒋᖅᒥ ᐅᐃᓱᖅᓂᖅ ᓂᓚᐅᒋᕆᐅᔪᖅ ᐊᓱᔪᖅᑭᓵᖅᓯᖅᓴᐅᓂᐊᕐᓂᒋᕆᐅᓵᓗᓂ,
498 ᓴᖏᓪᓗᐊᖅᑐᓂᒃ ᓱᓕᓗᖅᖁᓗᓂ (Maher *et al.* 2018). ᐅᓄᖅᓂᖅᓴᐃᑦ ᓴᖏᓪᓗᐊᒪᓱᖅᑐᖅ ᐃᐅᓵ ᓂᓄ-ᓂᒋᖅᒥ
499 ᐅᐃᓱᖅᖁᓂᑦ ᐊᓱᔪᖅᓵᓂᑦ ᐊᔪᖅᑎᑦᑎᑐᐃᓚᐋᓕᓵᓕᑦ ᓇᓗᒪᓯᖅᑐᑦ ᐅᓄᖅᓂᖏᓐᓂᒃ ᐅᑎᕆᐊᒃᓴᖅ
500 ᐅᓄᖅᓂᓚᓕᐅᖅᑕᖏᓐᓂᓄᑦ ᐅᓄᑭᓵᓪᓕᑎᖅᑎᒃᓂᓂᓕᑦᓗᓵᓵᓂᑦ.

501 ᐅᖅᑯᓱᓭᓕᐊᓵᓂᑦ ᐊᑦᑐᐃᑐᐃᓚᖏᑦᑐᒍ ᓇᒪᓱᑦᑐᓂᒃ ᓂᕈᑎᖅᑭᓚᖅᑯᓱᑦ; ᕈᑐᖅᖏᓐᐅᖅᓴᒪᒥ,
502 ᐅᖅᑯᓱᓭᓕᐊᓵᓂᑦ ᐱᓂᖅᓴᐅᓕᖅᑎᑐᐃᓚᐋᓕᓵᓕᑦ ᐃᓭᖅᓴᑦ ᐊᖓᔪᓚᓕᐅᓂᖏᓐᓄᓪᓗᑦ. ᐃᓭᖅᓴᓂᓂᒃ
503 ᐊᖓᔪᓚᓱᓂᖅ ᐱᔨᔪᑕᐅᓵᒪᐊᖅᓵᖅ ᕈᑐᖅᖏᓐᐅᖏᓐᓱᓂᓄᑦ ᓇᓗᒪᓯᖅᑐᓂᒃ (Sandercock 1997; Walpole
504 2008b; Weiser *et al.* 2018), ᐊᓱᐃᓵᓱ ᐊᖓᔪᓚᓱᑕᐅᓴᖅᓂᓂᑦ ᐊᑦᑐᐃᓂᖅᑭᓵᓱᖅᑐᑦ ᐃᓗᐃᑦᑐᓴᑦ
505 ᐅᓄᖅᓂᖏᓐᓄᑦ. ᓄᓇᕐᔪᐊᓕᒫᒥ, ᖃᐅᑕᒫᑦ ᐃᓭᖅᓴᐃᐅᔨᓂᓴ ᐊᖓᔪᓚᓱᑦᑐᒍ ᐱᖓᓱᓚᐃᓵᐊᖅᑐᑎᓴ
506 ᐅᓄᖅᓂᖅᑕᐅᓕᒪᑕ ᐅᕈᐅᖅᑕᖅᑐᒥ, ᓴᓂᓕᓚᓵᓗᑦᑐᒍ ᐱᓭᖅᓯᐊᓵᓕᐊᓕᖅᑐᐊᖅᑐᓗ ᓱᓕᐅᓵ
507 ᐅᖅᑯᓂᓂᐃᓂᓂ (Kubelka *et al.* 2018). ᕆᓯᐊᓂ ᐅᓴᐱᓱᓕᑐᑎᖅᓱᒪᓕᐊᖅ ᓚᐃᓴᐅᓱᓕᓚᓂᓴᑯᑦ
508 ᐱᖅᑯᓱᐅᔨᓄᑦ ᑕᐃᒪᐃᓵᓪᓕᑦᑕᒫᓂᓪᓗᑎᒍᓵᓪ ᑕᓴᑯᓚᓪᓕᑦ ᖃᐅᔨᔪᐅᔨᓂᑦ (Bulla *et al.* 2019; Kubelka *et al.*
509 2019).

510 ᓱᓕᐅᑦ ᐊᓱᔪᖅᓂᖏᓐᓇ ᐅᓄᖅᓱᓕᐊᖅᑎᑎᑐᐃᓚᐋᓕᓵᓕᑦ ᓱᓴᒥᐅᓄᓂᑦ ᑎᓪᒥᐊᑦ ᐃᓭᖅᓴᐃᖏᓐᓂᑦ
511 ᐊᖓᔪᓚᓱᑕᐅᓂᖏᓐᓂᓄᑦ ᖃᐅᔨᔪᓂᓄᑦ. ᐊᖓᔪᓚᓱᓂᓂᓂᑦ ᐊᑦᓴᓱᖅᑎᑕᐅᓂᖏᓐᓂᑦ ᐅᕈᐅᖅᑕᖅᑐᒥ ᑎᓪᒥᐊᓄᑦ
512 ᐊᑦᑐᐊᖅᑯᐃᔨᖅ ᐊᐃᖏᓚᐃᑦ ᐅᓄᖅᓂᖅᑐᓄᑦ. ᐊᐃᖏᓚᐃᑦ ᓂᕈᑎᖅᐅᓱᒪᓂᖅᑎᐅᐅᓕᑦ ᓇᓴᖅᑐᖃᖏᓐᓂᒥ
513 ᐅᓕᔨᖅᑎᑎᓂᓂ ᓇᓗᒪᓯᖅᑐ ᐃᓭᖅᓯᒪᓕᖅᑕᖏᓐᓂᓂ, ᕆᓯᐊᓂ ᖃᖏᓚᒧᑦ ᐅᓄᖅᓂᑦ ᐊᖅᑭᕆᓭᒪᓕᓵᑎᑐᓄᑦ.
514 ᐊᐃᖏᓚᖃᓕᒫᓚᑦ, ᐊᖓᔪᓚᓱᑎᓂᑦ ᐊᖓᔪᓚᓱᑕᐅᓯᑦ, ᕆᓯᐊᓂ ᐊᐃᖏᓚᑭᑕᔅᓚᑦ, ᓱᓴᒥᐅᑦ ᑎᓪᒥᐊᑦ
515 ᑐᑭᖅᑎᑕᖏᑕ ᐊᓐᓇᐅᑦᒪᓐᓇᓂᓚ ᒥᕈᓕᓕᐊᖅᓵᖅ ᐊᖓᔪᓚᓱᑦᑐᒍ ᐅᓄᖅᓱᓭᓕᐊᑎᓵᓕᑦᑐᑦ (Blomqvist *et*
516 *al.* 2002; McKinnon *et al.* 2014). ᓱᓕᐅᑦ ᐊᓱᔪᓂᓂᖅᓚᐅᓕᖅᑎᑐᐃᓚᐋᓕᓵᓕᑦ ᐊᐃᖏᓚᑦ
517 ᐅᓄᖅᓂᓚᖅᑕᖅᑕᖏᓐᓄᑦ ᐃᓱᐊᓂᓗ ᐅᓄᖅᖏᓐᓂᖅᓴᐅᓕᖅᑎᑎᓵᓕᓵᓗ ᐊᐃᖏᓚᖅᓴᐃᓂᒃ ᐅᓄᖅᓂᖏᓐᓂᑦ
518 “ᐅᓄᓗᐊᖅᑎᓵᓕᑦᑐᑦ” ᐊᖅᑦᕕᒍᓂ (Gilg *et al.* 2009) ᓱᓴᖅᒥᐅᑕᓂᒃ ᑎᓪᒥᐊᑦ ᐃᓭᖅᓴᖏᓂᑦ ᓂᕈᑎᖅᓯᒃᑐᑦ
519 ᐅᓄᖅᓂᖏᓂᑦ ᐅᓄᖅᓂᖅᑭᐅᓕᓵᑎᒃ (Kubelka *et al.* 2018). ᕆᓯᐊᓂ, ᐅᓄᖏᓪᓂᖅᑭᐅᓕᖅᓴᑦ ᐊᐃᖏᓚᐃᑦ
520 ᐅᓄᖅᓂᖏᓪᓂ “ᐅᓄᓗᐊᖅᑎᓵᓕᑦᑐᑦ” ᐊᖅᑦᕕᒍᓂ ᒥᕈᓕᓕᐊᖅᑎᑎᑐᐃᓚᐋᓕᓵᓕᑦ ᐃᓗᐃᑦᑐᒃᑯᑦ
521 ᐊᖓᔪᓚᓱᑕᐅᓗᐊᖅᓂᓄᑦ ᐃᓕᖏᓪᓄᑦ ᑎᓪᒥᐊᖓᖅᑎᑎᒍᓂᑦ (Gilg *et al.* 2009); ᓱᓂᓗ ᐅᕈᐅᖅᑕᖅᑐᒥᐅᖅ
522 ᑎᓚᑦᓂᐊᖅ (*Vulpes lagopus*) ᐅᓄᖅᓂᖏᑕ ᖃᓄᐃᓕᓚᑦᓂᖏᓂᑦ ᑐᖓᓴᓪᒪᑕ ᐅᓄᖅᑐᓂᒃ ᕈᑐᖅᖏᓐᐅᖅᓂᖅᓂᓄᑦ
523 “ᐅᓄᓗᐊᖅᑎᓵᓕᑦᑐᑦ” ᐊᖅᑦᕕᒍᓂ (Fuglei and Ims 2008).

524 ᓂᓪᒃᐳᐸᑦ ᐊᓂᔨᖅᓂᖏᓐᓇ ᐊᓂᔨᕐᓗᑐᐃᓇᑕᒪᓕᕐᓄ ᐃᓗᐃᑦᑐᑦᓄᓂᑦ ᐊᖏᓚᓇᓂᑦᑎᓂᑦ ᖃᓄᐃᓕᓴᖏᑐᓂᓄᑦ.
525 ᐅᖃᓄᑭᓂᓪᓕᐊᓂᒃᑕᑦ ᐅᑭᐅᖃᓕᖅᑐᑎ ᖃᑐᖅᖏᑎᐅᕈᑎᐅᓂᖅᓴᐅᓕᖅᒪᑦ (Gauthier *et al.* 2013)
526 ᐱᕕᖃᕈᐅᑐᐃᓇᓇᕐᓂᖅᑐᓂᓗ ᒥᑭᑐᓄᓂᑦ ᐊᖏᓚᓂᑕᐅᖃᑦᑕᖅᑐᓄᓂᑦ ᑕᒪᐅᖏᓐᓄᕈᑎᐅᓗᓂ, ᐃᓱᒪᖃᖅᖃᐃ
527 ᐃᑲᔪᓗᑎᒃ ᓄᑦᓯᓂᒃ ᐊᖏᓚᓂᓴᓴᑎᔪᑦ, ᐃᑲᔪᕈᓐᓇᓗᓂᖅᐃ ᓄᑦᓯᓂᒃ ᐊᖏᓚᓂᑎᓂᒃ ᐅᒪᔨᓂᒃ ᐅᐟᕕᓐᓂᑦ
528 ᐅᓄᖅᓯᕐᐊᔪᓗᑎᒃ ᑕᒪᓐᓇᐸᐊᖅᑐᑦ ᐊᖏᓚᓂᓴᓂᑦ (Fuglei and Ims 2008; Kubelka *et al.* 2018 ᑭᓯᐊᓂ
529 ᑕᑯᔪᒃ Gauthier *et al.* 2013). ᐅᑭᐅᖅᑕᖅᑐᑎ ᑎᓚᓄᓂᐊᕐᑐᑦ ᐊᖏᓚᓇᓯᑦ ᓇᒪᓯᑦᑐᓂᒃ (Liebezeit *et al.*
530 2014; English *et al.* 2017), ᐊᔨᖅᓂᖅᓴᐅᑐᓄᓕᐊᓕᓐᓂᑦ ᐊᐅᐸᖅᑐᓂᑦ ᑎᓚᓄᓂᐊᓂᑦ (*Vulpes vulpes*)
531 ᓄᓇᖏᑦᑕᐅᖅ ᐊᖏᓐᓂᓕᕐᐊᓂᓂᕐᒥᓄᑦ ᓂᓪᒃᐳᐸᑦ ᐊᓂᔨᖅᓂᖏᓐᓄᓕᑦ (Fuglei and Ims 2008). ᓂᖅᑯᐃᓇᓚᖏᑦᑐᑦᖅ
532 ᖃᓄᖅ ᒡᓚᓇ ᐊᑦᑐᐃᓂᐊᕐᓚᓐᑦ ᐃᐸᔪᓂᒃ ᓂᓪᒃᐳᐸᑦ ᑎᓕᐊᓂᒃ. ᓂᓪᒃᐅᐸᑦ ᐊᓂᔨᖅᓂᖏᓐ ᐊᑦᑐᐃᑐᐃᓚᓇᓇᕐᓂᒃ
533 ᐊᖏᓚᓂᓚᓴᓂᓂᒃ ᐊᓂᔨᓗᑎᒃ ᐃᓂᕐᓴᐅᐸᑦ ᐱᕈᖅᑐᖏᓚᒃ ᐃᓕᖏᐊᖅᓯᖅᑎᓕᑦᓗ ᐃᐸᖏᐊᓂᑦ (Kubelka
534 *et al.* 2018).

535 ᑲᑎᑦᑐᑦ ᐊᑦᑐᐃᓂᑦ ᐊᓂᔨᖅᑐᓄᑦ ᐅᖅᑯᓯᔨᓂᓄᑦ ᐃᓗᐃᑦᑐᒃᓂᑦ ᐊᖏᖁᒍᒪ ᑕᐃᒪᐃᓂᓄᑦ ᓇᓗᓇᖅᓴᑦ.

536 *11.4 ᐊᓂᔨᖅᓱᑦ Lᖏᓂᓂᓂ ᖃᓄᓂᓂᓂᓗᓗ ᐃᒋᑦᓗ ᐃᓕᓂᖅᑯᖏᓄᓂ (ᐊᑦᑐᐃᓂᖅ: ᓇᓗᓴᐅᔪᖅ)*

537 ᐃᒪᖃᖏᓄᓂᖅ ᐃᓂᒍᓗᑕᐅᓪᓗᐊᖅᑐᖅ ᓇᓗᒍᓂᖅᑐᓄᓂᑦ ᑲᓂᓄᓂᑦ ᓄᓇᐃᓄᓇᓄᓂᑦ ᓄᖅᑲᕐᓇᓄᓪᓗᓗ ᑕᓂᓄᓂ
538 ᑕᓂᔪᓂ. ᐃᓕᒥᖅᓴᓪᓕᐊᔨᑲᖏᓚᑕ ᐊᖏᓂᓂᖅᓴᑦ ᑕᓇᐅᔪᓱᓪᓂ ᑕᓂᓐᓂ, ᑕᓇᐅᖏᓐᓴᑲᓄᓂᖅᑕᑦᑕᒪᒪᑕ,
539 ᔪᑏᐱᐊᖃᖅᑎᑦᓂᖏᑦᑕᑦ ᑐᔪᑎᑕᐅᑐᐃᓇᓇᕐᓂᖅᑐᖅᑎᑐᒃ ᓇᓗᒪᔨᕐᓂᑦ ᑐᖏᓚᐅᑎᖅᑐᑦ (Rubega and Inouye
540 1994). ᓂᔪᓗ, ᑕᓇᐅᔪᖅᑲᔪᓱᓂ ᑕᓂᓂᖅ ᐊᐅᑦ, ᐅᐊᓇᓴᒥ ᑕᓇᐅᖏᓐᓇᓕᓇᐅᖅᑐᑦ ᓂᓪᒃᐳᐸᐅᑦ ᑎᓕᒥᐊᓪᓗ
541 ᐅᓄᕐᓱᖅᑐᑐᑎᒃ 1930ᓂ ᓴᐸᔪᐊᖅᑎᓪᓗᒍ Lᔪᑯᖏᓐᓄᓂᕐᒥᒃ (Larson *et al.* 2016). ᐊᑦᑐᐃᓂᖅᖏᓐ
542 Lᔪᑯᖏᓐᓄᓂᐅᑦ ᓇᓗᓕᓂᖅᑐᓄᑦ ᓇᓗᓴᐅᔪᖅ . ᑭᓂᐊᓂ, ᐊᑦᑐᐃᓂᖅ ᐊᑦᑐᐃᓪᓗᐊᑕᖅᑐᖅ ᓄᓇᐃᓄᓇᓂᓂ
543 ᑕᓇᐅᓪᓂᓂ ᑕᓂᓂᓂᒃ ᓂᔪᓗ ᒪᓄ ᑕᓂᓂᖏᓐ ᑕᓇᓪᔪᐊᔪᓗ ᑕᓂᓂᖅ ᑲᓪᓚᕐᓂᐊᓂᑕᒪᓕᕐᓂᑦ ᓴᓪᓕᐊᓪᓚᑦ, ᓴᓴᑦᑎᐅᐊᓪᓚᓐ,
544 ᓰᓇᓂᖅᑐᑦ ᓄᖅᑲᖏᓐᓇᖏᓐᓂᓂᓂ ᓄᑎᓪᓗᑎᑦ.

545 *11.4 ᐱᓗᐊᖅᑐᑦ / ᓴᖅᑭᓗᐊᒪᔪᖅᑐᑦ ᓂᓪᓂᓂ ᖃᓄᐃᑦᑐᑦ (ᐊᑦᑐᐃᓂᖅ: ᓇᓗᓴᐅᔪᖅ)*

546 ᓂᓪᒃᐳᐸᑦ ᐊᓂᔨᖅᓂᖏᓐᓇ ᓂᓇᐅᑎᓴᐅᔪᖅᓴᖅ ᑕᓇᐅᑦ ᐃᒪᖃᖅᓂᖅᓴᐅᓕᖅᑎᓪᓗᓂᑎᑦ 0.9ᒥᑦ 1.6 ᒧᑕᓄᑦ ᖁᓂᓂ ᑕᓇᐅᐸᑦ
547 ᐳᖅᑐᓂᐊᓄᑦ 2100ᒥ ᐅᑭᐅᖅᑕᖅᑐᑎ (AMAP 2012). ᓄᓇᐅᐸᑦ ᓂᕆᖏᑎᑦ ᐊᐅᓕᕐᒥᒃ, ᐳᖅᑐᓂᒪᓪᓕᐊᔪᑦ
548 ᑕᓇᐅᑦ ᐳᖅᑐᓂᖏᑦ ᓂᐱᓂᐊᕐᓚᑦᑐᑦ ᓄᓇᐃᔨᐃᓗᑎᓪᓗ ᐃᓕᖏᓐᓂᓂᒃ ᓄᑎᓂᒪᓂᑦ ᐃᓚᖏᑦ ᓇᓗᒪᔪᖅᑐᑦ
549 ᖃᑐᖅᖏᑦᐅᓐᓄᒃᑕᖅᑕᖏᓐᓂᓂ. ᓂᓪᓕᒃᓂᓪᓗᓂ ᑕᓇᐅᑦ ᐃᒋᑦ ᐱᖅᔪᖅᑐᓄᓂᑦ ᐊᑦᑕᑕᐅᔪᑦ
550 ᐃᖏᐅᓕᖅᑕᐅᓂᖅᓴᓄᓪᓗ ᓂᐳᖅᑎᑦᑎᒪᒥᑕ ᓄᓇᒧᑦ ᑕᓇᐅᖅᓯᖅᑎᑦᑐᓂᑦ ᐃᒥᑐᐃᓂᓇᐃᑦ ᑕᓂᔪᓂᑦ ᓂᓪᒃᐳᐸᓄᑦ
551 ᖃᓄᑦᑐᑦ (Jones *et al.* 2009). ᐊᑦᑐᐃᓂᖅᓯ ᓂᐱᐱᒋᑦ ᐅᓄᔪᓂᖏᓐᓄᓂᑦ ᓇᓗᓇᐅᔪᖅᑦ.

552 ***9. ᓂᕆᐃᓂᑦ (ᐊᑦᑐᐃᓂᖅ: ᐊᑯᓂᖅᓂᑐᖅ)***

553 *9.2 ᐅᒪᔪᖁᑎᒋᑦ (ᐊᑦᑐᐃᓂᖅ: ᓇᓗᓴᐅᔪᖅ)*

554 ᑭᓂᖅᑐᖅ ᑐᔪᑯᓇᒪᓕᑦ ᑕᒪᑫᑭᖅᓴᒥᓇᓕᓂᑦ ᑎᓕᒥᐊᓄᑦ ᑭᓯᐊᓂ ᐃᓐᓇᐃᑦ ᐃᓂᓪᓚᑦᐊᐅᕐᕿᖅᑐᑦ ᐊᖏᓕᔪᐊᓗᓐᓂᖅ
555 ᑐᔪᑯᓇᓪᓕᑐᑐᓄᓂᑦ ᐊᑦᑐᐃᓂᖅᑎᑦᓗᓂ (Jenssen 1994). ᖃᓯᐊᓂᒧᖅ, ᑭᓂᖅᑐᖅ ᖁᔨᔪᖅᓯᒪᖃᑦᑕᒪᒻᒪᑦ
556 ᓯᓗᖏᓐᓂᒃ, ᑲᑎᑎᑦᑐᑦ ᐃᒥᖅᒧᑦ ᐃᓵᖅᓯᓪᓕᖅᑐᑎᒃ ᖁᐅᖅᓴᓇᓪᓕᖅᑐᑎᓪᓗ. (Jenssen 1994). ᑎᓕᒥᐊᑦ ᓯᓗᒥᓂᒃ
557 ᓴᓗᓰᒪᖅᓴᐃᓇᓯᖅᑲᓗᐊᖅᓗᑎᒃ, ᑭᓯᐊᓂ ᑕᐃᒪᓴᓇ ᐃᓯᓚᓗᑎᒃ ᑭᓂᖅᑐᖅᑐᓂᒃ ᓯᑲᖏᓐᑕᓗᓚᓐᓂᑦ ᓯᓗᓇᐃᖅᑐᑦᑐᓂᑦ
558 ᐊᒥᐊᐅᑯᔪᓄᑦ (Jenssen 1994). ᐅᑎᕆᔨᑕᒧᑦ ᐅᐸᖃᑦᑕᖅᑕᒥᓄᑦ ᑎᓕᒥᐊᖅᓗᑦ ᓇᓗᓯᖅᑐᑦ, ᑭᓂᖅᑐᓕᖅᓯᒪᓗᓂ

ᐅᖅᑰᔾᓇᐃᓪᓕᓗᑎᓪᓗ ᑐᕐᑯᔅᔪᑎᒋᔾᓇᖅᐸᐃᑦ ᕿᐅᓗᐊᒧᑦ (Jenssen 1994). ᑕᐃᒪᐃᑉᐳᖅ ᑎᒻᒥᐊᑦ ᓴᑦᑎᑦᑐᓂ ᑕᕆᐅᓂ ᐃᓂᓖᑦ ᓇᓂᔭᐅᒐᔾᓂᖅᓴᐅᕗᑦ ᑐᕐᑰᒐᓪᓗᑎᒃ ᓯᕐᔭᓂ ᑭᓂᖅᑑᓗᓂ ᓯᒐᔭᓂᑦ ᖃᓂᑦᑐᒥᐅᓂᑦ ᑎᒻᒥᐊᓂᑦ, ᕿᒫᔾᓇᕐᒪᑕᓕ ᓯᔾᔭᒧᑦ ᐃᒻᒥᓂᓪᓗ ᐅᖅᑰᓯᑦᑎᕐᓗᑎᒃ ᐸᓂᖅᓴᕐᓗᑎᓪᓗ ᓇᓂᔭᐅᒐᔾᑦᑐᑎᓪᓗ ᑭᓂᖅᑑᓖᑦ ᑭᓯᐊᓂ ᐆᒪᓪᓗᑎᒃ (Henkel *et al.* 2014). ᓲᕐᑲᐃᒻᒪ ᓇᓅᒪᓱᖅᑐᑦ ᑲᑎᖃᑦᑕᕐᒪᑕ ᐅᓄᖅᑐᐊᓅᓪᓗᑎᒃ ᓴᑦᑎᑦᑐᒥ ᑕᕆᐅᕐᓂ ᑕᒪᒃᑮᓂ ᓅᑎᓪᓗᒋᑦ ᓄᖅᑲᖏᓐᓂ ᐅᑭᐊᙱᓂᓗ, ᓇᓂᓪᓗᐊᑕᖅ ᑭᓂᖅᑐᓂᒃ ᑯᕕᔾᖅ ᓱᕋᐃᔾᓛᓅᒐᔭᖅᑐᖅ ᑕᐃᒪᐃᓐᓂᕈᓂ ᐅᓄᖅᑐᑦ ᑎᒻᒥᐊᑦ ᑕᖕᖏᐅᑎᓪᓗᒋᑦ. ᑕᒪᒃᑮᑦ ᓄᓇᕐᔾᐊᕐᒥ ᑲᓇᑕᒥᓗ ᑭᓂᖅᑐᖅᑕᖅᑏᑦ ᐅᒥᐊᕐᔾᐊᑦ ᐃᖏᕐᕋᔾᑦ ᐅᓗᕆᐊᓇᖅᐳᑦ ᓇᓅᒪᓱᖅᑐᓄᑦ ᓅᒃᑕᖏᐅᓱᒃᑯᑦ. ᐊᑦᓚᓐᑎᒃ ᑲᓇᑕᒥ ᑭᓂᖅᑐᖅᑕᖅᑏᑦ ᐅᒥᐊᕐᔾᐊᑦ ᐃᖏᕐᕋᓂᖏᑦ ᐅᓄᖅᓯᒋᐊᖅᓯᒪᔾᑦ ᑲᖏᖅᑐᐊᓂ ᕙᓐᑕᐃᒥ ᓲᕐᑲᐃᒻᒪ ᐅᒥᐊᕐᔾᐊᑦ ᐋᑦᑎᖅᑕᑦᑕᕐᒪᑕ ᑭᓂᖅᑐᓂᒃ ᑭᓂᖅᑐᓕᕆᔨᓄᑦ ᓴᐃᓐᑦ ᔭᓐ, ᓂᐅ ᐳᕋᓐᔅᕕᒃᒧᑦ (J. Paquet ᓇᖕᒥᓂᖅ ᑐᓴᐅᒪᑎᑦᑎᓂᖅ).

ᑭᓂᖅᑐᓂᒃ ᑯᕕᔾᓪᓚᑦ, ᓴᓗᒻᒪᖅᓵᓚᒃᑕᐅᒐᓗᐊᕈᑎᒃ, ᐊᑦᑐᐃᑐᐃᓐᓇᕆᐊᓖᑦ ᓇᓅᒪᓱᖅᑐᑦ ᐃᓂᖏᓐᓂᒃ. ᐃᐊᒃᓴᓐ ᕙᓪᑏᔅ ᑯᕕᓚᐅᖅᑎᓪᓗᒋᑦ 1989ᒥ, ᓇᓅᒪᓱᖅᑐ ᐅᓄᕐᓂᖏᑦ ᕿᑐᕐᖏᐅᖅᑐᑦ ᑭᓇᐃ ᓄᕙᕐᔾᑯᑖᖏ, ᐊᖁᔅᑲᒥ, ᐅᓄᖏᓐᓂᖅᓴᐅᓚᐅᖅᑐᑦ ᑲᖏᖅᑐᓂ ᑭᓂᖅᑐᖃᕐᓂᖅᓴᐅᓚᐅᖅᑐᓂ. 1991 ᑎᑭᑎᓪᓗᒍ, ᒪᕐᑮᒃ ᐊᕐᕌᒎᒃ ᐊᓂᒍᖅᓯᒪᓕᖅᑎᓪᓗᒋᑦ, ᑎᒻᒥᐊᙳᖅᑲᑎᒌᑦ ᐅᓄᖅᓯᕙᓪᓕᐊᓕᓚᐅᖅᑐᑦ, ᑭᓯᐊᓂ ᐅᓄᓚᐅᖏᑦᑐᑦ ᓱᓕ ᑲᖏᖅᑐᓂ ᑯᕕᕝᕕᐅᓚᐅᖅᑐᓂ (Day *et al.* 1997a). ᑖᒃᑯᐊ ᐊᑯᓂᒧᑦ ᐊᑦᑐᐃᓃᑦ ᑕᐃᒪᐃᓚᐅᖅᑐᑦ ᐃᓕᖅᑯᓯᖅᓱᐴᓐᓃᖅᑎᑕᐅᓂᖏᓐᓄᑦ ᓯᕗᒥ ᐅᓕᕝᕕᓐᓂᓗ ᑭᓂᖅᑐᒧᑦ (ᑭᓂᖅᑐᓄᓪᓗ ᓴᓗᒻᒪᖅᓴᐃᔪᓄᑦ), ᑐᕐᑯᓇᕐᓂᕐᔫᖏᑦᑐᖅ ᐊᑦᑐᖅᑕᐅᑲᐅᑎᒋᓂᕐᒧᓪᓘᓐᓂᑦ (Day *et al.* 1997a). ᐳᕆᓐᔅ ᕗᐃᓕᐊᒻ ᑲᖏᖅᑐᒻᒥ, ᐊᖁᔅᑲᒥ ᓈᒪᓱᖅᑐᑦ ᑲᑎᙵᓂᖏᑦ ᓇᓕᒧᓚᐅᖅᑐᑦ ᐅᖅᓱᓕᓐᓂ ᐃᓂᒋᔭᐅᔪᓂ ᐅᖅᓲᖏᑦᑐᓂᓗ ᐃᓂ 2.5 ᐊᕐᕌᒎᓚᐅᖅᑐᑦ ᐊᓂᒍᖅᑎᓪᓗᒍ ᐃᐊᒃᓴᓐ ᕙᓪᑏᔅ ᑯᕕᔾᖅ (Day *et al.* 1997b).

ᑭᓂᖅᑐᓂᒃ ᑯᕕᕐᔾᐊᖅᑐᐊᕚᖏᑦᑐᑦ ᐊᑦᑐᐃᕗᑦ ᓇᓃᓱᖅᑐᓂᒃ. ᑭᓂᖅᑐᕈᔾᑦ, ᑐᕐᑯᖓᔾᑦ ᓇᓅᒪᓱᖅᑐᑦ ᓇᓂᔭᐅᒐᔾᑦᑐᑦ ᓯᕐᔭᓂ ᑳᓕᕗᐊᓂᐊᒥ, ᑭᓯᐊᓂ, ᓅᓯᒪᒐᒥᒃ ᑕᒪᐅᖓ ᐱᖃᑖᖑᖃᑦᑕᖏᑦᑐᑦ ᑎᒻᒥᐊᖑᖃᑎᒌᓂᑦ ᕿᓂᖅᑎᓂᑦ ᓇᓂᔭᐅᔾᓂᑦ ᓯᕐᔭᒥ (Roletto *et al.* 2003; Henkel *et al.* 2014). ᐅᓄᖅᑐᑦ ᑖᒃᑯᓇᙳᒐᑦ ᑎᒻᒥᐊᓂᑦ ᑯᕕᔾᓄᑦ ᐊᑦᑐᖅᑕᐅᓚᐅᖏᑦᑐᑦ ᑭᓯᐊᓂᖔᖅ ᑭᓂᖅᑐᓄᑦ ᓱᑉᐱᖏᓐᓇᐅᔭᖅᑐᓄᑦ ᒥᑭᑦᑐᓄᑦ ᐃᕐᖔᖅᑐᓄᑦ ᑯᕕᔾᓄᓪᓗ ᐅᖃᐅᓯᕆᔭᐅᒐᔾᖏᑦᑐᑦ ᐊᐅᓚᔾᔭᐃᓇᑎᓪᓗ ᓴᓗᒻᒪᖅᓴᐃᔾᔾᓯᕐᓂᒃ. ᕿᒥᕐᕈᓃᑦ ᐳᕆᑎᔅ ᑲᓚᒻᐱᐊ ᓯᔾᔭᖏᓐᓂᑦ ᐅᖃᖅᑰᔾᔨᕗᑦ ᓱᐴᖏᓐᓇᐅᔭᕐᓃᑦ ᑲᑎᓯᒪᕗᑦ ᒪᕐᕈᓪᓗᐊᓂ: Hᐃᐊᒃᑕᐃᑦ ᓱᓪᓗᕐᒥ ᑎᒃᓴᓐ ᐃᓯᕆᐊᒥ ᐅᐊᓐᓇᒥ, ᔅᑲᑦ ᕿᑭᖅᑕᓂᓗ ᓂᒋᕐᒥ (Fox *et al.* 2016). ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔾᑦ 41% ᓇᓅᒪᓱᖅᑐᑦ ᓅᑦᑐᑦ ᐳᕆᑎᔅ ᑲᓚᒻᐱᐊ ᓯᔾᔭᖕᒐᒍᑦ ᐅᐸᔅᓯᓂᐊᖅᑐᑦ ᐅᓗᕆᐊᓇᓪᓚᑦᑐᓂᒃ ᑭᓂᖅᑐᓕᓐᓄᑦ, ᐱᓗᐊᑕᖅᑐᒥ ᓂᒋᐊᓂ ᓯᔾᔭᐃᑦ (Fox *et al.* 2016). ᐅᓗᕆᐊᓇᕐᓂᖓ ᓯᓚᑖᓂ ᐳᕆᑎᔅ ᑲᓚᒻᐱᐊ ᖃᓄᑎᒋ ᐊᖏᒻᒪᖔᑦ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᖏᑦᑐᖅ.

ᖃᐅᔨᓴᕐᓂᓕᒫᑦ ᐊᑦᑐᐃᓂᖏᓐᓄᑦ ᑭᓂᖅᑐᑦ ᐱᓕᕆᔭᐅᓯᒪᕗᑦ ᓅᒃᑕᖏᓐᓂ, ᓇᓅᒪᓱᖅᑐᑦ ᐅᓗᕆᐊᓇᖅᑐᒥᒃᑭᕗᑦ ᑕᒪᒃᑮᓂᑦ ᑭᓂᖅᑐᖃᐃᓐᓇᐅᔭᕐᓂᐊᓄᑦ ᑯᕕᕐᔾᐊᑐᓄᓪᓗ ᑭᓂᖅᑐᓂᒃ ᐅᑮᕝᕕᒻᒥᓂ Hᐊᓪᐳᓪᑦ ᓱᓪᓗᐊᓂ. ᑭᓂᖅᑐᓂᒃ ᐲᔭᐃᓅᑦ ᐊᑑᑎᖃᑦᑎᐊᖅᐳᑦ ᑮᓇᐅᔭᓕᐅᕐᓂᕐᓄᑦ ᑭᓯᓕᐅᕐᓂᒃᑯᑦ ᑕᐅᕙᓂ, ᐅᓄᖅᑐᐊᓗᓐᓂᒃ ᐅᖅᓯᐊᓗᒃᑕᖅᑎᓂᒃ ᐱᖅᖅᐸᑦᑐᓂ (UNEP 2006). ᐅᓄᖅᑐᓂᒃ ᒥᑭᑦᑐᓂᒃ ᐊᖏᓗᐊᖏᑦᑐᓂᓪᓘᓐᓂᑦ ᑭᓂᖅᑐᓂᒃ ᑯᕕᔾᖃᖅᓯᒪᕗᑦ ᑕᐅᕙᓂ, ᑲᑎᓯᒪᓪᓗᐊᑕᖅᑐᑎᒃ ᐅᒥᐊᕐᔾᐊᓄᑦ ᑐᓚᒃᑕᕝᕕᓐᓄᑦ ᓲᕐᓗ ᑕᐃᑲᓃᑦᑐᓂ ᒍᐊᐃᐊᑯᕕᐅᓪ, ᐃᐊᑯᐊᑐᐊ, ᓖᒪ, ᐱᕈ, ᐳᐃᑐ ᑮᓐᑎᕈ, ᓴᓐ ᕕᓯᓐᑎ, ᐳᓐᑕ ᐊᕆᓈᔅ, ᓯᓕᓗ (UNEP 2006).

595 ᐃᓗᐃᑦᑐᑦᓯᒃᑯᑦ ᓇᑭᓪᓗᐊᑕᖅ ᑭᓂᖅᑐᖏᐃᓐᓇᐅᑦᔨᖅᑐᓂᓪᓘ ᓱᑭᐃᓂᑦ ᓇᓗᓚᓱᖅᑐᑦ ᐅᓄᖅᓂᖓᓐᓄᓂᑦ ᑲᓇᑕᒥ
596 ᓇᓗᓴᐅᔪᑦ.

597 *9.4 ᓴᓂᑦ ᑎᓱᔪᓪᓗ ᓱᑭᐃᑦ (ᐊᑯᓐᓂᖅᓱᖅ)*

598 ᐊᐅᑦᑕᔨᓄᑦ ᓯᓚᓂᑦ ᐊᖏᓪᓕᓂᕆᓪᓕᐊᓘᒪᑦ ᑕᓚᐅᓂ ᑕᒪᑲᑭᒃᓴᓪ ᓯᓴᓚᐊᑦ ᓂᓚᓱᒪᔪᖅᓴᐅᓂᑦ ᐊᐅᑲᑕᔨᕋᓭᓂᑲ.
599 ᓄᐊᑦ ᑲᓚᓪᐃᓇ ᓯᓴᖏᓪᑕ ᓴᖏᓂ 59 92ᓂᑦ ᓇᓭᓱᖅᑐᑦ (64%), ᑲᑎᖅᓱᖅᑕᐅᔪᑦ ᐅᒪᓪᓗᑎᑲ,
600 ᓂᓚᓱᒪᓪᐅᖅᑐᑦ ᐊᐅᑲᑕᔨᓂᑲ, ᐱᓪᐊᖅᑐᒥᑲ ᐊᐅᑲᑕᔨᑦᑎ ᐃᓪᓕᖏᓪᓂᑲ, ᐊᑦᑐᓇᓂᑲ, ᑐᐊᑦᑐᓂᑲ, ᑲᑎᖃᓴᔪᓂᑲ
601 ᐃᓂᓇᓂᑲ, ᓴᑦᑐᓂᓪᓗ ᐊᐅᑲᑕᔨᓂᑲ (Moser and Lee 1992). ᑕᑲᐅᕆᐅᓂ ᑎᒥᐊᖓᖏᖅᑎᑎᓂᓕᒃ,
602 ᑎᒥᐊᖓᖏᖅᑎᑎᓂᑦ ᓱᑦᓗᑐᑦ ᓇᓭᓱᖅᑐᑦ ᓂᑭᖅᓴᖅᓱᓱᐅᑦ ᖃᖅᓴᓂ ᑯᑭᐅᓴᓗᓂᑦ ᓂᓚᖅᓴᓴᔪᓂᖅᓴᐅᓚᐅᕐᖅᑐᑦ
603 ᐊᐅᑲᑕᔨᕋᓭᓂᑲ (Moser and Lee 1992). 53 ᓇᓭᓴᖅᑐᓄᑦ (*Phalaropus fulicarius*) ᖃᑯᖅᑕᐅᔨᓄᑦ
604 ᑲᓕᓂᐊᓂᐊ ᓱᑦᓴᖏᓪᓂ, ᐊᖏᑭᐊᖏᖏᑦ 34 ᐃᓗᓕᖃᓚᐅᖅᑐᑦ ᐊᐅᑲᑕᔨᕋᓭᓂᑲ (64%; Briggs *et al.* 1984).
605 ᖃᐅᔨᓴᖅᑕᐅᔨᓂ 7 ᓇᓭᓴᖅᑐᑦ ᑐᓗᖅᑐᓄᑦ ᐅᐊᔪᓄᑦ ᑲᓕᓂᐊᓂᐊᒥ, 6 ᐋᓱᓴᓚᐅᖅᑐᑦ ᐊᐅᑲᑕᔨᕋᓭᓂᑲ
606 86%; Connors and Smith 1982).

607 ᐋᓱᓗᓂ ᐊᐅᑲᑕᔨᕋᓭᓂᑲ ᐱᐅᖏᑦᑐᑲᔨᐅᔨᑦ ᓇᓭᓴᖅᑐᓄᑦ. ᓇᓭᓴᖅᑐᓄᑦ ᐊᑐᓂᑦ ᐋᓱᔨᑦ ᐅᓄᖅᓂᖅᓴᓂᑲ
608 ᐊᐅᑲᑕᔨᓂᑲ (ᐊᖏᕈᑲᓂᑦ) ᐅᖅᓱᖅᑲᖏᓪᓂᖅᓴᐅᓚᐅᖅᑐᑦ, ᐅᖅᑲᖅᑰᔨᓗᓂ ᓂᓚᓪᓗᓂ ᐊᐅᑲᑕᔨᓂᑲ ᐱᐅᖏᓕᒪᑦ
609 (Connors and Smith 1982). ᓱᓕᔭᑲᓪᓂᖅ 9ᓂᑦ ᑐᖁᖏᓴᔨᓂᑦ ᓇᓭᓴᖅᑐᓄᑦ ᑲᑎᖅᓱᖅᑕᐅᔨᑦ ᓴᓚᑎᑲ
610 ᑲᓕᓵᐱᐊᒥ, ᑕᒪᑲᑭᑦ ᐊᐅᑲᑕᔨᕋᓭᓕᖅᑕᐅᖅᑐᑦ ᐊᖏᐊᑭᒥᓂ ᐱᓗᓗᐊᒪᑲᖅᑐᑎᓪᓗᓗ (Drever *et al.* 2018).
611 ᐱᓕᔭᑕᐅᓚᒥᔭ ᓇᓗᓇᐃᖅᓱᓕᐅᖅᑐᑦ ᑕᒪᑲᑭᒃᓴᖅᑎᑦ ᑐᖁᓭᓕᐅᖅᑐᑦ ᐱᖁᓪᓂᖅᑎᑦ ᓇᓂᓱᓪᓗᓕᓪᓗ
612 ᐊᖏᐊᑭᖏᓐᓂᓂ ᐊᒥᖁᓪᓗᑐᑐᓂᔭ ᐊᐅᖏᓐᓇᐅᔨᖅᑐᑦᓂᓪᓗ ᐃᓄᐊᓗᐊᖏᑎᒍᑦ ᐃᓗᓪᓘᒧᑦ ᐊᐅᑦᑐᑦᓂᔭ,
613 ᓇᓗᓇᐃᖅᓱᓗᑎᔭ ᐱᖁᓪᓕᖅᑐᑦ ᑎᒥᐊᑦ ᓂᓚᔨᖏᓚᒥᔭ ᐊᐅᑲᑕᔨᓂᑲ, ᐊᐅᑕᔨᑦ ᓱᕋᐃᖅᑕᑕᓚᐅᖅᑐᑦ
614 ᐃᓇᓗᐊᖁᓂᔭ (Drever *et al.* 2018; Jennifer Provencher ᓇᖏᒥᓂᖅ ᑐᓴᐅᒪᑎᑦᑎᓂᖅ). ᑎᒥᐊᑦ ᓱᔨᓘᑦ
615 ᖃᒃᓕᒥᐊᖅᑐᑎᔭ ᓱᑦᖃᐃᓴᒪ ᑕᐃᒪᐃᓕᓴᖏᑦᑐᑦ ᐅᖅᓯᓗᐊᖅᑐᑦ ᑕᒪᐅᖁᒥ ᐅᓐᓴᓂ ᐅᓄᓐᓂᓂᖅᑎᑦᑕᐅᖁᒪᑦ
616 ᖁᓕᐊᑭᕋᓭᓂᔭ ᓴᑦᑎᑦᑐᒥ, ᑕᐃᒪᐃᓕᒪᖅᖃᐃ ᐊᐅᑲᑕᔨᖁᓂᖅᑕᓚᐅᑦᑕᑦᑐᑦ ᐊᐅᑲᑕᔨᓄᑦ ᓱᑭᓄᑦ (Drever *et al.*
617 2018).

618 ᐊᐅᑦᑕᔨᑦ ᐃᓱᐊᓪᓴᓓᓗᐊᑐᐃᓴᓓᓗᐊᓕᓪᓕᑦ ᖃᑐᖁᓴᑭᐅᖅᖁᑎᓪᓗᑦ. ᑕᑲᐅᖁᓂ ᐃᖏᑦᕋᓂᑦ ᖃᑎᑦᑎᓱᓰᓂᒪᑦ
619 ᖁᓕᐊᑭᓂᑲ ᕼᐊᐅᓴᓂ, ᓂᓚᓴᖁᓂᖅᑐᓂ ᐅᑭᔨᓄᑦ ᓇᓭᓱᖅᑐᓄᑦ. ᑕᑲᓕᐊᑦᑕᐃᓴᓓᐃᑦ ᐃᖏᑦᕋᓂᑦ
620 ᑲᐃᑦᑎᖃᑦᑕᖁᔪᑦ ᐊᐅᑲᑕᔨᓂᑲ, ᖃᑭᐃᓴᓪᓗᑎᑲ ᓱᓴᓚᐊᓂᑲ ᓂᓚᓴᖅᓴᓱᐅᖅᑐᑐᓂᑲ ᓄᑲᓭᖅᑐᓂ ᓴᓂᖁᓂ
621 (Bourne and Clarke 1984). ᐃᓗᐃᑦᑐᑦᓯᒃᑯᑦ ᐊᑦᑐᑲᓂᑦ ᓴᓂᖁᓂᑦ ᑎᒥᔨᓂᓪᓗ ᓱᑭᓂᑦ ᓇᓭᓱᖅᑐᑦ
622 ᐅᓄᖁᓂᖏᓐᓄᑦ ᐊᑯᓐᓂᖅᓱᖅᑐᑦ.

623 *9.5 ᖃᓚᒋᔨᑦ ᓄᔾᐃᑦ (ᐊᑦᑐᐃᓂᖅ: ᓇᓗᓴᐅᔨᖅ)*

624 ᑭᓱᓕᓚᓗᓄᑦ ᖃᓄᐃᐊᓕᐅᖁᓂᑦ ᓱᓭᑕᓂ ᐱᓕᓚᑲᐅᔪᖅᓴᓗᐊᖅᑐᑎᑲ ᓇᓭᓱᖅᑐᑦ ᖃᑐᖁᓕᐅᖅᖁᕐᓇᖏᑕ,
625 ᐊᖏᑭᔪᖃᓭᓂᑲ ᒧᐅᓚᑲ ᐅᐊᔪᖅᓴᖅᓯᓚᓘᒪᑦ ᐅᑭᐅᖅᑕᖅᑐᒪᑦ ᓱᓭᑕᓄᓭᓗ ᐃᒪᖏᓐᓄᑦ 1960 ᒥᓂᑦ (Muir *et al.*
626 2009). 13 ᓇᓭᓱᖅᑐᑦ ᖁᐅᖅᑕᐅᔨᑦ ᑲᑎᖅᓱᖅᑕᐅᔨᔪᓗ ᑲᖏᖅᓱᔪᓂ ᓭᓕᑕᐃ, ᓂᐅ ᐱᕆᔭᖅᑲ ᐱᑭᑦᑐᓂᑲ
627 ᓄᑭᒥᓂ ᒧᑦᓴᓚᖓᓕᐅᖅᑐᑦ, ᐃᓚᒪᖅᓯᓱᕈᓘᔪᖅ, ᖁᓕᐊᑭᓂᑲ ᓂᓚᔨᓗᑎᑲ ᔪᑐᑦᑐᑦ ᐃᓕᖏᓐᓄᑦ ᑎᑎᑲᓴ
628 ᑲᑎᖅᓱᐃᓂᕆᓂᑲ ᒧᑦᓴᓚᑲ ᐃᖅᑲᓖᑦ ᓂᓚᓱᓴᓂ ᑎᒥᔪᓂᑦ ᔪᑐᖅᑕᐅᔨᓂᑲ (Braun *et al.* 1987). ᑭᓱᐊᓂ,
629 ᖃᓄᒪᑎᐅᓴᖅ, ᔪᑕᐅᓱᖅ ᐅᑦᑭᐊᒃᓕᑲ (ᐱᐊᑭᓯᓚᐅᖅᑐᑦ), ᔪᓭᔾᔪᑲ ᐊᐅᖅᓴᓂ ᒧᑦᓴᑭᖅᑎᑎᓚᐅᖅᑐᑦ ᖁᓭᓚᓂ
630 ᑭᓪᓕᔪᑕ ᖃᑐᖁᓕᐅᑦᑎᔪᑭᓐᓇᖁᓪᓕᑦ ᔪᓱᓂ ᑎᒥᐊᖓᖏᖅᑎᑎᓂᓂ (1.21 ug g^{-1}; Perkins *et al.* 2016).

631 ᓂᓪᑲᓐᓂᖅ, ᐊᑕᐅᓂᑦ ᒪᓐᓂᐅᖏᑎᑦᑕ ᖃᐅᔨᕐᖏᑕᐅᔪᑦ ᐅᕐᑯᒪᐃᑦᑐᓄᓪᓕᐅᑦ ᓴᖅᓴᖏᖃᓕᓂᖅ ᓇᓂᓂᓚᐅᖅᑐᑦ
632 ᔮᑐᕐᑎᐅᒻ ᖃᕐᓂᑦ >ᖅᑐᓂᐊᖅᓂᒪᓚᐅᖅᑐᑦ, 9.7 µᑦᖁᒍᔪᑦᑐᑎᑦ ᔮᑐᕐᑎᐅᒻ ᐊᑐᓂ ᔫᑦᒪᒍᑦ ᒪᓐᓂᒻᒧᑦ,
633 ᕿᑯᓚᓕᑐᑐᓂ ᖃᑐᕐᖏᐅᑦᑎᐊᖅᓂᔪᑕᐅᔪᑦ ᐊᓂᓂ ᑎᒥᐊᖁᖃᑎᖏᓂᓂ (Saalfeld *et al.* 2016). ᔮᑐᕐᑎᐊᒻ
634 ᓇᒧᖏᐅᑦᔨᐅᔪᓇᖅᑐᖅ ᐅᖏᓂᑦᑐᐊᓗᓇᓂᑦ >ᔪᓗᑎᒃ, ᐅᑭᐅᖅᑕᖅᑐᒧᐊᕐᓗᑎᒃ. ᐊᑦᑐᐃᓂᖅᑎᑦ ᖃᖏᑕᒥᔪᑦ
635 ᓂᕈᐃᑦ ᓇᓗᒪᓂᖅᑐᑦ ᐅᓄᕐᓂᖅᓴᓄᑦ ᓇᓗᔨᐅᔪᖅ.

636 ***8. ᑕᒪᐅᓇᖏᑐᑦ ᐊᕆᐅᓇᓄᑕᐅᔪᓕᓗ ᑎᒥᐊᖁᖃᖏᓂᑦ, ᖃᓄᒪᓚᓇᑦ ᑎᑎᕋᐅᓄᑦᓕᓗ (ᐊᑦᑐᐃᓂᖅ: ᐳᖅᑎᑦᑐᖅ)***

637

638 *8.2 ᐊᕆᐅᓇᖅᓂᕋᑦᑎᓄᑦ ᑕᒪᓐᒥᐅᑕᑐᖃᑦ ᓂᕐᔪᓂᓕᓗ (ᐊᑦᑐᐃᓂᖅ: ᐳᖅᑎᑦᑐᖅ)*

639 ᑲᑎᓚᓂᖃᖅᐳᑦ ᓇᓗᒪᔪᖅᑐᑦ ᖃᑐᕐᖏᐅᕙᒃᓴᖏᓚᓂᓂ ᐅᓄᓗᐊᖅᑐᓕᓗ ᑲᖏᐃᑦ ᑲᖏᐃᖁᑎᑎᒃᓴᓚᓂᓂ, ᑭᒪᐊᓂ
640 ᐊᑕᖏᑳᓴᑦᑐᓂ ᖃᑐᕐᖏᐅᕙᒃᓴᓴᑲᖅ ᑲᑎᑎᒃᓂᓂ. ᐱᑕᖅᓯᓂᓄᑦ ᐊᒪᔪᓵᓂᓂ ᓴᓇᒪᒪᓚᒪᑕ ᓂᕋᖅᓴᓕᓚᓂᓂᑦ ᓴᓇᓂᓂ
641 ᐅᑭᓴᖏᓚᓂᓂ ᐅᓄᖅᓯᒪᐊᓕᓚᒍᑎᓕᑐᑐᓂᓂᐅᓕᓚᓂᓗ (Abraham *et al.* 2005). ᑲᖏᐃᑦ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᑦ
642 ᐅᓄᓗᐊᒪᓴᖅᑐᓄᑦ ᑲᓇᑕᒥ 1998ᒥᑦ. ᖃᑎᐊᓂ ᑲᓇᑕᐅᕐᐸ ᐊᒥᐊᓕᓴᖅᐅᓕᓚᓗ ᑲᖏᐃᑦ 1999ᒥᑦ,
643 ᐅᑭᐅᖅᑕᖅᑐᓕᓚᓗ ᐱᓇᓂᓇᖅᓴᓂ ᑲᖏᖅᓯᓂ ᒥᑭᓂᖅᓴᓂᓚᓗ ᑲᖏᓂ 2014ᒥᑦ. ᖃᓄᐃᒋᐊᑕᑕᐅᓚᓂᓂ
644 ᓇᓗᓇᐃᖅᓯᓂᔪᑦ ᐅᓄᓗᐊᒪᓴᖅᑐᑐᑦ, ᐊᓂᓇ ᐅᐱᕐᓴᖁᑦ ᓄᖏᑎᑦᑎᑕᐃᓕᓚᓂᓂᑦ ᐊᖏᐃᓇᓯᓂᑦ ᐅᓄᖅᑐᓂ
645 ᐊᕃᓴᓵᒪᓇᓂ ᖃᓴᓵᓂᓚᓗ ᑐᕐᑯᓂᑎᓇᓯᓂᑦ ᐅᓄᖅᓯᒋᐊᖅᑕᐅᓵᒪᓐᓂ ᑎᓕᐅᑕᐅᓇᓯᑐᑦᑐᑎᒃ ᑲᖏᓂᓂ
646 ᐊᖏᐃᓇᓯᑯᓚᒋᑦ ᐅᓄᕐᓂᖅᑦ ᐊᐅᓪᓚᑕᐅᓂᐊᖏᒪᑕ.

647 ᐅᓄᓗᐊᒪᓴᖅᑐᑦ ᑲᖏᐃᑦ ᓂᖀᓴᖁᓕᓪᓕᕆᓚᒥᒃ ᐳᑐᓪᓚᔪ ᐃᓱᐊᖅ, ᖃᒪᒪᓯᖏᓴᒪᑕ ᐃᓱᐊᖅᖏᓂᑐᑐᓂᓂ ᓄᓇᓂᒃ
648 ᐱᑕᖅᑐᑭᓂᖅᓴᓚᓪᓚᓗ (Abraham *et al.* 2005; Peterson *et al.* 2013). ᑲᖏᐃᑦ ᐳᑐᓯᓚᐊᕐᓂᖅᑦᑐᑦ
649 ᐊᓯᔨᓯᖏᓴᒪᑕ ᐃᓱᐊᐃᑦ ᖃᓄᐃᓕᓴᖅᖏᓂᓂᒃ ᐃᓱᐊᐃᔨᖅᐸᓪᓕᐊᑎᑎᓂᕐᑐᑐᓂᓚᓪᓚᓗ,
650 ᑕᓗᐅᕐᖏᖅᑎᑎᓂᒃᓄᓂᖅᑐᑐᓂᓂ ᑕᓗᐅᖅᖏᖏᑐᑐᓂ ᑕᓯᕐᓂᒃ ᐊᓯᔨᓵᓓᑎᓚᓗ ᐋᖅᑭᒃᓯᒪᓂᖏᓂᓂᒃ
651 ᐊᑐᐃᓂᓇᐅᓂᕐᓂᓪᓚᓗ ᕿᔪᐱᕐᓂᒃ (Milakovic *et al.* 2001). ᑲᖏᖅᑭᓂᓂᕐᓕᓚᐊᑭᑎᒃ ᓄᓇᐃᑦ, ᐊᓯᔨᕐᓂᓂ
652 ᐱᑕᖅᑐᓂ ᑕᐃᒪᐃᑐᐃᓂᓇᑦᓚᓂᑦ ᐊᕐᕌᒍᓄᑦ ᐃᓕᓴᖅᓯᓯᕐᒥᓄᑦ ᐅᑎᓪᓚᐅᖅᑎᓂᓂᓂᓄᓂᓂ (Peterson *et al.* 2013).

653 ᐅᓄᕐᓂᖅᑎᑦ ᓇᓗᒪᔪᖅᑐᑦ ᖃᑐᕐᖏᐅᖅᑐᑦ ᑲᐃᐸ ᓂᕿᓂᐅᓪᓚ, ᒪᓂᑐᐸᒥ, ᐅᓄᑭᓵᓪᓚᐅᖅᑐᑦ
654 ᑲᖏᖅᓗᐊᓪᓚᐅᖅᑎᓪᓚᔪᒍ 1990ᓂ (Sammler *et al.* 2008). ᑲᖏᓂᒃ ᐃᓂᓴᖅᓪᓚᐅᖅᑎᓂᓂᑦᑐᖅᑐᐊᖅᑐᓂ ᑲᐃᐸ
655 ᓂᕿᓂᓪᒥ, ᑲᖏᐃᑦ ᖃᑐᕐᖏᐅᖅᑐᑦ ᓪ ᐱᑭᓵ ᑲᖓᓂᖅᑐᒥᒥ ᐱᓂᓂᖅᑎᑎᒋᔭᓚᒪᓕᑦᑐ ᖃᑐᕐᖏᓚᓂ ᓂᕿᓂᓚᐅᓪᓚᓂ
656 ᓂᓚᓴᖅᑐᖅᑐᑎᒃ ᐱᑭᖅᑐᓂ ᐊᑐᖅᑐᓂ (Cooch *et al.* 1993), ᐱᐅᓴᓵᓂᖅᑎᑦᑐᐃᔪᖅᐃ ᐃᓂᒋᑦᔨᖅᓴ ᖃᑐᕐᖏᐅᑦᓂᓂᓄᑦ
657 ᓇᓗᒪᔪᖅᑐᓄᑦ (Sammler *et al.* 2008). ᓪ ᐱᑭᓵ ᑲᖓᖅᓂᓚ ᒧᓇᐅᔨᕐᖅ ᐃᓄᑭᓵᓂᖅᓴᓚᓵ ᓇᓗᒪᔪᖅᑐᖅᖃᖅᐳᖅ
658 ᓴᓂᐊᓂ ᐊᕐᕌᑎᖏᓵᓂᑐᑦ (Artuso 2018) ᐅᓄᓂᑦ ᓇᓗᒪᔪᖅᑐᓂ ᐅᓄᑭᓵᓂᓇᐅᖅᑐᑦ ᓪ ᐱᑭᓵ ᑲᖓᖅᑐᒥᒥ
659 1983ᒥ, ᑲᖏᐃᑦ ᐅᓄᖅᓯᓪᐅᖅᑎᓵᓚᑦ ᐊᑦᑐᐃᓴᓗᐊᓕᖅᓴᖅ ᐃᓂᒋᑦᔨᐅᔪᑦ ᐱᐅᓂᖏᓵᓂᒃ, ᐱᐃᓴᖅᑐᑦ
660 ᓇᓗᓇᐃᖅᓯᖏᓚᑦ 1982-1983 ENSO, ᑲᖏᐃᑦᖁᖏᑦᑐᑦ, ᓯᐅᓪᓕᖅᐸᒥ
661 ᐅᓄᑭᓵᓂᖅᓴᓪᓕᓕᑭᐅᑕᐃᐃᓇᓗᐊᖅᓴᓂᖏᓵᓂᒃ (Reynolds 1987; Nisbet and Veit 2015; C. Gratto-
662 Trevor ᓇᖏᒥᓂᖅ ᑐᓴᐅᒪᑎᑦᑎᓂᖅ). ᑭᓯᐊᓂ, ᐃᓂᒋᑦᔨᐅᔪᓂᒃ ᐊᓯᔨᓵᓂᑦ ᖃᓄᐃᓂ ᐃᓂᒋᑦᔨᐅᔪᖅ
663 ᐃᑲᔪᑐᐃᓵᓇᐊᖅᑐᖅᐃᓕᓂᖅ ᑲᔪᓯᔪᓄᑦ ᐅᓄᑭᓵᓂᓴᓂᓄᑦ ᓇᓗᒪᔪᖅᑐᑦ ᐅᓄᓴᖏᓵᓄᑦ.

664 ᐊᑦᑐᐃᓇᑦ ᐊᑲᐅᖅᓯᓗᑕᓄᑦ ᑕᒧᓂᒋᐅᑕᓄᑦ ᑎᒥᐊᖁᖃᖏᓂᑦ ᓇᓗᒪᔪᖅᑐᓄᑦ ᐳᖅᑎᑦᑐᑲᔪᐅᔪᖅ ᓯᖏᐃᒪᒻᒪ
665 ᒥᑭᑦᑐᒥᑲ ᐃᓂᖏᑦ ᑲᑎᒪᒪᑕ ᖃᑐᕐᖏᐅᖅᑐᑐᓂ ᓇᓗᒪᔪᖅᑐᓄᑦ ᐅᓄᓗᐊᖅᑐᓄᑦᓕᓗ ᑲᖏᓄᑦ ᐃᓂᒋᓄᑦ. ᐃᓂᓂᑦ
666 ᐱᐅᔪᓵᓂᖅᑎᑦᑎᓵᑦ ᑲᖏᐃᓄᑦ ᐊᑲᐅᖅᓯᒪᓕᐅᑉᑐᓄᖏᓚᑦ ᐱᓇᓵᓓᖏᓵᓂᒃ ᕼᐊᑦᔪᓵ <ᐃᒥ ᔦᐃᒻᔪ <ᐃᓗᓐ,

ᐋᓐᑎᐊᕆᐅᒥ, ᑯᐃᓐ ᒪᑦ ᑲᖏᖅᑐᒻᒥ ᓅᒃᑕᖅᑐᓄᑦ ᑎᒻᒥᐊᓄᑦ ᓴᐳᒻᒥᕕᒻᒥ, ᓄᓇᕘᒥ ᓴᐅᑦᕼᐊᒻᐸᑕᓐ ᕿᑭᖅᑕᒥᓗ, ᓄᓇᕗᑦ (COSEWIC 2014).

7. ᓄᓇᒥᐅᑦ ᐃᓕᖅᑯᓯᖏᓐᓂᒃ ᐊᓯᔾᔩᓂᑦ (ᐊᑦᑐᐃᓂᖅ : ᓇᓗᔭᐅᔪᖅ)

7.2 ᓴᐳᑏᑦ ᐃᒻᒦᓗ ᐊᐅᓚᑕᐅᓂᖏᑦ/ᐊᑐᖅᑕᐅᓂᖏᑦ (ᐊᑦᑐᐃᓂᖅ: ᓇᓗᔭᐅᔪᖅ)

ᐃᓄᓐᓄᑦ ᐃᒥᕐᓂᒃ ᐊᐅᓚᑦᓯᓃᑦ ᐃᓱᒫᓘᑕᐅᔪᑦ ᓇᓘᒪᓱᖅᑐᓄᑦ ᓅᑎᓪᓗᒋᑦ. ᐅᓄᖅᑐᑦ ᑎᒻᒥᐊᑦ ᓅᓲᖑᕗᑦ ᐃᓗᖏᑎᒍᑦ ᓄᓇᑎᒍᓪᓗ ᓂᕿᖅᓴᖅᓯᐅᓲᖑᓪᓗᑎᒃ ᐊᐅᓚᑕᐅᔪᓪᓚᓐᓄᑦ ᐃᒥᓄᑦ. ᓲᕐᓗ ᒪᓄ ᑕᓯᕐᒥ ᑳᓕᕗᐊᓂᐊ, ᓄᓇᐃᓐᓇᕐᒦᑦᑐᖅ ᑕᑎᐅᓕᒃ ᑕᓯᖅ, ᑕᑎᐅᖃᕐᓂᖅᓴᐅᓕᖅᑐᖅ ᐃᒥᖅ ᓴᖑᑎᑕᐅᓚᐅᕋᑦ ᐃᓄᐃᑦ ᐊᑐᕐᓂᐊᕐᒪᒋᑦ ᐱᒋᐊᖅᑐᑎᒃ 1940ᓂ. ᓇᓘᒪᓱᖅᑐᑦ ᓂᕿᓐᓇᑎᑖᖕᖓ ᑕᐃᑲᓂ, ᑕᑎᐅᕐᒥᐅᑦ ᐊᓇᙱᑦ, ᐃᒃᐱᒍᓱᒻᒪᑕ ᑕᑎᐅᙲᕐᓂᕐᓄᑦ 1990ᓂᓗ ᐃᓱᒫᓗᓚᐅᕐᒪᑕ ᑕᑎᐅᕐᒥᐅᑦ ᐊᓇᙱᑦ ᓄᖑᓐᓂᐊᕋᓱᒋᔭᐅᓪᓗᑎᒃ, ᕿᒪᑦᑐᒋᑦ ᓇᓘᒪᓱᖅᑐᑦ ᓂᕿᒃᓴᖃᕋᑎᒃ (Rubega and Inouye 1994). ᐅᓪᓗᒥ, ᒪᓄ ᑕᓯᕐᒥ ᐃᒥᖏᑦ ᑎᒫᓃᑦᑐᑦ ᓱᓕ ᑎᓕᐅᕈᑕᐅᔪᓄᑦ ᐊᕙᔅᓯᒪᔪᕐᓂ ᐱᖁᔭᖏᑎᒍᑦ. ᐊᓯᖏᑦ ᑕᓲᑦ ᐊᔾᔨᐸᓗᖏᓐᓂᒃ ᐊᔅᓱᕈᑎᖃᕆᕗᑦ; ᓯᔾᔭᕆᐊᓄᑦ ᓄᖅᑲᓈᕝᕕᐅᓲᑦ ᑕᓯᖅ ᐊᐅᐳᕐᒥ, ᐅᐊᕆᒐᓐ ᐅᓄᖏᓐᓂᖅᓴᐅᖅᑰᓕᓚᐅᖅᑐᑦ ᖃᖓᑦᓯᐊᖅ ᑕᑎᐅᙳᒃᑲᓐᓂᕐᓄᑦ (Larson *et al.* 2016). ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒍ, ᐃᒥᕐᓂᒃ ᐊᐅᓚᑦᓯᓂᖅ ᓄᓇᓕᓐᓄᑦ ᐊᑲᐅᙱᓕᐅᕈᑕᐅᕗᖅ ᐱᕕᑭᑦᑐᑎᒃ ᐊᒻᒪᓗ, ᑭᓯᐊᓂ ᐃᓗᐃᑦᑐᒃᑯᑦ ᐊᑦᑐᐃᓃᑦ ᐅᓄᕐᓂᖏᓐᓄᑦ ᓇᓗᔭᐅᔪᖅ, ᓂᕆᐅᒋᔭᐅᔪᖅ ᐊᑦᑐᐃᓂᖃᓗᐊᔾᔭᓇᓱᒋᔭᐅᓇᓂ.

5. ᐊᐅᓚᑦᓯᓂᖅᑎᒍᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᑦ

ᐊᐅᓚᑦᓯᓂᖅᑎᒍᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᑦ ᓇᓘᒪᓱᖅᑐᓄᑦ ᓄᖑᑉᐸᓪᓕᐊᖏᓪᓗᑎᒃ ᐅᓄᖅᓯᕚᓪᓕᐊᓗᑎᓪᓘᓐᓃᑦ ᐅᓄᕐᓂᖏᑦ 2040ᒧᑦ.

ᖃᓄᐃᒻᒪᑦ ᑕᐃᒪᐃᖁᔭᐅᔪᑦ ᐊᐅᓪᓚᑦᓯᓂᕐᓄᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᓄᑦ

ᐊᐅᓚᑦᓯᓂᖅᑎᒍᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᑦ ᓄᖑᔭᑦᑐᓐᓃᕐᓗᑎᒃ ᐅᓄᖅᓯᕆᐊᕐᓗᑎᓪᓘᓐᓃᑦ ᓇᓘᒪᓱᖅᑐᑦ ᐅᓄᕐᓂᖏ 2040 ᑎᑭᓪᓗᒍ. ᑖᒃᑯᐊ ᐊᐅᓚᑦᓯᓂᖅᑎᒍᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᑦ ᐃᓕᓴᖅᓯᕗᑦ ᓇᓘᒪᓱᖅᑐᑦ ᐅᓄᕐᓂᖏᑦ ᓈᒻᒪᑦᑐᒃᓴᐅᔪᑦ ᕿᑐᕐᖏᐅᖅᑐᖃᐃᓐᓇᕈᓐᓇᕐᓗᓂ (2.35 ᒥᓕᐊᓐ ᐸᓗᐃᑦ ᑲᓇᑕᒥ), ᓇᓘᒪᓱᖅᑐᓪᓗ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓗᑎᒃ ᐊᑐᐃᓐᓇᖏᑦᑐᒃᑯᑦ ᐃᓱᒫᓘᑕᐅᔪᑎᑐᑦ ᐅᓄᕈᓐᓂᕐᓂᖏᓐᓄᑦ ᓅᑎᓪᓗᒋᑦ ᓄᖅᑲᖕᖓᕕᖏᓐᓂ ᕿᒪᒃᑕᑦᓯᓐᓂ 40 ᐊᕐᕌᒍᓂ, ᐃᓱᒫᓘᑕᐅᓇᑎᒃ ᒫᓐᓇᐅᔪᖅ ᐅᓄᕐᓂᖏᑕ ᐊᖏᓂᖏᓐᓄᑦ. ᖃᓄᐃᐸᓪᓕᐊᓃᑦ ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑕᕐᓂᐊᖅᑐᑦ ᑐᙵᓗᑎᒃ ᐅᓄᕐᓂᕐᓄᑦ ᖃᐅᔨᓴᕐᓂᕐᓄᑦ ᓅᑎᓪᓗᒋᑦ ᓄᖅᑲᕝᕙᓐᓂ. 10 ᐊᕐᕋᒍᓄᑦ ᐱᕙᖃᖅᑎᑕᐅᓚᐅᖅᑐᑦ ᑖᒃᑯᓄᖓ ᑎᒻᒥᐊᖃᑎᖏᓄᑦ ᓲᖃᐃᒻᒪ ᕿᑐᕐᖏᐅᑦᓯᐊᕐᓃᑦ ᑕᐃᒪᐃᒻᒪᓪᓗ ᐅᓄᕐᓃᑦ ᐊᖏᓂᖏᑦ ᖃᓄᐃᐸᓪᓕᐊᓲᖑᓂᖏᓐᓄᑦ, ᐃᓚᖓᒍᑦ ᓲᖃᐃᒻᒪ ᐊᖑᓇᓱᓲᑦ ᐊᓯᔾᔨᓲᖑᒻᒪᑕ ᐊᕙᙵᓂᑦ ᓯᔾᔭᒥᐅᑕᓂᑦ ᑎᒻᒥᐊᓂᑦ ᐃᕙᕝᕕᖏᓐᓂᓪᓗ, ᑐᙵᓪᓗᑎᒃ ᐊᕙᙵᖃᕐᓃᑦ ᖃᓄᐃᓕᖕᖓᓂᖏᓐᓄᑦ (Blomqvist *et al.* 2002). ᐊᑯᓂᐅᓂᖅᓴᒧᑦ ᐱᕙᖃᕐᓂᖅ ᐱᕙᖃᖅᑎᑦᓯᔾᔮᙱᓚᖅ ᖃᓄᐃᐸᓪᓕᐊᓲᖑᓂᖏᒃ ᐊᑦᑐᐃᑎᖏᓪᓗᒍ ᖃᓄᐃᐸᓪᓕᐊᔪᓂᒃ. ᑖᓐᓇ ᐊᐅᓚᑦᓯᓂᖅᑎᒍᑦ ᖃᓄᐃᑎᑦᓯᓇᓱᑦᑐᖅ ᓵᑦᑎᕗᖅ ᑎᒻᒥᐊᖑᖃᑎᒌᑦ ᐅᓄᕈᓐᓃᕐᓂᖏᓐᓂᒃ ᐱᔾᔪᑕᐅᓗᐊᖅᑐᓂ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓂᖓᓄᑦ ᐊᑐᐃᓐᓇᖏᑦᑐᒃᑯᑦ ᐃᓱᒫᓘᑕᐅᔪᑦ (COSEWIC 2014) ᐊᔪᕐᓇᙱᓪᓗᐊᖅᑐᓂᓗ ᐱᐅᓕᓗᒋᑦ ᐃᓂᒋᔭᐅᔪᑦ ᐃᓗᐃᑦᑐᒃᑯᑦ ᐊᕐᕌᒍᒥ ᖃᓄᐃᐸᓪᓕᐊᓂᖏᓐᓄᑦ ᐊᐅᓪᓗᒋᓪᓗ ᐅᓗᕆᐊᓇᕐᓂᖅ ᑭᓂᖅᑐᓂᒃ ᑯᕙᔪᓂᑦ ᓱᕈᐃᓃᑦ. ᑭᓯᐊᓂ, ᐅᓄᕈᓐᓂᕐᓂᕐᓄᑦ ᖃᓄᐃᐸᓪᓕᐊᓃᑦ ᑕᐃᒪᐃᑎᑕᐅᒍᑎᒃ ᐱᐅᔪᓐᓂᒃᑲᓂᖅᑎᑕᐅᒍᑎᓪᓘᓐᓃᑦ ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖓᓄᑦ ᐊᑦᑐᐊᔪᓄᑦ

ᐅᓗᕆᐊᓇᖅᑐᓄᑦ, ᑖᒃᑯᐊ ᐊᐅᓚᐦᓯᓂᖅᑎᒍᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᑦ ᐊᔾᖅᓇᐸᓗᑐᐃᓐᓇᕆᐊᓖᑦ ᐱᓇᓱᓪᓗᒋᑦ, ᑲᑎᙵᔪᑦ ᓄᖑᔅᔭᐃᖅᓯᒋᐊᖅᓃᑦ ᐅᖃᐅᓯᕆᔭᐅᔪᑦ ᑲᓇᓂ ᐊᑐᓕᖅᑎᑕᐅᒐᓗᐊᕈᑎᒃ.

6. ᐊᔅᓵᕌᒋᕈᓘᔭᖅᑐᓄᑦ ᖃᓄᖅᑑᕈᑏᑦ ᓄᖑᔅᔭᐃᖅᓯᒋᐊᓖᓪᓗ

6.1. ᖃᓄᐃᒋᐊᖅᓃᑦ ᐱᔭᕇᖅᑕᐅᕙᕇᖅᑐᑦ ᐱᓕᕆᔭᐅᔪᓪᓘᓐᓃᑦ ᒫᓐᓇᐅᔪᖅ

- ᕿᑐᕐᖏᐅᖅᑐᑦ ᓇᓅᒪᓱᖅᑐ ᖃᐅᔨᓴᖅᑕᐅᔪᑦ ᐱᓕᕆᓂᖅ ᐊᕕᒃᓯᒪᔪᓄᑦ ᓄᓇᖅᔪᐊᕐᒥᐅᓄᓪᓗ ᓱᔅᓯᒥᐅᑕᓂᒃ ᑎᒻᒥᐊᓂᒃ ᖃᐅᔨᓴᖅᓂᖅᑎᒍᑦ. ᑮᓯᐊᓂ ᕿᑐᕐᖏᐅᖅᕚᑦ ᓂᒋᐊᓃᒻᒪᑕ ᐱᓕᕆᔭᙱᑕ ᑕᐃᒪᐃᒻᒪᑦ ᑖᓐᓇ ᖃᐅᔨᓴᖅᓂᖅ ᓇᐃᓴᐃᙱᒍᐊᖅᓂᐊᖅᑐᖅ ᐅᓄᖅᓂᕐᒋᓐᓂᒃ ᑖᒃᑯᓄᙶ ᑎᒻᒥᐊᙳᖅᑲᑎᒌᓄᑦ. ᑕᐃᒪᒃᑲᓗᐊᖅᑎᓪᓗᒍ, ᑖᒃᑯᐊ ᐱᐅᓛᙹᕗᑦ ᓇᓚᐅᑦᑖᒐᑦ ᒫᓐᓇᐅᔪᖅ ᐊᑐᐃᓐᓇᐅᔪᑦ ᖃᐅᔨᓴᐅᑕᐅᔪᓐᓇᖅᑐᑎᓪᓗ ᖃᓄᐃᑉᐸᓪᓕᐊᔪᓂᒃ.
- 2005 ᒥᓂᑦ ᐊᑦᓚᓐᑎᒃᒥ 1996ᒥᓗ ᐸᓯᕕᒃᒥ, ᑕᕆᐅᕐᒥᐅᑦ ᑎᒻᒥᐊᑦ ᑕᕆᐅᕐᓂ ᖃᐅᔨᓴᖅᑐᓂ ᖃᐅᔨᓴᖅᓯᒪᕗᑦ ᑕᕆᐅᙱᓐᓇᕐᕓᑦᑐᓂᒃ ᑎᒻᒥᐊᓂᒃ ᐅᒥᐊᓂᑦ. ᐊᑦᓚᓐᑎᒃᒥ, ᕿᒪᒃᑕᐦᓯᓐᓂᑦ ᖃᐅᔨᒪᔭᐅᔪᑦ ᐊᑐᐃᓐᓇᐅᔪᑦ ᐳᕈᕐᕋᒻ ᐃᓐᑎᒍᕆ ᑎ ᕆᓱᕐᓯᔅ ᓱᕐ ᓕᔅ ᕘᐊᓱ ᓕᓚᒋᒃᔅ (PROP) ᐊᐅᓚᓪᓗᓂ 1966ᒥᑦ 1992ᒧᑦ, ᐸᓯᕕᒃᕕᑎᓪᓗᒋᑦ, ᑎᒻᒥᐊᓄᑦ ᐃᓂᕕᓂᕐᒥᓄᑦ ᐅᑎᖃᔪᑦᑐᓄᑦ ᑕᕆᐅᕐᒥᐅᓄᑦ ᖃᐅᔨᓴᖅᓂᖅᓄᑦ ᖃᐅᔨᔭᐅᓯᒪᔪᑦ ᑲᑎᖅᓱᖅᓯᒪᔪᑦ ᐊᑯᓂᒥᑦ ᖃᐅᔨᒪᔭᐅᔪᓂᒃ 1982ᒥᑦ 2010ᒧᑦ.
- ᓄᓇᖅᔪᐊᕐᒥ ᓱᔅᓯᒥᐅᓄᑦ ᑎᒻᒥᐊᓄᑦ ᖃᐅᔨᓴᖅᓃᑦ ᐊᑦᓚᓐᑎᒃ ᑲᓇᑕᒥ ᓱᔅᓴᓐᒥᐅᑕᓄᑦ ᑎᒻᒥᐊᓄᑦ ᖃᐅᔨᓴᖅᓃᑦ ᑕᒪᒃᑮᒃ ᖃᐅᔨᓴᕌᖑᔪᑦ ᐃᓚᖓᓂᒃ ᓅᓲᑦ ᐅᓄᖅᓂᕐᒋᓐᓄᑦ ᐊᑐᖅᑕᐅᓯᒪᓪᓗᑎᓪᓗ ᕿᒥᖅᕈᔾᔪᑕᐅᓗᑎᒃ ᐅᓄᖅᓃᑦ ᖃᓄᐃᓕᖓᓂᕐᒋᓐᓄᑦ, ᑮᓯᐊᓂ ᑖᒃᑯᐊ ᖃᐅᔨᓴᖅᓃᑦ ᓱᔅᓴᒧᑦ ᐊᐅᓚᑕᐅᕙᒥᒃ, ᑕᑯᖃᑦᑕᕐᒋᑦᑐᒃᓴᐅᔪᓂᒃ ᐅᓄᖅᑐᓂᒃ ᑎᒻᒥᐊᓂᒃ ᓴᐦᓯᑦᑐᒃᑰᖅᑐᓂᒃ.
- ᐅᓄᖅᑐᑦ ᓅᑐᓄᑦ ᓄᖅᑲᕆᐅᓲᑦ ᓇᓅᒪᓱᖅᑐᑦ ᑲᑎᙵᕐᒋᑦ ᓂᕆᓇᓱᑦᑐᑎᒃ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᑦ ᓄᓇᐃᑦ ᐊᕕᒃᓯᒪᔪᓄᑦ ᓄᓇᖅᔪᐊᓪᓗ ᐊᙳᕐᖓᓄᑦ ᐱᖅᔪᐊᕆᔭᐅᔪᑐᑦ ᐱᓇᓐᓇᕐᒥ ᓄᓇᖅᔪᐊᑉ ᐊᙳᕐᖓᑕ ᓱᔅᓯᓂ ᑎᒻᒥᐊᓂᒃ ᓴᐳᔅᓵᔨᐅᖅᑎᕆᑦ (WHSRN). ᐃᓚᖏᑦ ᑖᒃᑯᐊ ᓄᓇᐃᑦ ᖃᐅᔨᓴᕋᔪᑦᑐᑦ ᓄᓇᖓᓄᑦ ᑐᕌᓗᐊᑕᖅᑐᓂᒃ ᓇᓅᒪᓱᖅᑐᓄᑦ ᐊᓯᓄᓪᓗ ᓱᔅᓯᒥᐅᓄᑦ.
- ᓇᓅᒪᓱᖅᑐᖅ ᐃᓚᒋᔭᐅᔪᖅ ᑕᓪᓕᒪᓄᑦ ᐊᔅᓱᕈᑕᐅᓛᓄᑦ ᑎᒻᒥᐊᙳᖅᑎᕆᑐᑦ ᐊᒥᐊᓕᒃᑲᓂ ᖃᖓᑕᕝᕕᐅᖃᑦᑕᖅᑐᓂ ᓇᓗᓇᐃᖅᓯᒪᔪᓂ ᐅᑭᐅᖅᑕᖅᑐᒥ ᓅᒃᑕᖅᑏᑦ ᑎᒻᒥᐊᓄᑦ ᐱᒋᐊᕈᑎ (CAFF 2019).
- ᐅᓄᖅᑐᓄᑦ-ᑎᒻᒥᐊᙳᖅᑲᑎᕌᓄᑦ ᖃᓄᐃᒋᐊᖅᓂᖅᓄᑦ ᐸᖅᓇᐅᑎ ᒍᕋᐃ Hᐋᓇᔅ ᑲᓇᑕᒥ ᒥᖅᑯᐃᖅᓯᕚᒃ, ᑲᓇᑕᒥ ᑕᕆᐅᖅᓂ ᓴᐳᒻᒥᔭᐅᕕᒃ, Hᐊᐃᑕ ᐃᑦᑕᖅᓂᓴᓕᕆᔩᑦ ᓄᓇᖓ (PCA 2016) ᐃᓕᓴᖅᓯᕗᑦ ᐱᑕᖃᕆᐊᖃᖅᓂᖓᓂᒃ ᑭᓂᖅᑐᑦ ᑯᕕᔪᓄᑦ ᐸᖅᓇᒃᓯᒪᔭᕆᐊᖃᖅᓂᖅᓄᑦ ᒥᖅᑯᐃᖅᓯᕚᒥ, ᐱᕚᓪᓕᕈᑕᐅᒐᔭᖅᑐᓂ ᓈᓗᒪᓱᖅᑐᑦ ᐊᓲᓪᓗ ᓱᔅᓯᒥᐅᑦ ᑕᕆᐅᕐᒥᐅᓪᓗ ᑎᒻᒥᐊᙳᖅᑲᑎᕌᓄᑦ ᒥᖅᑯᐃᖅᓯᕚᒥ.
- 1994ᒥ, ᑳᓕᕗᐊᓂᐊᒥ ᐊᕕᔅᓯᒪᔪᓂ ᐃᒥᓂᒃ ᐊᑐᕕᒃᓴᓂᒃ ᐊᐅᓚᐦᓯᓂᖅᑲᐦ ᑲᑎᒪᔨᖏᑦ ᐱᔭᕆᐊᖃᖅᑎᑦᓯᓚᐅᕐᒪᑕ ᓚᔅ ᐊᓐᔨᓕᔅᒥᒃ ᐅᑎᖅᑎᖅᑯᔨᓪᓗᑎᒃ ᐃᒦᑦ ᑯᕕᔪᑦ ᒪᓄ ᑕᓯᖅᒧᑦ. ᐅᑎᖅᑎᑦᑐᒋᑦ ᐃᒦᑦ ᖁᕝᕙᖅᑎᑉᐸᕆᖅᓯᒪᓕᖅᑕᖏᑦ ᐃᒦᑦ ᒪᓄ ᑕᓯᕐᒥ. ᑖᒃᑯᐊ ᐱᓕᕆᔪᑦ ᐱᖁᔭᑎᒍᑦ ᓯᕗᓪᓕᖅᐹᒧᑦ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓕᖅᑐᑦ ᐱᕕᑭᑎᑦᑐᒋᑦ ᐃᒥᖅᓄᑦ ᐱᔪᓐᓇᐅᑏᑦ ᐃᑲᔪᙹᖅᑐᑎᒃ "ᐃᓄᓕᒫᓄᑦ ᐊᑐᕕᒃᓴᓄᑦ ᑐᙵᕖᑦ" ᓂᒃ ᓲᖅᓗ ᐆᒪᔪᑦ ᐅᓄᖅᓂᕐᒋᓐᓂᒃ.

- 2018ᒥ, ᑲᓇᑕ ᐊᑎᓕᐅᓚᐅᖅᑐᑦ ᐃᓚᓕᐅᑎᓪᓗᑎᒃ ᓄᓇᕐᔪᐊᕐᒥ ᑕᕆᐅᓂ ᐊᐅᒃᑕᔫᓄᑦ ᐊᖏᖃᑎᒌᒍᑎᒥᒃ ᑮᓇᐅᔭᖃᖅᑎᑦᓯᓪᓗᓂᓗ ᑕᕆᐅᕐᓂ ᓴᓂᑭᓪᓕᒋᐊᕈᑎᓄᑦ ᒃᑮᓇᐅᔭᓄᑦ ᒥᑭᓪᓕᒋᐊᖅᑎᓐᓇᓱᑦᑐᒋᑦ ᐊᐅᒃᑕᔫᓄᑦ ᓱᕈᐃᑦ ᑕᕆᐅᕐᒥ.
- ᑲᑐᔾᔨᖃᑎᒌᑦ ᒐᕙᒪᖃᑎᒌᖏᑦᑐᑦ ᓴᓇᓂᕐᓄᑦ ᐱᓕᕆᓂᖓᑦ (UNDP) ᓄᓇᕐᔪᐊᕐᒥ ᐊᕙᑎᓕᕆᓪᕚᒃᑯᓪᓗ (GEF) ᑮᓇᐅᔭᖃᖅᑎᑦᓯᓚᐅᖅᑐᑦ ᓄᓇᕐᔪᐊᕐᒥ ᐊᕙᑎᓕᕆᓪᕚᒃᑯᑦ- ᑲᑐᔾᔨᖃᑎᒌᑦ ᒐᕙᒪᖃᑎᒌᖏᑦᑐᑦ ᓴᓇᓂᕐᓄᑦ ᐱᓕᕆᓂᖓᑦ-Hᐊᒻᐳᓪᑦ ᐱᓕᕆᓂᕐᒥᒃ 2010ᒥᑦ 2016ᒧᑦ. ᐱᓕᕆᓂᖅ ᐃᑲᔪᓚᐅᖅᑐᖅ ᓯᓕᐊᓐ ᐱᕈᕙᐊᓐ ᒐᕙᒪᖏᓐᓂᒃ ᓴᓇᑎᓪᓗᒋᑦ ᐆᒪᔪᖃᑎᒌᓄᑦ ᑐᙵᔪᒥᒃ ᐊᐅᓚᑦᓯᔾᔪᓯᕐᓂᒃ ᑕᐅᕗᖓ.
- 2016ᒥ, ᓄᓇᕐᔪᐊᕐᒥ ᐊᕙᑎᓕᕆᓪᕚᒃᑯᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᒐᕙᒪᖃᑎᒌᖏᑦᑐᑦ ᓴᓇᓂᕐᓄᑦ ᐱᓕᕆᓂᖓᒃᑯᓪᓗ ᑮᓇᐅᔭᖃᖅᑎᑦᓯᓚᐅᖅᑐᑦ ᐃᑲᔫᑕᐅᔪᒥᒃ ᐱᓕᕆᓂᕐᒥᒃ Hᐊᒻᐳᓪᑦ ᐃᖏᕋᓂᕐᒥ ᐊᖏᔪᕐᒥ ᑕᕆᐅᕐᓂ ᐆᒪᔫᖃᑏᓄᑦ ᐊᑯᓂᕈᕆᐊᖅᑐᒍ ᕿᒪᒃᑕᑦᓯᓐᓂ ᓄᖑᔾᔭᐃᕐᓂᕐᓄᑦ ᐱᓕᕆᔭᐅᓚᐅᖅᑐᑦ. ᐊᑑᑎᖃᓗᐊᙳᐊᖅᑐᖅ ᓇᓗᓕᒪᖅᑐᓄᑦ, ᓄᑖᖅ ᐊᔅᓱᕉᑕᐅᔪᓄᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᐱᖃᓯᐅᔾᔨᔨᑦ ᖃᐅᔨᓴᕐᓂᕐᓂᒃ ᓱᕈᓄᑦ ᑕᐅᕙᓂ.
- ᐱᕈ ᓴᓇᓚᐅᖅᑐᖅ ᒧᐊᓄ ᕿᑭᖅᑕᓂᒃ, ᕿᑭᖅᑕᕋᓛᓂᒃ, ᑲᐃᑉᓯ ᒐᕙᒪᖓᑕ ᓴᐳᔾᔭᐅᔪᓕᕆᔾᔪᓯᕐᓂᒃ 2009ᒥ. ᑖᓐᓇ ᓴᐳᔾᔭᐅᒪᕚᒃ ᓄᖑᔾᔭᐃᖅᓯᓯᒪᔪᖅ ~84,500 Hᐃᐊᒃᑎᐊᔅᓂᒃ ᑕᕆᐅᕐᓂ ᐃᓂᓂᒃ Hᐊᒻᐳᓪᑦ ᐃᖏᕋᓂᕐᒥ ~3,000 Hᐃᐊᒃᑎᐊᔅᓂᒃ ᐱᕈᒥ ᓯᔾᔭᓂ.
- ᕗᐊᓐ ᕚᓐᓐᑦᕆᐊᔅ ᐅᓄᖅᑐᓄᑦ ᐊᑐᖅᑕᐅᔫᓐᓇᖅᑐᖅ ᑕᕆᐅᕐᒥ ᓴᐳᔾᔭᐅᓯᒪᔪᖅ (ᑕᓪᓕᒪᓪᓗ ᐊᑦᑐᐊᔪᑦ ᑕᕆᐅᕐᓂ ᒥᕐᖑᐃᖅᓯᕐᕃᑦ) ᐊᖏᓂᖃᖅᑐᖅ ~24,000 ᓴᓂᒧᑦ ᑐᑭᒧᓪᓗ ᑭᓛᒥᑕᓂᒃ ᓴᑦᓯᑦᑐᒥ ᓯᓕᒥ Hᐊᒻᐳᓪᑦ ᐃᖏᕋᓂᕐᒥ. ᓯᓕ ᐊᑐᓕᖅᑎᑦᓯᓚᐅᖅᑐᑦ ᐅᓄᖅᑐᓄᑦ ᐊᑐᒐᒃᓴᓄᑦ ᐸᕐᓇᐅᑎᒥᒃ ᓴᐳᔾᔭᐅᓯᒪᔪᕐᒧᑦ ᐱᕚᖅᑎᑦᓯᓪᓗᓂ ᐳᓚᕋᑎᓂᒃ ᑲᔪᓰᓐᓇᕈᓐᓇᖅᑐᓂᓪᓗ ᓚᑉᑐᓄᑦ ᐃᖃᓗᒐᓱᒍᓐᓇᕐᓂᕐᓂᒃ.
- ᓯᕗᓪᓕᖅᐹᖅ ᓄᓇᕐᔪᐊᕐᒥᐅᓂᑦ ᓯᔾᔭᕆᐊᓄᑦ ᑲᑎᒪᕋᓛᑦ ᑲᑎᓚᐅᖅᑐᑦ ᔩᓂ, 2019ᒥ ᐅᖃᐅᓯᕆᓪᓗᒋᑦ ᐅᓗᕆᐊᓇᕐᓃᑦ ᓵᑦᓯᔪᑦ ᓇᓗᓕᒪᖅᑐᓂᒃ, ᓱᔾᒐᑦ, ᕚᐅᓴᐅᓪᓗ ᓯᔾᔭᕆᐊᖓ (*Phalaropus tricolor*), ᐋᖅᑭᒃᓯᓪᓗᑎᓪᓗ ᐊᔅᓱᕉᑕᐅᔪᓂᒃ ᖃᐅᔨᓴᕐᓂᕐᓄᑦ ᓄᖑᔾᔭᐃᖅᓯᓂᕐᓄᓪᓗ. ᐊᔅᓱᕉᑕᐅᔪᑦ ᓇᓗᓇᐃᖅᑕᐅᔪᑦ ᑲᑎᒪᔩᑦᑕᓂᑦ ᐅᑯᐊᖑᕗᑦ:
    - ᖃᐅᔨᓴᕐᓗᒋᑦ ᐃᓕᖅᑯᓯᑐᖃᖏᑦ ᑎᒻᒥᐊᙳᖃᑎᒌᑦ
    - ᓇᓗᓇᐃᕐᓗᒋᑦ ᐅᓄᕐᓂᖏᑕ ᐊᖏᓂᖏᑦ ᖃᓄᐃᑉᐸᓪᓕᐊᓂᖏᓪᓗ ᐸᕐᓇᒃᐸᓪᓕᐊᓗᒋᑦ ᖃᐅᔨᓴᐃᓐᓇᖅᑐᒃᑯᑦ ᖃᓄᐃᑕᐅᒋᐊᖅᑐᑦ
    - ᐊᑐᕐᓗᒍ ᒧᑖᔅ ᐆᒪᔪᓂᒃ ᕿᓂᕈᑎ[10] ᑲᑐᔾᔨᖃᑎᒌᖏᑦ ᒪᓕᓪᓗᒋᑦ ᓅᑦᑐᑦ ᓯᔾᔭᕆᐊᑦ ᓇᓗᓇᐃᕐᓗᒋᓪᓗ ᐊᓯᙴᖅᐸᓪᓕᐊᓂᖏᑦ ᓇᓚᐅᑦᑖᑦᓯᐊᒃᑲᓂᕐᓂᐊᕋᒥᒃ ᐅᓄᕐᓂᖏᑕ ᐊᖏᓂᖏᓐᓂᒃ, ᐊᑐᕐᓗᓂ ᑖᒃᑯᓂᖓ ᑲᑎᔾᔪᖃᑎᒌᒍᑎᓂᒃ ᓱᓕᒃᑲᓐᓂᕐᓂᖃᐃ ᓇᐸᔪᓂᒃ ᓇᑉᐸᖅᓯᒃᑲᓂᕆᐊᖃᕐᓂᐊᖅᐳᑦ ᐱᓇᓐᓇᖓᓂ ᐊᒥᐊᓕᒃᑲᑦ.
- ᑕᓪᓕᒪᓄᑦ ᐊᕐᕌᒍᓄᑦ ᖃᐅᔨᓴᕐᓂᖅ ᓯᔾᔭᕆᐊᓄᑦ ᒪᓄ ᑕᓯᕐᒥ, ᑳᓕᕗᐊᓂ ᐱᒋᐊᓚᐅᖅᑐᖅ 2019ᒥ. ᑖᒃᑯᐊ ᖃᔅᓯᓕᖓᔪᑦ ᖃᐅᔨᓴᕐᓃᑦ ᐳᕈᖅᓴᐃᕗᑦ ᕿᒪᒃᑕᑦᓯᓐᓂ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᓄᑦ ᑕᒫᓂ, ᑭᓯᐊᓂ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᓯᒪᔪᑦ ᐊᓯᓂᒃ ᐱᓕᕆᔾᔪᓯᓂᒃ ᐊᑐᓚᐅᖅᑐᑦ. ᒫᓐᓇᐅᔪᖅ ᖃᐅᔨᓴᕐᓂᑦ ᐋᖅᑭᒃᓯᒪᓂᖏᑦ ᐱᐅᓯᒋᐊᖅᓯᒪᓕᖅᑐᑦ.

[10] ᒨᑕᔅ ᒥᑭᑦᑐᑦ ᐆᒪᔪᓂᒃ ᖃᐅᔨᓴᕈᑎᑦ ᓄᓇᕐᔪᐊᕐᒥ ᑲᑐᔾᔨᖃᑎᒌᒍᑕᐅᓪᓗᓂ ᖃᐅᔨᓴᕈᑕᐅᕗᖅ ᐊᐅᓚᑕᐅᓪᓗᓂ ᓈᓚᐅᑎᕋᓛᒃᑯᑦ ᖃᐅᔨᓴᕈᑎᐅᓪᓗᓂ ᖃᐅᔾᔭᓇᓱᒍᑕᐅᓪᓗᓂ ᓇᒧᙵᖅᐸᓪᓕᐊᓂᖏᓐᓂᒃ ᐱᐅᓯᖏᓐᓂᓪᓗ ᑎᖏᐊᑦ ᐊᓯᖏᓪᓗ ᖃᖓᑕᔪᑦ ᐆᒪᔪᑦ.

6.2. ᐊᔾᔨᒌᓐᖏᑐᓘᔭᖅᑐᓄᑦ ᖃᓄᖅᑑᕈᑏᑦ

ᐊᔾᔨᒌᓐᖏᑐᓘᔭᖅᑐᓄᑦ ᖃᓄᖅᑑᕈᑏᑦ ᐱᓇᓱᓪᓗᒋᑦ ᐊᐅᓚᑦᓯᓂᖅᑎᒍᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᑦ ᓇᓘᒪᓱᖅᑐᓄᑦ ᐃᒪᐃᑉᐳᑦ:

- ᐅᓄᕐᓂᖏᓐᓄᑦ ᖃᐅᔨᓴᕐᓃᑦ
- ᐃᓂᒋᔭᐅᔪᓂᒃ ᓄᖑᑎᑦᓯᖏᓐᓂᑦ
- ᐃᓄᓕᒫᓂᑦ ᑐᓴᕋᓱᖕᓂᑦ
- ᓱᕈᖅᑎᑦᓯᑦᑕᐃᓕᒪᓃᑦ
- ᐅᓗᓇᐊᓇᖅᑐᓄᑦ ᖃᐅᔨᓴᕐᓃᑦ

6.3. ᓄᖑᔾᔭᐃᖅᓯᒋᐊᓃᑦ

ᓇᓗᓇᐃᖅᓯᒪᔪᑦ 3. ᓄᖑᔾᔭᐃᖅᓯᒋᐊᓃᑦ ᐊᑐᓕᖅᑎᑕᐅᓕᕐᓂᖏᓐᓄᓪᓗ ᐸᕐᓇᒃᓯᒪᔪᑦ. ᐅᓗᓇᐊᓇᖅᑐᓄᑦ ᓇᐃᓴᐅᑏᑦ ᒪᓕᑦᑐᑦ ᐅᓗᓇᐊᓇᕐᓂᕐᒧᑦ ᓇᐃᓴᐅᑎᒧᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᑦ 2ᒥ.

ᓄᖑᑎᑦᓯᑦᑕᐃᓕᒪᓂᕐᓄᑦ ᖃᓄᐃᑲᐅᒋᐊᓯᒪᔪᑦ	ᐊᔅᓱᕉᑕᐅᔪᖅᐥ	ᐅᓗᕿᐊᓇᖅᑐ ᐃᓱᒫᓘᑕᐅᔪᓪᓗᓐᓃᓐ ᓲᑕᐅᔪᑦ	ᖃᖓᒥᑦ ᖃᖓᒧᑦ
ᑭᓱᐳᓘᔭᕐᓄᑦ ᐸᕐᓇᓐᓃᑦ: ᐅᓄᕐᓂᖏᓐᓄᑦ ᖃᐅᔨᓴᕐᓃᑦ			
ᑲᑎᓪᓗᒋᑦ ᖃᐅᔨᒪᔭᐅᔪᑦ ᕿᒪᒃᑕᑦᓯᓂ ᓄᓇᓂᒃ ᖃᐅᔨᓴᕐᓂᕐᓂᑦ ᑭᒃᑯᓕᒫᓄᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᓄᑦ ᖃᐅᔨᒪᔭᐅᔪᓄᑦ ᑐᖅᑯᖅᓯᒪᔪᓄᑦ.	ᐳᖅᑐᔪᖅ	ᑕᒪᒃᑮᑦ	2022-2027
ᐊᑕᐅᑦᓯᒃᑰᖅᑎᓪᓗᒋᑦ ᖃᐅᔨᒪᔭᐅᔪᓂᒃ ᑲᑎᖅᓱᐃᓃᑦ ᑲᔪᓰᓐᓇᖅᑐᓄᑦ ᖃᐅᔨᓴᕐᓂᕐᓄᑦ ᓅᒃᑕᖅᑐᑦ ᓄᖅᑲᕝᕕᖏᓐᓂ ᕿᑐᕐᖏᐅᕝᕕᒥᓪᓗ ᓴᓂᕆᓐᓂᒃ ᖃᐅᔨᓴᐳᓇᕐᓂᐊᕐᒪᑕ ᖃᐅᔨᓴᐳᓇᖅᓯᓗᑎᒡᓗ ᐊᒥᐊᓕᒃᑲᐅᑉ ᐅᐊᓐᓇᖓᓃᑦᑐᓄᑦ ᓇᓚᐅᑦᑖᕐᓂᕐᓂᒃ ᓇᓂ ᐊᔪᕐᓇᖏᑦᑐᓂ.	ᐳᖅᑐᔪᖅ	ᑕᒪᒃᑮᑦ	2022-2027
ᖃᐅᔨᓴᕐᓗᒋᑦ ᐊᒥᐊᓕᒃᑲᐅᑉ ᐅᐊᓐᓇᖓᓂ ᓅᒃᑕᕝᕚᑦ ᓇᓗᓇᐃᕐᓗᒋᓪᓗ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓃᑦ ᐅᐸᒃᓯᒪᖃᑦᑕᕐᓂᓗ ᓅᒃᑕᕝᕚᑦ ᓄᖅᑲᕝᕕᖏᓐᓂ.	ᐳᖅᑐᔪᖅ	ᑕᒪᒃᑮᑦ	2022-2032
ᖃᐅᔨᓴᕐᓗᒋᑦ ᓄᑖᑦ ᐅᓄᕐᓂᖏᓐᓄᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᑦ ᖃᓄᐃᑉᐸᓪᓕᐊᔪᓪᓗ.	ᐳᖅᑐᔪᖅ	ᑕᒪᒃᑮᑦ	2027-2032
ᑭᓱᐳᓘᔭᕐᓄᑦ ᐸᕐᓇᓐᓃᑦ: ᐃᓗᓕᒫᓂᑦ ᑲᑎᖃᑎᖃᕐᓃᑦ			
ᑲᑎᖃᑎᒋᓗᒋᑦ ᐃᓕᓴᕐᓗᒋᓪᓗ ᐃᓄᓕᒫᑦ ᑎᒻᒥᐊᖑᖃᑎᒌᓄᑦ ᐅᓗᓇᐊᓇᕐᓃᓪᓗ ᓭᓯᒪᔭᖏᑦ. ᑎᓕᐅᕐᓗᒋᑦ ᐃᓄᓕᒫᑦ ᐅᖃᐅᓯᕆᖃᑦᑕᕐᑯᓗᒋᑦ ᑕᑯᔭᐅᔪᑦ ᑐᓴᐅᒪᔭᐅᑎᓐᓇᓱᓪᓗᒍ ᐃᓚᐅᕐᑯᔾᔨᓃᑦ ᐃᓄᑐᐃᓐᓇᕐᓂᑦ-ᑭᓪᓕᓯᓂᐊᕐᓂᒃᑯᑦ ᐱᓕᕆᓃᓪᓗ (ᓲᕐᓗ eBird, Beach Watch).	ᐳᒃᑭᑦᑐᖅ	ᑕᒪᒃᑮᑦ	ᑲᔪᓯᔪᖅ
ᑭᓱᐳᓘᔭᕐᓄᑦ ᐸᕐᓇᓐᓃᑦ: ᐃᓂᒋᔭᐅᔪᓂᒃ ᓄᖑᔾᔭᐃᖅᓯᓃᑦ			
ᐃᒥᕐᓂᒃ ᐊᑐᓗᐊᖏᓪᓗᓂ ᐊᐅᓚᓪᓗᒋᓪᓗ ᐃᒥᖅᑖᕝᕕᐅᓲᑦ ᐊᕙᑎᖏᓐᓃᑦᑐᓂᒃ	ᐊᑯᓐᓂᖅᓱᖅ	ᐅᓗᓇᐊᓇᕐᓂᑦ 7.2 ᐊᒻᒪ 11.2	ᑲᔪᓯᔪᖅ

ᓅᒃᑕᖅᑏᑦ ᓄᖅᑲᕝᕕᖏᑕ ᓈᒻᒪᑦᑐᓂ ᐃᒥᖃᐃᓐᓇᖅᑎᓪᓗᒋᑦ ᑕᓯᓕᓐᓂ ᑕᓯᕐᓂ.			
ᓇᓗᓇᐃᕐᓗᒋᑦ ᓄᙳᔾᔭᐃᕐᓗᒋᓪᓗ ᐃᓂᒋᔭᐅᔪᑦ ᑕᒪᒃᑮᓂ ᕿᑐᙱᒋᐅᕝᕕᐅᔪᓂ ᓅᒃᑕᕝᕖᑦ ᐊᖅᑯᑎᖏᓐᓂᓗ ᐋᖅᑭᖑᐊᖅᓯᒪᔪᑦ ᓇᓗᓇᐃᖅᑕᖏᑦ ᒫᓐᓇᐅᔪᖅ ᐃᓄᖃᕈᓐᓇᖅᑐᑦ ᐃᓄᖃᕈᓐᓇᐃᓐᓇᕐᓂᐊᕐᓗᑎᒡᓗ ᐊᑦᑐᐃᓐᓂᑦ ᓯᓚᐅᑉ ᐊᓯᔾᔨᕐᓂᖕᒐᓄᑦ ᑲᔪᓯᑎᓪᓗᒋᑦ (ᓲᕐᓗ, ᓯᓚᒧᑦ ᓂᑲᓇᖏᑦᑐᑦ ᐃᓐᓂᑦ).	ᐳᖅᑐᔪᖅ	ᐅᓗᕆᐊᓇᕐᓂᑦ 11.1, 11.2, 11.3, ᐊᒻᒪ 11.4	2027-2032
ᐱᓕᕆᖃᑎᒋᓗᒋᑦ ᓄᓇᕐᔪᐊᕐᒥᐅᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᐃᑲᔪᕐᓗᒋᑦ ᑕᕆᐅᕐᒥᐅᑦ ᑎᖕᒥᐊᓄᑦ ᓄᙳᑎᑦᓯᑦᑕᐃᓕᒪᓐᓂᑦ Hᐊᒻᐳᓪᑦ ᐃᖕᒋᕐᕋᓂᕐᒥ ᐊᖕᒋᔪᕐᒥ ᑕᕆᐅᕐᒥ ᐆᒪᔪᖃᑎᒌᓂ.	ᐊᑯᓐᓂᖅᓱᖅ	ᐅᓗᕆᐊᓇᕐᓂᑦ 9.2 ᐊᒻᒪ 9.4	2027-2032
ᑭᓱᕈᓘᔭᕐᓄᑦ ᐸᕐᓇᓐᓂᑦ: ᓴᕐᑯᔾᔭᐃᖅᓯᓃᑦ			
ᐃᓚᓕᐅᑎᓗᒋᑦ ᖃᐅᔨᒪᔭᐅᔪᑦ ᓇᓘᒪᓱᖅᑐᓄᑦ ᓅᒃᑕᕐᓂᒃᑯᑦ ᐅᑮᓂᒃᑯᓪᓗ ᐃᓂᖏᑦ ᐊᕙᑎᓕᕆᓂᕐᓄᑦ ᕿᒥᕐᕈᓂᕐᓄᑦ ᓇᓕᐊᑐᐃᓐᓇᕐᓄᑦ ᐱᓕᕆᓂᕐᓄᑦ ᐊᖏᓪᓕᒋᐊᖅᑎᑦᓯᔪᓄᑦ ᓇᓕᐊᑐᐃᓐᓇᕐᓂᒃ ᑕᐃᒪᐃᖕᒋᓐᓇᖅᑐᓂᒃ ᑯᕓᕐᔪᐊᖅᑐᐊᓗᓐᓄᓪᓘᓐᓂᑦ ᑭᖕᒋᖅᑐᓂᒃ ᐊᑏᑎᖃᑦᓯᐊᖅᑐᓂ ᓄᓇᓂ ᑎᒻᒥᐊᖃᑎᒌᓄᑦ.	ᐳᖅᑐᔪᖅ	ᐅᓗᕆᐊᓇᕐᓂᖅ 9.2	ᑲᔪᓯᔪᖅ
ᑭᓂᖅᑐᓄᑦ ᑯᕕᔪᑦ ᖃᓄᐃᒋᐊᕐᓂᐊᕐᓄᑦ ᐸᕐᓇᐅᑏᑦ ᐊᑐᐃᓐᓇᐅᓪᓚᑦᑖᕐᓗᑎᒃ, ᐃᓱᒪᒋᔭᓖᑦ ᓴᑦᓯᑦᑐᒥ ᑕᕆᐅᕐᒥᐅᓂᒃ ᑎᖕᒥᐊᓂᒃ ᐃᓂᖕᒋᓐᓂᓪᓗ ᐊᑐᖅᑕᐅᔪᓄᑦ ᓇᓘᒪᓱᖅᑐᓄᑦ.	ᐳᖅᑐᔪᖅ	ᐅᓗᕆᐊᓇᕐᓂᖅ 9.2	ᑲᔪᓯᔪᖅ
ᑭᓱᕈᓘᔭᕐᓄᑦ ᐸᕐᓇᓐᓂᑦ: ᐅᓗᕆᐊᖅᑐᓄᑦ ᖃᐅᔨᓴᕐᓃᑦ			
ᖃᐅᔨᓗᒋᑦ ᓇᑭᒃ ᓇᓘᒪᓱᖅᑐᑏᑦ ᐋᓯᓲᖑᒻᒪᖕᓚᑕ ᐊᑕᖕᒋᑲᓴᑦᑐᓂᒃ ᐊᐅᒃᑕᔩᓂᒃ ᖃᓄᑎᒋᓗ ᐋᓯᖃᑦᑕᕐᒪᖕᓚᑕ.	ᐊᑯᓐᓂᖅᓱᖅ	ᐅᓗᕆᐊᓇᕐᓂᖅ 9.4	2027-2032
ᖃᐅᔨᓴᕐᓗᒋᑦ ᐊᓯᔾᔨᕐᓃᑦ ᐅᓄᕐᓂᖕᒋᑎᒍᑦ ᑕᕆᐅᕐᒥ ᕐᑯᐱᕐᑭᑦ ᐊᓲᓪᓗ ᓂᕿᒋᔭᐅᔪᑦ ᐋᑖᕿᖅᓗᐊᖅᑐᓂ ᓅᒃᑕᕐᕖᑦ ᓄᖅᑲᕝᕕᖕᒋᓐᓂ (ᓲᕐᓗ, ᑲᖕᒋᑦᑐᖓ ᕙᓐᑕᐃᑉ) ᐅᑮᕝᕕᖕᒋᓪᓗ.	ᐊᑯᓐᓂᖅᓱᖅ	ᐅᓗᕆᐊᓇᕐᓂᖅ 11.3	2022-2027

[e] "ᐊᔅᓱᕿᑕᐅᔪᖅ" ᓴᖅᑮᔭᖅᑎᑦᔪᖅ ᖃᓄᑎᒋᒧᑦ ᖃᓄᐃᒋᐊᕐᓂᖅ ᐃᑲᔫᑎᖃᒻᒪᖕᒫᑦ ᑕᕝᕚᖕᖓᑲᐅᑎᒋ ᓄᙳᔾᔭᐃᖅᑕᐅᓂᖕᒋᓐᓄᑦ ᑎᒻᒥᐊᖃᑎᒌᑦ ᐅᕝᕙᓘᓐᓂᑦ ᐊᑏᑎᖃᑦᓯᐊᖅᑐᖅ ᓯᕗᓪᓕᐅᔪᖅ ᖃᓄᐃᒋᐊᕐᓂᕐᒧᑦ ᐃᑲᔫᑎᓕᒻᒧᑦ ᓄᙳᔾᔭᐃᖅᑕᐅᓂᖕᒋᓐᓄᑦ ᑎᖕᒥᐊᖑᖃᑎᒌᓄᑦ. ᐳᖅᑐᔪᑦ ᐊᔅᓱᕿᑕᑦ ᖃᓄᐃᒋᐊᕐᓃᑦ ᐃᓱᒪᒋᔭᐅᔪᑦ ᑕᐃᒃᑯᐊ ᑕᕝᕙᖕᖔᑲᐅᑎᒋ ᐊᒻᒪᓗ ᐅᕝᕙᓘᓐᓂᑦ ᑐᕌᖓᐅᑎᒋᔪᒥᒃ ᐊᑦᑐᐃᓂᖅᑲᕐᓂᐊᖅᑐᖅ ᐱᓇᓱᓪᓗᒋᑦ ᐊᐅᓚᑦᓯᓂᖅᑎᒍᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᑦ ᑎᒻᒥᐊᖑᖃᑎᒌᓄᑦ. ᐊᑯᓐᓂᖅᓱᖅᑐᑦ ᐊᔅᓱᕿᑕᑦ ᖃᓄᐃᒋᐊᕐᓂᑦ ᑕᕝᕚᖕᖓᑲᐅᑎᒋᐅᖕᒋᑦᑐᖅ ᑐᕌᖓᐅᑎᒋᖕᒋᑦᑐᓂᓪᓘᓐᓂᑦ ᐊᐅᓚᑦᓯᓂᖃᖅᑐᑦ ᑎᑭᓐᓇᓱᓪᓗᒋᑦ ᐊᐅᓚᑦᓯᓂᖅᑎᒍᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᓄᑦ, ᑭᓱᐊᓂ ᐱᕐᔪᐊᖑᓪᓗᑎᒃ ᐊᐅᓚᑕᐅᓂᖕᒋᓐᓄᑦ ᐅᓄᕐᓂᖕᒋᓐᓄᑦ. ᐳᒃᑭᑦᑐᑦ ᐊᔅᓱᕿᑎᑦ ᓄᙳᔾᔭᐃᖅᓯᒋᐊᕐᓂᑦ ᑐᕌᖕᒋᑦᑐᒥᒃ ᐱᕙᓪᓕᐊᕌᔾᔪᑦᑐᒥᓪᓗᓐᓂᑦ ᐊᑦᑐᐃᓂᖅᑲᕐᓗᑎᒃ ᑎᑭᑕᐅᓇᓱᑦᑐᓄᑦ ᐊᐅᓚᑦᓯᓂᖅᑎᒍᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᓄᑦ, ᑭᓱᐊᓂ ᐃᓱᒪᒋᔭᐅᓪᓗᑎᒃ ᐱᔪᐊᑐᑦ ᐃᑲᔫᑎᑐᑦ ᖃᐅᔨᒪᔭᐅᔪᓄᑦ ᑐᙵᕕᒻᒧᑦ ᐊᒻᒪᓗ ᐅᕝᕙᓘᓐᓂᑦ ᐃᓄᓕᒫᑦ ᐃᓚᐅᓂᖕᒋᓐᓄᑦ ᓈᒻᒪᒃᓴᕐᓂᖕᒋᓐᓄᓪᓗ ᑎᒻᒥᐊᖑᖃᑎᒌᓂᒃ.

6.4. ᐅᓂᒃᑳᖅ ᐃᑲᔫᐅᓗᓂ ᓄᖑᔾᔭᐃᖅᓯᒋᐊᕈᑎᓄᑦ ᐊᑐᓕᖅᑎᑕᐅᓂᕐᓄᓪᓗ ᐸᓐᓇᔅᓯᒪᔪᓄᑦ

ᓄᖑᔾᔭᐃᖅᓯᒋᐊᓃᑦ ᓇᓗᒪᓱᖅᑐᓄᑦ ᓴᓇᔭᐅᓚᐅᖅᑐᑦ ᓵᕐᑯᓪᓗᒋᑦ ᐅᓗᕆᐊᓇᕐᓃᑦ ᑎᒻᒥᐊᖑᖃᑎᒌᓄᑦ ᓇᐅᒃᑯᕈᓘᔭᖅ. ᓄᖑᔾᔭᐃᖅᓯᒋᐊᓃᑦ ᑕᐅᑐᓪᓗᐊᑕᖅᑐᑦᑐᒋᑦ ᐊᔅᓱᕈᕐᓇᓛᑦ ᐅᓗᕆᐊᓇᕐᓃᑦ ᑲᑎᖅᓱᓗᑎᓪᓗ ᖃᐅᔨᒪᔭᐅᔪᓂᒃ ᐊᑐᕆᐊᓕᓐᓂᒃ ᓵᔾᔪᑕᐅᓗᑎᒃ ᓇᓕᐊᑐᐃᓐᓇᕐᓂᒃ ᐊᒥᐊᒃᑯᓂᒃ ᐅᓗᕆᐊᓇᕐᓂᕐᓂᒃ ᓯᕗᓂᕐᒥ.

ᐅᓪᓗᒥᒧᑦ, ᖃᐅᔨᒪᙱᓪᓚᒻᒪᑕ ᖃᓄᓪᓚᑦᑖᖅ ᐊᙱᓂᖃᕐᒪᙵᑕ ᐊᒥᐊᓕᒃᑲᑦ ᐅᐊᓐᓇᙵᓂ ᓇᓗᒪᔫᖅᑐᑦ ᐅᓄᕐᓂᙱᑦ. ᐱᖃᙱᓪᓗᓂ ᓱᓕᔪᓂᒃ, ᐅᓄᖅᑐᓄᑦ ᐊᕐᕿᒍᓄᑦ ᐅᓄᕐᓂᕐᓄᑦ ᓇᓚᐅᑦᑖᓂᒃ ᐊᔅᓱᕈᕐᓇᖅᑐᖅ ᐅᖃᓯᐊᖅᓴᖅ ᐅᒃᐱᕈᓱᓪᓗᓂ ᖃᓄᑎᒋ ᐅᓄᕐᓂᙱᑦ ᐅᓄᕈᓐᓃᖅᓯᒪᒻᒪᙶᑕ. ᑕᐃᒪᐃᑦᑐᓐᓇᖅᐳᖅ (ᑕᐃᒪᐃᒃᑲᔭᖅᑐᒃᓴᐅᙱᒃᑲᓗᐊᖅᑐᓂ) ᓇᓗᒪᓱᖅᑐᑦ ᐅᓄᕐᓂᙱᑦ ᐅᓄᕋᓐᓃᙱᑦᑐᑎᒃ ᑭᓯᐊᓂ ᓇᓃᓐᓂᙱᑦ ᓅᒃᑕᕝᕕᙱᓪᓘᓐᓃᑦ ᐊᓯᔾᔨᖅᓯᒪᓕᕐᒪᑕ. ᑖᔅᓱᒧᙵ, ᓯᕗᓪᓕᖅᐹᖅ ᐊᔅᓱᕉᑎ ᓇᓗᓇᐃᖅᓯᔭᓇᐊᖃᖅᐳᑦ ᐃᓗᐃᑦᑐᒃᑯᑦ ᐊᙱᓂᙱᓐᓂᒃ ᕿᓚᒥᒧᓪᓗ ᐅᓄᕐᓂᖕᒋᑕ ᖃᓄᐃᒋᐊᕐᓂᖕᒋᓐᓂᒃ ᐅᓄᕐᓂᖕᒋᓐᓄᑦ ᖃᐅᔨᓴᕐᓂᒃᑯᑦ.

ᖃᐅᔨᓴᕋᓱᓪᓗᓂ ᓱᓕᓂᖅᓴᒥᒃ ᐅᓄᕐᓂᕐᓄᑦ ᓇᓚᐅᑦᑖᒥᒃ, ᐅᓄᖅᑐᓂᒃ ᐃᓚᖃᕐᒪᑦ ᖃᐅᔨᓴᕐᓂᕐᓄᑦ ᓈᒃᑕᖅᑏᑦ ᓇᓗᒪᓱᖅᑐᑦ ᐅᓄᕐᓂᖕᒋᓐᓄᑦ ᐱᐅᓯᒋᐊᖅᑕᐅᔭᕆᐊᓖᓐᓂᒃ. ᓱᖃᐃᒪ ᐅᓄᖅᑐᑦ ᓄᓇᐃᑦ ᖃᐅᔨᓴᖅᓯᒪᔭᕇᕐᒪᑕ, ᓯᔾᔭᕆᐊᓄᑦ ᑲᑎᒪᔩᕐᕋᓛᑦ ᐱᔪᒪᓚᐅᑐᑦ ᐊᐅᓚᓪᓗᒋᑦ ᐊᓯᓄᑦ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᒥᒃ ᖃᐅᔨᒪᔭᐅᔪᓂᒃ ᑐᖅᑯᕝᕕᒥ ᐊᑕᐅᓯᕐᒧᐊᕐᑯᓪᓗᒋᑦ ᑕᒪᒃᐲᑦ ᖃᐅᔨᔭᐅᔪᑦ ᕿᒪᒃᑕᑦᓯᓐᓂᑦ ᓯᕗᓂᕐᒥᓗ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᖅᑐᓂᑦ. ᐃᓚᓕᐅᑎᓗᒋᑦ ᑖᒃᑯᐊ ᖃᐅᔨᒪᔭᐅᔪᑦ ᑕᓇᐅᓂᑦ ᑕᓇᐅᒻᒥᐅᓄᑦ ᑎᒻᒥᐊᓄᑦ ᖃᐅᔨᓯᐊᕐᓂᕐᓄᑦ ᓱᕐᓗᑐᑦ ᐃᒪᒻᒥᐅᑕᑦ ᑎᒻᒥᐊᑦ ᑕᓇᐅᒻᒥ ᐊᒻᒪᓗ ᐅᑎᓲᓄᑦ ᐃᕙᕝᕕᒻᒥᓄᑦ ᑕᓇᐅᕐᒥᐅᓄᑦ ᑎᒻᒥᐊᓄᑦ ᖃᐅᔨᓴᕐᓂᕐᓄᑦ ᖃᐅᔨᒪᔭᐅᔪᓄᑦ ᑐᖅᑯᖅᓯᒪᔪᑦ ᐱᐅᓯᒋᐊᕈᑕᐅᑐᐃᓐᓇᕆᐊᖃᖅᐳᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᓂᒃ ᑕᓇᐅᒥ ᑎᑭᑦᑐᓄᑦ. ᐊᐅᓚᔾᔭᐃᒍᑕᐅᓗᓂ ᖃᐅᔨᓴᕐᓂᕐᓄᑦ ᓄᑖᒥ ᐊᒥᐊᓕᒃᑲᑦ ᐅᐊᓐᓇᙵᓂ ᓇᓗᒪᓱᖅᑐᑦ ᐅᓄᕐᓂᖕᒋᓐᓄᑦ ᓇᓚᐅᑦᑖᒥᒃ, ᖃᐅᔨᐊᕐᓃᑦ ᓅᒃᑕᕐᓂᕐᓄᑦ ᐊᔾᔨᐅᖏᑦᑐᓄᑦ ᓄᓇᓄᑦ, ᐊᔪᕐᓇᖏᑦᑕᕌᖕᒐᑦ, ᐊᐅᓚᑕᐅᓗᑎᒃ ᐊᑕᐅᑦᓯᒃᑯᕐᓗᑎᒃ ᐊᑐᕐᓗᑎᓪᓗ ᐊᔾᔨᕆᐸᓗᓐᓂᒃ ᐱᓕᕆᔾᔪᓯᕐᓂᒃ ᐱᔪᒪᔭᐅᔪᓄᑦ ᑲᑎᒪᔨᕋᓛᓄᑦ. ᐋᑎᖃᑐᐃᓐᓇᕆᐊᓕᒃᑕᐅᖅ ᖃᐅᔨᓴᕐᓗᓂ ᖃᐅᔨᓴᕐᓂᕐᓂᒃ ᓱᓕᒃᑲᓐᓂᕐᓂ ᓈᒃᑕᖅᑎᓄᑦ ᓄᖅᑲᕝᕙᓐᓂ ᐱᐅᓯᒋᐊᕋᓱᓪᓗᒍ ᖃᐅᔨᓴᕝᕕᐅᔪᑦ. ᑖᒃᑯᐊ ᓇᓚᐅᑦᑖᕐᓃᑦ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᑦ ᐊᑭᑦᑐᒃᑯᑦ ᐱᓕᕆᔾᔪᔾᔪᑦ ᓇᐃᓴᕋᓱᓪᓗᒋᑦ ᐅᓄᕐᓂᖕᒋᑕ ᖃᓄᐃᒋᐊᕐᓂᖕᒋᑦ. ᓇᐃᓴᕋᓱᓪᓗᓂ ᐅᓄᕐᓂᖕᒋᓐᓄᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᒥᒃ, ᐊᐅᓚᑦᓯᔩᑦ ᖃᐅᔨᒪᔭᕆᐊᖃᕐᓂᐊᖅᑐᑦ ᐊᓯᔾᔨᖃᑦᑕᕐᓂᕐᓂᒃ ᐅᐸᔅᓯᒪᕝᕙᓂᓗ ᓈᒃᑕᖅᑐᓄᑦ ᓄᖅᑲᕝᕙᓂ. ᖃᙱᑦᓯᐊᖅ ᐱᓕᕆᔭᐅᔪᑦ ᓄᓇᓂ ᓇᓂᓯᔾᔪᑎᓄᑦ ᐱᓯᒪᕗᑦ ᐃᓚᖏᓐᓂᒃ ᓇᓚᐅᑦᑖᕐᓂᕐᓂᒃ ᑎᒥᐊᓄᑦ ᓈᑐᓂᒃ ᐊᑦᓚᓐᑎᒃ ᓯᔾᔭᙱᒍᑦ (Smith *et al.* 2014, van Bemmelan *et al.* 2019). ᑭᓯᐊᓂ, ᐱᒃᑲᓂᖃᑦᑕᑦᓯᐊᓚᐅᖏᒪᓪᓚ ᓇᓗᓇᐃᒃᑯᑦᓯᖅᓯᒪᔪᓂᒃ ᓇᓗᒪᓱᖅᑐᓂᒃ, ᖃᐅᔨᓴᕐᓃᑦ ᐊᑐᖅᑐᑎᒃ ᒧᑦᓯᒥᒃ ᐊᔪᕐᓇᖏᓐᓂᖅᓴᐅᑐᐃᓐᓇᕆᐊᓕᒃ, ᐃᓗᐊᖅᑐᒧᑦ ᓄᓇᐃᓐᓇᕐᒧᐊᓘᓄᑦ. ᑭᓯᐊᓂ ᐊᑐᕐᓗᓂ ᒧᑦᓯᒥᒃ ᓱᓕᒃᑲᓐᓂᖅ ᒧᑦᓯᒧᑦ ᓇᐸᔪᖅᑲᓇᐊᖅᑲᕐᓂᐊᖅᑐᑦ ᑎᑭᑦᑐᓇᖏᑦᑕᖏᓐᓄᑦ ᑎᑭᑦᑐᓇᕐᓂᐊᕐᒪᑦ ᒧᑦᓯ ᑲᑐᔾᔮᖅᑲᑎᓖᓄᑦ ᐊᕙᓗᓯᒪᔪᓂᒃ ᓄᓇᐃᓇᕐᒧᑦ ᓈᑦᑕᖅᑎᓄᑦ ᓄᖅᑲᕝᕙᓂᒃ. ᓯᔾᔭᓇᐊᓄᑦ ᑲᑎᒪᔩᑦ ᐱᔪᒪᓯᒪᔭᕆᐊᑦᓯᒪᔪᑦ. ᓯᔾᔭᓇᐊᓄᑦ ᑲᑎᒪᔩᑦ ᐱᔪᒪᓯᒪᔪᑦ ᓴᓇᔪᒪᓪᓗᑎᒃ ᒧᑦᓯ ᓇᐸᔪᓂᒃ ᒪᓄ ᑕᓯᕐᒥ ᑕᓇᐅᓕᔅᔪᐊᕐᒥᓗ ᑕᓯᕐᒥ, ᑳᓕᕗᐊᓂᐊᒥ. ᑭᙳᓕᖅᐹᒧᑦ, ᕿᑐᕐᖏᐅᕝᕕᒥ, ᐱᐅᓯᒋᐊᕐᓗᒋᑦ ᖃᐅᔨᓴᕐᓃᑦ ᖃᐅᔨᓴᖅᑕᐅᓗᐊᓚᐅᖅᓯᒪᙱᑦᑐᓂ ᐱᕝᕙᕈᑕᐅᓗᓂ ᓄᑖᕈᓇᐊᖅᓯᒪᔪᕐᒧᑦ ᓇᓐᓂᕐᓄᑦ ᓄᓇᙶᐊᕐᒥᒃ ᐅᓄᕐᓂᓪᓗ ᓇᓚᐅᑖᓄᑦ. ᓱᖅᑯᐃᓇᑦᓯᐊᖅᑐᒥᒃ, ᑕᒪᖅᓯᒪᙱᑦᑐᒥᒃ ᓄᓇᙶᐊᕐᒥᒃ ᐃᓗᑦᑐᒃᑯᑦ ᓇᓃᓐᓂᙱᓐᓄᑦ ᐱᑕᖃᕐᒪᖔᖅ ᐊᑐᕈᓐᓇᕈᑕᐅᓗᓂ ᓅᓐᓂᕐᓄᑦ ᐊᖅᑯᑏᑦ ᓇᓃᓐᓂᙱᓗᓐᓃᑦ ᐊᔪᕐᓇᖅᓯᒪᙱᓐᓂᙱᓐᓄᑦ. ᐃᓚᓕᐅᑎᓗᒋᑦ ᖃᐅᔨᓴᕐᓂᓂᑦ ᖃᐅᔨᔭᐅᔪᑦ ᕿᑐᕐᖏᐅᕝᕕᓂ ᓅᑦᑐᓄᓪᓗ ᓄᖅᑲᕝᕕᓂᑦ ᐱᓕᕆᑦᓯᐊᕐᓇᓲᖑᑐᐃᓐᓇᕆᐊᓕᒃ ᖃᐅᔨᓴᕋᓱᓪᓗᒋᑦ ᓱᓕᔪᓄᑦ ᐅᓄᕐᓂᕐᓄᑦ ᓇᓚᐅᑦᑖᕐᓃᑦ.

836 ᓱᓪᓚᐅᐸ ᐊᓱᐅᖅᓂᕐᓗᑎ ᐃᓱᐊᓂ ᐊᑦᑐᐃᓂᕐᕿᓯᒍᐃᓇᐊᓪᓚᐅᖅ ᓇᓕᓚᓱᖅᑐᑦ ᐅᓄᖅᓂᕐᕈᑕ ᓇᒧᖓᐅᓂᕐᓗᓂᓄᑦ
837 ᐊᖏᕐᕕᓄᑦ ᐃᓪᓚᓄᑦ ᑕᐃᒪᐃᑎᑕᐅᓪᓕᑎᑉ ᐊᓱᐅᖅᓂᖅᓄᑦ ᓇᓕᓚᓱᖅᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᖃᑐᖅᖏᐅᕐᕿᖓᕐᓂᓄᑦ.
838 ᐃᓐᓇᐅᕐᔪᖅ ᐊᐟᖅᑭᖓᐊᖅᓯᒪᔪᓄᑦ ᓇᓪᓕᐅᑦᑕᖅᑐᑦ ᑎᑎᒥᐊᖓᖅᑎᑦᑐᑦ ᐊᓱᐅᐅᓂᐊᖅᑐᑦ 90%ᓂᑦ ᐃᓐᓇᐅᕐᔪᖅ
839 ᖃᑐᖅᖏᐅᕐᕿᖓᕐᓂᑦ 2070ᒧᑦ ᓱᓪ ᐊᓱᐅᐅᓯᓗᖅᑕᑦᑕᓪᓂ (Wauchope *et al.* 2017) ᐊᓱᐅᐅᓪᓗᑎᒃᓪ 42%
840 ᖃᑐᖅᖏᐅᕐᕿᕆᕆᓂ 3° ᐅᖅᑯᓱᓂᖅᓴᐅᓪᓗᓂ (Bateman *et al.* 2019). ᐊᓂᔪᓪᓚᐅᖅᓪᓗᓂ 3° ᐅᖅᑯᓱᓭᐊᖅᓂᖅ,
841 11% ᖃᑐᖅᖏᐅᕐᕿᓕᓂᑦ ᓴᖅᑭᑐᑕᖅᑐᐃᓐᓇᓪᓚᐅᑦ ᓱᓪᓚᑦ ᓂᑲᓇᖅᑐᑦᑐᑦ ᐃᓂᓂᑦ ᑕᓪᓕᐊᑎᑦ ᐅᐊᓐᓇᒪᑦ
842 (Bateman *et al.* 2019). ᐊᑐᑎᖅᑎᓯᐊᖅᓂᐊᖅᑐᖅ ᐸᖅᑭᓪᓕᑦ ᐃᓂᑦ ᑕᒪᑭᓐᓇᑦ ᖃᑐᖅᖏᐅᕐᕿᕆᐊᓕᑦ
843 ᓄᑦᑕᖅᕆᓪᓗ ᓱᓪᓚᐅᖅᓯᒪᓄᑦ ᐊᖅᑭᖅᖏᐊᖅᓯᒪᔪᑦ ᓇᓪᓇᐃᖅᓯᔪᓄᑦ ᓄᓪᒪᑦᑐᑦ ᐃᓂᖅᑎᓂᐊᖅᓂᓄᑦ
844 ᓯᓂᓂᒥ (ᓯᖅᓪᓗ, ᓱᓪᓚᒧᑦ ᓂᑲᓇᖅᑐᑦᑐᑦ ᐃᓂᑦ).

845 ᐃᒋᑦ ᐃᒪᐃᑭᑎᓪᓕᐊᒪᓴᑭᑎᑊ, ᑕᓇᐅᑦ ᑕᓱᑦ ᑕᓇᐅᖏᓪᓚᐊᑐᐃᓐᓇᓪᓚᐊᓕᑦ ᐃᑲᔪᓇᐊᖄᖅᓴ ᖁᐊᕐᑭᓂᖅ
846 ᓂᓇᓴᐅᓱᓂᖅ ᓇᓕᓚᓱᖅᑐᓄᑦ ᓄᑎᓕᓪᓚᑦ. ᐃᒥᖅᑕᕐᕿᓐᓂᑦ ᐊᐅᓪᓚᕐᓱᓴᑦ ᐊᐅᓪᓚᕐᓱᔪᓐᓇᕐᓂᑲᓪᓚᖅᑐᓂᑎᖅ
847 ᒪᖁᔪᓐᓇᕐᑐᓂᖅᓂᖅ, ᐊᖏᕐᓪᓚᐊᖅᑎᕐᑕᓪᓚᔭ ᐃᒋᑦ ᐃᓄᐃᓄᑦ ᐊᑐᖅᑕᐅᓂᓂᐊᖅᑐᑦ ᑕᓱᑦ ᐃᒪᖅᖁᓂᕐᑐᓄᑦ
848 ᐃᒪᐃᕐᑎᔨᐊᑕᐅᓂᐊᖅᑐᑦ ᐃᓄᕐᓪ ᑕᓱᖁᓂ ᑕᓱᖁᓂ ᓄᓪᒪᐃᓐᓇᖅᑎᕐᓪᓚᑦ ᓱᓴᓇᐊᓄᑦ. ᐃᑲᔪᖁᓪᓚᑦ ᐃᒥᖁᓂᖅ
849 ᐊᑐᓪᓚᐊᕐᓄᕐᑦ ᐃᒥᓂᓪ ᐊᐅᓪᓚᕐᓱᓂᖁᓂᖅ ᑕᑲᑯᓇᓂ ᐃᒥᖅᑕᕐᕿᕆᐅᓱᓂᐊᖅᑐᑦ ᐸᖅᑭᓂᖁᓂᓄᑦ
850 ᑕᑯᓇᓴᒃ ᐱᖁᐊᓇᓄᑦ ᓇᖅᑲᕐᕿᕆᐅᓱᓇᓄᑦ.

851 ᓇᓕᓚᓱᖅᑐᑦ ᐃᓱᒪᔪᑦᑐᑦ ᐊᐅᑲᑕᔪᓂᖅ ᐱᐅᔪᓐᓄᖅᑎᑦᓱᖅᑯᐃᓱᓚᓪᓚᑑᑎᖅ ᑎᑎᐅᐸ ᖃᓇᐃᓕᓴᒃᓴᒃᓂᖅ
852 ᐃᓪᓚᐃᑦᑐᓪᓗ ᖃᓇᐃᓕᕐᓂᕐᓂᕐᓂᖅ. ᓱᖃᖅᐃᓕᒪ ᓇᓕᓚᓱᖅᑐᑦ ᐊᖁᕐᔪᒪᓕᒪᔪᖅ ᓂᕆᐅᖅᓴᓱᐅᖃᖅᑕᑦᑕᖁᒪᑦ ᑕᓱᐅᑦ
853 ᖃᓄᕐᓂᓂ ᖁᔨᐱᕆᕋᓐᓇᓄᑦ, ᐃᓱᖃᖅᑕᕐᓂᓂᖅᖁᓇᖅ ᐊᐅᓪᓚᕐᔪᓂᖅ ᐊᓱᓂᓂ ᓱᓴᒥᐅᑕᓂᓂ ᑎᑎᒥᐊᓂᓂ.
854 ᖃᐅᔨᓴᖅᓂᓂᔪᐊᖃᖅᓴᑦ ᓇᓪᓇᐃᕆᓱᓪᓚᔭ ᖃᓇᓂᑎᑦ ᐊᐅᓪᓚᕐᔪᓂᖅ ᓱᓴᓱᔪᐊᑦ ᐃᓱᓱᓯᓚᖓᑕ, ᓇᑭᓪᓗ ᓱᓴᓱᔪᐊᑦ
855 ᐃᓱᓭᓯᓚᖅᑕᕐᓚᖓᑕ ᐊᐅᓪᓚᕐᔪᓂᖅ (ᐅᑭᐅᖅ, ᖃᑐᖅᖏᐅᖅᓴᑦ ᓄᑦᑕᖅᑐᒃᓴᓕᒪᓕᑦᑐᓂᓪᓗᑦ) ᐊᑐᑎᖅᑎᖃᖅᓄᑦ
856 ᐱᐅᖏᑦᑐᓄᑦ ᐱᐅᙱᓪᓚᐅᓴᐃᓄᑦᓂᖅ ᐊᑐᓕᖅᑎᑦᓱᓕᐅᖏᓪᓕᓱᓂᓱᓂᓪ.

857 ᖃᐅᔨᓴᖅᓂᓂᔪᐊᖃᖅᓚᓄᓪᓕᑦ ᖃᐅᔨᓇᓱᓪᓚᔭ ᓇᓕᓚᓱᖅᑐᑦ ᓄᓪᒪᐃᓐᓇᑦᑐᓂ ᓂᕆᐅᖅᓴᖅᑎᖅᓚᐊᖏᓚᖓᑕ ᓄᑦᑕᖅᑎᓂᐊᖅᑐᑦ
858 ᓄᖅᑲᕐᓴᖏᓂᓂ ᐅᑭᐃᖏᓂᓂᓪᓗ. ᓱᓚᐅᐸ ᐊᓱᐅᖅᓂᓂᖅ ᖁᔭᓕᖅᑎᓯᒪᖅᑎᓕᑦ ᑲᑎᓂᓂᓂᓂ ᐊᓱᐅᔨᑐᐃᓐᓇᓪᓚᐅᑦ
859 ᖃᖏᓚᐅᓪᓂᓂᔪᑦ ᓇᓄᓂᓂᔪᓚᔭ ᑕᐃᒪᐃᓂᓂᖏᓂᓂ, ᓇᓕᓚᓱᖅᑐᑦ ᐊᑐᐃᓂᓇᖅᑎᑦ ᓂᕆᐅᖅᓴᖅᑐᓄᓂᓂᓪᓗᓂᓂᑦ,
860 ᐅᓚᓪᓗᒪᑦ ᑭᓱᐊᓂ ᖃᐅᔨᔪᐊᑎᖃᖅᓯᒪᓚᖅ ᑕᐃᒪᐃᓚᖏᓐᓂᑦ ᐊᖁᖃᓂᓄᑦ.

861 ᓱᖃᖅᐃᓚᒪ ᓇᓕᓚᓱᖅᑐᑦ ᐊᔪᓂᐊᓗᓂᑦ ᐃᓄᐹᓱᓗᓂ ᑕᓇᐅᖏᒋᔪᓚᒪᓕᑉ, ᑕᓚᖁᑦᑕ ᑭᓂᖅᑐᖃᑐᐃᓐᓇᐅᕐᓴᖅᑐᑦ
862 ᑭᓂᖅᑐᓂᓪᓗ ᔪᐃᖏᔪᐊᖅᑐᑦ ᐅᓪᓗᕆᐊᓇᖅᓴᑦ ᐅᓄᖅᓂᖏᓪᓂᓄᑦ. ᐅᓪᓗᕆᐊᓇᓪᓗᐊᖅᑕᐃᓕᓚᒪᓪᓗᔪ ᑕᓪᓕ
863 ᐅᓪᓗᕆᐊᓇᖅᑐᖅ, ᓇᓕᓚᓱᖅᑐᑦ ᓄᑦᑕᖅᓂᖏᓪᓂᓄᑦ ᐅᑭᐃᖏᓪᓕᓱᓪᓗ ᓄᓇᖏᓂᑦ ᐃᓕᓴᐅᑦᓴᐅᓴᐅᓕᐊᓪᓚᑦ
864 ᐊᐊᑎᓕᕆᓂᓄᓂᑦ ᖃᐅᔨᓴᖅᓂᓄᓂᑦ ᐱᓕᕆᓂᓄᓂᑦ ᐅᓪᓗᕆᐊᓇᖅᔪᒥᑦ ᐊᖏᓪᓕᓪᒋᐊᖅᑎᑐᓂᑦᑐᓪᓚᐊᓕᓴᖏᑦ.
865 ᓱᓕᑲᓴᓂᖅ, ᓄᓇᓂ ᑭᓂᖅᑐᖃᐃᓐᓇᐅᕐᓴᖅᑐᓄᓂᑦ ᔪᐃᐃᐅᑦᓕᑐᐃᓐᓇᓪᓚᐊᓕᑦᓂᓂᓪᓗᑦ, ᐱᑕᖃᕆᐊᓕᑲᑦ
866 ᑭᓂᖅᑐᓄᓂᑦ ᔪᐃᓱᓄᓂᑦ ᖃᓄᐅᖅᑕᐃᓂᓂᓄᓂᑦ ᐸᖅᓇᐅᑎᑦᑐᑦ ᐊᑐᖅᑐᒥᑦ ᐃᓱᓪᓚᑎᓪᓂᑦᑐᑦ ᑕᓇᐅᖏᒥᐅᑦ ᑎᑎᒥᐊᑦ
867 ᑕᑲᔪᑐᓇᖅ ᑎᑎᒥᐊᖅᑎᑦᑐᓄᑦ.

868 ᓱᓕᑲᓴᓂᖅᓗᓪ, ᓄᓇᓂ ᑭᓂᖅᑐᖃᐅᕐᓴᖅᑐᓄᓪᓚᐊᓕᑦᓂᓂᓪ ᔪᐃᐃᐅᖏᖅᓱᐊᑐᓄᓪᓚᐊᓕᑦᓂᓂᓪᓗᓂᓂᑦ,
869 ᐱᑕᖃᕆᐊᓕᑲᑦ ᑭᓂᖅᑐᓄᓂᑦ ᔪᐃᓱᓄᓂᑦ ᖃᓄᐅᖅᑕᐃᓂᓂᓄᓂᑦ ᐸᖅᓇᐅᑎᑦᑐᑦ ᐊᑐᖅᑐᒥᑦ ᐃᓱᓪᓚᑎᓪᓂᑦᑐᑦ
870 ᑕᓇᐅᖏᒥᐅᑦ ᑎᑎᒥᐊᑦ ᑕᓚᓱᑕᐃᑐᑦ ᑎᑎᒥᐊᖅᑎᑦᑐᑎᑐᐃᑦ. ᐊᑕᖏᑭᓴᑦᑐᑎᑦ ᓇᓕᓚᓱᖅᑐᑦ ᐃᓄᖅᓱᑦ ᑲᓇᑕᒥ
871 ᑲᑎᓯᖅᓄᓂᑦ ᕼᐊᓴᓪᑦ ᐃᖏᕐᓴᕐᓂᒥ ᐅᑭᐅᖅᔪᑦ, ᑕᓚᓱᐃᓚᑦ ᐅᓄᓪᓕᐊᖅᓂᑦ ᑕᒧᓂ ᐊᓴᓱᖅᓇᓪᓕᓪᓚᖅᓴᖅ
872 ᐅᓄᖅᓂᓄᑦ. ᑕᓚᓱᐃᓚᑦ ᐱᖅᓱᐊᖅᓂᐊᖅᑐᑦ ᑎᓪᓕᐅᓗᓄᓂ ᑕᓇᐅᒥᐅᓂᖅ ᑎᑎᒥᐊᓂᖅ ᐱᐅᓪᓯᓇᓯᓪᓚᓄᓂ

ᐃᓗᐊᓂ Hᐊᒻᐳᓪᑦ ᐃᖏᕐᕋᓂᖓᓂ ᐊᖏᔪᕐᒥ ᑕᕆᐅᕐᒥ ᐆᒪᔪᑕᑎᒌᓄᑦ ᐱᓕᕆᖃᑎᒋᓗᒋᑦ ᓄᓇᕐᔪᐊᕐᒥᐅᑕᑦ ᑲᑎᔾᔾᖃᑎᒌᑦ. ᐱᓗᐊᕐᑯᒥᒃ ᐱᕈ ᓯᓕᓗ ᑕᒪᒃᑭᒃ ᓴᓇᓯᒪᔪᑦ ᐊᖏᔪᓂᒃ ᑕᕆᐅᕐᓂ ᓴᐳᔾᔭᐅᓯᒪᔪᓂᒃ ᑕᒫᓂ. ᑕᐃᒪᐃᑖᓐᓇᕐᓗᒋᑦ ᐅᓄᕐᓂᖏᑦ ᐅᑮᕙᓂ ᐊᑐᓕᖅᑎᑦᓯᔭᕆᐊᖃᕐᓂᐊᖅᑐᑦ ᑭᓂᖅᑐᑦ ᑯᕙᔪᓄᑦ ᖃᓄᐃᒋᐊᕐᓂᕐᓄᑦ ᐸᕐᓇᐅᑎᒥᒃ, ᑭᓂᖅᑐᑦ ᑯᕙᔪᑦ ᑕᒫᓂ ᓈᒻᒪᙱᑎᓪᓗᒍ ᐱᕙᒃᓴᖓ ᓱᕋᐃᕐᔪᐊᕋᔭᖅᑐᖅ ᑕᒪᒃᑮᓕᒫᓂᒃ ᐅᓄᕐᓂᖏᓐᓂᒃ ᒫᓐᓇᓗ ᑭᓂᖅᑐᓄᑦ ᑯᕙᔪᓄᑦ ᐸᕐᓇᓐᓂᖅ ᓈᒻᒪᙱᓚᖅ.

ᑭᖑᓪᓕᖅᐹᒍᑦ, ᐃᓄᓕᒫᓂᒃ ᑲᑎᖃᑎᖃᕐᓂᖅ ᐋᑎᖃᑦᓯᐊᕈᓐᓇᖅᑐᖅ ᓇᓕᐊᑐᐃᓐᓇᕐᒍᑦ ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᐸᕐᓇᐅᑎᒍᑦ. ᐃᓄᐃᑦ ᑲᑎᖃᑎᒋᔭᐅᔪᓐᓇᕐᒪᑕ ᐃᓕᓐᓂᐊᕐᓂᒃᑯᑦ ᓇᓘᒪᓱᖅᑐᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᓄᑦ ᓵᓯᒪᔪᓄᑦ ᑎᒻᒥᐊᖑᖃᑎᒌᓄᑦ. ᐃᓄᐃᑦ ᐅᖃᐅᓯᖃᕈᓐᓇᖅᑐᑦ ᑕᑯᔭᕐᒥᓂᒃ ᐃᕚᔪᓂᒃ ᓅᑦᑐᓂᓪᓘᓐᓃᑦ ᓇᓘᒪᓱᖅᑐᓂᒃ ᐃᓄᓐᓄᑦ ᑭᓪᓕᓯᓂᐊᕐᓂᕐᓄᑦ ᐱᓕᕆᓂᖅᑎᒍᑦ ᓱᕐᓗ eBird. ᓯᔾᔭᓂ, ᐃᓄᐃᑦ ᐃᓚᐅᔪᓐᓇᖅᑐᑦ ᐃᓄᓐᓄᑦ ᑭᓪᓕᓯᓂᐊᕐᓂᕐᓄᑦ ᓯᔾᔭᓂᒃ ᐅᐊᔅᓯᓂᕐᓂ ᐱᓕᕆᓂᕐᓂ ᖃᐅᔨᓴᕐᓗᑎᓪᓗ ᓇᓘᒪᓱᖅᑐᓄᑦ ᐊᓯᓄᓪᓗ ᑕᕆᐅᕐᒥᐅᑕᓄᑦ ᑎᒻᒥᐊᓄᑦ ᑎᐱᔭᐅᖃᑦᑕᖅᑐᓄᑦ ᑐᕐᑯᖓᓪᓗᑎᒃ ᑭᓂᖅᑐᑭᔩᓪᓗᑎᓪᓘᓐᓃᑦ. ᑖᒃᑯᐊ ᐱᓪᓇᓐᓃᑦ ᐃᑲᔫᑦᔪᑦ ᕿᒥᕐᕈᔾᔪᑕᐅᓪᓗᑎᒃ ᐊᑦᑐᐃᓂᕐᓂᒃ ᐊᐅᒃᑕᔩᓂᑦ ᑭᓂᖅᑐᓂᓪᓗ ᓱᕈᓂᑦ.

7. ᖃᐅᔨᓴᕐᓃᑦ ᓯᕗᒧᐊᖅᐸᓪᓕᐊᓂᖏᑦ

ᖃᓄᐃᓐᓂᕐᓄᑦ ᓇᓗᓇᐃᒃᑯᑕᑦ ᓴᖅᑭᑕᐅᔪᑦ ᑕᑲᓇᓂ ᐱᕕᖃᖅᑎᑦᓯᔾᔪᑦ ᖃᐅᔨᒋᐊᕐᓗᒋᑦ ᐱᕙᓪᓕᐊᔪᑦ ᓯᕗᒧᑦ ᐱᓇᓱᓪᓗᒍ ᐊᐅᓚᑦᓯᓂᖅᑎᒍᑦ ᖃᓄᐃᑕᐅᓇᓱᑦᑐᓂᒃ ᖃᐅᔨᓴᕐᓗᒋᓪᓗ ᐊᑐᓕᖅᑎᑕᐅᓃᑦ ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᐸᕐᓇᐅᑎᒥᒃ.

- 2030ᒥ, ᓱᓕᔪᕐᒥᒃ ᐊᒥᐊᓕᒃᑲᑦ ᐅᐊᓐᓇᖓᓂ ᐅᓄᕐᓂᖏᓐᓄᑦ ᐊᖏᓂᕐᓄᑦ ᓇᓗᑦᑖᖅᓯᒪᔪᑦ ᐊᑐᐃᓐᓇᐅᓕᗏᖅᑐᑦ.
- 2030ᒥ, ᐊᒥᐊᓕᒃᑲᐅᑉ ᐅᐊᓐᓇᓕᒫᖓᓂ ᖃᓄᐃᑉᐸᓪᓕᐊᔪᓄᑦ ᓇᓗᑦᑖᖅᑕᐅᔪᓄᑦ ᐊᑐᐃᓐᓇᐅᔪᖅ. ᑖᓐᓇ ᖃᓄᐃᑉᐸᓪᓕᐊᔪᓄᑦ ᓇᓗᑦᑖᖅ ᓴᙱᓪᓗᐊᖅᑐᖅ ᖃᐅᔨᔫᓇᕐᓗᓂ 30%ᒧᑦ ᓄᖑᑉᐸᓪᓕᐊᓂᕐᓂ 10 ᐊᕐᕌᒍᓂ.
- 2040ᒥ ᐅᓄᕐᓂᖏᓐᓄᑦ ᖃᓄᐃᑉᐸᓪᓕᐊᔪᑦ ᓇᓘᒪᓱᖅᑐᓄᑦ ᐱᐅᔪᕐᔫᓐᓂᑦ ᖃᐅᔨᓴᖅᑕᐅᓗᑎᒃ ᐅᓄᕐᓂᕐᓄᑦ ᖃᐅᔨᓴᕐᓂᕐᓄᑦ ᓅᕚᑦ ᓄᖅᑲᕗᖏᓐᓄᑦ 10 ᐊᕐᖀᒍᓂ.

8. ᖃᐅᔨᒋᐊᕐᕕᐅᔪᓇᖅᑐᑦ

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9. ᐊᑕᔪᖅ A: ᐊᑦᑐᐃᓐᓂᑦ ᐊᕙᑎᓄᑦ ᐊᓯᓄᓪᓗ ᐆᒪᔫᖃᑎᒌᓄᑦ

ᐸᕐᓇᑦᓯᐊᖅᓯᒪᔪᒥᒃ ᐊᕙᑎᓕᕆᓂᕐᓄᑦ ᕿᒥᕐᕈᓂᖅ (SEA) ᐊᐅᓚᑕᐅᕙᖅ ᑕᒪᒃᑮᓄᑦ

ᐆᒪᔪᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᓄᑦ ᐱᕐᖁᔭᕐᔪᐊᒥ ᐅᓄᖅᓯᕆᐊᓕᖅᑐᓄᑦ ᐸᕐᓇᐅᑎᓄᑦ ᑎᑎᕋᓄᑦ, ᒪᓕᓪᓗᒋᑦ *ᒥᓂᔅᑕᐅᖃᑎᒌᑦ ᑎᓕᓯᕗᑦ ᐊᕙᑎᒥᒃ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐊᑐᐊᒐᕐᒥᒃ, ᐸᕐᓇᐅᑎᒥᒃ ᐊᒻᒪ ᐱᓕᕆᐊᖅᓱᓄᑦ ᑐᔅᓴᐅᑎᓂᒃ*[11]. ᐊᑑᑎᖓ ᐸᕐᓇᑦᓯᐊᖅᓯᒪᔪᒥᒃ ᐊᕙᑎᓕᕆᓂᕐᓄᑦ ᕿᒥᕐᕈᓂᐅᑉ ᐃᓚᓕᐅᑎᓗᒋᑦ ᐊᕙᑎᓕᕆᓂᕐᓄᑦ ᐃᓱᒪᒋᔭᐅᔪᑦ ᓴᓇᔭᐅᓂᖏᓐᓄᑦ ᐃᓄᓕᒫᓄᑦ ᐊᑐᐊᓗᓄᑦ, ᐸᕐᓇᐅᑎᓄᑦ, ᐱᓕᕆᓂᕐᓄᓪᓗ ᐱᓇᓲᑎᓄᑦ ᐃᑲᔫᑕᐅᓗᑎᒃ ᐊᕙᑎᓕᕆᓂᕐᓄᑦ ᖃᓄᖅᑑᑎᐊᕐᓂᕐᓄᑦ ᕿᒥᕐᕈᓗᒋᓪᓗ ᖃᓄᐃᑦᑐᑦ ᐃᓕᖅᑯᓯᒥᓄᑦ ᐅᑎᖅᑎᑦᓯᓐᓇᓱᓪᓗᓂ ᐸᕐᓇᐅᑎᓄᑦ ᑎᑎᕋᖅ ᐊᑦᑐᐃᔪᓐᓇᕐᒪᖔᑦ ᓇᓕᐊᑐᐃᓐᓇᕐᒥᒃ ᐃᓚᖓᓂᒃ ᐊᕙᑎᒥᑦ ᓇᓕᐊᑐᐃᓐᓇᕐᓂᓪᓗ ᓚᕙᒪᑐᖅᑳᒃᑯᑦ ᑲᔪᓰᓐᓇᕈᓐᓇᖅᑐᓂᒃ ᐱᕚᓪᓕᐊᑎᑦᓯᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᕈᑕᐅᔪᒪᔪᖅ[12] (FSDS) ᑎᑭᓐᓇᓱᒃᑕᖕᒋᓐᓄᑦ ᑐᕌᖅᑕᖕᒋᓐᓄᓪᓗ.

ᓄᖑᑎᑦᓯᑦᑕᐃᓕᓂᕐᓄᑦ ᐸᕐᓇᓐᓂᑦ ᐊᑑᑎᖃᕋᓱᑦᑐᑦ ᐱᕚᓪᓕᕈᑕᐅᓗᑎᒃ ᐆᒪᔪᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᓄᑦ ᐊᔾᔨᒌᖕᒋᑦᑐᓄᓪᓗ ᓂᕐᔪᑎᖃᕐᓂᕐᓄᑦ. ᑭᓯᐊᓂ, ᐃᓕᓴᕆᔭᐅᕙᖅ ᐊᑐᓕᖅᑎᑦᓯᓐᓂᑦ ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᐸᕐᓇᐅᑎᓂᒃ ᐱᔾᔪᑎᖕᒋᓪᓗᓂ ᐊᕙᑎᓕᕆᓂᕐᓄᑦ ᐊᑦᑐᐃᓂᖃᑐᐃᓐᓇᕆᐊᓕᒃ ᐅᖓᑖᓂ ᐱᕚᓪᓕᕈᑕᐅᓇᓱᓚᐅᖅᑐᓄᑦ. ᐸᕐᓇᒐᓱᓐᓂᑦ ᑐᙵᕙᑦ ᓚᕙᒪᖃᑎᒌᓂᑦ ᑐᕌᕈᑎᓄᑦ ᑕᕝᕗᖓᑲᐅᑎᒋ ᐃᓚᐃᐅᔾᔨᕙᖅ ᐃᓱᒪᐃᔭᐅᔪᓂᒃ ᑕᒪᒃᑮᓐᓂᒃ ᐊᕙᑎᓕᕆᓂᕐᓄᑦ ᐊᑦᑐᐃᓂᕐᓂᒃ, ᐃᓱᒪᒋᓗᐊᖅᑐᒍ ᐊᑦᑐᐃᓂᐅᑐᐃᓐᓇᕆᐊᓕᓐᓄᑦ ᖃᐅᔨᓴᖅᑕᐅᖏᑦᑐᓄᑦ ᑎᒥᐊᙳᖃᑎᒌᓄᑦ ᐃᓂᓂᓪᓘᓐᓂᑦ. ᖃᐅᔨᔭᐅᔪᑦ ᐸᕐᓇᑦᓯᐊᖅᓯᒪᔪᒥᒃ ᐊᕙᑎᓕᕆᓂᕐᓄᑦ ᕿᒥᕐᕈᓂᕐᒥᑦ ᐃᓚᓕᐅᔾᔭᐅᑲᐅᑎᒋᔪᑦ ᑕᕝᕗᖓᑲᐅᑎᒋ ᐊᐅᓚᑦᓯᓂᕐᓄᑦ ᐸᕐᓇᐅᑎᒧᑦ, ᑭᓯᐊᓂ ᓇᐃᓈᖅᓯᒪᔪᓪᓗᑎᒃ ᑕᑲᓇᓂ ᑖᕙᓂ ᐅᓂᒃᑲᒥ.

ᐱᓕᕆᓂᑦ ᐃᑲᔫᑎᓕᑦ ᓇᒨᒪᓱᖅᑐᓄᑦ ᐱᕚᓪᓕᕈᑕᐅᔭᕆᐅᓂᐊᕐᒥᔪᑦ ᐊᓯᓄᑦ ᓱᔾᔭᓇᐊᓄᑦ, ᓅᓲᓄᑦ ᓱᓪᔭᒥᐅᓄᑦ ᑎᒥᐊᓄᑦ ᑕᓇᐅᕐᒥᐅᓄᓪᓗ ᑎᒥᐊᓄᑦ. ᓇᓗᒪᓱᖅᑐᑦ ᕼᐅᓴᓐᓗ ᓱᔾᔭᓇᐊᖓ (*Phalaropus tricolor*) ᑕᒪᒃᑮᒃ ᐊᑐᓲᖑᒪᑕ ᓅᒃᑕᕐᓂᕐᓄᑦ ᓄᖅᑲᖓᕼᐃᓐᓂᒃ ᓱᓚᓂᑐᑦ, ᑕᐃᒪᐃᒪᑦ ᐃᒥᖃᕋᓱᓐᓂᑦ ᑐᕌᖅᑐᑦ ᐃᒥᕐᓂᒃ ᐱᐅᖅᓱᐊᕐᓂᕐᓄᑦ ᖃᐅᔨᓴᕐᓗᒋᓪᓗ ᓂᕿᑦ ᐊᑐᐃᓐᓇᐅᓂᖏᓐᓂᒃ ᐃᑲᔫᑕᐅᔪᒃᓴᐅᓚᔭᖅᑐᑦ ᑖᒃᑯᓄᖓ ᑎᒥᐊᙳᖃᑎᒌᓄᑦ.

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[11] www.canada.ca/en/environmental-assessment-agency/programs/strategic-environmental-assessment/cabinet-directive-environmental-assessment-policy-plan-program-proposals.html

[12] www.fsds-sfdd.ca/index.html#/en/goals/

10. ᐊᑕᐯᖅ B: ᐃᓴᐯᓄᑦ ᑎᒥᐊᓄᑦ ᓄᓇᖕᒍᐊᖅ ᐃᓚᓱᑦᑐᓄᑦ

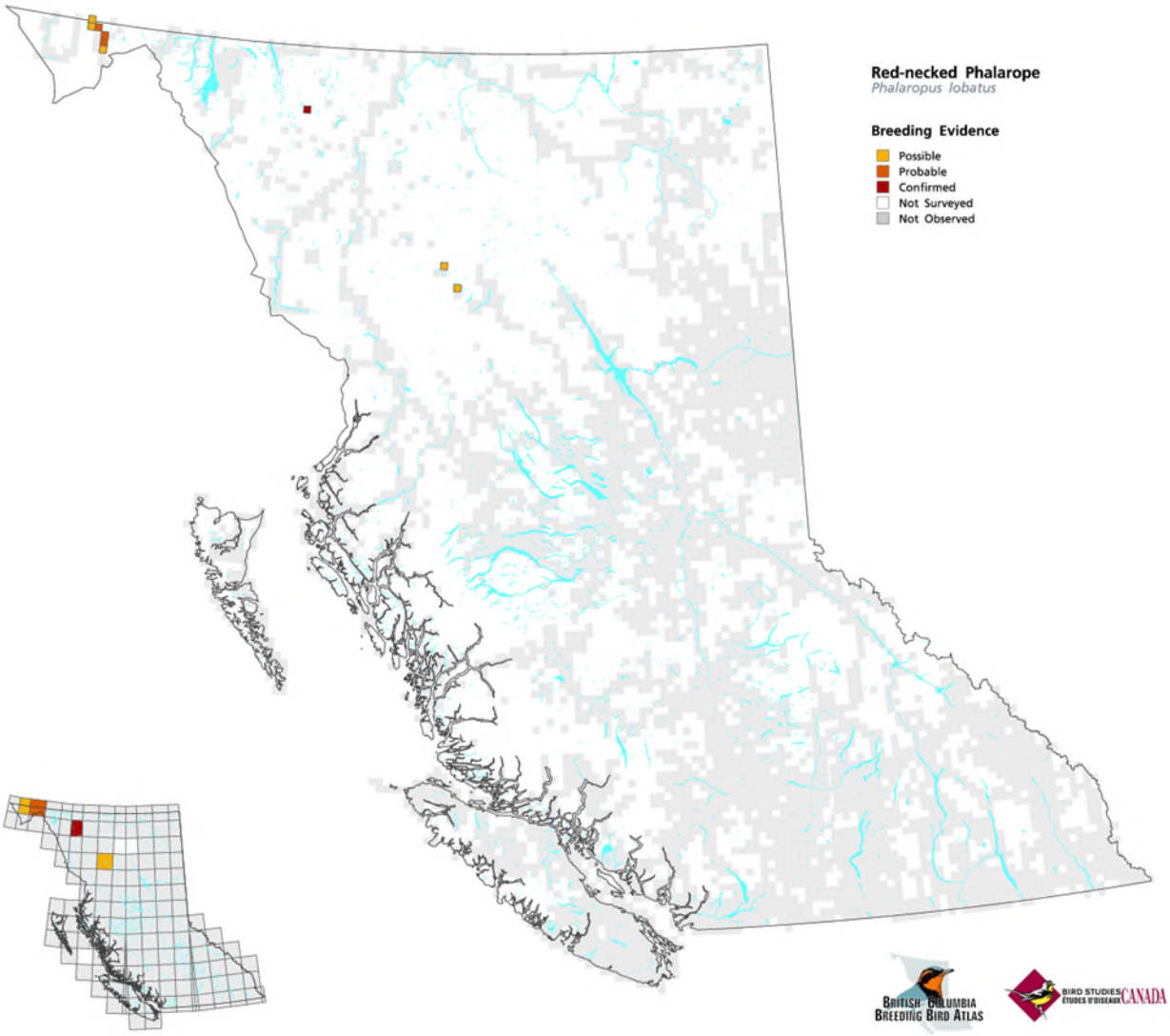
ᐃᓴᐯᓄᑦ ᑎᒥᐊᓄᑦ ᓄᓇᖕᒍᐊᑦ >ᓗᑎᑊ ᑲᓪᓚᐱᐊ, ᒪᓂᑐᑦ, ᐊᑲᑎᐊᓗᐅ, ᑯᐸᐃᒥᑦᓗ ᑕᒪᑲᑭᑦ ᓇᓗᓇᐃᖅᓱᒪᑦᓱᐊᖅᑐᓂᖅ ᓄᓇᖕᒍᐊᓂᖅ ᑭᑐᖅᑎᑦᑐᖅᑐᑦ ᓇᓵᒪᓱᖅᑐ ᓇᓂᓂᖅᑎᓂᖅ. ᐊᑕᐅᓱᑐᐊᒥᖅ ᐱᑕᖅᖅᑐᖅ ᑭᑐᖅᑎᑦᑐᖅᑐᓂᖅ ᓴᓚᒪᓱᑐᓂᖅ ᐃᓴᐯᓄᑦ ᑎᒥᐊᓄᑦ ᓄᓇᖕᒍᐊᖅᓚᓂ. ᐊᐅᐳᑕᐊᒥᖅ ᐃᓴᐯᓄᑦ ᑎᒥᐊᓄᑦ ᓄᓇᖕᒍᐊᖅ ᐅᖃᖅᐳᑦ ᓇᓵᒪᓱᖅᑐ ᖃᐅᔨᒪᕆᐅᒪᓕᐊᖅᑐᓂ ᑭᑐᖅᑎᑦᑐᖅᖃᑦᑕᖅᓂᖅᑐᓄᑦ ᐅᐊᓂᓇᖅᐸᓱᐊᓂ ᓇᐸᖅᑲᕐᓂᑦᑐᑦ ᑕᑯᐅᐯᔪᓕᑦᓗ ᓄᓇᖕᒍᐊᓕᓚᑎᓕᐊᓂᑦ ᐅᐊᓂᓇᖅᐸᓱᐊᖅ ᐃᓕᐅᖃᐅᑎᖅᑕᖅ ᐊᓱᐊᓄᖅᒪᐅᑉᓕᒪᑕ ᑕᓐᓇ ᓄᓇᖕᒍᐊᖅ ᐃᓕᐅᖃᓱᐅᑎᓇᓂ.

ᐳᓗᑎᑊ ᖃᓪᓚᐱᐊᒥ, ᖃᐅᐅᓴᖏᓂᖅ ᑕᖏᓱᓱᓂ ᐃᓗᑐᓂᕆᑦᓪᓕᐊᑕᓪᓕᐅᖅᑐᑦ, ᐅᐊᓐᓇᒥ ᐱᓇᓐᓇᖏᑦ ᐊᖏᓚᕐᓂᖅ, ᐃᓕᖏᑦ ᓇᓵᒪᓱᖅᑕᐅᓕᒪᓪᓗᑎᑦᑐᓄᑦ ᐅᓂᒃᑳᖅᑐᖅᑐᓄᑦ ᑭᖑᓂᓱᓂᖅᓴᓂᑦ, ᐊᓪᓚᖏᑦᑐᓂ ᐃᓇᓐᓇᖅᑐᓂ ᐅᖃᖅᑐᓂᒃ ᖃᐅᔨᓴᖅᑭᑐᖅᑐᓄᑦ ᐊᖏᓚᕐᓂᖅᑐᓄᑦ ᐊᖏᓚᕐᓂᖅᑐᓄᑦ (Di Corrado 2015). ᐊᖏᓚᕐᓂᖅᑐᑦ, ᓇᓗᓇᐃᖅᑐᓂ ᐃᓴᖅᓂ ᖃᐅᔨᖅᑐᓂᓂ ᓇᐸᖅᑲᕐᓂᓱᓂ ᑭᓪᓕᓂᓂ ᖃᓂᕆᐊᖅᓱᓂᓂ ᒪᑕᓂᑐᓂ ᑕᓂᖅᑐᓂᓂ, ᑭᓪᓕᐊᓂᓂ ᐱᓇᓐᓇᖅᑐᓂᓂ ᐃᓂᒪᓕᐅᕆᓂᓂ ᑕᐃᒪᐃᑦᑐᓂᓂ ᐃᓂᒪᓕᐅᕆᓂᓂ (Di Corrado 2015).

ᐃᓂᔅᑐᐸᒥ, 2010-2014 ᐃᓴᐯᓄᑦ ᑎᒥᐊᓄᑦ ᓄᓇᖕᒍᐊᖅ ᐊᖓᔪᓪᓚᑭᐊᖅᑎᑦᑭᓚᖅᑐᖅ ᖃᐅᔨᒪᐅᕆᓂᓄᑦ ᑭᑐᖅᑎᑦᑐᖅᓵᕕᓂᑦ, ᒪᓱᓇ ᐱᖃᐃᐅᔨᔨᓪᓚᖅᑐᓂ >ᐃᔪᔪᐃᓴᖏᓚᕐᓂᓂ ᓇᔪᓪᓚᖅᑐᓂᑦ (Artuso 2018). ᐃᓂᔅᑐᐸᒥ, ᑎᒥᐊᖓᔪᖃᑎᒌᑦ ᐃᓴᖑᔪᑦᑐᑦ ᕕᐊᓱᓂᓂ, ᐃᔨᔪᓚᓱᓂ ᐃᒪᖅᓱᓱᓂ, ᑭᓪᓕᖅᑐᓚᓱᓂᓗ ᓇᐸᖅᑐᖅᑭᖓᑦᑐᓂᓂ ᖃᐅᓂᔪᓂ ᒥᑭᑦᑐᑦ ᐃᒪᓂ. ᑎᒥᐊᖓᔪᖃᑎᒌᑦ ᐃᓴᖅᓂᓂᐊᖅᑐᑦ ᖃᐅᓂᔪᓂ ᕕᐊᓱᓂᓂ ᓇᐸᖅᑲᕐᓂᖅᑐᓂᓂ ᐅᖃᖅᑐᓂᕐᓂᓗᒍ, ᑭᓪᓕᐊᓂᓂ ᐱᓇᓐᓇᖅᑐᓂᓂ ᐃᓂᒪᓕᐅᕆᓂᓂ ᐳᓚᕐᓂᖅᑐᓂᓂ ᐅᖃᖅᑐᓂᕐᓂᓗᒍ ᐅᖃᖅᑐᓂᕐᓂᓗᒍ (Artuso 2018).

ᐊᑲᑎᐊᓗᐅᑎ, ᓇᓗᓇᐃᖅᑐᑦ ᑕᑯᐅᐯᔪᓕᑦᓗ ᐅᐊᓂᓇᖅᓴᓕᓂᓂ ᓄᓇᓂ ᖃᐅᔨᒪᖅᑕᐅᓕᒪᓂ. ᓇᐅᓇᐃᖅᑕᐅᓕᒪᓂᖅᑐᑦ ᖃᐅᔨᖅᑭᐅᖅᑐᑦ ᐃᕕᖏᓕᐅᓴᓂ ᑭᓪᓕᖅᑐᓚᓱᓂᓗ ᐱᖓᓗᐊᖅᑐᓂᑦ ᐃᒪᖅᓱᓂ ᑭᓪᓕᖅᑐᓚᓱᓂᓗ ᐃᓴᖅᑕᑦᑐᑦ ᑕᓕᓂᖅᑐᑦ (Nol and Beveridge 2007). ᐊᑕᐅᓕᖅᑎᑦ ᓇᓗᓇᐃᖅᑕᐅᓕᒪᓕᖅᓂᑦ ᑕᑯᓕᖅᓚᐅᖅᑐᓄᑦ ᐃᔨᓕᖅᓂ ᖃᐅᔨᒪᖅᑕᐅᖅᑎᓕᐊᖅᓱᒪᓕᑦᑐᑕᒥ ᓇᐸᖅᑲᕐᓂᓂ ᓇᐸᖅᑲᖅᑐᓂᑦᑐᓂ ᓄᓇᒥ, ᐅᖃᖅᑯᓕᔨᓚᓂ ᖃᐅᔨᒪᒪᓕᖅᑐᓂᑦᑐᓂᑦ ᐃᕕᖏᓕᐅᓴᓂ ᑭᓪᓕᖅᑐᓚᓱᓂᓗ ᐊᑲᑎᐊᓗᐅᑎ (Nol and Beveridge 2007).

ᑯᐱᐊᒃᑎ, ᐊᐃᕐᓴᓐᓄ ᐃᓴᐯᓄᑦ ᑎᒥᐊᓄᑦ ᓄᓇᖕᒍᐊᖅ ᐊᖓᔪᓕᓚᖅᑎᑦᑭᓕᓕᖅᖅ ᖃᐅᔨᒪᓕᐅᕆᓂᒃ ᖃᑐᓂᖅᑐᐅᐅᕆᓕᖅᓂ ᑯᐱᐊᒃ ᐅᐊᓂᓇᖅᐸᓱᐊᓂᓂ ᓂᒥᐊᓄᖅᒪᐅᑉᓕᒪᓪᓗᑎᑦᑐᓄᑦ ᐃᓴᖅᑕᑦᑐᑦ (Michel Robert, ᓇᖕᒥᓂᖅ ᑐᓴᐅᒪᑎᑦᑎᓂᖅ).



ᐊᐢᓵᖏᒍᐊᖅ B1: ᓇᓕᒪᓂᖅᑐᑦ ᖃᑐᖅᑎᐅᕙᓘᑦᑕᒥᑦ ᓇᓂᓄᓂᖅᑎᑦ ᑭᓇᐯᒪᔪᑦ ᐳᑎᑎᑦ ᑲᓪᓚᐸᐊᒥ ᓄᓇᖏᒍᐊᒥᑦ ᖃᑐᖅᑎᐅᖅᑕᓄᑦ ᐳᑎᑎᑦ ᑲᓪᓚᐸᐊᒥ, 2008-2012 (ᐱᕙᓵᐅᔨᖅ: Di Corrado 2015) ᓇᓕᒪᓂᖅᑐ

Breeding Evidence = ᖃᑐᖅᑎᐅᑦᑕᓄᑦ ᓇᓗᓇᐃᖅᓯᔨᑦ

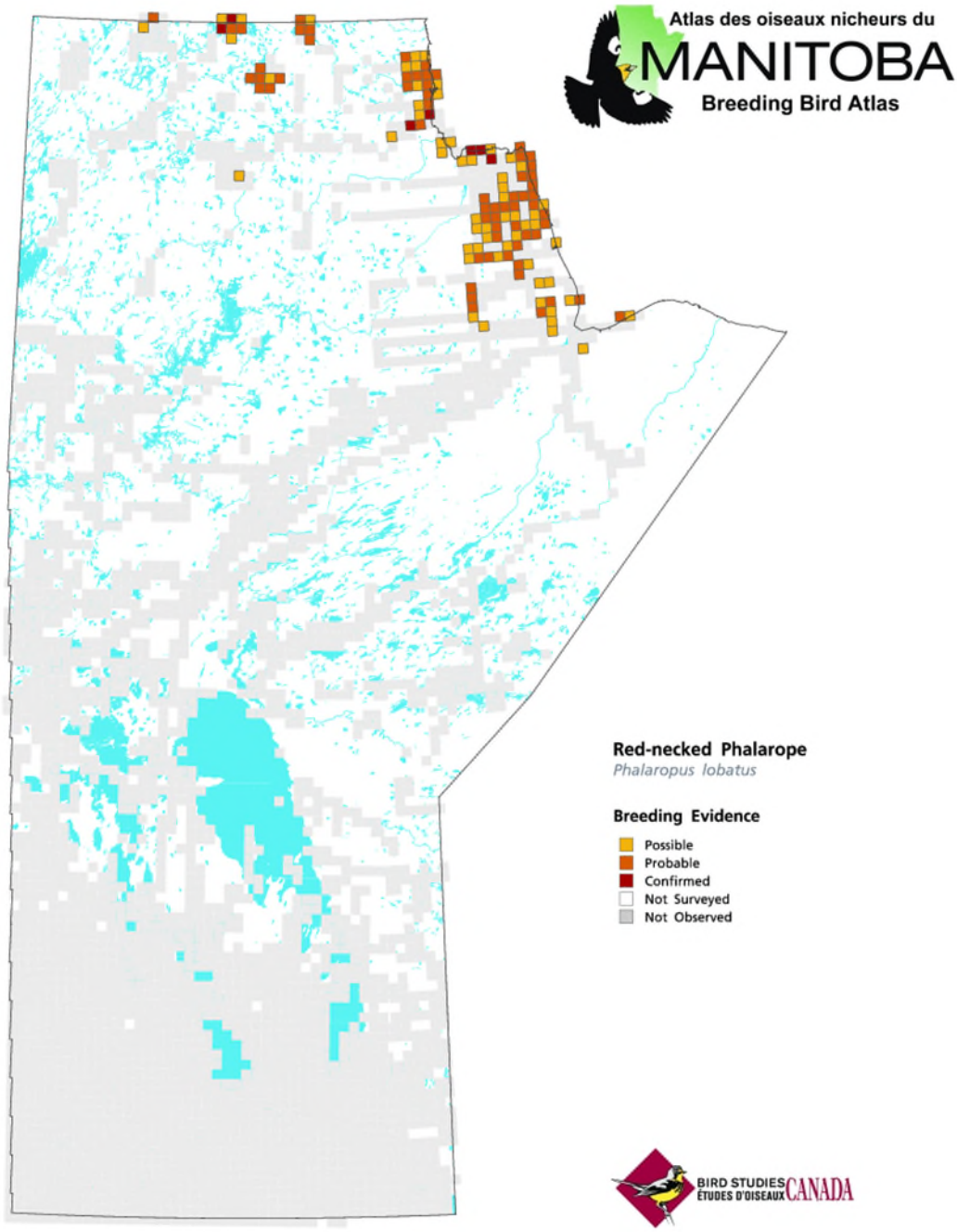
Possible = ᐊᔨᖅᓇᖏᑦᑐᖅ

Probable = ᑕᐃᒪᐃᑐᐃᓐᓇᑌᐊᓕᒃ

Confirmed = ᓇᓗᓇᐃᖅᑕᐅᔨᖅ

Not Surveyed = ᖁᐅᔭᓴᖅᑕᐅᓂᒪᖏᑦᑐᖅ

Not observed = ᑕᓂᕐᐅᓂᒪᖏᑦᑐᖅ



ᐊᖏᖅᓯᐊᖅ B2: ᓇᓗᒪᓂᖅᑐ ᓇᓗᒪᓂᖅᑐᑦ ᕿᑐᕐᖁᐅᖃᕐᓂᖅᑕ ᓇᓂᓕᖁᕐᑦ ᒪᓂᑉᑕᕐᓂᑦ ᕿᑐᕐᖁᐅᖅᑐᓄᑦ ᒪᓂᑉᑕᕐᒥ, 2010-2014 (ᐱᕙᓪᓕᐅᔪᖅ: Artuso 2018)

Manitoba Breeding Bird Atlas = ᒪᓂᑉᑕᕐᒥ ᐃᓕᔪᓄᑦ ᑎᒍᒥᐊᓄᑦ ᓄᓇᖅᓯᐊᖅ

Red-necked Phalarope = ᓇᓗᒪᓂᖅᑐ

Breeding Evidence = ᕿᑐᕐᖁᐅᑐᓄᑦ ᓇᓕᓇᐃᖅᓱᑦ

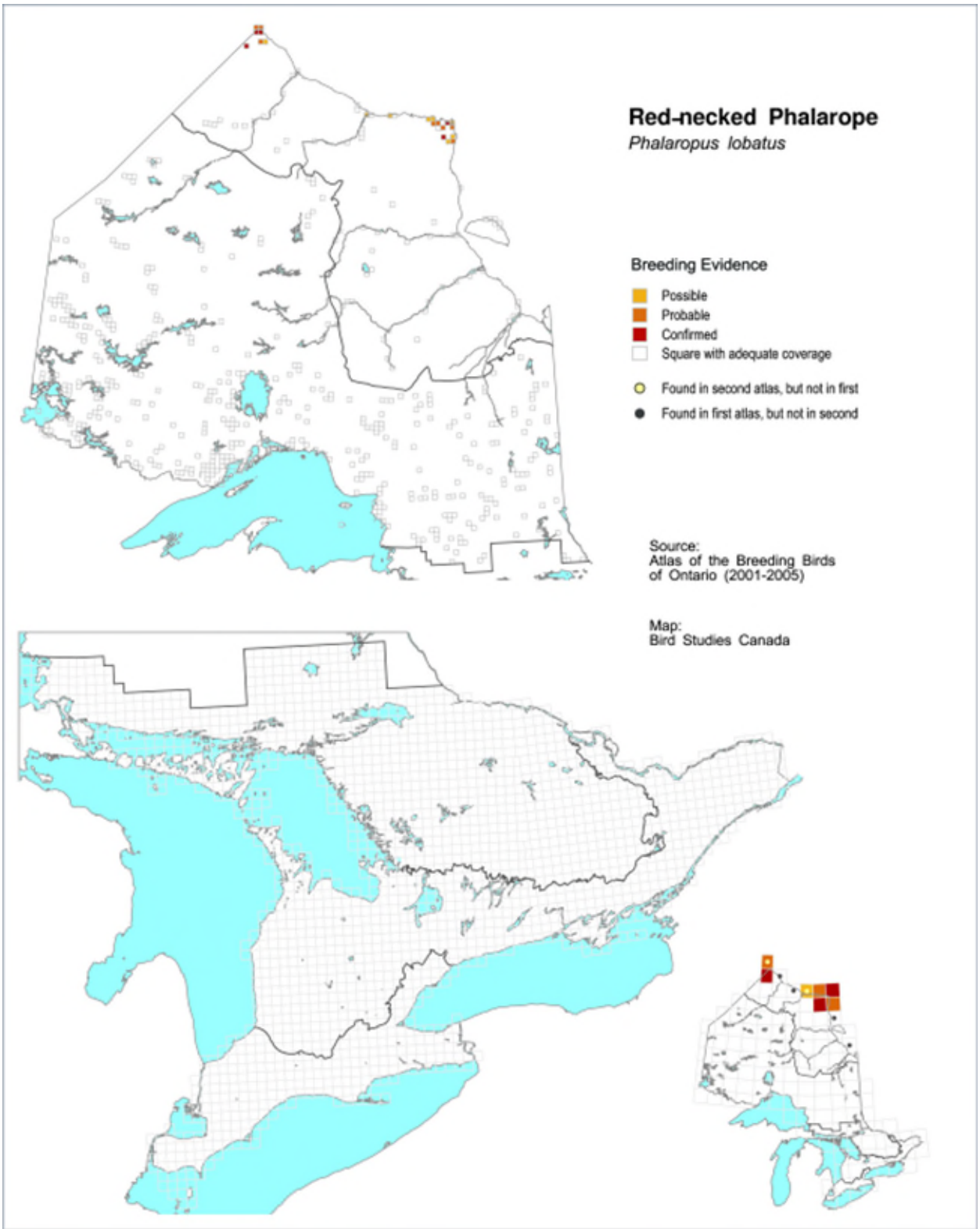
Possible = ᐊᔪᕐᓇᖏᑦᑐᖅ

Probable = ᑕᐃᒪᐃᑐᐃᓐᓇᑌᐊᓕᒃ

Confirmed = ᓇᓕᓇᐃᖅᑕᐅᔪᖅ

Not Surveyed = ᖃᐅᔨᓴᖅᑕᐅᓱᒪᖏᑦᑐᖅ

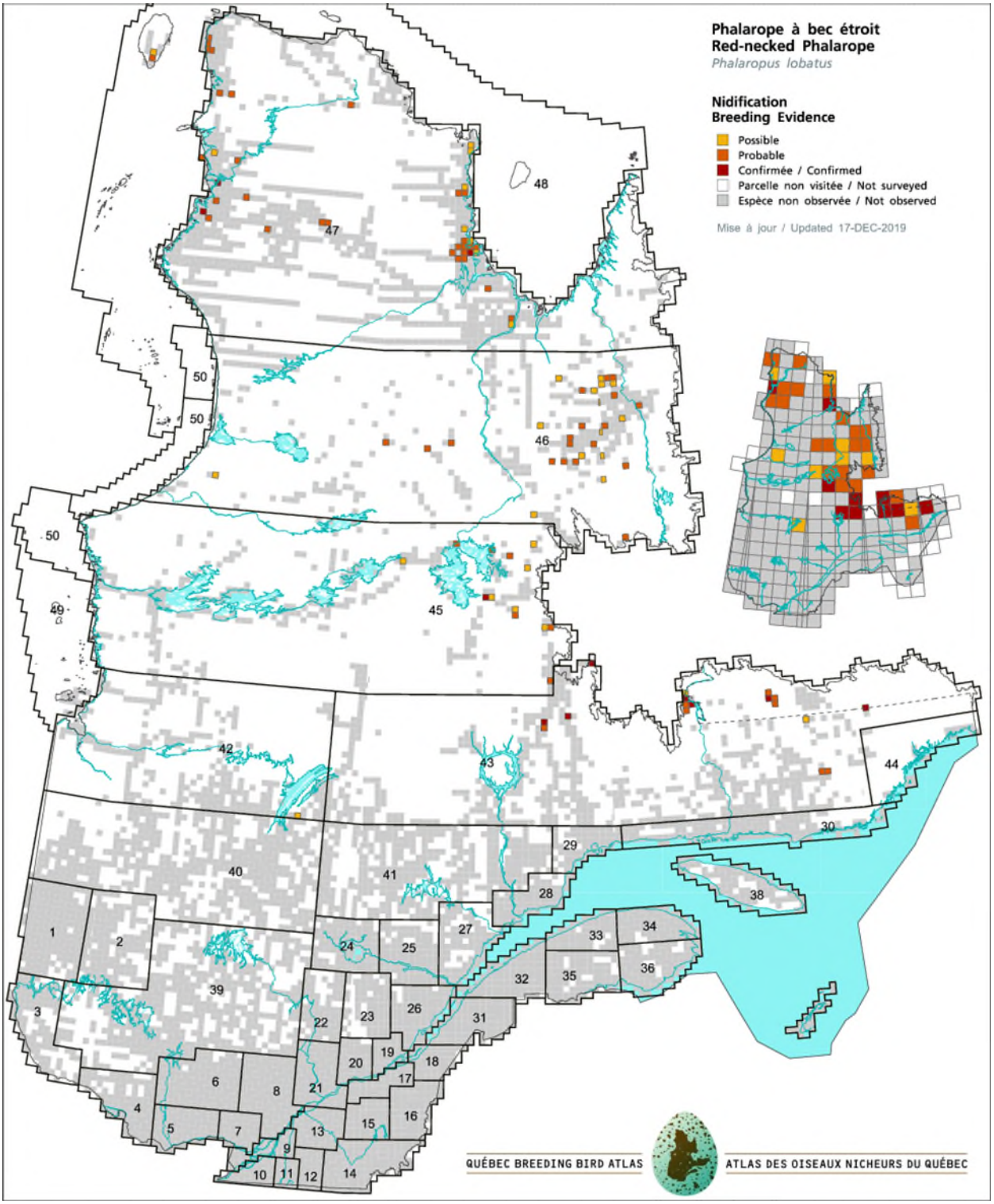
Not Observed = ᑕᑯᐅᐅᓱᒪᖏᑦᑐᖅ



ᐊᐢᓴᓐᒍᐊᖅ B3: ᓇᓕᒪᓴᖅᑐᑦ ᖃᑐᖅᑎᐅᔾᔪᑎᑕ ᓇᓂᓕᓂᑎᑦ ᐃᓕᑎᐊᓚᐅᒥ ᓄᓇᓐᒍᐊᒥᑦ ᖃᑐᖅᑎᐅᔾᔪᖅᑐᓄᑦ ᐃᓕᑎᐊᓚᐅᒥ, 2001-2005. (ᐱᖓᔪᐅᔨᖅ: Nol and Beveridge 2007)

Red-necked Phalarope = ᓇᓕᒪᓴᖅᑐ

Breeding Evidence = ᖃᑐᖁᕈᐅᑦᑐᓗᓄᑦ ᓇᓗᓇᐃᖅᓯᓂ
Possible = ᐊᔨᖁᓇᕈᑎᑐᖅ
Probable = ᑕᐃᒪᐃᑐᐃᓇᕆᐊᓕᒃ
Confirmed = ᓇᓗᓇᐃᖅᑕᐅᔨᖅ
Square with adequate coverage = ᑭᐱᓵᕆᑦᑐᖅ ᓇᓴᒪᑦᑐᓂᒃ ᐱᑭᖅᑐᖅᖅᑐᓂ
Found in second Atlas, but not in first = ᓇᓂᔭᐅᔨᖅ ᐊᐃᐸᐱᓚᓂ ᓄᓇᖏᔪᐊᓂ, ᑭᓯᐊᓂ ᓯᓚᓕᒥᐅᕈᑎᑦᑐᖅ
Found in first Atlas, but not in second = ᓇᓂᔭᐅᔨᖅ ᓯᓚᓕᒥ ᓄᓇᖏᔪᐊᓂ, ᑭᓯᐊᓂ ᐊᐃᐸᐱᓚᓂᐅᕈᑎᑦᑐᖅ
Source = ᐱᖕᕃᐅᔨᖅ
Atlas of the Breeding Birds of Ontario = ᓄᓇᖏᔪᐊᒥᑦ ᖃᑐᖁᕈᐅᖅᑐᓗᓄᑦ ᐊᑦᑎᐊᓕᐅ
(2001-2005) = (2001-2005)
Map: = ᓄᓇᖏᔪᐊᖅ:
Bird studies Canada = ᑎᒍᐊᓄᑦ ᖃᐅᔨᓴᖁᓕᑦ ᑲᓇᑕ



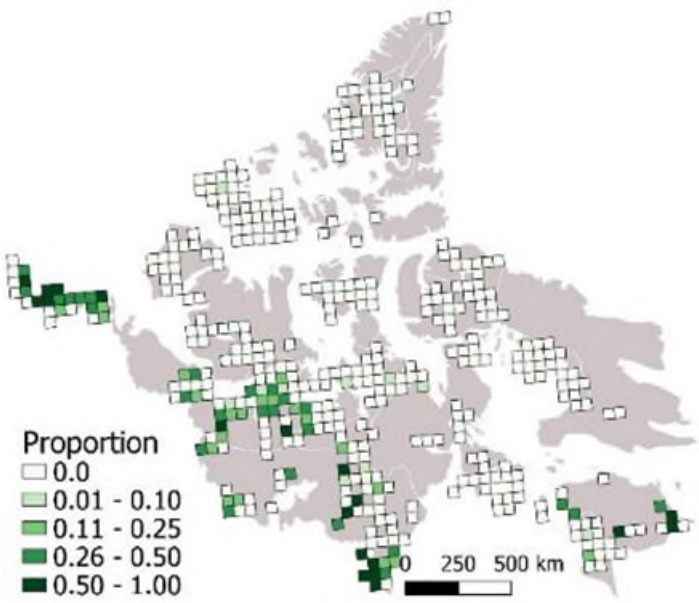
ᐊᖏᕐᒪᐊᖅ B4: ᓇᓗᒪᓴᖅᑐᑦ ᑭᑐᖅᑎᐅᖏᖅᓯᒃᑐᑦ ᓇᓂᓂᓄᑦ ᑯᐱᐊᖑᒥ ᓄᓇᒪᔪᐊᒥᑦ ᑭᑐᖅᑎᐅᖅᑐᓄᑦ ᑯᐱᐊᖑᒥ, 2010-2019 (ᐱᖏᕕᐅᔾᔨᖅ: https://www.atlas-oiseaux.qc.ca/donneesqc/cartes.jsp?lang=en)

Red-necked Phalarope = ᓇᓗᒪᓴᖅᑐᑦ

Nidification = ᐃᓕᖏᕕᓕᐅᖅᑐᑦ

Breeding Evidence = ᖃᑐᖅᑎᐅᑦᑐᓄᓪ ᓇᓗᓇᐃᖅᓯᓪ
Possible = ᐊᔪᖅᓇᖏᑦᑐᖅ
Probable = ᑕᐃᒪᐃᑐᐃᓇᓕᐊᓕᒃ
Confirmed = ᓇᓗᓇᐃᖅᑕᐅᔪᖅ
Not surveyed = ᖃᐅᔨᓴᖅᑕᐅᓯᒪᖏᑦᑐᖅ
Not observed = ᑕᑯᐅᐅᓯᒪᖏᑦᑐᖅ
Updated: 17 Dec. 2019 = ᓄᑦᑭᓕᓚᐸᖅᑕᐅᔪᖅ: 17 ᑎᓯᓴᓚ 2019

11. ᐊᑕᔪᖅ C: ᐅᑭᐅᖅᑕᖅᑐᑎ ᐳᓚᓴᒪ (PRISM) ᐱᓕᓚᓂᖅ ᐊᐃᓴᓯᒪᔪᓄᑦ ᓄᓇᕐᔪᐊᕐᒥᐅᓄᕐᓗᓪ ᓯᓴᒥᐅᑕᓂᒃ ᑎᒥᐊᓂᒃ ᖃᐅᔨᓴᕐᓂᑦ ᓇᓂᓐᓂᕆᓐᓄᑦ ᓄᓇᖕᖏᐊᖅ ᓇᒪᓯᑦᑐᓄᓪ



ᐊᐅᓚᖏᐊᖅ C1: ᐊᖏᕐᓂᖓ 25 x 25 ᑭᓯᒥᑦ ᑭᐸᓵᓇᑦᑐᑦ ᑎᓕᒥᐊᖏᕆᑎᑎᕐᑦ ᐳᐃᔪᓴᐃᖅᑕᐅᓯᐅᕐᓇᖅᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᓕᓚᓂᖅ ᐊᐃᓴᓯᒪᔪᓄᑦ ᓄᓇᕐᔪᐊᕐᒥᐅᓄᕐᓗᓪ ᓯᓴᒥᐅᑕᓂᒃ ᑎᒥᐊᓂᒃ ᖃᐅᔨᓴᕐᓂᑦ (Paul Allen Smith and Jennie Rausch, ᓇᖕᒥᓂᖅ ᑐᓴᐅᒪᑦᑎᓂᖅ).

ᓇᐃᓈᖅᓯᒪᔪᖅ ᑐᒃᓯᕋᖅᑕᐅᔪᖅ ᑭᖑᓪᓕᖅᐹᖅᓯᐅᑎ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᖅ ᐸᕐᓇᐅᑎ ᐅᑯᓄᖓ

ᐊᐅᐸᓘᒃᑐᑦ ᓴᐅᕐᕋᑦ(*Phalaropus lobatus*) ᑲᓇᑕᒥ

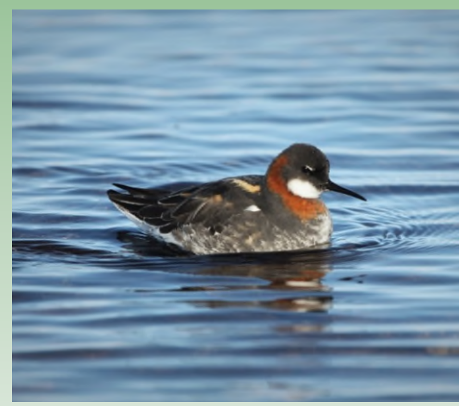
ᐅᓇ ᓇᐃᓈᖅᓯᒪᔪᖅ ᑐᓴᒃᓴᖅ ᐱᔾᔪᑎᒋᓪᓗᒍ ᑐᒃᓯᕋᖅᑕᐅᔪᖅ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓄᑦ ᐸᕐᓇᐅᑎᑦ ᑖᒃᑯᓄᖓ ᐊᐅᐸᓘᒃᑐᖅ ᓴᐅᕐᕋᖅ. ᐊᐅᐸᓘᒃᑐᑦ ᓴᐅᕐᕋᑦᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᐆᒪᔪᓄᑦ ᐃᓱᒫᓘᑕᐅᔪᓄᑦ ᐊᑖᒍᑦ ᐆᒪᔪᑦ ᐃᓅᓯᖓᓗᐊᕐᑯᓇᒋᑦ ᐱᕐᑯᔭᖅ 2019-ᒥ.

ᐅᓇ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᖅ ᐸᕐᓇᐅᑎ ᐅᓇ ᐸᕐᓇᐅᑎ ᐋᕿᒃᓱᐃᓯᒪᔪᖅ ᑐᕌᕆᓂᐊᖅᑐᓂᒃ ᐊᒻᒪᓗ ᑐᑭᓕᐅᕈᑕᐅᕙᓪᓕᐊᓂᐊᖅᑐᓄᑦ ᐱᑕᖃᐃᓐᓇᕈᓪᓗᒋᑦ ᐃᓄᖅᑑᓗᑎᒃ ᐊᐅᐸᓘᒃᑐᑦ ᓴᐅᕐᕋᐃᑦ. **ᐅᓇ ᓇᐃᓈᖅᓯᒪᔪᖅ ᑐᓂᔭᐅᓯᒪᔪᖅ ᑕᒫᓂ ᒪᓕᒃᑐᖅ ᑐᓴᒃᓴᓂᒃ ᖃᓪᓗᓈᑎᑐᑦ ᑖᒃᑯᐊ ᑐᒃᓯᕋᐅᑎᑦ ᑭᖑᓪᓕᖅᐹᖅᓯᐅᑎᑦ ᐊᐅᐸᓘᒃᑐᑦ ᓴᐅᕐᕋᑦᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᖅ ᐸᕐᓇᐅᑎ ᑲᓇᑕᒥ**. ᐅᓇ ᖃᓪᓗᓈᑎᑐᑦ ᐊᒻᒪᓗ ᐃᓄᒃᑎᑐᑦ ᑎᑎᕋᖅᓯᒪᔪᖅ ᑕᕐᕋᖓ ᑐᓂᔭᐅᔪᖅ ᐃᓕᖓᓄᑦ ᖃᐅᔨᒪᔾᔪᑎᒋᓂᐊᕋᖓᓂ (ᐅᐃᒍᖅ A).

ᑲᑎᒪᔨᕋᕈᑦ ᓄᖑᓕᖅᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ ᖃᐅᔨᓴᖅᓯᒪᔪᑦ ᐊᒻᒪᓗ ᐆᒪᔪᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓂᒃ ᑐᓴᕐᑎᑦᑎᔪᑦ (ᒪᒃᐱᕚᐃᑦ 1-2)

ᐅᑯᐊ ᒪᒃᐱᕚᐃᑦ ᑐᓂᓯᔪᑦ ᑕᒪᑐᒥᖓ ᑲᑎᒪᔨᕋᕈᑦ ᓄᖑᓕᖅᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ ᖃᐅᔨᓴᖅᓯᒪᔭᖏᑦ ᓇᓗᓇᐃᔭᕐᕕᖕᓂᑦᑐᑦ, ᐅᑯᐊᓗᑦᑕᐅᖅ ᐃᓚᓕᐅᑎᓯᒪᖕᒥᔪᑦ ᑖᒃᑲᓂ.
ᓇᓗᓇᐃᑦᑎᐊᖅᓯᒪᔪᑦ ᖃᓄᐃᒻᒪᑦ ᑲᑎᒪᔨᕋᕈᑦ ᓄᖑᓕᖅᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ ᖃᐅᓕᓴᖅᓯᒪᔭᑎᒃ ᐊᐅᐸᓘᒃᑐᑦ ᓴᐅᕐᕋᑦᐆᒪᔪᑦ ᐃᓱᒫᓗᑕᐅᕕᖏᓐᓂ, ᑕᐃᑲᓂᓗ ᑕᐃᒪᓐᓇᐃᓕᖓᔪᑦ ᑲᓇᑕᒥ, ᐊᒻᒪᓗ ᐃᒻᒪᑲᓪᓚᒃ ᖃᓄᐃᓕᖓᓚᐅᕈᓯᕙᓂᖏᑦ ᐆᒪᔪᑦ ᐊᓂᒍᖅᑐᓂᒃ ᐊᕐᕿᒍᓂ.

ᑕᒃᑯᓂ ᑎᑎᕋᖅᓯᒪᔪᑦ ᑐᓴᕐᑎᑦᑎᔪᑦᑕᐅᖅ ᖃᓄᐃᓕᖓᓂᖏᓐᓂᒃ ᐆᒪᔪᑦ ᓇᓂᑐᐃᓐᓇᑦ ᑲᓇᑕᒥ, ᖃᓄᖅ ᓴᐳᒻᒥᔭᐅᕙᑦ ᑲᓇᑕᒥ ᐊᕕᒃᑐᖅᓯᒪᔪᑦ ᐊᒻᒪᓗ ᑎᐅᓕᑐᐊᓕᒃ, ᐊᒻᒪᓗ ᖃᓄᐃᓕᖓᓂᖏᑦ ᑎᖕᒥᐊᓂᒃ ᓴᐳᓐᓂᐊᕈᑕᐅᔪᑦ ᐊᓯᖏᓐᓂ ᓲᕐᓗ ᓇᐃᑦᓯᓲᕕ.
ᓇᐃᑦᓯᓲᕕᒃᑯᑦ ᖃᐅᔨᓴᖅᓯᒪᔪᑦ ᖃᓄᐃᓕᖓᓂᖏᓐᓂᒃ ᑖᒃᑯᐊ ᐊᐅᐸᓘᒃᑐᑦ ᓴᐅᕐᕋᑦ ᓄᓇᕗᒻᒥ ᑕᐃᒪᓗ S3B, S3M. S = ᑎᐊᓕᑐᐊᓕᑎᒍᑦ, 3 = ᐊᑦᑕᕐᓇᖅᑐᑦ, B = ᐃᕙᔪᑦ, M = ᓄᑦᑕᖅᑐᑦ.



ᐊᕐᓇᕕᐊᖅ ᐊᐅᐸᓘᒃᑐᑦ ᓴᐅᕐᕋᑦ© Willow

ᐅᓪᓗᖓ ᖃᐅᔨᓴᖅᑕᐅᓂᖓᑕ: ᓄᕕᐱᕆ 2014
ᐊᑎᖃᖅᑐᑦ ᑕᐃᔭᐅᓃᖑᓪᓗᑎᒃ ᐃᒪᓐᓇ (ᑲᑎᖓᔪᑦ) : ᐊᐅᐸᓘᒃᑐᖅ ᓴᐅᕐᕋᖅ
ᖃᐅᔨᓴᖅᑎᒻᒪᕆᖓᓂᑦ ᐊᑎᖃᖅᑎᑕᐅᔪᑦ: *Phalaropus lobatus*
ᑲᑎᒪᔨᕋᕈᑦ ᓄᖑᓕᖅᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ ᖃᓄᐃᓕᖓᓂᖓ:
ᐃᓱᒫᓘᑕᐅᔪᑦ
ᐱᔾᔪᑎᖓ ᓴᓂᖅᑲᒃᑕᐅᓗᑎᒃ:
ᐅᑯᐊ ᑎᖕᒥᐊᑦ ᐅᓄᕈᓐᓃᖅᐸᓪᓕᐊᖏᓐᓇᖅᑐᑦ ᐊᓂᒍᖅᑐᓂ 40 ᐅᑭᐅᓂ ᐃᓗᐊᓂ ᐱᒻᒪᕆᐅᔪᑦ ᐃᕙᕕᒋᕙᒃᑕᖏᓐᓂ; ᑕᐃᒪᓐᓇᐅᕙᓗᐊᖅᑎᓪᓗᒍ, ᑕᒪᕐᒥᒃ ᐅᓄᖅᓯᕙᓪᓕᐊᒻᒪᖔᑕ ᐊᓂᒍᖅᑐᓂ ᐱᖓᓱᑦ ᖁᓕᑦ ᐊᕐᕿᒍᓂ ᖃᐅᔨᒪᓐᖏᑦᑐᑦ. ᐅᑯᐊ ᑎᖕᒥᐊᑦ ᓵᑦᑎᓯᒪᔪᑦ ᐅᓗᕆᐊᓇᖅᑐᓂᒃ ᐃᕙᕕᒋᕙᒃᑕᖏᓐᓂ ᑖᒃᑯᐊᓗ ᓇᔪᖅᐸᒃᑕᖏᑦ ᐊᐅᔪᑦ ᐱᔾᔪᑎᒋᓪᓗᒍ ᓯᓚᐅᑉ ᐅᕐᑑᓯᕙᓪᓕᐊᓂᖓ ᐊᓯᑭᕐᓂᖓᓄᑦ. ᐅᑯᐊᑦᑕᐅᖅ ᓄᕐᑯᕋᖅᑕᐅᔪᓐᓇᖅᑐᑦ ᓱᑭᕐᓂᑦ ᐊᒻᒪᓗ ᐅᖅᓱᐊᓗᖕᒥᑦ ᓄᑦᑕᖅᑎᓪᓗᒋ ᐊᒻᒪᓗ ᐅᑭᐅᕐᕕᖕᒋᓐᓂ.
ᐱᔾᔪᑎᒋᓪᓗᒍ ᑎᖕᒥᐊᑦ ᑲᑎᖓᓲᖑᖕᒪᑕ ᐅᓄᖅᑑ ᐃᒪᕕᖕᒥ, ᐱᓗᐊᖅᑐᒥᒃ ᒪᓕᓖᑦ ᓄᐊᑦᑎᔪᑦ ᓱᑲᕐᓂᒃ.
ᑲᓇᑕᒥ ᐱᑕᖃᓖᑦ:
ᔫᑳᓐ, ᓄᓇᑦᓯᐊᖅ, ᓄᓇᕗᑦ, ᐳᑎᔅ ᑲᓚᑉᐱᐊ, ᐊᐃᐳᑕ, ᓴᔅᑳᑦᑐᐋᓐ, ᒫᓂᑑᐸ, ᐋᓐᑎᐅᕆᐅ, ᑯᐸᒃ, ᓅ ᐳᓚᓐᔅᕕᒃ, ᐳᓕᑦᔅ ᐃᑦᕗᑦ ᐊᐃᓚᓐᑦ, ᓅᕙ ᓯᑰᓯᐊ, ᓅᕙᐅᓐᓚᓐᑦ ᐊᒻᒪᓗ ᓛᐸᑐᐊ, ᐸᓯᕕᒃ ᐃᒪᕙ, ᐋᑎᒃ ᐃᒪᕙ, ᐊᑦᓛᓐᑎᒃ ᐃᒪᕙ

ᑲᑎᒪᔨᕋᕈᑦ ᓄᖑᓕᖅᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ ᖃᓄᐃᓕᖓᔭᐅᓂᖏᒃ ᐃᒻᒪᑲᓪᓚᖓᓂᒃ: ᓴᓂᖅᑲᒃᑕᐅᓯᒪᔪᑦ ᐃᓱᒫᓘᑕᐅᓪᓗᑎᒃ ᓄᕕᐱᕆ 2014-ᒥ.
* ᑲᑎᒪᔨᕋᕈᑦ ᓄᖑᓕᖅᑐᓄᑦ ᐆᒪᔪᓄᑦ ᑲᓇᑕᒥ

ᑕᓴᓭᖓ ᑐᓴᐅᒪᑎᑦᑎᓴᐸᑎᑦ (ᒪᓴᐱᖏᐃᑦ 2-9)

ᐅᓇ ᑕᒪᓐᓂᓂ ᑎᑎᕐᖅᓭᒪᓴᓂ ᑐᓴᓭᕐᐅᑎᑦ ᐊᐅᓪᓚᑦᑎᓴᐸᑎᖅ ᐸᖅᓇᐅᑎ ᑕᓴᑯᓂᖅ ᐊᐅᐸᓗᑐᑦ ᓴᐅᖅᑭᖅᑐᒋᓭᓭᒪᓴᓂ ᓇᓗᓇᐃᔨᑦᑎᐊᕐᓭᒪᓕᒫᑦ ᓇᓗᒋᑦ ᓄᓇᕐᖓᒪᓕᖅᑎᑦ ᐃᒪᓗᓗ ᑭᓭᓕᖅ ᐅᓴᓂᓕᖅᑎᑦ.

ᑎᕐᓭᐊᑦ ᓇᓪᓕᐊᕐᒧᓂᑦ

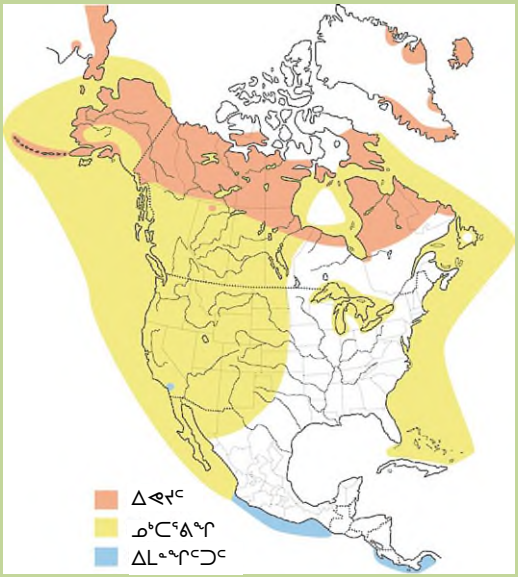
- ᐊᐅᐸᓗᑐᑦ ᓴᐅᖅᑭᑦᐊᕐᓭᓪᓕᐊᓂᕐᑐᑦ ᓭᐅᕐᐃᐃᖅ ᓴᖅᐃᖅᓱᒃ ᐊᐅᐸᖅᑐᖅ ᐊᖏᓚᓴᓕᓪᔨᖅᑐᖅᑐᖅ ᖃᓄᖅᓭᖅᓱᓂᓂ ᐊᐦᒪᓗ ᑎᑭᐅᑎᕐᓭᓂᓂ ᓂᐊᐊᕐᓂᓂ ᓇᓂᐅᐊᕐᓂᑦ ᑕᐃᑲᓂ ᐃᓂᓴᓂᐅᑎᓗᒍ.
- ᐊᖅᓇᐃᐊᖅ ᐊᓂᓂᓂᖅᓴᖅᓭᓗᑎᒃ ᐊᓕᐅᑎᐃᐊᖅᓂᒃ (40 ᔪᓚᑦᑦ ᑕᒃᑯᓇᖅᑎᓭᓂ 33 ᔪᓚᑦᑦ).

ᑎᕐᓭᐊᑦ ᐅᓄᖅᓂᓂᑦ ᐊᒪᓗᓗ ᓇᒧᓴᓭᕐᓂᓂᑦ

- ᐊᐅᐸᓗᑐᑦ ᓴᐅᖅᑭᑦ ᐅᑯᐊ ᐅᑭᐅᖅᑕᖅᑐᖅ ᑲᔪᓯᐊᓂ ᐃᓂᓴᓂᑦ.
- ᐃᓂᓴᓂᑦ ᑎᑭᐅᑎᓂᒪᑎᒃ ᐅᐊᖅᓇᖅᓱᓄᓇᓄᓂ ᓂᒋᐊᓂ ᖁᑭᖅᑕᓗᓂᑦ.
- ᐊᐅᐸᓗᑐᑦ ᓴᐅᖅᑭᑦ ᓄᑦᑕᓂᓂ ᓂᓴᖅᐸᓂᓴᓂᑯᖅᓯᒪᑎᒃ ᐊᒪᓗᓗ ᐅᑭᐅᓂᑦ ᑕᑎᐅᖅᑎ ᓂᓴᖅᑎᓂᓕᓂ ᐃᓂᓴᓂᑦ, >ᓗ, ᐊᒪᓗᓗ ᓂᓪᓕ.

ᐅᓄᖅᓭᖅᑕ ᐊᖅᓭᓭᖅᑕ ᐊᒪᓗᓗ ᐊᓂᔪᖃᑦᑕᖅᑐᖅ ᐅᓄᖅᓭᖅᑕ

- ᖃᐅᔨᓴᕐᑎᑦ ᐅᓄᖅᓭᖅᑕᓭᓭᒃ ᐊᒪᓗᓗ ᐊᓂᔪᖃᑦᑕᖅᓭᖅᑕᓭᓭᒃ ᐱᑕᖃᓗᐊᓕᖅᑕᖅᑐᖅ ᐱᔨᔪᑎᑕᓗᓂᑦ ᐊᐅᐸᓗᑐᑦ ᓴᐅᖅᑭᑦᐱᖅᑎᓭᖅᑕᒪᓕᑕ ᑎᑎᕐᓭᑦ ᓱᓴᕋᓂᓪᓚᑦ ᑕᖅᑭᖅᑕ ᑕᒫᓂᖅᑕᖅᑐᑦ ᑕᓪᓕᐅᕐᑎᑦ ᐊᒪᓗᓗ ᓇᒥᑐᖅᑕᖅᑐᓂᒃ ᐃᓕᓴᐃᖅᑕᖅᑐᑦ.
- ᐅᑭᐅᖅᑕᖅᑐᑎᒥ ᐱᓕᕆᑎᑦᑎᔨᕈᑕᐅᖅᖃᖅ ᐊᐃᔅᑐᖅᓯᒪᔪᓂᑦ ᐊᒪᓗᓗ ᓯᓚᕐᔪᐊᒥ ᓯᓚᑎ ᑎᑎᕐᓭᑦ ᒥᐊᐅᑦᑕᖅᑐᑦ ᓇᓂᐅᐊᕐᓂᑦ ᐃᓚᐅᐃᖅᑕᖅᑐᑦ ᑕᕆᐅᑕᖅᑎ ᐊᒪᓗᓗ ᓇᒥᑐᖅᑕᖅᑐᓂᒃ ᐃᐊᓐᓂᖅᑕᖅᑐᑦ ᑕᕆᐅᑕᖅᑎ ᐊᒪᓗᓗ ᓇᒥᑐᖅᑕᖅᑐᓂᒃ ᐃᐊᓐᓂᖅᑕᖅᑐᑦ 2020 ᐃᒪᓵ 2.3 ± 0.7 ᒥᓪᓕᐊᓵ.
- ᑕᐃᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᓪᓚᑎᑦᑎᓴᕐᑕᐅᔨᖅ ᐊᐃᔅᑐᖅᓯᒪᔪᓄᑦ ᐊᒪᓗᓗ ᓯᓪᓕᕐᔪᐊᒥ ᓯᓱᒥ ᑎᑎᕐᓭᑦ ᒥᐊᐅᑦᑕᖅᑐᑦ ᒥᐊᐅᑦᑕᖅᑕᕐᓭᑦᑐᑦ ᓂᓚᐊᓂ ᐃᐊᖅᓭᖅᑕᓭᓂ, ᑕᐃᒪᓗᓗ ᑕᒪᓐᓇᖅᑐᖅᑕᖅᑐᖅᓭᖅᑕ ᐃᓚᐅᐃᖅᑕᖅᑐᑦ ᐊᒪᓗᓗ ᓯᓪᓕᕐᔪᐊᒥ ᓯᓱᒥ ᑎᑎᕐᓭᑦ ᒥᐊᐅᑦᑕᖅᑐᑦ ᒥᐊᐅᑦᑕᖅᑕᕐᓭᑦᑐᑦ ᓂᓚᐊᓂ ᐃᐊᖅᓭᖅᑕᓭᓂ, ᑕᐃᒪᓗᓗ ᑕᒪᓐᓇᖅᑐᖅᑕᖅᑐᖅᓭᖅᑕ ᐃᓚᐅᐃᖅᑕᖅᑐᑦ ᐊᒪᓗᓗ ᓯᓪᓕᕐᔪᐊᒥ ᓯᓱᒥ ᑎᑎᕐᓭᑦ ᒥᐊᐅᑦᑕᖅᑐᑦ ᒥᐊᐅᑦᑕᖅᑕᕐᓭᑦᑐᑦ ᓂᓚᐊᓂ ᐃᐊᖅᓭᖅᑕᓭᓂ, ᑕᐃᒪᓗᓗ ᑕᒪᓐᓇᖅᑐᖅᑕᖅᑐᖅᓭᖅᑕ ᐃᓚᐅᐃᖅᑕᖅᑐᑦ ᐊᒪᓗᓗ ᓯᓪᓕᕐᔪᐊᒥ ᓯᓱᒥ ᑎᑎᕐᓭᑦ ᒥᐊᐅᑦᑕᖅᑐᑦ ᒥᐊᐅᑦᑕᖅᑕᕐᓭᑦᑐᑦ ᓂᓚᐊᓂ ᐃᐊᖅᓭᖅᑕᓭᓂ, ᑕᐃᒪᓗᓗ ᑕᒪᓐᓇᖅᑐᖅᑕᖅᑐᖅᓭᖅᑕ ᐃᓚᐅᐃᖅᑕᖅᑐᑦ



ᓇᒧᓴᓭᕐᓂᓂᑦ ᐊᐅᐸᓗᑐᑦ ᓴᐅᖅᑭᑦ(ᑕᐃᑲᓂᑦ ᑯᐊᓂᐅ ᖃᐅᔨᓴᖅᓯᒪᔪᓂ - ᑎᑎᕐᐊᑦ ᑲᓇᑕᒥ ᐊᒥᐊᓕᓂᓄᓇ ᖃᓄᑕᐅᔨᖃᖅᓯᒪᔪᓂ, ᐅᓗᐱᒪ ᐊᓂᑎᓕᓗ 2000)

- ᐊᑦᓯᓐᓂᒃ ᑲᓇᑕ ᓂᓴᖅᐸ ᑎᑎᕐᐊᑎᑦ ᓵᓴᖃᑕᐅᓂᒪᓕᕐᓭᑦ ᑕᐃᑲᓂᑦ 1974 ᑎᑎᕐᓂᓗ 1998 ᑕᑯᑎᑦᑎᓂᒪᓕᕐᓭᑦ ᑕᑯᑦᑐᐊ ᐊᐅᐸᓗᑐᑦ ᓴᐅᖅᑭᑦ ᓄᑦᑕᓂᓕᖅ ᓇᒥᑐᐃᓐᓇᖅ ᑲᑎᕐᐊᒪᓗᓗ ᐅᓄᕈᓐᓃᖅᐸᓕᕐᓂᑎᑎᑦᑎᓂᖅᑎᑦ, ᑭᓕᐊᓂ ᑕᑯᑦᐊ ᓄᑦᑕᖅᐸᑐᑦ ᓂᓕᑕᓂᑦ ᐅᓄᕈᓐᓃᖅᓂᒪᓕᕐᓭᑦ 7.6% ᐊᑕᐅᓂᖅ ᐊᑦᑭᐃᒥᑦ.
- ᐅᓇ ᐃᓕᐱᑦᓴᐊ ᓱᓐᑎ ᓄᖅᖃᖅᐃᐅᓱᒃᑐᖅ ᖃᐅᔨᓴᖅᑕᐅᓚᐊᖅᓂᒪᓕᕐᓭᖅᑐᖅ ᐊᒪᓗᓗ ᐊᐅᐸᓗᑐᑦ ᓴᐅᖅᑭᑦ ᑕᐅᐅᓴᖅᑕᐅᓚᐊᖅᓂᒪᓕᕐᓭᑦ ᐃᓚᐅᐃᖅᑕᖅᑐᑦ ᐅᓄᕈᓐᓃᖅᓂᒃᓴᓂᓂᖅᓂᒪᓕᕐᓭᑦ ᑕᐃᒪᓕᖅ 2-3 ᒥᓪᓕᐊᓵ ᑕᐃᑲᓂ 1970ᓂ ᐊᒪᓗᓗ 1980ᓂ ᑎᑎᕐᓂᓗ 100,000 – 300,000 ᑕᐃᑲᖅᓱᒃ 2008-ᒥᑦ 2010ᖅᓗᒍᑦ.
- ᐃᓗᖓᒃ ᑕᑯᑦᐊ ᐊᐅᐸᓗᑐᑦ ᓴᐅᖅᑭᑦ ᐊᖅᓴᓕᓵᕐᑕᖅᓯᒪᔪᓄᑦᑕᖅᑐᑦ ᐊᓂᔪᖃᑦᑕᖅᑐᑦ ᐊᖅᓭᐃᔪᑦ ᐊᖅᓭᐃᑎᒃᓴᓂᓂᖅᓂᒪᓕᕐᓭᑦ.
- ᓄᓇᕐᓴᑦᑐᑦ ᐅᓄᕈᓐᓃᖅᓂᒪᓕᕐᓭᑦᑕᐅᖅ ᑕᑯᑦᐅᐅᓴᖅᑕᐅᓚᐊᖅᓂᒪᓕᕐᓭᑦ ᑕᐃᑲᓂᑦ ᖁᓕᓚᖃᖅᓱᒃ, ᐊᒪᓗᓗ ᐅᐊᖅᓇᖅᓱᓂ ᓂᓴᖅᑎᓂᓕᓂᑦ ᐊᒪᓗᓗ ᑯᓚᑦᑦ, ᔭᒃᓂ ᐊᒪᓗᓗ ᓂᓪᓕ, ᐃᓂᓴᓂᑦ.

ᑭᓇᓐᖓᓚᒋᔭᖓᓂᑦ (ᐃᓕᐱᑦᓴᐊᓂᑦ, ᓄᑦᑕᖅᑐᐊᓂᑦ, ᐅᓕᓇᖓᓂᑦᑕᑦ ᐊᒪᓗᓗ ᓂᖅᑭᖓᓂᑦ)

- ᐅᑯᐊ ᐊᐅᐸᓗᑐᑦ ᓴᐅᖅᑭᑦ ᐃᓕᓴᐃᑦ ᐅᑭᐅᖅᑕᖅᑐᑎᒥ ᐃᒪᖅᓴᖅᑕᖅᑐᓂ, ᑕᐃᒪᓕᖅᓗ 43% ᓄᓇᖓ ᐃᒪᖅᓴᖅᑕᖅᑎᓭᓗᒍ.

ᑐᑭᓯᐊᖅᓂᓕᓇᖅᑐᑎᑦ, ᐅᖅᑭᐊᓗᑎᒍᑦ, ᐅᓕᓂ:
ᐊᓕᑎᓕᓚᓴᑯᓂᖅ ᑲᓇᑕ –
ᑲᓇᑕᒥ ᐅᒪᓴᓚᓴᑯᓂᖅ, ᐅᑭᐅᖅᑕᖅᑐᑦ ᓄᓇᖓᓄᓂ
933 ᒥᘁᓕ ᐊᑯᑦ, ᐃᖅᓗᐃᑦ, ᓄᓇᕗᑦ X0A0H0 ᑎᑎᖅᑯᑯᓘᓕ 1870
ᐅᖅᓗᑦ: 867-445-7927
ᖃᓚᔨᐅᓕᑯᑦ: Rhiannon.pankratz@ec.gc.ca
ᖃᓚᔨᐅᓕᖅ ᒪᑐᐅᓕᓚᕐᓴᐃᑦ ᐅᑯᐊ ᒪᓕᓴᓂᑦ ᑐᑭᓯᐊᖅᓂᓕᓇᖅᑐᒥᒪᔪᓂᑦ:
ᑎᑎᕐᐊᑦ ᐊᑎᑕᓇᖅᑐᒋᑦ ᐅᖃᐅᔨᐅᓴᓕᖅᑐᑦ (www.sararegistry.gc.ca)

ᑐᑭᓯᐊᖅᓂᓕᓇᖅᑐᑎᑦ ᑕᒪᓴᑯᓂᖓ ᐅᓄᖅᓭᓕᓪᓕᐊᑎᑎᓂᒥᓐᓂᒧᑦ ᐱᓴᓇᓄᐅᑎᑦ, ᐊᑎᑲ ᐅᖃᖅᑎᑕᒍ ᐊᓕᓐᓂᓚᓴᑯᓂᖅ ᑲᓇᑕᐅᑦ ᐃᓄᓕᒫᑦ ᑐᑭᓯᐊᖅᓂᓕᓇᖅᑐᒥ ᒪᑐᐅᓕᖅᑎᑦ 1-800-668-6767 (ᑲᓇᑕᒥᐊᖅ) ᐅᓴᓕᔪᓐᓇ (819) 997-2800 ᐅᓴᓕᔪᓐᓇ ᖃᓚᔨᐅᓕᑯᑦ: enviroinfo@ec.gc.ca.
Aussi disponible en français

- ᐃᒪᑦᑎᐊᕙᒃ ᑕᓲᑦ ᓇᔪᖅᑕᐅᔪᑦ ᐊᒻᒪᓗ ᓂᕿᖃᕐᕕᐅᑦ ᐃᕙᓪᓗᑎᒃ ᐊᒻᒪᓗ ᑐᑭᖅᑐᓂᑦ.
- ᐃᕙᓂᐊᖅᑐᑦ ᑕᓯᕐᒥ ᐱᑕᖃᖅᑐᓂ ᐊᓯᖏᑦ ᓯᐅᕐᕋᐃᑦ, ᐅᑯᐊᓗ ᑎᓕᑐᐊᓕᔅᓄᑦ ᑎᑭᐅᑎᓲᖑᓐᖏᑦᑐᑦ ᖃᓂᒋᔭᖕᒐᓃᖏᓐᖏᓇᓲᑦ ᐊᖏᕐᕋᒥᖕᓂ.
- fᑎᖕᒥᐊᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᐃᕙᓲᖑᓂᖏᓐᖏᓂᒃ ᓇᐹᖅᑐᖃᖅᑐᓂ ᐃᓄᖃᓐᖏᑦᑎᐊᖅᑐᒥ ᓄᐹᖅᑐᓂ ᓇᔪᖅᐸᒃᑕᖏᑦᑕ ᐃᓚᖏᑦ ᐃᒪᓕᖕᓂ ᓄᓇᒥ, ᐃᒪᖅᓱᖕᓂ ᐊᒻᒪᓗ ᐊᓯᖏᓐᖏᓂ ᑕᓯᖃᐅᖅᑐᓂ.
- ᐊᕐᓇᕕᐊᑦ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᑦ ᐊᓐᓂᕈᓚᐅᑎᕙᒃᑐᑦ ᐊᖑᑎᕈᕕᐊᑦ ᐊᖑᑎᕕᐊᓂᒃᑕᐅᖅ ᐱᕈᖅᓲᔪᓂᒃ ᑎᖕᒥᐊᓂᒃ (ᐃᓚᒋᓪᓗᒍ ᐃᕙᓪᓗᑎᒃ ᐊᒻᒪᓗ ᐃᕙᕕᓕᐅᖅᓱᑎᒃ).
- ᑖᒃᑯᓂᖓ ᓂᕿᖃᓲᑦ ᐃᕙᔭᕋᓗᐊᖏᓐᓂᒃ.
- ᐊᕐᓇᕕᐊᑦ ᕿᒪᒍᑎᓲᑦ ᓄᒃᑕᓯᓪᓗᑎᒃ ᓯᕗᓪᓕᐅᓪᓗᑎᒃ ᐊᖑᑎᕕᐊᕐᓂᒃ.
- ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᑦ ᖃᖓᑕᓲᖅ ᖃᓂᒌᔭᓂ 120-130 ᑭᓚᒦᑕᒃ ᐅᓪᓗᖅ ᐊᑕᐅᓯᖅ ᓄᒃᑕᖅᐸᓪᓕᐊᓗᑎᒃ ᐊᓯᐊᓄᑦ.
- ᑕᒪᕐᒥᐸᓗᒃ ᓄᒃᑕᓲᑦ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᑦ ᖄᖓᓂ ᐊᒻᒪᓗ ᖄᕐᑯᖅᓱᒋᑦ ᐃᒪᐃᑦ, ᑭᓯᐊᓂ ᓄᒃᑕᓲᖑᖏᔪᑦ ᓄᓇᑎᒍᑦ (ᐃᒃᐱᐊᕐᔪᐊ ᕙᓐᑎ ᐅᓄᓛᓂᑦ ᐅᑭᐊᒃᓵᒃᑯᑦ ᓄᖃᖓᕕᐅᓲᖅ ᐃᓂᒋᔭᐅᓪᓗᓂ).
- ᐅᑯᐊ ᐅᑭᐅᓲᑦ ᑕᓇᐅᕐᒥ.
- ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᑦ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᑦ ᓂᕿᖃᓲᑦ ᕿᒥᕐᓗᖃᖕᒋᑦᑐᓂᒃ ᐃᒪᕐᒥᐅᑕᓂᒃ, ᐊᓇᖏᒃᓴᓂᒃ ᐊᒻᒪᓗ ᐊᓯᖏᓐᓂᒃ ᖁᐱᕐᕈᕐᓂᒃ.

ᐅᓗᕆᐊᖅᑮᕆᔪᑦ (ᒪᒃᐱᒐᐃᑦ 10-18)

ᐅᓇ ᐃᓚᖓ ᑐᒃᓯᕋᖅᑕᐅᔪᖅ ᐊᐅᓚᑦᑎᔅᔪᑎᒃᓴᖅ ᐸᕐᓇᐅᑎ ᓇᓗᓇᐃᑦᑎᐊᖅᓯᒪᔪᖅ ᑖᒃᑯᓂᖓ ᐊᐅᐸᓗᒃᑐᑦ ᑎᖕᒥᐊᑦ ᐅᓄᕈᓐᓃᖅᐸᓪᓕᐊᔅᔪᑎᖏᓐᓂᒃ. ᐅᓗᕆᐊᖅᑮᕆᔪᑦ ᑖᒃᑯᓄᖓ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᑦ ᐊᒃᑐᐃᓲᑦ ᓇᔪᖅᐸᒃᑕᖏᓐᓂᒃ, ᑭᓯᐊᓂ ᐊᒃᑐᐃᔫᓇᖅᑐᑦ ᐊᑐᓂ ᑎᖕᒥᐊᓂ, ᐃᕙᕕᖏᓐᓂᒃ ᐊᒻᒪᓗ ᒪᓂᖏᓐᓂᒃ.

ᐅᑯᐊ ᐊᓗᕆᐊᖅᑮᕆᔪᑦ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᓂᒃ:

- **ᐆᒪᔪᓕᒦᑦ ᐊᕝᕙᑎᓕᒦᖕᒋᓪᓗ ᐱᖕᒋᓐᓂᑦ** –ᖃᐅᔨᓴᕈᑎᑦ ᓂᕈᐅᓇᖅᓯᑎᑦᑎᓯᒪᔪᑦ ᐅᖓᑖᓂ 90% ᒫᓇ ᐃᕙᕕᒋᕙᒃᑕᖏᑦ ᓈᒻᒪᒍᓃᕈᒦᖅᑐᑦ ᐱᔾᔪᑎᒋᓪᓗᒍ ᓯᓚᐅᑉ ᐅᕐᑰᓯᕙᓪᓕᐊᓂᖓᓄᑦ ᑎᑭᐅᑎᓚᐅᖅᑎᖏᓐᓇᒍ 2070.
- **ᐊᒃᑕᑯᑦ ᐊᒻᒪᓗ ᐊᖏᔪᑦ ᐃᒋᑕᐅᓂᑯᑦ** – ᐊᐅᒃᑕᔫᑦ ᓲᕈᖅᓴᐃᔪᑦ ᐃᓗᐊᖏᔅᔪᑎᕈᖅᐸᓪᓕᐊᔪᑦ ᐃᒪᕙᖕᓂ ᓯᐅᕐᕋᓄᑦ ᐅᑭᐅᒃᑯᑦ. ᓯᐅᕐᕋᑦ ᐋᓯᖃᑦᑕᖅᑐᑦ ᐊᐅᒃᑕᔫᓂᒃ ᕿᓪᓚᔪᑭᐊᓂᒡᓗ ᐅᑯᐊᓗ ᐱᐅᔪᓐᓃᖅᑎᑦᑎᓲᑦ ᐊᒃᑐᐃᑎᓪᓗᒋᑦ.
- **ᐃᓗᐊᖏᔅᔪᑎᑦ ᐱᕈᖅᑐᓄᑦ ᐊᒻᒪᓗ ᓂᕐᔪᑎᓄᑦ** – ᐅᓄᓗᐊᖅᑎᓪᓗᒋᑦ ᒥᑏᑦ ᐱᐅᓐᖏᑦᑑᕗᖅ ᐊᓯᕈᖅᑎᑦᑎᓲᑦ ᐃᕙᕝᕕᒃᓴᖏᓐᓂᒃ ᑖᒃᑯᐊ ᓴᐅᕐᕋᕐᓂᑦ.

ᐊᐅᓚᑦᑎᔅᔪᑎᒃᓴᒧᑦ ᑐᑭᓕᐅᕈᑕᐅᕙᓪᓕᐊᔪᑦ (ᒪᒃᐱᒐᐃᑦ 18-19)

ᐅᑯᐊ ᐊᐅᓚᑦᑎᔪᑎᒃᓴᓄᑦ ᑐᑭᓕᐅᕈᑕᐅᕙᓪᓕᐊᔪᑦ ᑖᒃᑯᓄᖓ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᑦ ᐃᒪᓐᓇ:

- ᓈᒻᒪᒃᓯᓗᑎᒃ ᐅᒡᕙᓘᓐᓃᑦ ᐅᓄᖅᓯᕚᓪᓕᕐᓗᑎᒃ ᐊᓯᑐᓰᖑᓂᖕᒋᓐᓄᑦ ᑎᑭᐅᑎᓚᐅᖅᑎᑎᓐᓇᒍ 2040.

ᑕᒪᐃᓐᓄᑦ ᐋᕿᒃᓯᒪᔾᔪᑎᒃᓴᐃᑦ ᐊᒻᒪᓗ ᓴᐳᓐᓂᐊᕈᑎᒃᓴᐃᑦ (ᒪᒃᐱᒐᐃᑦ 19-24)

ᐱᓕᕆᐊᖑᔪᑦ ᒫᓇ ᐱᔭᕇᖅᑐᑦ ᐅᒡᕙᓘᓐᓃᑦ ᐱᒋᐊᕐᓂᐊᓕᖅᑐᑦ: ᐊᒥᓲᑦ ᐃᖏᕐᕋᓯᑎᑕᐅᓯᒪᔪᑦ ᐅᒡᕙᓘᓐᓃᑦ ᐱᔭᕇᖅᑐᑦ ᐊᒻᒪᓗ ᐅᑯᐊ ᐃᓚᒋᔭᐅᔪᑦ:

- ᐅᓄᕐᓂᖏᑦ ᒥᐊᓂᕆᔭᐅᔪᑦ ᓇᓂᑐᐃᓐᓇᖅ ᑕᒫᓂ ᐅᐸᒃᓯᒪᕙᒃᑕᖏᓐᓂ
- ᓴᓂᖅᕙᐃᓂᖅ ᐃᓚᖏᓐᓂᒃ ᑎᑭᑉᐸᒃᑐᑦ ᐃᓂᖏᑦ ᐱᒻᒪᕆᐅᑉᑦ
- ᓇᓗᓇᐃᕐᓗᒋᑦ ᑎᖕᒥᐊᑦ ᓯᕗᓪᓕᐅᑎᒋᐊᓕᑦ ᐅᑭᐅᖅᑕᖅᑐᒧᑦ ᑎᑭᑉᐸᒃᑐᑦ ᑎᖕᒥᐊᓄᑦ ᐱᒋᐊᕈᑕᐅᓯᒪᔪᓄᑦ.
- ᓴᕿᑦᑎᓗᓯ ᐱᓇᓱᐊᖃᑎᒌᖕᓂᐊᖅᑐᑦ ᓴᓇᖃᑎᒌᑦ ᐋᕿᒃᓯᓗᑎᒃ ᖃᐅᔨᓴᕈᑎᒃᓴᓂᒃ ᐊᒻᒪᓗ ᓴᐳᓐᓂᐊᕈᑎᒃᓴᓂᒃ ᓯᕗᓪᓕᐅᑎᕆᐊᓕᖕᓄᑦ.
- ᓴᕿᑦᑎᓗᑎᒃ ᐊᐅᓚᑦᑎᔅᔪᑎᒃᓴᓄᑦ ᐸᕐᓇᐅᑎᑦ ᐃᓚᖏᓐᓂ ᓴᐳᒻᒥᔭᐅᔪᓂ ᓄᓇᓂ ᓇᓗᓇᐃᖅᓯᓯᒪᔪᑦ ᐃᑲᔫᑎᔪᓂᒃ ᓴᐳᓐᓂᐊᕈᑎᓄᑦ ᑖᒃᑯᓄᖓ ᐊᐅᐸᓗᒃᑐᑦ ᑎᖕᒥᐊᑦ.
- ᐊᑎᓕᐅᕆ ᐃᒪᕙᖕᒥ ᐊᐅᒃᑕᔫᕐᓄᑦ ᐱᖅᑯᔭᕐᔪᐊᖅ ᐊᒻᒪᓗ ᖃᑭᔾᔪᑎᒃᓴᓕᐅᕐᓗᑎᒃ ᑕᓇᐅᕐᒥ ᐊᒃᑕᓇᐊᖃᖕᒋᑎᑦᑎᓂᕐᒧᑦ ᑮᓇᐅᔭᒃᓴᖕᒐᓄᑦ.

ᑕᒪᐃᓐᓄᑦ ᐋᕿᒃᓯᒪᔾᔪᑎᒃᓴᐃᑦ ᐊᒻᒪᓗ ᓴᐳᓐᓂᐊᕈᑎᑦ:

- ᑕᒪᐃᓐᓄᑦ ᐊᑕᐅᓯᕐᒥᒃ ᓄᐊᑦᑎᕙᖃᕐᓗᑎᒃ ᖃᐅᔨᓴᕈᑎᓂᒃ ᑕᐃᒪᖓᓂ ᐊᓂᒍᖅᑐᓂᒃ ᐊᓂᕙᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᕈᑎᕙᓃᑦ ᐃᓕᔭᐅᖏᓗᑎᒃ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᓄᑦ ᐊᒻᒪᓗ ᒪᓕᑦᑎᐊᓕᕐᓗᒋᑦ ᒐᓇᑕᒥ ᐊᒥᐊᓕᒐᒥᓗ ᓄᒃᑕᕐᕕᖏᑦ ᐊᕐᑯᑎᖏᑦ ᐊᒻᒪᓗ ᓇᓗᓇᐃᕐᓗᒋᑦ ᖃᖓᒃᑯᑦ ᐊᐅᓚᓲᖑᕙᑦ ᑎᑭᓲᖑᕙᓗ ᐊᒻᒪᓗ ᓄᓇᒋᔭᖏᑦ ᓄᒃᑕᖅᐸᓪᓕᐊᓕᕝᖓᒥᒃ ᓄᖃᕐᕕᒋᔭᖏᓪᓗ ᓄᓇᐃᑦ.

- ᑲᒪᒋᔭᐅᑦᑎᐊᕐᓗᑎᒃ ᖃᐅᔨᓴᕈᑎᑖᑦ ᓄᐊᑕᐅᔪᑦ ᐊᔪᕈᓐᓂᕐᓂᐊᕐᒪᑕ ᐊᒻᒪᓗ ᓈᓴᕐᓗᒋᑦ ᑲᓇᑕᒥ ᐊᒥᐊᓕᕆᒥᓗ ᓇᒥᑐᐃᓐᓈᖅᑐᑦ ᓇᓚᐅᑖᕐᓗᒋᑦ ᐊᔪᕐᓇᖏᑦᑐᒃᑯᑦ.
- ᓈᓴᕐᓗᒋᑦ ᓄᑖᑦ ᑎᑭᑦᑐᒃ ᓇᓚᐅᑖᕐᓗᒋᑦ ᐊᒻᒪᓗ ᐊᓯᕈᖅᑕᕐᕕᖏᑦ ᐅᓄᕐᓂᖏᑦᑕ.
- ᑲᑎᒪᐅᑎᒋᓗᒋᑦ ᐊᒻᒪᓗ ᐃᓕᓐᓂᐊᕈᑎᒋᓗᒋᑦ ᐃᓄᓕᒫᓄᑦ ᑎᖏᐊᑦ ᐊᒻᒪᓗ ᐅᓗᕆᐊᖅᓵᕆᔪᑦ, ᐊᔭᐅᕆᓗᑎᒃ ᐱᓕᕆᔭᕆᐊᖃᖅᑐᓂᒃ ᐊᒃᑐᐊᖅᑕᐃᓕᑎᑦᑎᑦᔪᑎᑦ ᐅᓗᕆᐊᖅᓵᕆᔪᑦ ᐊᒻᒪᓗ ᐊᔭᐅᕐᓗᒋᑦ ᐃᓄᓕᒫᑦ ᐅᖃᖃᑦᑕᕐᑯᓗᒋᑦ ᑕᑯᔭᕋᙱᒥᒃ.
- ᓴᐳᓂᐊᕐᓗᒋᑦ ᐃᒪᐃᑦ ᐊᒻᒪᓗ ᐊᐅᓚᑦᑎᐊᕐᓗᒋᑦ ᑰᒡᕕᐅᔫᒃ ᐊᕙᑭᙵᓂᑦ ᑎᑭᐸᒃᑐᑦ ᑎᖏᐊᑦ ᓄᖃᕐᕕᒋᕚᒃᑕᖏᑦ ᐃᓂᖏᑦ ᐃᒪᖃᑦᑎᐊᖏᓐᓇᕐᓂᐊᕐᒪᑕ ᐊᒻᒪᓗ ᑕᕆᐅᓕᑦ ᐃᒪᐃᑦ.
- ᓇᓗᓇᐃᕐᓗᒋᑦ ᐊᒻᒪᓗ ᓴᐳᒻᒥᓗᒋᑦ ᓯᓚᐅᑉ ᐅᕐᑰᓯᕙᓪᓕᐊᓂᙵᓄᑦ ᓱᕋᒍᓐᓇᙱᓂᖏᑦ ᐃᕙᕕᐅᕙᒃᑐᑦ ᓄᓇᑦ ᐊᒻᒪᓗ ᐊᕐᑯᑎᖏᓐᓂ ᓄᒃᑕᕐᕕᖏᑦ.
- ᓴᓇᖅᑎᒋᓗᒋᑦ ᓯᓚᕐᔪᐊᒥ ᐱᓇᓱᐊᖅᑎᒌᑦ ᐃᑲᔪᖅᑐᑦ ᑕᕆᐅᑉ ᑎᖏᐊᖏᓐᓂᒃ ᓴᐳᒻᒥᔪᑦ ᐃᓗᐊᓂ Hᐊᒻᐳᑦ ᐃᖏᕐᕋᓂᑦ ᐊᖏᔪᑦ ᑕᕆᐅᕐᒥ ᐆᒪᔪᓕᒫᑦ ᐊᕙᑎᓕᒫᖏᓪᓗ ᐅᑭᐅᕐᕕᐅᕙᒃᑐᑦ.
- ᐃᓚᓕᐅᑎᓗᒋᑦ ᑐᓴᒐᒃᓴᖏᑦ ᐱᔾᔪᑎᓕᑦ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᐃᑦ ᓇᔪᖅᐸᒃᑕᖏᑦ ᐊᒻᒪᓗ ᐅᑭᐅᕐᕕᓕᕙᒃᑕᖏᑦ ᐊᕙᑎᖏᑦ ᖃᐅᔨᓴᑦᑎᐊᕐᓗᒋᑦ ᑕᐃᒪᓗ ᓴᓇᔪᑦ ᐊᑦᑕᕐᓇᖅᓯᑎᑦᑎᑲᓂᖅᓯᒪᔪᓐᓇᖅᑐᑦ ᑐᕐᑯᕋᕐᓗᑎᒃ ᐅᒡᕙᓘᓐᓃᑦ ᐅᖅᓱᐊᓗᒃ ᑯᕕᔭᐅᒍᓂ ᑖᒃᑯᓄᖓ ᑎᖏᐊᑦ ᐊᒻᒪᓗ ᐅᑯᐊ ᓄᓇᐃᑦ ᐅᖅᓱᐊᓗᖓ ᑯᕕᔪᖅᖃᐸᑦ ᐱᓕᕆᔾᔪᑎᒃᓴᖃᑦᑎᐊᕐᓗᑎᒃ ᐃᓱᒪᒋᔭᐅᑦᑎᐊᕐᓗᑎᒃ ᐃᒪᕕᐅᐸ ᑎᖏᐊᖏᑦ.
- ᓇᓗᓇᕈᓐᓃᕐᓗᒋᑦ ᐃᓂᖏᑦ ᐊᒻᒪᓗ ᖃᑦᓯᐅᓂᖏᑦ ᐋᓯᕙᒋᖃᑦᑕᖅᑕᖏᑦ ᕿᓪᓚᔪᑭᐊᕐᓂᒃ ᐊᐅᒃᑕᔫᕐᓂᒃ ᑖᒃᑯᐊᑦ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᑦ.
- ᖃᐅᔨᓴᕐᓗᒋᑦ ᐊᓯᕈᖅᑐᑦ ᐃᒪᐅᑉ ᐃᖃᖓᓂ ᖁᐱᕈᑦ ᐊᒥᓱᑦ ᓄᒃᑕᐅᑎᒋᓗᐊᖅᑕᖏᑦ ᓄᖃᕐᕕᒋᕚᒃᑕᖏᑦ (ᓱᕐᓗ ᐃᒃᐱᐊᕐᔪᐊ ᕚᓐᑎ) ᐊᒻᒪᓗ ᐅᑭᐅᕐᕕᒋᕚᒃᑕᖏᑦ ᓄᓇᐃᑦ.

ᖃᓄᐃᓕᐅᕈᑕᐅᔪᑦ ᐱᕚᓪᓕᐊᓂᖏᑦ (ᒪᒃᐱᒐᐃᑦ 24-25)

ᖃᓄᖅ ᐱᓕᕆᑦᑎᐊᕐᒪᙱᑕ ᓇᓗᓇᐃᖅᓯᔾᔪᑎᑦ ᐊᑐᖅᑕᐅᓗᑎᒃ ᖃᓄᐃᓕᐅᕈᑕᐅᓂᐊᖅᑐᑦ ᐱᔭᕇᑦᑎᐊᕐᓂᐊᕐᒪᑕ ᐊᒻᒪᓗ ᐊᐅᓚᑦᑎᐊᕐᓗᒋᑦ ᑐᑭᓕᐅᕈᑕᐅᕙᓪᓕᐊᔪᑦ ᐊᒻᒪᓗ ᒥᐊᓂᕆᔾᔪᑕᐅᔪᑦ ᓴᕿᑕᐅᓯᒪᔪᑦ ᑕᒪᑐᒨᓇ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓄᑦ ᐸᕐᓇᐅᑎᑦ

- ᑎᑭᐅᑎᓚᐅᖅᑎᓐᓇᒍ 2030, ᑕᒪᖅᓯᒪᓐᖏᑦᑎᐊᖅᑐᓂᑦ ᑲᓇᑕ ᐊᒥᐊᓕᒐᓗ ᐅᓄᕐᓂᖏᑦ ᓇᓚᐅᑖᕐᓗᑎᒃ ᐊᑐᐃᓐᓇᐅᓕᕐᓗᒋᑦ.
- ᑎᑭᐅᑎᓚᐅᖅᑎᓐᓇᒍ 2030, ᑲᓇᑕ ᐊᒥᐊᓕᒐᓗ ᐊᓯᕈᖅᑕᖃᑦᑕᖅᑐᑦ ᐅᓄᕐᓂᖏᑦ ᐊᑐᐃᓐᓇᐅᔪᑦ. ᐅᓇ ᐊᑐᕈᖅᑕᖃᑦᑕᕐᓂᖓ ᐊᖏᔫᓂᖓᓄᑦ ᖃᐅᔨᓇᖅᑐᖅ 30% ᐅᓄᕈᓐᓃᖅᓯᒪᔪᑦ ᑕᐃᒪᖓᓂᑦ 10-ᐊᕐᕌᒍᓂᑦ.
- ᑎᑭᐅᑎᓚᐅᖅᑎᓐᓇᒍ 2040, ᐅᓄᕐᓂᖏᑦᑕ ᐊᓯᕈᖃᑦᑕᕐᓂᖏᑦ ᑖᒃᑯᐊ ᐊᐅᐸᓗᒃᑐᑦ ᓴᐅᕐᕋᑦ ᐊᓯᕈᖅᐸᓪᓕᐊᓂᖏᑦᑐᑦ ᐅᖓᔾᔫᓐᓃᑦ ᐱᐅᔪᒥᒃ ᐋᕿᒍᑎᕙᓪᓕᐊᕙᑦ ᐅᓄᕐᓂᖏᑦ ᒥᐊᓂᕆᓪᓗᒋᑦ ᓄᖃᕐᕕᒃᑲᑦᑕᖅᑕᖏᓐᓄᑦ ᓄᒃᑕᖅᖢᑎᒃ ᐊᕐᒥᖅᑐᓄᑦ 10-ᐊᕐᕌᒍᓄᑦ.

ᑐᑭᓯᒋᐊᒃᑲᓂᕈᓐᓇᖅᑐᑎᑦ, ᐅᖃᕐᕕᒋᓗᑎᒍᑦ, ᐅᕙᓂ:
ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᑲᓇᑕ –
ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᔩᑦᔪᐊᒃᑯᑦ, ᐅᑭᐅᖅᑕᖅᑐᖅ ᓄᓇᙳᓄᑦ
933 ᒥᕕᒃ ᐊᕐᑯᑖ, ᐃᖃᓗᐃᑦ, ᓄᓇᕗᑦ X0A0H0 ᑎᑎᖅᑯᕕᒃ 1870
ᐅᖃᓘᑖ: 867-445-7927
ᖃᕆᓴᐅᔭᒃᑯᑦ: Rhiannon.pankratz@ec.gc.ca
ᖃᕆᓴᐅᔭᖅ ᒪᑐᐃᒋᓇᕐᒥᔭᐃᑦ ᐅᑯᐊ ᒪᓕᒡᓗᒋᑦ ᑐᑭᓯᒋᐊᒃᑲᓂᕈᒪᒍᕕᑦ:
ᑎᖏᐊᑦ ᐊᑦᑕᕐᓇᖅᑐᒦᑦ ᐅᖃᐅᓯᐅᔪᓐᓇᖅᑐᑦ (www.sararegistry.gc.ca)

ᓇᐃᓕᒋᐊᖅᓯᒪᔪᖅ ᓯᕗᓪᓕᖅ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᐸᕐᓇᐅᑦ ᐅᑯᓄᖓ

ᐊᐅᐸᓗᒃᑐᓂᒃ ᖁᖏᓯᓂᓕᑦ ᑐᓪᓕᕐᔪᐃᑦ

ᐊᑕᓐᓂ ᐆᒪᔪᑦ ᐊᑦᑕᓇᖅᑐᒃᑰᓕᒑᔪᓄᑦ ᒪᓕᒐᖅᔪᐊᖅ (SARA), ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᐸᕐᓇᐅᒥᒃ ᐱᑕᖃᕆᐊᖃᖅᐳᖅ ᐊᔾᖏᖏᑐᓐᓄᑦ ᑎᖕᒥᐊᕈᓯᕐᓄᑦ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᓄᑦ ᐃᓱᒪᓗᖕᓇᖅᑐᓄᑦ ᓴᐳᔾᐅᔾᓇᐸᖃᖅᓂᖏᓐᓄᑦ ᑎᖕᒥᐊᕈᓯᑦ. ᑕᒻᓇ ᑎᑎᕋᖅᓯᒪᔪᖅ ᓇᓗᓇᐃᖅᓯᕗᖅ ᐅᔾᕐᓇᓗᐊᖅᑐᓂᒃ ᓯᕗᓪᓕᕐᒥᒃ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᐸᕐᓇᐅᒻᒥᒃ.

ᑎᖕᒥᐊᕈᓯᑦ ᓴᐳᔾᐅᓯᒪᓂᖏᓐᓄᑦ ᖃᓄᐃᓕᐅᕈᑎᖏ

ᑕᑉᑯᐊ ᐊᐅᐸᓗᒃᑐᓂᒃ ᖁᖏᓯᓂᖃᖅᑐᑦ ᑐᓪᓕᕐᔪᐃᑦ (*Phalaropus lobatus*) ᓇᓗᓇᐃᖅᑕᐅᓯᒪᖕᒪᑕ ᐅᒻᒪᔪᑦ ᐊᑦᑕᕐᓇᖅᑐᑯᓕᖕᒐᔪᓄᑦ ᐃᓱᒪᓗᖕᓇᖅᓯᑉᓗᑎᒃ ᐊᑕᓐᓂ ᐅᒻᒪᔪᑦ ᐊᑦᑕᕐᓇᖅᑐᒥᓕᖅᑐᑦ ᒪᓕᒐᕐᔪᐊᖓ (SARA) ᑕᐃᒪᖓᑦ 2019.

ᐅᓂᑉᑲᖅᓯᒪᓂᖏᑦ ᐊᒻᒪ ᓇᒧᖓᐅᑕᕐᓂᖏᑦ

ᑕᑉᑯᐊ ᐊᐅᐸᓗᒃᑐᓐᓂᒃ ᖁᖏᓯᓂᖃᖅᑐᑦ ᑐᓪᓕᕐᔪᐃᑦ ᒥᑭᔪᑉᓗᑎᒃ ᓯᒡᔭᒥᐅᑕᐅᔪᑦ. ᐊᑎᖅᑎᑕᐅᔪᑦ ᖃᐅᒻᒪᔪᒻᒥᒃ ᓯᖁᖏᓯᓂᖕᒪᑎᒍᑦ, ᐃᓚᖓᓪᓕ ᑎᒥᐊᑕ ᕿᕐᓂᖅᑐᑉᓗᓂ ᕿᕐᓇᖓᔪᑉᓗᓂᓗᓐᓂᑦ (ᓂᐊᖁᖓ, ᑐᓐᓄᐊ, ᓱᓗᖏᓪᓗ) ᐊᒻᒪ ᖃᑯᖅᑐᑉᓗᑎᒃ (ᓱᓗᖏᑕ ᐊᑕᐃ, ᐅᓗᐊᖏᑦ, ᓇᖓᓪᓗ). ᐊᕐᓇᕕᐊᑦ ᐊᖏᓂᖅᓴᐅᑉᓗᑎᒃ ᐊᖑᑎᕕᐊᓐᓂᑦi ᑲᓚᖃᕐᓂᖅᓴᐅᑉᓗᑎᒡᓗ ᐱᐊᓚᖃᓕᖅᑎᓪᓗᒋᑦ. ᐅᑭᐊᒻᒥ, ᑕᒪᕐᒥᒃ ᖃᑯᖅᑐᕙᒃᐳᑦ (ᓂᐊᖁᖏᑦ ᓴᖏᓪᓗ) ᐊᒻᒪ ᐃᕐᓇᖓᔪᑉᓗᑎᒃ (ᓱᓗᖏᑦ ᐸᒥᐅᖏᓪᓗ), ᕿᕐᓂᕐᓂᖃᖅᓱᑎᒃ ᓇᒍᓇᓗᒃᑕᖅ ᐃᔾᖏᑕᓗ ᑐᓄᐊᑎᒍᑦ ᐊᒻᒪ ᕿᕐᓂᕐᓂᖃᖅᓱᑎᒃ ᓂᐊᖁᖏᑎᒍᑦ.

ᐊᐅᐸᓗᒃᑐᓂᒃ ᖁᖏᓯᓂᓕᑦ ᑐᓪᓕᕐᔪᐃᑦ ᐊᐅᓚᖅᐸᒃᑐᑦ ᓇᓂᑐᐃᓐᓇᖅ ᓄᓇᖁᑎᖓᓐᓂ ᐅᑭᐅᖅᑕᖅᑐᑉ ᖃᓂᒋᔭᖓᓂ 74% ᓄᐊᑦ ᐊᒥᐊᓕᑲᒻᒥᓯᐅᖅᓱᑎᒃ ᑲᓇᑕᒻᒥ. ᑕᑉᑯᐊ ᑕᑯᓐᓇᖅᐸᒃᑐᑦ ᓄᓇᑦᓯᐊᕐᒥ ᓂᕿᖃᓗᐊᖏᓂᖓᓂ ᒪᓐᓂᓕᐅᓕᖅᑎᓪᓗᒋ, ᔪᑲᓐᒥ; ᓄᓇᕗᒻᒥ, ᓯᒡᔭᖓᓂ ᓂᐅᕙᐅᓐᓚᓐ ᐊᒻᒪ ᑲᓇᖕᓇᖕᒪᓂ ᑯᐃᐱᒃ. ᐊᐅᐸᓗᒃᑐᓐᓂᒃ ᖁᖏᓯᓂᖃᖅᑐᑦ ᑐᓪᓕᕐᔪᐃᑦ ᐊᐅᓚᖅᐸᒃᐳᑦ ᐊᑦᓚᓐᑎᒃ ᐊᒻᒪ ᐸᓯᕕᒃ ᓯᓇᒍᑦ ᓄᓇᒃᑯᓪᓗ ᐱᕈᖅᓯᕕᒃᑎᒍᑦ ᐊᒻᒪ ᐅᑭᐅᖅᓯᐅᖅᐸᒃᐳᑦ ᓴᐅᑦ ᐊᒥᐊᓕᑲᓐᒥ ᑕᐃᓴᐃᔪᒻᒥ ᕼᐊᒻᐳᑦ ᒪᓐᓇᐅᔪᖅ.

ᓄᓇᖁᑎᖃᓕᐊᖃᖅᓂᖏᑦ

ᐊᐅᐸᓗᒃᑐᓂᒃ ᖁᖏᓯᓂᓕᑦ ᑐᓪᓕᕐᔪᐃᑦ ᐃᓂᖃᖅᐸᒃᐳᑦ ᐅᑭᐅᖅᑕᒻᑐᒻᒥ ᓄᓇᖓᓂ ᐃᒪᕐᓗᖅᓴᓂ ᑕᓯᕐᓂ ᐊᒻᒪᕿᔪᓕᕋᕐᓂ. ᐃᓚᓐᓂᑯᑦ, ᐊᕐᓇᕕᐊᑦ ᐊᖑᑎᕕᐊᓐᓂᒃ ᐊᖅᓴᐅᑉᐳᑦ ᒥᐊᓂᖅᓯᖁᔨᐅᑉᓗᑎᒃ ᐱᐊᓚᖕᒋᖕᒥᓂᒃ. ᑕᑉᑯᐊᓗ ᑎᖕᒥᐊᕈᓯᑦ ᐱᐊᓚᖃᖕᒋᖕᑎᓪᓗᒋᑦ ᑕᓯᕐᓂ, ᐃᓚᓐᓂᑯᑦ ᑕᓴᐅᒥ, ᐊᒻᒪ ᐃᒪᕐᓗᖅᓴᓂ, ᑕᓯᕐᓂᓗ ᐊᖏᔪᓂ ᑕᓴᐅᒥ ᐱᑐᐊᖅᓱᑎᒃ, ᓄᓇᒥᓗ ᐊᐅᓚᖅᐸᓕᐊᕕᖕᒥᓄᑦ.

ᐅᓗᓕᐊᓇᖅᑐᑦ ᑎᖕᒥᐊᑭᓴ ᑕᐃᒪᐅᑐᖅᑐᓄᓪᓕ

- ᓄᓇᖃᑎᖓᓕ ᐊᓱᐊᓂᕐᓕᐊᕐᒪᖅ ᓴᓚᐅ
- ᐊᓱᐊᖏᖅᐸᓕᐊᓂᖓᓕᓄᑦ ᓄᓇᓗ ᐸᓂᓗᐊᖃᓂᖓᓕᓄᑦ ᐊᓕᒪ ᓄᓇᖃᑎᖓᓂᑦ ᐱᑭᖅᐸᓕᐊᓗᐊᓕᖃᖅᑐᓄᑦ ᓄᓇᐃᓐᓇᕐᒥ.
- ᐱᐊᓚᖅᑕᖅᐸᓕᐊᓗᐊᖏᓕᖃᖅᑐᓄᑦ ᑐᓴᓕᓴᐋᐃᓐ ᐱᓗᐊᕐᒪᑐᐃᓐ ᐊᓗᐊᖅᑐᒍᓕᒪᓐᓇᖅᑐᑦ ᐊᓱᐊᖏᖅᑕᖅᐸᓕᐊᓂᖓᓕᓄᑦ ᐊᐱᓚᖅᑕᕆᓂᖅᑐᓄᓪᓕ ᐊᓕᒪ ᓄᓇᐃᓐᓇᕐᒥ ᐊᑐᖅᑕᕆᓂᖅᑐᓄᓪᓕ.
- ᐱᐅᒪᖅᑕᖅᐸᓕᐊᓂᖓᓕᓄᑦ ᐱᐊᓚᓕᐅᖏᓂᖓᓕᓄᑦ ᐱᐅᒪᖅᑕᖅᐸᓕᐊᓂᖓᓕᓄᑦ ENSO ᐊᓱᐊᖏᖅᑕᖅᓯᓂᖓᓂᑦ ᓂᕆᐳᖅᑐᐃᓐᓇᖅᑐᓂᖓᓂᑦ ᐊᓕᒪ ᓂᕆᐳᖅᑐᐃᓐᓇᖅᑐᓂᖓᓂᑦ.
- ᐊᓱᐅᓱᒪᓕᑦ ᓂᕆᐳᕐᓴᖅ ᑕᓚᐅᓕᓐᓂᒃ ᑕᓱᕆᒥ ᓱᓕᐅᖅᐸᓕᐊᓂᖓᓕᓄᑦ ᓄᓇ ᐸᓂᓗᐊᓕᖅᑎᓕᓗᒍ ᐃᓕᖅᑎᐳᖅᑐᐃᓐᓇᖅᑎᓕᓗᒍ ᑕᒪᓇ ᑕᓚᐅᖅᓗᐊᕈᑕᐅᓕᕐᓕᒡᓕᑦ.
- ᑐᓴᐅᓂᕐᓕᐊᓗᐊᓕᖅᑐᑦ ᐱᐊᓚᓕᐅᐅᖅᑎᓕᓗᒍᑦ ᑕᓚᐅᐸ ᓱᓕᖅᓄᑕ ᓴᓗᒪᐃᓗᐊᓕᖅᑐᓂᖓᓂᑦ.
- ᑐᓴᐅᓂᕐᓕᐊᓗᐊᓕᖅᑐᑦ ᐅᖅᓱᐊᓗᐃᑦ ᐅᐊᑕᓴᐃᓪᓕ ᑐᐊᑕᓴᓂᖓᓂᓄᑦ ᓴᓗᒪᐃᓗᐊᓕᖅᑐᓂᖓᓂᓄᑦ.

ᒥᐊᓂᓚᐅᐅᓂᖓᓂᓄᑦ ᑐᓴᐅᓂᓚᐅᐅᓕᑦ

ᒥᐊᓂᓚᐅᐅᓂᖓᓂᓄᑦ ᑐᓴᐅᓂᓚᐅᐅᓕᑦ ᐊᐅᐸᒃᑐᓂᓪᓕ ᓯᓚᑦᓴᓕᓴᐋᐃᓐ ᐅᓗᓕᐊᓇᖅᑐᑦ:

1. ᐃᓱᒪᓕᐅᖏᓐᓄᓪ ᖃᐸᓱᐅᓂᖓᓂᓪᓕ ᐊᑐᕐᓴᒥᓕᑦ 2030.
2. ᓄᓐᔪᐸᓕᐊᓂᖓᓕᑦ ᓄᖃᖅᓚᑎᓂᓪᓕᓚᔪᓄᑦ ᐊᒥᓱᓕᓚᖅᑕᐃᓕᓕᐊᓂᖓᓂᓪᓕ ᐊᑐᕐᓴᒥᓕᑦ ᐊᐊᒪᓂᓄᓪᓕ ᐅᓄᖅᖅ 2040.

ᖃᓄᐃᓕᐅᕐᓕᐊᓕᓪᓕ ᐃᑲᓱᐅᑎᓴᒃᓚᖅᑐᓂᓪᓕ ᑐᓴᐅᓂᓚᐅᐅᓕᑦ

ᖃᓄᐃᓕᐅᕐᓕᐊᐅᑎᓴᒃᑐᑦ ᐅᖃᐅᑎᐅᓚᑎᓪ ᐅᓗᓕᐊᓇᖅᑐᑦ ᐅᓚᓐᓇᖅᑐᓂᖓᓂᑦ ᑎᖕᒥᐊᑭᓴ ᐱᐊᓚᓕᐅᐅᖅᑎᓕᓗᒍᑦ ᐅᑦᐊ ᐃᓕᐅᓚᓂᑦ:

- ᐊᑕᐅᓱᐅᔪᒥᑦ ᖃᐅᐅᓴᓴᖃᖅᓯᓂᖅ ᐊᑐᔪᑦ ᐱᐊᓂᖅᓱᒪᔪᓕᑦ ᐃᓱᒪᓕᓚᑦ ᖃᓄᐃᓕᐅᕐᓕᐊᓕᖅᑐᓂᖓᓂᑦ ᓄᖃᖅᓚᑎᓂᓪᓕᓚᔪᓄᑦ ᓄᓇᐃᓐᓇᕐᒥ ᐊᑐᕐᓴᒥᓕᑦ ᐱᐊᓂᖅᓱᒪᔪᓕᑦ ᐃᓕᖅᑎᐳᖅᑐᐃᓐᓇᖅᑎᓕᓗᒍ ᐃᓕᒪ ᓄᖃᖅᓚᑎᓂᓪᓕᓚᔪᓄᑦ ᐊᑐᕐᓴᒥᓕᑦ ᐊᐊᒪᓂᓄᓪᓕ ᐅᓄᖅᖅ 2040.
- ᐃᓱᒪᓕᐅᖏᓐᓄᓪ ᖃᐸᓱᐅᓂᖓᓂᓪᓕ ᐊᑐᕐᓴᒥᓕᑦ ᐊᐊᒪᓂᓄᓪᓕ ᐅᓄᖅᖅ 2040.
- ᐊᓱᐊᖏᖅᐸᓕᐊᓂᖓᓂᓄᑦ ᐃᓕᖅᑎᐳᖅᑐᐃᓐᓇᖅᑎᓕᓗᒍ ᐃᓕᒪ ᓄᖃᖅᓚᑎᓂᓪᓕᓚᔪᓄᑦ ᐊᑐᕐᓴᒥᓕᑦ ᐊᐊᒪᓂᓄᓪᓕ ᐅᓄᖅᖅ 2040.
- ᐊᓱᐊᖏᖅᐸᓕᐊᓂᖓᓂᓄᑦ ᐃᓕᖅᑎᐳᖅᑐᐃᓐᓇᖅᑎᓕᓗᒍ ᐃᓕᒪ ᓄᖃᖅᓚᑎᓂᓪᓕᓚᔪᓄᑦ ᐊᑐᕐᓴᒥᓕᑦ ᐊᐊᒪᓂᓄᓪᓕ ᐅᓄᖅᖅ 2040.

ᖃᓄᐃᓕᐅᕐᓕᐊᓕᓪᓕ ᐃᑲᓱᐅᑎᓴᒃᓚᖅᑐᓂᓪᓕ ᑐᓴᐅᓂᓚᐅᐅᓕᑦ

ᖃᓄᐃᓕᐅᕐᓕᐊᐅᑎᓴᒃᑐᑦ ᐅᖃᐅᑎᐅᓚᑎᓪ ᐅᓗᓕᐊᓇᖅᑐᑦ ᑎᖕᒥᐊᑭᓴ ᐱᐊᓚᓕᐅᐅᖅᑎᓕᓗᒍᑦ ᐅᑦᐊ ᐃᓕᐅᓚᓂᑦ:

- ᐃᓱᒪᓕᐅᖏᓐᓄᓪ ᖃᐸᓱᐅᓂᖓᓂᓪᓕ ᐊᑐᕐᓴᒥᓕᑦ ᐊᐊᒪᓂᓄᓪᓕ ᐅᓄᖅᖅ 2030.
- ᐊᓱᐊᖏᖅᐸᓕᐊᓂᖓᓂᓄᑦ ᐃᓕᖅᑎᐳᖅᑐᐃᓐᓇᖅᑎᓕᓗᒍ ᐃᓕᒪ ᓄᖃᖅᓚᑎᓂᓪᓕᓚᔪᓄᑦ ᐊᑐᕐᓴᒥᓕᑦ ᐊᐊᒪᓂᓄᓪᓕ ᐅᓄᖅᖅ 2040.
- ᐊᓱᐊᖏᖅᐸᓕᐊᓂᖓᓂᓄᑦ ᐃᓕᖅᑎᐳᖅᑐᐃᓐᓇᖅᑎᓕᓗᒍ ᐃᓕᒪ ᓄᖃᖅᓚᑎᓂᓪᓕᓚᔪᓄᑦ ᐊᑐᕐᓴᒥᓕᑦ ᐊᐊᒪᓂᓄᓪᓕ ᐅᓄᖅᖅ 2040.

ᖃᓄᐃᓕᐅᕐᓕᐊᓕᓪᓕ ᐃᑲᓱᐅᑎᓴᒃᓚᖅᑐᓂᓪᓕ ᑐᓴᐅᓂᓚᐅᐅᓕᑦ

ᖃᓄᐃᓕᐅᕐᓕᐊᐅᑎᓴᒃᑐᑦ ᐅᖃᐅᑎᐅᓚᑎᓪ ᐅᓗᓕᐊᓇᖅᑐᑦ ᑎᖕᒥᐊᑭᓴ ᐱᐊᓚᓕᐅᐅᖅᑎᓕᓗᒍᑦ ᐅᑦᐊ ᐃᓕᐅᓚᓂᑦ:

1. ᐃᓱᒪᓕᐅᖏᓐᓄᓪ ᖃᐸᓱᐅᓂᖓᓂᓪᓕ ᐊᑐᕐᓴᒥᓕᑦ 2030.
2. ᓄᓐᔪᐸᓕᐊᓂᖓᓕᑦ ᓄᖃᖅᓚᑎᓂᓪᓕᓚᔪᓄᑦ ᐊᑐᕐᓴᒥᓕᑦ ᐊᐊᒪᓂᓄᓪᓕ ᐅᓄᖅᖅ 2040.

ᑐᓴᐅᓂᓚᐅᐅᓕᑦ, ᑐᓴᐅᓂᓕᑎᓂᓕᐊᖅᓴᑎᓕ:
ᐊᓕᑎᓕᓗᓚᓕ ᓱᓕᐅᓕᑦ ᐊᓱᐊᖏᖅᐸᓕᐊᓂᖓᓂᖅ ᑲᓚᑦᑎᑎ (ECCC) –
Canadian Wildlife Service, Northern Region
PO Box 1870, Iqaluit NU X0A 0H0
Fax: 867-975-4645 Phone: 867-979-7058
Email: Teresa.tufts@canada.ca
ᐊᑐᐃᓚᐅᕐᓕᐊᖅᑐᑦ ᐃᐃᑎᑐᑦ

ᑐᑭᓱᓂᑐᐊᕐᑭᓂᑭᓕᓪᓕ ᐊᐅᓚᐅᓗᓚᓂᓕᕐᒧᑦ ᑐᓴᖅᑎᓕᓯᒪᐊᕐᓴᓕᑦ ᑐᐊᖅᑎᓕᓯᒪᐊᕐᓴᓕᑦ ᐊᓕᖅᑎᓕᓗᓚᓕᓪᓕ ᓱᓕᐅᓕᑦ ᐊᓱᐊᖏᖅᐸᓕᐊᓂᖓᓂᖅ ᑲᓚᑦᑎᑎ ᐃᓄᖕᓂᖅ 1-800-668-6767 (ᑲᓚᑦᑎ ᑭᓱᐊᓂ) ᐅᖕᓇᓂᑦ 819-997-2800 ᖃᓚᑕᐅᓴᓄᓂᑦ ᑎᑎᕐᓴᑐᑦ ec.enviroinfo.ec@canada.ca.

ᖃᓄᖅ ᐃᓕᓴᑦ ᐃᑲᔪᐊᖅᓴᖅᐸᑦ

- ᑐᑭᓯᑲᓂᕐᒪᖃᖅᐳᖅ ᐊᐅᓚᓕᑦᑐᓂᓂᑲ ᐅᖏᕈᓯᓂᖃᖅᑐᑐᒃ ᑐᓴᕐᓯᐃᓕᖅᓄᑦ, ᐅᓪᓗᐊᓕᓴᖅᑐᒥᓯᐅᕐᓂᖏᓐᓄᑦ ᐱᒋᖃᖅᑐᐃᓕᓴᕐᓂᖏᓐᓄᑦ ᐊᓕᒻᒥ ᓄᓇᕐᔪᐊᖏᑦᑐᒃ ᒥᐊᓂᕐᒪᖃᖅᑐᐃᓂᖅᓴᓂᑦ ᐅᐊᖅᑎᑦ www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html;
- ᐱᓕᕆᐊᕐᓂᕐᒥᐅᑦ ᐊᔪᑭᓚᐅᐸᖅᓴᓂᓂᓂ ᐱᓕᕆᓂᖅᑎᓯᓂᕐᒥᐅᑦ ᐅᓂᒃᑳᐅᑦ ᐅᑉᑐᑦᑐᒃᓴᓂᑦ:
    - ᐱᓕᕆᖏᑎᖏᓐᓄᓕᒃ ᐊᓯᖏᑎᓕᕆᓂᑦ ᓂᓪᑕᐅᑦ ᐊᐅᖓᔪᖅᑐᓂᒃᑯᑦ ᐱᓕᕆᓂᖅᑐᐃᓂᖅᓴᓂᑦ ᐱᒋᐊᕐᓂᖏᓐᓄᑦ ᐱᑕᖃᓂᒃᑯᑦ ᐊᑐᑎᖏᓐᓂᑦ; ᐊᓕᒻᒥ
    - ᐱᓕᕆᑕᐃᓕᓪᓕᓂᒃ ᐊᓂᓂᔅᓴᓕᖅᑐᐃᓂᖅ ᑎᓯᒥᐊᑐᓂᓂᖅᓴᓂᑦ ᓄᓇᓕᖕᒥᓂᖅ.
- ᖃᐅᔨᓴᕐᓂᓂᑦ ᑎᑎᕐᖏᓚᐅᑦ ᑐᓂᓪᓕᑦ ᓴᓇᔨᐅᓂᓚᐃᓕᑦ ᑎᑎᕐᕿᓕᕐᓂᐅᑉ (ᐅᑯᐊᖅᑎᑦ eBird).

ᓇᒧᐊᖅᑕᕐᓂᖅᑐᑦ ᐊᐅᓚᓕᑦᑐᓂᓂᑲ ᐅᓂᒃᑳᐅᑦ ᐅᑉᑐᑦᑐᒃᓴᓂᑦ ᑐᓴᕐᓯᐃᓕᑦ (ᑯᐊᖅᑎᑦ ᖃᐅᔨᓴᕐᓂᓂᖅᓴᓂᑦ - ᓄᐊᑦ ᐊᒥᐊᓘᓴᓂ ᑎᑎᕐᕿᓕᕐᓂᖏᓐ ᖃᓄᑕᐅᔪᒥᒃ, Rubega et al. 2000)

ᑐᓴᔨᓂᕐᒪᔪᐃᓐᓇᑦ, ᑐᓴᖅᑎᑦᑎᓂᐊᕐᓇᖅᑐᑦ:
ᐊᐅᓚᑦᑐᓂᓂᑦ ᓯᓚᑐᑦ ᐊᓯᐊᓂᖅᓴᕐᓂᐊᖅᓴᖏᓐ ᑲᓇᑕᒥ (ECCC) –
Canadian Wildlife Service, Northern Region
PO Box 1870, Iqaluit NU X0A 0H0
Fax: 867-975-4645 Phone: 867-979-7058
Email: Teresa.tufts@canada.ca
ᐊᑐᐃᓐᓇᐅᔨᖅᑕᐅᖅ ᐃᐃᑎᑐᑦ

ᑐᑭᓯᑲᓂᕐᒪᔭᐃᓐᓇᑦ ᐊᔨᓕᐅᓇᑲᓂᓴᓗᑦ ᑐᓴᖅᑎᑦᓯᒥᐊᓘᓴᓂᑦ ᐊᐅᓚᓕᑦᑐᓂᓂᑦ ᓯᓚᑐᑦ
ᐊᓯᐊᓂᖅᓴᕐᓂᐊᖅᓴᖏᓐ ᑲᓇᑕᒥ ᐃᓄᖅᑲᓂᖏᓐ 1-800-668-6767 (ᑲᓇᑕᒥ ᑭᓯᐊᓂ)
ᐅᓂᒃᑳᓂᑦ 819-997-2800 ᖃᓇᑕᐅᕆᔨᓄᓂᑦ ᑎᑎᕐᕿᓕᕐᓂᑦ ec.enviroinfo.ec@canada.ca.

ᑯᐃᓄ ᑭᓚᖅᑐᖏᓐᓄᑦ ᑲᓇᑕᒥ, ᑭᓚᖅᑐᑦᑕᐅᓴᓂᓗᑦ ᐊᐅᓚᓕᑦᑐᓂᓂᑦ ᐊᓕᒻᒥ ᓯᓚᑐᑦ
ᐊᓯᐊᓂᖅᓴᕐᓂᐊᖅᓴᖏᓐ ᑲᓇᑕᒥ, 2020

Archived: June 16, 2022 9:05:35 AM
From: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Sent: February 9, 2022 12:26:00 PM
To: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Bcc: ikajutit@baffinhto.ca; hto_ab@qiniq.com; htoclyde@qiniq.com; clyde@baffinhto.ca; iviq@baffinhto.ca; hbhta@baffinhto.ca; hbhta@qiniq.com; igloolik@baffinhto.ca; pond@baffinhto.ca; rbhta@qiniq.com; rbhta@baffinhto.ca; aiviq_hunters@qiniq.com; aiviq@baffinhto.ca; amaruq@qiniq.com; amaruq@baffinhto.ca; kimmiruthto@qiniq.com; mayukalik@baffinhto.ca; pang@baffinhto.ca; nativak@baffinhto.ca; sani@baffinhto.ca; sanihta@qiniq.com; panghta@qiniq.com; wildlifeadvisor@niws.ca; fdcqwb@niws.ca; info@qia.ca; jgroves@qia.ca
Subject: FOR COMMENT: Proposed Management Plan for the Red-necked Phalarope in Canada (Due: April 20, 2022) Inuktitut and English
Sensitivity: Normal
Attachments:
RNPH_Factsheet_2022_Inuktitut.pdf p_red_necked_phalarope_e_proposed.pdf NPH_Factsheet_2022.pdf

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Hello,

I am writing to notify you that the proposed Management Plan for **Red-necked Phalarope** in Canada was posted on the Species at Risk Public Registry on January 20th, 2022, for a **90-day public comment period** which ends on **April 20, 2022**. Comments received from provinces, territories, wildlife management boards, and Indigenous governments across Canada were considered in the drafting of the current version of the Management Plan. Following the 90-day public comment period, the Department will then have 30 days to consider the comments received, after which the final version of the Management Plan will go to the Nunavut Wildlife Management Board for decision. The Nunavut Wildlife Management Board process is the final stage before the Management Plan will be posted on the Species at Risk Public Registry as final. Note that as a species of special concern, there are no general prohibitions or critical habitat requirements for this species.

You can read the proposed Management Plan at: Species at risk registry (canada.ca). I have also attached the Management Plan to this email for your convenience.

There is also a summary fact sheet attached in English and Inuktitut that provides an overview of the document.

Please submit all comments to ec.planificationduretablissement-recoveryplanning.ec@canada.ca or directly to me at Hayley.roberts@ec.gc.ca or 867-222-0112.

I welcome your participation in this matter.

Sincerely,

Hayley Roberts / Hᐊᐃᓕ ᖃᓪᓗᓂ
Pronouns: She/Her

Species at Risk Biologist, Canadian Wildlife Service
Environment and Climate Change Canada / Government of Canada
hayley.roberts@ec.gc.ca / Tel: +1 (867) 979-7045, Cell: +1 (867) 222-0112
NOTE NEW EMAIL ADDRESS ENDING

Biologiste des Espèces en Péril, Service Canadien de la faune
Environnement et Changement climatique Canada / Gouvernement du Canada

hayley.roberts@ec.gc.ca / Tél. : +1 (867) 979-7045, Cell: +1 (867) 222-0112

ᐊᐃᖓᐃ,

ᑎᑎᕋᖅᑐᖓ ᖃᐅᔨᑎᑦᑐᒪᓪᓗᓯ ᐱᒋᐊᖅᑎᑕᐅᔪᒪᓂᖏᑦ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᐃᑦ ᐸᕐᓇᐅᑎᖏᑦ ᑕᐃᒃᑯᓂᖓ **ᐊᐅᐸᓗᒃᑐᓕᖕᓂ ᓴᐅᕐᕋᕐᓂᒃ** ᑲᓇᑕᒥ ᐃᓕᔭᐅᓯᒪᓕᕐᒪᑕ ᒪᓕᒐᐃᑦ ᒪᓕᒃᓯᑎᒃ ᑕᐃᑲᓂ ᐆᒪᔪᐃᑦ ᐊᒥᔅᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᖅᑎᒍᑦ ᑎᑎᖅᑲᖃᕐᕕᒃᑯᑦ ᐃᓄᓕᒫᓄᑦ ᒪᑐᐃᖓᔪᓂ ᑕᒫᓂ ᔭᓄᐊᕆ 20, 2022-ᒥ, ᐱᕙᒃᓴᖃᖅᑎᑦᑎᓂᕐᒧᑦ **90-ᓂᒃ ᐅᓪᓗᓂᒃ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᓂᒃᕙᐅᔪᓐᓇᓇᐊᖃᕐᓂᖏᓐᓄᑦ ᐃᓱᓪᓚᕙᖃᕐᓂᐊᖅᑐᓂᒃ ᑕᒫᓂ ᐄᐳ 20, 2022-ᒥ**. ᐅᖃᐅᓯᒃᓴᓂᒃᑕᐅᓂᖏᑦ ᑲᓇᑕᐅᑉ ᐊᕙᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᐅᑭᐅᖅᑕᖅᑑᑉ ᐊᕙᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᒪᔪᓂᒃ ᐊᐅᓚᑦᑎᔨᐅᖃᑕᐅᓂᕐᒧᑦ ᑲᑎᒪᔨᓂᒃ, ᓄᓇᓚᑐᖃᐃᓪᓗ ᓴᕝᒪᖏᓐᓂᒃ ᓇᓂᑐᐃᓐᓇᖅ ᑲᓇᑕᒥ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑕᐅᓚᐅᖅᐳᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓚᐊᓚᐊᖅᒥᒃ ᒫᓐᓇᐅᔪᖅ ᖃᓄᐃᓕᖓᓕᕐᓂᖏᓐᓂᑦ ᐊᐅᓚᑦᑎᓂᖏᑦ ᐸᕐᓇᐅᑎᒃᓴᖏᑦ. ᑭᖑᓂᐊᒍᑦ ᐊᓂᒍᖅᐸᑕ 90 ᐅᓪᓗᐃᑦ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᓂᒡᕙᐅᔪᓐᓇᖅᓂᖏᓐᓂᒃ, ᐃᖃᓇᐃᔭᕝᕙᖓᓐᓂ ᐊᓯᐃᓛᒃ 30-ᓂᒃ ᐅᓪᓗᓂᒃ ᐱᕙᒃᓴᖃᕐᓂᐊᖅᑐᑦ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑎᖃᕈᓐᓇᖅᓂᖅ ᑕᐃᒃᑯᓂᖓ ᐅᖃᐅᓯᒃᓴᓂᒃᑕᐅᓯᒪᔪᓂᒃ, ᑭᖑᓂᐊᒍᓪᓗ ᑐᓂᔭᐅᓂᐊᖅᑐᑦ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᐃᓱᒪᓕᐅᕈᑕᐅᔭᕆᐊᖃᕐᓂᕐᒧᑦ. ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ ᑲᒪᒋᔭᐅᓂᖏᑦ ᑭᖑᓪᓕᕆᔭᐅᓂᐊᖅᑐᑦ ᑕᐃᒃᑯᐊ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᐃᑦ ᐸᕐᓇᐅᑏᑦ ᐃᓕᔭᐅᓚᐅᖏᓐᓂᖏᓐᓂ ᓯᓚ ᐆᒪᔪᐃᑦ ᐊᒥᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᓕᐊᕆᔭᐅᓂᖏᓐᓂᒃ ᓴᖅᑭᑎᑦᑎᕙᓪᓗᒍᑦ, ᑭᖑᓪᓕᐅᓂᐊᖅᑐᒥᒃ. ᖃᐅᔨᒪᓂᐊᖅᐳᓯ ᐆᒪᔪᐃᑦ ᒪᓕᒐᖅᑎᒍᑦ ᐃᓕᑕᕆᔭᐅᔪᑦ ᑕᐃᔭᐅᔪᒥᒃ ᐊᔾᔨᐅᓐᖏᑦᑐᒥᒃ ᐃᓱᒫᓗᑕᐅᓂᕐᒥᒃ, ᐊᔪᕐᓇᖅᑎᑕᐅᕙᓐᖏᑦᑕᑦ ᐅᕝᕙᓗᓐᓂᑦ ᓇᔪᒐᖃᕆᐊᖃᖅᑎᑕᐅᓪᓚᕆᐊᖃᖅᑎᓪᓚᑦ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ.

ᐅᖃᓕᒫᕈᓐᓇᖅᑐᑎᑦ ᐊᑐᓕᖅᑎᑕᐅᔪᒪᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓂᒃ ᐸᕐᓇᐅᑎᓂᒃ ᐅᕙᓂ ᑐᕌᕈᒻᒥ: Species at risk registry-ᐆᒪᔪᐃᑦ ᐊᒥᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᓕᐅᕈᑕᐅᓂᖏᓐᓂ (canada.ca). ᑐᓂᓯᕗᖓ ᑖᒃᑯᓇᓃᖃᑕᐅᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓄᒃ ᐸᕐᓇᐅᑎᓂᒃ ᑕᕝᕙᓂ ᖃᓇᑕᐅᔭᒃᑯᑦ ᑎᑎᖅᑲᖅᑖᓇᔭᕐᓂ, ᐊᑐᐃᓐᓇᐅᖁᓪᓗᒍ ᐃᓕᖕᓄᑦ.

ᑎᑎᖅᑲᖅᑲᕐᒥᔪᖅ ᓇᐃᓈᖅᓯᒪᔪᓂᒃ ᓯᓚᔪᓂᒃ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᓂᒃᑕᐅᓯᒪᔪᓂᒃ ᖃᓪᓗᑎᑦ ᐃᓄᒃᑎᑐᓪᓗ ᑕᒪᐃᓐᓂᒃ ᑎᑎᖅᑲᖁᑎᖏᓐᓂ ᐅᓂᒃᑳᖅᑐᓂᒃ.

ᐅᖃᐅᓯᒃᓴᒃᓴᓂᒃᑕᐅᔪᑦ ᑕᒪᐃᒥᒃ ᑐᓂᔭᐅᖁᔭᕗᑦ ᐆᒧᖓ ᑐᕌᖓᑎᑕᐅᒍᑎᒃ ᑎᑎᖅᑲᑖᕝᕙᖓᓄᑦ ec.planificationduretablissement-recoveryplanning.ec@canada.ca ᐅᕙᓄᒍᓐᓃᑦ ᑎᑎᖅᑲᖅᑖᕝᕙᖓᓄᑦ ᑐᖅᓴᓗᑎᒃ ᐅᕙᓂ Hayley.roberts@ec.gc.ca ᐅᕙᓄᒍᓐᓃᑦ ᐅᖄᓚᓗᓯ 867-222-0112-ᒧᑦ.

ᖁᔭᓕᔪᖓ ᐃᓚᐅᖃᑕᐅᓂᖅᓯᓐᓄᑦ ᑕᒪᑯᐊ ᑲᒪᒋᔭᐅᓂᖏᓐᓂ.

ᑎᑎᕋᖅᑐᖅ

ᐆᒪᔪᐃᑦ ᐊᒥᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᐆᒪᔪᓕᕆᔨ
ᑲᓇᑕᒥᐅᑕᓂ ᐆᒪᔪᓕᕆᔩᑦ ᐱᔨᑦᑎᕋᐃᔨᖏᓐᓂ
ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᓄᑦ ᑲᓇᑕᒥ
hayley.roberts@ec.gc.ca / ᐅᖄᓚᐅᑦ: +1 (867) 979-7045, ᐅᖄᓚᐅᑎᕋᓛᖅ: +1 (867) 222-0112

Archived: June 16, 2022 9:10:33 AM
From: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Sent: February 9, 2022 12:27:00 PM
To: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Bcc: 'BDean@tunngavik.com'; 'pirngaut@tunngavik.com'; 'kritchie@nwmb.com'; 'jringrose@gov.nu.ca'; 'Aroberto-charron@gov.nu.ca'; 'lleclerc@gov.nu.ca'; 'mcampbell1@gov.nu.ca'
Subject: FOR COMMENT: Proposed Management Plan for the Red-necked Phalarope in Canada (Due: April 20, 2022) Inuktitut and English
Sensitivity: Normal
Attachments:
mp_red_necked_phalarope_e_proposed.pdf NPH_Factsheet_2022_Inuktitut.pdf NPH_Factsheet_2022.pdf

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Hello,

I am writing to notify you that the proposed Management Plan for **Red-necked Phalarope** in Canada was posted on the Species at Risk Public Registry on January 20th, 2022, for a **90-day public comment period** which ends on **April 20, 2022**. Comments received from provinces, territories, wildlife management boards, and Indigenous governments across Canada were considered in the drafting of the current version of the Management Plan. Following the 90-day public comment period, the Department will then have 30 days to consider the comments received, after which the final version of the Management Plan will go to the Nunavut Wildlife Management Board for decision. The Nunavut Wildlife Management Board process is the final stage before the Management Plan will be posted on the Species at Risk Public Registry as final. Note that as a species of special concern, there are no general prohibitions or critical habitat requirements for this species.

You can read the proposed Management Plan at: Species at risk registry (canada.ca). I have also attached the Management Plan to this email for your convenience.

There is also a summary fact sheet attached in English and Inuktitut that provides an overview of the document.

Please submit all comments to ec.planificationduretablissement-recoveryplanning.ec@canada.ca or directly to me at Hayley.roberts@ec.gc.ca or 867-222-0112.

I welcome your participation in this matter.

Sincerely,

Hayley Roberts / Hᐊᐃᓕᖅ ᕿᓐᓂ
Pronouns: She/Her

Species at Risk Biologist, Canadian Wildlife Service
Environment and Climate Change Canada / Government of Canada
hayley.roberts@ec.gc.ca / Tel: +1 (867) 979-7045, Cell: +1 (867) 222-0112
NOTE NEW EMAIL ADDRESS ENDING

Biologiste des Espèces en Péril, Service Canadien de la faune
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ᐊᐃᖏᓚᐃ,

ᑎᑎᕋᖅᑐᖓ ᖃᐅᔨᑎᑦᑐᒪᓪᓗᓯ ᐱᒋᐊᖅᑎᑕᐅᔪᒪᓂᖏᑦ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᐃᑦ ᐸᕐᓇᐅᑎᖏᑦ ᑕᐃᒃᑯᓂᖓ **ᐊᐅᐸᓗᒃᑐᓕᖓ ᓴᐅᕐᕋᕐᓂᒃ** ᑲᓇᑕᒥ ᐃᓕᔭᐅᓯᒪᓕᕐᒪᑕ ᒪᓕᒐᐃᑦ ᒪᓕᒃᓱᑎᒃ ᑕᐃᑲᓂ ᐆᒪᔪᐃᑦ ᐊᒥᔅᓲᕆᐊᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᖅᑎᒎᑦ ᑎᑎᕐᑲᕐᕕᒃᑯᑦ ᐃᓄᓕᒫᓄᑦ ᒪᑐᐃᖓᔪᓂ ᑕᒫᓂ ᔭᓄᐊᕆ 20, 2022-ᒥ, ᐱᕙᒃᓴᕐᑲᖅᑎᑦᑎᓂᕐᒧᑦ **90-ᓂᒃ ᐅᓪᓗᓂᒃ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᓂᒃᕙᐅᔪᓐᓇᓇᐊᖅᑲᕐᓂᖏᓐᓄᑦ ᐃᓱᓪᓕᕙᕐᑲᕐᓂᐊᖅᑐᓂᒃ ᑕᒫᓂ ᐄᐳ 20, 2022-ᒥ**. ᐅᖃᐅᓯᒃᓴᓂᒃᑕᐅᓂᖏᑦ ᑲᓇᑕᐅᑉ ᐊᕙᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᐅᑭᐅᖅᑕᖅᑑᑉ ᐊᕙᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᒪᔪᓂᒃ ᐊᐅᓚᑦᑎᔨᐅᖃᑕᐅᓂᕐᒧᑦ ᑲᑎᒪᔨᓂᒃ, ᓄᓇᓕᑐᖃᐃᓪᓗ ᒐᕙᒪᖏᓐᓂᒃ ᓇᓂᑐᐃᓐᓇᖅ ᑲᓇᑕᒥ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑕᐅᓚᐅᖅᐳᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᓕᕋᒥᒃ ᒫᓐᓇᐅᔪᖅ ᖃᓄᐃᓕᖓᓕᕐᓂᖏᓐᓂᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒃᓴᖏᑦ. ᑭᖑᓂᐊᒍᑦ ᐊᓂᒍᖅᐸᑕ 90 ᐅᓪᓗᐃᑦ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᓂᒃᕙᐅᔪᓐᓇᕐᓂᖏᓐᓂᒃ, ᐃᖅᑲᓇᐃᔭᕙᖓᓐᓂ ᐊᓯᐃᑖᒃ 30-ᓂᒃ ᐅᓪᓗᓂᒃ ᐱᕙᒃᓴᕐᑲᕐᓂᐊᖅᑐᑦ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑎᖅᑲᕈᓐᓇᕐᓂᖅ ᑕᐃᒃᑯᓂᖓ ᐅᖃᐅᓯᒃᓴᓂᒃᑕᐅᓯᒪᔪᓂᒃ, ᑭᖑᓂᐊᒍᓪᓗ ᑐᓂᔭᐅᓂᐊᖅᑐᑦ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᐃᓱᒪᓕᐅᕈᑕᐅᔭᓇᐊᖅᑲᕐᓂᕐᒧᑦ. ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ ᑲᒪᒋᔭᐅᓂᖏᑦ ᑭᖑᓪᓕᕆᔭᐅᓂᐊᖅᑐᑦ ᑕᐃᒃᑯᐊ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᐃᑦ ᐸᕐᓇᐅᑏᑦ ᐃᓕᔭᐅᓚᐅᖏᓐᓂᖏᓐᓂ ᓯᓚ ᐆᒪᔪᐃᑦ ᐊᒥᓲᕆᐊᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᓕᐊᕆᔭᐅᓂᖏᓐᓂᒃ ᓴᕿᑎᑦᑎᕙᖕᒐᒍᑦ, ᑭᖑᓪᓕᐅᓂᐊᖅᑐᒥᒃ. ᖃᐅᔨᒪᓂᐊᖅᐳᓯ ᐆᒪᔪᐃᑦ ᒪᓕᒐᖅᑎᒎᑦ ᐃᓕᑕᕆᔭᐅᔪᑦ ᑕᐃᔭᐅᔪᒥᒃ ᐊᔾᔨᐅᓐᖏᑦᑐᒥᒃ ᐃᓯᒫᓗᑕᐅᓂᕐᒥᒃ, ᐊᔪᕐᓇᖅᑎᑕᐅᕙᓐᖏᑦᓚᑦ ᐅᕝᕙᓗᓐᓃᑦ ᓇᔪᒐᖅᑲᓇᐊᖅᑲᖅᑎᑕᐅᓪᓚᓇᕆᐊᖅᑲᕐᓪᓚᑦ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ.

ᐅᖃᓕᒫᕈᓐᓇᖅᑐᑎᑦ ᐊᑐᓕᖅᑎᑕᐅᔪᒪᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓂᒃ ᐸᕐᓇᐅᑎᓂᒃ ᐅᕙᓂ ᑐᕌᕈᒥ: Species at risk registry-ᐆᒪᔪᐃᑦ ᐊᒥᓲᕆᐊᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᓕᐅᕈᑕᐅᓂᖏᓐᓂ (canada.ca). ᑐᓂᓯᕆᕗᖓ ᑖᒃᑯᓇᓃᖅᑕᐅᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓄᒃ ᐸᕐᓇᐅᑎᓂᒃ ᑕᑉᕙᓂ ᖃᓇᑕᐅᔭᒃᑯᑦ ᑎᑎᕐᑲᖅᑖᓇᔭᕐᓂ, ᐊᑐᐃᓐᓇᐅᕐᑯᓪᓗᒍ ᐃᓕᖕᓄᑦ.

ᑎᑎᕐᑲᕐᒥᔪᖅ ᓇᐃᓈᖅᓯᒪᔪᓂᒃ ᓯᓕᔪᓂᒃ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᓂᒃᑕᐅᓯᒪᔪᓂᒃ ᖃᓪᓗᓇᑎᑐᑦ ᐃᓄᒃᑎᑐᓪᓗ ᑕᒪᐃᓐᓂᒃ ᑎᑎᕐᑯᑎᖏᓐᓂ ᐅᓂᒃᑳᖅᑐᓂᒃ.

ᐅᖃᐅᓯᒃᓴᒃᓴᓂᒃᑕᐅᔪᑦ ᑕᒪᐃᒥᒃ ᑐᓂᔭᐅᕐᑯᔭᕐᒍᑦ ᐆᒍᓐᓂ ᑐᕌᖓᑎᑕᐅᓗᑎᒃ ᑎᑎᕐᑳᕕᖓᓄᑦ ec.planificationduretablissement-recoveryplanning.ec@canada.ca ᐅᕙᓄᓗᓐᓃᑦ ᑎᑎᖅᑳᕕᖕᓄᑦ ᑐᖓᓗᑎᒃ ᐅᕙᓂHayley.roberts@ec.gc.ca ᐅᕝᕙᓗᓐᓃᑦ ᐅᖄᓚᓗᓯ 867-222-0112-ᒧᑦ.

ᖁᔭᓕᔪᖓ ᐃᓚᐅᖃᑕᐅᓂᕐᓯᓐᓄᑦ ᑕᒪᑯᐊ ᑲᒪᒋᔭᐅᓂᖏᓐᓂ.

ᑎᑎᕋᖅᑐᖅ

ᐆᒪᔪᐃᑦ ᐊᒥᓲᕆᐊᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᐆᒪᔪᓕᕆᔨ
ᑲᓇᑕᒥᐅᑕᓂ ᐆᒪᔪᓕᕆᔩᑦ ᐱᔨᑦᑎᕋᐃᔩᖏᓐᓂ
ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᓯᓚᐅᓪᓗ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᓄᑦ ᑲᓇᑕᒥ
hayley.roberts@ec.gc.ca / ᐅᖄᓚᐅᑦ: +1 (867) 979-7045, ᐅᖄᓚᐅᑎᕋᕐᓃᖅ: +1 (867) 222-0112

Archived: June 16, 2022 9:10:03 AM
From: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Sent: February 9, 2022 12:27:00 PM
To: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Bcc: 'bathurst@kitikmeothto.ca'; 'cambay@krwb.ca'; 'cambay@kitikmeothto.ca'; 'Gjoa@krwb.ca'; 'gjoa@kitikmeothto.ca'; 'kugluktukhto@qiniq.com'; 'kugluktuk@kitikmeothto.ca'; 'kugluktuk@krwb.ca'; 'kugaaruk@kitikmeothto.ca'; 'kugaaruk@krwb.ca'; 'chimo@kitikmeothto.ca'; 'taloyoak@kitikmeothto.ca'; 'taloyoak@krwb.ca'; 'pwong@krwb.ca'; 'krwb@niws.ca'; 'dirlands@kitia.ca'; 'execdir@kitia.ca'; 'envofficer@kitia.ca'
Subject: FOR COMMENT: Proposed Management Plan for the Red-necked Phalarope in Canada (Due: April 20, 2022) Inuktitut and English
Sensitivity: Normal
Attachments:
RNPH_Factsheet_2022.pdf p_red_necked_phalarope_e_proposed.pdf NPH_Factsheet_2022_Inuktitut.pdf

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Hello,

I am writing to notify you that the proposed Management Plan for **Red-necked Phalarope** in Canada was posted on the Species at Risk Public Registry on January 20th, 2022, for a **90-day public comment period** which ends on **April 20, 2022**. Comments received from provinces, territories, wildlife management boards, and Indigenous governments across Canada were considered in the drafting of the current version of the Management Plan. Following the 90-day public comment period, the Department will then have 30 days to consider the comments received, after which the final version of the Management Plan will go to the Nunavut Wildlife Management Board for decision. The Nunavut Wildlife Management Board process is the final stage before the Management Plan will be posted on the Species at Risk Public Registry as final. Note that as a species of special concern, there are no general prohibitions or critical habitat requirements for this species.

You can read the proposed Management Plan at: Species at risk registry (canada.ca). I have also attached the Management Plan to this email for your convenience.

There is also a summary fact sheet attached in English and Inuktitut that provides an overview of the document.

Please submit all comments to ec.planificationduretablissement-recoveryplanning.ec@canada.ca or directly to me at Hayley.roberts@ec.gc.ca or 867-222-0112.

I welcome your participation in this matter.

Sincerely,

Hayley Roberts / Hᐊᐃᓕ ᕿᓐᓂ
Pronouns: She/Her

Species at Risk Biologist, Canadian Wildlife Service
Environment and Climate Change Canada / Government of Canada
hayley.roberts@ec.gc.ca / Tel: +1 (867) 979-7045, Cell: +1 (867) 222-0112
NOTE NEW EMAIL ADDRESS ENDING

Biologiste des Espèces en Péril, Service Canadien de la faune
Environnement et Changement climatique Canada / Gouvernement du Canada
hayley.roberts@ec.gc.ca / Tél. : +1 (867) 979-7045, Cell: +1 (867) 222-0112

ᐊᐃᖓᐃ,

ᑎᑎᕋᖅᑐᖓ ᖃᐅᔨᑎᑦᑐᒪᓪᓗᓯ ᐱᒋᐊᖅᑎᑕᐅᔪᒪᓂᖏᑦ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᐃᑦ ᐸᕐᓇᐅᑎᖏᑦ ᑕᐃᒃᑯᓂᖓ **ᐊᐅᐸᓗᒃᑐᓕᖕᓂ ᓴᐅᕐᕋᕐᓂᒃ** ᑲᓇᑕᒥ ᐃᓕᔭᐅᓯᒪᓕᕐᒪᑕ ᒪᓕᒐᐃᑦ ᒪᓕᒃᓯᑎᒃ ᑕᐃᑲᓂ ᐆᒪᔪᐃᑦ ᐊᒥᔅᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᖅᑎᒍᑦ ᑎᑎᖅᑲᖅᑲᕕᒃᑯᑦ ᐃᓄᓕᒫᓄᑦ ᒪᑐᐃᖓᔪᓂ ᑕᒫᓂ ᔭᓄᐊᕆ 20, 2022-ᒥ, ᐱᕙᒃᓴᖃᖅᑎᑦᑎᓂᕐᒧᑦ **90-ᓂᒃ ᐅᓪᓗᓂᒃ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᓂᒃᕙᐅᔪᓐᓇᓇᐊᖃᕐᓂᖅᑎᓐᓄᑦ ᐃᓱᓪᓕᕙᖃᕐᓂᐊᖅᑐᓂᒃ ᑕᒫᓂ ᐄᐳ 20, 2022-ᒥ**. ᐅᖃᐅᓯᒃᓴᓂᒃᑕᐅᓂᖏᑦ ᑲᓇᑕᐅᑉ ᐊᕙᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᐅᑭᐅᖅᑕᖅᑑᑉ ᐊᕙᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᒪᔪᓂᒃ ᐊᐅᓚᑦᑎᔨᐅᖃᑕᐅᓂᖏᑦ ᑲᑎᒪᔨᓂᒃ, ᓄᓇᓕᑦᑐᖃᐃᓪᓗ ᑲᕙᒪᖏᓐᓂᒃ ᓇᓂᑐᐃᓐᓇᖅ ᑲᓇᑕᒥ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑕᐅᓚᐅᖅᐳᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᓕᐊᓕᖅᑭᒥᒃ ᒫᓐᓇᐅᔪᖅ ᖃᓄᐃᓕᖓᓕᕐᓂᖏᓐᓂᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒃᓴᖏᑦ. ᑭᖑᓂᐊᒍᑦ ᐊᓂᒍᖅᐸᑕ 90 ᐅᓪᓗᐃᑦ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᓂᒡᕙᐅᔪᓐᓇᕐᓂᖏᓐᓂᒃ, ᐃᖃᓇᐃᔭᕙᖕᒐᓐᓂ ᐊᓯᐃᓛᒃ 30-ᓂᒃ ᐅᓪᓗᓂᒃ ᐱᕙᒃᓴᖃᕐᓂᐊᖅᑐᑦ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑎᖃᕈᓐᓇᕐᓂᖅ ᑕᐃᒃᑯᓂᖓ ᐅᖃᐅᓯᒃᓴᓂᒃᑕᐅᓯᒪᔪᓂᒃ, ᑭᖑᓂᐊᒍᓪᓗ ᑐᓂᔭᐅᓂᐊᖅᑐᑦ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᐃᓱᒪᓕᐅᕈᑕᐅᔭᕆᐊᒃᓴᖏᓐᓄᑦ. ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ ᑲᒪᒋᔭᐅᓂᖏᑦ ᑭᖑᓪᓕᕆᔭᐅᓂᐊᖅᑐᑦ ᑕᐃᒃᑯᐊ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᐃᑦ ᐸᕐᓇᐅᑏᑦ ᐃᓕᔭᐅᓚᐅᖏᓐᓂᖏᓐᓂ ᓱᓕ ᐆᒪᔪᐃᑦ ᐊᒥᔅᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᓕᐊᓇᔭᐅᓂᖏᓐᓂᒃ ᓴᖅᑭᑎᑦᑎᕙᖕᒐᒍᑦ, ᑭᖑᓪᓕᐅᓂᐊᖅᑐᒥᒃ. ᖃᐅᔨᒪᓂᐊᖅᐳᓯ ᐆᒪᔪᐃᑦ ᒪᓕᒐᖅᑎᒍᑦ ᐃᓕᑕᕆᔭᐅᔪᑦ ᑕᐃᔭᐅᔪᒥᒃ ᐊᔾᔨᐅᙱᑦᑐᒥᒃ ᐃᓱᒫᓗᑕᐅᓂᕐᒥᒃ, ᐊᔪᕐᓇᖅᑎᑕᐅᕙᓐᖏᑦᑐᑦ ᐅᕝᕙᓗᓐᓃᑦ ᓇᔪᒐᖅᑲᓇᐊᖅᑲᖅᑎᑕᐅᓪᓚᓇᕆᐊᖅᑲᖏᑦᑕᓪᓚᑦ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ.

ᐅᖃᓕᒫᕈᓐᓇᖅᑐᑎᑦ ᐊᑐᓕᖅᑎᑕᐅᔪᒪᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓂᒃ ᐸᕐᓇᐅᑎᓂᒃ ᐅᕙᓂ ᑐᕌᒐᒥ: [Species at risk registry-ᐆᒪᔪᐃᑦ ᐊᒥᔅᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᓕᐅᕈᑕᐅᓂᖏᓐᓂ (canada.ca)]. ᑐᓂᓯᕗᖓ ᑖᒃᑯᓇᓃᖃᑕᐅᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓄᒃ ᐸᕐᓇᐅᑎᓂᒃ ᑕᒡᕙᓂ ᖃᓇᑕᐅᔭᒃᑯᑦ ᑎᑎᖃᖅᑖᓇᔭᕐᓂ, ᐊᑐᐃᓐᓇᐅᖁᑦᑐᒍ ᐃᓕᖕᓄᑦ.

ᑎᑎᖅᑲᖅᑲᒥᔪᖅ ᓇᐃᓈᖅᓯᒪᔪᓂᒃ ᓯᓕᔪᓂᒃ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᓂᒃᑕᐅᓯᒪᔪᓂᒃ ᖃᓪᓗᓈᑎᑐᑦ ᐃᓄᒃᑎᑐᑦ ᑕᒪᐃᓐᓂᒃ ᑎᑎᖅᑲᖅᑯᑎᖏᓐᓂ ᐅᓂᒃᑳᖅᑐᓂᒃ.

ᐅᖃᐅᓯᒃᓴᒃᓴᓂᒃᑕᐅᔪᑦ ᑕᒪᐃᒥᒃ ᑐᓂᔭᐅᖅᑯᔭᕗᖅ ᐆᒧᖓ ᑐᕌᖅᑎᑕᐅᓗᑎᒃ ᑎᑎᖅᑲᖅᑖᕕᓐᓄᑦ ec.planificationduretablissement-recoveryplanning.ec@canada.ca ᐅᕙᓄᓗᓐᓃᑦ ᑎᑎᖅᑲᖅᑖᕕᖓᓄᑦ ᑐᖓᓗᑎᒃ ᐅᕙᓂ Hayley.roberts@ec.gc.ca ᐅᕝᕙᓗᓐᓃᑦ ᐅᖄᓚᓗᓯ 867-222-0112-ᒧᑦ.

ᖁᔭᓕᔪᖓ ᐃᓚᐅᖃᑕᐅᓂᕐᓴᓄᑦ ᑕᒪᑯᐊ ᑲᒪᒋᔭᐅᓂᖏᓐᓂ.

ᑎᑎᕋᖅᑐᖅ

ᐆᒪᔪᐃᑦ ᐊᒥᔅᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᐆᒪᔪᓕᕆᔨ
ᑲᓇᑕᒥᐅᑕᓂ ᐆᒪᔪᓕᕆᔨᑦ ᐱᔨᑦᑎᕋᐃᔨᖏᓐᓂ
ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᓯᓚᐅᓪᓗ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᓄᑦ ᑲᓇᑕᒥ
hayley.roberts@ec.gc.ca / ᐅᖄᓚᐅᑦ: +1 (867) 979-7045, ᐅᖄᓚᐅᑎᕋᓛᖅ: +1 (867) 222-0112

Archived: June 16, 2022 9:11:00 AM
From: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Sent: February 9, 2022 12:27:00 PM
To: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Bcc: 'arviat@kivalliqhto.ca'; 'bakerlake@kivalliqhto.ca'; 'aqigiq@kivalliqhto.ca'; 'htochester@qiniq.com'; 'aiviit@kivalliqhto.ca'; 'rankin@kivalliqhto.ca'; 'rankinhto@qiniq.com'; 'arviq@kivalliqhto.ca'; 'repulsebayhto@qiniq.com'; 'issatik@kivalliqhto.ca'; 'whalecovehto@qiniq.com'; 'kwb@niws.ca'; 'reception@kivalliqinuit.ca'
Subject: FOR COMMENT: Proposed Management Plan for the Red-necked Phalarope in Canada (Due: April 20, 2022) Inuktitut and English
Sensitivity: Normal
Attachments:
mp_red_necked_phalarope_e_proposed.pdf NPH_Factsheet_2022_Inuktitut.pdf NPH_Factsheet_2022.pdf

---

Hello,

I am writing to notify you that the proposed Management Plan for **Red-necked Phalarope** in Canada was posted on the Species at Risk Public Registry on January 20th, 2022, for a **90-day public comment period** which ends on **April 20, 2022**. Comments received from provinces, territories, wildlife management boards, and Indigenous governments across Canada were considered in the drafting of the current version of the Management Plan. Following the 90-day public comment period, the Department will then have 30 days to consider the comments received, after which the final version of the Management Plan will go to the Nunavut Wildlife Management Board for decision. The Nunavut Wildlife Management Board process is the final stage before the Management Plan will be posted on the Species at Risk Public Registry as final. Note that as a species of special concern, there are no general prohibitions or critical habitat requirements for this species.

You can read the proposed Management Plan at: Species at risk registry (canada.ca). I have also attached the Management Plan to this email for your convenience.

There is also a summary fact sheet attached in English and Inuktitut that provides an overview of the document.

Please submit all comments to ec.planificationduretablissement-recoveryplanning.ec@canada.ca or directly to me at Hayley.roberts@ec.gc.ca or 867-222-0112.

I welcome your participation in this matter.

Sincerely,

Hayley Roberts / Hᐊᐃᓕ ᖃᓪᓗᒋ
Pronouns: She/Her

Species at Risk Biologist, Canadian Wildlife Service
Environment and Climate Change Canada / Government of Canada
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NOTE NEW EMAIL ADDRESS ENDING

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hayley.roberts@ec.gc.ca / Tél. : +1 (867) 979-7045, Cell: +1 (867) 222-0112

ᐊᐃᖓᐃ,

ᑎᑎᕋᖅᑐᖓ ᖃᐅᔨᑎᑦᑐᒪᓪᓗᓯ ᐱᒋᐊᖅᑎᑕᐅᔪᒪᓂᖏᑦ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᐃᑦ ᐸᕐᓇᐅᑎᖏᑦ ᑕᐃᒃᑯᓂᖓ **ᐊᐅᐸᓗᒃᑐᓕᖅᓂ ᓴᐅᕐᕋᕐᓂᒃ** ᑲᓇᑕᒥ ᐃᓕᔭᐅᓯᒪᓕᕐᒪᑕ ᒪᓕᒐᐃᑦ ᒪᓕᒃᓯᑎᒃ ᑕᐃᑲᓂ ᐆᒪᔪᐃᑦ ᐊᒥᔅᓲᖏᓗᐊᓕᕐᓂᖏᓐᓇᓄᑦ ᒪᓕᒋᖅᑎᒍᑦ ᑎᑎᖃᖃᕐᕕᒃᑯᑦ ᐃᓄᓕᒫᓄᑦ ᒪᑐᐃᖓᔪᓂ ᑕᒫᓂ ᔭᓄᐊᕆ 20, 2022-ᒥ, ᐱᕕᒃᓴᖃᖅᑎᑦᑎᓂᕐᒧᑦ **90-ᓂᒃ ᐅᓪᓗᓂᒃ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᓂᒃᕙᐅᔪᓐᓇᕆᐊᖃᕐᓂᖅᓯᓐᓄᑦ ᐃᓱᓪᓕᕙᖃᕐᓂᐊᖅᑐᓂᒃ ᑕᒫᓂ ᐋᐳ 20, 2022-ᒥ**. ᐅᖃᐅᓯᒃᓴᓂᒃᑕᐅᓂᖏᑦ ᑲᓇᑕᐅᑉ ᐊᕙᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᐅᑭᐅᖅᑕᖅᑑᑉ ᐊᕙᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᒪᔪᓂᒃ ᐊᐅᓚᑦᑎᔨᐅᖃᑕᐅᓂᕐᒧᑦ ᑲᑎᒪᔨᓂᒃ, ᓄᓇᓕᑐᖃᐃᓪᓗ ᖁᕝᕙᖏᓐᓂᒃ ᓇᓂᑐᐃᓐᓇᖅ ᑲᓇᑕᒥ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑕᐅᓚᐅᖅᐳᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓚᐊᓚᕋᒥᒃ ᒫᓇᐅᔪᖅ ᖃᓄᐃᓕᖓᓕᕐᓂᖏᓐᓂᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒃᓴᖏᑦ. ᑭᖑᓂᐊᒍᑦ ᐊᓂᒍᖅᐸᑕ 90 ᐅᓪᓗᐃᑦ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᓂᖑᕙᐅᔪᓐᓇᕐᓂᖏᓐᓂᒃ, ᐃᖃᓇᐃᔭᕙᖓᓐᓂ ᐊᓯᐃᓛᒃ 30-ᓂᒃ ᐅᓪᓗᓂᒃ ᐱᕕᒃᓴᖃᕐᓂᐊᖅᑐᑦ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑎᖃᕈᓐᓇᕐᓂᖅ ᑕᐃᒃᑯᓂᖓ ᐅᖃᐅᓯᒃᓴᓂᒃᑕᐅᓯᒪᔪᓂᒃ, ᑭᖑᓂᐊᒍᓪᓗ ᑐᓂᔭᐅᓂᐊᖅᑐᑦ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᐃᓱᒪᓕᐅᕈᑕᐅᔭᕆᐊᖃᕐᓂᕐᒧᑦ. ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ ᑲᒪᒋᔭᐅᓂᖏᑦ ᑭᖑᓪᓕᕆᔭᐅᓂᐊᖅᑐᑦ ᑕᐃᒃᑯᐊ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᐃᑦ ᐸᕐᓇᐅᑏᑦ ᐃᓕᔭᐅᓚᐅᖅᓯᓂᖅᓯᖅᓯᓂ ᓱᓕ ᐆᒪᔪᐃᑦ ᐊᒥᓲᖏᓗᐊᓕᕐᓂᖏᓐᓂᒃ ᒪᓕᒐᓕᐊᕆᔭᐅᓂᖏᓐᓂᒃ ᓴᕿᑎᑦᑎᕙᖓᒍᑦ, ᑭᖑᓪᓕᐅᓂᐊᖅᑐᒥᒃ. ᖃᐅᔨᒪᓂᐊᖅᐳᓯ ᐆᒪᔪᐃᑦ ᒪᓕᒐᖅᑎᒍᑦ ᐃᓕᑕᕆᔭᐅᔪᑦ ᑕᐃᔭᐅᔪᒥᒃ ᐊᔾᔨᐅᙱᑦᑐᒥᒃ ᐃᓱᒪᑐᑕᐅᓂᕐᒥᒃ, ᐊᔪᕐᓇᖅᑎᑕᐅᙵᖏᓪᓚᑦ ᐅᕝᕙᓗᓐᓃᑦ ᓇᔪᕐᖃᕆᐊᖅᑎᑕᐅᓪᓚᕆᐊᖅᑲᖏᓪᓚᑦ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ.

ᐅᖃᓕᒫᕈᓐᓇᖅᑐᑎᑦ ᐊᑐᓕᖅᑎᑕᐅᔪᒪᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓂᒃ ᐸᕐᓇᐅᑎᓂᒃ ᐅᕙᓂ ᑐᕌᒻᒥ: [Species at risk registry-ᐆᒪᔪᐃᑦ ᐊᒥᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᓕᐅᕈᑕᐅᓂᖏᓐᓂ (canada.ca)](https://canada.ca). ᑐᓂᓯᒋᕚᖓ ᑖᒃᑯᓇᓂᖅᑕᐅᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓄᒃ ᐸᕐᓇᐅᑎᓂᒃ ᑖᕙᓂ ᖃᓇᑕᐅᔭᒃᑯᑦ ᑎᑎᖃᑖᓇᔭᕐᓂ, ᐊᑐᐃᓐᓇᐅᕐᑯᓪᓗᒍ ᐃᓕᖕᓄᑦ.

ᑎᑎᖃᖃᕐᒥᔪᖅ ᓇᐃᓈᖅᓯᒪᔪᓂᒃ ᓱᓕᔪᓂᒃ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᓂᒃᑕᐅᓯᒪᔪᓂᒃ ᖃᓪᓗᑎᑐᑦ ᐃᓄᒃᑎᑐᓪᓗ ᑕᒪᐃᓐᓂᒃ ᑎᑎᖃᑯᑎᖏᓐᓂ ᐅᓂᒃᑳᖅᑐᓂᒃ.

ᐅᖃᐅᓯᒃᓴᒃᓴᓂᒃᑕᐅᔪᑦ ᑕᒪᐃᒥᒃ ᑐᓂᔭᐅᖁᔭᕗᑦ ᐆᒧᖓ ᑐᕌᖓᑎᑕᐅᓗᑎᒃ ᑎᑎᖃᑦᑖᕝᕕᖓᓄᑦ ec.planificationduretablissement-recoveryplanning.ec@canada.ca ᐅᕙᓄᓗᓐᓃᑦ ᑎᑎᖃᖅᑖᕝᕕᖓᓄᑦ ᑐᖓᓗᑎᒃ ᐅᕙᓂHayley.roberts@ec.gc.ca ᐅᕝᕙᓗᓐᓃᑦ ᐅᖄᓚᓗᓯ 867-222-0112-ᒧᑦ.

ᖁᔭᓕᔪᖓ ᐃᓚᐅᖃᑕᐅᓂᕐᓯᓐᓄᑦ ᑕᒪᑯᐊ ᑲᒪᒋᔭᐅᓂᖏᓐᓂ.

ᑎᑎᕋᖅᑐᖅ

ᐆᒪᔪᐃᑦ ᐊᒥᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᐆᒪᔪᓕᕆᔨ
ᑲᓇᑕᒥᐅᑕᓂ ᐆᒪᔪᓕᕆᔨᑦ ᐱᔨᑦᑎᕋᐃᔨᖏᓐᓂ
ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᓯᓚᐅᓪᓗ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᓄᑦ ᑲᓇᑕᒥ
hayley.roberts@ec.gc.ca / ᐅᖄᓚᐅᑦ: +1 (867) 979-7045, ᐅᖄᓚᐅᑎᕋᓛᖅ: +1 (867) 222-0112

Archived: June 16, 2022 9:11:25 AM
From: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Sent: February 9, 2022 12:28:00 PM
To: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Bcc: 'cao@city.iqaluit.nu.ca'; 'sao@resolute.ca'; 'hamletcedo1@xplornet.com'; 'sao@whalecove.ca'; 'mayor@whalecove.ca'; 'sao_ab@qiniq.com'; 'sao@arviat.ca'; 'blsao@northwestel.net'; 'mlimousin@cambridgebay.ca'; 'muncdsao@capedorset.ca'; 'sao_hamlet@qiniq.com'; 'cao@clyderiver.ca'; 'munch@qiniq.com'; 'saogjoa@qiniq.com'; 'gfsao@qiniq.com'; 'gfasao@qiniq.com'; 'sao_hbhamlet@qiniq.com'; 'sao@igloolik.ca'; 'sao@rankininlet.ca'; 'saokug@qiniq.com'; 'sao@kugluktuk.ca'; 'saonaujaat@qiniq.com'; 'pang_sao@qiniq.com'; 'sao@pondinlet.ca'; 'hamletpond_mayor@qiniq.com'; 'munqik@qiniq.com'; 'sao@sanikiluaq.com'; 'sao@taloyoak.ca'; 'sanisao@qiniq.com'; 'sanimayor@qiniq.com'
Subject: FOR COMMENT: Proposed Management Plan for the Red-necked Phalarope in Canada (Due: April 20, 2022) Inuktitut and English
Sensitivity: Normal
Attachments:
RNPH_Factsheet_2022.pdf RNPH_Factsheet_2022_Inuktitut.pdf rp_red_necked_phalarope_e_proposed.pdf

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Hello,

I am writing to notify you that the proposed Management Plan for **Red-necked Phalarope** in Canada was posted on the Species at Risk Public Registry on January 20th, 2022, for a **90-day public comment period** which ends on **April 20, 2022**. Comments received from provinces, territories, wildlife management boards, and Indigenous governments across Canada were considered in the drafting of the current version of the Management Plan. Following the 90-day public comment period, the Department will then have 30 days to consider the comments received, after which the final version of the Management Plan will go to the Nunavut Wildlife Management Board for decision. The Nunavut Wildlife Management Board process is the final stage before the Management Plan will be posted on the Species at Risk Public Registry as final. Note that as a species of special concern, there are no general prohibitions or critical habitat requirements for this species.

You can read the proposed Management Plan at: Species at risk registry (canada.ca). I have also attached the Management Plan to this email for your convenience.

There is also a summary fact sheet attached in English and Inuktitut that provides an overview of the document.

Please submit all comments to ec.planificationduretablissement-recoveryplanning.ec@canada.ca or directly to me at Hayley.roberts@ec.gc.ca or 867-222-0112.

I welcome your participation in this matter.

Sincerely,

Hayley Roberts / Hᐊᐃᓕᖅ ᕿᓐᓂ
Pronouns: She/Her

Species at Risk Biologist, Canadian Wildlife Service
Environment and Climate Change Canada / Government of Canada
hayley.roberts@ec.gc.ca / Tel: +1 (867) 979-7045, Cell: +1 (867) 222-0112
NOTE NEW EMAIL ADDRESS ENDING

Biologiste des Espèces en Péril, Service Canadien de la faune

Environnement et Changement climatique Canada / Gouvernement du Canada
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ᐊᐃᖓᐃ,

ᑎᑎᕋᖅᑐᖓ ᖃᐅᔨᑎᑦᑐᒪᓪᓗᓯ ᐱᒋᐊᖅᑎᑕᐅᔪᒪᓂᖏᑦ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᐃᑦ ᐸᕐᓇᐅᑎᖏᑦ ᑕᐃᒃᑯᓂᖓ **ᐊᐅᐸᓗᒃᑐᓕᖕᓂ ᓴᐅᕐᕋᕐᓂᒃ** ᑲᓇᑕᒥ ᐃᓕᔭᐅᓯᒪᓕᕐᒪᑕ ᒪᓕᒐᐃᑦ ᒪᓕᒃᓯᑎᒃ ᑕᐃᑲᓂ ᐆᒪᔪᐃᑦ ᐊᒦᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᖅᑎᒍᑦ ᑎᑎᕐᑲᕐᑲᖁᑦ ᐃᓄᓕᒫᓄᑦ ᒪᑐᐃᖓᔪᓂ ᑖᒥᓂ ᔭᓄᐊᕆ 20, 2022-ᒥ, ᐱᕙᒃᓴᕐᑲᖅᑎᑦᑎᓂᕐᒧᑦ **90-ᓂᒃ ᐅᓪᓗᓂᒃ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᓂᒃᕚᐅᔪᓐᓇᕆᐊᖃᕐᓂᖏᓐᓄᑦ ᐃᓱᓪᓕᕚᖃᕐᓂᐊᖅᑐᓂᒃ ᑖᒥᓂ ᐋᐳ 20, 2022-ᒥ**. ᐅᖃᐅᓯᒃᓴᓂᒃᑕᐅᓂᖏᑦ ᑲᓇᑕᐅᑉ ᐊᕙᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᐅᑭᐅᖅᑕᖅᑑᑉ ᐊᕙᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᒪᔪᓂᒃ ᐊᐅᓚᑦᑎᔨᐅᖃᑕᐅᓂᕐᒧᑦ ᑲᑎᒪᔩᓂᒃ, ᓄᓇᓕᑐᖃᐃᓪᓗ ᖃᕙᒪᖏᓐᓂᒃ ᓇᓂᑐᐃᓐᓇᖅ ᑲᓇᑕᒥ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑕᐅᓚᐅᖅᐳᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᓕᕋᒥᒃ ᒫᓇᐅᔪᖅ ᖃᓄᐃᓕᖓᓕᕐᓂᖏᓂᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒃᓴᖏᑦ. ᑭᖑᓂᐊᒍᑦ ᐊᓂᒍᖅᐸᑕ 90 ᐅᓪᓗᐃᑦ ᐃᓄᓕᒫᓄᑦ ᐅᖃᐅᓯᒃᓴᓂᒃᕚᐅᔪᓐᓇᕐᓂᖏᓐᓂᒃ, ᐃᖃᓇᐃᔭᕝᕕᖓ ᐊᓯᐃᓛᒃ 30-ᓂᒃ ᐅᓪᓗᓂᒃ ᐱᕙᒃᓴᖃᕐᓂᐊᖅᑐᑦ ᐃᓱᒪᒃᓴᖅᓯᐅᕈᑎᖃᕈᓐᓇᕐᓂᖅ ᑕᐃᒃᑯᓂᖓ ᐅᖃᐅᓯᒃᓴᓂᒃᑕᐅᓯᒪᔪᓂᒃ, ᑭᖑᓂᐊᒍᓪᓗ ᑐᓂᔭᐅᓂᐊᖅᑐᑦ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᐃᓱᒪᓕᐅᕈᑕᐅᔭᕆᐊᖃᕐᓂᖏᓐᓄᑦ. ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ ᑲᒪᒋᔭᐅᓂᖏᑦ ᑭᖑᓪᓕᕆᔭᐅᓂᐊᖅᑐᑦ ᑕᐃᒃᑯᐊ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᐃᑦ ᐸᕐᓇᐅᑏᑦ ᐃᓕᔭᐅᓚᐅᕐᓂᖏᓐᓂᖏᓐᓂ ᓱᓕ ᐆᒪᔪᐃᑦ ᐊᒦᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᓕᐊᕆᔭᐅᓂᖏᓐᓂᒃ ᓴᕿᑎᑦᑎᕙᖓᒍᑦ, ᑭᖑᓪᓕᐅᓂᐊᖅᑐᒥᒃ. ᖃᐅᔨᒪᓂᐊᖅᐳᓯ ᐆᒪᔪᐃᑦ ᒪᓕᒐᖅᑎᒍᑦ ᐃᓕᑕᕆᔭᐅᔪᑦ ᑕᐃᔭᐅᔪᒥᒃ ᐊᔾᔨᐅᓐᖏᑦᑐᒥᒃ ᐃᓱᒫᓗᑕᐅᓂᕐᒥᒃ, ᐊᔪᕐᓇᖅᑎᑕᐅᕙᓐᖏᓪᓚᑦ ᐅᕙᓗᓐᓃᑦ ᓇᔪᒐᖃᕐᓇᖅᑎᑕᐅᓪᓚᕆᐊᖃᖏᓪᓚᑦ ᑎᑎᕋᖅᓯᒪᔪᓂᒃ.

ᐅᖃᓕᒫᕈᓇᖅᑐᑎᑦ ᐊᑐᓕᖅᑎᑕᐅᔪᒪᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓂᒃ ᐸᕐᓇᐅᑎᓂᒃ ᐅᕙᓂ ᑐᕌᕈᒥ: [Species at risk registry-ᐆᒪᔪᐃᑦ ᐊᒦᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᒪᓕᒐᓕᐅᕈᑕᐅᓂᖏᓐᓂ (canada.ca)](#). ᑐᓂᓯᒋᕗᖓ ᑖᒃᑯᓇᓃᖅᑕᐅᔪᓂᒃ ᐊᐅᓚᑦᑎᔾᔪᑎᒃᓴᓄᒃ ᐸᕐᓇᐅᑎᓂᒃ ᑖᕙᓂ ᖃᓇᑕᐅᔭᒃᑯᑦ ᑎᑎᖃᖅᑖᓇᔭᕐᓂ, ᐊᑐᐃᓐᓇᐅᖁᓪᓗᒍ ᐃᓕᖓᓄᑦ.

ᑎᑎᕐᑲᕐᒥᔪᖅ ᓇᐃᓈᖅᓯᒪᔪᓂᒃ ᓱᓕᔪᓂᒃ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᓂᒃᑕᐅᓯᒪᔪᓂᒃ ᖃᓪᓗᑎᑐᑦ ᐃᓄᒃᑎᑐᓪᓗ ᑕᒪᐃᓐᓂᒃ ᑎᑎᕐᑯᑎᖏᓐᓂ ᐅᓂᒃᑳᖅᑐᓂᒃ.

ᐅᖃᐅᓯᒃᓴᒃᓴᓂᒃᑕᐅᔪᑦ ᑕᒪᐃᒥᒃ ᑐᓂᔭᐅᖁᔭᕙᑦ ᐆᒧᖓ ᑐᕋᖓᑎᑕᐅᓗᑎᒃ ᑎᑎᖃᑖᕐᕕᖓᓄᑦ ec.planificationduretablissement-recoveryplanning.ec@canada.ca ᐅᕙᓄᓗᓐᓃᑦ ᑎᑎᖅᑳᕐᕕᖓᓄᑦ ᑐᖓᓗᑎᒃ ᐅᕙᓂHayley.roberts@ec.gc.ca ᐅᕝᕙᓗᓐᓃᑦ ᐅᖄᓚᓗᓯ 867-222-0112-ᒧᑦ.

ᕿᔭᓕᔪᖓ ᐃᓚᐅᖃᑕᐅᓂᓯᓐᓄᑦ ᑕᒪᑯᐊ ᑲᒪᒋᔭᐅᓂᖏᓐᓂ.

ᑎᑎᕋᖅᑐᖅ

ᐆᒪᔪᐃᑦ ᐊᒥᓲᖏᓗᐊᓕᕐᓂᖏᓐᓄᑦ ᐆᒪᔪᓕᕆᔨ
ᑲᓇᑕᒥᐅᑕᓂ ᐆᒪᔪᓕᕆᔨᑦ ᐱᔨᑦᑎᕋᐃᔨᖏᓐᓂ
ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᓯᓚᐅᓪᓗ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᓄᑦ ᑲᓇᑕᒥ
hayley.roberts@ec.gc.ca / ᐅᖄᓚᐅᑦ: +1 (867) 979-7045, ᐅᖄᓚᐅᑎᕋᖕᖑᖅ: +1 (867) 222-0112

ᓇᐃᓕᒥᐊᖅᑐᖓᓂᖅ ᓯᓚᓪᓕᖅ ᒥᐊᓂᓱᐅᓂᖏᓐᓄᑦ ᑭᓪᓕᐅᑦ ᐅᔨᓂᖅ

ᐊᐅᓪᓗᓂᒃ ᖃᓄᖏᓯᓂᓪᓕᑦ ᑐᓴᓪᕿᐃᓕᑦ


female Red-necked Phalarope ©Willow English

ᐊᑕᐅᓂ ᐅᒪᓴᑦ ᐊᑦᑕᓇᖅᑐᒃᓯᓕᓴᐃᓚᓄᑦ ᒪᓕᒃᖁᓴᐊᖅ (SARA), ᒥᐊᓂᓱᐅᓂᖏᓐᓄᑦ ᑭᖑᓇᐅᒥᒃ ᐱᑕᖅᓀᐊᖅᓵᓐᓂ ᐊᔨᖏᖏᑐᓄᑦ ᑎᓐᒥᐊᑭᓯᓄᑦ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓴᓄᑦ ᐃᓯᒪᓗᓐᓇᖅᑐᐃᓄᑦ ᓴᓐᔪᐅᔪᓀᐸᖅᖁᓂᖏᓐᓄᑦ ᑎᓐᒥᐊᑭᓯᑦ. ᑕᒪᓇ ᑎᑎᕋᖅᓯᒪᔪᖅ ᓇᓗᓇᐃᖅᓯᐅᖅ ᐅᔨᖁᓇᐊᖅᑐᓂᓄᑦ ᓯᓚᓪᓕᖅᑐᑦ ᒥᐊᓂᓱᐅᓂᖏᓐᓄᑦ ᑭᖑᓇᐅᓕᑦ.

ᑎᓐᒥᐊᑭᓯᑦ ᔪᓐᔪᐅᓯᒪᓂᖏᓐᓄᑦ ᖁᓇᐃᓕᓂᐅᑭᑎᓐᓂ

ᑕᖃᓯᐊ ᐊᐅᓪᓗᓂᒃ ᖃᓄᖏᓯᓂᖅᖁᓂᑐᑦ ᑐᓴᓪᕿᐃᓕᑦ (*Phalaropus lobatus*) ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓐᓚᑕ ᐅᒪᒪᓴᑦ ᐊᑦᑕᖃᖅᑐᑎᓪᓗᓄᑦ ᐃᓯᒪᓗᓐᓇᖅᓯᒃᓴᓂᑎᒃ ᐊᑕᐅᓂ ᐅᒪᒪᓴᑦ ᐊᑦᑕᖃᖅᑐᒥᓂᖅᑐᑦ ᒪᓕᒪᖃᐊᖅᓱᒃ (SARA) ᑕᐃᒪᓐᑦ 2019.

ᐅᓂᖃᖅᓯᒪᓂᖏᓐᓄᑦ ᐊᒪ ᓇᒧᓐᐅᑕᖃᖅᓂᖏᓐᓄᑦ

ᑕᖃᓯᐊ ᐊᐅᓪᓗᓂᒃ ᖃᓄᖏᓯᓂᖅᖁᓂᑐᑦ ᑐᓴᓪᕿᐃᓕᑦ ᒥᑭᔪᓪᓚᑎᒃ ᓯᓚᒥᐅᑕᐅᔪᓂ. ᐊᑎᖅᖁᓕᑎᐅᔪᓂᑦ ᖁᐅᒪᒪᔪᓂᒃ ᓯᓂᖏᓯᓂᓚᑎᒧᑦ, ᐃᓕᓐᓂᓪᓕ ᑎᒥᐊᑕ ᖵᖃᓂᖅᑐᑦᓂᓪᓗᓂ ᖵᖃᓂᖅᓱᓕᓂᓪᓗᓂ (ᓂᐊᖃᓂᖓ, ᑐᓵᓄᐊ, ᓯᓗᓪᓕᓪᓗ) ᐊᒪᒪ ᖁᓂᖅᑐᑦᓚᑎᒃ (ᓯᓗᓪᓕᑕ ᐊᑕᐃᑦ, ᐅᓗᐊᖓᓕᑦ, ᓇᓐᓕᓪᓗ). ᐊᑦᓇᕕᐊᑦ ᐊᖓᓂᖅᓴᐅᓪᓚᑎᒃ ᐊᖓᔪᑎᕕᐊᓵᓂᑦi ᑲᓪᖁᖅᓂᖅᓴᐅᓪᓚᑎᑎᓪᓗ ᐱᐊᓪᖁᖅᑐᓪᓚᑎᓪᓕᑦ. ᐅᑭᐊᒪᒥ, ᑕᒪᖁᑦ ᖁᓂᖅᑐᐊᖅᑐᑦ (ᓂᐊᖃᓂᖓᓕᑦ ᓴᖓᓪᓗᑦ, ᓇᓐᓕᓪᓗ), ᖃᓄᓂᓂᓂᖅᖁᓚᑎᒃ ᓇᒪᓇᓪᑕᖅ ᐃᓴᖓᑕᓗᓐ ᑐᓵᓄᐊᑎᔪᓐᓇᖅᑐᑦ ᓂᐊᖃᓂᖓᓕᑦ ᐊᒪᒪ ᖃᓄᓂᓂᓂᖅᖁᓚᑎᒃ (ᓯᓗᓪᓕᑕᓕᑦ ᐸᒥᐅᖓᓂᓗ), ᖃᓄᓂᓂᓂᖅᖁᓚᑎᒃ ᓇᒪᓇᓪᑕᖅ ᐃᓴᖓᑕᓗᓐ ᑐᓵᓄᐊᑎᔪᓐᓇᖅᑐᑦ ᓂᐊᖃᓂᖓᓕᑦ ᐊᒪᒪ ᖃᓄᓂᓂᓂᖅᖁᓚᑎᒃ ᓂᐊᖃᓂᖓᓕᑦ.

ᐊᐅᓪᓗᓂᒃ ᖃᓄᖏᓯᓂᓪᓕᑦ ᑐᓴᓪᕿᐃᓕᑦ ᐊᐅᓪᓚᖅᐸᒃᑐᓂᑦ ᓇᓂᑐᐃᓇᖅ ᐅᓇᓕᐊᓇᖅᑐᑦᓂᓪᓗᓂ ᐅᑭᐅᖅᑕᖅᑐᑦᓂᓪᓗᓂ 74% ᓄᐊᑦ ᐊᒥᐊᓚᑦᓯᐅᖅᓱᓚᑎᒃ ᑲᓇᑕᒥᑦ. ᑕᖃᓯᐊ ᑕᓄᓇᖅᐸᒃᑐᓂᑦ ᓄᓇᓕᓯᐊᓕᑦ ᓂᐅᖏᖅᑐᓂᖓᓂᓪᓗᓂ ᒪᓂᓂᐅᓪᓚᖅᑐᓂᖅᓴᓪᓗᓂ, ᔫᑲᓕᑦ; ᓄᓇᕗᒥᑦ, ᓯᓚᖃᓂᓂᓂ ᓂᐅᕐᓇᐅᓪᓚᓂᓂ ᐊᒪᒪ ᑲᑎᕕᐊᖅᑐᓂᖓᓂᓪᓗᓂ ᐊᐅᓪᓗᓂᒃ ᖃᓄᖏᓯᓂᖅᖁᓂᑐᑦ ᑐᓴᓪᕿᐃᓕᑦ ᐊᐅᓪᓚᖅᐸᒃᑐᓂᑦ

ᐊᑎᖅᑕᐅᓂ ᐊᒪᒪ ᐸᓯᕕᒃ ᓯᓇᒧᑦ ᓄᓇᓯᑦᓯᐊᓂᑦ ᐱᖓᓱᖅᑐᓂᖓᓂᓪᓗᓂ ᐊᑎᖅᖁᓕᑎᐅᔪᓂᑦ ᐃᓴᖓᑕᓗᓐ ᐊᒪᒪ ᐅᑭᐅᖅᑕᖅᑐᑦᓂᓪᓗᓂ ᐊᑎᖅᖁᓕᑎᐅᔪᓂᑦ ᓄᓇᓯᑦᓯᐊᓂᑦ ᐱᖓᓱᖅᑐᓂᖓᓂᓪᓗᓂ ᓄᓇᓕᖅᑐᑦ.

ᐅᓗᓚᐊᓇᖅᑐᑦ ᑎᓐᒥᐊᑭᓯᑦ ᑕᐃᒪᐅᑐᐃᓇᓕᓂᖏᓐᓄᑦ

- ᓄᓇᕋᓂᖅᑕᑦ ᐊᓯᐊᓂᓵᓕᓕᐊᕐᓇᖅ ᓯᓚᐅᑦ ᐊᓯᐊᖏᖅᐸᓕᐊᓂᖅᓴᓂᑦ ᓄᓇᓗ ᐸᓂᓗᐊᖏᓂᖅᓴᓂᑦ ᐊᒪᒪ ᓄᓇᕋᓂᖅᑕᑦ ᐱᖅᖁᓂᖅᐸᓕᐊᓕᖏᓂᖏᓐᓄᑦ ᓄᓇᐃᓕᓐᓂᑦ.

- ᐱᐊᓚᖅᑕᖅᐸᓕᐊᓗᐊᖏᓕᕐᓂᖏᓐᓄᑦ ᑐᓪᓕᒡᔪᐃᑦ ᐱᓗᐊᖅᑐᒻᒥᒃ ᓯᓚᐅᑉ ᐊᓯᐊᖑᖅᐸᓕᐊᓂᖓᓄᑦ ᐱᐊᓚᖅᑕᑳᓂᖅᓴᐅᑕᓕᕐᒪᑕ ᐊᒻᒪ ᓂᕿᖃᖏᓗᐊᓕᖅᓘᑎᒃ ᒫᓂᓕᐅᕐᕕᖏᓐᓂ.
- ᐱᑕᖃᕈᓇᐃᖅᐸᓪᓕᐊᓂᖏᑦ ᐱᐊᓚᓕᐅᖏᓂᖏᓐᓂ ᐱᑕᖄᖅᐸᓕᐊᓗᐊᓕᕐᓂᖏᓐᓄᑦ ENSO ᐊᓯᐊᖑᖅᑕᕐᓂᖏᓐᓂᑦ ᓂᕿᖃᑎᐊᕈᓇᐃᕈᑕᐅᔪᓪᓗᐊᕐᓗᑎᒃ ᓯᕝᔭᒥ.
- ᐊᓯᐅᓯᒪᔪᑦ ᓂᕿᒃᓴᑦ ᑕᑯᐅᓕᖕᒥ ᑕᓯᕐᒥ ᓯᓚᐅᑉ ᐊᔾᔪᖅᐸᓕᐊᓂᖓᓄᑦ ᓄᓇ ᐸᓂᓗᐊᓕᖅᑎᓪᓗᒍ ᐃᒪᖃᑎᐊᕈᓇᐃᖅᑎᓪᓗᒍᓗ ᑕᒪᓇ ᑕᑯᐅᖃᓗᐊᕈᑕᐅᓕᕐᒪᑦ.
- ᑐᖁᕙᓕᐊᓗᐊᓕᖅᑐᑦ ᐱᐊᓚᓕᐅᖏᑎᓪᓗᒋᑦ ᑕᑯᐅᑉ ᓯᕝᔭᖓᑕ ᓴᓗᒪᐃᓗᐊᓕᕐᓂᖓᓄᑦ.
- ᑐᖁᕙᓕᐊᓗᐊᓕᖅᑐᑦ ᐅᖅᓱᐊᓗᐃᑦ ᑯᕕᑕᕐᓂᖏᓐᓄᑦ ᓴᓗᒪᐃᓕᑎᑦᓯᑕᕐᓂᖏᓐᓄᓪᓗ.

ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᑐᕋᒐᕆᔭᐅᔪᑦ

1. ᓄᖑᐸᓕᐊᓂᖓᑦ ᓄᖃᖓᑎᓐᓂᓗᒡᓗᒍ ᐊᒥᓱᓕᓗᐊᖅᑕᐃᓕᓂᖓᓪᓗ ᐊᕋᒍᓐᓄᑦ ᐊᕙᑎᓐᓄᑦ ᐅᕝᕙ 2040.

ᖃᓄᐃᓕᐅᕈᑕᐅᔪᑦ ᐃᑲᔪᕈᑎᒃᓴᖏᓐᓄᑦ ᑐᕋᒐᕆᔭᐅᔪᑦ

ᖃᓄᐃᓕᐅᕈᑎᒃᓴᐅᓂᐊᖅᑐᑦ ᐅᖃᐅᑎᐅᓗᑎᒃ ᐅᓗᕆᐊᓇᖅᓯᓯᒪᓂᖏᑦ ᐊᒻᒪ ᓴᕿᑎᑕᐅᕙᓪᓕᕐᓂᖏᓪᓗ ᑎᖏᐊᕈᓯᑦ ᐅᑯᐊ ᐃᓚᐅᓗᑎᒃ:

- ᐊᑕᐅᓯᐅᔾᔪᒥᒃ ᖃᐅᔨᓴᕐᕕᖃᕐᓗᓂ ᐊᕋᒍᑦ ᐱᐊᓂᒃᓯᒪᔪᑦ ᐃᓱᒪᒋᓗᒋᑦ ᖃᕆᑕᐅᔭᒃᑯᑦ ᐊᒻᒪ ᖃᐅᔨᒪᓂᓗᒡᓗᒋᑦ ᓄᐊᑦ ᐊᒥᐊᕆᑲᒻᒥ ᐃᖏᕋᑕᕐᓂᖏᑦ ᐅᑎᕆᐊᕐᕕᖏᓪᓗ ᐊᒻᒪ ᓄᖃᖏᓪᓚᑕᕐᓂᖏᑦ ᐊᐅᓚᖅᐸᓕᐊᓂᖏᓐᓂ ᐅᑎᖅᐸᓕᐊᓂᖏᓐᓂᓗ.
- ᐃᓱᒪᓕᐅᕐᓗᓂ ᖃᐸᓯᐅᓕᕐᓂᖏᓐᓂᒃ ᖃᓄᐃᓕᐅᕙᓕᐊᓂᖏᓐᓂᒡᓗ.
- ᓴᐳᔭᐅᓂᖏᓐᓂᒃ ᐃᒥᖅᑲᖅᐸᓕᐊᓂᖏᓐᓂᒃ ᐊᐅᓚᖅᐸᓕᐊᓂᖏᑕ ᐊᑉᖁᑎᖏᓐᓂ ᐃᒥᐸᒃᑕᖏᑦ ᓇᒻᑎᐊᖁᑉᓗᒋᑦ ᐊᒻᒪ ᑕᑯᐅᖃᑎᐊᖅᓗᑎᒃ ᑕᓯᑦ.
- ᓇᓗᓇᐃᖅᑕᐅᓗᑎᒃ ᒥᐊᓂᕆᔭᐅᓗᑎᒡᓗ ᓯᓚᐅᑉ ᐊᓯᐊᖑᖅᐸᓕᐊᓂᖓᓄᑦ ᓄᓇᖁᑎᕆᓯᔭᐅᔪᑦ ᐱᐊᓚᖃᖅᑲᖅᐱᖏᑦ ᐃᖏᕋᕙᓕᐊᓂᖏᑦ ᐅᑎᖅᐸᓕᐊᓂᖏᓐᓂ ᐊᐅᓚᖅᐸᓕᐊᓂᖏᓐᓂᓗ.
- ᐱᓕᕆᖃᑎᖃᕐᓗᑕ ᓯᓚᕐᔪᐊᕐᒥ ᐃᑲᔪᖅᑎᐅᔪᓂᒃ ᓯᕗᔾᔭᒥᐅᑦ ᑎᖏᐊᕈᓯᑦ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓂᒃ ᐃᓗᐊᓐᓂ Hᐊᓪᐳᑦ ᒪᓇᐅᔪᖅ ᑕᑯᐅᕐᔪᐊᕐᒥ ᐅᒻᒪᔪᖕᓇᖅᑐᓕᒪᑦ ᐊᕙᑎᖏᓪᓗ ᐅᑭᐅᖅᖅᓯᐅᕐᕕᖏᓐᓂᒃ ᓄᓇᖁᑎᖏᓐᓂᒃ.
- ᐃᓱᒪᒋᐸᓗᒋᒃ ᐊᐅᐸᓗᒃᑐᓂᒃ ᖁᖏᓯᓂᖅᖅᑐᑦ ᑐᓪᓕᕐᔪᐃᑦ ᐊᕙᑎᐅᑉ ᖃᐅᔨᓴᒐᐅᓂᖓᓂ ᐱᓕᕆᐊᕐᓂᒃ ᐅᓗᕆᐊᓇᖅᑐᓯᐅᖅᐸᓕᐊᓂᖏᓐᓂᒃ ᐅᖅᓱᐊᓗᖏᒃ ᑯᕕᔪᖃᕐᓂᖅᐸᑦ ᓄᓇᕐᑯᑎᕆᔭᐅᔪᓄᑦ ᑎᖏᐊᕈᓯᑦ ᑕᐸᑯᐊ ᓄᓇᒋᔭᐅᔪᑦ ᐸᕐᓇᐅᑎᖃᕐᓗᑎᒃ ᐃᓱᒪᒋᔭᐅᑎᐊᕐᓗᑎᑦ ᓯᕝᔭᒥᐅᑦ ᑎᖏᐊᕈᓯᖏ ᐊᕿᐅᒪᑎᐊᕐᒪᖔᑕ.
- ᓇᓂ ᓂᕆᓗᐊᖅᑕᕐᒪᖔᑕ ᑕᐸᑯᐊ ᑐᓪᓕᕐᔪᐃᑦ ᖃᐸᓗᓇᑦ ᓴᓇᔭᖏᓐᓂᒃ ᓂᖃᐅᖏᑐᓐᓂᒃ ᐳᓚᒃᑎᖑᓂᕋᓚᐅᔪᓐᓂᒃ.
- ᖃᐅᔨᓴᕐᓗᓂ ᐊᓯᐊᖑᖅᐸᓕᐊᔪᓐᓂᒃ ᐅᒻᒪᔪᐊᕈᓯᕐᓂᒃ ᐃᒪᓂᓯᐅᖅᑐᓐᓂᒃ ᐅᔾᔨᕐᓇᓗᐊᖅᑐᓐᓂ ᓄᖃᖅᑕᕐᕕᖏᓐᓂ ᐊᐅᓚᖅᐸᓕᐊᓂᖏᓐᓂ ᑎᑭᐸᓕᐊᓂᖏᓐᓄᓪᓗ (ᐅᓇᑐ ᑕᑯᐅᖓ ᕙᓐᑎᐅᑉ) ᐅᑭᐅᖅᓯᐅᕐᕕᖏᓐᓄ

ᖃᓄᖅ ᐃᒡᕕᑦ ᐃᑲᔪᕈᓐᓇᖅᐱᑦ

- ᑐᑭᓯᑲᓂᕈᑎᑕᖃᖅᐳᖅ ᐊᐅᐸᓗᒃᑑᓂᒃ ᐅᖏᓯᓂᖃᖅᑐ ᑐᓪᓕᕐᔪᐊᕐᓄᑦ, ᐅᓗᕆᐊᓇᖅᑐᒥᓯᐅᕐᓂᖏᓐᓄᑦ ᐱᑕᖃᖅᑐᐃᓇᕐᓂᖏᓐᓄᓪᓗ ᐊᒻᒪ ᓄᓇᕐᑯᑎᖏᑕ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᐅᕙᓂ www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html;
- ᐱᓕᕆᑎᐊᕐᓂᕐᒥᒃ ᐊᔪᕈᓐᓇᐃᖅᓴᕐᓗᓐᓂ ᐱᕚᓪᓕᖅᑎᑦᓯᓂᕐᒥᓪᓗ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓂᒃ ᐅᑯᐊ ᐅᒃᑐᑕᐅᓗᑎᒃ:
    - ᐱᓕᕆᖃᑎᖃᕐᓗᓯ ᐊᕙᑎᓕᕆᔨᑦ ᓯᓚᐅᑉ ᐊᔾᔨᖅᐸᓕᐊᓂᖓᓂᒃ ᑲᓇᑕᒻᒥ ᓴᐳᔾᔨᒪᔪᓂᓪᓗ ᑎᒥᐅᔪᓐᓂᒃ ᐱᑕᖃᐃᓐᓇᕐᑯᑉᓗᒋᑦ ᐊᑐᑎᖃᖅᑐᑦ ᐊᕙᑎᑦ; ᐊᒻᒪ
    - ᐱᓕᕆᑕᐃᓕᓗᓯ ᐊᓐᓂᕐᓂᒐᔭᖅᑐᓂᒃ ᑎᒻᒥᐊᕈᓯᕐᓂᒃ ᓄᓇᕐᑯᑎᖏᓐᓂᓪᓗ.
- ᖃᐅᔨᓴᕐᓂᒍᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᑐᓂᓗᒋᑦ ᓴᐳᔾᔭᐅᓯᒪᕕᑦ ᑎᑎᕋᕝᕕᖏᓐᓄᑦ (ᐅᑯᐊᑐᑦ eBird).

ᓇᒧᐊᒃᑕᕐᓂᖏᑦ ᐊᐅᐸᓗᒃᑑᓂᒃ ᖁᖏᓯᓂᖅᖅᑐᑦ ᑐᓪᓕᕐᔪᐃᑦ (ᑯᐊᓂᐅᓪ ᖃᐅᔨᓴᕝᕙᒐᓂᑦ - ᓄᐊᑦ ᐊᒥᐊᕆᑲᓐ ᑎᖕᒥᐊᕈᓯᖕ ᖃᕆᑕᐅᔭᒥ, Rubega et al. 2000)

ᑐᑭᓯᑲᓂᕈᐊᕐᓂᕈᕕᑦ ᐊᔨᓕᐅᕆᑲᓂᕐᓂᕐᒧᑦ ᑐᓴᖅᑎᑦᓯᒥᐊᕐᓗᑎᑦ ᐊᕙᑎᓕᕆᔨᑦ ᓯᓚᐅᑉ
ᐊᔾᔨᖅᐸᓕᐊᓂᖓ ᑲᓇᑕᒻᒥ ᐃᓄᖕᓄᑦ ᑐᑭᓯᒋᐊᕐᕕᒃ ᐅᖃᓗᑎᖓ 1-800-668-6767 (ᑲᓇᑕᒥ ᑭᓯᐊᓂ)
ᐅᕙᓗᓂᑦ 819-997-2800 ᖃᕆᑕᐅᔭᑯᓗᓐᓂᑦ ᑎᑎᕋᕐᓗᑎᑦ ec.enviroinfo.ec@canada.ca.

ᑐᑭᓯᒋᐊᑎᐊᒃᑲᓐᓂᕈᒪᒍᕖᑦ, ᐅᖃᕖᐅᔪᓐᓇᖅᑐᒍᑦ ᓇᖕᒥᓂᖅ ᐅᕙᓂ:
ᐊᕙᑎᓕᕆᔨᖅᔪᐊᒃᑯᑦ ᓯᓚᐅᓪᓗ ᐊᔾᔨᖅᐸᓪᓕᐊᓂᖓᓄᑦ ᑲᓇᑕᒥ (ᐊᕙᑎᓕᕆᔨᖅᔪᐊᒃᑯᖏᓐᓄᑦ) –
ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᒥᒃ ᐱᔨᑦᑎᕋᐃᔩᑦ, ᐅᑭᐅᖅᑕᖅᑑᑉ ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ,
933 ᒥᕝᕕᒃ ᐊᖁᑖ, ᐃᖃᓗᐃᑦ, ᓄᓇᕗᑦ X0AOHO
ᑎᑎᖃᖓᐊᕐᕕᒃ 1870
ᐅᖄᓚᐅᑦ: 867-979-7045
ᖃᕆᑕᐅᔭᒃᑯᑦ ᑐᕌᕈᑎᒐ: hayley.roberts@ec.gc.ca
ᑕᑯᓂᐊᕈᓐᓇᕐᒥᔪᑎ ᒪᓕᒡᓗᒍ ᖃᕆᑕᐅᔭᒃᑯᑦ ᑕᑯᓂᐊᖅᑕᐅᕕᒃᐳᑦ ᑐᑭᓯᒋᐊᑎᐊᑲᓂᕈᒪᒍᕕᑦ ᐅᕙᓂ:
Species at Risk Public Registry (www.sararegistry.gc.ca

ᑐᓂᔨᐅᔾᔪᑦ ᓄᓇᕗᒻᒥ ᐅᒪᔪᓕᓗᐱᔨᑯᓄᑦ

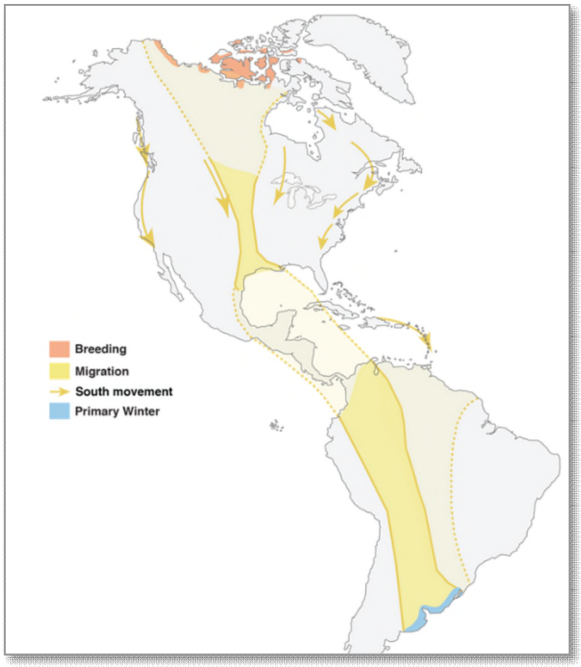
ᑐᑭᓯᐅᒪᔭᕐᑎᑦ: **ᐃᓱᒪᓕᐅᖅᑕᐅᔾᔪᖅ: X**

ᐱᔭᕇᑕᐅᔾᔪᖅ: ᐃᓱᒪᓕᐅᖅᑯᓱᔾᔪᑦ ᓴᓪᒪᒋᔨᐅᓗᓂᓂ ᐊᐅᓪᓕᑎᓂᖅᓗᒍᑦ ᕿᖅᓇᐅᑎ ᓯᓚᕆᐊᖅᓄᑦ ᑲᓇᑕᒥᑦ ᒪᓕᒃᔪᔪᒍ ᒪᓂᕆᑐᖅᑯᑦ ᐅᒪᔪᐃᐸᑦ (Tryngites subruficollis) ᐅᓗᓚᐊᓇ ᖃᑐᒃᑯᓄᑦ ᐱᖅᔪᖅ (SARA).

ᓯᓚᕆᐊᖅᓱᐃᑦ ᓇᑦᑎᖅ ᑯᓛᒥᑦ (Seal River Estuary) ᓂᖅᓱᑎᖅᑲᕐᒥᑦ
ᐱᓪᒪᓇᐅᔾᔪᑦ ᑎᓕᒥᐊᖅᑲᖅᑲᐅᔾᔪᑦ © ᑯᓚᓵᑎᐊᓐ ᐊᖅᑐᓱᒻ (Christian Artuso)

ᖃᓄᐃᓕᓐᐅᑕᐅᓯᒪᔾᔪᑦ

- ᑲᓇᑕᒥᑦ ᑎᑭᐅᑎᓯᒪᓂᕐᒥᑦ ᓯᓚᕆᐊᒃᑯᑦ ᐱᓕᕆᓯᓄᑦ ᓄᓇᐃᑦ ᐊᐃᑲᑐᖅᓯᒪᔾᔪᓂᑦ: ᓄᓇᕗᑦ, ᓄᓇᑦᓯᐊᖅ, ᐊᓪᒪᓗ ᔫᑲᓐ. ᓄᓇᕗᒻᒥ, ᑦ ᐱᓕᕆᓯᓂ ᐊᐃᑲᑐᖅᓯᒪᔾᔪᓂᑐᑦ (ᖃᑎᖅᑎᐅᓂᑦ, ᑭᓴᓪᓕᖅᑎᑦ, ᐊᓪᒪᓗ ᖃᑭᒡᓗᓕᖅᑎᑦ).
- ᑲᓇᑕᒥᑦ ᐅᑭᐅᖅᑕᖅᑐᖅ ᐃᑲᔪᖅᑐᐃᔪᖅ 87% ᖃᓂᑕᓕᒐᓂᑦ ᐅᐊᓕᓇᓕᒐᓂᑦ ᐊᒥᓪᑲᒥᑦ ᐱᐊᓪᓕᐅᖅᑯᐃᐅᓯᓂᑦ.



ᓇᒧᙵᐅᖃᑦᑕᕐᓂᖏᑦ ᓱᒃᓴᕆᐊᑦ (ᑯᐊᓂᐅᓪ ᖃᐅᔨᓴᐃᕙᖕᒥᑦ - ᑎᖕᒥᐊᑦ ᐅᐊᖕᓇᖓᓂᑦ ᐊᒥᐊᓕᒃᐅᑉ ᖃᕆᑕᐅᔾᑯᑦ ᑕᑯᔭᐅᕆᐊᖅᑕᕐᕕᒃ, McCarty et al. 2017)

ᐅᐊᖕᓇᖓᓂᑦ ᐊᒥᐊᓕᒃᐅᑉ ᐱᐊᓛᓕᐅᕐᕕᐅᔪᑦ ᓇᒧᙵᐅᖃᑦᑕᕐᓂᖏᑦ ᓱᒃᓴᕆᐊᑦ (ᐱᔭᐅᔪᖅ J. Rausch, ᑲᓇᑕᒥᑦ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ). ᐆᒪᔪᐃᑦ ᓇᒧᙵᐅᓯᒪᖃᑦᑕᖅᑐᑦ ᐊᑦᓯᒪᐅᖅᑐᓂᑦ ᐱᐊᓛᓕᐅᕐᕕᐅᔪᓂᑦ, ᐱᔭᐅᔪᖅ COSEWIC ᖃᓄᐃᓐᓂᖏᓐᓄᑦ ᐅᓄᑉᑰᖅ (2013).

- ᓱᒃᓴᕆᐊᑦ ᒫᓇ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᐊᔾᔨᐅᖏᑦᑐᒃᑯᑦ ᐃᓱᒪᓘᑎᒋᔭᐅᑉᓗᑎᒃ (2017) *ᐆᒪᔪᐃᑦ ᐅᓗᕆᐊᓇᖅᑐᑏᑦᑐᓄᑦ ᐱᖁᔭᖅ*-ᒥᑦ (SARA). 2012-ᒥᑦ, ᑲᑎᒪᔨᐊᓖᑦ ᖃᓄᐃᙶᓂᖏᓐᓄᑦ ᐅᓗᕆᐊᓴᖅᑐᑏᑦᑐᑦ ᓂᕐᔪᑏᑦ ᑲᓇᑕᒥᑦ (COSEWIC) ᖃᐅᔨᓴᐃᓚᐅᖅᑐᑦ ᓱᒃᓴᕆᐊᓂᒃ ᐊᒻᒪᓗ ᐊᔾᔨᐅᖏᑦᑐᒃᑯᑦ ᐃᓱᒪᓘᑕᐅᑉᓗᑎᒃ ᒪᓕᒃᓘᕆᑦ ᑕᒪᕐᒥᒃ ᑕᐃᒪᙵᓂᑦ ᐊᖏᔫᔪᒃᑯᑦ ᐊᒻᒪᓗ ᒫᓇᓴᖅ ᐊᒥᓲᔪᖕᓃᖅᐸᓪᓕᐊᓂᖏᓐᓄᑦ ᐊᒻᒪᓗ ᐅᓗᕆᐊᓇᖅᑐᒦᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᐊᓯᐅᔾᓂᖏᑦ ᐊᔾᔨᐅᖏᑦᑐᓕᐊᖑᔪᑦ ᐃᓂᒋᖃᑦᑕᖅᑕᖏᑦ ᑕᒪᐃᓐᓂᑦ ᐅᑭᐅᖅᓯᐅᕝᕕᒋᖃᑦᑕᖅᑕᖏᑦ ᐊᒻᒪᓗ ᐅᑎᖅᑕᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᐊᐸᑯᑎᒋᖃᑦᑕᖅᑕᖏᓐᓂᑦ.
- ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᓈᒻᒪᒋᓚᐅᖅᑕᖓ ᐃᓂᓕᐊᖑᔪᖅ ᓱᒃᓴᕆᐊᑦ ᐊᔾᔨᐅᖏᑦᑐᒃᑯᑦ ᐃᓱᒫᓘᑕᐅᓂᖏᓐᓄᑦ SARA-ᑯᑦ 2014-ᒥᑦ.
- ᐱᔭᕆᐊᖃᕐᓂᖓᑐᑦ SARA-ᒥᑦ ᐆᒪᔪᐃᑦ ᑎᑎᕋᖅᓯᒪᔪᑦ ᐊᔾᔨᐅᖏᑦᑐᒃᑯᑦ ᐃᓱᒫᓘᑕᐅᓂᖏᑐᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᓕᐅᓚᐅᖅᑐᑦ (ᐃᓚᒋᔭᐅᔪᖅ ᑎᑎᖅᑲᖅ A). ᓇᐃᓈᖅᓯᒪᔪᖅ ᑎᑎᖅᑲᐅᑎ ᖃᑉᓗᓈᑎᑑᖅᑐᖅ ᐊᒻᒪᓗ ᐃᓄᒃᑎᑑᖅᑐᖅ ᐃᓚᒋᔭᐅᔪᖅ ᑎᑎᖅᑲᖅ B-ᒥᑦ ᐱᔭᐅᔪᖕᓇᖅᑐᖅ.
- ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑏᑦ ᐃᓗᓕᖕᖏᑦᑐᑦ ᖃᓄᐃᑦᑑᓂᖏᓐᓄᑦ ᐱᒪᕆᐅᔪᑦ ᐃᓂᒋᔭᐅᖃᑦᑕᖅᑐᑦ ᐱᔭᕆᐊᖃᖅᑎᑕᐅᖏᒪᑕ ᐆᒪᔪᑦ ᑎᑎᕋᐅᖅᑕᐅᓯᒪᔪᑦ ᐊᔾᔨᐅᖏᑦᑐᒃᑯᑦ ᐃᓱᒫᓘᑕᐅᔪᓄᑦ.

ᐅᖃᖅᑎᖃᕐᓂᖅ:

ᓯᓚᐅᑉ ᐊᕙᑎᖓ ᐊᑭᓐᓂᖓ ᐃᓄᐃᑦ ᖃᐃᖁᑦ ᐃᒥᐊᓗᒃ ᑖᓐᓇ

ᓱᕗᓪᓕᖅᐸᖕᒥᐅᑕᐃᑦ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐃᓅᓯᖃᕐᓂᖅ ᖃᐅᔨᒪᔾᔪᑎᑦ (ᓱᕗᓪᓕᖅ ᐅᒃᑐᕋᐅᑕᐃᑦ)

- ᐆᒃᑐᕋᐅᑕᐃᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ ᓯᕗᓪᓕᖅᐹᖅ ᐊᕙᑦᑐᖅᓯᒪᔪᓂᑦ ᐃᓅᔪᒃᑯᑦ ᖃᒥᕐᕈᓂᖅ
ᑐᓂᐅᖅᖃᐅᑕᐅᓚᐅᖅᑐᖅ ᑕᖅᕿᓐᓇᕐᔪᐊᖅ (ᔭᓄᐊᕆ) 2020-ᒥᑦ ᐊᒻᒪᓗ ᐃᓚᐅᔪᖃᖅᑐᓂ ᐱᓇᓱᒃᑯᓂᒃ
ᑕᒪᐃᓐᓂᑦ ᖃᐸᓗᓈᑎᑑᖅᑐᒥᒃ ᐊᒻᒪᓗ ᐃᓄᒃᑎᑑᖅᑐᒥᒃ ᐅᑯᓇᙵ:
    - ᐃᖃᓗᒃᑑᑦᑎᐊᖅ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᐸᖑᐦᑦ ᐃᓪᓚᑦ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᐅᖅᓱᖅᑑᖅ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᑯᑕᐃᕈᔪᐊᖅ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᐅᒥᖕᒫᑑᖅ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᑕᓗᕐᔪᐊᖅ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᐊᕐᕕᐊᑦ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᖃᒪᓂᑦᑐᐊᖅ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᐊᕿᒡᒋᖅ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᐊᕿᒡᒋᐊᖅ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᐊᕐᕕᖅ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᐃᒐᓗᒃ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᒥᑦᑎᒪᑕᓕᒃ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᐃᕙᖅ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᖃᐅᓯᐃᑦᑐᖅ ᐆᒻᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ
    - ᓄᓇᕗᒻᒥ ᒐᕙᒪᒃᑯᑦ
    - ᓄᓇᕗᑦ ᐆᒪᔪᓕᕆᔾᔪᐊᑦ ᑲᑎᒪᔨᖏᑦ
    - ᓄᓇᕗᑦ ᑐᙵᕕᒃᑯᑦ
    - ᖃᑭᑖᓗᒃ ᐆᒪᔪᓕᕆᔾᔪᐊᒃᑯᑦ
    - ᑭᕙᓪᓕᕐᒥᑦ ᐆᒪᔪᓕᕆᔾᔪᐊᒃᑯᑦ
    - ᖁᑎᕐᒥᐅᑦ ᐆᒪᔪᓕᕆᔾᔪᐊᒃᑯᑦ

- ᐊᕐᕕᐊᑦ ᐆᒪᔪᓕᕆᔨᐊᓖᒃᑯᑦ ᑭᐅᓚᐅᖅᑐᑦ ᐊᕝᕌᓂᕙᒃ (ᕙᕝᐊᕆ) 2020-ᒥᑦ ᐅᖃᐅᓯᒃᓴᖃᓚᐅᕐᖏᓐᓂᖅᑯᑎᒃ.
- ᓄᓇᕗᒻᒥ ᒐᕙᒪᒃᑯᑦ ᓇᓗᓇᐃᓚᐅᖅᑐᑦ ᑲᑉᓚᓐᓇᕕ (ᓄᕕᐱᕆ) 2020-ᒥᑦ ᐃᓱᒪᔫᑎᖃᓚᐅᕐᒋᑦᑐᑦ ᑎᑎᖅᑲᐅᑎᒧᑦ ᓴᖅᑭᑕᐅᓂᐊᖅᑐᖅ ᐃᓄᓗᒃᑖᑦ ᓂᐸᓕᐅᑎᖃᕈᒪᒃᐸᑕ ᐋᖅᑭᒃᑕᐅᓯᒪᔪᒧᑦ.
- ᑎᑎᖅᑲᒧᑦ ᐃᓚᓕᐅᑎᓯᒪᔪᖅ ᑕ ᐃᓗᓕᖅᑲᖅᑐᖅ ᑐᓴᐅᒪᑎᑦᑎᓂᕐᒧᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᓂᒃ ᐊᒻᒪᓗ ᑎᑎᖅᑲᐅᑎᓂᒃ ᑐᓂᔭᐅᓚᐅᖅᑐᑦ ᓯᕗᓪᓕᖅᐹᒥᑦ ᐊᕙᑦᑐᖅᓯᒪᔪᑦ ᐃᓅᔪᒃᑯᑦ ᖃᐅᔨᒪᔾᔪᑎᖃᕐᑎᓪᓗᒋᑦ.

ᓴᖅᑭᑕᐅᓯᒪᓂᐊᖅᑐᖅ (90-ᐅᓪᓗᓂᒃ ᐃᓄᓗᒃᑖᑦ ᓂᐸᓕᐅᑎᖃᕈᒪᒃᐸᑕ ᐋᖅᑭᒃᑕᐅᓯᒪᔪᖅ)

- ᐅᑎᖅᑕᐅᕐᑯᔭᐅᓂᖓᓄᑦ ᑎᑎᖅᑲᖅ ᓴᖅᑮᔭᖅᑎᑕᐅᓚᐅᖅᑐᖅ ᐆᒪᔪᐃᑦ ᐅᓗᕆᐊᓇᖕᓂᕐᒦᑦᑐᑦ ᐊᑎᓕᐅᕐᕕᖕᒧᑦ ᑲᑉᓚᓐᓇᕕᒃ (ᓄᕕᐱᕆ) 17, 2021-ᒥᑦ 90-ᐅᓪᓗᓄᑦ ᐃᓄᓗᒃᑖᑦ ᓂᐸᓕᐅᑎᖃᕈᒪᒃᐸᑕ ᐋᖅᑭᒃᑕᐅᓯᒪᔪᒧᑦ ᐃᓱᓕᓚᐅᖅᑐᓂ ᐊᕝᕌᓂᕙᒃ (ᕙᕝᐊᕆ) 15, 2022-ᒥᑦ. ᐅᐃᒍᕆᐊᖅᑕᐅᓚᐅᖅᑐᖅ ᐊᑐᖅᑕᐅᕙᒃᑐᖅ 60 ᐅᓪᓗᓄᑦ ᓂᐸᓕᐅᑎᖃᕈᒪᒃᐸᑕ ᐋᖅᑭᒃᑕᐅᓯᒪᔪᖅ ᓄᕙᒡᔪᐊᕐᓇᕐᒧᑦ ᑮᓪᓕᖅᑎᑦᑎᓂᐅᔪᖅ ᐱᔾᔪᑎᒋᐸᓗᒍ ᐱᕙᖃᒃᑲᓐᓂᕐᓂᐊᕐᓗᑎᒃ ᑲᑎᖅᓱᐃᓂᕐᒧᑦ ᐃᓱᒪᒋᔭᐅᔪᓂᒃ.

- ᖃᓄᑕᐅᔾᔪᒃᑯᑦ ᑎᑎᖅᑲᖅ ᑐᒃᓯᕋᐅᑕᐅᔪᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ ᐊᒻᒪᓗ ᓇᐃᓈᖅᓯᒪᔪᖅ ᐱᓇᓱᑯᓂᒃ ᐊᓂᓚᔪᖅ ᖃᐸᓗᓈᑎᑑᖅᓯᒪᔪᖅ ᐊᒻᒪᓗ ᐃᓄᒃᑎᑑᖅᓯᒪᔪᖅ ᐊᐅᓪᓚᖅᑎᑕᐅᓚᐅᖅᑐᖅ ᑲᑉᓚᓐᓇᕕᒃ (ᓄᕕᐱᕆ) 18, 2021-ᒥᑦ ᑎᑎᖅᑲᐅᑎᑖᓚᐅᖅᑐᓄᑦ ᓯᕗᓪᓕᖅᐹᖅ ᐊᕙᑦᑐᖅᓯᒪᔪᒃᑯᑦ ᖃᐅᔨᒪᔾᔪᑎᒥᑦ ᐊᒻᒪᓗ:

- ᖅᑎᕐᓂᐅᓂᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔾᖃᑎᒌᑦ,
- ᑭᕙᓪᓕᕿᒥᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔾᖃᑎᒌᑦ
- ᖃᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔾᖃᑎᒌᑦ
- Hᐋᒻᓚᒃᑯᑦ ᒥᑦᑎᒪᑕᓕᒃ
- Hᐋᒻᓚᒃᑯᑦ ᖃᐅᓯᑦᑐᖅ
- Hᐋᒻᓚᒃᑯᑦ ᐊᐅᓯᐃᑦᑐᖅ
- Hᐋᒻᓚᒃᑯᑦ ᐃᖃᓗᒃᑑᑦᑎᐊᖅ
- Hᐋᒻᓚᒃᑯᑦ ᐅᖅᓯᖅᑑᖅ
- Hᐋᒻᓚᒃᑯᑦ ᑰᒑᕐᔪᒃ
- Hᐋᒻᓚᒃᑯᑦ ᑕᓗᕐᔪᐊᖅ
- Hᐋᒻᓚᒃᑯᑦ ᐊᕐᕕᐊᑦ
- Hᐋᒻᓚᒃᑯᑦ ᖃᒪᓂᑦᑐᐊᖅ
- Hᐋᒻᓚᒃᑯᑦ ᐃᒡᓗᓕᒑᕐᔪᒃ
- Hᐋᒻᓚᒃᑯᑦ ᑲᖏᖅᖠᓂᖅ
- Hᐋᒻᓚᒃᑯᑦ ᓇᐅᔾᔾᑦ
- Hᐋᒻᓚᒃᑯᑦ ᑎᑭᕋᕐᔪᐊᖅ

- ᑎᑎᖅᑲᒧᑦ ᐃᓚᓕᐅᑎᓯᒪᔪᖅ ᑕ ᐃᓗᓕᖃᖅᑐᖅ ᑐᓴᐅᒪᑎᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᐃᓄᓗᒃᑖᑦ ᓂᐸᓕᐅᑎᖃᕈᒪᔪᑦ ᐋᖅᑭᒃᓯᒪᔪᒧᑦ (ᓄᑖᙳᖅᑎᖅᑕᐅᓚᐅᖅᑐᖅ ᐱᓐᓂᑯᓄᑦ ᐊᓕᓚᔪᖅ, ᖃᕆᑕᐅᔭᒃᑯᑦ ᑎᑎᖅᑲᐃᑦ)

ᓯᕗᓪᓕᐊᒍᑏᑦ:

- ᑲᓇᑕᒥᑦ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᔪᓕᕆᔨᒃᑯᑦ ᓴᖅᑭᑦᑎᓚᐅᖅᑐᑦ ᐅᑎᖅᑎᑕᐅᔭᕆᐊᖃᕐᓂᖓ ᑎᑎᖅᑲᖅ ᐆᒪᔪᐃᑦ ᐅᓗᕆᐊᓇᖅᑐᖏᑦᑐᑦ ᐊᑎᓕᐅᕐᕕᖓᓄᑦ ᑭᙳᓪᓕᖅᐹᒃᑰᖓᐸᓗᒍ.
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PROPOSED FINAL

Species at Risk Act
Management Plan Series

Management Plan for the Buff-breasted Sandpiper (*Tryngites subruficollis*) in Canada

Buff-breasted Sandpiper

2022

Government of Canada
Gouvernement du Canada

Canada

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For copies of the management plan, or for additional information on species at risk, including the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Status Reports, residence descriptions, action plans, and other related recovery documents, please visit the Species at Risk (SAR) Public Registry[1].

Cover illustration: Buff-breasted Sandpiper at Seal River Estuary Important Bird Area by © Christian Artuso

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[1] www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html

Preface

The federal, provincial, and territorial government signatories under the Accord for the Protection of Species at Risk (1996)[2] agreed to establish complementary legislation and programs that provide for effective protection of species at risk throughout Canada. Under the *Species at Risk Act* (S.C. 2002, c.29) (SARA), the federal competent ministers are responsible for the preparation of management plans for listed species of special concern and are required to report on progress within five years after the publication of the final document on the SAR Public Registry.

The Minister of Environment and Climate Change and Minister responsible for the Parks Canada Agency is the competent minister under SARA for the Buff-breasted Sandpiper and has prepared this management plan, as per section 65 of SARA. To the extent possible, it has been prepared in cooperation with other federal government departments, Provinces/Territories, Wildlife Management Boards, and Aboriginal organizations as per section 66(1) of SARA.

Success in the conservation of this species depends on the commitment and cooperation of many different constituencies that will be involved in implementing the directions set out in this plan and will not be achieved by Environment and Climate Change Canada and the Parks Canada Agency, or any other jurisdiction alone. All Canadians are invited to join in supporting and implementing this plan for the benefit of the Buff-breasted Sandpiper and Canadian society as a whole.

Implementation of this management plan is subject to appropriations, priorities, and budgetary constraints of the participating jurisdictions and organizations.

[2] www.canada.ca/en/environment-climate-change/services/species-risk-act-accord-funding.html#2

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A draft of this management plan was presented during a workshop on October 10, 2019 in Ottawa, Canada. Thanks are extended to participants to this workshop: Isadora Angarita-Martínez (CAFF), Arne Lesterhuis and Rob Clay (Manomet Inc.), Brad Andres and Richard Lanctot (USFWS), as well as members of ECCC's Shorebird Technical Committee.

Acknowledgement and thanks are given to all other parties that provided advice and input used to help inform the development of this management plan including provincial and territorial governments, other federal departments (e.g., Department of National Defence), landowners, citizens, and stakeholders.

The development of this management plan was largely informed by the Conservation Plan for the Buff-breasted Sandpiper (*Tryngites subruficollis*) published in 2010 by Richard Lanctot and colleagues. On October 23, 2019, experts met in Panama City, Panama to lay the groundwork for a full life-cycle conservation plan for the Buff-breasted Sandpiper. The Panama City workshop was an opportunity to align conservation targets and strategies between the Management Plan for the Buff-breasted Sandpiper (*Tryngites subruficollis*) in Canada and the full life-cycle conservation plan.

Executive Summary

The Buff-breasted Sandpiper (*Calidris subruficollis,* formerly *Tryngites subruficollis*) is an arctic-breeding shorebird. The species nests on the upland coast of the Yukon, Northwest Territories, Nunavut and Alaska before migrating along the Midcontinental flyway to the coast of Argentina, Uruguay, and Brazil where birds stay during the boreal winter.

The species was assessed as Special Concern by COSEWIC in 2012 and listed under Schedule 1 of the *Species at Risk Act* in 2017. Globally, the IUCN Red List has categorized the species as Near Threatened since 2004. As a long-distance migrant, the Buff-breasted Sandpiper is protected under the *Migratory Birds Convention Act* in Canada and the *Migratory Bird Treaty Act* in the United States.

The Buff-breasted Sandpiper population is estimated at 56,000 individuals (range: 35,000–78,000; Lanctot et al. 2010), 75% of which are thought to breed in Canada (Donaldson et al. 2000). After massive declines during the early 1900s caused by hunting in Canada and the United States, the species appears to be still declining today. The scale of the decline is uncertain due to the challenges in surveying the species and the current lack of data.

The exact causes of this decline are unknown. A combination of factors resulting in habitat loss or poor habitat quality on the migratory and wintering grounds are likely driving the decline. Those factors include conversion of natural areas to agriculture, pesticide exposure, wind turbines, resource extraction, and climate change.

The management objective for the Buff-breasted Sandpiper is to maintain the population size of the species over a period of 10 years ranging from 2026 to 2036. The baseline for this management objective will be a more reliable and accurate population estimate obtained within the next 5 years (2021–2026).

The broad strategies identified in this management plan aim to conserve habitat, monitor the population and distribution of the species, and understand characteristics of non-breeding habitats through research. Much of this habitat is outside of Canada, so supporting international conservation and research efforts should play a key role in Canada’s conservation strategies for the species.

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1. COSEWIC* Species Assessment Information

Date of Assessment: May 2012

Common Name (population): Buff-breasted Sandpiper

Scientific Name: *Tryngites subruficollis***

COSEWIC Status: Special Concern

Reason for Designation:
The Canadian Arctic supports about 87% of the North American breeding range of this shorebird and about 75% of its global population. The species was once common and perhaps even abundant historically, but it suffered severe declines stemming from intensive market hunting in the late 1800s and early 1900s. By the 1920s, it was thought to be at the brink of extinction. Its population has grown since hunting was banned in North America, but numbers remain much lower than those before hunting began. There is evidence for population decline in recent decades, and many conservation organizations consider the species to be of concern throughout its range. However, this species is difficult to monitor effectively, and data necessary to estimate population trends are currently lacking. Outside the breeding period, loss and degradation of its specialized grassland habitat, both on its wintering grounds in South America and along its migration routes, are believed to pose the most significant threats.

Canadian Occurrence:
Yukon, Northwest Territories, Nunavut, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec

COSEWIC Status History:
Designated Special Concern in May 2012.

* COSEWIC (Committee on the Status of Endangered Wildlife in Canada)

** The scientific name of the Buff-breasted Sandpiper (*Calidris subruficollis*) changed in 2013 (Chesser et al. 2013), after COSEWIC assessment in May 2012. Documents developed under the *Species at Risk Act* (SARA) must follow the species nomenclature used in Schedule 1 of SARA.

2. Species Status Information

An estimated 75% of the global Buff-breasted Sandpiper population breeds in Canada (Donaldson et al. 2000). In Canada, the species was assessed as Special Concern by COSEWIC in 2012 and listed as Special Concern under Schedule 1 of the *Species at Risk Act* (S.C. 2002, c. 29) in 2017. The Buff-breasted Sandpiper is not listed under any provincial species at risk legislation. The species has been identified as a priority

species in four of the twelve Bird Conservation Regions[3]. A recently updated assessment of shorebirds in Canada deemed Buff-breasted Sandpiper to be of High Concern in Canada based on the probable decline and threats to the species (Hope et al. 2019).

Table 1. Summary of national and provincial or state NatureServe ranks for the Buff-breasted Sandpiper where it occurs in North America (NatureServe, 2019)

Global (G) Rank	National (N) Ranks	Sub-national (S) Ranks
G4	Canada N2N4B, N4N5M	Alberta (S3M), British Columbia (SUM), Labrador (SNA), Manitoba (S1S2M), Newfoundland Island (SNA), Northwest Territories (S2S4B), Nunavut (S3B, S3M), Ontario (SNA), Quebec (S3M), Saskatchewan (S4M), Yukon (S1B)
	United States N4B	Alabama (SNRM), Alaska (S2B), Arkansas (SNA), California (SNA), Colorado (SNA), Connecticut (SNA), Delaware (SNA), Florida (S2M), Georgia (SNRN), Illinois (SNA), Indiana (S3M), Iowa (S3N), Kansas (SNA), Kentucky (SNA), Louisiana (S3M), Maine (SNA), Maryland (SNA), Massachusetts (S1N), Michigan (SNRN), Minnesota (SNRM), Mississippi (SNA), Missouri (SNA), Nebraska (S2N), New Jersey (S4N), New York (SNRN), North Carolina (SNA), North Dakota (SNA), Ohio (SNA), Oklahoma (S3M), Pennsylvania (S2M), Rhode Island (S1N), South Carolina (SNA), South Dakota (SNA), Tennessee (S3N), Texas (S2S3), Virginia (SNA), Washington (SNA), Wisconsin (S3N), Wyoming (S4N)

National (N) and Subnational (S) NatureServe alphanumerical ranking: 1 – Critically Imperiled, 2 – Imperiled, 3 – Vulnerable, 4 – Apparently Secure, 5 – Secure, NR – Unranked, NA – Not Applicable, U – Unrankable. Occurrence definitions: B – Breeding, M – Migrant. The N2N4B range indicates the range of uncertainty about the status of the species.

The global NatureServe rank is G4 – Apparently Secure (reviewed in 2016; NatureServe 2019; see Table 1 for additional sub-rankings) and the IUCN Red List has categorized the species as Near Threatened since 2004 when its status was upgraded from Lower Risk (BirdLife International 2017). The species was listed in 1999 in Appendix I and II of the UN Convention on the Conservation of Migratory Species of Wild Animals, which prohibits hunting of the species in its wintering range[4]. The Buff-breasted Sandpiper is also protected under the *Migratory Birds Convention Act, 1994* which protects all individuals of the species as well as its nest and eggs on federal and non-federal lands.

[3] Those Bird Conservation Regions are the Arctic Plains and Mountains, the Lower Great Lakes/St. Lawrence Plain, the Prairie Potholes, and the Taiga Shield and Hudson Plains.

[4] This document refers to the wintering range as the species' range occupied during the northern hemisphere's winter months (December to March).

The Buff-breasted Sandpiper is a Species of High Concern in the United States. (USSCP, 2016). In South America, the species is considered Vulnerable in Brazil, Threatened in Paraguay (Ministerio de Ambiente y Desarrollo Sostenible, 2019), a Priority Species for Conservation in Uruguay, Threatened in Argentina, and Highly Threatened in Colombia (Johnston-González et al. 2010).

3. Species Information

3.1. Species Description

The Buff-breasted Sandpiper is a medium-sized, buff-coloured (light brownish yellow), arctic-breeding shorebird. Males weigh about 70 g and females weigh about 55 g (McCarty et al. 2017). They are marked with dark brown spots or streaks along the crown and sides of the breast, and narrow, teardrop shaped, dark-brown streaks edged in buff along the feather shafts on their back, scapulars[5], upper tail, and wing coverts[6] (COSEWIC 2012). Male, female, and juvenile plumage is similar, but the dark spots on the undersides of the outer primaries are larger in males than in females who have larger spots than juveniles (McCarty et al. 2017). The species has yellow legs and a black bill.

Buff-breasted Sandpipers are the only North American shorebird with an exploded lek[7] mating system (Lanctot et al. 1998). In an exploded lek, males are further away from one another than they would be in a classic lek. Because of density-dependent effects[8] associated with its unusual lek-mating system, further reductions in the species' abundance could accelerate population collapse if males and females cannot locate each other in their expansive breeding grounds. However, at present, there is no indication that genetic diversity declined as a result of historic reductions in population size (Lounsberry et al. 2013, 2014).

3.2. Species Population and Distribution

Distribution

The Buff-breasted Sandpiper breeds in low densities in the tundra along the coastline of Alaska and Canada from Point Barrow, Alaska through the Northwest Territories and to the Boothia Peninsula, Nunavut and as far north as Melville, Bathurst, and Devon Islands, Nunavut (Figure 1; COSEWIC 2012; McCarty et al. 2017). There are also small populations (280-650 individuals) breeding in Russia on Wrangel Island and the

[5] Scapulars are the feathers at the top of the wing when the bird is at rest.
[6] Wing coverts are the feathers that cover the wing's flight feathers.
[7] A lek is an aggregation of male animals gathered to engage in competitive displays, lekking, to entice visiting females, which are surveying prospective partners to mate.
[8] Density-depended effects occur when a change in the size of a group influences, either positively or negatively, the conditions of habitat available for individual. For example, a lower number of Buff-breasted Sandpipers (lower density) might result in a decreased ability of individuals to find a mate in a given area, especially if the mating area is widespread.

Chukotski Peninsula (Lappo et al. 2012). The Buff-breasted Sandpiper breeds in low densities; their local distribution is patchy and variable both between and within years—one Alaskan study found only 10% of leks to be present in all three consecutive years of the study (Lanctot and Weatherhead 1997). There is little to no breeding site fidelity (less than 10% of adults return; Pruett-Jones 1988; Lanctot and Weatherhead 1997) and males may display at multiple leks across the entire breeding range (Lanctot et al. 2016).

The Buff-breasted Sandpiper migrates south mainly following the Midcontinental flyway, through the prairies and plains, where they make multiday stops in locations such as southern Saskatchewan, in the Kansas Flint Hills, southcentral Texas and the Gulf of Mexico coast in the United States (Lanctot et al. 2016; Lyons et al. 2019; Tibbitts et al. 2019). Some juveniles frequent the Atlantic coast during southbound migration, with vagrant birds also migrating on the Pacific and Atlantic coasts (McCarty et al. 2017; see Figure 1). Then, they follow the Midcontinental Amazonia/Pantanal flyway, stopping in Bolivia and Paraguay (Lanctot et al. 2016; Tibbitts et al. 2019) before arriving on their wintering grounds on the coast of central Argentina, southeast Uruguay, and southeast Brazil (Lanctot et al. 2002; McCarty et al. 2017). The wintering grounds overlap with the Southern Cone Grasslands, also known as the pampas. On their northbound migration, birds stop in the Llanos plains of Colombia and Venezuela before crossing the Gulf of Mexico. This region therefore represents an important stopover site on migration. Fall and spring migrants take similar routes, but in the fall, juveniles migrating south may follow the Atlantic and Pacific coasts leading to a more dispersed route in the fall than spring (COSEWIC 2012). In contrast to the breeding grounds, birds show fairly high wintering site fidelity (55% to 64% return rate), with males being somewhat more likely to emigrate than females (Almeida 2009).

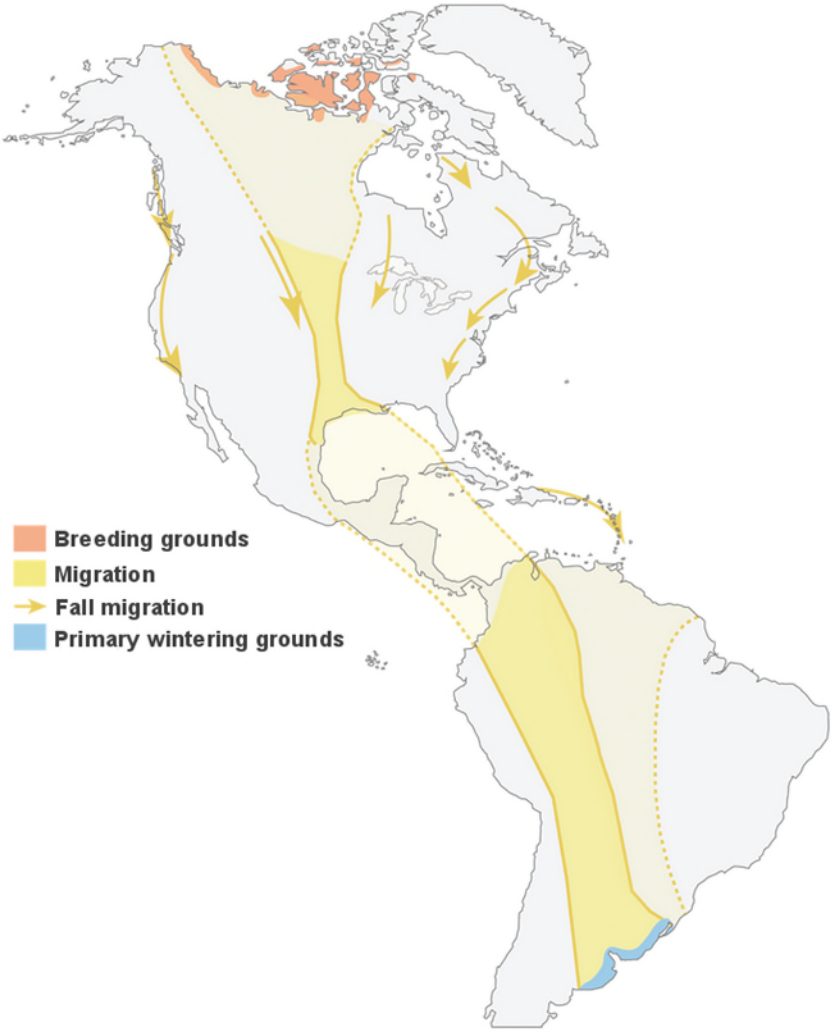

Figure 1. Distribution of the Buff-breasted Sandpiper in the Americas. Shaded yellow areas are migration corridors where the species is found at low densities; the species funnels through areas represented in dark yellow (from Cornell Lab - Birds of North America's Website, McCarty et al. 2017).

Population Size and Trends

Based on surveys done on stopover sites in the United States, the Buff-breasted Sandpiper population is estimated to include 56,000 individuals (range of 35,000 to 78,000; Lanctot et al. 2010); earlier estimates were between 15,000 and 30,000 (Morrison et al. 2006), but likely were underestimates (Lanctot et al. 2010). The current estimate of 56,000 individuals is based on counts in the Rainwater Basin, Nebraska, an important stopover location[9] during northbound migration (Jorgensen et al. 2008). The uncertainty of the current population estimate depends on turnover rates estimated at stopover sites. Stopover duration at the Rainwater Basin is now known to be 48 hours

[9] Lanctot et al. (2010) defined key conservation sites as areas where at least 0.2% of the population (about 100 birds) occur regularly through time.

or less (McCarty et al. 2015), suggesting actual population size may be higher than previously estimated (Farmer and Durbian 2006). In addition, recent tracking data suggests that some birds bypass the Rainwater Basin, again potentially increasing population size estimates (R.B. Lanctot pers. comm. 2020). It should be noted that surveys of Buff-breasted Sandpipers on wintering grounds do not cumulatively support a population estimate of more than 50,000 birds. This suggests either a smaller population than estimated at the Rainwater Basin, or the existence of unknown wintering sites with large concentrations of birds (A.J. Lesterhuis, pers. comm. 2020; see Appendix B for a summary of population estimates).

Arctic Program for Regional and International Shorebird Monitoring (PRISM) surveys conducted between 1997 and 2007 across parts of Arctic Alaska yielded a population size estimate of 42,839 individuals for the areas surveyed at that time (95% range = 5,856–79,260; Bart and Smith, 2012). PRISM surveys conducted on the breeding grounds in Arctic Canada between 2010 and 2017 yielded much higher densities than expected based on conventional assumptions of the species' distribution and abundance. The population estimates arising from these surveys are many times larger than the currently proposed range-wide estimate of 56,000 (Lanctot et al. 2010). At the time of developing this management plan, these results are being carefully evaluated to ensure that they are accurate (P.A. Smith, pers. comm. 2020). PRISM estimates for the Buff-breasted Sandpiper present unique challenges because the species breeds at highly variable densities, due to its lek mating system, and they inhabit dry upland areas that are surveyed less intensively than the wetlands area used by many species (Lanctot et al. 2010; COSEWIC 2012). These new PRISM analyses will provide important information on abundance, distribution and habitat use for Buff-breasted Sandpipers. Surveys such as the North American Breeding Bird Survey (BBS) and Audubon Christmas Bird Count (CBC) provide very limited insight on this species.

Estimating trends is difficult because the species occurs in unpredictable locations on the breeding grounds, and appears to adjust when, where and how long it uses sites on both the migration and wintering grounds depending on environmental conditions (Lanctot et al. 2010). Historically, the Buff-breasted Sandpiper numbered in the hundreds of thousands. By the end of the 19th century, extensive commercial hunting during migration, and to a lesser extent on the wintering grounds, resulted in population numbers approaching dangerously low levels (McCarty et al. 2017; Lanctot et al. 2002, 2010). When the *Migratory Birds Convention Act* in 1917 and *Migratory Bird Treaty Act* in 1918 came into force, hunting pressure on the population declined, likely slowing the dramatic population decline (Lanctot et al. 2002, 2010; COSEWIC 2012).

Following hunting regulations, it is unknown whether the Buff-breasted Sandpiper population recovered or remained at low levels between the 1920s and the 1970s. The population is thought to have continued to decline in the recent decades (Lanctot et al. 2002, 2010). Observers on the migratory and wintering grounds alike have anecdotally reported declining numbers since at least the 1980s (Lanctot et al. 2002, 2010; COSEWIC 2012). For example, on the wintering grounds, there were 1,000 to 2,000 individuals during the winters of 1973 and 1974, with roosts of 600 to 1,000 individuals at Estancia Medaland, Argentina (Myers 1980). When the survey was

repeated in 1996–2000, there were rarely more than 100 birds sighted and never more than 94 individuals together (although there was a flock of ~300 sighted outside the study area) (Isacch and Martínez 2003a, 2003b). Estancia Medaland was declared a Western Hemisphere Shorebird Reserve Network (WHSRN) site of Regional Importance in 2018, in part based on counts of 1,010 Buff-breasted Sandpipers recorded at the site in 2017 (Martínez-Curci et al. 2018). The extent to which birds move between sites within a year is unknown but their numbers often vary substantially between years and even within the season, so short-term studies should be interpreted with caution (Myers 1980; Pruett-Jones 1988; Lanctot and Weatherhead 1997; Lanctot et al. 2002, 2016; but see Almeida 2009).

3.3. Needs of the Buff-breasted Sandpiper

Breeding

The Buff-breasted Sandpiper is an upland species, preferring to breed on the drier, elevated ridges of the tundra, rather than the wet, polygon lowlands as is common for many other shorebirds. In the spring, males begin foraging and displaying on the first snow-free areas, usually along bluffs and ridges bordering rivers (Pruett-Jones 1988; Lanctot and Weatherhead 1997). As the snow melts, males display on leks in moist graminoid meadow with many clumps of grasses (20 cm tall, 25-50 cm diameter; Lanctot et al. 2010; COSEWIC 2012; McCarty et al. 2017). Display areas typically are non-patterned ground, with few of the geometric patterns created by permafrost that are common in many arctic areas. Buff-breasted Sandpipers have an exploded lek mating system, with groups of 2-20 (average 2.6) males displaying together in a lek (Lanctot and Weatherhead 1997). Males typically display at one lek for only a short time, apparently moving between leks based on the number of available females (Lanctot and Weatherhead 1997). This causes lek location to be unstable within and across years. Solitary males may also display near the nest while females are fertile; this may be a more reliable tactic later in the season when there are fewer available females (Prevett and Barr 1976; Pruett-Jones 1988; but see Lanctot and Weatherhead 1997). Males leave breeding grounds following the initiation of nesting by females (Sutton 1967; Pitelka et al. 1974; McCarty et al. 2017).

Females nest away from lek sites (270-830 m; Pruett-Jones 1988), in well-drained grassy tundra with sedge grass clumps or moss-willows or moist sedge–graminoid meadows (Sutton 1967; Prevett and Barr 1976; Lanctot et al. 2010; McCarty et al. 2017). During incubation breaks, females forage in areas with little vegetation, often along streams. They may also use habitats with a distinct net-like pattern across the ground caused by permafrost freeze/thaw cycle. After their eggs hatch, females forage with their brood in wetter areas, often along streams in emergent vegetation (Lanctot et al. 2010). Unlike many other species, the Buff-breasted Sandpiper remains in the uplands throughout brood rearing (McCarty et al. 2017).

Migration

Historically, during the North American portion of migration, Buff-breasted Sandpipers would have congregated in the short-grass prairies, where fire and grazing bison kept

vegetation short (Jorgensen et al. 2007). These prairies are now largely taken over by agriculture. Currently, migrating Buff-breasted Sandpipers congregate in surrogate short-grass areas, like newly planted crops, pastures, plowed fields, sod farms, golf courses, cemeteries, airports, freshly cut hayfields, lawns, and fallow or short-growth agricultural fields (Lanctot et al. 2010; COSEWIC 2012; McCarty et al. 2017). The species is attracted to “relatively moist” fields and, especially in drier year, to recently watered fields (Lanctot et al. 2010 citing D. Newstead). In the Rainwater Basin, Nebraska, an important stopover site, migrating birds congregate in corn or soybean fields, with a strong preference for fields where soybean had been harvested on the previous year (Jorgensen et al. 2007). Buff-breasted Sandpipers tend to use cornfields where stalks are cut at the base and less than 10 cm in height (Jorgensen et al. 2007). The birds spend about 50% of their time at migratory stopover sites foraging (McCarty et al. 2009) and prefer the foraging site to be near (but not in) a wetland (Jorgensen et al. 2007), which they use for bathing and drinking (McCarty et al. 2009). On the Gulf Coast, staging Buff-breasted Sandpipers rely heavily on commercial sod and other forms of agriculture to a lesser extent (Stone et al. 2019). In South America, migrating Buff-breasted Sandpipers primarily use short-grass areas along rivers and wetlands. They are also found in harvested or newly planted agricultural fields (particularly sugar cane and rice), sand bars, or other short-grass habitats (Lanctot et al. 2002, 2010).

Non-breeding

Buff-breasted Sandpipers winter in the Pampas biome and show high fidelity to previous wintering sites (Isacch and Martinez 2003b). As during migration, they prefer grasslands where vegetation is 2 to 5 cm tall (Lanctot et al. 2002, 2004). Over winter, the birds rely primarily on intensively grazed pastureland or areas with flooding events, high salinity, and naturally short vegetation (Isacch and Martínez 2003b). Alternatively, the species relies on soybean or rice agricultural fields (Lanctot et al. 2002, 2004). Habitat tracking of wintering birds in the Samborombón Bay shows they rely on a combination of Pampas grassland (day) and salt-tolerant coastal (night) areas in Argentina (Castresana et al. 2019). In the Estancia Medaland, Buff-breasted Sandpipers move to freshwater swamps at night (J.P. Isacch, pers. comm. 2019)

Diet

Buff-breasted Sandpipers feed on insects, with some seeds and plant material. They also eat aquatic zooplankton, particularly during the fall after brood-rearing (McCarty et al. 2017). Their exact diet is poorly documented and likely varies between sites. However, on the wintering grounds, birds preferentially eat adult and larval beetles, ants, flies, spiders and earthworms (Isacch et al. 2005). Although most other arctic shorebirds eat worms, insect larvae, and marine zooplankton during brood rearing in the wet lowlands, the Buff-breasted Sandpiper remains in the uplands throughout brood rearing and therefore does not feed heavily on these aquatic invertebrates (McCarty et al. 2017).

4. Threats

4.1. Threat Assessment

The Buff-breasted Sandpiper threat assessment is based on the IUCN-CMP (World Conservation Union–Conservation Measures Partnership) unified threats classification system (Salafsky et al. 2008). This threat assessment was conducted in June 2019. Threats are defined as the proximate activities or processes that have caused, are causing, or may cause in the future the destruction, degradation, and/or impairment of the entity being assessed (population, species, community, or ecosystem) in the area of interest (global, national, or subnational). Limiting factors are not considered during this assessment process. Historical threats, indirect or cumulative effects of the threats, or any other relevant information that would help understand the nature of the threats are presented in the Description of Threats section.

Table 2. Threat calculator assessment.

Threat #	Threat Description	Impact[a]	Scope[b]	Severity[c]	Timing[d]
1	Residential and commercial development	Negligible	Pervasive (71-100%)	Negligible (<1%)	High (Continuing)
1.1	Housing and urban areas	Negligible	Pervasive (71-100%)	Negligible (<1%)	High (Continuing)
1.3	Tourism and recreation areas	Unknown	Small (1-10%)	Unknown	High (Continuing)
2	Agriculture and aquaculture	Unknown	Pervasive (71-100%)	Unknown	High (Continuing)
2.1	Annual and perennial non-timber crops	Unknown	Pervasive (71-100%)	Unknown	High (Continuing)
2.2	Wood and pulp plantations	Not Calculated (outside assessment timeframe)	Negligible (<1%)	Negligible (<1%)	Low (Possibly in the long term, >10 yrs)
2.3	Livestock farming and ranching	Not a Threat	Large (31-70%)	Neutral or Potential Benefit	High (Continuing)
3	Energy production and mining	Medium-Low	Large - Restricted (11-70%)	Moderate (11-30%)	High (Continuing)
3.1	Oil and gas drilling	Low	Small (1-10%)	Slight (1-10%)	High (Continuing)
3.2	Mining and quarrying	Low	Small (1-10%)	Slight (1-10%)	High (Continuing)
3.3	Renewable energy	Medium - Low	Large - Restricted (11-70%)	Moderate (11-30%)	High (Continuing)
4	Transportation and service corridors	Negligible	Large - Restricted (11-70%)	Negligible (<1%)	High (Continuing)
4.2	Utility and service lines	Negligible	Large - Restricted (11-70%)	Negligible (<1%)	High (Continuing)

Threat #	Threat Description	Impact[a]	Scope[b]	Severity[c]	Timing[d]
5	Biological resource use	Negligible	Negligible (<1%)	Extreme (71-100%)	Moderate (Possibly in the short term, < 10 yrs)
5.1	Hunting and collecting terrestrial animals	Negligible	Negligible (<1%)	Extreme (71-100%)	High (Continuing)
7	Natural system modifications	Low	Pervasive-Large (31-100%)	Slight (1-10%)	High (Continuing)
7.1	Fire and fire suppression	Low	Pervasive - Large (31-100%)	Slight (1-10%)	High (Continuing)
7.2	Dams and water management/use	Negligible	Pervasive (71-100%)	Negligible (<1%)	High (Continuing)
7.3	Other ecosystem modifications	Unknown	Pervasive (71-100%)	Unknown	High (Continuing)
8	Invasive and problematic species, pathogens and genes	Negligible	Large (31-70%)	Negligible (<1%)	High (Continuing)
8.1	Invasive non-native/alien plants and animals	Negligible	Large (31-70%)	Negligible (<1%)	High (Continuing)
8.2	Problematic native plants and animals	Not a Threat	Restricted (11-30%)	Neutral or Potential Benefit	High (Continuing)
9	Pollution	Unknown	Pervasive (71-100%)	Unknown	High (Continuing)
9.3	Agricultural and forestry effluents	Unknown	Pervasive (71-100%)	Unknown	High (Continuing)
11	Climate change	Low	Pervasive (71-100%)	Slight (1-10%)	High (Continuing)
11.1	Ecosystem encroachment	Not Calculated (outside assessment timeframe)	Large (31-70%)	Unknown	Low (Possibly in the long term, >10 yrs)
11.4	Changes in precipitation and hydrological regimes	Unknown	Pervasive (71-100%)	Unknown	Moderate (Possibly in the short term, <10 yrs)
11.5	Severe / Extreme Weather Events	Low	Pervasive (71-100%)	Slight (1-10%)	High (Continuing)

[a] **Impact** – The degree to which a species is observed, inferred, or suspected to be directly or indirectly threatened in the area of interest. The impact of each threat is based on Severity and Scope rating and considers only present and future threats. Threat impact reflects a reduction of a species population or decline/degradation of the area of an ecosystem. The median rate of population reduction or area decline for each combination of scope and severity corresponds to the following classes of threat impact: Very High (75% declines), High (40%), Medium (15%), and Low (3%). Unknown: used when impact cannot be determined (e.g., if values for either scope or severity are unknown); Not Calculated: impact not calculated as threat is outside the assessment timeframe (e.g., timing is insignificant/negligible or low as threat is only considered to be in the past); Negligible: when scope or severity is negligible; Not a Threat: when severity is scored as neutral or potential benefit.

[b] **Scope** – Proportion of the species that can reasonably be expected to be affected by the threat within 10 years. Usually measured as a proportion of the species' population in the area of interest. (Pervasive = 71–100%; Large = 31–70%; Restricted = 11–30%; Small = 1–10%; Negligible < 1%).

[c] **Severity** – Within the scope, the level of damage to the species from the threat that can reasonably be expected to be affected by the threat within a 10-year or three-generation timeframe. Usually measured as the degree of reduction of the species' population. (Extreme = 71–100%; Serious = 31–70%; Moderate = 11–30%; Slight = 1–10%; Negligible < 1%; Neutral or Potential Benefit ≥ 0%).

[d] **Timing** – High = continuing; Moderate = only in the future (could happen in the short term [< 10 years or 3 generations]) or now suspended (could come back in the short term); Low = only in the future (could happen in the long term) or now suspended (could come back in the long term); Insignificant/Negligible = only in the past and unlikely to return, or no direct effect but limiting.

4.2. Description of Threats

The exact causes of the decline of Buff-breasted Sandpipers are unknown. Multiple factors likely reduce the suitability or availability of stopover and wintering sites, including fire suppression, resource extraction, conversion of short-grass prairies to agricultural land, and pesticide contamination. Habitat loss as a result of these factors likely are the most immediate threat to the species. Habitat loss from wind farm encroachment and direct mortality from collisions with wind turbines at important stopover and wintering sites are significant threats to the Buff-breasted Sandpiper. A large proportion of the population is exposed to threats occurring on the Midcontinental flyway as the species uses this narrow migration corridor in spring and fall. Most of the threats to the species, and their underlying factors, are ongoing. The species faces few threats on its breeding grounds, but an expansion of industrial activities in the Arctic could cumulatively result in impacts on the species. In the coming years, climate change will likely play a larger role in the decline of the species. Threats likely to affect the species within the next ten years are described below from highest to lowest impact and certainty (Table 4).

IUCN-CMP Threat 3.3 Renewable energy (Medium to Low Impact)

The development of wind farms is thought to have a medium to low impact on Buff-breasted Sandpipers, though there is uncertainty in both the scope and severity of this threat. Wind farms may kill birds if they enter the rotor sweep zone or cause birds to avoid historic staging areas (Lanctot et al. 2010). Pre-construction surveys in Indiana found that more than 20% of staging American Golden-Plovers (*Pluvialis dominica*), who often migrate with Buff-breasted Sandpipers, flew in the proposed rotor sweep zone (West Inc., unpublished report, described in Lanctot et al. 2010). Wind energy production has grown substantially in Canada and the United States with more growth projected (Statistics Canada 2017; U.S. Energy Information Administration 2019). Most wind farms in the United States are located along the Midcontinental flyway, where birds migrate both in the fall and in spring. This biannual use of the migration corridor increases the risk of negative interaction with wind farms. In Canada, wind energy installations are mostly found outside of the Buff-breasted Sandpiper's breeding and migration ranges (Canadian Wind Energy Association 2019). There are at least 10 wind farms in development in southern Alberta (Dowdell and Patel 2020), but they also seem to be outside of the main migration corridor (McCarty et al. 2015, 2017). However, northern regions and the Prairies show high wind energy potential (Canadian Geographic Enterprises 2009). Extensive windfarm development is projected in the grassland and coastal areas of Brazil, Uruguay and Argentina. As of 2018, the Global Wind Energy Council ranks Brazil as having the 8th largest wind power capacity in the world and the largest in South America, while Uruguay has the 3rd largest capacity in South America. In Brazil, ongoing windfarm development overlaps with important wintering areas for Buff-breasted Sandpipers, where flocks of 200 to 300 birds have been reported (J.B. Almeida, pers. comm. 2019).

IUCN-CMP Threat 7.1 Fire and fire suppression (Low Impact)

Buff-breasted Sandpipers seem to prefer grassland that has been recently burned (Penner et al. 2015). The species may have benefitted from indigenous people's practices of burning the grasslands in the Midwestern United States and on the wintering grounds (R.B. Lanctot pers. comm. 2019a). Current fire suppression allows woody vegetation to encroach into grasslands, reducing habitat availability (Brockway et al. 2002), particularly as this species prefers areas without nearby trees or other obstructions (Jorgensen et al. 2007). In the Kansas' Flint Hills, new management techniques are starting to use fire for prairie conservation. Fire suppression was deemed to have a low impact on Buff-breasted Sandpipers.

IUCN-CMP Threat 11.5 Severe weather events (Low Impact)

Because of climate change, severe storms are increasing, and this increase is linked to declines in songbirds, particularly those that migrate over the Atlantic, as they cannot seek shelter (Butler 2000). Buff-breasted Sandpipers' migration across the Gulf of Mexico may become increasingly perilous. Similarly, juvenile mortality may increase with storm number and severity. Unlike adults, juveniles often migrate along the Atlantic Coast (Lanctot et al. 2010) and are therefore more likely to encounter storms or hurricanes. On the breeding grounds, extreme weather may cause nest failure, but losses to nests and chicks have not yet been studied in detail (J. Rausch, pers. comm. 2019). Overall, the impact of severe weather events is likely low.

IUCN-CMP Threat 3.1 Oil and gas drilling (Low Impact)

Buff-breasted Sandpipers have been documented breeding in the National Petroleum Reserve, Kuparuk and Prudhoe Bay oil fields and the Arctic National Wildlife Refuge in Alaska, where oil and gas drilling is either already occurring or proposed (Lanctot et al. 2010). The infrastructure associated with arctic oil and gas projects (e.g. roads, runways, buildings) is usually built in the drier upland areas where Buff-breasted Sandpiper males display. Building in these areas may lead to habitat loss and disturbance during the breeding season, possibly causing females to abandon nests if they are repeatedly flushed, or to increased predator numbers due to the presence of artificial food sources.

Since 2007, oil drilling, particularly horizontal drilling and hydraulic fracturing (fracking) has increased across the prairies in both Canada and the United States (National Energy Board 2013). Horizontal drilling may reduce the amount of land affected by oil and gas development. Many grassland species avoid these sites and their surroundings to varying degrees (Thompson et al. 2015). On the wintering grounds, Colombian grasslands are seeing an increase in habitat loss due to drilling (C. Ruiz-Guerra, pers. comm. 2019). Given the limited extent of oil and gas development, their impact is likely low.

IUCN-CMP Threat 3.2 Mining and quarrying (Low Impact)

As with oil and gas drilling, infrastructure associated with arctic mines (e.g. roads, runways, buildings) is usually built on the drier upland areas where Buff-breasted

Sandpipers display and occasionally nest. There has been increased mining in Brazil on the wintering grounds (COSEWIC 2012), but biologists negotiated the movement of an 8,000-hectare mine project south of Lagoa do Peixe away from Buff-breasted Sandpiper habitats (Lanctot et al. 2010). Similar to oil and gas development, the limited footprint of mining and quarrying resulted in this threat's low impact score.

IUCN-CMP Threat 7.3 Other ecosystem modifications (Unknown Impact)

Buff-breasted Sandpipers may be exposed to a wide array of pesticides because they rely on agricultural habitat when migrating and during the winter (Strum et al. 2008, 2010). Although attractive to the Buff-breasted Sandpiper because of their physical characteristics, surrogate short-grass habitat with intensive pesticides use could represent ecological traps for the species from direct or indirect contamination (Lanctot et al. 2010). Direct effects of pesticides are discussed under "Description of Threats: 9.3 Agricultural and forestry effluents". Insect abundance is also likely lower on cropland that has been treated with insecticides, reducing food availability for insectivorous birds, including this species (Hart et al. 2006; Bellavance et al. 2018). Poor insect abundance in these areas may reduce survival because Buff-breasted Sandpipers rely heavily on those insects to provide energy for migration. The impact on the population is unknown.

IUCN-CMP Threat 9.3 Agricultural and forestry effluents (Unknown Impact)

The Buff-breasted Sandpiper may be exposed to pesticides during migration and the wintering period because they rely mainly on human-altered habitat (such as cropland, sod fields and golf courses) sprayed with pesticides. Carbamate insecticides like Furadan F4 have been linked to Buff-breasted Sandpiper mortality during migration (Flickinger et al. 1986; Lanctot et al. 2010). Buff-breasted Sandpipers wintering in rice fields and cattle pastures in Argentina and Uruguay have shown evidence of being exposed to contaminants that altered the birds' nervous system (Strum et al. 2010). Effects of the increasing use of neonicotinoid, the most widely used insecticide known to be highly detrimental for seed eating birds (Goulson 2013, Gibbons et al. 2015), remain undocumented for the Buff-breasted Sandpiper (McCarthy et al. 2017). Since 2016, Brazil has approved the usage of more than 1200 pesticides, many of which are banned elsewhere, which creates a concern of further negative effects on the species. Because of the species' habitat use, a large proportion of the Buff-breasted Sandpiper population might be exposed to pesticides and contaminants; however, population effects have not been quantified. The overall impact of agricultural contaminants on the Buff-breasted Sandpiper population is unknown, but likely is significant and in need of study.

IUCN-CMP Threat 2.1 Annual and perennial non-timber crops (Unknown Impact)

Most of the native, short-grass prairie historically used as stopover habitat has been converted to agricultural fields, resulting in a profound loss of natural stopover habitat. Short-grass prairies managed under cattle grazing provide suitable habitat for Buff-breasted Sandpipers, but those areas are increasingly converted to agricultural cropland. Conversion to agricultural cropland across Canada, the United States and Mexico is ongoing, driven by the need to feed growing human populations, demands for biofuel, and increasing crop irrigation in traditionally dry areas as electricity becomes

available (Meeting of the Canada/Mexico/United States Trilateral Committee for Wildlife and Ecosystem Conservation and Management 2019; Agenda item 24). Similar agricultural expansions are happening in South America in both migratory and wintering habitat. Farmers are converting traditional rangeland into cropland in fertile areas (Lanctot et al. 2010). Important migratory stopovers during northern migration in the savannahs of Los Llanos, Colombia (Lanctot et al. 2016) have rapidly been converted for palm oil and rice cultivation since 2000 (Romero-Ruiz et al. 2011). Illegal drainage canals to irrigate rice and drain areas for cultivation threaten Brazilian wintering habitat around coastal lagoons (Lanctot et al. 2010).

Because there is little unaltered short-grass habitat, Buff-breasted Sandpipers have adopted some types of croplands as alternative habitat during migration and over the winter. It is unclear whether agricultural areas are high-quality substitutes—there may simply be no natural habitat available. Some types of fields are preferable to others (e.g., soy is preferable to corn; Jorgensen et al. 2007). In Saskatchewan and Manitoba, two important staging areas during northern migration (Tibbitts et al. 2019), pasture land has decreased between 2011 and 2016 by 5% and 7%, respectively (Statistics Canada 2020). The increased agricultural production discussed above may provide habitat, depending on which crops are planted. Some agricultural practices, increasingly used for other conservation purposes, may be at odds with Buff-breasted Sandpiper conservation (e.g., no-till agriculture conserves soil and water but may reduce insect abundance in fields; Lanctot et al. 2010). No-till agriculture and monocultures, such as sod fields, require increased chemical application, discussed under *7.3 Other ecosystem modifications*. Since the conversion of native areas to cropland both destroys traditional habitat and creates an alternative—albeit likely inferior—habitat, the overall impacts of non-timber crops are unknown.

IUCN-CMP Threat 11.4 Changes in precipitation and hydrological regimes (Unknown Impact)

Conditions on the breeding ground may get drier as precipitation regimes shift, permafrost thaws, and drainage increases (Hinzman et al. 2005), which may change the insect prey available to Buff-breasted Sandpipers. Along the migratory route, more frequent severe droughts are predicted in the Great Plains, which will reduce wetland habitat (Johnson et al. 2005). These areas are currently used by Buff-breasted Sandpipers for resting and maintenance (McCarty et al. 2009). However, the large, shallow lakes in the Parkland regions of Alberta (such as Beaverhill Lake and North Cooking Lake) have been at extremely low water levels since the late 1990s (G. Court, pers. comm. 2020). Those historical staging areas for Buff-breasted Sandpipers are now used less frequently by the species (G. Court, pers. comm. 2020). Increasing precipitation in the wintering range may contribute to flooding and displacement (Nuñez et al. 2008). Important sites for the species, such as Asuncion Bay and Estancia Medaland, are regularly flooded, which temporarily reduces the amount of available habitat locally, yet overall effects on the wintering population are unknown (A. Lesterhuis, pers. comm. 2019). It is ultimately unknown how changing precipitation regimes will impact Buff-breasted Sandpiper populations.

IUCN-CMP Threat 1.3 Tourism and recreational areas (Unknown Impact)

Because this species prefers short grass habitat, birds use airports, golf courses, and other large landscaped areas during their migration as short-term resting sites (Lanctot et al. 2010; COSEWIC 2012; McCarty et al. 2017). These sites may represent poor habitat—golf courses use large amounts of pesticides, and airport managers harass birds to prevent bird strikes on planes (R.B. Lanctot pers. comm. 2019a). Those surrogate habitats may be attractive to the species, but could result in poor foraging conditions compared to natural habitat. The impact of tourism and recreation is unknown.

IUCN-CMP Threat 7.2 Dams & water management/use (Negligible Impact)

Ground water pumping and surface drainage can result in drier fields, reducing the suitability of short-grass habitat for Buff-breasted Sandpipers. Surface and ground water management is a common practice in agricultural fields to optimize crop production. Those practices likely influence the suitability of a large portion of the Buff-breasted Sandpiper's non-breeding range, given that the species relies almost exclusively on crops as stopover and wintering sites. The impact of dams and water management has been considered as negligible for the species. This impact score could be revised following further investigation on the permanent effects of drainage on the species' habitat.

IUCN-CMP Threat 1.1 Housing and urban areas (Negligible Impact)

While the North American prairies that the Buff-breasted Sandpiper historically relied on during migration have overwhelmingly been converted for agricultural use (Gauthier and Wiken 2003), housing and urban areas expansion has likely been negligible. Evidence from Nebraska suggests that while migrating the species prefers areas without obstructions, such as buildings, trees, and other structures associated with human settlements (Jorgensen et al. 2007). On the wintering grounds, the species is no longer found surrounding Buenos Aires, Argentina after heavy urban development and habitat destruction (Lanctot et al. 2002). The impact of this threat has been deemed negligible.

IUCN-CMP Threat 8.1 Invasive non-native/alien plants and animals (Negligible Impact)

Non-native plant species may spread into the remaining native grassland. This is particularly true given that the Prairie Farm Rehabilitation Administration's Community Pasture Program ended in 2012 and federally managed grassland was returned to the provinces by 2018, decreasing resources for pasture management in Canada. Fire suppression may also contribute to the spread of non-native plants that are not as fire-resistant as their native competitors (Brockway et al. 2002). Finally, grasslands on the wintering grounds are often modified by planting non-native grasses that can increase forage levels for livestock (R.B. Lanctot pers. comm. 2019b). It is unclear whether this modification will affect the use of the areas by Buff-breasted Sandpipers. On wintering grounds, feral pigs alter vegetation where the Buff-breasted Sandpiper occurs, but effects on the species have not been assessed. Despite the potential

negative effects, non-native species invasion poses a negligible threat to the Buff-breasted Sandpiper.

IUCN-CMP Threat 4.2 Utility and service lines (Negligible Impact)

Although there have been instances where Buff-breasted Sandpipers collide with powerlines, generally the species seems to coexist with powerlines without population-level impacts, so the impact has been deemed negligible (Lanctot et al. 2010).

IUCN-CMP Threat 5.1 Hunting and collection of terrestrial animals (Negligible Impact)

Though historically commercial hunting was prevalent in North America, Buff-breasted Sandpipers have been protected under the *Migratory Birds Convention Act* in Canada and the *Migratory Bird Treaty Act* in the United States since 1917 and 1918, respectively. The species is listed in Appendix I and II of the UN Convention on the Conservation of Migratory Species of Wild Animals, which prohibits hunting of the species in its wintering range. Presently, there is little risk of hunting throughout their range. Small amounts of legal and illegal shorebird harvesting do occur in parts of Latin America (the Guianas, the Caribbean, along the northern coast of South America, and potentially other areas) but these areas are not along the main migratory route (Wege et al. 2014). Currently, it is estimated that no more than 1371 +/- 282 Buff-breasted Sandpipers could be sustainably harvested annually (Watts et al. 2015). This level of hunting is unlikely to be occurring and hunting was deemed a negligible threat to the population.

IUCN-CMP Threat 11.1 Ecosystem encroachment (Outside of Assessment Timeframe)

Buff-breasted Sandpipers are expected to lose about 50% of their potential suitable breeding habitat by 2070 because of climate change (Wauchope et al. 2017). Warming is allowing shrub growth to expand northward across the tundra (Sturm et al. 2001). Melting permafrost may affect the shallow tundra wetlands, preferred for foraging. Coastal erosion has accelerated as the permafrost melts and there are more ice-free days with heavy wave action, even flooding some freshwater areas with saltwater (Jones et al. 2009). Rising sea levels may also flood breeding sites and salinize freshwater wetlands used for foraging (Lanctot et al. 2010). Buff-breasted Sandpipers have low breeding site fidelity and ample breeding habitat, providing them some flexibility in adjusting where they breed (Lanctot et al. 2016). Thus, the species may be able to cope with changes in the near term but may struggle if habitat becomes more limiting.

Additionally, in response to earlier spring thaws in the Arctic, the arthropods that shorebirds feed on are emerging earlier. Some other shorebirds are responding to these changes by breeding earlier. However, many species are no longer able to synchronize the hatching of their eggs with peak insect emergence (i.e., phenological mismatch is occurring; McKinnon et al. 2012; Tulp and Schekkerman 2008). It is unknown whether Buff-breasted Sandpipers are able to adjust to these changes.

Climate change is projected to shift the location of suitable migratory stopover habitat along the Midcontinental flyway (Wauchope et al. 2017).

Most Buff-breasted Sandpiper wintering habitat is coastal and could be flooded as a result of the projected rise in sea levels. The species may be forced to move inland to hillier, drier habitats or agricultural areas, which long-term suitability have not been assessed. While the impact of ecosystem encroachment was not calculated because these impacts are outside the timeframe of the threat assessment, rising sea levels on the wintering ground may pose the largest threat to the species.

IUCN-CMP Threat 2.2 Wood and pulp plantations (Outside of Assessment Timeframe)

In Brazil, and to a lesser extent Argentina, tree plantations may affect Buff-breasted Sandpipers wintering habitat. Ten percent of the grasslands in Rio Grande do Sul, Brazil have been converted to pine, eucalyptus, and acacias plantations (Gautreau and Vélez 2011), though much of this grassland is not coastal. These plantations are avoided by Buff-breasted Sandpipers (Dias et al. 2013). Pine plantations are particularly concerning because their seeds may disperse into adjacent grassland habitat, altering even greater areas than the plantations themselves, and ecological restoration is challenging (Simberloff et al. 2010; Lanctot et al. 2010). In fact, invasions of non-native pines into native habitat have already occurred around the world, resulting in varying degrees of habitat loss (Simberloff et al. 2010). This threat's impact is negligible to the species. This impact score could be revised following further investigation on the species' range overlap with tree plantation areas.

IUCN-CMP Threat 8.2 Problematic native plants and animals (Not a Threat)

Expanding Snow Goose (*Anser caerulescens*) populations cause habitat degradation in agricultural fields in Saskatchewan and to a lesser extent Manitoba and Alberta where geese grub for food on migratory staging grounds (Mowbray et al. 2000). Since Snow Geese stage in Saskatchewan earlier than the Buff-breasted Sandpiper in the spring and later in the fall, Snow Geese are not expected to impact Buff-breasted Sandpipers on migration (Mowbray et al. 2000; McCarty et al. 2017). Grubbing may even be beneficial if it exposes soil and invertebrates for Buff-breasted Sandpiper foraging (C. Artuso, pers. comm. 2019). In two studies performed on the breeding grounds, the presence of goose colonies were shown to increase predation risk to nesting shorebirds; however, Buff-breasted Sandpipers were not specifically included in these studies (Lamarre et al. 2017; Flemming et al. 2019).

Nest predators such as the Arctic Fox (*Vulpes lagopus*) and the Red Fox (*V. vulpes*), whose range's has expanded northward over the last decades (Stickney et al. 2014, Elmhagen et al. 2017), are expected to have a higher impact on nest survival through changes in distribution, increased densities, and adapted behavior (Kubelka et al. 2018). Oil and gas development is thought to increase the number of avian and mammalian predators due to the presence of artificial food sources and additional denning and nesting sites. However, according to two studies, there is no evidence that the infrastructure reduces nest survival of shorebirds as a group, although both studies included only a small number of Buff-breasted Sandpiper nests (10 and 3, respectively; Liebezeit et al. 2009; Bentzen et al. 2017). In general, predation risk has increased over the last 70 years in the Northern Hemisphere, especially in the Arctic (Kubelka

et al. 2018). Problematic native plants and animals are deemed not a threat to this species.

IUCN-CMP Threat 2.3 Livestock farming and ranching (Not a Threat)

Buff-breasted Sandpipers extensively use tame pastures during the winter and, to a lesser extent, during migration (Lanctot et al. 2004; Jorgensen et al. 2007; Isacch and Cardoni 2011; Aldabe et al. 2019). Tame pastures might provide similar amount of food as in natural grasslands if grazing conditions are similar, and therefore adequate wintering and stopover habitat. Pastures with suboptimal grazing conditions for the species might still be used, as those may simply be the dominant habitat in the area. Though this species prefers to forage in overgrazed areas, grazing to that intensity year-round might be detrimental to the soil (Lanctot et al. 2004; Aldabe et al. 2019) and can degrade the quality of the forage and increase erosion (Bement 1969, Cingolani et al. 2005). Instead, Buff-breasted Sandpipers may benefit from seasonal rotations in grazing intensity that maintain vegetation height from 2 to 5 cm while birds are present (Isacch and Cardoni 2011; Aldabe et al. 2019). In Canada, the Prairie Farm Rehabilitation Administration's Community Pasture Program ended in 2012, and federally managed grassland was returned to the provinces by 2018. This may lead to overgrazing, soil erosion, and damage in some areas where Buff-breasted Sandpipers stopover depending on how the areas are managed going forward. On the balance, livestock farming and ranching are not a threat to Buff-breasted Sandpipers.

5. Management Objective

The management objective for the Buff-breasted Sandpiper is to maintain the population size of the species over a period of 10 years ranging from 2025 to 2035 using new stopover sites estimates provided by 2025.

Accounts of historical population sizes are limited and the trend of the population is unknown. The species is difficult to survey given its sparse distribution on breeding grounds and the difficulty to detect individuals in the field. Surveys at key stopover areas currently provide the most reliable estimates of population size and will contribute in measuring progress towards the management objective. A tracking study revealed that the Flint Hills, located in Oklahoma and Kansas, and the Texas Gulf Coast are the two main stopover areas for the Buff-breasted Sandpiper in the U. S., the latter likely being the most important (Lanctot et al. 2016). From 2016 to 2019, the United States Fish and Wildlife Service (USFWS), the United States Geological Survey (USGS), and the University of Nebraska Omaha, working with citizen scientists, conducted spring ground surveys for the Buff-breasted Sandpiper on the Texas Gulf Coast. Those surveys will yield a more reliable population estimate[10] for the species, which should be available by 2026, and will provide a baseline for the long-term management objective.

[10] The current estimates did not take turnover rates into account, which are known to be relatively high (see *Population Size and Trends* in section 3.2). This could lead to an underestimation of the population count. New estimates are expected to be more reliable as specific effort was put in assessing turnover rates at the Texas stopover sites throught radio-tracking of individuals.

Progress towards meeting the management objective will be evaluated as new population estimates become available.

The Buff-breasted Sandpiper was designated as Special Concern because of ongoing threats related to habitat loss and degradation on the non-breeding grounds (COSEWIC 2012). Since hunting of the species was banned in North America in the early 1900s, its population has grown, but numbers remain much lower than they were before hunting began. The Buff-breasted Sandpiper population appears to be limited by the availability of habitat on migration and non-breeding areas. Hence, the long-term management objective will be achieved by ensuring a no net loss of suitable sites at the landscape level on migration and wintering grounds. Considering the extent of non-breeding habitat found outside Canada, achieving this goal will only be possible through strong collaboration with Canada's international partners.

The United States Conservation Plan for the Buff-breasted Sandpiper sets the goal to increase the population by more than 90% to at least 100,000 individuals (Lanctot et al. 2010). This goal aims to build resiliency in the population of the species to offset future threats (Lanctot et al. 2010). In contrast, this management plan's objective seeks to address the risk of the species to become endangered or threatened, which led COSEWIC to assign a Special Concern status to the Buff-breasted Sandpiper.

6. Broad Strategies and Conservation Measures

6.1. Actions Already Completed or Currently Underway

In Canada, there has been little conservation work specifically targeting the Buff-breasted Sandpiper. The following list is not exhaustive, but is meant to illustrate the main areas where work has been completed or is already underway, to give context to the broad strategies outlined in section 6.3. Actions completed or underway include the following:

- Broad-scale initiatives which benefit the conservation and management of the species:
  - The Buff-breasted Sandpiper is one of the focal species for the Americas Flyway Action Plan of the Arctic Migratory Birds Initiative (AMBI). This designation focuses efforts at understanding the factors limiting this species and ways to improve its conservation throughout the flyway (CAFF 2019).
  - The USFWS is leading work, with contribution from the Canadian Wildlife Service (CWS), to update the full life-cycle conservation plan for the Buff-breasted Sandpiper.
  - Many organizations and programs provide financial incentives to farmers and ranchers for conserving or restoring grassland and wetland habitats along the migratory route. Examples include the United States and Canada Joint Ventures, MultiSAR in Alberta, South of the Divide Conservation Action Program, the United States Department of Agriculture's Conservation Reserve Program, and the Sustainable Grazing Network in Mexico.

816 - Research identifying key breeding, stopover, and wintering locations using
817 satellite and GPS tracking technology is ongoing. See section 3. Species
818 Information.
819
820 - Conservation and management of the species in Canada:
821 - Buff-breasted Sandpiper breeding habitat is conserved in the national parks,
822 migratory bird sanctuaries, national wildlife areas of the Canadian Arctic, as well
823 as through the Inuvialuit community conservation plans.
824 - The Ahiak Migratory Bird Sanctuary Management Plan (2018) outlines a plan for
825 the co-management of Buff-breasted Sandpipers and other species by
826 Environment and Climate Change Canada (ECCC) and local Inuit in the
827 sanctuary (ECCC 2018).
828 - The Arctic PRISM, a joint effort between ECCC, the USGS, and the USFWS, has
829 been surveying the Arctic for shorebirds from 2002 to 2018 to determine
830 population sizes and trends, and clarify distribution and habitat usage of all
831 species, including the Buff-breasted Sandpiper. At the time of developing this
832 management plan, new estimates of population size and breeding distribution for
833 the species are being carefully evaluated to ensure accuracy.
834 - Land from the former Prairie Farm Rehabilitation Administration's Community
835 Pasture Program had been returned by 2018 to provinces for management and
836 is in large part still being managed for conservation by different groups in a way
837 that benefits the Buff-breasted Sandpiper.
838
839 - Conservation and management of the species outside Canada:
840 - Some of the identified key stopover sites have been designated as sites of
841 importance by the WHSRN, including Rainwater Basin in Nebraska (2009) and
842 the Flint Hills in Kansas and Oklahoma (2016) as sites of hemispheric
843 importance, as well as Asuncion Bay in Paraguay (2008) and Barba Azul Nature
844 Reserve in Bolivia (2015) as sites of regional importance.
845 - Following habitat destruction from construction in Asuncion Bay (Paraguay) in
846 2010, the CWS and the United States' *Neotropical Migratory Birds Conservation*
847 *Act* (NMBCA) have supported the local government in restoring habitat for
848 Buff-breasted Sandpiper and other impacted shorebirds.
849 - In 2018, a grant from NMBCA was awarded to fund the purchase of an additional
850 681 hectares of grassland and the management of 15,000 hectares of
851 Buff-breasted Sandpiper habitat at the Barba Azul Nature Reserve, Bolivia
852 (U.S. Fish and Wildlife Program 2018). Starting October 2019, the reserve will be
853 experimenting with beneficial management practices for cattle ranching to create
854 and maintain Buff-breasted Sandpiper staging habitat. Long-term monitoring of
855 the species will also be conducted at the site (Asociación Armonía 2019).
856 - The Southern Cone Grassland Alliance, supported in part by CWS, has helped
857 guide the development of beneficial management practices for sustainable
858 land-use in Argentina, Paraguay, Uruguay, and Brazil. Through this project,
859 ranching practices were improved on 116,479 hectares of grasslands and other
860 beneficial management practices implemented on 25,371 hectares (Rosenberg
861 et al. 2016).

- Four sites of importance for the Buff-breasted Sandpiper on the wintering grounds have been designated under WHSRN, namely Lagoa do Peixe in Brazil (1990) and Bahía Samborombón in Argentina (2011) as sites of international importance, and Laguna de Rocha in Uruguay (2010) and Estancia Medaland in Argentina (2018) as sites of regional importance. These sites include both publicly and privately-owned land.
- Biologists in several countries within the Southern Cone Grassland Alliance have conducted surveys for Buff-breasted Sandpipers with the goal of providing a winter-based population estimate and trend for the species.

6.2. Broad Strategies

The broad strategies for the Buff-breasted Sandpiper have been developed to address the threats this species is facing across its range, primarily focusing on mitigating the most pressing threats and gathering the information needed to address the remaining threats. While renewable energy development received the highest impact score in the threat assessment and this impact score could rapidly increase, wintering and stopover habitat loss from a combination of factors (see section 4.2) remain the most immediate threat to the Buff-breasted Sandpiper. Strategies fall under the following broad categories[11]:

- Livelihood, Economic & Moral Incentives
- Conservation Designation & Planning
- Institutional Development
- Research and Monitoring

6.3. Conservation Measures

Table 3. Conservation Measures and Implementation Schedule

Conservation Measure	Priority[e]	Threats or Concerns Addressed	Timeline
Broad Strategy: Livelihood, Economic & Moral Incentives			
Market-based Incentives • Provide resources to landowners through stewardship programs to consider Buff-breasted Sandpiper habitat needs (such as short-grass, adequate soil moisture, and vital dry Arctic uplands in danger of flooding as sea levels rise) when managing their lands.	High	IUCN Threats 2.1, 2.3, 7.1, and 7.2	Ongoing

[11] The broad strategy categories follow the International Union for Conservation of Nature – Conservation Measures Partnership (IUCN-CMP) Conservation Actions Classification v 2.0 (http://cmp-openstandards.org/tools/threats-and-actions-taxonomies/),

Conservation Measure	Priority[e]	Threats or Concerns Addressed	Timeline
Better Products & Management Practices • Encourage the wind energy sector to develop, implement, and promote beneficial management practices to mitigate threats to the Buff-breasted Sandpiper and its habitats where the species is known to occur.	High	IUCN Threat 3.3	2021–2031
Better Products & Management Practices • Assist landowners to implement and promote beneficial management by providing or helping to develop written and digital resources to strengthen stewardship programs, which directly contribute to creating and maintaining Buff-breasted Sandpiper habitat and an appreciation of its value.	Moderate	IUCN Threats 2.1, 2.3, 7.1, and 7.2	2026–2036
Broad Strategy: Conservation Designation & Planning			
Protected Area Designation &/or Acquisition • Conserve habitat at key sites.	Moderate	IUCN Threats 2.1, 2.3, 3.1, 3.2 and 3.3	Ongoing
Broad Strategy: Institutional Development			
Alliance & Partnership Development • Develop new international partnerships for conservation and maintain existing ones.	High	All	Ongoing
Broad Strategy: Research and Monitoring			
Basic Research & Status Monitoring • Centralize data from past surveys and complete the analysis of tracking studies that identify sites with high densities of Buff-breasted Sandpipers.	High	Knowledge gap	2021–2026
Basic Research & Status Monitoring • Monitor the species at known and potential key sites during southbound and northbound migration; • Establish a list of key sites where at least 0.2% of the population (about 100 birds) occur regularly through time.	High	Knowledge gap	2021–2026
Basic Research & Status Monitoring • Develop a more reliable and accurate population estimate within the next 5 years	High	Knowledge gap	2021–2026

Conservation Measure	Priority[e]	Threats or Concerns Addressed	Timeline
Basic Research & Status Monitoring • Determine fine-scale landscape features that predict habitat usage both on breeding and non-breeding grounds	High	IUCN Threats 3.1, 3.2, 11.1, and 11.4	2021–2026
Basic Research & Status Monitoring • Identify the natural processes that created and maintained suitable habitats to develop land-use practices beneficial for the species	High	IUCN Threats 2.1, 2.3, 7.1, and 7.2	2021–2026
Basic Research & Status Monitoring • Continue to monitor the species and its habitat on the breeding ground as part of the Arctic PRISM survey.	High	Knowledge gap	2021–2031
Basic Research & Status Monitoring • Determine level of exposure of the species to pesticides and effects of those contaminants on survival, fitness and food availability.	Medium	IUCN Threats 7.3 and 9.3	2021–2026
Basic Research & Status Monitoring • Evaluate current and past population monitoring methods and identify the most appropriate methods to assess progress towards the management objective.	Medium	Knowledge gap	2021–2026
Basic Research & Status Monitoring • Determine the fall migration route, survival rates and potential threats to juveniles of the Buff-breasted Sandpiper population.	Low	Knowledge gap	2026–2031
Basic Research & Status Monitoring • Assess the severity of the effects of climate change on demographics and distribution	Low	Threats 11.1, 11.4, and 11.5	2026–2031

[e] "Priority" reflects the degree to which the measure contributes directly to the conservation of the species or is an essential precursor to a measure that contributes to the conservation of the species. High priority measures are considered those most likely to have an immediate and/or direct influence on attaining the management objective for the species. Medium priority measures may have a less immediate or less direct influence on reaching the management objective but are still important for the management of the population. Low priority conservation measures will likely have an indirect or gradual influence on reaching the management objective but are considered important contributions to the knowledge base and/or public involvement and acceptance of the species.

6.4. Narrative to Support Conservation Measures and Implementation Schedule

Institutional Development

Considering the extent of non-breeding habitat found outside Canada, implementing broad strategies that benefit the Buff-breasted Sandpiper will only be possible through strong collaboration with Canada's international partners. In addition, collaboration with the wind energy sector is required to mitigate threats to the species and its habitat at key sites.

As such, Canada and international partners created the Midcontinental Shorebird Conservation Initiative (MSCI), which aims to deliver full life-cycle conservation for the Buff-breasted Sandpiper and other species. The Buff-breasted Sandpiper is recognized as high conservation concern in many countries because it occupies several locations relevant to shorebird conservation that are prioritized as part of the MSCI.

Livelihood, Economic & Moral Incentives, and Conservation Designation & Planning

Wintering and stopover habitat used by the Buff-breasted Sandpiper is predominantly privately owned and used as agricultural cropland or pastureland, so the involvement of private landowners is critical. Stewardship programs can support and incentivize landowners to manage their land for short-grass habitat and shorebird conservation. Where appropriate and after consideration of a range of ecological targets, this may involve using livestock or fire to maintain short-grass habitat, as well as appropriate soil moisture in sod fields. Support could also be given to sod farm owners, where housing development exerts pressure on agricultural lands. Further research is need to determine if this type of habitat provides adequate conditions to support the recovery of Buff-breasted Sandpiper. Conservation managers and landowners of key migratory and wintering sites should be educated about Buff-breasted Sandpiper's unusual habitat requirements (shortgrass rather than the taller coastal wetland grasses preferred by most shorebirds and waterbirds) so that these requirements are not overlooked when implementing management practices for shorebirds more broadly.

Appropriate buffers and mitigation measures for renewable energy developments must be put in place in locations where there is high density of Buff-breasted Sandpiper. *Standards for monitoring nonbreeding shorebirds in the Western Hemisphere* (PRISM 2018) provide a comprehensive protocol for *ad hoc* assessments of habitat use by shorebirds.

Research and Monitoring

Buff-breasted Sandpipers should be monitored to determine habitat usage, population size and trends. By 2025, this monitoring effort should inform a more reliable and accurate baseline population size towards the management objective. Surveys on staging or wintering grounds may be more effective in determining population sizes and trends than arctic surveys because the species does not congregate in large numbers or show site fidelity on the breeding grounds. This is particularly important as population

trends have not been quantified. At the same time, arctic breeding ground surveys and GPS-tracking can provide important information about micro-scale habitat use, which is needed to identify areas sensitive to industrial development and to climate change. Arctic PRISM may provide some of this information as upland habitats are included in the surveys (COSEWIC 2012). Surveys along the migratory route and in the wintering grounds can provide similar information about habitat use during these stages.

Monitoring of habitat use and research on suitable habitat characteristics are key steps in shaping conservation actions for the species. By 2025, key wintering and migratory stopovers sites that cumulatively support 80% of the current population estimate of 56,000 individuals should be identified. Canada will collaborate with its international partners to work towards a no net loss of suitable habitat at those sites. Tracking Buff-breasted Sandpipers using technology such as isotopes, genetics, radio-telemetry, geolocators, and satellite telemetry provides a wealth of information, including the location of sites with high densities of the species. Once identified, high-density locations can be conserved and managed cooperatively with landowners. Much of the species monitoring work is already in progress, but the analysis of the data is ongoing (R.B. Lanctot pers. comm. 2019b). Additionally, to most effectively use this technology, the potential effects of geolocators and telemetry units on movement and survival must be assessed (identified as High priority by the ECCC Shorebird Technical Committee in 2016).

Various threats to the Buff-breasted Sandpiper require further investigation to understand their impact. The species' reliance on agricultural areas during the non-breeding period puts individuals at risk of pesticide contamination. While there has been some research into the effects of pesticides, multiple unknowns remain, such as the extent of exposure to various chemicals; the direct effects of those chemicals on the species, and; the indirect effects on the invertebrates eaten by the species.

Climate change may become one of the greatest threats facing this species but the severity of its current and projected effects on the Buff-breasted Sandpiper requires more research. As average temperatures increase in the Arctic, the northern limit of shrub vegetation is advancing into the Buff-breasted Sandpiper's breeding habitat. On the wintering grounds, habitat is expected to be lost from coastal erosion and rising sea levels. It is unclear whether the species is adjusting its breeding schedule to match earlier insect emergence in the Arctic. Along migration, habitat and weather patterns are expected to shift and it is unknown whether the species will adapt to these changes. The population-level effect of these threats is unknown. Some changes, like more frequent and severe storms, may have strong impacts on individual survival, but more study is needed to determine whether birds are able to survive such situations. During fall migration, juveniles following the Atlantic coast might be disproportionally vulnerable to increased frequency and severity of storms compared to adults who migrate inland. Overall, more research into the effects of climate change on Buff-breasted Sandpiper demographics and distribution is needed.

7. Measuring Progress

The performance indicators presented below provide a way to measure progress towards achieving the management objective and monitoring the implementation of the management plan.

- By 2026, a more accurate population estimate from stopover sites is available.
- By 2026, key wintering and migratory stopovers sites that cumulatively support 80% of the current population estimate are identified. Key sites are defined as areas where at least 0.2% of the population (about 100 birds) occur regularly through time.
- By 2036, the Buff-breasted Sandpiper population is maintained at the 2026 level detected from stopover surveys.

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Appendix A: Effects on the Environment and Other Species

A strategic environmental assessment (SEA) is conducted on all SARA recovery planning documents, in accordance with the *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals*[12]. The purpose of a SEA is to incorporate environmental considerations into the development of public policies, plans, and program proposals to support environmentally sound decision-making and to evaluate whether the outcomes of a recovery planning document could affect any component of the environment or any of the Federal Sustainable Development Strategy's[13] (FSDS) goals and targets.

Conservation planning is intended to benefit species at risk and biodiversity in general. However, it is recognized that implementation of management plans may also inadvertently lead to environmental effects beyond the intended benefits. The planning process based on national guidelines directly incorporates consideration of all environmental effects, with a particular focus on possible impacts upon non-target species or habitats. The results of the SEA are incorporated directly into the management plan itself but are also summarized below in this statement.

The Buff-breasted Sandpiper is an arctic shorebird, breeding in the coastal uplands and relying on short-grass habitat on migratory stopover sites and wintering grounds. Conservation measures aiming to preserve short-grass habitats and manage pasturelands for Buff-breasted Sandpipers are expected to provide habitat for other shorebirds migrating and wintering with them, including but not limited to the Semipalmated Plover (*Charadrius semipalmatus*), Baird's Sandpiper (*Calidris bairdii*), American Golden-Plover (*Pluvialis dominica*), Pectoral Sandpiper (*Calidris melanotos*), and Upland Sandpiper (*Bartramia longicauda*). On the breeding ground, other species also nest in the upland coastal habitat including Black-bellied Plover (*Pluvialis squatarola*) and American Golden-Plover so conservation measures on the breeding ground (e.g., managing development, climate action) may be of broad benefit.

[12] www.canada.ca/en/impact-assessment-agency/programs/strategic-environmental-assessment/cabinet-directive-environmental-assessment-policy-plan-program-proposals.html
[13] www.fsds-sfdd.ca/en#/en/goals/

Appendix B: Summary of Buff-breasted Sandpiper Population Estimates

Life Cycle Stage	Location	Year	Estimation (thousands)	Scope	Particularities	Reference
Spring migration	Rainwater Basin	2004–2005	56 (35–78, 95%CI)	Global	- Stopover duration (2 days) not considered; possible high underestimation - Assumes that all individuals stop there but they don't; possible underestimation	Jorgensen et al. 2008; Lanctot et al. 2010; McCarty et al. 2015.
Spring Migration	Flint Hills ecoregion	2014	20.7 (11.7–35,4, 95%CI)	Surveyed area	- Surveys performed from a moving vehicle - Stopover duration not considered; possible high underestimation	Lyons et al. 2016.
Spring Migration	Flint Hills ecoregion	2015	12.7 (5–28.9, 95%CI)	Surveyed area	- Difference with 2014 could be that fewer birds stopped in the study area or could be due to timing of surveys	Lyons et al. 2016.
Spring migration	Coastal Texas	2016–2019	Not yet available	Global	- Stopover duration obtained through tagging data and considered for estimation	J.E. Lyons, pers.comm, 2020; Lanctot et al. 2016.
Breeding grounds	Canadian Arctic	2010–2017	550 (293–719, 85%CI) (358–654, 95%CI)	Canada	- Currently being reviewed to evaluate accuracy - Effects of deviation from random site selection unknown; possible positive bias - Small sample size in marginal habitats; possible unstable estimates - Many of the PRISM estimates are much higher than estimates based on summed winter counts, because for widely dispersed species, there are always birds wintering in low numbers in areas that aren't surveyed	P.A. Smith, pers. comm. 2020; CWS, unpublished data.
Breeding grounds	Arctic Alaska	1997–2007	42.5 (5.8–79, 95%CI)	Surveyed area	- Estimation based on only 60 observations; high uncertainty	Andres et al. 2012; McCarty et al. 2020; Bart and Smith 2020.

Life Cycle Stage	Location	Year	Estimation (thousands)	Scope	Particularities	Reference
Wintering grounds	Argentina, Uruguay, Brazil	1999 & 2001	None provided but could be 100–200	Global	- Not provided for statistical reasons associated with the use of unsupervised satellite image classification	R.B. Lanctot, pers. comm. 2020; Lanctot et al. 2004.
Wintering grounds	South America	-	Less than 50	Global	- Most likely missing important wintering sites or birds too dispersed	A.J. Lesterhuis, pers. comm. 2019.

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Archived: August 4, 2022 9:05:14 AM
From: Tufts, Teresa (EC)
Sent: January 17, 2020 1:20:00 PM
Bcc: 'pond@baffinhto.ca'; 'iviq@baffinhto.ca'; 'rbhta@baffinhto.ca'
Subject: Buff-breasted Sandpiper draft Management Plan for review
Sensitivity: Normal
Attachments:
Buffbreasted_sandpiper_MP.pdf uffbreasted-Sandpiper_mp_Factsheet.pdf uffbreasted-Sandpiper_mp_Factsheet-IKB.pdf
;

Good day,

We are seeking comments on the draft Management Plan for the Buff-breasted Sandpiper. This bird breeds along the coast of the Kitikmeot region and as far north as Melville, Bathurst, and Devon Islands. During migration, the Buff-breasted Sandpiper passes through the Kivalliq region of Nunavut.

Buff-breasted Sandpiper was listed as Special Concern under the federal *Species at Risk Act* in 2017. For species of Special Concern, a management plan must be developed to identify measures for its conservation. Attached are a factsheet and a complete draft of the Management Plan for your review. If you have any comments on the draft plan, please send them to me by **February 21, 2020**.

Many thanks and best regards,

Teresa Tufts ᑐ?ᓇ?ᓴ? ᑕ?ᕽ?ᕀ?

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Archived: August 4, 2022 9:31:48 AM
From: Tufts, Teresa (EC)
Sent: January 17, 2020 1:28:00 PM
Bcc: 'cambay@kitikmeothto.ca'; 'bathurst@kitikmeothto.ca'; 'gjoa@kitikmeothto.ca'; 'kugaaruk@kitikmeothto.ca'; 'chimo@kitikmeothto.ca'; 'taloyoak@kitikmeothto.ca'; 'arviat@kivalliqhto.ca'; 'bakerlake@kivalliqhto.ca'; 'aqigiq@kivalliqhto.ca'; 'rankin@kivalliqhto.ca'; 'arviq@kivalliqhto.ca'; 'issatik@kivalliqhto.ca'
Subject: Buff-breasted Sandpiper draft Management Plan for review
Sensitivity: Normal
Attachments:
Buffbreasted-Sandpiper_mp_Factsheet-IKK.pdf; uffbreasted_sandpiper_MP.pdf; uffbreasted-Sandpiper_mp_Factsheet.pdf
;

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Archived: August 4, 2022 10:11:58 AM
From: Tufts, Teresa (EC)
Sent: January 14, 2020 10:19:00 AM
Bcc: Smith, Caryn (CSmith@GOV.NU.CA); 'Kyle Ritchie'; 'BDean@tunngavik.com'; 'wildlifeadvisor@niws.ca'; 'kwb@niws.ca'; 'krwb@niws.ca'
Subject: Buff-breasted Sandpiper draft Management Plan for review
Sensitivity: Normal
Attachments:
Buffbreasted-Sandpiper_mp_Factsheet.pdf Buffbreasted_sandpiper_MP.pdf

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Environment and Climate Change Canada
Environnement et Changement climatique Canada



Summary of the draft Management Plan for the

BUFF-BREASTED SANDPIPER

Buff-breasted Sandpiper at Seal River Estuary Important Bird Area © Christian Artuso

Under the *Species at Risk Act* (SARA), a management plan must be developed for each species listed as Special Concern in order to identify measures for the conservation of the species. This document highlights the key sections of the draft management plan.

Species Conservation Status

The Buff-breasted Sandpiper (*Calidris subruficollis, formerly Tryngites subruficollis*) is listed as Special Concern under SARA since 2017.

Description and Distribution

The Buff-breasted Sandpiper is a medium-sized shorebird. This species is marked with dark brown spots or streaks along the crown and sides of the breast, and narrow, dark-brown streaks edged in buff along the feather shafts on their back, scapulars, upper tail, and wing coverts. Male, female, and juvenile plumage is similar. The species has yellow legs and a black bill.

An estimated 75% of the global Buff-breasted Sandpiper population breeds in Canada. The species breeds in low densities in the tundra along the coastline of Alaska (U.S.), Yukon, the Northwest Territories and Nunavut. In the spring, the species migrates mostly in the Prairie Provinces. In the fall, the species migrate on a broad front, from British Columbia to Newfoundland.

Habitat Needs

The Buff-breasted Sandpiper is an upland species, preferring to breed on the drier, elevated ridges of the tundra. Males display in small groups (leks) in moist meadows. Females nest away from lek sites, in well-drained grassy tundra. During migration, the species congregates in natural or managed short-grass (less than 10 cm in height) areas, such as pastures and ploughed fields.

Threats to the Species' Survival

- Habitat loss from wind farm encroachment and direct mortality from collisions with wind turbines at important stopover (in the U.S.) and wintering sites (in South America).
- Permanent habitat loss in the non-breeding period due to fire suppression; resource extraction; conversion to pine, eucalyptus, and acacias plantations; and invasive non-native species.
- Decreased survival in the non-breeding period due to exposition to pesticides and reduced food availability, especially when natural habitats or pastures are not available.
- Decreased survival of juveniles during migration and decreased nesting success on breeding grounds due to severe weather events.

Canada

Management Objective

Over a period of 10 years (2025 to 2035), maintain or, if possible, increase the Buff-breasted Sandpiper population size.

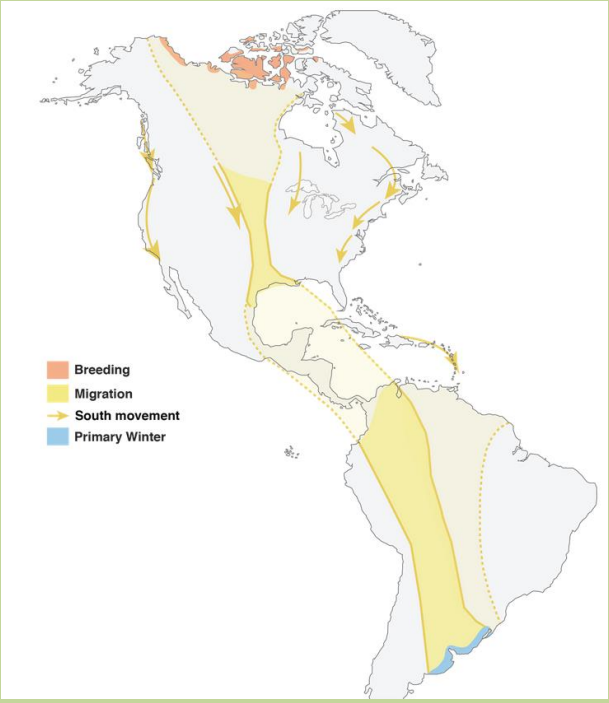
Strategies to Help Meet Objectives

Broad strategies to address the threats to the survival and recovery of the species include:

- Provide resources to landowners through stewardship programs to consider Buff-breasted Sandpiper habitat needs (such as short-grass and adequate soil moisture) when managing their land;
- Protect habitat at sites of key importance;
- Develop new international partnerships for conservation and maintain existing ones;
- Centralize data from past surveys and complete the analysis of tracking studies that identify sites with high densities of Buff-breasted Sandpipers;
- Determine fine-scale landscape features that predict habitat usage on non-breeding grounds;
- Evaluate current and past population monitoring methods and identify the most appropriate methods to assess progress towards the management objective;
- Identify the natural processes that created and maintained suitable habitats to develop land-use practices beneficial for the species.
- Determine level of exposure of the species to pesticide and herbicide and effects of those contaminants on survival, fitness and food availability.

How You Can Help

- Learn more about the Buff-breasted Sandpiper, the threats to its survival and its habitat needs at www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html;
- Practice voluntary stewardship activities and beneficial management practices, for example:
  - Work in cooperation with Environment and Climate Change Canada and/or local conservation groups to conserve important habitat; and
  - Avoid activities that could harm the species or its habitat.
- Submit observation data to conservation data centres (such as eBird).



Distribution of the Buff-breasted Sandpiper (from Cornell Lab – Birds of North America's Website, McCarty et al. 2017)

For more information, please contact us directly at:
Environment and Climate Change Canada (ECCC) – Canadian Wildlife Service, Northern Region
PO Box 1870, Iqaluit NU X0A 0H0
Fax: 867-975-4645 Phone: 867-979-7058
Email: Teresa.tufts@canada.ca

Archived: June 15, 2022 1:40:27 PM
From: Tamar Mukyunik
Sent: February 4, 2020 12:28:46 PM
To: Tufts, Teresa (EC)
Subject: RE: Buff-breasted Sandpiper draft Management Plan for review
Sensitivity: Normal

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s2]M5yx6 g]En,

]b7N ttc6 gnZ4nE/sMs6g6 vtm4mb s8k4. m5N.

Good morning Teresa,

This item was received as information during last night's meeting. Thanks.

Tamar Mukyunik
Manager

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P.O. Box 529, Arviat, NU X0C 0E0 • Phone (867) 857-2636 • Fax (867) 857-2488

From: Tufts, Teresa (EC) <teresa.tufts@canada.ca>
Sent: January 17, 2020 12:30 PM
Subject: Buff-breasted Sandpiper draft Management Plan for review

Good day,

We are seeking comments on the draft Management Plan for the Buff-breasted Sandpiper. This bird breeds along the coast of the Kitikmeot region and as far north as Melville, Bathurst, and Devon Islands. During migration, the Buff-breasted Sandpiper passes through the Kivalliq region of Nunavut.

Buff-breasted Sandpiper was listed as Special Concern under the federal *Species at Risk Act* in 2017. For species of Special Concern, a management plan must be developed to identify measures for its conservation. Attached are a factsheet and a complete draft of the Management Plan for your review. If you have any comments on the draft plan, please send them to me by **February 21, 2020**.

Many thanks and best regards,

Teresa Tufts ᑐ?ᓗ?ᓴ? ᑕ?ᖖ?ᓵ?

Species at Risk Biologist
Canadian Wildlife Service
Environment and Climate Change Canada / Government of Canada
Teresa.Tufts@canada.ca / Tel: +1 (867) 979 7058

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Teresa.Tufts@canada.ca / ᐅ?ᖃ?ᓪ?ᐅ?ᑦ? : +1 (867) 979 7058

Biologiste des espèces en peril
Service Canadien de la faune
Environnement et Changement climatique Canada / Gouvernement du Canada
Teresa.Tufts@canada.ca / Tél. : +1 (867) 979 7058

Archived: June 15, 2022 1:34:11 PM
From: Smith, Caryn
Sent: November 23, 2020 11:51:20 AM
To: Svoboda, Michael (EC)
Cc: Kyle Ritchie (kritchie@nwmb.com); Roberts, Hayley (EC); Gissing, Drikus; Machtans, Craig (EC)
Subject: Re: ACTION; Support to post Management Plans for HOGR, BBSP and RNPH
Sensitivity: Normal

Hi Michael,

The GN has no issue with these documents being posted for public comment.

Thanks for reaching out to us on this matter.

All the best,
Caryn

From: Svoboda, Michael (EC) <michael.svoboda@canada.ca>
Sent: November 23, 2020 11:34 AM
To: Smith, Caryn <CSmith@GOV.NU.CA>
Cc: Kyle Ritchie (kritchie@nwmb.com) <kritchie@nwmb.com>; Roberts, Hayley (EC) <hayley.roberts@canada.ca>; Gissing, Drikus <DGissing@GOV.NU.CA>; Machtans, Craig (EC) <craig.machtans@canada.ca>
Subject: ACTION; Support to post Management Plans for HOGR, BBSP and RNPH

Hi Caryn:

Hope you are all doing well.

We are seeking GN support to post three Management Plans (Horned Grebe, Red-necked Phalarope and Buff-breasted Sandpiper) for public comment period.

GN would have seen them during the first Jurisdictional Review, and since there were only limited edits a second jurisdictional review is being skipped.

Attached are the three Management Plans and their factsheets.

If you could let us know by December 7th 2020 or earlier would be greatly appreciated.

Thank you,

Michael Svoboda
Head, Conservation Planning and Stewardship
Canadian Wildlife Service
Environment and Climate Change Canada / Government of Canada
Michael.Svoboda@canada.ca

Service Canadien de la faune
Environnement et Changement climatique Canada / Gouvernement du Canada

michael.svoboda@canada.ca

Archived: November 19, 2021 9:25:36 AM
From: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Sent: November 18, 2021 2:55:00 PM
To: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Bcc: 'mcampbell1@gov.nu.ca'; 'kritchie@nwmb.com'; 'Bert Dean'; 'pond@baffinhto.ca'; 'sao@pondinlet.ca'; 'hamletpond_mayor@qiniq.com'; 'rbhta@baffinhto.ca'; 'rbhta@qiniq.com'; 'sao@resolute.ca'; 'hamletcedo1@xplornet.com'; 'iviq@baffinhto.ca'; 'gfsao@qiniq.com'; 'gfasao@qiniq.com'; 'jgroves@qia.ca'; 'info@qia.ca'; 'wildlifeadvisor@niws.ca'; 'qwbac@niws.ca'
Subject: CORRECTED EMAIL SUBJECT LINE : FOR COMMENT: Proposed Management Plan for Buff-breasted Sandpiper in Canada (DUE: February 15 2022)
Sensitivity: Normal
Attachments:
Buffbreasted-Sandpiper_mp_Factsheet_ENG.pdf uffbreasted-Sandpiper_mp_Factsheet-IKB.pdf ;mp_buff_breasted_sandpiper_e_proposed.pdf

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Hello,

I am writing to notify you that the proposed Management Plan for **Buff-breasted Sandpiper** in Canada was posted on the Species at Risk Public Registry on November 17th, 2021, for a **90-day public comment period** which ends on **February 15th 2022**. Buff-breasted Sandpipers breed along the coast of the Kitikmeot region and as far north as Melville, Bathurst, and Devon Islands. During migration, the Buff-breasted Sandpiper passes through the Kivalliq region of Nunavut. Comments received from provinces, territories, wildlife management boards, and Indigenous governments across Canada were considered in the drafting of the current version of the Management Plan. Following the 90-day public comment period, the Department will then have 30 days to consider the comments received, after which the final version of the Management Plan will go to the Nunavut Wildlife Management Board for decision. The Nunavut Wildlife Management Board process is the final stage before the Management Plan will be posted on the Species at Risk Public Registry as final. Note that as a species of special concern, there are no general prohibitions or critical habitat requirements for this species.

You can read the proposed Management Plan and comment at: Management Plan for the Buff-breasted Sandpiper (Tryngites subruficollis) in Canada - Document search - Species at risk registry. I have also attached the Management Plan to this email for your convenience. You can also provide comments directly to me at hayley.roberts@ec.gc.ca.

There is also a Factsheet attached in both English and Inuktitut that provides an overview of the species and the Management Plan. If you require the email in Inuktitut please let me know and I can provide that for you.

I welcome your participation in this matter.

Hayley Roberts / ᐄᐊᐃᓕᓗ ᕿᐳᖏ
Pronouns: She/Her

Species at Risk Biologist, Canadian Wildlife Service
Environment and Climate Change Canada / Government of Canada
hayley.roberts@ec.gc.ca / Tel: +1 (867) 979-7045, Cell: +1 (867) 222-0112
NOTE NEW EMAIL ADDRESS ENDING

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hayley.roberts@ec.gc.ca / ᐅᖃᓗᐅᑦ: +1 (867) 979-7045, ᐅᖃᓗᐅᑎᕋᓱᖅ: +1 (867) 222-0112

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Archived: November 19, 2021 9:23:31 AM
From: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Sent: November 18, 2021 3:42:00 PM
To: Roberts,Hayley (ECCC) Roberts,Hayley (ECCC)
Bcc: 'JAliqatuqtuq@tunngavik.com'; 'dlee@tunngavik.com'; 'envofficer@kitia.ca'; 'attima@hadlari.com'; 'execdir@kitia.ca'; 'krwb@niws.ca'; 'Pamela Wong'; 'kwb@niws.ca'; 'dningeongan@kivalliqinuit.ca'; 'reception@kivalliqinuit.ca'; 'cambay@kitikmeothto.ca'; 'cambay@krwb.ca'; 'mlimousin@cambridgebay.ca'; 'chimo@kitikmeothto.ca'; 'bathurst@kitikmeothto.ca'; 'gjoa@kitikmeothto.ca'; 'Gjoa@krwb.ca'; 'saogjoa@qiniq.com'; 'kugaaruk@kitikmeothto.ca'; 'Joshua Kringorn'; 'saokug@qiniq.com'; 'taloyoak@kitikmeothto.ca'; 'taloyoak@krwb.ca'; 'sao@taloyoak.ca'; 'Dorianna Kuksuk'; 'sao@arviat.ca'; 'bakerlake@kivalliqhto.ca'; 'blsao@northwestel.net'; 'aqigiq@kivalliqhto.ca'; 'htochester@qiniq.com'; 'sao_hamlet@qiniq.com'; 'rankin@kivalliqhto.ca'; 'rankinhto@qiniq.com'; 'sao@rankininlet.ca'; 'arviq@kivalliqhto.ca'; 'repulsebayhto@qiniq.com'; 'saonaujaat@qiniq.com'; 'issatik@kivalliqhto.ca'; 'whalecovehto@qiniq.com'; 'sao@whalecove.ca'; 'mayor@whalecove.ca'
Subject: FOR COMMENT: Proposed Management Plan for Buff-breasted Sandpiper in Canada (DUE: February 15 2022)
Sensitivity: Normal
Attachments:
Buffbreasted-Sandpiper_mp_Factsheet_ENG.pdf uffbreasted-Sandpiper_mp_Factsheet-IKK.pdf ;mp_buff_breasted_sandpiper_e_proposed.pdf uffbreasted-Sandpiper_mp_Factsheet-IKB.pdf

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You can read the proposed Management Plan and comment at: Management Plan for the Buff-breasted Sandpiper (Tryngites subruficollis) in Canada - Document search - Species at risk registry. I have also attached the Management Plan to this email for your convenience. You can also provide comments directly to me at hayley.roberts@ec.gc.ca.

There is also a Factsheet attached in both English and Inuktitut that provides an overview of the species and the Management Plan. If you require the email in Inuktitut please let me know and I can provide that for you.

I welcome your participation in this matter.

Hayley Roberts / ᐄᐊᐃᓕᖅ ᖁᔭᓐ
Pronouns: She/Her

Species at Risk Biologist, Canadian Wildlife Service
Environment and Climate Change Canada / Government of Canada
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hayley.roberts@ec.gc.ca / ᐅᖃᑲᓕᐅᑦ: +1 (867) 979-7045, ᐅᖃᑲᓕᐅᑎᕐᓴᖅ: +1 (867) 222-0112

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Summary of the draft Management Plan for the

BUFF-BREASTED SANDPIPER

Under the *Species at Risk Act* (SARA), a management plan must be developed for each species listed as Special Concern in order to identify measures for the conservation of the species. This document highlights the key sections of the draft management plan.

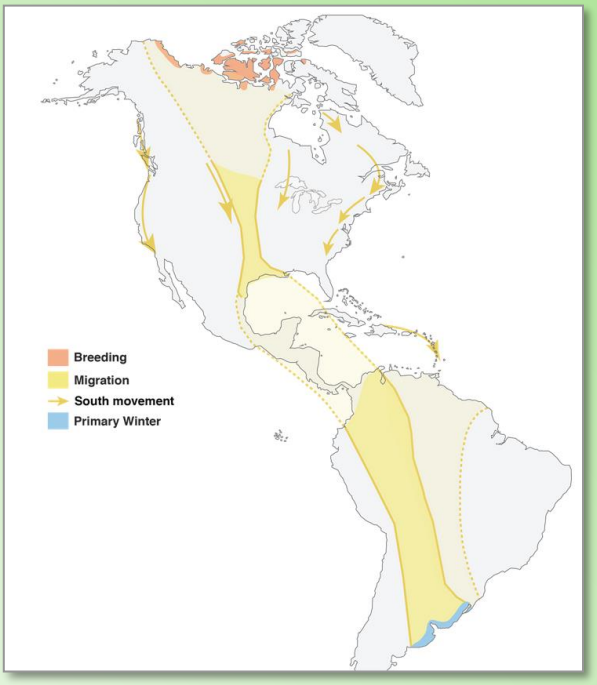
Species Conservation Status

The Buff-breasted Sandpiper (*Calidris subruficollis, formerly Tryngites subruficollis*) is listed as Special Concern under SARA since 2017.

Description

The Buff-breasted Sandpiper is a medium-sized shorebird. This species is marked with dark brown spots or streaks along the crown and sides of the breast, and narrow, dark-brown streaks edged in buff (light brownish yellow) on their back, upper tail, and wing feathers (when viewed at rest). Male, female, and juvenile plumage is similar. The species has yellow legs and a black bill.

Buff-breasted Sandpiper at Seal River Estuary Important Bird Area © Christian Artuso



Distribution of the Buff-breasted Sandpiper (from Cornell Lab – Birds of North America's Website, McCarty et al. 2017)

Distribution

An estimated 75% of the global Buff-breasted Sandpiper population breeds in Canada. The species breeds in low densities in the tundra along the coastline of Alaska, Yukon, the Northwest Territories and Nunavut. On the spring migration, the species follows the Midcontinental Flyway, stopping in the Llanos plains of Columbia and Venezuela before crossing the Gulf of Mexico. In the fall, the species makes multiday stops in southern Saskatchewan, in the Kansas Flint Hills, in southcentral Texas and on the Gulf of Mexico coast.

Environment and Climate Change Canada | Environnement et Changement climatique Canada

Canada

Habitat Needs

The Buff-breasted Sandpiper is an upland species, preferring to breed on the drier, elevated ridges of the tundra. Males display in small groups (leks) in moist meadows. Females nest away from lek sites, in well-drained grassy tundra. During migration, the species congregates in natural or managed short-grass (less than 10 cm in height) areas, such as pastures and plowed fields.

Threats to the Species' Survival

- Habitat loss from wind farm encroachment and direct mortality from collisions with wind turbines at important stopover (in the U.S.) and wintering sites (in South America).
- Permanent habitat loss in the non-breeding period due to fire suppression; resource extraction; and conversion to pine, eucalyptus and acacias plantations.
- Decreased survival in the non-breeding period due to exposure to pesticides and reduced food availability, especially when natural habitats or pastures are not available.
- Decreased survival of juveniles during migration and decreased nesting success on breeding grounds due to severe weather events.

Management Objectives

Over a period of 10 years (2025 to 2035), maintain the Buff-breasted Sandpiper population size.

Strategies to Help Meet Objectives

Broad strategies to address the threats to the survival and recovery of the species include:

- Encourage the wind energy sector to develop, implement, and promote beneficial management practices to mitigate threats to the Buff-breasted Sandpiper and its habitats where the species is known to occur.
- Conserve habitat at sites of key importance.
- Provide resources to landowners through stewardship programs to consider Buff-breasted Sandpiper habitat needs (such as short-grass and adequate soil moisture) when managing their land;
- Identify the natural processes that created and maintained suitable habitats in order to develop land-use practices beneficial for the species.
- Develop new international partnerships and maintain existing ones, for conservation of the species and its habitat
- Centralize data from past surveys and complete the analysis of tracking studies that identify sites with high densities of Buff-breasted Sandpipers;
- Determine fine-scale landscape features that predict habitat usage on non-breeding grounds;
- Determine level of exposure of the species to pesticides and effects of those contaminants on survival, fitness and food availability.

How You Can Help

- Learn more about the Buff-breasted Sandpiper, the threats to its survival and its habitat needs at www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html;
- Practice voluntary stewardship activities and beneficial management practices, for example:
  - Work in cooperation with Environment and Climate Change Canada and/or local conservation groups to conserve important habitat; and avoid activities that could harm the species or its habitat.
  - Submit observation data to conservation data centres such as eBird.

For more information, please contact us directly at:

Environment and Climate Change Canada (ECCC) – Canadian Wildlife Service Iqaluit
933 Mivvik Street, Iqaluit, Nunavut X0A 0H0 PO Box 1870
Phone: 1-867-979-7045 or **Email**: hayley.roberts@canada.ca
Or visit the Species at Risk Public Registry website at: www.sararegistry.gc.ca

Aussi disponible en français

Environment and Climate Change Canada
Environnement et Changement climatique Canada



Summary of the draft Management Plan for the

BUFF-BREASTED SANDPIPER

Buff-breasted Sandpiper at Seal River Estuary Important Bird Area © Christian Artuso

Under the *Species at Risk Act* (SARA), a management plan must be developed for each species listed as Special Concern in order to identify measures for the conservation of the species. This document highlights the key sections of the draft management plan.

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An estimated 75% of the global Buff-breasted Sandpiper population breeds in Canada. The species breeds in low densities in the tundra along the coastline of Alaska (U.S.), Yukon, the Northwest Territories and Nunavut. In the spring, the species migrates mostly in the Prairie Provinces. In the fall, the species migrate on a broad front, from British Columbia to Newfoundland.

Habitat Needs

The Buff-breasted Sandpiper is an upland species, preferring to breed on the drier, elevated ridges of the tundra. Males display in small groups (leks) in moist meadows. Females nest away from lek sites, in well-drained grassy tundra. During migration, the species congregates in natural or managed short-grass (less than 10 cm in height) areas, such as pastures and ploughed fields.

Threats to the Species' Survival

- Habitat loss from wind farm encroachment and direct mortality from collisions with wind turbines at important stopover (in the U.S.) and wintering sites (in South America).
- Permanent habitat loss in the non-breeding period due to fire suppression; resource extraction; conversion to pine, eucalyptus, and acacias plantations; and invasive non-native species.
- Decreased survival in the non-breeding period due to exposition to pesticides and reduced food availability, especially when natural habitats or pastures are not available.
- Decreased survival of juveniles during migration and decreased nesting success on breeding grounds due to severe weather events.

Canada

Management Objective

Over a period of 10 years (2025 to 2035), maintain or, if possible, increase the Buff-breasted Sandpiper population size.

Strategies to Help Meet Objectives

Broad strategies to address the threats to the survival and recovery of the species include:

- Provide resources to landowners through stewardship programs to consider Buff-breasted Sandpiper habitat needs (such as short-grass and adequate soil moisture) when managing their land;
- Protect habitat at sites of key importance;
- Develop new international partnerships for conservation and maintain existing ones;
- Centralize data from past surveys and complete the analysis of tracking studies that identify sites with high densities of Buff-breasted Sandpipers;
- Determine fine-scale landscape features that predict habitat usage on non-breeding grounds;
- Evaluate current and past population monitoring methods and identify the most appropriate methods to assess progress towards the management objective;
- Identify the natural processes that created and maintained suitable habitats to develop land-use practices beneficial for the species.
- Determine level of exposure of the species to pesticide and herbicide and effects of those contaminants on survival, fitness and food availability.

How You Can Help

- Learn more about the Buff-breasted Sandpiper, the threats to its survival and its habitat needs at www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html;
- Practice voluntary stewardship activities and beneficial management practices, for example:
  - Work in cooperation with Environment and Climate Change Canada and/or local conservation groups to conserve important habitat; and
  - Avoid activities that could harm the species or its habitat.
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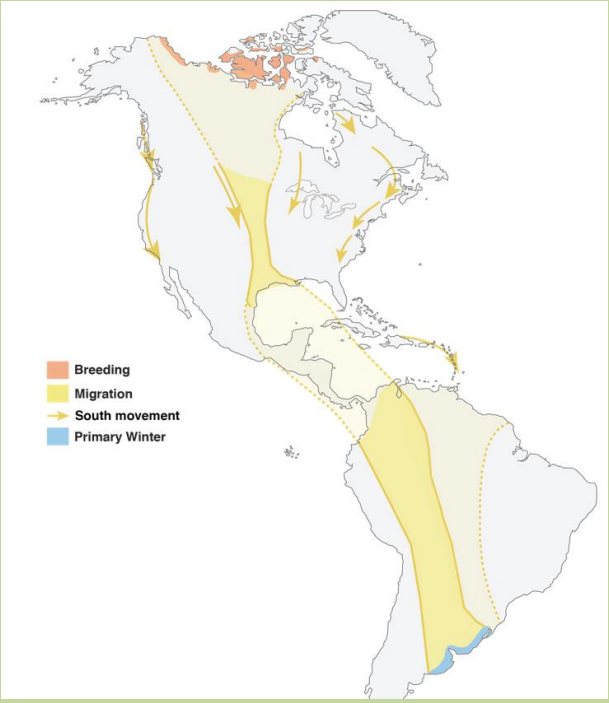

Distribution of the Buff-breasted Sandpiper (from Cornell Lab – Birds of North America's Website, McCarty et al. 2017)

For more information, please contact us directly at:
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PO Box 1870, Iqaluit NU X0A 0H0
Fax: 867-975-4645 Phone: 867-979-7058
Email: Teresa.tufts@canada.ca

Environment and Climate Change Canada
Environnement et Changement climatique Canada

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ᐊᑕᐅᓯᖅ ᓂᕐᔪᑎᑦ ᐃᓱᒪᓗᒋᔭᐅᓕᖅᑐᑦ ᐱᖁᔭᖓᓂ (SARA), ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᐸᕐᓇᐅᑦ ᐊᕿᒃᑕᐅᔭᕆᐊᓕᒃ ᐊᔾᔨᖏᖏᑐᓄᑦ ᑎᒥᐊᕈᓯᕐᓄᑦ ᑎᑎᕋᖓᐅᓯᒪᔪᓄᑦ ᐃᓱᒪᓗᒋᔭᐅᓕᖅᑐᑦ ᓇᓗᓇᐃᖅᑕᐅᖁᐸᓗᒍ ᖃᓄᐃᓕᐅᕈᑕᐅᓂᐊᕐᓗᑎᒃ ᓴᐳᔭᐅᓯᒪᓂᖏᓐᓄᑦ. ᑕᒫᓇ ᑎᑎᖃᖅ ᓇᓗᓇᐃᖅᓯᒪᕚᖅ ᐊᕙᒃᑐᖅᓯᒪᔪᓂᒃ ᓱᕗᓪᓕᐅᐸᓗᐊᓂ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᐸᕐᓇᐅᑎᐸ.

ᑎᖏᐊᕈᓯᑦ ᓴᐳᔾᔭᐅᓯᒪᓂᖏᓐᓄᑦ ᖃᓄᐃᓕᕐᓂᖓ

ᓯᖅᔮᐊᕐᔪᐃᑦ (*Calidris subruficollis*, *ᑕᐃᔭᐅᓚᐅᖅᑐᑦ Tryngites subruficollis*) ᑎᑎᕋᖓᐅᓯᒪᕚᖅ ᐃᓱᒪᓗᒋᔭᐅᐸᓗᐊᓂ ᐊᑕᐅᓯᖅ ᓂᕐᔪᑎᑦ ᐃᓱᒪᓗᒋᔭᐅᓕᖅᑐᑦ ᐱᖁᔭᖓᓂ (SARA) ᑕᐃᒪᖓᑦ 2017.

ᖃᓄᐃᑐᓂᖏ ᐊᒻᒪ ᓇᒧᖓᐅᑕᕐᓂᖏᑦ

ᓯᖅᔮᐊᕐᔪᐃᑦ ᐊᖏᓗᐊᖏᑐᖅ ᓯᖅᔭᒥᐅᑕᖅ ᑎᖏᐊᕈᓯᖅ. ᑕᐸᑯᐊ ᑕᐅᑦᑐᖃᖅᐸᑦ ᓴᖏ ᑯᑯᔭᖅᓱᑎᒃ ᑕᖅᓴᖃᖅᑐᑦ ᑐᐊᑦᑐᓂᒃ ᓴᓂᕋᕐᒥᑎᒍᑦ, ᐸᒥᐅᖏᑎᒍᑦ ᐊᒻᒪ ᐃᓴᕈᖏᑎᒍᓪᓗ. ᐊᕐᓇᕕᐊᑦ ᐊᖑᑎᕕᐊᓪᓗ ᑕᐅᑦᑐᖏᑦ ᐊᔾᔨᒥᐊᖅᐸᑦ, ᖁᖅᓱᖅᑐᓂᒃ ᓂᐅᖃᖅᓱᑎᒃ ᓯᒍᒋᓪᓗ ᕿᕐᓂᖅᑐᐸᓗᑎᒃ.

ᐃᓱᒪᒋᔭᐅᓯᒪᕚᑦ ᑕᒪᐃᓐᓂ ᖃᓂᒋᔭᖓᓐᓂ 75% ᓯᓚᕐᔪᐊᕐᒥ ᓯᖅᔮᐊᕐᔪᐃᑦ ᑲᓇᑕᒥᓯᐅᕋᓱᒋᔭᐅᐸᓗᑎᒃ. ᑮᓯᐊᓂ ᖃᓄᐃᑐᓂᖏᑦ ᐊᔾᔨᖏᖏᓂᖏᓪᓗ ᐊᒥᓱᓗᐊᖏᑐᑦ ᓄᓇᒥᓯᐅᕐᓂᖏᑦ ᐊᓚᙵᐅᐸ ᓯᖅᔭᖓᓂ (ᐊᒥᐊᕆᑲᓐ ᓄᓇᖓᓐ), ᔨᑲᓐᒥ, ᓄᓇᑦᓯᐊᕐᒥ, ᓄᓇᕗᒻᒥᓗ. ᐅᐱᕐᖑᓵᒥ, ᑕᐸᑯᐊ ᓄᐸᓕᐊᕚᒃᐸᑦ ᖃᐸᓗᓇᑦ ᓄᓇᖓᓐᓂ ᐱᓗᐊᖅᑐᒻᒥᒃ. ᐅᑭᐊᒥᓕ, ᓄᐸᓕᐊᓱᕋᕗᑦ ᓱᕗᓪᓕᐅᐸᓗᑎᒃ ᐳᕋᑎᔅ ᑲᓚᐱᐊᒥᑦ ᓄᐅᕙᐅᓚᓐᒍᑦ.

ᓂᕿᖃᕋᐊᖃᕐᓂᖏᑦ

ᓯᖅᔮᐊᕐᔪᐃᑦ ᓄᓇᒥᐅᑕᐅᖓᒪᑕ, ᐸᓂᕐᓂᕐᒥ, ᐊᑎᓗᐊᖏᑐᒥᓗ ᓄᓇᖃᕈᐊᓱᖅᐸᑦ. ᐊᖑᑕᐅᓂᖅᓴᓗ ᑭᓂᐸᓂᕐᒥ ᓄᓇᖃᕈᐊᓱᖅᐸᑦ. ᐊᕐᓇᓗᐃᑦ ᒫᓂᓕᐅᖅᓱᑎᒃ ᐱᕈᖅᓯᐊᖃᕐᓂᖅᓴᒥ.

ᓯᖅᔮᐊᕐᔪᐊᖅ ᓇᑎᓕᖕᒥ ᑎᖏᐊᕈᓯᑦ ᓄᓇᖃᕐᕕᖓᓂ ᐊᑐᑎᖃᖅᑐᒥ
© Christian Artuso

ᐊᐅᓚᖅᐸᓕᐊᓕᕋᖓᒥᒃ ᓄᓇᒧᑦ ᐸᓂᕐᓂᖅᓴᒧᑦ ᓄᖃᖅᑕᓱᖅᑐᑦ (ᖁᑎᖕᓂᖏᑦ 10 ᓰᑎᒥᑕᖑᐸᓗᑎᒃ ᓄᓇᕋᐃᑦ ᐱᖁᖅᑐᖃᑎᐊᖅᑐᑦ.

ᐅᓗᕆᐊᓇᖅᑐᑦ ᐱᑕᖃᕈᓇᐃᖅᑎᑦᓯᔪᓇᖅᑐᑦ

- ᓇᔪᖅᐸᒃᑕᖏᑦ ᐱᑕᖃᕈᓇᐃᖅᑐᑦ ᓂᕐᔪᑎᖃᕐᕕᐅᔪᓄᑦ ᐊᒻᒪ ᑐᓗᖅᑕᐅᑕᓕᕐᓂᖏᓐᓄᑦ ᐊᓄᓇᒧᑦ ᐃᑯᒪᖃᐅᑎᓄᑦ ᓄᖃᖓᑎᓪᓗᒋᑦ (ᐊᒥᐊᕆᑲᓐ ᓄᓇᖓᓂ) ᐊᒻᒪ ᐅᑭᐅᖅᓯᐅᕕᒋᕙᒃᑕᖏᓐᓂ (ᓴᐅᑦ ᐊᒥᐊᕆᑲᒥ).
- ᓇᔪᖅᐸᒃᑕᖏᑦ ᐱᑕᖃᕈᓇᐃᓗᐊᕕᒃᑐᑦ ᐃᓂᒋᖏᑕᖏᓂᓯᐅᖅᑎᓗᒋᑦ ᐃᑯᐊᓚᖅᑐᒧᑦ ᓄᓇᒧᑦ; ᓄᓇᐅᑉ ᐱᖅᑕᐅᕙᓕᐊᓂᖓᓄᑦ; ᓇᐸᖅᑐᑦ ᐊᓯᐊᖑᖅᑕᐅᕙᓕᐊᓂᖏᓐᓄᑦ, eucalyptus, ᐊᒻᒪ acacias ᐱᕈᖅᑐᖁᑎᖏᑦ; ᐊᒻᒪ ᐅᒪᔪᐊᕈᓯᑦ ᓂᕆᕙᓪᓕᐊᓂᖏᓐᓄᑦ.
- ᐱᑕᖃᓗᐊᕈᓇᐃᖅᑎᑕᐅᓗᑎᒃ ᑎᖏᐊᕈᓯᑦ ᐅᑯᓄᖓ ᐱᕈᖅᑐᑦ ᐃᓚᖁᑎᖏᓐᓂᒃ ᐊᑐᖅᑕᐅᓂᖏᓐᓄᑦ ᐊᒻᒪ ᓂᕿᖃᓗᐊᕈᓇᐃᕈᑕᐅᓗᑎᒃ, ᐱᓗᐊᖅᑐᒻᒥᒃ ᓄᓇᒥ ᐱᕈᖅᑐᑦ ᐱᑕᖃᓗᐊᖏᓕᖅᑎᓪᓗᒋᑦ.
- ᐱᕈᐊᓂᒃᓯᒪᖏᑐᑦ ᓄᖑᐸᓕᐊᓂᖏᑦ ᐊᓯᐊᓄᑦ ᓄᐸᓕᐊᑎᓪᓗᒋᑦ ᐊᒻᒪ ᒫᓂᖃᕆᖅᑎᓪᓗᒋᑦ ᓄᖃᒐᕕᒋᕙᒃᑕᒥᖕᓂ ᓯᓚᐅᑉ ᓇᒻᒪᖏᓗᐊᕐᓂᖓᓄᑦ.

Canada

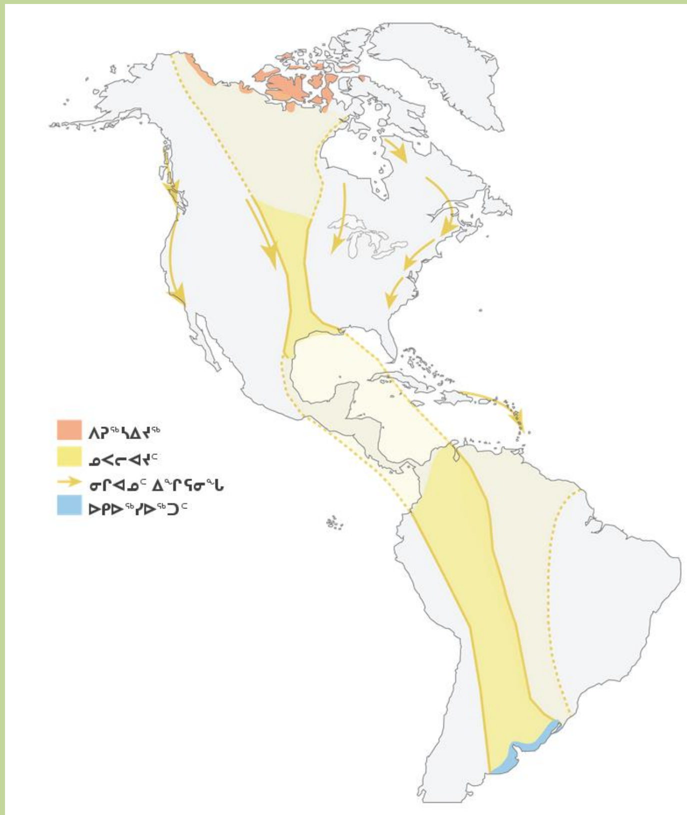
ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᑐᕋᒐᕆᔭᐅᔪᖅ

ᐃᓗᐊᓐᓂ 10 ᐊᕌᒍᑦ (2025 ᐅᕝᕙ 2035), ᐊᕿᐅᒪᑎᓪᓗᒋᑦ, ᐊᔾᕐᓇᖏᐸᑦ, ᐱᕈᖅᐸᓕᐊᑎᓪᓗᒋᑦ ᓰᓯᕆᐊᕐᔪᐃᑦ ᐊᒥᓲᓂᖏᑦ.

ᖃᓄᐃᓕᐅᕈᑕᐅᔪᑦ ᐃᑲᔪᑕᐅᓂᐊᕐᓗᑎᑦ ᑐᕋᒐᕆᔭᐅᔪᓄᑦ

ᐊᔫᖏᖏᑐᓐᓂᒃ ᐅᖃᐅᓯᖃᖅᑐᑦ ᖃᓄᐃᓕᐅᕈᑎᑦ ᐅᓗᕆᐊᓇᖅᓯᓂᖏᓐᓄᑦ ᐊᒻᒪ ᐱᑕᖃᑲᓂᖅᑎᑕᐅᓂᖏᓐᓄᑦ ᑕᐸᑯᐊ ᓰᓯᒥᐅᑦ ᐅᑯᐊᖑᓂᐊᖅᓱᑎᒃ:

- ᐊᑐᓚᐅᔾᖓᖅᑐᓂᒃ ᐱᑕᖅᖅᑎᑦᓯᓂᖅ ᐃᓱᒪᒋᓗᐊᕐᓗᒋᑦ ᓰᓯᕆᐊᕐᔪᐃᑦ ᓇᔾᖅᐸᒃᑕᖏᓐᓂᒃ ᒥᐊᓂᖅᓯᓂᕐᒥᒃ (ᓄᓇᒋᓗᐊᖏᑐᖅ ᐊᒻᒪ ᓄᓇᖓ ᐃᒪᕐᓗᖅᓴᖅᑐᖅ) ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓂᒃ ᐃᓱᒪᓕᐅᕐᓂᐊᕐᓗᓐᓂ;
- ᒥᐊᓂᕆᔭᐅᓗᑎᒃ ᓇᔾᖅᐸᒃᑕᖏᑦ ᐅᔨᕐᓇᓗᐊᖅᑐᑦ ᓄᓇᖁᑎᒋᔭᐅᔪᑦ;
- ᑲᓇᑕᐅᑉ ᓯᓚᑕᓂᑦ ᐱᓕᕆᖃᑎᖃᕐᓗᓐᓂ ᓴᐳᔭᐅᓯᒪᕙᖏᓐᓂᒃ ᒥᐊᓂᖅᓯᓂᐊᖅᑐᓂᒃ ᐅᑉᓗᒥᐅᔪᒧᑦ ᐊᑐᖅᑕᐅᔪᓂᒃ;
- ᓇᓗᓇᐃᔭᕐᓗᒋᑦ ᐱᐊᓂᒃᓯᒪᔪᓐᓂᒃ ᖃᐅᔨᓴᒪᐅᓂᑯᓚᐅᖅᑐᓐᓂ ᐊᒻᒪ ᖃᓄᐃᓇᔭᕐᓂᖏᑦ ᖃᐅᔨᓴᕐᓂᑯᑦ ᓇᓗᓇᐃᖅᓯᓯᒪᔪᑦ ᐅᑯᓄᖓ ᐱᑕᖃᕐᓂᖏᑦ ᓰᓯᕆᐊᕐᔪᐊᕐᓂᒃ;
- ᐃᓱᒪᓕᐅᕐᓗᓐᓂ ᓄᓇᐅᑉ ᐃᓕᖓᓂᖏᓐᓂᒃ ᓂᕿᒃᓴᕆᔭᐅᔪᑦ ᐊᑐᓚᐅᑕᕐᓂᖏᓐᓄᑦ ᐱᑕᖃᓗᐊᖏᑐᓄᑦ ᑎᖕᒥᐊᕈᓯᕐᓄᑦ ᓄᓇᒋᔭᐅᔪᓄᑦ;
  - ᐅᑉᓗᒥᐅᔪᖅ ᐊᑐᐊᓂᒃᑐᓪᓗ ᖃᐅᔨᓴᕈᑎᑦ ᐃᖏᕋᓂᖏᑦ ᓇᓱᐊᖑᔪᖅ ᐱᐅᓚᖑᓂᖓᓂᒃ ᐊᐅᓚᑕᐅᓂᖏᓄᑦ ᖃᐅᔨᒪᕈᑕᐅᓂᐊᖅᑐᑦ ᑐᕋᒐᕆᔭᐅᓂᐊᖅᑐᓄᓪᓗ; ᓇᓗᓇᐃᕐᓗᒍᓗ ᐱᓕᕆᐊᖑᓚᐅᖅᑐᑦ ᐊᕿᒃᑕᐅᓂᖏᓐᓄᑦ ᓄᓇᐅᑉ ᐊᑐᖅᑕᐅᓂᖓᑕ ᐱᕙᓪᓕᐊᕈᑕᐅᓚᐅᖅᑐᑦ ᑎᖕᒥᐊᕈᓯᕐᓄᑦ.
- ᐃᓱᒪᓕᐅᕐᓗᒥ ᐱᕈᖅᑐᑦ ᐃᓚᖁᑎᖏᑦ ᐊᒃᑐᐃᓂᖃᕐᒪᖔᑕ ᓴᓗᒪᐃᓐᓂᐅᔪᓄᑦ ᐱᑕᖅᑐᐃᓇᕐᓂᐊᕐᓗᑎᒃ, ᓇᒻᒪᑎᐊᕐᓂᐊᕐᓗᑎᒃ ᐊᒻᒪ ᓂᕿᖃᑎᐊᕐᓗᑎᒃ.
- ᐊᑭᓕᒐᐅᓂᕐᒥᒃ ᐃᓱᒪᖏᒥᐊᕐᓗᓐᓂ ᐃᑲᔪᖅᑐᐃᓂᕐᒥᒃᓚᖅ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᓴᐳᔭᐅᓯᒪᓂᖏᓐᓄᑦᓗ ᐅᑯᓂᖓ ᐱᓕᕆᐊᖃᖅᓯᓐᖓᖅᐳᓯ:
  - ᐱᓕᕆᖃᑎᖃᕐᓗᓐᓂ ᐊᕙᑎᓕᕆᔨᑦ ᓯᓚᐅᑉ ᐊᔭᖑᖅᐸᓕᐊᓂᖓ ᑲᓇᑕᒥ ᓄᓇᓕᖕᓂᓗ ᓴᐳᔭᐅᓯᒪᔪᓕᕆᔨᓂᒃ ᓰᓯᒥᐅᑦ ᓄᓇᕐᑯᑎᖏᑦ ᐊᑐᕐᓂᖅᑐᑦ ᐱᑕᖃᐃᓇᕐᑯᐸᓗᒋᑦ; ᐊᒻᒪ
  - ᓰᓯᒥᐅᑦ ᐊᒻᒪ ᓇᔪᖅᐸᒃᑕᖏᓐᓂᒃ ᓱᕈᐃᑕᐃᓕᓂᕐᒧᑦ ᖃᓄᒥᐊᖅ ᐱᓕᕆᑕᐃᓕᓗᓯ.
- ᓰᓯᒥᐅᑕᓂᒃ ᑕᑯᑕᕐᓂᑯᑦ ᐅᖃᐅᓯᐅᔾᖓᖅᐳᑦ ᖃᕆᑕᐅᔭᑯᑦ ᑲᑎᖅᓱᐃᕙᖑᒃ (ᐅᓇᑐᑦ eBird).



ᓇᒧᖓᐅᑕᕐᓂᖏᑦ ᓰᓯᕆᐊᕐᔪᐃᑦ (ᐅᑯᓇᖓᖅᑐᖅ ᖃᐅᔨᓴᕐᕕᖏᑦ – ᓄᐊᑦ ᐊᒥᐊᕆᑲ ᑎᖕᒥᐊᕈᓯᖏ ᖃᕆᑕᐅᔭᒥ ᐅᖃᐅᓯᐅᔪᑦ, McCarty et al. 2017)

- ᐃᓕᓂᐊᕐᓗᒋᑦ ᖁᖅᓱᖅᑐᓂᒃ ᓴᖃᖅᑐᑦ ᑐᓪᓕᑦ, ᐱᑕᖃᐃᓐᓇᑎᓐᓂᕐᓗᒋᑦ ᐃᓱᒪᓕᐅᕈᑎᑦ ᐊᒻᒪ ᓂᕆᔾᖅᑕᖏᑦ ᖃᕆᑕᐅᔭᑯᑦ ᐅᕙᓐᓂ www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html;

ᑐᑭᓯᑲᓂᕈᒪᒍᕕᑦ ᑎᑎᕋᕐᓚᐅᖃᑲᓐᓂᕐᓂᕐᓚᓂᒃ, ᑐᓴᖅᑎᒥᐊᕐᓗᒋᑦ ᐊᕙᑎᓕᕆᔨᑦ ᓯᓚᐅᑉ ᐊᔭᖅᐸᓕᐊᓂᖓ ᑲᓇᑕᒥ ᐃᓄᖕᑦ ᖃᐅᔨᒋᐊᕐᕕᖓᑦ ᐅᖃᓗᑎᖓ ᐊᑭᖃᖏᑐᖅ 1-800-668-6767 (ᑲᓇᑕᒥᓐᓇᖅ) ᐅᕙᓗᓂᑦ 819-997-2800 ᖃᕆᑕᐅᔭᑯᑦ ᑐᕋᕈᑎᖓ ec.enviroinfo.ec@canada.ca.

Aussi disponible en français. Also available in English.

ᑐᑭᓯᑲᓂᕈᒪᒍᕙ ᐅᕝᕙ ᑎᑎᕋᕈᓐᓇᖅᐳᓯ:
Environment and Climate Change Canada (ECCC) –
Canadian Wildlife Service, Northern Region
PO Box 1870, Iqaluit NU X0A 0H0
Fax: 867-975-4645   Phone: 867-979-7058
Email: Teresa.tufts@canada.ca

Environment and Climate Change Canada | Environnement et Changement climatique Canada



ᓇᐃᓕᓐᓂᐊᕐᓂᑦ ᓄᓇᕗᑦ ᒥᐊᓂᓗᐅᓂᖅᐳᓂᑦ <ᖁᓇᐅᑎᑦ

ᓄᓚᓴᐊᖁᐊᖁᓇᓂᑦ

ᓄᓚᓴᐊᖁᐊᖅ ᓇᕐᑎᓕᖅ ᑎᑎᕐᓂᖅ ᓄᓇᕗᑦ
ᐊᑐᑎᖃᑦᑐᖅ © Christian Artuso

ᐊᑐᓂᖅᐸᓕᓐᓂᖅᑐᑦ ᐊᐅᓚᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ ᐊᐅᓚᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ (SARA), ᒥᐊᓂᓚᐅᓂᖅᓂᓐᓄᑦ <ᖁᓇᐅᑦ ᐊᖏᖃᑎᐅᓚᐊᓕᓂᒃ ᐱᓕᕐᓂᕐᓂᑦ ᐃᓕᓐᓂᐅᓚᐅᓂᖅᓂᑦ ᑎᓕᒥᐊᑭᓕᓂᑦ ᑎᑎᕋᐱᐅᓚᐅᓂᖅᓂᑦ ᐃᓕᓐᓂᑦᑎᐊᓂᖅᓂᑦ ᓇᓗᓇᐃᖅᑕᐅᖁᔨᓗᒍ ᖃᓄᐃᓕᓂᐅᑕᐅᓂᐊᖁᓗᑎᒃ ᓴᓗᐅᓂᓚᓂᖅᓂᑦ. ᑕᒪᓇ ᑎᑎᖃᖅ ᓇᓗᓇᐃᖅᓚᕐᖅ ᐊᕕᑐᑐᖅᓚᓚᐅᓂᑦ ᓂᕆᐅᒪᓂᖅ ᐊᐅᓚᑦ ᒥᐊᓂᓚᐅᓂᖅᓂᑦ <ᖁᓇᐅᑎᑦ.

ᑎᓕᒥᐊᑭᓂ ᓴᓗᓴᐅᓂᓚᓂᖅᓂᑦ ᖃᓄᐃᓕᒥᖁᓂᖓ

ᓄᓚᓴᐊᖁᐊᐃᓕᑦ (*Calidris subruficollis, ᑕᐃᔨᐅᓪᓚᐅᖅᑐᑦ Tryngites subruficollis*) ᑎᑎᕋᐱᐅᓚᕐᖅ ᐃᓂᓚᓂᑎᐅᑦᓗᓐᓂ ᐊᑐᓂᖅ ᓄᓇᕗᑦ ᐃᓂᓚᓂᑎᐅᓚᐅᖅᑐᑦ ᐱᖁᓴᓐᓂᖅ (SARA) ᑕᐃᒪᓐᓂ 2017.

ᖃᓄᐃᑐᓂᖅ ᐊᒪ ᓇᒧᓐᐅᑕᖁᓂᓂᑦ

ᓄᓚᓴᐊᖁᐊᐃᓕᑦ ᐊᖏᓕᓇᖏᑐᑐᖃᖅ ᓄᓚᒥᐅᑕᖃᖅ ᑎᓐᒥᐊᑭᓄᖅ. ᑕᐸᑯᐊ ᑕᐅᔨᑐᖃᖅᓴᐅᑎᑦ ᓄᓚᖃᖅᑐᑦ ᑕᖅᓴᖃᖅᑐᑦ ᑐᐊᑦᑐᓄᖅ ᓴᓂᕆᒥᑎᒧᑦ, ᐸᒥᐅᖏᓐᓄᒧᑦ ᐊᒪᒪ ᐃᓴᑭᖏᑎᒧᑦᓗᓐᓇ. ᐊᖁᓇᐃᐊᑦ ᐊᖓᒍᐃᓇᐊᖁᓇᓇᓐᓇ ᑕᐅᔨᑐᖃᖅᓴᐅᑎᑦ ᐊᐅᓚᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ, ᖃᐅᔨᓴᓂᖅᓴᐅᓂᑦ ᐊᐅᓚᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ ᐊᑭᓐᓄᖅᓴᐅᓂᑦ ᓴᓂᕆᒥᑎᒧᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ (ᐊᐅᓚᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ), ᕿᑐᕈᒥ, ᓄᓇᕗᓂᐊᖁᑎᒥ, ᓄᓇᕆᓚᒥᓗ. ᐅᐱᕐᖏᓚᒥ, ᑕᐸᑯᐊ ᓄᐸᓕᐊᕆᐳᑦ. ᐅᑭᐅᖏᓚᓂ, ᓄᐸᓕᐊᓂᕆᓇᕆᓂᑦ ᓂᕆᐅᓕᐅᑦᓕᓐᓂᖅᑐᑦ ᐳᓗᑎᑦ ᑲᓪᓚᐃᐊᒥᑦ ᓄᐅᐊᐅᑦᓕᓐᓂᖅᑐᑦ.

ᓂᕆᑭᓚᐊᖅᑐᓂᖅᓂᑦ

ᓄᓚᓴᐊᖁᐊᐃᓕᑦ ᓄᓇᒥᐅᑕᐅᖅᓚᒐ, <ᓂᕐᓂᕆᒥ, ᐊᑎᑎᓗᐊᖅᑐᑐᒥᓗ ᓄᓇᖃᖅᐸᓂᖅᑐᑦ. ᐊᖏᒍᐅᓂᖅᓴᓕᓗ ᑭᓂᐸᓂᕆᒥ ᓄᓇᖃᖅᐸᓂᖅᑐᑦ. ᐊᖏᓇᐃᓕᑦ ᒪᑐᓂᐅᖅᓴᓗᑎᒃ ᐱᖃᖅᓂᐊᖁᖃᖅᓂᖅᓴᓕᒥ.

ᐊᐅᓚᑲᓇᖅᑐᒃᑐᑦ ᓄᓇᕗᒻᒥ ᑎᓐᒥᐊᑭᓂᓂᑦ ᓄᓇᖃᖅᑐᑦ <ᓂᓂᓂᖅᓴᓕᒧᑦ ᓄᖃᖅᑕᐅᓂᖅᑐᑦ (ᖃᐅᔨᒪᓂᖅ 10 ᓂᓚᑎᑕᑦᓱᓪᓗᑎᒃ ᓄᓇᕆᐃᑦ ᐱᖁᓂᖅᑐᖅᑎᑦᓂᖅᑐᑦ.

ᐅᓗᓚᐊᓇᖅᑐᑦ ᐱᑕᖅᑭᖏᓇᐃᖅᑎᑦᓂᐊᔪᖏᓇᖅᑐᑦ

- ᓇᔪᖅᑉᐳᑕᖏᑦ ᐱᑕᖅᑭᖏᓇᐃᖅᑐᑦ ᓂᔪᐊᑎᖅᑭᐊᔪᓄᑦ ᐊᒪᒪ ᑐᓗᓂᖅᑕᐅᑕᓂᔪᓄᑦ ᐊᓄᓚᒪᓗᑦ ᐃᓄᒪᖅᑎᓄᑦ ᓄᖅᓴᓐᓂᑦᓴᐅᑦ (ᐊᒥᐊᐊᓚᖅᓴ ᓄᓇᖏᓐᓂᑦ) ᐊᒪᒪ ᐅᑭᐅᖅᑯᐊᓕᕆᖏᑐᖅᓂᓂᓴ (ᓴᐅᑦ ᐊᒥᐊᓚᖅᓴᒥ).
- ᓇᔪᖅᑉᐳᑕᖏᑦ ᐱᑕᖅᑭᖏᓇᐃᓗᐊᖅᑐᓂᑦ ᐃᓂᓕᓐᓂᑕᖏᑦᑐᓂᓂᔪᐅᖅᑎᑦᓂᐊᔪᓄᑦ ᐃᑯᐊᓚᓂᑦᑐᓄᑦ ᓄᓇᕗᑦ; ᓄᓇᐅᑦ ᐱᖅᑕᐅᓕᕆᓂᐊᓂᖏᓐᓄᑦᓂᑦ; ᓇᐸᖅᑐᑦ ᐊᔪᐊᖏᖅᑕᐅᓕᕆᓂᐊᓂᖏᓐᓄᑦᓂᑦ, eucalyptus, ᐊᒪᒪ acacias ᐱᑭᖅᑐᑦᓴᐅᑎᖏᑦᑐᑦ; ᐊᒪᒪ ᐅᓪᓚᕐᓇᐅᔪᖏᓐᓄᑦᓂᑦ ᐅᓪᓚᕆᓚᐊᓂᖏᓐᓄᑦᓂᑦ.
- ᐱᑕᖅᑐᐊᑭᓇᐃᖅᑎᑐᐅᑦᓴᐅᑎᑦ ᑎᓐᒥᐊᑭᓂᓂᑦ ᐅᔨᓴᖅᓗ ᐱᑭᖅᑐᑦ ᐃᓕᑦᓴᑎᖏᑦᑐᓂᓂᑦ ᐊᑐᑦᑐᖅᓂᓂᑦ, ᐱᓕᐊᖅᑐᓗᑦ ᓄᓇᕗᑦ ᐱᑭᖅᑐᑦ ᐱᑕᖅᑐᓚᐅᖅᓴᐅᑎᓂᖅᓂᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᓄᖅᓴᓐᓂᑦᓴᐅᑦ ᓇᓪᓕᖏᓐᓂᑦᓴᐅᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ.
- ᐱᑭᐊᓂᓚᖏᑐᑐᑦ ᓄᖓᕐᓂᑕᖏᓂᖅᓂᑦ ᐊᓚᓴᐊᓂᑦ ᓄᓇᕗᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᓄᓇᕗᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᓄᖅᓴᓐᓂᑦᓴᐅᑦ ᓇᓪᓕᖏᓐᓂᑦᓴᐅᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ ᓇᓗᓇᐃᖅᑕᐅᓕᕆᓂᐊᓂᖏᓐᓄᑦᓂᑦ ᓄᓇᕗᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᓄᖅᓴᓐᓂᑦᓴᐅᑦ ᓇᓪᓕᖏᓐᓂᑦᓴᐅᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᓄᖅᓴᓐᓂᑦᓴᐅᑦ ᓇᓪᓕᖏᓐᓂᑦᓴᐅᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ.

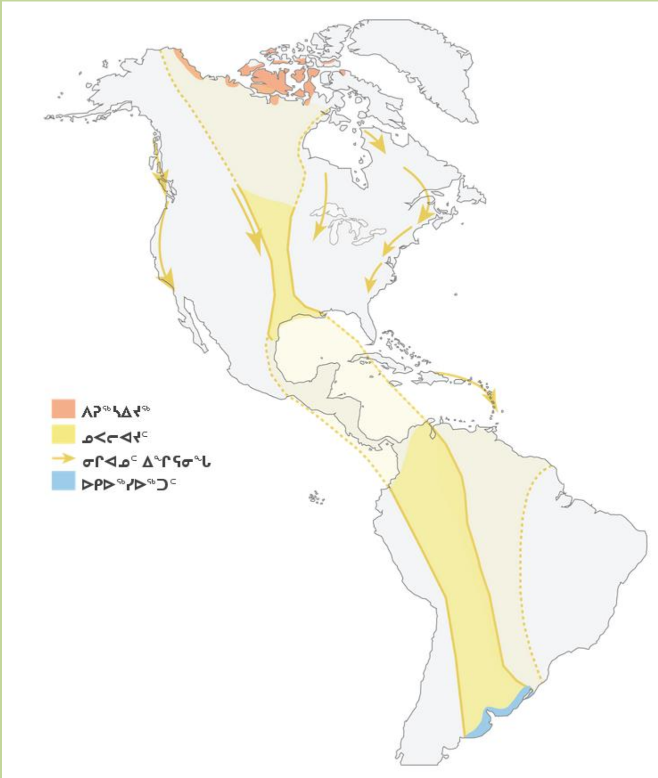
ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᑐᕋᒐᕆᔭᐅᔪᖅ

ᐃᓗᐊᓐᓂ 10 ᐊᕋᒍᑦ (2025 ᐅᕝᕙ 2035), ᐊᖏᐅᒪᑎᓪᓗᒋᑦ, ᐊᔪᖅᓇᖏᑉᐸᑦ, ᐱᕈᖅᐸᓕᐊᑎᓪᓗᒋᑦ ᓱᓪᓚᕆᐊᕐᔪᐃᑦ ᐊᒥᓱᓂᖏᑦ.

ᖃᓄᐃᓕᐅᕈᑕᐅᔪᑦ ᐃᑲᔪᑕᐅᓂᐊᕐᓗᑎᑦ ᑐᕋᒐᕆᔭᐅᔪᓄᑦ

ᐊᔾᔨᖏᖏᑐᓐᓂᒃ ᐅᖃᐅᓯᖃᖅᑐᑦ ᖃᓄᐃᓕᐅᕈᑎᑦ ᐅᓗᕆᐊᓇᖅᓯᓂᖏᓐᓄᑦ ᐊᒻᒪ ᐱᑕᖃᑲᓂᖅᑎᑕᐅᓂᖏᓐᓄᑦ ᑕᐸᑯᐊ ᓱᓪᓚᕆᐅᑦ ᐅᑯᐊᕐᒍᓂᐊᖅᑲᑎᒃ:

- ᐱᑕᖅᖅᑎᑦᓯᓗᓂ ᓄᓇᒥᐅᑕᐃᑦ ᐊᑐᑎᖃᖅᑐᓂᒃ ᓄᓇᒥᒃ ᓇᒥᓂᖃᖅᑐᓄᑦ ᐱᓕᕆᖃᑎᒋᑦᑎᐊᕐᓂᑯᑦ ᐃᓱᒪᒋᔭᐅᑲᓂᕐᓗᑎᒃ ᓱᓪᓚᕆᐊᖃᕐᔪᐃᑦ ᓇᔪᖅᐸᒃᑕᖏᑕ ᐊᑐᕆᐊᖃᖅᑕᖏᓐᓂᒃ (ᐃᕕᖃᓗᐊᕐᒋᑐᒥ ᑭᓂᐸᔪᒥᓗ ᓄᓇᕋᒥ) ᒥᐊᓂᖅᓯᑎᓪᓗᒋᑦ ᓄᓇᖁᑎᒥᖕᓂᒃ;
- ᒥᐊᓂᖅᓯᓗᑎᒃ ᓇᔪᖅᐸᒃᑕᖏᓐᓂᒃ ᓄᓇᖁᑎᒋᔭᐅᔪᓂᒃ ᐅᔨᕆᔭᐅᓗᐊᖅᑐᓂᒃ;
- ᐱᕗᓪᓕᐊᑎᑦᓯᓗᑎᒃ ᓄᑖᓂᒃ ᑲᓇᑕᐅᑉ ᓯᓚᑖᓂ ᐱᓕᕆᖃᑎᒋᖕᓂᒥᒃ ᓴᐳᑎᔭᐅᓂᖏᓐᓄᑦ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᓪᓗ ᐅᑉᓗᒥ ᓄᓇᖁᑎᒋᔭᐅᔪᑦ;
- ᐊᑕᐅᓯᕐᒧᑦ ᓄᑎᕐᓗᒋᑦ ᖃᐅᔨᓵᕐᓂᑯᑦ ᓄᓴᐅᖏᑐᑦ ᓇᓂᓯᐅᕐᓕᕐᓂᖕᓂᒃ ᐊᒻᒪ ᑲᑎᓯᒪᓗᐊᖅᑐᑦ ᓱᓪᓚᕆᐊᕐᔪᐃᑦ;
- ᐃᓱᒪᓕᐅᕐᓗᓂ ᒪᓂᒃᑐᒻᒥᒃ ᓄᓇᒻᒥᒃ ᐃᓱᒪᒋᔭᐅᔫᒥᒃ ᓇᔪᖅᐸᒃᑕᖏᓐᓂᒃ ᐱᐊᓚᖅᑭᑐᑦ ᓄᓇᖁᑎᖏᓐᓂᒃ;
- ᖃᐅᔨᒋᐊᕐᓗᒋᑦ ᑲᐸᐅᓕᕐᓂᖏᑦ ᒪᓇ ᑕᐃᑉᓱᒪᓂᓗ ᓇᒧᐊᒃᑕᕐᓂᖏᓐᓂᒃ ᐱᐅᓚᖑᓇᔭᖅᑐᓃᓗ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᐃᓱᒪᓕᐅᕐᓗᓂ ᑐᕋᒐᖅᓂᐊᖅᑕᖏᓐᓂᒃ;
- ᓇᓗᓇᐃᕐᓗᒋᑦ ᓇᔪᖅᐸᒃᓴᖏᑦ ᐊᕿᐅᑎᐊᖅᑐᑦ ᐊᒻᒪ ᐃᓱᒪᓕᐅᕐᓗᓂ ᓄᓇᐅᑉ ᐊᑐᒐᐅᓂᖏᓐᓄᑦ ᐱᕙᓪᓕᐊᕈᑕᐅᔾᔭᖅᑐᑦ ᑎᖏᐊᕈᓯᕐᓄᑦ.
- ᐃᓱᒪᓕᐅᕐᓗᓂ ᓄᐃᑕᓗᐊᕐᓂᖏᓐᓂᒃ ᐊᓯᖏᓐᓄᑦ ᑎᖏᐊᕈᓯᑦ ᐃᓚᕐᑯᑎᓐᓄᑦ ᑕᐸᑯᐊᓗ ᐊᒃᑐᐃᓂᐊᕐᒪᖔᑕ ᑎᒥᖏᓐᓂᒃ ᖃᓄᐃᖏᑎᐊᕐᓂᖏᓐᓂᒃ ᐊᒻᒪ ᓂᕿᖃᑎᐊᕐᓂᖏᓐᓂᒃ.
- ᐊᑭᓕᒪᐅᓂᕐᒥᒃ ᐃᓱᒪᖏᒥᐊᕐᓗᓂ ᐃᑲᔪᖅᑐᐃᓂᕐᒥᒃᓕᖅ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᓵᐳᔭᐅᓯᒪᓂᖏᓐᓄᑦᓗ ᐅᑯᓂᖓ ᐱᓕᕆᐊᖃᕈᖅᓇᖅᐳᓯ:
    - ᐱᓕᕆᖃᑎᖃᕐᓗᓂ ᐊᕙᑎᓕᕆᔨᑦ ᓯᓚᐅᑉ ᐊᔾᔨᒌᖅᐸᓕᐊᓂᖓ ᑲᓇᑕᒥ ᓄᓇᓕᖕᓂᓗ ᓴᐳᔭᐅᓯᒪᔪᓕᕆᔨᓂᒃ ᓱᓪᓚᒥᐅᑦ ᓄᓇᖁᑎᖏᑦ ᐊᑐᕐᓂᖃᖅᑐᑦ ᐱᑕᖃᐃᓐᓇᖁᐸᓗᒋᑦ; ᐊᒻᒪ
    - ᓱᓪᓚᒥᐅᑦ ᐊᒻᒪ ᓇᔪᖅᐸᒃᑕᖏᓐᓂᒃ ᓱᕈᐃᑕᐃᓕᓂᕐᒧᑦ ᖃᓄᒥᐊᖅ ᐱᓕᕆᑕᐃᓕᓗᓯ.
- ᓱᓪᓚᒥᐅᑕᓂᒃ ᑕᑯᑕᕐᓂᑯᑦ ᐅᖃᐅᓯᐅᔾᔭᖅᐸᑦ ᖃᕆᑕᐅᔭᑯᑦ ᑲᑎᖅᓱᐃᕕᖕᒧᒃ (ᐅᓇᑐᑦ eBird).



ᓇᒨᕆᐅᑕᕐᓂᖏᑦ ᓱᓪᓚᕆᐊᕐᔪᐃᑦ (ᐅᑯᓇᖕᒐᖅᑐᖅ ᖃᐅᔨᓴᕐᕕᖕᒥᑦ – ᓄᐊᑦ ᐊᒥᐊᕆᑲ ᑎᖏᐊᕈᓯᖏ ᖃᕆᑕᐅᔭᒥ ᐅᖃᐅᓯᐅᔪᑦ, McCarty et al. 2017)

ᖃᓄᖅ ᐃᑲᔪᕈᓐᓇᕐᒪᖓᖅᐱᑦ

- ᐃᓕᓐᓂᐊᕐᓗᒋᑦ ᖁᖅᓱᖅᑐᓂᒃ ᓴᖃᖅᑐᑦ ᑐᓪᓕᑦ, ᐱᑕᖃᐃᓐᓇᑎᓐᓂᕐᓗᒋᑦ ᐃᓱᒪᓕᐅᕈᑎᑦ ᐊᒻᒪ ᓂᕆᓱᖅᑕᕐᒋᑦ ᖃᕆᑕᐅᔭᑯᑦ ᐅᕙᓂ www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html;

ᑐᑭᓯᑲᓂᕈᒪᒍᕕ ᐅᕝᕙ ᑎᑎᕋᕈᓐᓇᖅᐳᓯ:
Environment and Climate Change Canada (ECCC) –
Canadian Wildlife Service, Northern Region
PO Box 1870, Iqaluit NU X0A 0H0
Fax: 867-975-4645 Phone: 867-979-7058
Email: Teresa.tufts@canada.ca

Environment and Climate Change Canada | Environnement et Changement climatique Canada



ᓇᐃᓕᓐᓂᐊᕐᓂᑦ ᓄᓇᕗᑦ ᒥᐊᓂᓗᐅᓂᖅᐳᓂᑦ <ᖁᓇᐅᑎᑦ

ᓄᓚᓴᐊᖁᐊᖁᓇᓂᑦ

ᓄᓚᓴᐊᖁᐊᖅ ᓇᕐᑎᓕᖅ ᑎᑎᕐᓂᖅ ᓄᓇᕗᑦ
ᐊᑐᑎᖃᑦᑐᖅ © Christian Artuso

ᐊᑐᓂᖅᐸᓕᓐᓂᖅᑐᑦ ᐊᐅᓚᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ ᐊᐅᓚᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ (SARA), ᒥᐊᓂᓚᐅᓂᖅᓂᓐᓄᑦ <ᖁᓇᐅᑦ ᐊᖏᖃᑎᐅᓚᐊᓕᓂᒃ ᐱᓕᕐᓂᕐᓂᑦ ᐃᓕᓐᓂᐅᓚᐅᓂᖅᓂᑦ ᑎᓕᒥᐊᑭᓕᓂᑦ ᑎᑎᕋᐱᐅᓚᐅᓂᖅᓂᑦ ᐃᓕᓐᓂᑦᑎᐊᓂᖅᓂᑦ ᓇᓗᓇᐃᖅᑕᐅᖁᔨᓗᒍ ᖃᓄᐃᓕᓂᐅᑕᐅᓂᐊᖁᓗᑎᒃ ᓴᓗᐅᓂᓚᓂᖅᓂᑦ. ᑕᒪᓇ ᑎᑎᖃᖅ ᓇᓗᓇᐃᖅᓚᕐᖅ ᐊᕕᑐᑐᖅᓚᓚᐅᓂᑦ ᓂᕆᐅᒪᓂᖅ ᐊᐅᓚᑦ ᒥᐊᓂᓚᐅᓂᖅᓂᑦ <ᖁᓇᐅᑎᑦ.

ᑎᓕᒥᐊᑭᓂ ᓴᓗᓴᐅᓂᓚᓂᖅᓂᑦ ᖃᓄᐃᓕᒥᖁᓂᖓ

ᓄᓚᓴᐊᖁᐊᐃᓕᑦ (*Calidris subruficollis, ᑕᐃᔨᐅᓪᓚᐅᖅᑐᑦ Tryngites subruficollis*) ᑎᑎᕋᐱᐅᓚᕐᖅ ᐃᓂᓚᓂᑎᐅᑦᓗᓐᓂ ᐊᑐᓂᖅ ᓄᓇᕗᑦ ᐃᓂᓚᓂᑎᐅᓚᐅᖅᑐᑦ ᐱᖁᓴᓐᓂᖅ (SARA) ᑕᐃᒪᓐᓂ 2017.

ᖃᓄᐃᑐᓂᖅ ᐊᒪ ᓇᒧᓐᐅᑕᖁᓂᓂᑦ

ᓄᓚᓴᐊᖁᐊᐃᓕᑦ ᐊᖏᓕᓇᖏᑐᑐᖃᖅ ᓄᓚᒥᐅᑕᖃᖅ ᑎᓐᒥᐊᑭᓄᖅ. ᑕᐸᑯᐊ ᑕᐅᔨᑐᖃᖅᓴᐅᑎᑦ ᓄᓚᖃᖅᑐᑦ ᑕᖅᓴᖃᖅᑐᑦ ᑐᐊᑦᑐᓄᖅ ᓴᓂᕆᒥᑎᒧᑦ, ᐸᒥᐅᖏᓐᓄᒧᑦ ᐊᒪᒪ ᐃᓴᑭᖏᑎᒧᑦᓗᓐᓇ. ᐊᖁᓇᐃᐊᑦ ᐊᖓᒍᐃᓇᐊᖁᓇᓇᓐᓇ ᑕᐅᔨᑐᖃᖅᓴᐅᑎᑦ ᐊᐅᓚᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ, ᖃᐅᔨᓴᓂᖅᓴᐅᓂᑦ ᐊᐅᓚᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ ᐊᑭᓐᓄᖅᓴᐅᓂᑦ ᓴᓂᕆᒥᑎᒧᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ (ᐊᐅᓚᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ), ᕿᑐᕈᒥ, ᓄᓇᕗᓂᐊᖁᑎᒥ, ᓄᓇᕆᓚᒥᓗ. ᐅᐱᕐᖏᓚᒥ, ᑕᐸᑯᐊ ᓄᐸᓕᐊᕆᐳᑦ. ᐅᑭᐅᖏᓚᓂ, ᓄᐸᓕᐊᓂᕆᓇᕆᓂᑦ ᓂᕆᐅᓕᐅᑦᓕᓐᓂᖅᑐᑦ ᐳᓗᑎᑦ ᑲᓪᓚᐃᐊᒥᑦ ᓄᐅᐊᐅᑦᓕᓐᓂᖅᑐᑦ.

ᓂᕆᑭᓚᐊᖅᑐᓂᖅᓂᑦ

ᓄᓚᓴᐊᖁᐊᐃᓕᑦ ᓄᓇᒥᐅᑕᐅᖅᓚᒐ, <ᓂᕐᓂᕆᒥ, ᐊᑎᑎᓗᐊᖅᑐᑐᒥᓗ ᓄᓇᖃᖅᐸᓂᖅᑐᑦ. ᐊᖏᒍᐅᓂᖅᓴᓕᓗ ᑭᓂᐸᓂᕆᒥ ᓄᓇᖃᖅᐸᓂᖅᑐᑦ. ᐊᖏᓇᐃᓕᑦ ᒪᑐᓂᐅᖅᓴᓗᑎᒃ ᐱᖃᖅᓂᐊᖁᖃᖅᓂᖅᓴᓕᒥ.

ᐊᐅᓚᑲᓇᖅᑐᒃᑐᑦ ᓄᓇᕗᒻᒥ ᑎᓐᒥᐊᑭᓂᓂᑦ ᓄᓇᖃᖅᑐᑦ <ᓂᓂᓂᖅᓴᓕᒧᑦ ᓄᖃᖅᑕᐅᓂᖅᑐᑦ (ᖃᐅᔨᒪᓂᖅ 10 ᓂᓚᑎᑕᑦᓱᓪᓗᑎᒃ ᓄᓇᕆᐃᑦ ᐱᖁᓂᖅᑐᖅᑎᑦᓂᖅᑐᑦ.

ᐅᓗᓚᐊᓇᖅᑐᑦ ᐱᑕᖅᑭᖏᓇᐃᖅᑎᑦᓂᐊᔪᖏᓇᖅᑐᑦ

- ᓇᔪᖅᑉᐳᑕᖏᑦ ᐱᑕᖅᑭᖏᓇᐃᖅᑐᑦ ᓂᔪᐊᑎᖅᑭᐊᔪᓄᑦ ᐊᒪᒪ ᑐᓗᓂᖅᑕᐅᑕᓂᔪᓄᑦ ᐊᓄᓚᒪᓗᑦ ᐃᓄᒪᖅᑎᓄᑦ ᓄᖅᓴᓐᓂᑦᓴᐅᑦ (ᐊᒥᐊᐊᓚᖅᓴ ᓄᓇᖏᓐᓂᑦ) ᐊᒪᒪ ᐅᑭᐅᖅᑯᐊᓕᕆᖏᑐᖅᓂᓂᓴ (ᓴᐅᑦ ᐊᒥᐊᓚᖅᓴᒥ).
- ᓇᔪᖅᑉᐳᑕᖏᑦ ᐱᑕᖅᑭᖏᓇᐃᓗᐊᖅᑐᓂᑦ ᐃᓂᓕᓐᓂᑕᖏᑦᑐᓂᓂᔪᐅᖅᑎᑦᓂᐊᔪᓄᑦ ᐃᑯᐊᓚᓂᑦᑐᓄᑦ ᓄᓇᕗᑦ; ᓄᓇᐅᑦ ᐱᖅᑕᐅᓕᕆᓂᐊᓂᖏᓐᓄᑦᓂᑦ; ᓇᐸᖅᑐᑦ ᐊᔪᐊᖏᖅᑕᐅᓕᕆᓂᐊᓂᖏᓐᓄᑦᓂᑦ, eucalyptus, ᐊᒪᒪ acacias ᐱᑭᖅᑐᑦᓴᐅᑎᖏᑦᑐᑦ; ᐊᒪᒪ ᐅᓪᓚᕐᓇᐅᔪᖏᓐᓄᑦᓂᑦ ᐅᓪᓚᕆᓚᐊᓂᖏᓐᓄᑦᓂᑦ.
- ᐱᑕᖅᑐᐊᑭᓇᐃᖅᑎᑐᐅᑦᓴᐅᑎᑦ ᑎᓐᒥᐊᑭᓂᓂᑦ ᐅᔨᓴᖅᓗ ᐱᑭᖅᑐᑦ ᐃᓕᑦᓴᑎᖏᑦᑐᓂᓂᑦ ᐊᑐᑦᑐᖅᓂᓂᑦ, ᐱᓕᐊᖅᑐᓗᑦ ᓄᓇᕗᑦ ᐱᑭᖅᑐᑦ ᐱᑕᖅᑐᓚᐅᖅᓴᐅᑎᓂᖅᓂᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᓄᖅᓴᓐᓂᑦᓴᐅᑦ ᓇᓪᓕᖏᓐᓂᑦᓴᐅᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ.
- ᐱᑭᐊᓂᓚᖏᑐᑐᑦ ᓄᖓᕐᓂᑕᖏᓂᖅᓂᑦ ᐊᓚᓴᐊᓂᑦ ᓄᓇᕗᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᓄᓇᕗᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᓄᖅᓴᓐᓂᑦᓴᐅᑦ ᓇᓪᓕᖏᓐᓂᑦᓴᐅᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ ᓇᓗᓇᐃᖅᑕᐅᓕᕆᓂᐊᓂᖏᓐᓄᑦᓂᑦ ᓄᓇᕗᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᓄᖅᓴᓐᓂᑦᓴᐅᑦ ᓇᓪᓕᖏᓐᓂᑦᓴᐅᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ ᐊᒪᒪ ᓴᓇᓂᖅᑐᓂᑦ ᓄᖅᓴᓐᓂᑦᓴᐅᑦ ᓇᓪᓕᖏᓐᓂᑦᓴᐅᑦ ᐊᓂᓕᓐᓂᖅᑐᑦ.

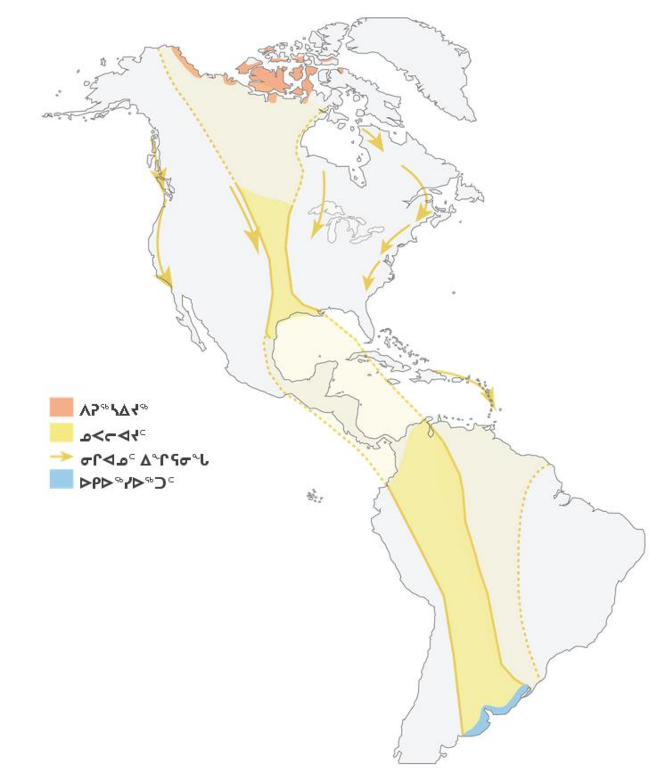
ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᑐᕋᒐᕆᔭᐅᔪᖅ

ᐃᓗᐊᓐᓂ 10 ᐊᕋᒍᑦ (2025 ᐅᕝᕙ 2035), ᐊᕿᐅᒪᑎᓪᓗᒋᑦ, ᐊᔪᕐᓇᙱᐸᑦ, ᐱᕈᖅᐸᓕᐊᑎᓪᓗᒋᑦ ᓯᒃᓴᓇᐊᕐᔪᐃᑦ ᐊᒥᓲᓂᖏᑦ.

ᖃᓄᐃᓕᐅᕈᑕᐅᔪᑦ ᐃᑲᔪᑕᐅᓂᐊᕐᓗᑎᑦ ᑐᕋᒐᕆᔭᐅᔪᓄᑦ

ᐊᔾᙵᙳᓐᓂᒃ ᐅᖃᐅᓯᖃᖅᑐᑦ ᖃᓄᐃᓕᐅᕈᑎᑦ ᐅᓗᕆᐊᓇᖅᓯᓂᖏᓐᓄᑦ ᐊᒻᒪ ᐱᑕᖃᑲᓂᖅᑎᑕᐅᓂᖏᓐᓄᑦ ᑕᐸᑯᐊ ᓯᒃᓴᒥᐅᑦ ᐅᑯᐊᖑᓂᐊᖅᓱᑎᒃ:

- ᐱᑕᖃᖅᑎᑦᓯᓗᓂ ᓄᓇᒥᐅᑕᐃᑦ ᐊᑐᑎᖃᖅᑐᓂᒃ ᓄᓇᒥᒃ ᓇᒥᓂᖃᖅᑐᓄᑦ ᐱᓕᕆᖃᑎᒌᑦᑎᐊᕐᓂᑯᑦ ᐃᓱᒪᒋᔭᐅᑲᓂᕐᓗᑎᒃ ᓯᒃᓴᕆᐊᖃᕐᔪᐃᑦ ᓇᔪᖅᐸᒃᑕᖏᑕ ᐊᑐᕆᐊᖃᖅᑕᖏᓐᓂᒃ (ᐃᕝᖃᓗᐊᖏᑐᒥ ᑭᓂᐸᔪᒥᓗ ᓄᓇᕋᕐᒥ) ᒥᐊᓂᖅᓯᑎᓪᓗᒋᑦ ᓄᓇᖁᑎᒥᙶᓂᒃ;
- ᒥᐊᓂᖅᓯᓗᑎᒃ ᓇᔪᖅᐸᒃᑕᖏᓐᓂᒃ ᓄᓇᖁᑎᒋᔭᐅᔪᓂᒃ ᐅᔾᔨᕆᔭᐅᓗᐊᖅᑐᓂᒃ;
- ᐱᕙᓪᓕᐊᑎᑦᓯᓗᑎᒃ ᓄᑖᓂᒃ ᑲᓇᑕᐅᑉ ᓯᓚᑖᓂ ᐱᓕᕆᖃᑎᒋᙱᓂᕐᒥᒃ ᓴᐳᑎᔭᐅᓂᖏᓐᓄᑦ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᓪᓗ ᐅᑉᓗᒥ ᓄᓇᖁᑎᒋᔭᐅᔪᑦ;
- ᐊᑕᐅᓯᕐᒧᑦ ᓄᑎᕐᓗᒋᑦ ᖃᐅᔨᓴᕐᓂᑯᑦ ᓄᓴᐅᖏᑐᑦ ᓇᓂᓯᐅᕐᓕᕐᓂᖕᓂᒃ ᐊᒻᒪ ᑲᑎᓯᒪᓗᐊᖅᑐᑦ ᓯᒃᓴᓇᐊᕐᔪᐃᑦ;
- ᐃᓱᒪᓕᐅᕐᓗᓂ ᒪᓂᒃᑑᒥᒃ ᓄᓇᒥᒃ ᐃᓱᒪᒋᔭᐅᔪᒥᒃ ᓇᔪᖅᐸᒃᑕᖏᓐᓂᒃ ᐱᐊᓚᖅᑲᖏᑐᑦ ᓄᓇᖁᑎᖏᓐᓂᒃ;
- ᖃᐅᔨᒋᐊᕐᓗᒋᑦ ᑲᐸᐅᓕᕐᓂᖏᑦ ᒪᓇ ᑕᐃᐸᒪᓂᓗ ᓇᒧᐊᒃᑕᕐᓂᖏᓐᓂᒃ ᐱᐅᓚᙶᓇᔾᔪᓂᓗ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᐃᓱᒪᓕᐅᕐᓗᓂ ᑐᕋᒐᓂᐊᖅᑕᖏᓐᓂᒃ;
- ᓇᓗᓇᐃᕐᓗᒋᑦ ᓇᔪᖅᐸᒃᓴᖏᑦ ᐊᕿᐅᑎᐊᖅᑐᑦ ᐊᒻᒪ ᐃᓱᒪᓕᐅᕐᓗᓂ ᓄᓇᐅᑉ ᐊᑐᒐᐅᓂᖏᓐᓄᑦ ᐱᕗᓪᓕᐊᕈᑕᐅᔪᙳᖅᑐᑦ ᑎᖏᐊᕈᓯᕐᓄᑦ.
- ᐃᓱᒪᓕᐅᕐᓗᓂ ᓄᐃᑕᓗᐊᕐᓂᖏᓐᓂᒃ ᐊᓯᖏᓐᓄᑦ ᑎᖏᐊᕈᓯᑦ ᐃᓚᕐᑯᑎᓄᑦ ᑕᑯᐊᓗ ᐊᒃᑐᐃᓂᐊᕐᒪᖔᑕ ᑎᒥᖏᓐᓂᒃ ᖃᓄᐃᖏᑎᐊᕐᓂᖏᓐᓂᒃ ᐊᒻᒪ ᓂᕿᖃᑎᐊᕐᓂᖏᓐᓂᒃ.
- ᐊᑭᓕᒐᐅᓂᕐᒥᒃ ᐃᓱᒪᖏᒥᐊᕐᓗᓐᓂ ᐃᑲᔪᖅᑐᐃᓂᕐᒥᒃᓕᖅ ᒥᐊᓂᕆᔭᐅᓂᖏᓐᓄᑦ ᓴᐳᔭᐅᓯᒪᓂᖏᓐᓄᓪᓗ ᐅᑯᓂᖓ ᐱᓕᕆᐊᖃᕈᖅᓇᖅᐳᖅ:
  - ᐱᓕᕆᖃᑎᖃᕐᓗᓂ ᐊᕙᑎᓕᕆᔨᑦ ᓯᓚᐅᑉ ᐊᔾᙳᖅᐸᓕᐊᓂᖓ ᑲᓇᑕᒥ ᓄᓇᓕᖕᓂᓗ ᓴᐳᔾᔨᒪᔪᓕᕆᔨᓂᒃ ᓯᒃᓴᒥᐅᑦ ᓄᓇᖁᑎᖏᑦ ᐊᑐᕐᓂᖃᖅᑐᑦ ᐱᑕᖃᐃᓐᓇᕆᐸᓗᒋᑦ; ᐊᒻᒪ
  - ᓯᒃᓴᒥᐅᑦ ᐊᒻᒪ ᓇᔪᖅᐸᒃᑕᖏᓐᓂᒃ ᓱᕈᐃᑕᐃᓕᓂᕐᒧᑦ ᖃᓄᒥᐊᖅ ᐱᓕᕆᑕᐃᓕᓗᓯ.
- ᓯᒃᓴᒥᐅᑕᓂᒃ ᑕᑯᑦᑕᕐᓂᑯᑦ ᐅᖃᐅᓯᐅᔾᔭᖅᐸᑦ ᖃᕆᑕᐅᔭᑯᑦ ᑲᑎᖅᓱᐃᕕᖕᒧᒃ (ᐅᓇᑐᑦ eBird).



ᓇᒧᖓᐅᑕᕐᓂᖅᑦ ᓯᒃᓴᓇᐊᕐᔪᐃᑦ (ᐅᑯᓇᖓᖅᑐᖅ ᖃᐅᔨᓴᕐᕕᖕᒥᑦ – ᓄᐊᑦ ᐊᒥᐊᕆᑲ ᑎᖏᐊᕈᓯᖏ ᖃᕆᑕᐅᔭᒥ ᐅᖃᐅᓯᐅᔪᑦ, McCarty et al. 2017)

ᖃᓄᖅ ᐃᑲᔫᖅᓇᕐᒪᖔᖅᐱᑦ

- ᐃᓕᓂᐊᕐᓗᒋᑦ ᑯᖅᓱᖅᑐᓂᒃ ᓴᖃᖅᑐᑦ ᑐᓪᓕᑦ, ᐱᑕᖃᐃᓐᓇᑎᓂᓪᓗᒋᑦ ᐃᓱᒪᓕᐅᕈᑎᑦ ᐊᒻᒪ ᓂᕆᓱᖅᑕᖏᑦ ᖃᕆᑕᐅᔭᒃᑯᑦ ᐅᕙᓂ www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html;

ᑐᑭᓯᑲᓂᕈᒪᒍᕕ ᐅᕝᕙ ᑎᑎᕋᕈᓐᓇᖅᐳᓯ:
Environment and Climate Change Canada (ECCC) –
Canadian Wildlife Service, Northern Region
PO Box 1870, Iqaluit NU X0A 0H0
Fax: 867-975-4645 Phone: 867-979-7058
Email: Teresa.tufts@canada.ca

ᐅᔨᓇᖏᑦ ᑐᓂᓯᐅᔾᔪᑎᑦ

ᓄᓇᕗᑦ ᐅᒪᔨᓕᕆᔨᖅᑎᑐᒃᓯᒪᓕᖅᐸᓂᖅ ᑲᑎᒪᔨᖏᑦᑐᓄᑦ

ᐅᔨᓇᖏᑦ:

ᑐᓴᖅᑕᐅᔾᔪᑎᓄᑦ: **X** **ᐃᓱᒪᓕᕆᖏᓐᓇᔪᖅ:**

ᐱᔪᔾᑕᐅᔾᔪᖅ: ᐅᐊᖏᓂᔨᖅᑐᑐᒥ ᓄᓇᐃᖏᓇᒥ ᔨᓂ 2021-ᒥᑦ ᑐᔅᑐᓂ ᓇᐃᓴᐃᓂᖅ

ᖃᓄᐃᓇᓕᖏᓐᓄᑦ:

- ᓄᓇᕗᑦ ᐊᕐᕌᑎᓕᓵᔨᑦᓯᖏᑦ ᖃᐅᔨᓴᓇᐊᓕᓕᐅᔪᓐᒪᑕ ᐅᐊᖏᓂᔨᖅᑐᑐᒥ ᓄᓇᐃᖏᓇᒥᑦ ᑐᓴᖅᑕᖏᓐᓂᓂᑦ (ᐊᕼᐃᐃᐊᖅ, ᐅᔨᔪᓂᓴᓕᖅ, ᐅᔨᔪᓂᓴᓕᐅᑦ ᑐᓴᖅᑕᖏᓐᓂᓂᑦ) ᐊᐃᑎᓕ 1999-ᒥᑦ. ᐊᑎᑎᑐᔨᔪᑦᓴᑎᑦ ᓇᐃᓴᐃᓕᐅᐅᑦᓴᑎᑦ ᑭᖑᔪᓂᐊᓂ ᖃᖓᓐᑕᑎᑕᐅᔪᓕᔪᑎᒍ ᑐᔪᖏᓂᔪᖅᑕᓂᓂᑦ ᒪᓕᓵᓴᑎᑦ ᐅᔨᔪᓂᓴᓕᐅᑦ ᐊᑎᓇᓵᓴᒃᖏᑐᓂᑦ. ᑐᔪᖏᓂᔪᖅᑕᓂᕆᐊᓂ ᑕᒪᕐᕉᓇ ᐱᓕᓀᐊᑦ ᓄᖅᑲᑎᑕᐅᓕᐅᑎᑦᑐᑦ 2006-ᒥᑦ, ᐊᖏᑦᓂᖅᓱᒥ ᖃᐅᔨᓴᓇᑭᑎᓂ ᐱᓕᓀᐊᓂᖅᓴᐅᓕᐅᑎᑦᑐᑦ ᖃᒪᓂᑐᑕᐊᑦ ᐅᐊᖏᓂᔨᖅᑐᑐᒥ 2009-ᒥᑦ, ᑲᔪᓯᓕᓂᓂ ᐅᓯᓕᒥᒧᑦ.
- ᑐᔅᑕᐃᑦ ᓄᑦᑕᔪᓐᓇᖏᑦ ᖃᐅᔨᓴᔪᑎᑦᑕᐅᓕᐅᑎᑦᑐᑦ 2013-ᒥᓯᓗ ᖃᐅᔨᓴᔪᑎᑦᓴᑎᑦ ᑐᔅᑕᐃᑦ ᓄᑦᑕᔪᑎᓯᓕᓂᑦ. ᑕᒪᓐᓇ ᓭᐊᓚᓴᑎᑕᖅ ᑐᓴᐅᒪᔨᓴᔪᖅ, ᐊᑐᔪᓴᑎᓗ ᔪᓂᖏᓐᓂᓂᒍ ᓄᑦᑕᔪᓂᓚᖏᑦᑕ ᑎᑎᖅᑲᖏᓐᓂᓂᑦ, ᐊᑐᓕᐅᑎᑦᑐᑦ ᓴᓇᒪᓂᖓᑕ ᑕᐅᑦᑐᓴᔪᖓᓂ ᐃᖅᑲᒥᐅᔪᓕᔪᑎᓂ ᐅᐊᖏᓂᔨᖅᑐᑐᒥᑦ ᓄᓇᐃᖏᓇᒥᑦ ᐊᒥᓱᓂᖏᓐᓂᓂᑦ ᓇᐃᓴᐃᓂᖏᓐᓂᓂᑦ.
- ᑕᒪᓐᓇ ᐊᑐᔪᑕᐅᓚᑐᓂ ᑐᓴᔪᓇᐅᓚᑐᓴᑦ ᐊᖓᔪᓇᓴᑐᑐᒥᑦ ᑲᑐᔾᔨᖃᑎᒋᔭᖏᓐᓂᓂᑦ ᐊᐃᓴᑐᖓᓕᒫᑦ ᐅᒪᔨᓕᕆᓂᔪᓐᓇᖅᑐᓂᑦ ᑲᑐᔾᔨᖃᑎᒋᔭᖏᓐᓂᓂᑦ ᐊᕼᐃᐃᐊᖅᒥ, ᐅᔨᔪᓂᓴᓕᐅᑎᓚᑐᓴ ᑐᓴᐅᒪᔨᓴᔪᖅ ᐊᑯᓂᖓᓕᒫᑦ ᐊᒃᓱᕈᓐᓇᖅᑐᓂᑦ ᐊᑎᓕᓴᐅᓂ 4 ᐊᖏᓚᓗ ᔨᓂ 15, 2021.

ᐃᓕᓐᓇ ᖃᓄᐃᓇᓕᖏᓐᓄᑦ:

- ᐅᐊᖏᓂᔨᖅᑐᑐᒥᑦ ᓄᓇᐃᖏᓇᒥᑦ ᑐᓴᐅᒪᔨᓴᔪᖅ ᐅᓄᖅᓯᖏᓐᓂᓂᑦ ᓇᐃᓴᐃᓂᖅᓴᑦ ᐊᕼᐃᐃᐊᖅ, ᐅᔨᔪᓂᓴᓕᐅᑎᓚᑐᓴ ᑐᓴᖅᑕᖏᓐᓂᓂᑦ ᐱᐊᓂᔨᑕᐅᔪᓐᓇᖅᑐᓂᑦᓴᑦ ᔨᓂ 15, 2021-ᒥᑦ (*ᑎᑎᕆᔨᒪᔭᖅ 1*). ᑕᒪᐃᓐᓂᓕ, ᑐᓴᐅᒪᔨᓴᔪᖅ ᓇᐃᓴᐃᓂᑕᐅᔪᓐᓇᖅᑐᓂᑦ ᓇᓕᐅᑦᑕᓂᑕᐅᓂᑎᐊᓕᐅᑎᑦᑐᑦ ᑲᑎᒪᔨᖏᑦᑐᓄᑦ ᖃᓄᐃᓇᓕᖏᓐᓄᑦ ᐊᒥᓱᓂᖏᓐᓂᓂᑦ ᐊᑯᓇᔨᖅᑐᓂᑦᓴᑦ ᑲᑐᔾᔨᖃᑎᒋᔭᖏᓐᓂᓂᑦ ᐊᑯᓇᔨᖅᑐᓂᑦᓴᑦ ᑲᑐᔾᔨᖃᑎᒋᔭᖏᓐᓂᓂᑦ (*ᑎᑎᕆᔨᒪᔭᖅ 2*).
- ᐃᓚᖅᑎᑎᓂ ᐊᑲᐅᓯᖏᑦᑐᑎᓂ ᐊᑐᔪᑕᐅᓵᑦ ᐊᑯᓂᑕᐅᑎᑦᑐᑦ ᑕᒪᓕᖁᓕᓚᑐᓂ ᓇᓕᐅᑦᑕᓂᑕᐅᓇᓂᑦ. ᐸᓐᓇᐅᒪᓕᒃᔪᑦ ᐅᐊᖏᓐᓇᖅ ᐃᓚᖅᑎᑎᓂᓐᓂᑦ ᐃᓚᖅᑎᑎᓂ ᐊᑲᐅᓯᖏᑦᑐᑎᓂ ᐊᑯᓇᔨᖅᑐᓂᑦ 10-ᓗ 15-ᓗ ᐳᕆᔨᑎᒥ ᐱᐅᔾᔨᑦ ᐊᑯᓂᑕᐅᑎᑦᑐᑦ ᑕᒪᓕᖁᓕᓚᑐᓂ ᑕᒪᓕᖁᓕᓚᑐᓂᓂᑦ ᐊᑯᓇᔨᖅᑐᓂᑦ ᑐᓴᖅᑕᖏᓐᓂᓂᑦ ᐊᕼᐃᐃᐊᖅᓗ ᑐᔅᑕᐃᑦ ᐃᓚᖅᑎᑎᓂ ᑐᓴᐅᒪᔨᓴᔪᖅ ᐊᑐᔪᑕᐅᓵᑦ ᑐᔪᖏᓂᔪᖅᑕᓂᓂᑦ ᑐᓴᖅᑕᖏᓐᓂᓂᑦ.

- ᐅᒃᑯᓯᒃᓴᓕᐅᑉ ᑐᒃᑐᖏᑦ ᓇᐃᓴᐅᑎᑦ ᐊᔾᔨᒌᖕᒋᑦᑑᑎᑦ 19.2 ᐳᓴᓐᓂ ᖁᕇᓃᓚᐅᕐᑐᑦ ᑎᑭᑕᐅᓇᓱᒃᑑᑉ ᓇᐃᓴᐅᑎᑦ ᐊᔾᔨᒌᖕᒋᑦᑑᑎᑦ ᓂᕆᐅᓇᖕᒋᑦᑐᒧ ᐊᒻᒪᓗ ᑲᑎᕐᓱᕐᓂᖕᒋᓐᓂ ᓄᕐᕆᐅᕐᕕᖕᒥᑦ. ᑲᑎᕐᓱᕐᓂ ᑎᑎᕋᕐᑕᐅᓚᐅᕐᖁᒪᖕᒋᑦᑐᑦ; ᖃᐅᔨᓴᕈᑎᑎᒍᑦ ᑕᐃᒪᐃᒐᔪᖕᒋᑦᑐᑦ ᓇᓗᓇᕐᑐᒥ ᐱᔾᔪᑎᓕᒃ.
- ᓇᓚᐅᑦᑖᓚᐅᕐᑐᒍᑦ 23,118 ᐊᕐᓇᓪᓗᒃᑲᐃᑦ (ᓇᐃᓴᐅᑎᑦ ᐋᔾᔨᒌᖕᒋᑦᑑᑎᑦ=7.6 ᐳᓴᓐᑎ) ᐊᕼᐃᐊᒃᒥ ᓇᐃᓭᕐᑕᐅᔪᓂ ᑕᒪᕐᒥᒃ ᓇᓚᐅᑦᑖᕐᑕᐅᓪᓗᑎᒃ 39,131 ᐃᓐᓇᐃᑦ (95 ᐳᓴᓐᑎ ᓇᐃᓴᐅᑎᑦ ᐊᔾᔨᒌᖕᒋᑦᑑᑎᑦ=33,385-45,867; ᓇᐃᓴᐅᑎᑦ ᐊᔾᔨᒌᖕᒋᑦᑑᑎᑦ=7.8 ᐳᓴᓐᑎ). ᓇᓚᐅᑦᑖᓚᐅᕐᑐᒍᑦ 19,764 ᐊᕐᓇᓪᓗᒃᑲᐃᑦ (ᓇᐃᓴᐅᑎᑦ ᐋᔾᔨᒌᖕᒋᑦᑑᑎᑦ=19.1 ᐳᓴᓐᑎ) ᐅᒃᑯᓯᒃᓴᓕᖕᒥᑦ ᓇᐃᓭᕐᑕᐅᔪᓂ ᑕᒪᕐᒥᒃ ᓇᓚᐅᑦᑖᕐᑕᐅᓪᓗᑎᒃ 33,454 ᐃᓐᓇᐃᑦ (95 ᐳᓴᓐᑎ ᓇᐃᓴᐅᑎᑦ ᐊᔾᔨᒌᖕᒋᑦᑑᑎᑦ=22,503-49,735; ᓇᐃᓴᐅᑎᑦ ᐊᔾᔨᒌᖕᒋᑦᑑᑎᑦ=19.2 ᐳᓴᓐᑎ). ᓇᓚᐅᑦᑖᓚᐅᕐᑐᒍᑦ 26,588 ᐊᕐᓇᓪᓗᒃᑲᐃᑦ (ᓇᐃᓴᐅᑎᑦ ᐋᔾᔨᒌᖕᒋᑦᑑᑎᑦ=7.1 ᐳᓴᓐᑎ) ᐅᒃᑯᓯᒃᓴᓕᐅᑉ ᑐᒃᑯᖏ ᓇᐃᓭᕐᑕᐅᔪᓂ ᑕᒪᕐᒥᒃ ᓇᓚᐅᑦᑖᕐᑕᐅᓪᓗᑎᒃ 45,005 ᐃᓐᓇᐃᑦ (95 ᐳᓴᓐᑎ ᓇᐃᓴᐅᑎᑦ ᐊᔾᔨᒌᖕᒋᑦᑑᑎᑦ=38,732-52,293; ᓇᐃᓴᐅᑎᑦ ᐊᔾᔨᒌᖕᒋᑦᑑᑎᑦ=7.3 ᐳᓴᓐᑎ).
- ᖁᒥᕐᕿᓚᐅᕐᑐᒍᑦ 122 ᐊᒪᖅᑯᓂᑦ (30 ᐊᕼᐃᐊᕐᒥᑦ ,60 ᐅᒃᑯᓯᒃᓴᓕᖕᒥᑦ, ᐅᒃᑯᓯᒃᓴᓕᖕᒥᑦ 32), 3 ᐊᒃᕙᐃᑦ ᐊᕼᐃᐊᒥᑦᑐᐃᓐᓇᐃᑦ, 16 ᖃᑉᕚᓛᕐᔭᐃᑦ (1 ᐊᕼᐃᐊᕐᒥᑦ, 7 ᐅᒃᑯᓯᒃᓴᓕᖕᒥᑦ, 8 ᐅᒃᑯᓯᒃᓴᓕᖕᒥᑦ), 36 ᓇᓄᐃᑦ (10 ᐊᕼᐃᐊᕐᒥᑦ 27–ᓗ ᐅᒃᑯᓯᒃᓴᓕᖕᒥᑦ) (*ᑎᑎᕋᕐᓯᒪᔪᖅ 2*). ᖁᒥᕐᕿᓚᐅᕐᑐᒍᑦ 225 ᐅᒥᖕᒪᖕᓂᑦ (118 ᐊᕼᐃᐊᕐᒥᑦ, 46 ᐅᒃᑯᓯᒃᓴᓕᖕᒥᑦ, 61–ᓗ ᐅᒃᑯᓯᒃᓴᓕᖕᒥᑦ) (*ᑎᑎᕋᕐᓯᒪᔪᖅ 3*).
- ᐱᖓᓱᐃᑦ ᓇᐃᓴᖅᑕᑦ, ᐊᕼᐃᐊᕐᒥᑐᐊᖅ ᓇᐃᓴᐃᓯᒪᔪᑦ ᔫᓂ 2011–ᒥᑦ. ᓇᐃᓭᕐᑕᐅᓯᒪᔪᑦ ᐊᔾᔨᐸᓗᕆᓚᐅᕐᑕᖕᒋᑦ ᒪᕐᕈᒃ ᓇᐃᓴᐃᓂᕆᓚᐅᕐᑕᖕᒋᓐᓂᑦ, ᑭᓯᐊᓂᓕ, ᑲᑎᖃᑦᑕᓚᐅᕐᑐᑦ ᐊᕼᐃᐊᕐᒥᐅ ᐊᒻᒪ ᑎᔾᔭᐅᑉ ᑐᒃᑐᑯᖏᑦ ᐃᓪᓗᐃᓕᒥᑦ ᔫᓂ 2011–ᒥᑦ; ᖁᖓᓯᕈᑎᒍᑦ ᑎᑎᖅᑲᐃᑦ ᑲᑎᓐᓂᐅᕙᒃᑐᑦ ᐅᓄᓚᐅᖕᒋᑦᑐᑦ. ᓇᓚᐅᑦᑖᒐᑦ ᐃᓚᖃᕋᓗᐊᕈᑎᑦ ᑲᑎᑉᐸᒃᑐᓂᑦ, ᓇᐃᓭᕐᑕᐅᓯᒪᔪᑦ ᐊᒥᓖᔪᓐᓃᕐᐹᓪᓕᕐᑐᑦ 5 ᐳᓴᓐᑎᒥᑦ ᐊᕼᐃᐊᕐᒥᐅ ᑐᒃᑐᖏᑦ ᐊᒃᑯᓐᓂᖓᓂ ᔫᓂ 2011 ᐊᒻᒪᓗ 2021–ᒥᑦ ᖃᐅᔾᔭᐅᓚᐅᕐᑐᑦ.
- 2021 ᔫᓂᒥᑦ ᓇᐃᓭᕐᑕᐅᔪᑦ ᓯᕗᓪᓕᕐᐹᖑᓚᐅᕐᐳᑦ ᐅᒃᑯᓯᒃᓴᓕᐅᑉ ᐅᒃᑯᓯᒃᓴᓕᐅᓪᓗ ᑐᒃᑐᖏᑦ, ᖃᐅᔨᓴᕐᑕᐅᓚᐅᖕᒋᑦᑐᑦ ᐊᓯᔾᔨᕐᐸᓪᓕᐊᔪᑦ. ᐅᑯᐊ ᓇᓚᐅᑦᑖᕆᑦ ᐊᑐᕐᑕᐅᔾᕐᑐᑦ ᓯᕗᓂᑦᑎᓐᓂᑦ ᖃᐅᔨᓴᕈᑎᓂᑦ ᐊᓯᔾᔨᕐᐸᓪᓕᐊᔪᓂᑦ.
- ᓇᓚᐅᑦᑖᒐᑦ ᐊᕼᐃᐊᕐᒥᑦ ᐅᒃᑯᓯᒃᓴᓕᖕᒥᑦ ᐅᒃᑯᓯᒃᓴᓕᐅᓪᓗ ᑐᒃᑐᖏᑦ ᐱᐊᓂᒃᑕᐅᓚᐅᕐᑐᑦ ᐊᓯᔾᔨᐊᕐᔪᒃᓗᑎᒃᓗ ᐊᓯᔾᔨᕋᑎᒃᓘᓐᓃᑦ ᑭᖑᓪᓕᕐᐋᒥ ᖁᒥᕐᕿᔭᐅᓕᕐᐸᑕ, ᐱᓕᕆᒃᑳᓂᕆᐊᓕᑦ ᑐᒃᓯᑦᑎᐊᕋᓱᒃᓗᒋᑦ ᐅᑯᐊ ᐱᖓᓱᑦ ᓄᓇᒥᐅ ᑐᒃᑐᐃᑦ ᑲᑎᙵᕙᖕᒪᖔᖕᒋᑦ ᐊᕐᕋᒍᒥ ᐱᔾᔪᑎᖃᓗᐊᕐᓗᑎᒃ ᓄᕐᕆᐅᕐᕕᖕᓂᑦ ᓄᓕᐊᕐᓂᖕᓂᓪᓗ.
- ᖁᒥᕐᕿᓂᖕᓂᑦ ᐃᓕᔭᐅᓂᐊᕐᑐᑦ ᑭᖑᓪᓕᐋᒥᑦ ᐅᓂᒃᑳᒥ ᓂᕆᐅᒋᔭᐅᔪᖅ ᐊᑐᐃᓐᓇᐅᓖᕐᓂᖓ ᓄᕙᐱᕆ 2022–ᒥᑦ.

ᑐᓴᕋᓱᖕᓂᑦ:

- ᐊᕙᑎᓕᕆᔾᔪᑎᑦ ᐸᖓᒃᓯᒪᔪᑦ ᐅᐸᒃᓗᑎᒃ ᑐᓴᕋᓱᖕᓂᐊᕐᓗᑎᒃ ᐊᒃᑐᖅᑕᐅᔪᓕᒫᓂ ᐊᖑᓇᓱᒃᑎᑦ ᑲᑐᔾᔨᖃᑎᒌᖕᒋᓐᓂᑦ, ᐱᖓᓱᑦ ᐊᕕᒃᑐᕐᓯᒪᔪᑦ ᐆᒪᔪᓕᕆᔾᔪᑎᑦ ᑲᑐᔾᔨᖃᑎᒌᖕᒋᓐᓂᑦ ᐅᑭᐅᒥᑦ 2020 ᐊᒻᒪᓗ 2021 ᑭᓯᐊᓂ, ᓄᕙᒡᔪᐊᕐᓇᖅ-19–ᒧᑦ ᐊᔪᕿᑕᐅᖃᑦᑕᓚᐅᕐᑐᑦ ᓯᐊᒻᒪᒃᑐᓂᓪᓗ ᐊᒥᓱᓂ ᓄᓇᓕᖕᓂᑦ ᑭᖑᕙᕆᐊᓚᐅᕐᐳᑦ ᐃᓚᖕᒋᑦ ᑲᑎᒪᓂᑦ, ᐊᑐᓕᕐᓗᑎᒃᓗ ᑲᕆᓴᐅᔭᒃᑯᑦ ᑲᑎᒪᓪᓗᑎᒃ ᐊᒥᓱᓄ ᑲᑐᔾᔨᖃᑎᒌᓄᑦ. ᑭᖑᕙᕆᐊᖅᐸᒃᑲᓗᐊᕐᑎᓪᓗᒍ ᑲᑎᓪᓚᑦᑖᕿᓐᓇᕋᑕᓗ, ᑲᑎᒪᓃᑦ ᑲᔪᓯᑎᐊᖃᑦᑕᓚᐅᕐᑐᑦ, ᓇᐃᓭᕐᑕᐅᔪᕕᓂᑦ

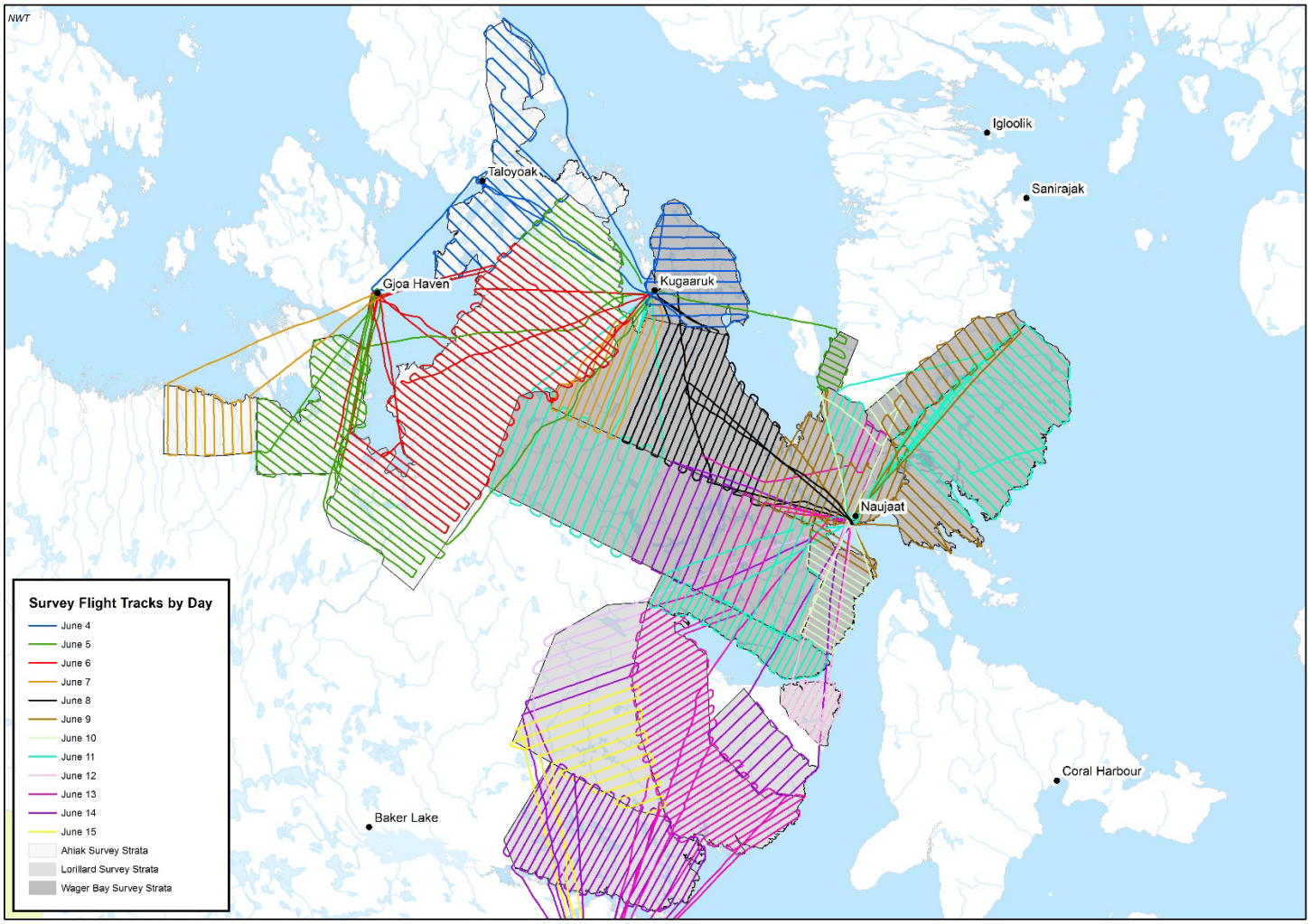
ᓴᖅᑭᑕᐅᓪᓗᑎᑦ, ᐃᓄᐃᑦ ᖃᐅᔨᒪᔪᑐᖅᓯᓪᓗ ᓇᓗᓇᐃᖏᑕᐅᓪᓗᑎᑦ ᐃᓕᓴᐅᕐᓴᐅᓪᓗᑎᒃᓗ ᓇᐃᔨᐃᓂᖅᓂᒃ ᐸᖅᓯᒪᓂᕐᓂᓕᒫᖅᓂᒃ ᓄᓇᕗᑦ ᑲᒪᒋᔭᖅᑭᑦ ᐊᐅᓚᑦᓇᓕᐅᕐᓴᐅᓪᓗᑎᒃᓴᓪᓗJ.

- ᐊᐅᑐᖅᑕᐅᔨᓕᒋᓂ ᐊᖏᓇᓚᐅᑎᑦ ᑲᑐᔨᖅᑎᑭᖅᓯᒪᓂᑦ ᐊᓱᒪᓗ ᐱᖅᑲᓚᑦ ᐊᐃᖅᑐᑦᓯᓚᐸᑦ ᐅᒪᔨᓕᓵᔨᕐᓂᑦ ᑲᑐᔨᖅᑎᑭᖅᓯᒪᓂᑦ ᐃᑲᔪᖅᑐᑐᒃᓴᓪᓗ ᓇᐃᔨᐃᓇᓚᖅᓂᐅᔨᓂᑦ ᖃᐅᔨᓴᓪᓗᑎᒃᓴ ᑎᑎᖅᑲᑦ ᐱᑕᖃᖅᖢᓂᐅᓂᖅᓂᑦ ᑐᑭᓯᒪᔪᓂᑦ/ᓱᐊᓚᒃᐸᖅᓂᖅᓯᓪᓗ ᐃᓂᖅᓂᓂᑦ.
- ᐊᐸᑎᓕᓵᔨᕐᓂᑦ ᐅᐸᓪᓕᑦ ᐊᑐᑦᑕᐅᓱᒪᔨᓂ ᐊᖏᓇᓚᖅᑐᓕᓵᔨᕐᓂᑦ ᑲᑐᔨᖅᑎᑭᖅᓯᒪᓂᑦ ᐱᐊᓂᒃᐸᑕ ᓇᐃᔨᐃᑎᖅᓂᑦ ᖃᑎᒌᐦᑐᑦᓯᓚᐅᓪᓗᑎᒃᓴᓪᓗ ᑭᖏᓪᓕᓚᖅᓴᖅ ᐅᓂᒃᑲᖅ ᐅᖃᐅᔨᓴᖅᓗᑎᒃ ᓇᐃᔨᐃᓐᔪᐊᑎᐃᓂᐅᓪᓗᑎᒃᓴᓪᓗᓕ. ᐊᐸᑎᓕᓵᔨᕐᓂᑦ ᐃᓕᐅᓪᓕᖏᓕᑦ ᐊᖏᓇᓚᑦᓇᓕᐅᕐᓂᑦ ᐅᓱᒪᔨᓕᓵᔨᕐᓂᑦ ᑲᑐᔨᖅᑎᑭᖅᓯᒪᓂᑦ ᐊᑭᑐᔪᓕᒫᓚᐅᑎᒃᓴᓪᓗᑎᒃᓴᓪᓗ ᑲᑎᒪᔨᐸᐊᓚᐅᓪᓗᑎᒃᓴᓪᓗ ᐅᖃᐅᔨᓴᖅᓗᑎᒃᓗᑐᑦᓯᓚᑎᒃ ᓇᐃᔨᐃᓐᔪᐊᑎᐃᓂᐅᓪᓗᑎᒃᓴᓪᓗ ᐊᐅᓪᓕᖅᑐᓂᒃᓴᓪᓗᓕ.

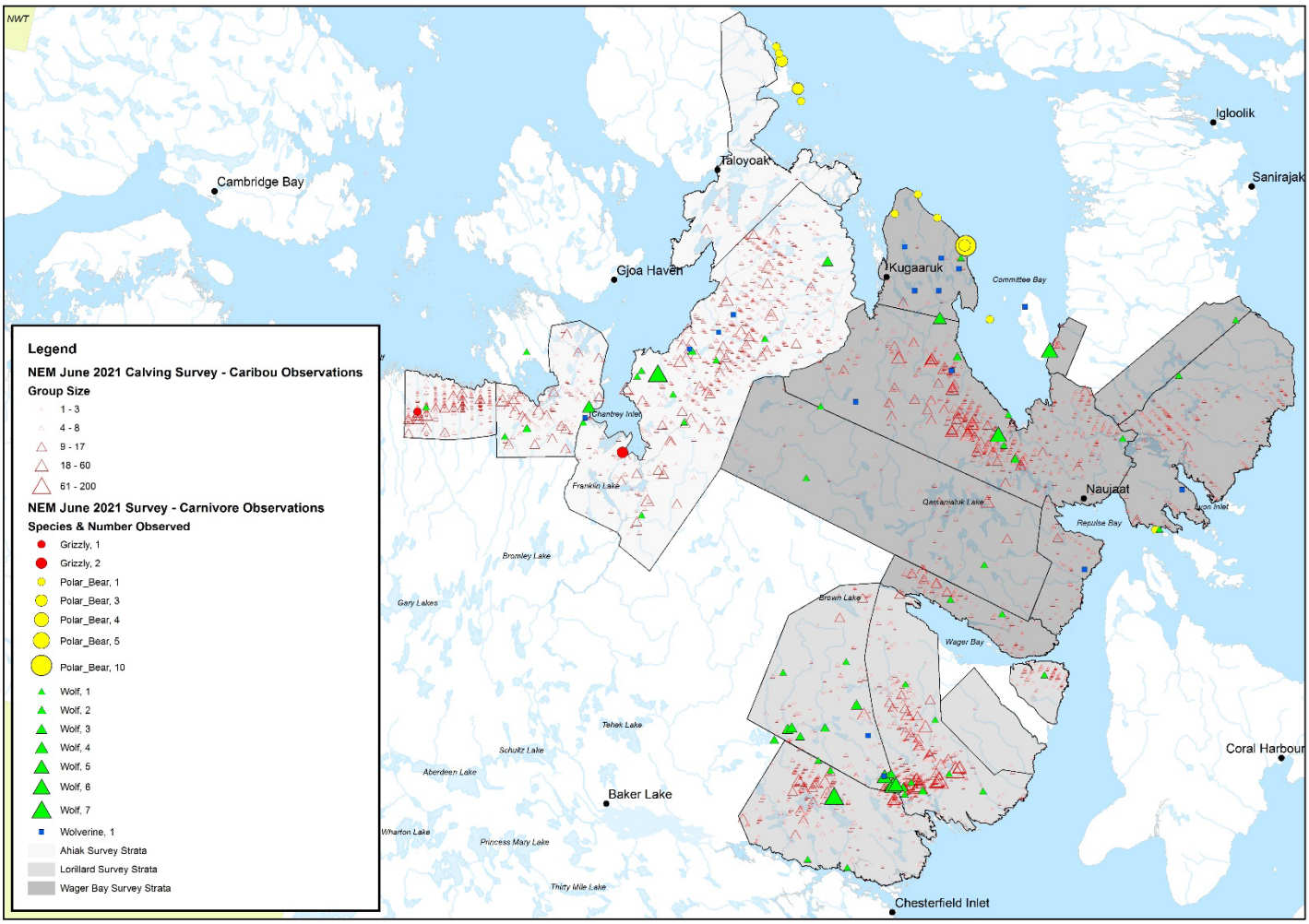
ᐊᑐᓕᐦᔪᐅᔨᑦ:

- ᐊᑐᖏᑦᑐᖅ

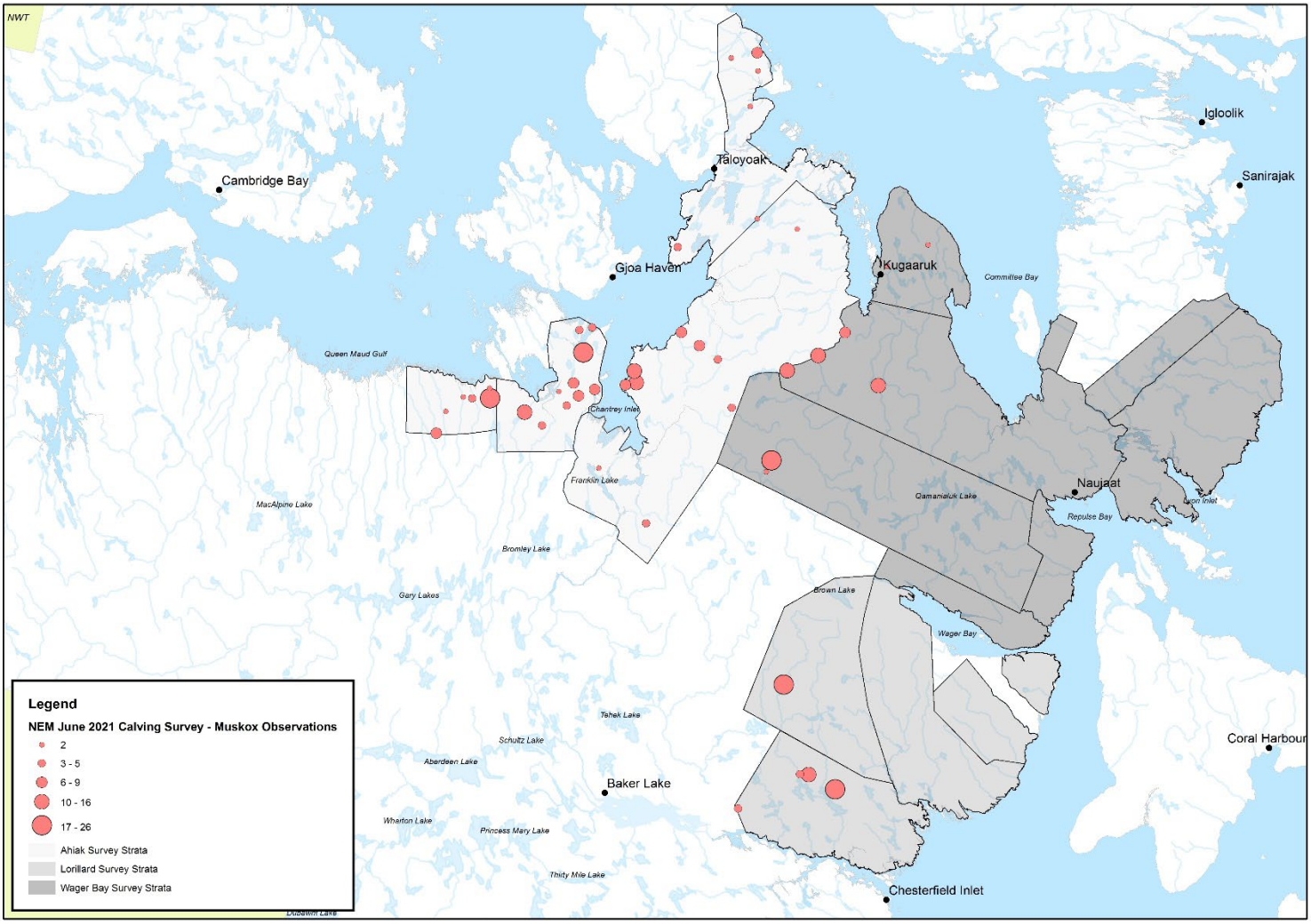
ᐊᐱᓐᖏᓪᓗᖅ *1.* ᓇᐃᓴᐃᓂᓚᒍᑦ ᖃᖏᑕᕐᕕᐅᓕᐅᔾᔪᑎᑦ ᐊᑯᓂᓂᐊᓂ ᓱᓂ 4 ᐊᒻᒪ 15, 2022.



ᐊᓱᓂᕐᐊᖅ 2: ᑐᑦᑐᐃᑦ ᓂᖅᑕᑦᓴᓪᓗ ᖃᐅᔨᓴᕐᑕᐅᔪᑦ ᓴᓂ 2021-ᒥᑦ ᐅᐊᓂᓂᑦᑐᒥ ᓄᓇᐃᓇᒥ ᓇᐃᓴᐃᔨᕐᑐᖃᑎᒌᓪᓗᒍ. ᖃᐅᔨᒪᓂᐊᕐᓵᓱ ᐊᕿᐃᐊᒥᑦ ᓇᐃᓴᐃᓂᑦ ᑲᔪᓴᓂᑦ (ᐅᐊᓂᓂᖏᓂ), ᐅᑲᔪᖅᓴᓕᑦ ᓇᐃᓴᕐᑕᑦ ᑲᔪᓪᓚᕆᐅᓪᓗᑎᑉ, ᐅᑲᔪᖅᓴᓕᐅᓪᓗ ᑐᑦᑐᖏᑦ ᑲᔪᑲᖅ (ᓂᒋᖁᓕᐊᓂᑦ).



ᐊᓱᓂᕐᐊᓂ 3 ᐅᒥᒃᒡᑦ ᖃᐅᔨᓴᓕᐅᔪᑦ ᓴᓂ 2021-ᒥᑦ ᐅᐊᓱᓂᑦᑐᑎᓪᓗᒥ ᓄᓇᐃᓐᓇᒥ ᓇᐃᓴᐃᔨᓴᖅᑎᑦᓯᒪᓪᓗᒥ.



ᑐᓂᔨᐅᔪᓐᓇᖅ

ᓄᓇᕗᒻᒥ ᐅᒪᔪᓕᕆᓂᖅᓴᖅᑎᑦ ᑲᑎᒪᔨᖏᑦ

ᒪᓴᓂᒧᖏᑐᒃ

ᑐᑭᓯᐊᕐᑕᑎ: ᐃᓂᒪᓕᐅᕐᑕᑎ: ᐃᒪᓐᓇᖅᑐᑦᑕᑦ: X

ᐱᓇᐃᓗᑕᖅ: ᑲᑎᕐᑐᑦ ᐃᖅᑲᓗᑕᐅᔪᓇᖅᑐᑦ ᖁᑯᓂᓯᓂᖅᑐᑦ ᐊᒻᒪᓗ 100 ᑕᓐ ᐅᕿᖏᑦᓂᖅᑲᖅᑐᒃ ᐊᑯᖅᑐᑦ ᖃᑦᕕᓕᖏᑦ ᓯᓚᖅᑭᓯᖏᒻ ᑯᑕᒥᑦ 0–Γ 2023 ᐊᒻᒪᓗ 2024 ᐃᖅᑲᓇᓯᐊᖅᓇᐅᑎᓪᓗᒍ.

ᐊᑯᖅᑐᑦ ᖃᑦᕕᓕᖏᑦ (*Reinhardtius hippoglossoides*)

ᐅᖅᑲᐅᓯᖅᑭᓯᒪᓂᖏᑦ

ᐃᖅᑲᓗᓪᓚᓂᐅᔪᖅ ᐊᑯᖅᑐᑦ ᖃᑦᕕᓕᖏᓐᓂᑦ (GHL) ᐱᑕᖅᖃᑐᖅ ᐅᐊᓐᓇᖅᓯᒃ ᐱᖅᑯᓐᓇᖅᓂ ᐊᑦᑭᓐᑎᑯ ᐃᖅᑲᓗᑕᓪᓚᑦᑐᑦ ᑲᑐᔾᔨᖅᑎᑎᑦᓂᖏᑦ (NAFO) ᐊᑲᔪᑐᖅᓯᒪᔪᖅ (SA) 0 ᐊᑲᔪᑐᖅᓯᒪᔪᖅ ᐅᐊᓐᓇᒪᓗᑦ, ᐊᕐᕕᑐᖅᓯᒪᔪᖅ 0A (ᓴᓐᓂᕈᑎᐅᑦ ᐃᒪᖅᓗ), ᐊᑲᔪᑐᖅᓯᒪᔪᖅ 0B (ᑕᑦᓗᕈᑎᐅᑦ ᐃᒪᖅᓐᓂᒥ), ᓯᓚᑦᑕᒥ ᓄᓇᕗᒻᒥ ᐊᖅᑭᖅᑎᑎᑦᑕᒧᑦ ᓄᓇᖃᑎᑎᑭᐅᔪᓂᒃ (NSA). ᑭᓇᐅᔭᓕᐅᕆᐊᓂᓪᓗᑦ ᐃᖅᑲᓇᓯᐊᖅᓇᐅᑎᓪᓗᒍ ᐊᑯᖅᑐᑦ ᖃᑦᕕᓕᖏᓐᓂᓐᓄᑦ ᑲᔪᐊᓂᖅᑐᑦ ᐊᒻᒪᓗ 1 ᐊᒻᒪ ᐃᓯᓐᓂᖅᑲᖅᑐᑦ ᑎᓯᐊᓗ 31. ᓄᓇᕕᒃᐊᖅ ᑕᑯᔭᕆᐅᑎᑌᔪᖅ ᐅᐊᓐᓇᖅᓯᒃ ᐱᖅᑯᓐᓇᖅᓂ ᐊᑦᑭᓐᑎᑯ ᐃᖅᑲᓗᑕᓪᓚᑦᑐᑦ ᑲᑐᔾᔨᖅᑎᑎᑦᓂᖏᑦ (NAFO) ᐊᑲᔪᑐᖅᓯᒪᔪᑦ ᐊᒻᒪᓗ ᐊᕐᕕᑐᖅᓯᒪᔪᑦᑦ ᐊᑐᑎᔪᑦ ᐊᑯᖅᑐᑦ ᖃᑦᕕᓕᖏᓐᓂᓐᓄᑦ ᐃᖅᑲᓗᑕᓪᓚᑦᑐᑦ ᓇᓂᔾᔨᐅᔪᖅᑐᒃ ᐃᓕᓴᖅᑐᒃ 1–Γ.

ᐊᑯᖅᑐᑦ ᖃᑦᕕᓕᖏᓐᓂᑦ (GHL) ᐃᖅᑲᓗᐃᑦ ᐅᕐᓂᓐ ᐊᑲᔪᑐᖅᓯᒪᔪᖅ 0 (SA0) ᐃᓕᑎᔾᔪᓯᒃ ᑭᑦᑕᖏᑐᓂᓐ ᐅᖅᓯᑕᐅᔾᔨᖅᑕᑕᐅᑎᔪᑦ ᐃᖅᑲᓗᐃᑦ ᑲᑐᑎᔾᐅᔪᑦ ᐅᑯᓂᖅᓯᒃ ᑲᓇᑕ (ᐊᕕᑐᑐᖅᓯᒪᔪᑦ 0A ᐊᒻᒪ 0B) ᐊᒻᒪ ᐊᑯᖅᑐᑦ (ᐊᕕᑐᑐᖅᓯᒪᔪᑦ 1A ᑎᑭᑐᑐᒍ F ᐃᓕᐃᓐᓇᕆᑦ). ᑐᓴᓯᖏᓚᓂᑦ ᑕᓪᕿᑭᓐᓇᑦ ᓄᓇᕗᒻᒥ, ᐅᐊᓐᓇᖅᑕᑕ ᐱᖅᑯᓐᓇᖅᓂ ᐊᑦᑭᓐᑎᑯ ᐃᖅᑲᓗᑕᓪᓚᑦᑐᑦ ᑲᑐᔾᔨᖅᑎᑎᑦᓂᖏᑦ (NAFO) ᖃᐅᔨᓴᖅᑎᑦ ᑲᑎᒪᔨᖏᑦ (SC) ᐱᑕᖅᖃᑎᑎᑦᓂᑦᑦ ᐅᖃᐅᔾᔨᑎᑦᓂᕐᒥᑦ ᒪᑭᒪᑎᑕᐅᓂᖅᓯᒪᓂᓐᓄᑦ ᐃᖅᑲᓗᑕᐅᓯᖅᑐᑦ ᖁᓕᓯᐅᓂᖅᑐᑦ. ᐅᐊᓐᓇᖅᑕᑕ ᐱᖅᑯᓐᓇᖅᓂ ᐊᑦᑭᓐᑎᑯ ᐃᖅᑲᓗᑕᓪᓚᑦᑐᑦ ᑲᑐᔾᔨᖅᑎᑎᑦᓂᖏᑦ (NAFO) ᒪᑕᑕᐅᔾᔨᕆᐊᑕᐅᔪᓂᖅᓯᒃᑎᑕᑦ ᑭᓱᑯᓐᓇᖅ ᐃᖅᑲᓗᖁᑎᐅᔾᔨᓂᓐ; ᑲᓇᑕ ᐊᒻᒪ ᐊᑯᖅᑐᑦ ᑲᒪᒋᔭᖅᑎᑦ ᒪᑕᑕᐅᔾᔨᕆᐊᑕᐅᔪᓂᑦ ᐃᒪᖅᑐᓂᑦ ᐊᑐᐃᓐᓇ ᐃᒪᖁᑐᖅᓂ. ᑲᓇᑕ ᐊᒻᒪᓗ ᐊᑯᖅᑐᑦ ᐊᑯᓂᐅᔾᔨᒃ ᐊᖅᑭᖅᑎᑎᑦᓂᖅᑲᓂᕐᒥᑦ ᐃᖅᑲᓱᑕᐅᔾᔨᓇᖅᑐᑦ (TAC) ᖁᓂᖓᓂᖅᑐᑦ ᓴᖅᑭᖅᑎᑕᐅᓯᒪᓗᑎᑦ ᐅᐊᓐᓇᖅᑕᑕ ᐱᖅᑯᓐᓇᖅᓂ ᐊᑦᑭᓐᑎᑯ ᐃᖅᑲᓗᑕᓪᓚᑦᑐᑦ ᑲᑐᔾᔨᖅᑎᑎᑦᓂᖏᑦ (NAFO) ᖃᐅᔨᓴᖅᑎᑦ ᑲᑎᒪᔨᖏᑦ (SC) ᐅᖃᖅᓯᒪᔪᑦ ᐊᕕᑦᑕᐅᓗᑎᑦ 50/50 ᑭᓱᑯᓐᓇᖅ ᒪᖃᐃᓐᓂᖅ ᓄᓇᕗᒻᒥᔪᓐᓇᖅᑐᒥᓂᖅ.

ᐃᓐᓇᐅᔾᔪᑦ ᐊᕕᖅᑐᖅᓯᒪᔪᖅ 0 (SA0) ᐊᑯᖅᑐᑦ ᖃᑦᕕᓕᖏᓐᓂᑦ ᑲᑎᒪᔨᖏᑦ ᐃᖅᑲᓗᑕᐅᔾᔨᓇᖅᑐᑦ (GHL) ᐃᖅᑲᓱᑕᐅᔾᔨᓇᖅᑐᑦ (TAC) 18,185 ᑕᓴᑦ, ᐋᖅᑭᑕᐅᑕᓚᐅᖅᑐᖅᑐᒃ ᒥᓂᑕᒧᑦ ᑎᓯᐊᓗ 22, 2020–Γ ᑐᖁᖓᓕᒫᓂ 2021 ᐊᒻᒪ 2022–J; ᑭᓴᓇ ᖁᓂᑎᖅᓂᖅᕿᖓᔪᖅ ᐃᖅᑲᓱᑕᐅᔾᔨᓇᖅᑐᓂᖅ (TAC)

ᑭᖑᓂᓕᒫᑦᑎᓐᓂ ᐊᒡᒍᑐᖅᓯᒪᔪᖅ 0 ᐃᖃᓗᓕᕆᓂᕐᒥ. ᒫᓐᓇᐅᔪᖅ ᐊᕙᒃᓯᒪᓂᖓ ᒫᓐᓇᐅᔪᒧ ᐃᖃᓗᒃᑕᐅᔪᓐᓇᖅᑐᓄᑦ (TAC) ᐊᑐᓂ ᐊᕙᑦᑐᖅᓯᒪᔪᓂᒃ ᐃᒪᐃᓪᓗᒍᖅ:

ᐃᖃᓗᒐᓯᐊᕐᕕᒋᔭᐅᔪᑦ	ᐅᒥᐊᕐᔪᐊᑦ/ᐱᔪᒪᓂᕐᑲᖅᑐᑦ	2021-22 ᐃᓕᐅᖅᑲᖅᑕᐅᔪᑦ (ᑕᓐᓴ)
ᐅᐊᓐᓇᖓᑕ ᐱᖓᓐᓇᖓᓂ ᐊᑦᓛᓐᑎᒃ ᐃᖃᓗᓕᕆᓂᕐᒧᑦ ᑲᑐᔾᔨᖃᑎᒌᖏᑦ (NAFO) ᐊᕙᑦᑐᖅᓯᒪᔪᖅ 0A	ᓄᓇᕗᑦ	9,592.5
	ᑲᑎᑦᑐᒋᑦ 0A ᑲᑎᑦᑐᒋᑦ ᐃᖃᓗᑦᑕᐅᔪᓐᓇᖅᑐᑦ	9,592.5

ᐃᖃᓗᒐᓯᐊᕐᕕᒋᔭᐅᔪᑦ	ᐅᒥᐊᕐᔪᐊᑦ/ᐱᔪᒪᓂᕐᑲᖅᑐᑦ	2021-22 ᐃᓕᐅᖅᑲᖅᑕᐅᔪᑦ (ᑕᓐᓴ)
ᐅᐊᓐᓇᖓᑕ ᐱᖓᓐᓇᖓᓂ ᐊᑦᓛᓐᑎᒃ ᐃᖃᓗᓕᕆᓂᕐᒧᑦ ᑲᑐᔾᔨᖃᑎᒌᖏᑦ (NAFO) ᐊᕙᑦᑐᖅᓯᒪᔪᖅ 0B	ᓄᓇᕗᑦ	4,283.25
	ᓄᓇᕙᒃ	449.25
	ᐱᓕᕆᕙᐅᔪᑦ ᐃᓕᐅᖅᑲᖅᑕᐅᔪᓄᑦ ᑎᒍᒥᐊᖅᑏᑦ	2,960
	ᐋᖅᑭᔅᓯᒪᔪᓄᑦ ᐃᖃᓗᒐᓯᐊᕈᑏᑦ ᐊᑭᑦᑐᕋᐅᑎᓂᖅ	900
	ᑲᑎᑦᑐᒋᑦ 0B ᑲᑎᑦᑐᒋᑦ ᐃᖃᓗᑦᑕᐅᔪᓐᓇᖅᑐᑦ	8,592.5

ᐅᓇᐅᑎᓪᓗᒍ 2021, ᑲᑎᑦᑐᒋᑦ ᐃᖃᓗᑦᑕᐅᔪᓐᓇᖅᑐᑦ (TAC) ᐊᑐᖅᑕᐃᓐᓇᐅᓚᐅᖅᑐᖅ ᑕᒪᒃᑭᓐᓄᑦ ᐊᕙᑦᑐᖅᓯᒪᔪᑦ 0A ᐊᒻᒪ 0B.

ᑕᐃᒪᙵᓂ 2006–ᒥ, 100 ᑕᓐᓴ ᐊᕙᑦᑐᖅᓯᒪᔪᑦ 0A ᐃᖃᓗᒃᑕᐅᔪᓐᓇᖅᑐᑦ (TAC) ᑐᓂᓯᖃᑦᑕᖅᓯᒪᔪᑦ ᓯᕗᔭᒥ ᐃᖃᓗᓕᕆᓂᕐᒧ ᐱᕚᓪᓕᐊᑎᑦᑎᓂᕐᒧ ᐊᑐᖅᑕᐅᔪᓐᓇᕐᑯᓪᓗᒍ ᓄᓇᕗᒻᒥ ᐊᖏᖃᑎᒋᒍᑎᓖᒧᑦ ᓄᓇᕐᑯᑎᒋᔭᐅᔪᓄᑦ ᐅᐊᓐᓇᖓᑕ ᐱᖓᓐᓇᖓᓂ ᐊᑦᓛᓐᑎᒃ ᐃᖃᓗᓕᕆᓂᕐᒧᑦ ᑲᑐᔾᔨᖃᑎᒌᖏᑦ (NAFO) ᐊᕙᑦᑐᖅᓯᒪᔪᑦ 0A ᐃᓗᐊᓂ.

ᑐᓴᕋᓱᐊᕐᓃᑦ

ᐊᔾᔨᖃᖅᓗᓂ ᑭᖑᓂᑦᑎᓐᓂ ᓯᕗᓪᓕᐅᔾᔨᓂᕐᒧ ᐱᓕᕆᓂᐅᔪᓂᒃ, ᑐᓴᕋᓱᐊᕐᓂᖅ ᑲᓇᕐᓇᖓᓂ ᐃᖅᑲᕐᒥᐅᑕᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᒪᔭᑕᕆᔭᐅᔪᑦ ᑲᑎᒪᔨᕋᓛᓄᑦ (EAGSAC) ᐃᓇᒋᔭᐅᔪᓂᒃ ᐱᓕᕆᐊᖑᓂᐊᖅᑐᖅ ᐅᕐᑲᓕᒫᓚᓕᐊᖑᓚᐅᖅᑎᓪᓗᒍ ᐅᐊᓐᓇᖓᑕ ᐱᖓᓐᓇᖓᓂ ᐊᑦᓛᓐᑎᒃ ᐃᖃᓗᓕᕆᓂᕐᒧᑦ ᑲᑐᔾᔨᖃᑎᒌᖑᔪᓄᑦ (NAFO) ᖃᐅᔨᓴᖅᑏᑦ ᑲᑎᒪᔨᖏᑦ (SC) ᐃᖃᓗᒃᑕᐅᔪᓐᓇᖅᑐᓄᑦ (TAC) ᐅᖃᖅᓯᒪᔪᖅ ᐊᑯᑭᑦᑐᑦ ᖃᓕᕋᓕᖏᑦ ᑲᑎᑦᑐᒋᑦ ᐃᖃᓗᑦᑕᐅᔪᓐᓇᖅᑐᑦ (GHL) ᐊᒡᒍᑐᖅᓯᒪᔪᒥ 0+1 (ᐃᒪᕙᖏᒥ) 2023–ᒧ ᐊᒻᒪᓗ 2024–ᒧ.

ᑭᒡᓕᓯᓂᐊᖅᑕᐅᓯᒪᔪᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ

ᐃᖃᓗᓕᕆᓂᕐᒧᑦ ᐃᒪᕐᒥᐅᑕᓕᕆᓂᕐᒧᑦᓗ ᑲᓇᑕᒥ (ᐃᖅᑲᓇᐃᔭᕐᕕᓚᓚᒃ) ᐃᓱᒪᔪᖅ ᖃᐅᔨᓴᖅᑏᑦ ᑲᑎᒪᔨᖏᑦ (SC) ᐅᖃᖅᓯᒪᔪᑦ ᐅᖃᓕᒫᒐᙳᕐᓂᐊᖅᑐᖅ ᓯᕗᓂᑦᑎᐊᑦᑎᓐᓂ, ᐊᒻᒪᓗ ᑐᑭᓯᒋᐊᕈᑎᓂᒃ ᑐᓂᓯᓗᓂ ᑲᑎᒪᔨᓄᑦ ᐃᓚᒋᐊᖅᓯᒪᔪᒥ ᑖᔅᓯᒧᖓ ᓇᐃᒡᓕᒋᐊᖅᓯᒪᔪᒧᑦ ᐊᑐᐃᓐᓇᐅᓕᑐᐊᕈᓂ ᐊᒻᒪᓗ ᓯᑎᐱᕆᐅᑉ ᑲᑎᒪᕙᒃᓴᖓᑕ ᑐᖔᓂ. ᐃᓚᒋᐊᖅᓯᒪᔪᖅ ᖃᐅᔨᒪᑎᑦᑎᓂᐊᖅᑐᖅ ᑲᑎᒪᔩᑦ ᑕᒪᐃᓐᓂ ᐊᑐᐃᓐᓇᐅᔪᑦ ᑐᑭᓯᒋᐊᕈᑎᓂᒃ ᐱᖃᕐᒪᖔᑦ ᐃᓱᒪᒃᓴᖅᓯᐅᖅᓯᒪᔪᒥᒃ ᐊᑐᓕᕐᑯᔨᔪᓕᐅᕐᓗᑎᒃ ᖃᐅᔨᒪᑎᑦᑎᓂᕐᒥ ᐃᓱᒪᓕᐅᕆᔪᒥᒃ ᐱᓕᕆᔭᐅᑲᐅᑎᒋᔪᒥ ᐃᖃᓗᒐᓱᖕᓂᕐᒧ ᐊᐅᓚᓂᖅ ᓱᖁᓯᖅᑕᐅᕐᑯᓇᒍ ᔫᓄᐊᕆ 1, 2023–ᒥ ᐱᒋᐊᕐᓂᐊᖅᑐᒥ.

ᑲᑎᒪᔩᑦ ᐃᓚᓕᐅᑎᓯᒪᔪᒥᒃ ᐊᖏᖅᓯᔪᓐᓇᖏᒃᑯᑎᒃ ᓯᑎᐱᕆᒥ ᑲᑎᒪᓂᐅᔪᒧ, ᐃᖅᑲᓇᐃᔭᕐᕕᓚᒃ ᐱᔪᒪᓂᐊᖅᑐᖅ ᐃᓅᑑᔪᒥ ᑲᑎᒪᓂᕐᒥ ᑲᑎᒪᔨᒃᑰᓗᑎᒃ ᓯᑎᐱᕆᐅᑉ ᓄᕐᖑᐊᓂ. ᑖᓐᓇ ᑐᕌᒐᐅᔪᖅ ᐊᔾᔨᖃᖅᑐᖅ ᐃᓗᐊᓂ 3.1–ᒥ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ (NWMB) ᐃᑲᔫᑎᖓ ᐊᐅᓚᑦᑎᓂᖅ ᐊᐅᓚᑦᑎᔨᐅᖃᑎᒋᓂᒃ.

ᐃᒪᓐᓇᕐᓂᖅ

ᐃᖃᓗᓕᕆᔨᓐᓇᖅᑐᓄᑦ (TAC) ᐃᓱᒪᓕᕆᓚᐅᕆᔨᒃ, ᐃᓕᖃᖅᖢᓂᐹᖅ ᑐᓂᐅᖅᑲᐃᓂᕐᒥᑎ ᐊᒻᒪᓗ ᑐᓂᓱᓂᕐᒥ ᓇᓗᓇᐃᖃᓱᓂᖅ, ᐱᓕᕆᐊᖓᓂᐊᖅᑐᖅ ᐃᖃᖅᑲᓇᐃᓚᐅᐃᑦ ᐱᓕᕆᔨᒃᑯᐊᑎᒍ ᐊᒻᒪᓗ ᐊᑐᓚᐊᓕᓴᐅᑎᒍ. ᐃᖃᓗᓕᕆᔨᓐᓇᖅᑐᓄᑦ (TAC) ᐃᓱᒪᓕᕆᓚᐅᕆᔨᒃ ᐃᓕᓕᕆᔨᐅᓱᒪᔨᑦ ᐅᓄᖅᑐᓄᓪ ᐃᓱᒪᑎᑲᐊᓕᓴᐅᓂ ᐃᓕᖃᖅᖢᓂᐹᖅ: ᐱᐅᖅᓱᐊᖅᓂᖅ; ᖃᐅᔨᓴᖃᖅᑎᑦ ᐅᖃᐅᔾᔨᖅᓂᒃᑯᓂ; ᐃᓄᓕᕆᓂᖏᓐᓂᒃᑯᑦ ᐊᐅᑐᐃᓂᐅᔨᑦ; ᖃᓄᐃᓕᓴᕐᓂᖅ ᐃᓱᒪᑎᓕᖅᑐᓂ; ᐅᓇᑦᑎᐊᓱᐊᓂᖏᓐᓇᖅᑐᓄᓪ ᐊᒻᒪᓗ ᓄᓇᕗᒻᒥ ᐱᓕᕆᐊᖃᓕᓴᐅᓂᒃ.

ᓇᐃᓇᖅᓱᒪᔨᓂ ᑐᓴᓂᖅᑎᑦ

ᐱᓕᕆᓚᐅᕆᔨᖅ ᑐᓵᓱᖅᑐᑦ ᖃᑎᒌᓂᒃ:

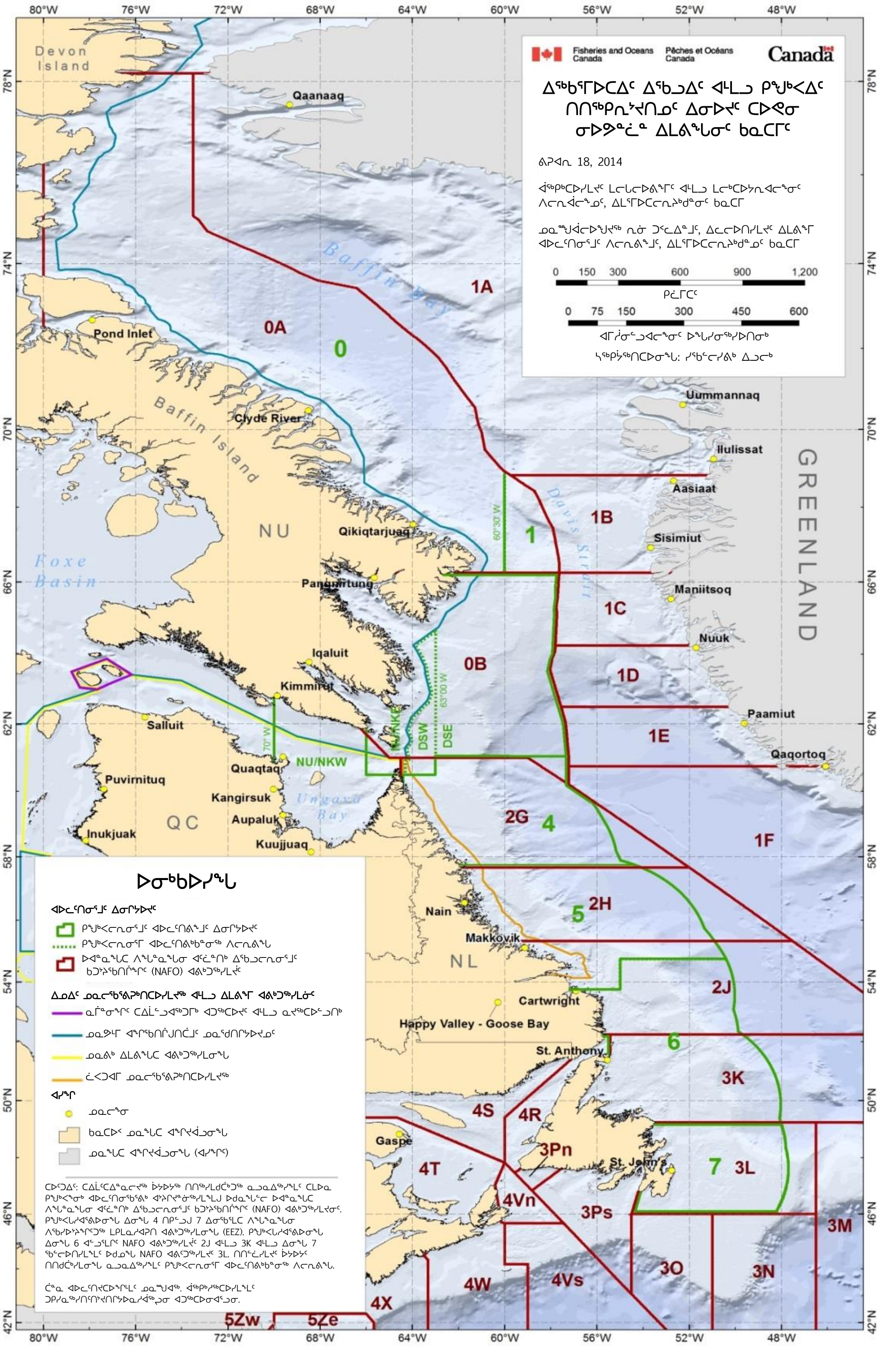
1) ᐊᑐᓕᖏᓚᐅᕆᔨᖅ ᐋᖅᑭᑦᑕᐅᓂᖅᓴᓄᑦ ᐊᓴᒧᑐᖅᓱᒪᔨᖅ 0 (SA0) ᐊᑯᑭᑐᑦ ᖃᓄᕐᓗᓕᖅᓴᓂ ᖃᑎᒌᑎᓂ ᐃᖃᓗᓕᕆᔨᓐᓇᖅᑐᑦ (GHL) ᐃᖃᓗᓕᕆᔨᓐᓇᖅᑐᑦ (TAC) 2023–ᒧ ᐊᒻᒪᓗ 2024–ᒧ.
2) ᐊᑐᓕᖏᓚᐅᕆᔨᖅ ᓴᓂᕐᖤᖅᑕᐅᓱᒪᔭᓄᑦ 100 ᑕᐃᔪ ᐊᑯᑭᑐᑦ ᖃᓄᕐᓗᓕᕆᓂᖅ ᖃᑎᒌᑎᓂ ᐃᖃᓗᓕᕆᔨᓐᓇᖅᑐᑦ (GHL) ᐊᖏᔪᖅᓱᒪᔨᖅ 0A–ᒥ ᓱᓴᒥ ᐃᖃᓗᓕᓚᓂᕐᒧᑎ ᐱᖓᓕᓚᐊᑎᓂᓂᕐᒥ ᓄᓇᕗᓴᒥ ᐊᖏᓕᓚᐊᑎᑕᒧᑦ ᓄᓇᓕᒫᑦ ᐊᖏᔪᖅᑎᑎᑲᓂᒡᒧᑦ ᓄᓇᕗᑯᑎᑕᐅᓱᒪᔭᓄᑦ ᐃᓗᐊᓂ.

ᐱᖓᑕᖅᑕᖏᑐᒃ ᐅᒪ: ᐃᖃᓗᓕᓚᓂᕐᒧᑦ ᐊᐅᓕᕆᓂᕐᒧᑦ, ᐃᒪᖏᑕᐅᓕᓚᓵᖅᑯᑦ ᑲᓇᑕᒥ

ᐅᓪᓗᖅ: ᐊᖅᑭᓱ 04, 2022

ᐃᓕᓴᕐᓂᒃ

ᐃᓕᓴᕐᓂᒃ 1 – ᓄᓇᙱᓐᐊᖅ ᐃᖃᖅᖏᑕᐅᑕᑦ ᐃᖃᓗᓗᐃᑦ ᐊᒻᒪᓗ ᑭᙵᐸᐃᑦ ᑎᑎᖅᑭᓚᐹᒪᓄᑦ ᐃᓂᐅᔨᑦ ᑕᐅᖓᓂ ᓂᐅᐅᓪᓗᒡᓘ ᐃᒪᓕᙱᓐᓂᑦ ᑲᓇᑕᒥᑦ


Fisheries and Oceans Canada
Pêches et Océans Canada
Canada
2014
Devon Island
Qaanaaq
Baffin Bay
Pond Inlet
Baffin Island
Clyde River
Qikiqtarjuaq
NU
Foxe Basin
Pangnirtung
Iqaluit
Kimmirut
Salluit
NU/NKW
Quaqtaq
Puvirnituq
Kangirsuk
Aupaluk
Ungava Bay
QC
Inukjuak
Kuujjuaq
Nain
Makkovik
NL
Cartwright
Happy Valley - Goose Bay
St. Anthony
Gaspe
St. John's
Uummannaq
Ilulissat
Aasiaat
Sisimiut
Maniitsoq
Nuuk
Paamiut
Qaqortoq
GREENLAND
Davis Strait
0A
0B
0
1
1A
1B
1C
1D
1E
1F
2G
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3L
3M
3N
3O
3Pn
3Ps
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4R
4S
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4Vn
4Vs
4W
4X
5
5Zw
5Ze
6
7
DSW
DSE
60°30' W
63°00' W
70° W
(NAFO)
(EEZ)

Greenland halibut in Subarea 0+1 (offshore) Advice June 2022 for 2023-2024

Recommendation for 2023 and 2024

The main index for this stock has not been updated since 2017, consequently stock status is increasingly uncertain. However, SC notes that the stock varied without trend between 2013-2017 while the fishery was increasing. Average catches during this period were 29,640 t, therefore, SC recommends catches not to exceed this value in 2023 and 2024.

Management objectives

Canada and Greenland adopted a total allowable catch (TAC) of 36 370 t for 2019 to 2022. Canada requests that stock status be evaluated in the context of management requirements for long-term sustainability and the advice provided should be consistent with the precautionary approach.

Convention General Principles	*Status*	*Comment/consideration*
Restore to or maintain at B_{MSY}	○	B_{MSY} Unknown
Eliminate overfishing	○	F_{MSY} Unknown
Apply Precautionary Approach	●	B_{lim} *valid to 2017*
Minimise harmful impacts on living marine resources and ecosystems	●	Fishing closures are in effect in SA0 and Div. 1A. No specific measures.
Preserve marine biodiversity	○	Cannot be evaluated

● OK
● Intermediate
● Not accomplished
○ Unknown

Management unit

The Greenland halibut stock in Subarea 0 + 1 (offshore) is part of a larger population complex distributed throughout the Northwest Atlantic. From 2020, separate assessments are made on the inshore management units in 1A-F and 0B.

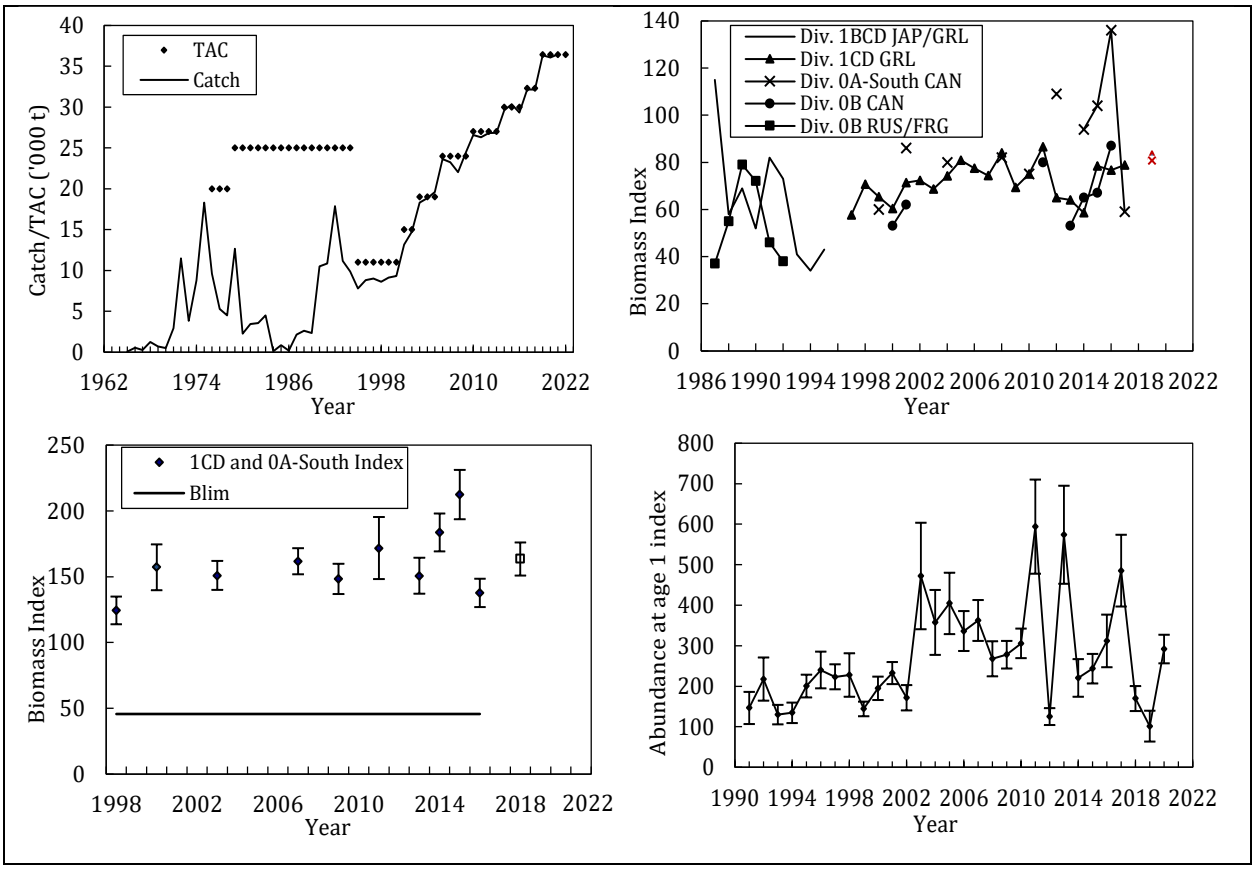
Stock status

The 0A-South and 1CD biomass index was above B_{lim} throughout the time series, 1999 to 2017. The 2019 value is similar in magnitude to previous surveys, however, it is not considered directly comparable. Despite a lack of index survey data in recent years the stock status is not expected to have changed drastically during 2018 to present.

Special Comment

The main index for this stock has not been updated since 2017, consequently stock status is increasingly uncertain: this increases the risks associated with management decisions. It is essential that surveys resume as soon as possible to update indices.

In assessing stock status SC considered the observed stability in length frequencies from surveys and the fishery, the age-1 index, that TACs have been consistently achieved, longevity of the species, and that status in 2017 was well above B_{lim}.



Reference points

B_{MSY} is not known for this stock. In 2015 a proxy for B_{lim} was developed based on 30% of a period of stability in the 0A-South and 1CD index (1999-2012). However, no surveys were conducted in 2018, 2020 or 2021 and the 2019 survey was not considered comparable to previous surveys. The previous B_{lim} was valid to 2017, but needs to be re-evaluated once a new time series is established.

Assessment

The assessment is qualitative with input from research surveys (total biomass and abundance indices to 2017, an index of age 1 fish to 2020, and length frequency distributions to 2017) and fishery length frequencies to 2021.

The next assessment is expected to be in 2024.

Human impact

Mainly fishery related mortality has been documented. Other sources (e.g. pollution, shipping, oil-industry) are undocumented.

Biology and Environmental interactions

No specific studies were reviewed during this assessment

Fishery

Catches were first reported in 1964. Catches increased from 1989 to 1992 due to a new trawl fishery in Div. 0B with participation by Canada, Norway, Russia and Faeroe Islands and an expansion of the Div. 1CD fishery with participation by Japan, Norway and Faeroe Islands. Catch declined from 1992 to 1995 primarily due to a reduction of effort by non-Canadian fleets in Div. 0B. Since 1995 catches have been near the TAC and increasing in step with increases in the TAC, with catches reaching a high of 36 436 t in 2021.

Recent catch and TACs ('000 t)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TAC	27	30	30	30	32.3	32.3	36.4	36.4	36.4	36.4
STACFIS SA 0	13.4	14.9	15.4	14.1	15.9	16.0	18.3	17.9	19.1[2]	
STACFIS SA 1	13.5	14.7	14.9	15.2	16.2	16.2	18.0	18.1	17.3	
Total STACFIS[1]	26.9	29.6	30.3	29.3	32.1	32.2	36.3	36.0	36.4	

[1] Based on STATLANT, with information from Canada and Greenland authorities to exclude inshore catches.

[2] STACFIS estimate using 1.5 conversion factor for J-cut, tailed product; 1 129 t increase over reported catch.

Effects of the fishery on the ecosystem

The impact of bottom fishing activities on VMEs in SA 0 was assessed in 2016. Three areas have been designated as marine refuges, that exclude bottom contact fisheries: Disko Fan, Davis Strait and Hatton Basin. Areas in SA 1 have also been closed to fishing to protect benthic habitats.

Greenland Shark is a bycatch species of concern in the SA 0+1 (offshore) fishery given its low reproductive rate, slow growth rate and limited ecological information. SC has examined Greenland Shark bycatch records and survey encounters in the NAFO Convention Area to determine the amount of, and spatial and temporal patterns in Greenland Shark bycatch.

Basis for Advice

A quantitative assessment of risk at various catch options is not possible for this stock, therefore, it is not possible to quantitatively evaluate the sustainability of the TAC. There was no biomass index available for 2018, 2020 or 2021, and there is uncertainty in the comparability of the 2019 estimate. TAC advice in 2022 is based on a qualitative review of available data.

Sources of information

SCR 22/022, 023, 21/014; SCS Doc. 22/009, 012, 017

III. STOCKS ASSESSMENTS

A. STOCKS OFF GREENLAND AND IN DAVIS STRAIT: SUBAREA 0 AND SUBAREA 1

Recent Conditions in Ocean Climate and Lower Trophic Levels

- The ocean climate index in Subarea 0-1 above normal in 2021.
- Mean initiation timing of the spring phytoplankton bloom in 2021 was the earliest of the time series.
- Spring bloom magnitude (total production) was slightly below normal in 2021

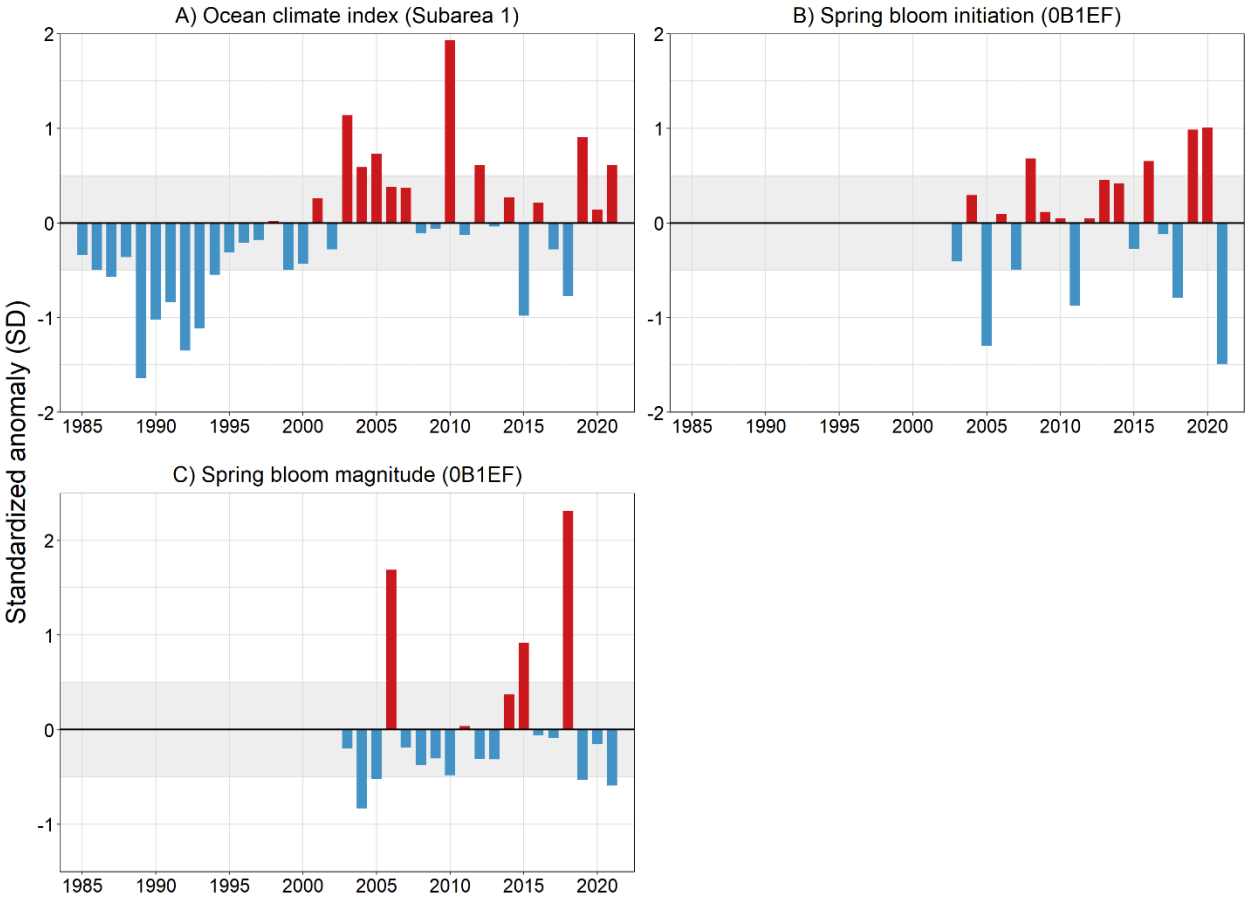


Figure A1. Annual anomalies of environmental indices for NAFO Subareas 0 and 1. The ocean climate index (A) for the period 1990-2020 is the average of 10 individual time series. These includes standardized anomalies of 4 SSTs time series, 4 temperature time series at 3 hydrographic stations and 2 air temperatures time series (see Cyr and Belanger 2022 for details). Spring bloom anomalies (B, C) for the 2003-2021 period are derived from four satellite boxes (HS, NLAB, CLAB, GS – see Cyr and Belanger 2022 for details). Positive (negative) anomalies indicate late (early) bloom timing or magnitude above (below) the mean for the reference period. Anomalies were calculated using the following reference periods: ocean climate index: 1981-2010, spring bloom indices: 2003-2020. Anomalies within ± 0.5 SD (shaded area) are considered near-normal conditions.

Environmental Overview

Hydrographic conditions in this region depend on a balance of ice melt, advection of polar and sub-polar waters and atmospheric forcing, including the major winter heat loss to the atmosphere that occurs in the central Labrador Sea. The cold and fresh polar waters carried south by the east Baffin Island Current are counter balanced by warmer waters are carried northward by the offshore branch of the West Greenland Current (WGC). The water masses constituting the WGC originate from the western Irminger Basin where the East Greenland Currents (EGC) meets the Irminger Current (IC). While the EGC transports ice and cold low-salinity Surface Polar Water to the south along the eastern coast of Greenland, the IC is a branch of the North Atlantic current and transports warm and salty Atlantic Waters northwards along the Reykjanes Ridge. After the currents converge, they turn around the southern tip of Greenland, forming a single jet (the WGC) that propagates northward along the western coast of Greenland. The WGC is important for Labrador Sea Water formation, which is an essential element of the Atlantic Meridional Overturning Circulation. At the northern edge of the Labrador Sea, after receiving freshwater input from Greenland and Davis Strait, part of the WGC bifurcates southward along the Canadian shelf edge as the Labrador Current.

Ocean Climate and Ecosystem Indicators

The ocean climate index in Subarea 0-1 has been predominantly above or near normal since the early 2000s, except for 2015 and 2018 that were below normal (1A). After being in 2019 at its highest value since the record high of 2010, the index was normal in 2020 and again above normal in 2021. Before the warm period of the last decade, cold conditions persisted in the early to mid-1990s.

Spring bloom initiation has been oscillating between early (negative anomalies) and late (positive anomalies) timing between 2003 and 2020. In 2021, the average timing of the spring bloom in Subarea 0B1EFT was the earliest of the time series and followed the two latest bloom onset on record for the region (Figure A1B). Spring bloom magnitude (total production) remained mostly below or near-normal between 2003 and 2020 with the exception of a few highly productive bloom in 2006, 2015 and 2018 (Figure A1C). In 2021, mean bloom magnitude in the region was slightly higher than normal (Figure A1C).

1. Greenland Halibut (*Reinhardtius hippoglossoides*) in Subarea 0 and 1 (Offshore)

(SCR Doc. 22/022, 22/023, 21/014; SCS Doc. 22/009, 22/012)

a) Introduction

The Greenland halibut stock in Subarea 0 and 1 (offshore) is part of a larger population complex distributed throughout the Northwest Atlantic (Roy et al. 2014). The fishery distribution includes Canadian (SA0) and Greenland (SA1) offshore waters. Canada and Greenland manage the fisheries independently and request advice from NAFO SC. The fishery came under quota regulation in 1976 when a TAC of 20,000 t was established. TAC was increased to 25,000 t in 1979. In 1994 analysis of tagging and other biological information resulted in the creation of separate management areas for inshore Div. 1A. The portion of the TAC allocated to Subarea 0+1A (offshore) and 1B-F was set at 11 000 t and the TAC remained at this level from 1995-2001, during which time the TAC was fished almost exclusively in Div. 0B and Div. 1CD. A series of surveys took place during 1999-2004 in areas of Div. 0A and 1AB that had not been surveyed before resulting in an expansion of the fishery into these northern divisions between 2001 and 2006. In 2020 studies of parasites, analysis of historic taggings and fishery data resulted in the creation of separate management areas for inshore Div. 1B-F (SCR Doc. 20/034).

The assessment is qualitative, and since 2014 has been based on an index of survey biomass that combines Divisions 0A-South and 1CD surveys (ICES 2013). The surveys are conducted by the same vessel and gear during the fall which allows for a combination of the survey results. An index based harvest control rule was accepted as the basis for TAC advice in 2016 and 2018.

The vessel that conducted surveys from 1997 to 2017 was retired in 2018 and a new research vessel built by the Greenland Institute of Natural Resources will begin a new survey time series in 2022. No survey was conducted in 2018, 2020 and 2021. A commercial vessel was used for the 2019 survey. This change in vessel had an effect on gear performance such that the 2019 index is not directly comparable to previous years. Also, earlier timing for the 0A-South survey in 2019 introduced additional uncertainty to the comparability of this index. Assessment and advice in 2020 and 2022 were based on a qualitative review of available survey and fisheries data. The absence of a continuous survey series limits the assessment and STACFIS may be unable to evaluate the impact of the advised TAC.

Fishery and Catch: Bottom otter trawl gear is used by most fleets in the Subarea 1 fishery. There have been longline vessels occasionally in the offshore, however gillnet gear is not allowed. The Subarea 0 fishery is a mix of trawl and gillnet (between 30-40% of the catch in recent years) with the occasional use of longline. The trawlers in both Subareas have been using both single and double trawl configurations since about 2000. The gillnet fishery in Subarea 0 began in 2005 and has been using baited gillnets since about 2015. Baiting gillnets has been shown to increase catch rates (Bayse and Grant 2020).

Catches were first reported in 1964 and rose to 20,027 t in 1975 before declining to 2,031 t in 1986. Catches increased from 1989 to 1992 (reaching a level of 17,888 t) due to a new trawl fishery in Div. 0B with participation by Canada, Norway, Russia and Faeroe Islands and an expansion of the 1CD fishery with participation by Japan, Norway and Faeroe Islands. Catch declined from 1992 to 1995 primarily due to a reduction of effort by non-Canadian fleets in Div. 0B. Since 1995 catches have been near the TAC, increasing in step with increases in the TAC. Since 2019 the TAC has been 36,400 t. In 2021 catches were 36,436 t (Figure 1.1).

Fisheries and Oceans Canada does not include the J-cut and tail off product in its product list for Greenland halibut, however, the majority of the catch in this fishery (~90%) is processed as this product. An interim conversion factor (CF) of 1.49 was therefore provided in at-sea observer manuals and used by vessel operators and observers since 2007. In 2021, the CF for J-cut, tail off product was lowered by Canadian authorities from 1.49 to 1.4. Based on a review of at-sea observer experiments conducted in Subarea 0 the appropriate value to estimate round weight from J-cut, tail off, dressed weight is 1.5, which is comparable with J-cut, tail off CF values used by other countries that fish in the SA0+1 stock area (SCR Doc. 22/023). The catch in SA 0 for 2021 was adjusted accordingly.

Recent catch and TACs ('000 t):

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TAC	27	30	30	30	32.3	32.3	36.4	36.4	36.4	36.4
STACFIS SA 0	13.4	14.9	15.4	14.1	15.9	16.0	18.3	17.9	19.1[2]	
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Total STACFIS[1]	26.9	29.6	30.3	29.3	32.1	32.2	36.3	36.0	36.4	

[1] Based on STATLANT, with information from Canada and Greenland authorities to exclude inshore catches.

[2] STACFIS estimate using 1.5 conversion factor for J-cut, tailed product; 1,129 t increase over reported catch.

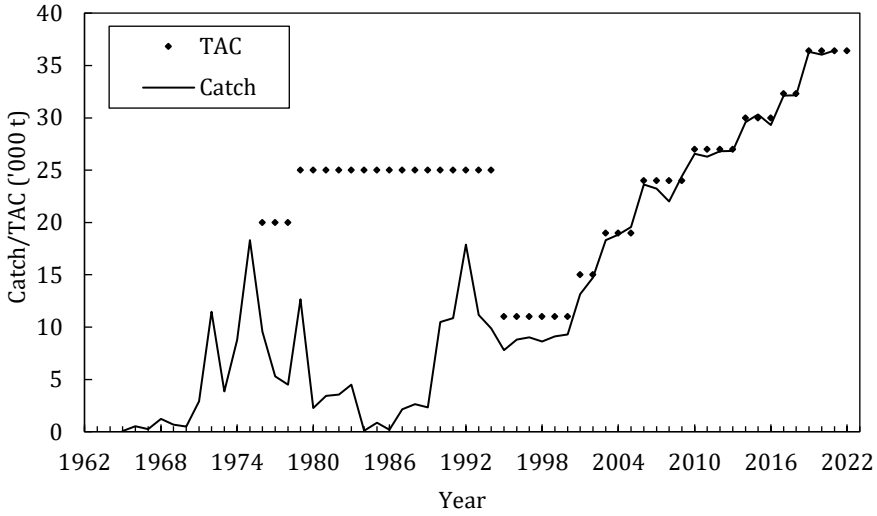

Figure 1.1. Greenland halibut in Subarea 0 and 1 (offshore): catches and TACs.

b) Data Overview

i) Commercial fishery

Length frequencies were available for 2021 from Greenland trawl fisheries in Div. 1AB, , Greenland, German, trawl fisheries in Div. 1CD, and from Canadian gillnet and trawl fisheries in Div. 0AB.

Length frequency data have been combined to produce an overview for the SA0+1 trawl fleets and the SA0 gillnet fleet. Modal length for the trawl fleets has varied from 49 to 51 cm and since 2014 the mode has remained above 50 cm. Modal length in the SA 0 gillnet fleet was approximately 61 cm prior to 2014 and since then has declined to about 56 cm observed in 2021.

ii) Research surveys

In the past, surveys were conducted by Russia and the Federal Republic of Germany in 0B (1987-1992) and by Greenland and Japan in 1BCD (1987-1995). Greenland and Canada began conducting surveys in 1997 and 1999, respectively (Figure 1.2).

Greenland Surveys (Div. 1CD)– Buffered stratified random bottom trawl surveys conducted during fall from 400 to 1500 m, from 1997-2017, and in 2019. Biomass in 1CD fluctuated with a slight positive trend through most of the time series (Figure 1.2). In 2017, biomass was similar to levels seen in 2015 and 2016. There were no surveys in years 2018, 2020 and 2021. The 2019 estimate is not comparable to previous values.

Canada Surveys (Div. 0A-South and occasionally in 0B and 0A-North**) –** Buffered stratified random bottom trawl surveys conducted during fall from 400 to 1500 m, in 1999, 2001, every second year between 2004 and 2014, annually to 2017 and in 2019. Biomass in Div. 0A-South varied with an increasing trend from 1999 to 2016 followed by a marked decline in 2017 (Figure 1.2). Biomass in Div. 0B in 2016 was similar to a previous high

observed in 2011. There were no surveys in years 2018, 2020, and 2021. The 2019 0A-South estimate is not comparable to previous values.

Combined 0A-South and 1CD Surveys - In 2014 STACFIS adopted a recommendation from the ICES Greenland halibut benchmark meeting (ICES 2013) to create a combined survey index with which to monitor the overall Subarea 0+1 (offshore) stock. The surveys are conducted with the same vessel and gear during the fall which allowed for simple addition of the survey estimates to create the index. The biomass index had remained stable at a relatively high level during 1999-2012 and therefore, based on Precautionary Approach Framework guidance from NAFO SC for stocks assessed using an index (SCS Doc. 04/12), the average over this period was accepted as a proxy for $B_{MSY,}$ and B_{lim} was set as 30% of the proxy $B_{MSY.}$ The index increased between 2014 and 2016 and while it declined in 2017 it remained well above B_{lim} (Figure 1.3). Abundance followed a similar trend. The decline observed in 2017 was a result of a decline in 0A-South. The 2019 value is similar in magnitude to previous surveys, however, it is not considered directly comparable for use in provision of advice.

The length distribution for 0A-South and 1CD surveys combined ranged from about 5 cm to 100 cm. Modal lengths have shifted from 42-43 cm at the beginning of the time series to a high of 51 cm in 2015. Secondary modes were clearly present in 2008 and 2012-2017.

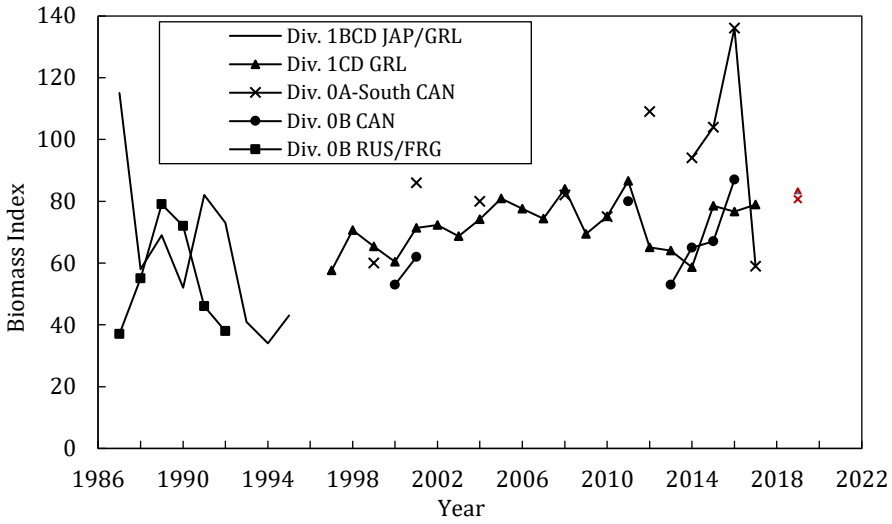

Figure 1.2 Greenland halibut in Subarea 0 and 1 (offshore): biomass indices from bottom trawl surveys. A survey in Div. 0A in 2006 is not included due to poor coverage.

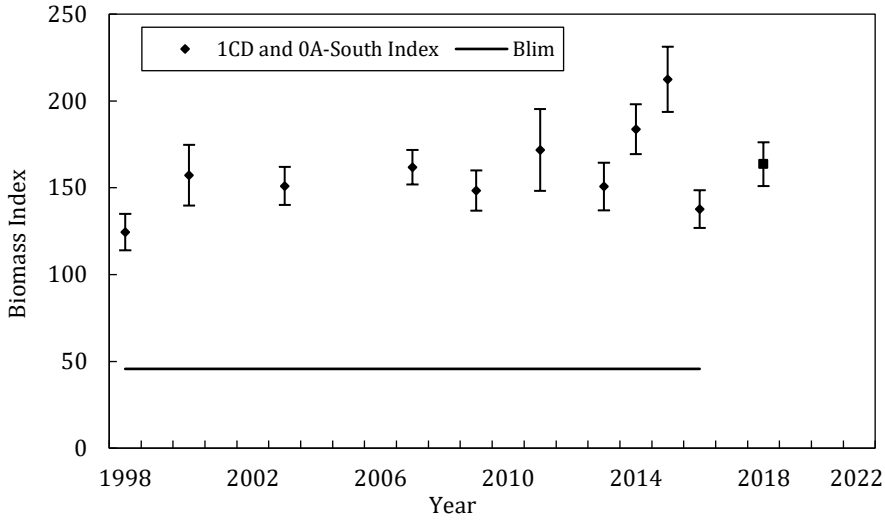

Figure 1.3 Greenland halibut in Subarea 0 and 1 (offshore): Biomass trends in Div. 0A-South + Div. 1CD survey and the proxy for B_{lim}.

Age-1 Abundance Index - The Petersen-method is used to assign Greenland halibut caught during the West Greenland shrimp survey to age 1, 2 and 3+ using length data. The survey takes place on the Greenland shelf in Div. 1A-F at depths 50 m to 600 m for fish sampling (SCR Doc. 21/014). The number of 1 year old fish in the survey area, including Disko Bay (also area within Division 0A when available), is used as an age-1 index. The index was generally increasing from 1988 to 2003, followed by a declining trend to 2010, and since then the index has been variable with series high values observed in 2011, 2013 and 2017 (Figure 1.4). Abundance in 2020 is near the series average. A change in survey vessel occurred in 2018, but gear performance analyses concluded the surveys were comparable (SCR 20/15).

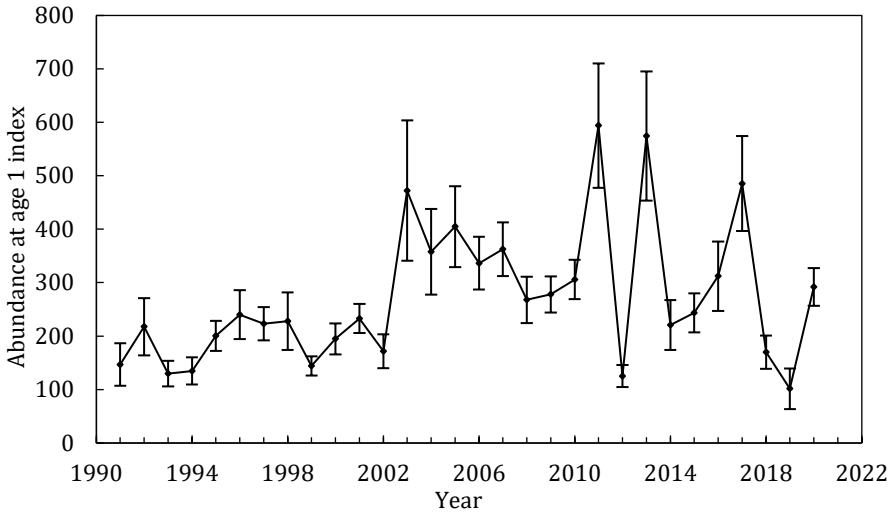

Figure 1.4 Greenland halibut in Subarea 0 and 1 (offshore): index at age 1 derived from the Greenland Shrimp and Fish Survey.

c) Assessment Results

There is no accepted analytical model. Several attempts to model the stock dynamics have been tried over the years using methods such as Yield per Recruit Analysis, XSA, ASPIC and Schaefer surplus production model.

i) Subarea 0 and 1 (offshore)

Biomass: The RV Pâmiut 0A-South+Div. 1CD combined survey biomass index, 1999 – 2017 had been relatively stable from 1999 to 2014 then more variable with a time series high in 2016 and a level near the series low in 2017, all values were above B_{lim}.

Recruitment: Recruitment is uncertain.

Fishing mortality: Fishing mortality is uncertain.

State of the Stock: The 0A-South and 1CD biomass index was above B_{lim} throughout the time series, 1999 to 2017. The 2019 value is similar in magnitude to previous surveys, however, it is not considered directly comparable. Despite a lack of index survey data in recent years the stock status is not expected to have changed drastically during 2018 to present.

d) Reference Points

B_{MSY} is not known for this stock. In 2015 a proxy for B_{lim} was developed based on 30% of a period of stability in the 0A-South and 1CD index (1999-2012). However, no surveys were conducted in 2018, 2020 or 2021 and the 2019 survey was not considered comparable to previous surveys. The previous B_{lim} was valid to 2017, but needs to be re-evaluated once a new time series is established.

The next full assessment of this stock is expected to be in 2024.

e) Recommendations:

In 2018 STACFIS **recommended** that *the CPUE data be explored and the General Linear Model examined to better understand the observed trends.*

In 2020 STACFIS **recommended** that *the overall 1A-F survey biomass be explored as an index of stock status instead of only the age 1 portion of this survey.*

STATUS: No progress has been made on these recommendations in 2022. However, effort is underway to explore spatial and length based models using all available survey indices as well as fishery catch and length frequencies, to identify the potential for their use in future assessments of this stock.

References

ICES 2013. Report of the benchmark on Greenland halibut stocks (WKBUT). ICES CM 2013/ACOM:44. 74pp.

Roy, D., D. C. Hardie, M. A. Treble, J. D. Reist and D. E. Ruzzante. 2014. Evidence of high gene flow in a locally adapted species: the paradox of Greenland Halibut (Reinhardtius hippoglossoides) panmixia in the Northwest Atlantic. Canadian Journal of Fisheries and Aquatic Science 71: 763-774.

2. Greenland Halibut (*Reinhardtius hippoglossoides*) in Subarea 1 inshore

(SCR Doc. 18/023, 22/008, 009, 010, 024, 029, 031, 035, 036, 037, 038; SCS Doc. 22/11) Full assessment.

a) Introduction

The fishery targeting Greenland halibut developed in the Disko Bay and south Greenland in the beginning of the twentieth century. The fishery is conducted with longlines or gillnets from small vessels, open boats and through holes in the sea ice during the winter months. The fishery gradually spread from the Disko Bay to Uummannaq and Upernavik, but the catches remained low until the 1980s.

Quota regulations were introduced in 2008 as a shared quota for all vessels . In 2012, the TAC was split in two components with ITQ's for vessels and shared quota for small open boats. In 2014, the Government of Greenland set "quota free" areas within each subarea, and in these areas, catches were not drawn from the total quota, although still included in landing statistics. In 2022 the quota free areas were abolished.

To protect juvenile fish in the area, sorting grids have been mandatory since 2002 in the offshore shrimp fishery at West Greenland and since 2011 in the inshore shrimp fishery in the Disko Bay. Trawl fishery is not allowed

August 30, 2022

Board Members
Nunavut Wildlife Management Board
PO Box 1379
Iqaluit, NU
X0A 0H0

Dear the Nunavut Wildlife Management Board Members:

Re: NAFO Scientific Council's advice regarding SA0 +1 Greenland Halibut TAC for 2023-2024

The recent advice provided to the Department of Fisheries and Oceans Canada (DFO) from the Northwest Atlantic Fisheries Organization (NAFO) Scientific Council (SC) for Greenland Halibut (turbot) in Subareas 0+1 for the 2023-2024 fishing seasons is incredibly concerning and has prompted this joint response from the Nunavut Fisheries Association (NFA), the Government of Nunavut (GN), and Industry to communicate the concern and disagreement.

All parties strongly disagree with the recommendation from NAFO SC on the potential decrease in Total Allowable Catch (TAC) from 36,370 t to 29,640 t for SA 0+1 turbot and, therefore, a reduction in Division 0A + 0B TAC. We present the following rationale for why the TAC should remain the same in Divisions 0A + 0B:

1) There is no scientific justification to warrant a reduction; the current TAC was established from the previous long-term stock assessment data.
2) A reduction in TAC would have an adverse effect on Nunavummiut.
3) The NAFO Precautionary Approach (PA) was not completely adhered to when formulating the advice.

There is no scientific justification to warrant a reduction; the current TAC was established from the previous long-term stock assessment data:

NAFO SC's 2022 report and recommendation for a reduction are not supported by sound scientific rationale and evidence. The rationale given by the SC for a reduction is that the "*main index for this stock has not been updated since 2017, consequently stock status is increasingly uncertain*". However, there is just as much evidence to say that the stock continues to be stable.

The evidence presented in the SC report shows stock stability and minimal harvesting impacts at the current TAC, as illustrated by the following direct points taken from the 2022 report.

1. *The stock likely remains healthy and well above B_{LIM};*
    - All survey index values have remained above the NAFO B_{LIM} for the entire time series, including 2013-2017, where it had a time series high (2016) and near low (2017) (Figure 1). Even the low value in 2017 was within the range of survey index values (1999-2012) considered by NAFO to be a proxy for B_{MSY}. This means that the stock was considered healthy even at this low value.
    - A survey with a commercial vessel was completed in 2019. While not considered directly comparable to the existing time series, it does not mean the data from 2019 does not accurately represent the stock. We want to point out that the 2019 value was in the same range as previous surveys and higher than 2017. It is within the range of the values of the years used as a proxy of B_{MSY}, providing some confidence that current harvest levels are sustainable and the stock is healthy.
    - The 2023-2024 NAFO Advice even states: "*Despite a lack of index survey data in recent years the stock status is not expected to have changed drastically during 2018 to present*" [Emphasis added]. For a stock status that has not expected to have drastically changed, and for which there is no evidence that it has changed at all, it is concerning that there is a recommended drastic reduction in the overall TAC.

2. *With similar information available in 2020, the NAFO SC advised there was low risk of being below B_{LIM} if the TAC remained at 36,370 mt;*

    - The only new information used in the 2022 assessment was fishery length frequencies to 2021, and an index of age-1 fish to 2020.
    - The NAFO SC notes in the advice (SCS Doc. 22/18, P. 74) that both were stable.
    - There was less data used within the 2020 report, and the recommendation was that there was low risk to the stock if the TAC remained at 36,370 mt.

3. *Additionally, some Greenland inshore research shows stable trends in recent years, evidence of stock stability;*

    "In assessing stock status, SC considered the observed stability in length frequencies from surveys and the fishery, the age-1 index, that TACs have been consistently achieved, longevity of the species, and that status in 2017 was well above B_{lim}." (SCS Doc. 22/18, P. 74)

    - Specifically, NAFO states that from the Greenland inshore surveys, abundance in 2020 is near the series average and that the change in survey vessel occurred in 2018, but gear performance analyses concluded the surveys were comparable (SCR 20/15 P. 118).
    - The NAFO SC noted it observed stability in length frequencies from surveys and the fishery, and the age-1 index of abundance. In 2020, the age-1 abundance index was near the series average and was at high levels in 2017. While it is unclear if this index is representative of recruitment, the SC has noted in the past it contributes to perception of stock status.

Given the information presented above from the NAFO SC within this report and previous reports, the current TAC of 36, 370 t for SA 0+1 falls within a low risk of the stock falling below B_{lim}. From fisheries stock assessment literature, this indicates stock stability which does not warrant or support any recommendation for TAC decreases.

4. *The present TAC was determined sustainable from long-term stock assessment data*

The present TAC of 36,370 t for SA 0+1 was determined to be of low-risk harm to the stock (well above the B_{lim} proxy) by NAFO from the previous long-standing time series analysis (2018 and 2020 stock assessment reports). In 2018, the NWMB made the recommendation to support the increases proposed by the NAFO SC, which has resulted in the current TAC. DFO accepted this recommendation and supported the conservative and cautious approach to increase incrementally over the years.

We have confidence in the previous science advice based on the long-term time series, and present TAC levels are of low risk of harm to the stock. There has been no evidence or argument brought forward to show that the past advice was wrong or needing adjustment. In contrast, the data that is available since 2018 shows stock stability.

5. *There is ongoing scientific work to combine the existing survey index time series with future surveys anticipated to be ready for the 2024 stock assessment (SCR Doc.22/022, Appendix 4).*

There are scientific analyses ongoing in Canada to provide science advice on methods to mitigate the impact of a change in Research Vessel on the assessment. Indications are that progresses has been made to combine the existing survey index time series with a new time series beginning in 2022. These methods are anticipated to be available for 2024 stock assessment and allow for the use the new survey data. It is possible this may allow for continued use of the survey index-based HCR already established for this stock. At minimum, in 2024 the assessment will be quantitative and informed by new data.

The available information in 2022 indicates to the NAFO SC that the stock status is not expected to have changed drastically from 2018 to present, therefore maintaining a stable overall TAC until a more quantitative assessment can be undertaken does not seem unreasonable.

With the lack of time series data collection in recent years by Canada and Greenland we must rely on the data we know to be accurate and sound; this is the scientific approach. We strongly encourage the NWMB and DFO to only consider TAC recommendations that are supported by scientific evidence and data.

Reduction in TAC would have an adverse effect on Inuit in Nunavut

The *Fisheries Act* Section 2.4 states that the "Minister shall consider any adverse effects that the decision may have on the rights of the Indigenous peoples of Canada recognized and affirmed by section 35 of the *Constitution Act, 1982.*" A reduction in TAC would have an adverse effect on Inuit.

Fisheries and Oceans Canada and the Canadian Coast Guard have stated that they have a "key role in the transformation of Canada's relationship with Indigenous peoples". The reduction in TAC put forward by NAFO SC is forecasted to cause an annual loss of $20,00,000 to Inuit-owned businesses in Nunavut.

Given the science's rule that a minimum of five years of new survey data is necessary to decide on TAC, this reduction would result in a loss of upwards of $100,000,000 to Nunavut over the next five years. This reduction in TAC would result in a direct loss of jobs, social development, and community-level benefits. In a territory where economic opportunities are limited and investments into our sustainable resource development are in their infancy, a recommendation to reduce the TAC without any scientific justification unjustly penalizes Inuit. A robust assessment of a long-term data set on the stock was used to determine current TAC, and SC deemed it to be low-risk.

The NAFO Precautionary Approach (PA) was not completely adhered to when formulating the advice:

Canada requested the NAFO SC follow the PA. According to the NAFO PA, in the absence of the probability that current or projected biomass is below B_{LIM}, stocks should also have a B_{BUF} (FC Doc. 04/18, P. 3).[1] According to the NAFO PA:

> "*B_{BUF} should be specified by managers and should satisfy the requirement that there is a very low probability that any biomass estimated to be above B_{BUF} will actually be below B_{LIM}. The more uncertain the stock assessment, the greater the buffer zone should be. In all cases, a buffer is required to signify the need for more restrictive measures.*" [emphasis added].

The NAFO SC should have requested management (i.e., Canada and Greenland) establish a B_{BUF} to enable adherence to the NAFO PA in the provision of the advice. Without a B_{BUF} more restrictive measures (i.e., substantial TAC reduction) are being applied without knowledge of where the stock aligned relative to the B_{BUF} during the last viable survey year or during the reference period (2013-2017) chosen for the 2023 to 2024 advice. Without an established B_{BUF} the proposed reductions are out of place as a recommendation and can be seen solely as punitive.

Conclusion

Individually and collaboratively, our organizations aim to live by the Inuit Societal Values:

- Piliriqatigiinniq (working together for a common cause),
- Inuuqatigiitsiarniq (respect for relationships and caring for one and another) and;
- Avatittinnik Kamatsiarniq (respect and care for the land, animals and environment).

As stakeholders and rights-holders in this fishery, we advocate strongly that this recommendation by the NAFO SC to reduce the TAC of turbot in Division 0A + 0B is not justified by the evidence presented and will cause undue harm to Inuit and Nunavummiut. Additionally, we want to state that if the recommendation from NAFO SC is accepted, the quota reduction suggested would represent the lowest TAC in Subarea 0 since 2013, or the lowest TAC in 10 years, despite the fact that there is no evidence of decline in the health of the stock.

We have advocated for years that the multispecies research needed to be resumed, with potential solutions offered by industry to support these efforts. Unfortunately, none of the options offered were realized. Additionally, there was assurance from DFO Science in 2019 that despite the lack of continued research, there was confidence in the past assessments and that the TAC would remain consistent. DFO

[1] https://www.nafo.int/Portals/0/PDFs/fc/2004/fcdoc04-18.pdf

Science further stated that there should be no expectation of increased TAC until a new time series was established.

In answer to your questions:

1. Given the advice from NAFO SC, what should be the TAC for NAFO Subarea 0?

The TAC for Greenland Halibut in NAFO Subarea 0 should remain at 18,185 t. As discussed above, there is no scientific evidence warranting a decrease, and a dramatic cut in quota is out of place under the precautionary framework.

2. Distribution of TAC between NAFO divisions 0A and 0B?

Distribution of TAC between NAFO divisions 0A and 0B should remain the same at 9,592.5 t in Division 0A, and 8,592.5 t in Division 0B.

3. Nunavut's share in 0A and 0B and why?

Nunavut's share of Division 0A turbot is 100%, and its direct share of 0B is approximately 50%, or 4,283.25 t, plus participation with licenses in the 900t competitive fishery. Nunavut's overall direct share of 0A-0B combined is 76.2%. For the last several allocation cycles, in keeping with Land Claim agreements, DFO has provided Nunavut with 100% of any 0A quota increases and 90% of any 0B quota increases (with the remaining 10% going to Nunavik).

Based on the above recommendations to maintain the overall TAC at current levels, the current sharing arrangements would be maintained. However, Nunavut interests continue to consider the territory's share of the 0B quota to be inequitable and not in line with adjacency and Indigenous reconciliation considerations.

We appreciate that the NWMB Board Members will meaningfully and fairly consider all the points we brought forward when considering your recommendation. We wish you luck in your deliberation and trust you have all the information you need.

Sincerely,

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David Akeeagok, Minister of Economic Development and Transportation, Government of Nunavut

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Chair of Arctic Fishery Alliance

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Chair of Baffin Fisheries

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Chair of Cumberland Sound Fisheries Limited

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Chair of Qikiqtaaluk Corporation

Cc:

Nunavut Tunngavik Incorporated - Aluki Kotierk
Qikiqtani Inuit Association – Olayuk Akesuk
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Minister of Fisheries and Oceans Canada – Government of Canada - Minister Murray
Fisheries and Oceans Canada, RDG Arctic Region – Government of Canada – Gabriel Nirlungnayuq
Minister of Crown Indigenous Relations and Northern Affairs Canada – Government of Canada– Minister Miller
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Ministery of Fisheries, Hunting and Agriculture - Government of Greenland

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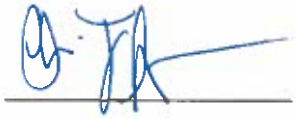
Chair of Arctic Fishery Alliance



CEO of Baffin Fisheries

Chair of Cumberland Sound Fisheries Limited

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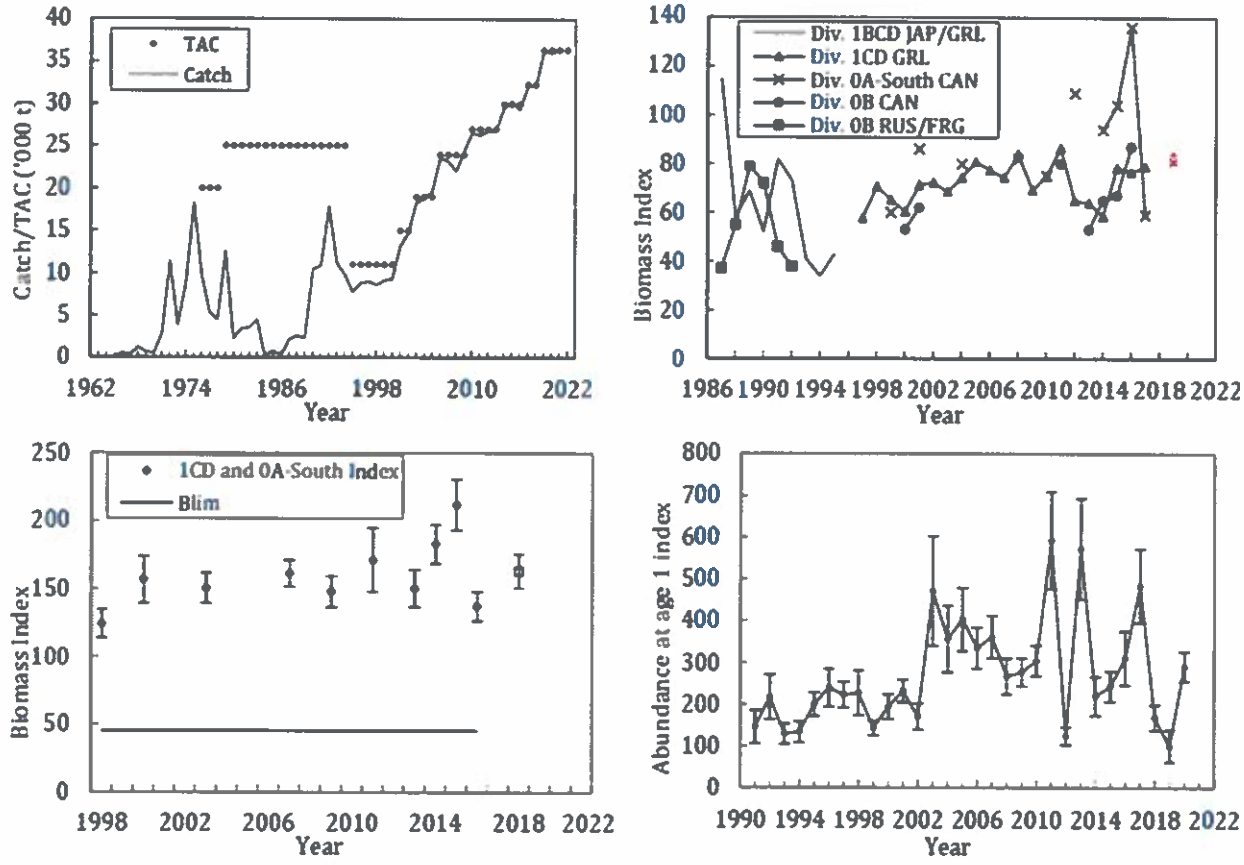
Minister of Fishery, Forest and Agriculture - Government of Newfoundland, Minister Bragg
Ministery of Fisheries, Hunting and Agriculture - Government of Greenland

Annex 1:

Figure 1. Greenland halibut in NAFO Subarea 0+1 (offshore) catches and TAC (top left panel), survey biomass indices (top right panel), combined survey biomass index and B_{lim} (bottom left panel) and abundance at age 1 index (bottom right panel). Modified from figure included in NAFO SCS Doc. 22/18 (page 75).



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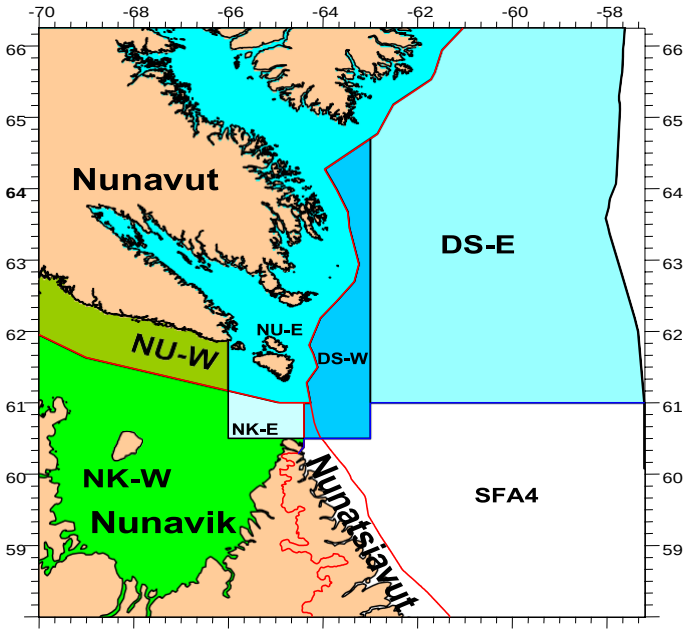

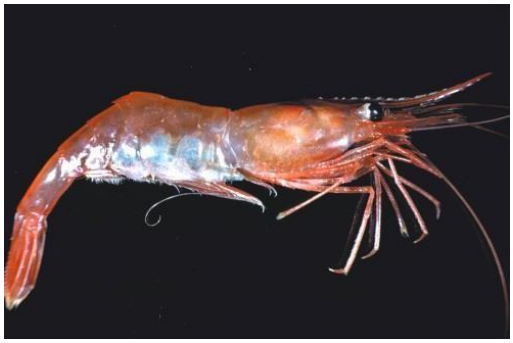

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ᖃᓄᐃᓕᐅᕐᓂᐅᓯᒪᔪᑦ

ᒪᕐᐹᒃ ᑭᖑᐸᐸᐃᑦ ᐊᔾᔨᒋᙱᑦᑑᒃ *(P. borealis* ᐊᒻᒪ *P. montagui*) ᐱᑕᖃᐅᖅᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᑭᖑᐸᕋᓱᐊᕐᓂᐅᔪᓂᒃ ᑕᐅᕙᓂ ᕿᑭᖅᑖᓅᑉ ᐃᑭᕋᓴᖕᒐᓂ ᐊᒻᒪ ᑲᓇᓐᓇᖕᒐᓂ ᓱᓪᓗᐊᓗᒻᒥᑦ. ᑖᓐᓇ ᐃᖃᓗᒐᓱᐊᕐᓂᐅᔪᖅ ᐊᐅᓚᑕᐅᔪᖅ ᒪᓕᑦᓯᑎᒃ ᒪᕐᐹᓐᓂᒃ ᐃᖃᓗᒐᙳᓂᒃ ᖃᐅᔨᓴᕐᓂᐅᔪᓂᒃ ᐃᓂᐅᔪᓂᒃ, ᐱᖓᓐᓇᖕᒐᓂ ᖃᐅᔨᓴᕐᕕᐅᔫᑉ ᐃᓂᖕᒐᓂ (WAZ) ᐊᒻᒪ ᑲᓇᓐᓇᖕᒐᓂ ᖃᐅᔨᓇᓱᐊᖅᓯᕕᐅᔪᑉ ᐃᓂᖕᒐᓂ (EAZ) (ᐅᐃᑐᖕᒐ 1).

ᓴᓂᕝᕙᑦᑕᐅᕙᓪᓕᐊᔪᑦ ᐱᔭᐅᑎᑕᖅᑲᑦᑕᑦᑎᓪᓗᒋᑦ ᐊᕐᕌᒍᑕᒪᑦ ᑮᓇᐅᔭᓕᐅᕋᓱᐊᓪᓗᑎᒃ ᐃᖃᓗᒐᓱᐊᖅᑎᓄᑦ, ᓇᓪᓕᑆᑎᓂᖅ ᐃᑳᖅᑎᑦᑎᖕᒐᕐᓂᖅ ᐱᔭᐅᒍᓇᖅᑎᑕᐅᔪᓂᒃ ᐃᓯᒪᒋᔭᐅᒻᒪᑦ ᐊᑑᑎᖅᑲᑦᑎᐊᖅᑐᙵᔭᐅᓪᓗᓂ ᐊᐅᓚᓂᕐᒧᑦ ᖃᓄᐃᓐᓀᕈᓐᓇᑎᑦᑎᓂᖕᒐᓄᑦ ᑕᒪᓂ ᐱᖓᓐᓇᖕᒐᓂ ᖃᐅᔨᓴᕐᕕᐅᔫᑉ ᐃᓂᖕᒐᓂ (WAZ) ᐊᒻᒪᓗ ᑲᓇᓐᓇᖕᒐᓂ ᖃᐅᔨᓇᓱᐊᖅᓯᕕᐅᔪᑉ ᐃᓂᖕᒐᓂ (EAZ) ᑭᖑᐸᓚᓱᐊᓂᒻᒧᑦ ᐃᖃᓗᒐᓱᐊᓂᒻᒧᑦ ᐱᒍᓇᖅᑎᑕᐅᓗᑎᒃ ᐃᓚᒃᑲᓂᖕᒐᓂᒃ ᐱᓕᕆᐊᕕᐅᒍᓐᓇᖅᑐᓂᒃ ᐱᔭᐅᒐᔾᔪᓪᓗᑎᒃ ᓴᓂᕝᕙᑦᑕᐅᓯᒪᔪᓂᒃ ᐃᓘᓐᓇᓕᒫᖏᓂᒃ, ᐋᖅᑭᖃᑎᒋᒍᑎᖃᖏᒃᑲᓗᐊᕐᓗᑎᒃ ᓄᖑᑕᐅᕙᓕᐊᑎᖏᒐᓭᐅᓂᖏᓐᓂᒃ ᐱᕕᐅᖃᑦᑕᕈᓐᓇᖅᑐᓂᒃ.

ᑲᑐᑎᓗᒋᑦ, ᓇᓪᓕᑆᑎᓂᖅ ᐃᑳᖅᑎᑦᑎᓂᖅ ᑭᖑᐸᓚᓱᐊᓂᒻᒥᒃ ᐅᖃᐅᓯᖃᒻᒪᑦ 1) ᐊᑐᖅᑐᐊᖅᓛᓐᓂᖅ ᐊᕐᕇᒍᓂᐊᖅᑐᒥ ᐱᔭᐅᒍᓇᕋᔭᖅᑐᓂᒃ ᐃᖃᓗᒃᑕᐅᒍᓇᖅᑐᓂᒃ ᐃᖃᓗᑦᑕᐅᒍᓐᓇᓕᓪᓗᑎᒃ ᐊᑐᖅᑐᒥ ᐊᕐᕇᒍᒥ; ᐊᒻᒪᓗ 2) ᓅᑎᑦᑎᖕᓛᕐᓂᖅ ᐃᓚᖏᓐᓂᒃ ᒫᓐᓇ ᐊᕐᕇᒍᒥ ᐱᔭᐅᓚᐅᖏᑦᑐᓂ ᐱᔭᐅᒍᓐᓇᖅᑎᑕᐅᔪᓂ ᐃᖃᓗᑦᑕᐅᒍᓐᓇᖅᓯᓗᑎᒃ ᐊᑐᓂᐊᑐᐃᓐᓇᖅᑐᒥ ᐊᕐᕇᒍᒥ (ᓯᕗᓪᐊᒃᑎᑕᐅᓗᓂ). ᐅᑯᑎᒌᓇ ᒫᓐᓇ ᐃᑳᖅᓯᒪᓕᑦᑎᑕᐅᓂᖏᓐᓄᑦ ᒪᓕᒃᑕᐅᕐᑯᔭᐅᔪᑦ ᐅᑯᓇᓃᑦᑐᑦ ᑲᓇᓐᓇᖕᒐᓂ ᖃᐅᔨᓇᓱᐊᖅᓯᕕᐅᔪᑉ ᐃᓂᖕᒐᓂ (EAZ), ᑎᑭᐅᒪᔪᑦ 350 t-ᓄᑦ ᐱᒐᓴᐅᑎᑕᐅᒻᒪᑕ ᑲᔪᓯᑎᑕᐅᕐᑯᓪᓗᒋᑦ ᓯᕗᓪᐊᒃᑎᑕᐅᓗᑎᒃ ᐅᑯᓄᖕᒐ ᓄᓇᕗᒻᒧᑦ ᐊᒻᒪᓗ 20 t ᓄᓇᕕᒻᒧᑦ ᓴᓂᕝᕙᑕᐅᓗᑎᒃ, ᑭᖑᐸᒐᓱᐊᑦᑕᐅᒍᓐᓇᐅᓪᓗᒋᑦ ᐃᓗᐊᓂ ᓯᕗᓪᓕᑦ 120 ᐅᓪᓘᓂᐊᖅᑐᓂ (ᐊᐃᕆᓕ 1 – ᔪᓚᐃ 31 ᐊᑐᓂᐋᑐᐃᓐᓇᖅᑐᒥᒃ ᐊᕐᕇᒍᓂᐊᖅᑐᒥ) (ᐅᐃᑐᖕᒐ 2). ᐱᔭᐅᒍᓐᓇᖅᑎᑕᐅᔪᑦ ᐱᔭᐅᖏᒃᑲᓗᐊᖅᑎᓪᓗᒋᑦ ᑕᒪᑐᒪᓂ ᐅᓪᓗᓇᑎᑕᐅᔪᒥ ᐊᓯᐳᑦᑕᐅᔫᙱᑦᑐᑦ ᐃᖃᓗᑦᑕᐅᓯᒪᖏᓂᕋᒃᑕᐅᓗᑎᒃ.

ᐃᓯᓕᓕᖅᑎᓪᓗᒍ ᔫᓂ 2022, ᓴᓇᕙᕐᑯᑎ ᑐᓴᕋᓚᐅᒻᒪᑦ ᐱᓕᕆᕙᒻᒧᑦ ᑕᐃᒃᑯᐊ ᑲᔪᓯᑎᑕᐅᔪᑦ ᓯᕗᓪᐊᑦᑎᑕᐅᔪᑦ ᐱᔭᐅᑎᑕᐅᓂᖏᑦ ᐅᖓᕙᓇᐊᑦᑕᐅᕐᑯᓪᓗᒋᑦ ᑕᐅᕙᓂ ᕿᑭᖅᑖᓅᑉ ᐃᑭᕋᓴᖕᒐᑕ ᐱᖓᓇᖕᒐᑕ ᐃᓚᖕᒐᓂ ᑲᓇᓐᓇᖕᒐᓂ ᖃᐅᔨᓇᓱᐊᖅᓯᕕᐅᔪᑉ ᐃᓂᖕᒐᓂ (EAZ) ᑕᐃᒪᐃᑎᑕᐅᓗᓂ ᓯᑯᖃᓗᐊᓂᖕᒐᓄᑦ ᖃᓄᐃᓕᖕᒐᓂᖏᓐᓂ ᑭᖑᕙᖅᑎᑦᑎᓪᓗᓂ ᓴᓇᕙᕐᑯᑎᐅᑉ ᐱᓕᕆᒍᓐᓇᓂᖕᒐᓂᒃ ᐱᓕᕆᐊᖑᓗᓂ ᑭᖑᐸᓚᓱᐊᓐᓂᖅ. ᕿᑎᖕᒐᓂ–ᔪᓚᐃ, ᑐᓴᕌᖑᔪᖅ ᐅᖓᕙᓇᐊᖅᑕᐅᕐᑯᓪᓗᒍ ᓯᕗᓪᐊᒃᑎᑕᐅᓗᓂ ᐅᓪᓗᖕᒐ ᐋᖅᑭᑕᐅᓚᐅᒻᒥᔪᖅ ᕿᑭᖅᑖᓗᒻᒥ ᐃᖃᓗᒐᓱᐊᖅᑎᑦ ᐱᖃᓯᐅᑎᔭᐅᕐᑯᓪᓗᒋᒃ ᓇᔪᖕᓚᒃ ᓄᓇᕗᑦ–ᑲᓇᓐᓇᖕᒐᓂ (NU-E) ᐊᒻᒪᓗ ᓄᓇᕕᒃ ᑲᓇᓐᓇᖕᒐᓂ (NK-E) ᑕᐃᒪᐃᑎᑕᐅᓪᓗᓂ ᓱᕐᕋᖏᓐᓂᖕᒐᓄᑦ ᓯᑲᖃᓂᖕᒐᑕ ᖃᓄᐃᓕᖕᒐᓂᖕᒐ ᑖᒃᑯᓇᓂ ᓇᔪᒐᕐᓂ ᐃᓚᒋᔭᐅᓪᓗᑎᒃ.

ᖃᐅᔨᓇᓱᐊᕐᓃᑦ ᐃᓱᒪᔅᓴᖅᓯᐅᕈᑕᐅᓂᖏᑦ

P. borealis ᐱᕕᐅᒍᓇᖅᑐᑦ ᑕᒫᓂ ᑲᓇᓐᓇᖕᒐᓂ ᖃᐅᔨᓇᓱᐊᖅᓯᕕᐅᔪᑉ ᐃᓂᖕᒐᓂ (EAZ) ᖃᓄᐃᓂᖅᑲᖏᑦᑎᐊᒻᒪᑦ ᐊᕕᒃᑐᖅᓯᒪᐅᓂᖕᒐᓂ ᐱᓂᕐᓗᒃᑕᐃᓕᒪᓗᓂ ᐱᓕᕆᓂᕐᒧᑦ (PA) ᐋᖅᑭᔅᓱᖅᓯᒪᓂᖏ. ᑕᒪᓐᓇᐅᕙᓗᐊᖅᑎᓪᓗᒍ ᒫᓐᓇᕋᑖᖅ ᒥᒃᓴᐅᓴᒃᑕᐅᔪᓂᖏᑦ ᐃᖃᓗᒐᓱᐋᖅᑕᐅᒍᓇᖅᑐᑦ ᐊᒥᓲᓂᖏᑦ ᐊᒻᒪᓗ ᒪᓐᓂᖃᓕᓂᖏᑦ ᐱᔭᐅᒍᓐᓇᖅᑎᑕᐅᔪᑦ ᐊᒥᓲᓂᖏᑦ 2021–ᒥ ᑕᒫᓂ ᑲᓇᓐᓇᖕᒐᓂ ᖃᐅᔨᓇᓱᐊᖅᓯᕕᐅᔪᑉ ᐃᓂᖕᒐᓂ (EAZ) ᐱᔭᐅᒍᓇᖅᑎᑕᐅᔪᑦ, *P. borealis* ᖃᓄᐃᓂᖅᑲᖏᑦᑎᐊᒻᒪᑦ ᐊᕕᒃᑐᖅᓯᒪᐅᓂᖕᒐᓂ ᐱᓂᕐᓗᒃᑕᐃᓕᒪᓗᓂ ᐱᓕᕆᓂᕐᒧᑦ (PA) ᐋᖅᑭᔅᓱᖅᓯᒪᓂᖏ, ᐊᒻᒪᓗ ᐃᒪᓇᐃᓕᖓᔪᖅ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕᒥ (DFO) ᖃᔨᓇᓱᐊᓂᖅ ᑕᐅᑐᙵᖅᑲᖏᒻᒪᑦ ᐱᐅᓇᖏᑦᑐᒥᒃ ᐊᑐᓯᑲᓪᓚᒃᑲᔭᖅᑐᒥᒃ ᐅᖓᕙᓇᐊᖅᑕᐅᒍᓐᓇᕋᔭᓐᓂᖃᑦ ᑲᔪᓯᑎᑕᐅᓗᑎᒃ–ᓯᕗᓪᐊᒃᑎᑕᐅᔪᑦ ᐱᔭᐅᑎᑕᐅᖃᔭᓂᖏᑦ ᑕᐃᒫᒃ ᐱᔭᐅᒍᓐᓇᖅᑎᑕᐅᒻᒪᑕ ᐱᕕᓴᐃᑎᑕᐅᔪᓂᑦ.

ᓱᑯᖄᓂᖓ ᑕᐃᒪᐃᓕᖓᐃᓇᖅᑲᑦ ᑭᖑᕙᓯᓂᕐᐅᓗᓂ ᑕᐃᒫᖑᓱᖑᓂᖓᓄᑦ ᐊᐅᔾᒃᑯᑦ ᓇᓪᓕᕉᑎᓂᖓᓂ ᑕᒪᓂ ᑲᓇᓐᓇᖓᓂ ᖃᐅᔨᓇᓱᐊᖅᓯᕕᐅᔪᑉ ᐃᓂᖓᓂ (EAZ) ᑭᖑᕙᓯᓕᖅᑎᑦᑎᒐᔾᒪᑦ ᐱᕙᓪᓕᐊᓂᖏᓐᓂᒃ ᐃᓄᒃᑎᓪᓗᒋᑦ ᒪᓐᓂᖏᑦ ᑭᖑᐸᐃᑦ ᐊᒻᒪᓗ ᓄᑕᔾᔩᖅᑕᐅᑎᓪᓗᒋᑦ ᑕᒪᑐᒧᖓ 2022 ᓇᓪᓕᕉᑎᓂᖓᓄᑦ ᑎᑭᓐᓇᓱᐊᕐᓂᖓᓂ ᓱᑯᖃᓂᖓ ᓱᑯᖃᓗᐊᕈᓐᓅᓐᓂᖓᓄᑦ ᐊᒻᒪᓗ ᓱᑯᖃᕈᓐᓅᕋᔾᓪᓗᓂ ᑭᖑᕙᖅᑎᓪᓗᒍ ᐊᐅᔾᒥ.

ᐊᐃᐸᖓᓂ ᐱᓕᕆᐋᖅᓃᑦ

ᓱᑯᓕᕆᓯᒪᔪᖅ ᖃᐅᔨᒪᑎᑦᑎᔾᔪᑎ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᐊᒻᒪᓗ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓ ᑲᓇᑕᒥᑦ (ECCC) ᓇᓗᓇᐃᖅᓯᓯᒪᒻᒪᑕ ᓱᑯᖃᓂᖓ ᑲᔪᓯᓂᐊᓂᕋᑕᐅᓪᓗᓂ ᓱᕋᕌᓚᐅᖏᓪᓗᓂ ᑕᒪᓂ ᑲᓇᓐᓇᖓᓂ ᖃᐅᔨᓇᓱᐊᖅᓯᕕᐅᔪᑉ ᐃᓂᖓᓂ (EAZ) (ᐅᐃᒍᖓ 3). ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕᒥ (DFO) ᖃᐅᔨᓇᓱᐊᕐᓂᖅ ᓇᓗᓇᐃᖅᓯᓯᒪᓕᒪᒻᒪᑦ ᓄᖑᑕᐅᑎᑦᑎᑕᐃᓕᒪᓂᒧᑦ ᐃᓱᒫᓗᓇᑐᖅᑲᖏᓂᕋᑕᐅᓪᓗᓂ ᐅᖓᕙᓇᐊᑕᐅᒃᐸᑦ ᒪᓐᓇ ᐃᓱᓕᕕᓴᓇᓚᐅᑕᖓ, ᑕᒪᓐᓇᐅᓂᖓᓄᑦ ᓱᑯᖃᓗᐊᒻᒪᑦ ᐊᒻᒪᓗ ᐊᒃᑐᐃᓯᒪᓪᓗᓂ ᒪᓐᓂᖃᓕᓐᓂᖏᑦ ᐊᑐᖅᑎᓪᓗᒍ. ᑕᐃᒪᓐᓇ ᓱᑳ ᐱᓕᕆᑦᑎᐊᕈᓐᓇᐃᓕᒍᑕᐅᓚᐅᒻᒪᑦ ᐱᔾᔪᑲᓱᐊᑎᓪᓗᒋᑦ ᐅᑭᐅᖅᑕᖅᑐᒻᒥ ᑭᖑᐸᐃᑦ ᑭᖑᐸᐸᓱᐊᓂᒻᒥᒃ ᑕᐅᕙᓂ ᑲᓇᓐᓇᖓᓂ ᖃᐅᔨᓇᓱᐊᖅᓯᕕᐅᔪᑉ ᐃᓂᖓᓂ (EAZ), ᐊᒻᒪᓗ ᑭᖑᓂᖓᒍᑦ ᐅᖃᖃᑎᒋᔭᐅᓚᖅᑎᓪᓗᒋᑦ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔩᔭᐊᒃᑯᑦ ᑲᑎᒪᔩᖏᑕ ᐃᖃᓇᐃᔮᖅᑎᖏᑦ ᑕᒪᓇᐅᑎᓪᓗᒍ ᐊᔪᕐᓇᓚᐅᓂᖓ ᐅᖃᓚᐅᑎᒋᒋᐋᖏᑕ ᑲᑎᒪᔩᓄᑦ ᓯᕗᓂᖓᒍᑦ ᐃᓱᒪᓕᐅᕈᑕᐅᓂᐋᖅᑎᓪᓗᒋᑦ, ᐱᓕᕆᕕᒃ ᐃᓱᒪᓕᐅᓚᐅᒪᑦ ᐅᖓᕙᓇᐊᖅᓯᒍᒪᓪᓗᓂ ᐃᓱᓕᕝᕕᓴᖓᓂᒃ ᑭᖑᐸᒐᓱᐊᓂᐅᑉ ᑭᖑᐸᒐᓱᕕᐅᓂᖓ ᓯᕗᓗᐊᒃᑎᑕᐅᓗᓂ ᐊᒥᓲᓂᕆᒍᓇᖅᑕᖏᑦ ᐃᓅᓇᓕᒫᖏᓐᓂ ᑭᖑᐸᒐᓱᐊᕕᐅᔪᒥ ᑕᐅᕙᓂ ᑲᓇᓐᓇᖓᓂ ᖃᐅᔨᓇᓱᐊᖅᓯᕕᐅᔪᑉ ᐃᓂᖓᓂ (EAZ), ᐃᓚᒋᔭᐅᓗᓂ ᓄᓇᕗᑦ ᑲᓇᓐᓇᖓ, ᑕᐅᕙᙵᑦ ᔪᓚᐃ 31–ᒥᒃ ᑎᑭᓪᓗᒍ ᐋᒌᓯ 31, 2022. ᑖᓐᓇ ᐱᓕᕆᐊᓐᓂᖅ ᒪᓕᓯᒪᒻᒪᑦ ᐱᓕᕆᐊᓂᐅᓚᐅᖅᑐᓂᒃ ᐊᓱᐊᓂᓪᓗᑎᒃ ᐊᑲᐅᙱᓕᐅᕈᑎᖃᒃᑎᓪᓗᒋᑦ ᑕᐅᕙᓂ ᓱᑰᑉ ᖃᓄᐃᓕᖓᓂᖓᓂᒃ ᐱᓕᕆᒍᓇᐃᓕᒍᑕᐅᓪᓗᓂ ᑕᐃᒫᖑᓱᖑᓂᖓᓂᒃ, ᓇᒻᒪᕈᓇᑎᓪᓗᒋᑦ ᐃᖃᓗᖓᓱᐊᓂᕐᒧᑦ ᐱᓕᕆᓂᐅᔪᓂᒃ.

ᑎᑎᕋᖅᑐᖅ: ᐃᖃᓗᓕᕆᓂᕐᒧᑦ ᐊᐅᓚᔨᓯᓂᕐᒥᑦ, ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕᒥ

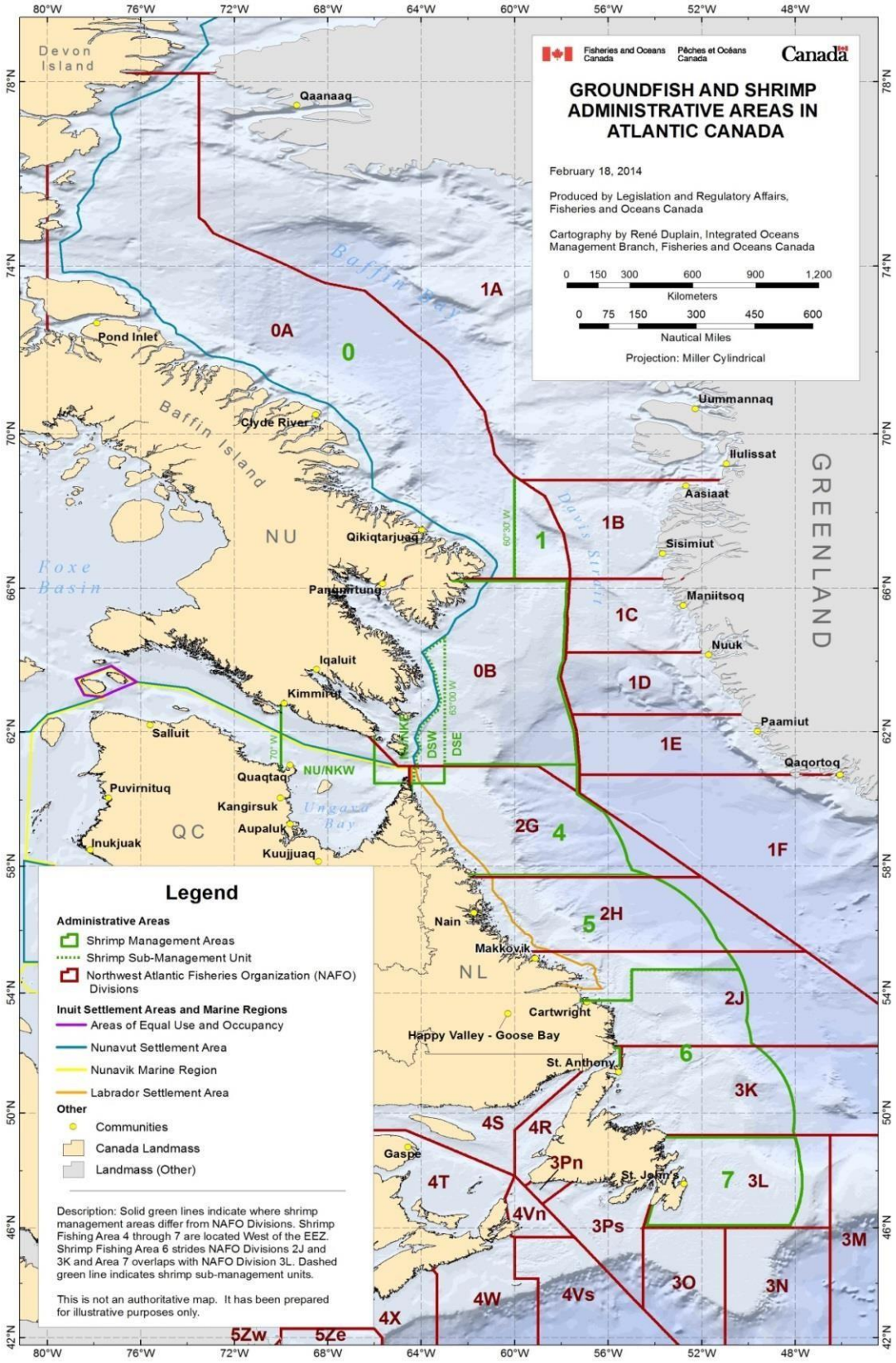
ᐅᓪᓗᖓ: ᐋᒌᓯ 4, 2022

ᐃᓚᒍᑕᖏᑦ

ᐅᐃᒍᖓ 1 – ᓄᓇᖑᐊᖅ ᐃᖅᑲᖓᓂ ᐃᑲᓗᓐᓂᑦ ᐊᒻᒪ ᑭᖑᐸᐸᓂᑦ ᐊᐅᓚᕝᓯᓂᕐᒧᑦ ᐃᓂᒋᔭᐅᔪᑦ ᐊᑦᓛᓐᑎᒃ ᑲᓇᑕᒥ

ᐅᐃᒍᖓ 2 – ᓇᓕᕿᑎᓂᒥᒃ ᐊᑐᖅᑕᐅᒍᓐᓇᖅᓯᑎᑦᑎᔪᑦ ᒪᓕᑦᑕᐅᕐᑯᔭᐅᔪᓂᒃ ᐅᑯᓄᖓ ᓄᓇᕗᒻᒧᑦ ᐊᒻᒪᓗ ᓄᓇᕕᒻᒧᑦ ᓴᓂᕙᑦᑕᐅᓂᖏᓐᓄᑦ ᐅᑯᓇᓂ ᐱᖓᓐᓇᖓᓂ ᖃᐅᔾᓴᕝᕕᐅᔫᑉ ᐃᓂᖓᓂ (WAZ) ᐊᒻᒪᓗ ᑲᓐᓇᖓᓂ ᖃᐅᔾᔨᓇᓱᐊᖅᓯᕕᐅᔪᑉ ᐃᓂᖓᓂ (EAZ)

ᓇᓂᑦᑎᓯᖓ 3 – ᓄᓇᖑᐊᖅ ᑕᑯᓴᐅᑎᑦᑎᔪᖅ ᓯᑰᑉ ᖃᓄᐃᓕᖓᓕᓂᖓᓂᒃ ᐃᓯᓕᓕᖅᑎᓪᓗᒍ ᔫᓂ 2022, ᐱᒋᐊᓕᕋᑖᓂᖓᓂ ᔪᓚᐃ 2022


Fisheries and Oceans Canada
Pêches et Océans Canada
Canada
GROUNDFISH AND SHRIMP ADMINISTRATIVE AREAS IN ATLANTIC CANADA
February 18, 2014
Produced by Legislation and Regulatory Affairs, Fisheries and Oceans Canada
Cartography by René Duplain, Integrated Oceans Management Branch, Fisheries and Oceans Canada
0 150 300 600 900 1,200
Kilometers
0 75 150 300 450 600
Nautical Miles
Projection: Miller Cylindrical
Legend
Administrative Areas
Shrimp Management Areas
Shrimp Sub-Management Unit
Northwest Atlantic Fisheries Organization (NAFO) Divisions
Inuit Settlement Areas and Marine Regions
Areas of Equal Use and Occupancy
Nunavut Settlement Area
Nunavik Marine Region
Labrador Settlement Area
Other
Communities
Canada Landmass
Landmass (Other)
Description: Solid green lines indicate where shrimp management areas differ from NAFO Divisions. Shrimp Fishing Area 4 through 7 are located West of the EEZ. Shrimp Fishing Area 6 strides NAFO Divisions 2J and 3K and Area 7 overlaps with NAFO Division 3L. Dashed green line indicates shrimp sub-management units.
This is not an authoritative map. It has been prepared for illustrative purposes only.
Devon Island
Qaanaaq
Baffin Bay
Pond Inlet
Baffin Island
Clyde River
Foxe Basin
Qikiqtarjuaq
Pangnirtung
Iqaluit
Kimmirut
Salluit
Puvirnituq
Quaqtaq
Kangirsuk
Aupaluk
Inukjuak
Kuujjuaq
Ungava Bay
NU
QC
NL
Nain
Makkovik
Cartwright
Happy Valley - Goose Bay
St. Anthony
Gaspe
St. John's
Uummannaq
Ilulissat
Aasiaat
Sisimiut
Maniitsoq
Nuuk
Paamiut
Qaqortoq
GREENLAND
Davis Strait
NU/NKW
DSW
DSE
60°30' W
63°00' W
70° W
0A
0
1A
1
1B
1C
1D
1E
1F
0B
2G
4
2H
5
2J
6
3K
4S
4R
3Pn
4T
4Vn
3Ps
7
3L
3M
3O
3N
4W
4Vs
4X
5Zw
5Ze
80°W
76°W
72°W
68°W
64°W
60°W
56°W
52°W
48°W
78°N
74°N
70°N
66°N
62°N
58°N
54°N
50°N
46°N
42°N

ᐅᖅᓯᒪᓕᐊᓕᓂᕐᒧᑦ ᐊᑐᐱᕆᓪᓗᑦ NU ᐊᓚ NK ᑐᵒᓂᖅᕆᑦ ᐃᓗᐊᓄᑦ WAZ ᐊᓚᓗ EAZ

ᐅᖅᓯᒪᓕᐊᓕᓂᖅ

WAZ (*P. montagui)*
ᐱᓪᓕᖏᕐᓄᑦ ᓴᖅᑭᒍᑎᒃ 800t ᐊᑐᐃᓐᓇᐅᓂᐊᖅᑐᑦ ᐃᓗᐊᓂ WAZ ᐅᖅᓯᒪᓕᐊᓕᓂᕐᒧᑦ ᑕᒃᑯᓄᖅ ᓄᓇᕗᑦ ᐊᓚᒪ ᓄᓇᕘᒃ ᑐᓂᓗᖅᓯᑦ ᑎᒍᒥᐊᖅᑎᕐᓄᑦ ᐊᖏᕐᒧᒍᒪᒻᒪᖅ; ᑐᓂᖅᐅᓯᑦ ᐊᒥᓯᓂᕐᑎᓄᑦ ᒪᓪᓂᐊᖅᑐᑦ ᑐᓂᖅᐅᖏᓐᓄᑦᑕᓯᒡᒎᓂᕐᑎᓄᑦ ᐊᖅᑭᖅᐅᓯᒪᓂᕐᑎᑦ ᑲᑎᒪᓕᐅᔪᓄᑦ.

ᐅᑦᓗᒥᐅᔪᖅ, ᒪᓪᓴᓗᒍ ᑕᵒᓇ 50/50 ᐊᕕᑲᓯᔪᑎᐊ, ᓄᓇᕗᑦ ᐊᓚᒪᓗ ᓄᓇᕘᒃ ᐊᑐᓂ ᐅᖅᓯᒪᐃᔪᵒᓇᖅᑐᑦ ᑲᑎᑦᓗᒍ 400t ᐊᑐᓂᑦ. ᓇᑦᓂᐊᑐᐃᓇᖅ ᐅᖅᓯᒪᓕᐊᓕᓴᖅ ᑯᑕᖏᑦ ᐱᓕᐅᖅᕿᑐᑎᖅ ᓯᑎᐱᓇ 30 ᐊᖏᕐᒍᓂᐊᖅᑐᒍᑦ ᑕᐅᑐᑦᑕᖅ ᐃᖅᑲᓇᑕᐅᓂᑯᖅᓯᖅ.

EAZ - ᓄᓇᕗᑦ ᑲᓪᓚᑦ ᐃᑭᖏᓐᓄᑦ, NU/NK E[1] *(P. borealis)*
350t ᐊᑐᐃᓇᐅᑎᑕᐅᓗᑎᒃ ᐅᖅᓯᒪᓕᐊᓕᓂᕐᒧᑦ ᓄᓇᕗᒍᑦ ᐊᓚᒪᓗ 20t ᓄᓇᕘᖓ ᑐᵒᓂᖅᓴᓗᓄᑦ, ᐃᖅᑲᓗᓯᓚᕐᑕᐅᓯᒪᓗᑎᒃ ᓯᕗᓂᐊᑕ ᔪᓚᐃ 31 ᐊᖏᕐᒧᑎᓂᐊᖅᑐᓴᑦ. ᑯᑕᖏᑦ ᐃᖅᑲᓇᑕᐅᓯᒪᖓᕐᑐᑦ ᑭᖑᓂᐊᑦ ᐃᖅᑲᓗᓯᑌᓴᖅᑐᑦᑦ.

ᑕᐃᒪᓕ ᑭᖑᓚᖏᑦ *P. borealis* ᐅᒪᔪᖅᑲᑎᑦ ᖃᓄᐃᙵᖏᑦᑐᔪᑦ ᐃᓂᖅᓴᓕᕐᓂᓕᕆᔨᑎᒃ, ᑕᑯᑯᐊ ᐅᖅᓯᒪᓕᐊᓕᓂᐅᔪᑦ ᓇᐃᓴᐅᑎᖅᑎᖏᑦ ᑲᑕᕈᐊᖅᑕᐅᓗᑎᒃ ᐅᑯᐊ ᒪᓕᓪᓗᓂᕐᑐᑦ:

- ᐅᒪᔪᖅᑲᑎᑦᑦ ᐃᓂᖅᓴᓕᑯᑎᒃ ᐅᓪᓴᖅᑲᓚᐊᓕᓪᓂ ᐃᓂᖅᓴᓂᒃ, ᐱᑕᐊᕋᓚᑦ ᐅᖅᓯᒪᓕᐊᓕᓂᕐᒧᑦ ᓇᐃᓴᐅᑎᖅᑎᖏᑦ ᑲᑕᕈᐊᓪᓚᑦ 13% ᐊᓚᒪ 26% ᑕᑯᑯᓇᓂ ᖃᐅᔨᓂᖅᓴᖅ – ᐊᓚᒪ ᐊᖅᐸᔪᓂᖅᓴᖅ – ᕿᑎᕋᖅᑐᓂᒃ ᐅᓪᓴᖅᑲᓚᐊᓕᓪᓂ ᐃᓂᖅᓴᔪᑦ, ᒪᓪᓴᑦ ᕿᑎᕋᖅᑕᖏᓪᓄᑦ.

- ᑭᖑᓂᐸᑦ ᐅᒪᔪᖏᑦ ᐃᔪᒪᓗᓐᓇᖅᑐᒥᑦ ᐃᓂᒋᑎᒃ, ᐅᖅᓯᒪᓕᐊᓚᔪᕋᖅᑭᓇᓐᓂᕐᑐᖅ.

ᐊᑐᖅᑐᐊᑭᑎᑦ

WAZ (*P. montagui)*
ᓄᓇᕗᑦ ᐊᓚᒪᓗ ᓄᓇᕘᒃ ᐊᕕᑲᔪᓂᐊᖅᑐᖅᐳᒃ ᑯᑎᑦᓗᒍ 550t ᐊᖏᕐᒧᑎᓂᖅ ᐊᑐᖅᑐᐊᖏᖅᓯᒪᒃ ᒪᓪᓴᓗᒍ ᐊᕕᑲᔪᓂᐊᖅᑐᑦ ᐊᖅᑭᖅᑲᑎᑦᑦ ᑯᑎᒪᓕᖓᓐᓄᓄᑦ, ᐅᑦᓗᒥ 275t ᐊᑐᓂ. ᐱᔨᒪᔨᔪᑎᑦ ᐊᑐᖅᑐᐊᖏᓂᐊᑦ ᑯᑕᕈᐊᑦ ᕿᑎᕋᖅᑲᑦᑐᖅᑕᖏᑦᑕᓂᐊᖅᑐᑦ ᐱᓕᕐᓂᖅᓴᓂᓄᑦ ᒪᓪᓴᓗᒍ ᐊᑐᐃᓂᖅᓴᖅ ᕿᑎᕋᖅᑕᐃᔨᔪᑎᑎᖅᓯᑦ ᐃᓕᑦᑎᓗᑎᑦ ᓴᓪᓕᑦᑕᓗᒋᑦ ᐃᓕᖅᑕᓗᒋᑦ ᐃᓕᖅᑕᓂᒃᓴᓂᒃᓴᖅ.

EAZ - ᓄᓇᕗᑦ ᑲᓪᓚᑦ ᐃᑭᖏᓐᓄᑦ, NU/NK E[2] *(P. borealis)*
ᓄᓇᕗᑦ ᐊᓚᒪᓗ ᓄᓇᕘᒃ ᑎᒥᖏᓐᓄᑦ ᐊᔨᖅᑎᑕᐅᓱᒪᓕᓪᓂ ᐊᑐᕈᓐᓇᓗᑎᒃ ᐃᓕᖅᑲᖅᑐᒥᒃ 225t ᐊᓚᒪᓗ 10t ᒪᓪᓴᓗᑎᑦ ᐊᖏᕐᒧᑎᓂᐊᖅᑐᒥᒃ ᑐᓂᖅᐅᖏᓐᓄᑦᑕᓯᒡᒎᓂᖅᑐᑦ, ᐃᖅᑲᓗᓯᓚᕐᑕᐅᓯᒪᓂᖅᑐᑦ ᑕᖅᑭᖓᓗᓂ ᑭᖑᓪᓕᖅᐸᑦ (ᒪᔪᔅ) ᐃᖅᑲᓗᓯᓚᕐᑕᐅᔪᓂᖅ.

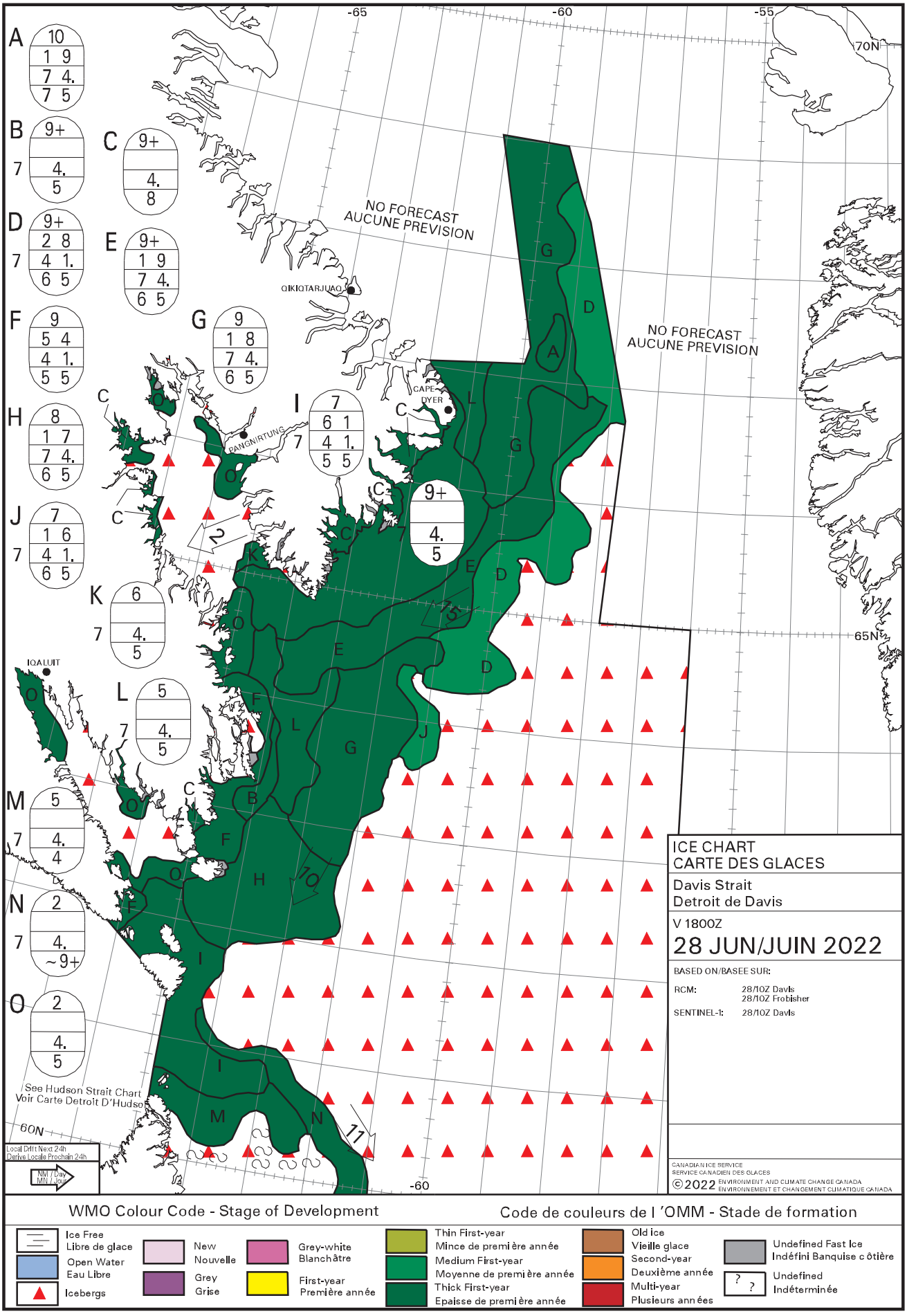
[1] ᑐᙵᓗᓂᐊᖅᓴᓂ ᒥᓂᑕᐅᐸ ᐊᖅᑭᑭᑎᐊᓚᖓᖓᓗᓄᑦ ᐱᓱᐃᓂᒥᒃ ᐱᓇᓚᕐᑕᐅᙵᑎᑕᑦ ᐃᖅᑲᓇᑕᐅᖅᑲᓚᕐᑕᑦ ᑕᑯᓚᒪᖓ *P. Borealis* ᐃᓗᐊᓂ NU/NK E.

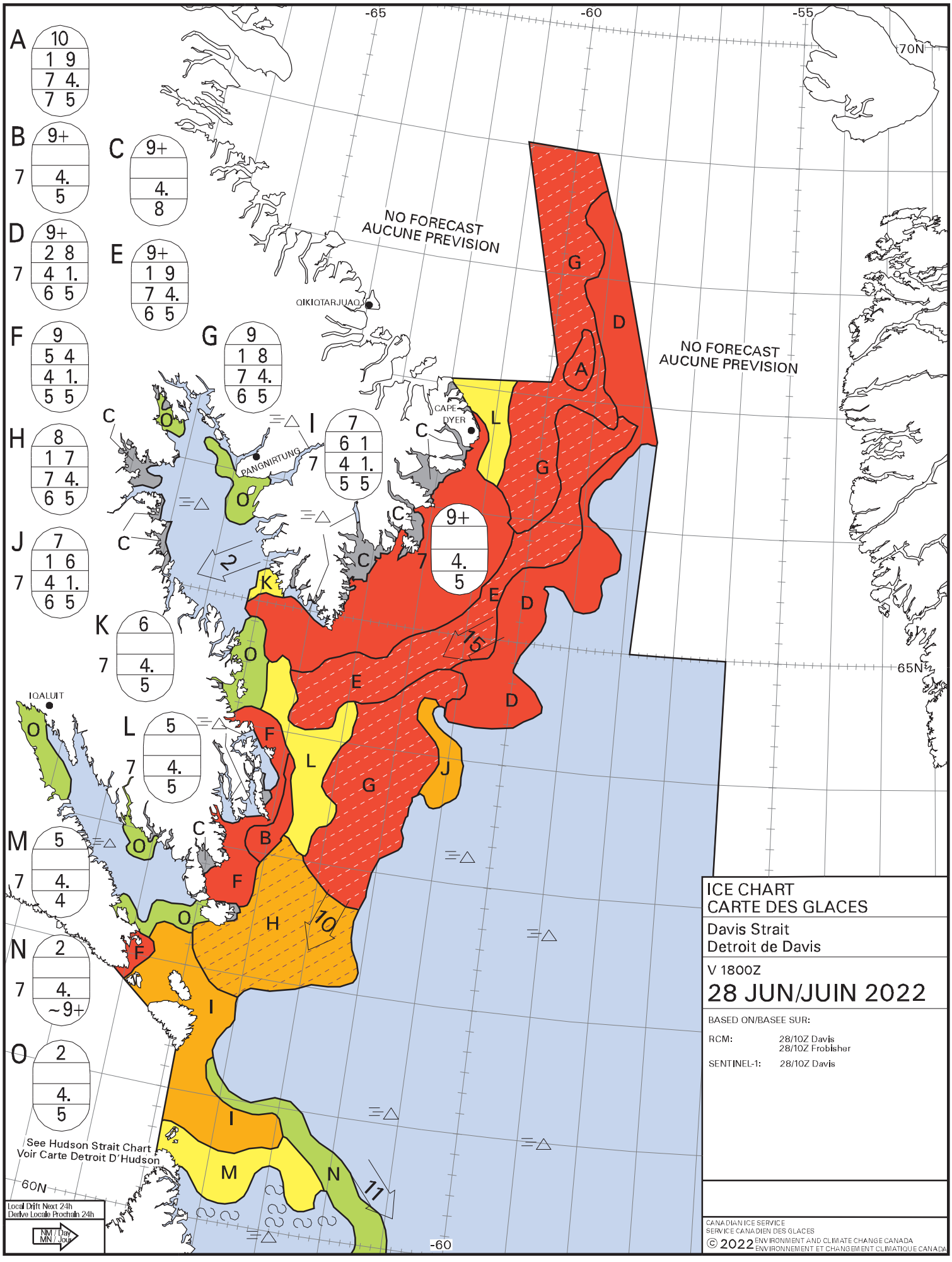
[2] ᑐᙵᓗᓂᐊᖅᓴᓂ ᒥᓂᑕᐅᐸ ᐊᖅᑭᑭᑎᐊᓚᖓᖓᓗᓄᑦ ᐱᓱᐃᓂᒥᒃ ᐱᓇᓚᕐᑕᐅᙵᑎᑕᑦ ᐃᖅᑲᓇᑕᐅᖅᑲᓚᕐᑕᑦ ᑕᑯᓚᒪᖓ *P. Borealis* ᐃᓗᐊᓂ NU/NK E.

ᖃᑎᖅᑕᕐᓴᖅ 1. ᓄᓇᕗᑦ ᐊᓚᒐᓗ ᓄᓇᕆᑦ ᑐᵒᓂᓱᑦᐅᔨᵒᓇᖅᑐᑦ ᐊᑐᐃᵒᓇᑦ ᐅᖃᓕᑦᐊᓱᓂᖅᓯᑦ ᐊᑐᖅᑐᐊᑭᑎᓄᑦᓯ.

ᐃᓂᖃᓚ	ᓄᓇᕆᑦ		ᓄᓇᕗᑦ	
	ᐅᖃᓕᓴᐊᓱᓂᖅ	ᐊᑐᖅᑐᐊᓚᑲᓕᑦ	ᐅᖃᓕᓴᐊᓱᓂᖅ	ᐊᑐᖅᑐᐊᓚᑲᓕᑦ
WAZ *P. montagui*	400t	275t	400t	275t
WAZ *P. borealis*	ᐊᑐᐦᑎᑐᖅ – ᐱᓇᓴᒃᑕᐅᐦᑎᑐᑐᑦ ᐊᓯᖏᑦ			
EAZ *P. montagui*	ᐊᑐᐦᑎᑐᖅ – ᐱᓇᓴᒃᑕᐅᐦᑎᑐᑐᑦ ᐊᓯᖏᑦ			
EAZ *P. borealis* (ᓄᓇᕗᑦ ᑲᓪᓕᐅᑦ ᐃᑭᐱᓕᖅ, *NU/NK E*[3])	20t	10t	350t	225t

[3] ᑐᐦᓚᓂᐊᖅᓱᓂ ᒥᓂᑕᐅᑦ ᐊᖅᑭᑎᐊᓕᖅᓚᓕᑦ ᐱᓴᐃᓂᒥᒃ ᐱᓇᓴᒃᑕᐅᐦᑎᑐᑐᑦ ᐃᖅᑲᓗᑕᐅᖅᑲᓴᐅᓴᓂᑦ ᑕᓐᓯᒍᓕᖅ *P. Borealis* ᐃᓗᐊᓂ NU/NK E.


-65
-60
-55
70N
65N
60N
NO FORECAST
AUCUNE PREVISION
NO FORECAST
AUCUNE PREVISION
QIKIQTARJUAQ
CAPE DYER
PANGNIRTUNG
IQALUIT
See Hudson Strait Chart
Voir Carte Detroit D'Hudson
Local Drift Next 24h
Derive Locale Prochain 24h
NM / Day
MN / Jour
ICE CHART
CARTE DES GLACES
Davis Strait
Detroit de Davis
V 1800Z
28 JUN/JUIN 2022
BASED ON/BASEE SUR:
RCM: 28/10Z Davis
28/10Z Frobisher
SENTINEL-1: 28/10Z Davis
CANADIAN ICE SERVICE
SERVICE CANADIEN DES GLACES
©2022 ENVIRONMENT AND CLIMATE CHANGE CANADA
ENVIRONNEMENT ET CHANGEMENT CLIMATIQUE CANADA
WMO Colour Code - Stage of Development
Code de couleurs de l 'OMM - Stade de formation
Ice Free
Libre de glace
Open Water
Eau Libre
Icebergs
New
Nouvelle
Grey
Grise
Grey-white
Blanchâtre
First-year
Première année
Thin First-year
Mince de première année
Medium First-year
Moyenne de première année
Thick First-year
Epaisse de première année
Old ice
Vieille glace
Second-year
Deuxième année
Multi-year
Plusieurs années
Undefined Fast Ice
Indéfini Banquise c ôtière
Undefined
Indéterminée


-65
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70N
65N
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-60
NO FORECAST
AUCUNE PREVISION
NO FORECAST
AUCUNE PREVISION
QIKIQTARJUAQ
PANGNIRTUNG
CAPE DYER
IQALUIT
A 10 / 1 9 / 7 4. / 7 5
B 9+ / 4. / 5
7
C 9+ / 4. / 8
D 9+ / 2 8 / 4 1. / 6 5
7
E 9+ / 1 9 / 7 4. / 6 5
F 9 / 5 4 / 4 1. / 5 5
G 9 / 1 8 / 7 4. / 6 5
H 8 / 1 7 / 7 4. / 6 5
I 7 / 6 1 / 4 1. / 5 5
7
J 7 / 1 6 / 4 1. / 6 5
7
K 6 / 4. / 5
7
L 5 / 4. / 5
7
M 5 / 4. / 4
7
N 2 / 4. / ~9+
7
O 2 / 4. / 5
9+ / 4. / 5
7
See Hudson Strait Chart
Voir Carte Detroit D'Hudson
Local Drift Next 24h
Derive Locale Prochain 24h
NM / Day
MN / Jour
ICE CHART
CARTE DES GLACES
Davis Strait
Detroit de Davis
V 1800Z
28 JUN/JUIN 2022
BASED ON/BASEE SUR:
RCM: 28/10Z Davis
28/10Z Frobisher
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CANADIAN ICE SERVICE
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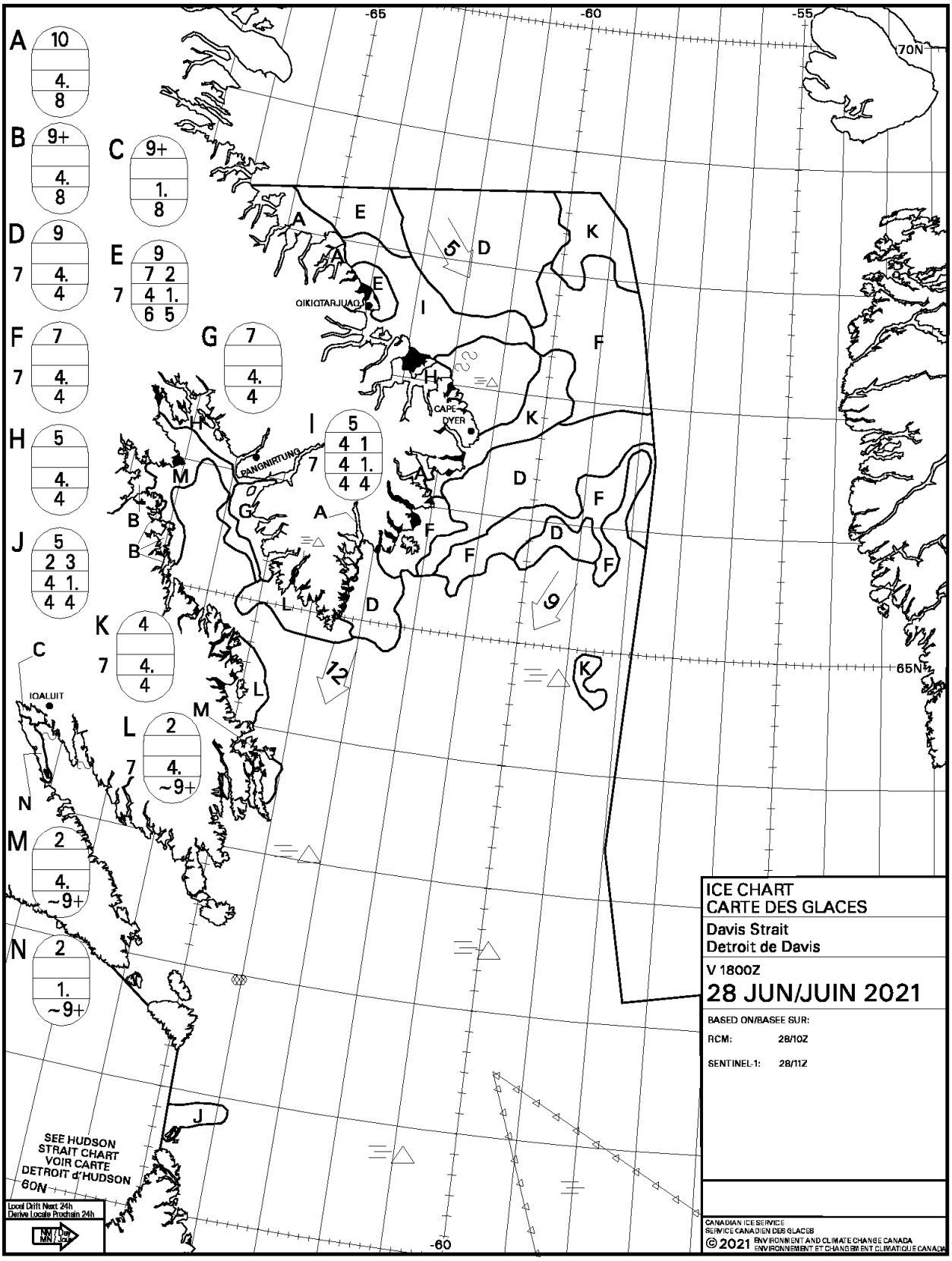
A 10 / 4. / 8
B 9+ / 4. / 8
C 9+ / 1. / 8
D 9 / 7 4. 4
E 9 / 7 2 / 7 4 1. / 6 5
F 7 / 7 4. 4
G 7 / 4. / 4
H 5 / 4. / 4
I 5 / 4 1 / 7 4 1. / 4 4
J 5 / 2 3 / 4 1. / 4 4
K 4 / 7 4. 4
L 2 / 7 4. ~9+
M 2 / 4. ~9+
N 2 / 1. ~9+
-65
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70N
65N
60N
QIKIQTARJUAQ
CAPE DYER
PANGNIRTUNG
IQALUIT
SEE HUDSON STRAIT CHART
VOIR CARTE DETROIT d'HUDSON
Local Drift Next 24h
Derive Locale Prochain 24h
KM / Day
MN / Jr
ICE CHART
CARTE DES GLACES
Davis Strait
Detroit de Davis
V 1800Z
28 JUN/JUIN 2021
BASED ON/BASEE SUR:
RCM: 28/10Z
SENTINEL-1: 28/11Z
CANADIAN ICE SERVICE
SERVICE CANADIEN DES GLACES
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ENVIRONNEMENT ET CHANGEMENT CLIMATIQUE CANADA

POLAR
POLAIRE

ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᓚᓐᓂᕆᐊᖅᓯᖅ ᑲᓐᑕ

ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᐅᓂᒃᑲᑦ 2022

ᐅᖃᐅᓯᐅᔾᑦ ᓄᓇᕗᑦ ᐃᓚᔨᓕᓚᐅᔪᖅᑕᐅᓯᑦ ᑲᑎᒪᔨᖏᑦᑐᓂᒃ

ᑲᖏᖅᓯᓂᖅ, ᔪᑎᐱᓚ 8, 2022

Polar Knowledge Canada | Savoir polaire Canada

Canada

ᐅᑭᐅᖅᑕᖅᑐᒥᐅᒃ ᖃᐅᔨᒪᓕᓴᐊᖅᓂᖅ ᑲᓇᑕᐅᐸ ᑎᓕᔅᐅᓴᐊᑎᖓᑦ

- **ᖃᐅᔨᒪᓕᕆᑎᐊᖅᓂᓗᑕ** ᑲᓇᑕᐅᐸ ᐅᑭᐅᖅᑕᖅᑐᐊ ᐱᐅᓴᓭᓕᕆᓂᖅᓂᐊᖅᒪᑕ ᐅᑯᐊ:

  1) Ṗᓇᐅᔭᓕᑌᓂᒃᑯᑦ ᒪᑭᒪᓴᐊᑎᒃᓴᐃᑦ ᐊᑐᐃᓐᓇᐅᓴᑦ

  2) ᐊᐸᑎᑦᑎᓂ ᓇᐅᑦᑎᖅᓴᖅᑏᑦ

  3) ᐃᓅᓴᖅᑦᑎᐊᖅᑯᓕᒋᑦ ᓄᓇᖅᖅᑐᑦ ᐊᒻᒪᓗ ᑲᓇᑕᒥᐅᑦ

- ᖃᐅᔨᒪᔭᐅᓕᕆᑎᓕᒋᑦ ᐱᓵᓕᓕᐊᑎᑦᑎᓂᖅ ᐊᒻᒪᓗ **ᑭᒃᑯᓇᑦ ᑐᓂᖅᑯᒋᐊᖅᐸ ᖃᐅᔨᒪᓂᖅ** ᐊᓯᓂᓂᑦ ᐅᑭᐅᖅᑕᖅᑐᖅ ᑲᔪᐊᓂ, ᑦᒃᑯᐊᓗ ᐊᓂᐊᑎᒃ

- ᓴᖏᑭᒃᑎᑭᐊᖅᓗᒍ **ᑲᓇᑕᐅᐸ ᔨᐅᓕᐅᖅᑎᐅᓂᖏᓐᓄ** ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᔪᑕᐅᔨᓇᑦ

- ᐃᓂᖅᓴᓗᑕ ᐊᐅᓪᓕᑎᑦᑎᓂᑎᓇᑦ ᖃᐅᔨᓴᐃᓂᓕᒫᖏᓐᓄ ᑕᐃᑲᓂ ᑲᓇᑕᐅᐸ ᕿᓄᑎᑐᑦᑎᐊᖅᒥ, ᓄᓇᕐᑦ

ᐊᐅᓪᓕᑎᒃᓵᐅᔨᖅ ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᓴᖅᑕᖏᓐᓄᑦ, ᒥᐊᓂᓕᖏᓐᓄᑦ ᐊᒻᒪᓗ ᐊᔨᖏᓐᓄᑦ ᖃᓄᐃᓕᐅᑕᐅᔨᓕᑦ ᓴᖅᑭᑦᖅᑐᑦ ᐊᐅᓚᔨᖅᑐᑦ.

ᑕᒪᐃᓐᓄᑦ ᐱᒋᐊᕈᑎ ᖃᐅᔨᓴᐃᓂᐊᕐᓗᓂ ᐊᒻᒪᓗ ᓄᑦᑦ ᐱᓕᕆᑦᑐᕐᓂᓄᑦ ᑐᖏᕆᓴᑦ

ᖃᐅᔨᒪᓂᕐᒥᐅ ᐱᑎᑕᐅᓂᖅ	ᐱᒋᐊᕈᑎᑦ	ᑐᖏᖅᑕᓵᑦ
ᖃᐅᔨᓴᐃᓂᒪᒃᓗᒃ ᓄᑦᑦ ᐱᓕᕆᑦᑐᕐᓂᑦ ᓄᓇᖅᑲᖅᓱᖅᓯᒪᔪᑦ ᖃᐅᔨᒪᔭᖅᑭᑦ	ᓄᓇᕗᒻᒥᐅ ᐃᓕᐅᑎᑦᑎᓂᖅ ᑐᑭᓯᑎᑦᑎᓂᖅ ᐱᕕᓕᕆᑦᑐᖅᓯᒪᔪᑦ ᖃᐅᔨᓴᕈᑎᑦᑕᑦ ᐊᐅᓚᑦᑎᐊᖅᑐᑦ	1. ᖃᐅᔨᒪᑦᑎᐊᖅᓯᖏᓐᓇᓕᒃ ᑭᓯᖏᑦ ᐅᑭᐅᖏᑦᑕᖏᑐᑦ ᓄᓇᖅ, ᐃᒪᑦᑎᐊᓂᖅ, ᐊᒻᒪᓗ >ᐃᔨᑦ ᐊᓂᑎᓕᒫᖏᓪᓗ ᓴᖅᑭᑦᑎᐊᖅᑐᑦ ᓯᕗᓪᓕᐹᒃ ᐊᓯᑦᔨᖏᑦᑐᑦ
		2. ᖃᐅᔨᒪᓂᖏᓐᓇᓕᒃᑐᑦᓗᑕ ᑲᑎᖅᒪᓂᖏᓐᓂᒃ ᐊᓂᒍᑎᓂ ᓄᓇᓕᖏᑦ ᖃᐅᔨᓴᖏᑦᑎᐊᓕᓯᖏᓐᓂᖏᑦ ᐊᒻᒪᓗ ᐊᓂᒍᑎᑦᑎᓂᒃ ᖃᐅᔨᓴᖏᑦᑎᐊᓕᓯᖏᓐᓂᖏᑦ
		3. ᐱᓂᒋᓪᓂᖏᓐᓂᓗᑦ ᐅᓪᓚᑦᔪᑎᖃᐅᑎᒃᓴᐃᓐᓂ, ᓄᓕᑦ ᐱᓕᕆᑦᑐᕐᓂᖏᓐᓇᑦᑐᖅᑕᑦ ᐊᒻᒪᓗ ᓇᑦᑕᖅᑕᐅᔪᑦ ᐊᔪᐅᓂᖏᑦᑐᖅᑕᑦ ᐊᓂᒍᑎᒥ, ᐃᓄᓕᓕᒫᓂᖅᒥ ᐊᒻᒪᓗ ᐱᓕᕆᑦᑐᕐᓂᑦ ᐊᐅᓚᑦᑎᐊᖅᑐᑦᓯᓕᓕᑦᑐᑦ ᐅᑭᐅᖏᑦᑕᖏᑐᑦ

ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ

ᐊᐃᒃᑐᖅᓱᒪᔪᑦ ᓴᕐᓇᐃᓂᓐᓄᒃ ᐊᒻᒪᓗ ᖃᐅᔨᒪᓴᐅᔪᓂᒃ ᑐᓴᕐᑎᑦᑎᓂᖅ ᐃᓕᓐᓂᐊᕐᔪᑎᒃ ᑲᑎᒪᓗᑎᒃ

ᐊᑭᒃᓱᕐᔪᑎᑦ ᑐᓐᖓᕕᖏᑦ ᐃᒃᐱᒍᓱᖏᓐᓂᒃ ᐊᑐᖅᓱᔪᑎᒃ ᐃᓕᑎᒍᓱᖃᕐᓂᐊᕐᒪᑦ

ᐃᒪᓕᒃ 10 – 11, 2020

ᑲᓇᑕᐅᑉ ᕿᒋᐊᒃᑐᕐᒥ ᖃᐅᔨᓴᕐᕕᖏᓐᓄᑦ, ᐃᖃᓗᒃᑑᑦᑎᐊᖅ, ᓄᓇᕗᑦ, ᑲᓇᑕ

ᐱᓂᓪᓕᐊᑎᑦᑎᖅᑕᐅᓂᖅᐳᑦ ᓯᐅᓪᓕᐅᑎᓂᐊᖅᑐᑦ ᑐᑭᖓᓕᒃ ᐊᐱᖅᑎ

ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᓇᓯᖏᓂᖅ ᑲᓇᑕ ᐅᑭᐅᖅᑕᖅᑐᒍᑦ ᕿᖅᓇᐃᓂᖏᓐᓄ ᐊᒥᓱᓕ ᖃᐅᔨᓕᕐᕆᐊᓕᓕᑦ ᐱᓪᓗᑎᑦ ᐃᓕᓴᓂᐊᖅᓯᓗᓂᒃ ᑲᑎᒪᔨᖅ, 2020, ᑲᓇᑕᐅᐸ ᕿᓂᖅᑐᕐᒥᐅᓂ ᖃᐅᔨᓴᕐᕕᖏᓐᓄᓂ

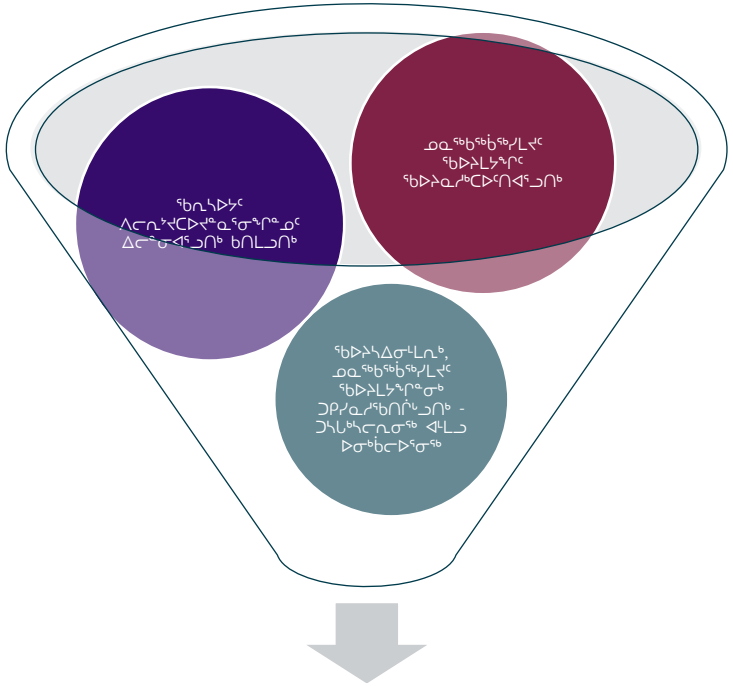
ᐊᓂᔪᖅᐸᑕ ᐅᖃᖅᑎᑎᒋᑦᑎᐊᓕᐅᖅᓯᓗᓂᒃ ᐃᓕᐅᔨᑦ ᓂᕈᐊᖅᓯᒪᓕᕐᓂᖓᓪᓕ ᐊᑕᓂ ᑕᓪᓕᒪᑦ ᑐᕈᑦ ᐳᖅᑐᓴᑦ ᐊᑐᑎᖃᖅᑐᑦ:

- ᑐᒃᑐᑦ ᐅᓄᕐᓂᖏᑦ ᐊᒥᒪᓗ ᓇᔨᖅᐸᒃᑕᖏᑦ
- ᐃᖅᓗᐃᑦ ᐊᒥᒪᓗ ᐊᔨᖏᑦ ᐃᖅᓗᖅᖃᕐᓇᑦ
- ᐊᕐᕿᑦ ᐊᒥᒪᓗ ᐳᐃᔨᑦ ᐅᒪᔨᓕᒪᑦ ᐊᓭᑎᓕᒪᖏᓪᓗ ᐊᐢᔨᑭᓇᖏᑦᑐᑦ
- ᔨᓕᐅᐸ ᐅᕐᑯᔨᓭᓪᓕᐊᓂᖓᓐᓄ ᖃᐅᔨᔨᖅᑕᐅᓂᖓᓐᓄ ᐊᒥᒪᓗ ᒥᐊᓂᕆᔨᐅᓂᖓᓐᓄ
- ᐊᓭᑎᑦᑎᓂ ᐊᔨᑉᖅᑐᑦ - ᐊᐳᑦ, ᔨᑯ, ᐅᕐᑯᓂᖓᓐᓄ, ᖃᕈᕐᔨᖅ ᐊᐅᔪᓚᓇᓐᖏᑦᑐᖅ

ᐊᑦᑭᒃᓯᓂᖅ ᑐᑭᓯᖅᑎᑯᔪᑎᒃᓴᓂᒃ ᖃᓄᐃᓕᓂᐅᕆᐊᖃᖅᖃᑐᓄᑦ ᑎᑎᖅᖏᑦ, 2022

ᐃᓱᒪᓕᕆᑎᒃᓴᓄᑦ ᖃᓄᐃᓕᓂᐅᕆᐊᖃᖅᖃᑐᓄᑦ ᑎᑎᖅᖏᑦ ᐊᑐᐃᓐᓇᐅᔾᔨᑦ ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᐃᐅᔾᔨᖅᖃᖅᓴᖏᓐᓄᒍᑦ ᐅᓂᒃᑲᓕᐅᖅᓱᒪᓕᕐᓂ ᐊᑎᖅᖃᖅᑐᖅ, ᐊᕐᕼᐊᓕᐃᔪᖅ:

https://www.canada.ca/en/polar-knowledge/aqhaliat.html



5 ᑐᑭᓕᐅᕆᑎᖏᑦ ᑎᑎᖅᑐᑦ ᐃᑲᔪᖅᑐᑦ ᖃᓄᐃᓕᓂᐅᕆᐊᖃᖅᑐᑦ ᑐᓴᖅᑎᑦᑎᓂᖅᑐᑦ, 2023-24

— ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᓄᐃᓕᓂᐅᕆᐊᖃᖅᖃᑐᓄᑦ ᑲᓇᑕ

ᐅᑭᐅᖅᑕᖅᑐᑎᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᖃᓄᐃᓕᒋᐊᖅᑐᖅᑐᓄᒃ ᑎᑎᖅᖁᓕᑦ - ᑐᑭᓯᓇᓱᖅᑎᑎᒋᓂᐊᖅᑕᖏᑦ

Environment	Caribou	Char & Fish	Marine	Climate Change
Government of Northwest Territories	Government of Northwest Territories	Fisheries and Oceans Canada	Fisheries and Oceans Canada	Environment and Climate Change Canada
UBC	Nunavut	UBC	OCEANS NORTH	uOttawa
UNIVERSITÉ DE SHERBROOKE	Forêts, Faune et Parcs Québec	UNIVERSITÉ LAVAL	WCS CANADA	McMaster University
Queen's University	KITIKMEOT REGIONAL WILDLIFE BOARD	UNIVERSITY OF WATERLOO	ocean wise	UNIVERSITY OF CALGARY
WILFRID LAURIER UNIVERSITY LAURIER Inspiring Lives.	Yukon	McGill UNIVERSITY	FJMC FISHERIES JOINT MANAGEMENT COMMITTEE	TRENT UNIVERSITY
UNIVERSITY OF CALGARY	Lakehead UNIVERSITY	Environment and Climate Change Canada	University of Manitoba	NUNAVIK MARINE REGION WILDLIFE BOARD
University of Victoria	Newfoundland Labrador			TORNGAT WILDLIFE PLANTS & FISHERIES SECRETARIAT
OCEAN NETWORKS CANADA	Wek'èezhìi Renewable Resources Board			Nunavut Wildlife Management Board
MEMORIAL UNIVERSITY	WCS CANADA			Government of Northwest Territories
	Porcupine Caribou Management Board			UNIVERSITY of GUELPH
	Polar Knowledge Canada / Savoir polaire Canada			Yukon

“ ᑐᑭᓯᓇᓱᖃᑎᓲᒍᑎᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖓᓄᑦ ᓇᓗᓇᐃᔭᖅᑕᑎᑦ ᖃᓄᐃᓕᐅᕐᓂᐊᕐᓂᑦᓯᓐᓂᒃ ᐱᕆᐊᕈᑎᑦᑎᐊᕙᐃᑦ ᐊᓯᑯᖅᐸᓪᓕᐊᑎᓐᓂᐊᕐᓗᒍ ᖃᓄᖅ ᖃᐅᔨᓴᐃᓂᕐᒪᕆᒃ ᐱᓕᕆᐊᖑᕙᖓᓖᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ. ᑐᓐᖓᓱᒃᑎᑦᑎᔪᒍᑦ ᐱᕕᖃᕐᑎᑦᑎᓪᓗᑕ ᐃᓚᐅᓗᓯ ᐊᕐᕖᑦ ᐊᒻᒪᓗ ᐳᐃᔩᑦ ᐆᒪᔪᓕᒫᓪᓗ ᐊᕙᑎᖏᓪᓗ ᐱᓇᓱᐊᖃᑎᒌᑦ ᑲᑎᒪᔩᑦ, ᐊᒻᒪᓗ ᓴᓇᖃᑎᒋᓗᒋᑦ ᓄᓇᖅᑲᖅᑳᖅᓯᒪᔪᑦ ᖃᐅᔨᒪᔪᑦ ᑎᒍᒥᐊᖅᑎᑦ ᐊᒻᒪᓗ ᖃᐅᔨᓴᖅᑎᑦ ᓴᕿᑦᑎᖃᑎᒌᓪᓗᑎᒃ ᑎᑎᕋᖅᑲᖏᓐᓂᒃ. ”

- ᕙᓗᕆᐊ ᕗᒐᕋ, ᓘᒃᑖᖅ, ᐱᓕᕆᑎᑦᑎᔾᔪᑕᐅᔪᓄᑦ
ᑐᑭᒧᐊᒃᑎᖓ, ᐆᓴᓐ ᒍᐃᔅ

ᐅᓄᐊ ᖃᐅᔨᒪᓂᖅᑎᑐ ᑐᕆᖁᑎᑕᑎᕕᖏᓐᓄᑦ ᖃᓪᓚᕆᐅᓴᖅᓄᑦ ᑲᑎᒪᓪᓗᑎᑦ ᐊᒥᐅᓯᐊᖏᑎᑦ, 2022

ᑐᖅᑐᑦ ᐅᓇᖏᓂᑦ ᐊᓚᒐᓗ ᓇᔨᖅᓯᖅᑕᑦ

ᐃᖃᓗᐃᑦ ᐊᓚᒐᓗ ᐃᖃᓗᓯᑦ

ᐊᖏᕕᑦ ᐊᓚᒐᓗ >ᐃᔨᑦ ᐅᒪᔨᓯᒪᑦ ᐊᓂᑎᓯᒪᖏᓪᓗ ᐊᖅᔨᑦᓴᖏᑦᑐᑦ

ᔨᓪᐅᐳᐸ ᐅᖏᓱᔨᓂᓯᐊᓂᖓ ᖃᐅᔨᔪᖃᑕᐅᓂᖓ ᐊᓚᒐᓗ ᒥᐊᓂᓱᔪᐅᓂᖓ

ᐊᓂᑎ ᐊᔨᑭᖃᑐᑦ - ᐊᐳᑦ, ᔨᓱ ᐊᓚᒐᓗ ᐅᖏᓱᓂᖓ

ᑲᓇᑕ ᐊᓚᒐᓗ ᐊᓵᐊᑲᑎᒃ

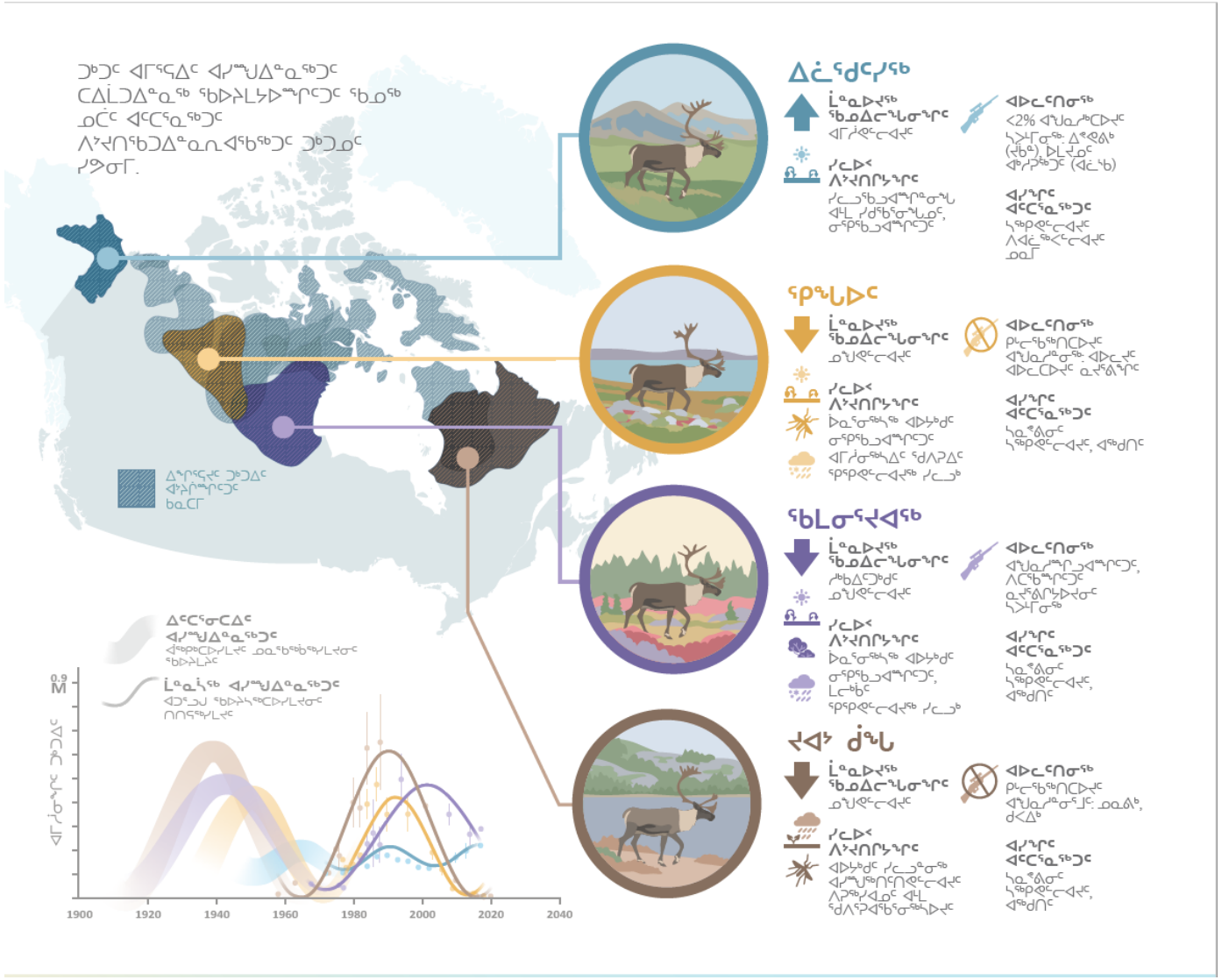
ᑲᓇᑕᐅᐸ ᖁᓕᑎᑐᒥ ᐅᑭᐅᖃᖅᑕᑐᒥᑦ ᖃᐅᔨᔪᖁᔭᖓᓐᓄ

ᐃᓕᑦᑎᑲᓵᓂᑭᓵᓇᖅᑐᑎᑦ ᐊᑐᓂ ᑕᑲᓱᐊ ᖃᓪᓚᕆᐅᓴᖅᓄᑦ ᑲᑎᒪᓂᖅ (ᐃᑦᓯ 2022):

ᖃᓪᓚᕆᐅᓴᖅᓄᑦ ᖁᓂᖁᓗᒃᑐᑦ: ᑲᓇᑕᐅᐸ ᐅᑭᐅᖃᖅᑕᑐᒥᑦ ᖃᐅᔨᔪᓇᓯᐊᖁᓂᖅ ᑲᓇᑕ-ᖃᓪᓚᕆᐅᓴᖅᓄᑦ ᑕᖁᔭᐅᑎᖅᓄᑦ

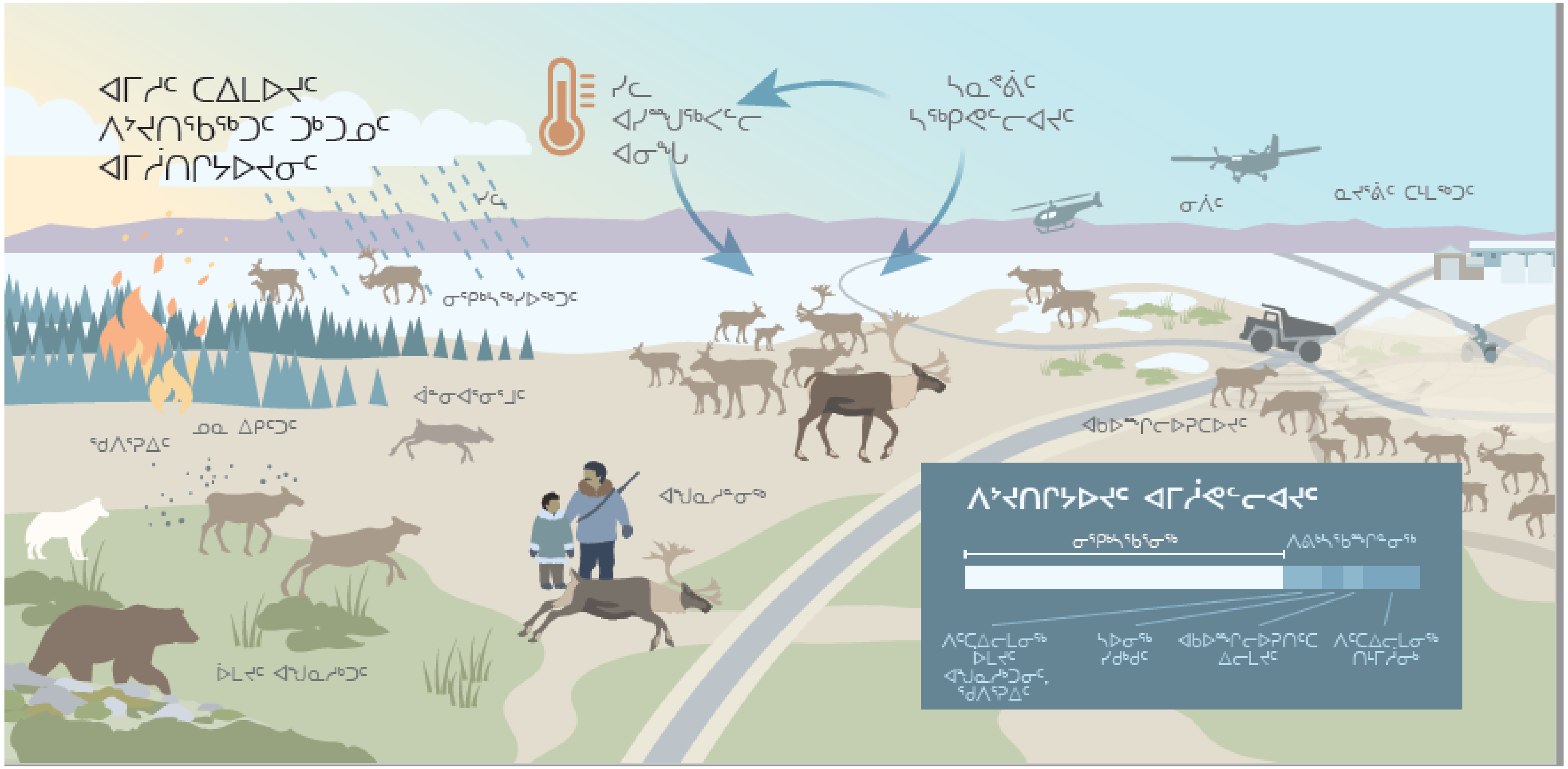
— ᐅᑭᐅᖃᖅᑕᑐᒥᑦ ᖃᐅᔨᔪᓇᓯᐊᖁᓂᖅ ᑲᓇᑕ

ᐅᑭᐅᖅᑕᖅᑐᑎᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᑐᖅᑐᓄᑦ ᐱᓇᓱᐊᖃᑎᒌᑦ - ᑐᖅᑐᑦ ᐅᓄᖑᓂᖑᑦ ᖃᓄᐃᓕᓚᖅᑐᑐᖑᓂᓄᑦ



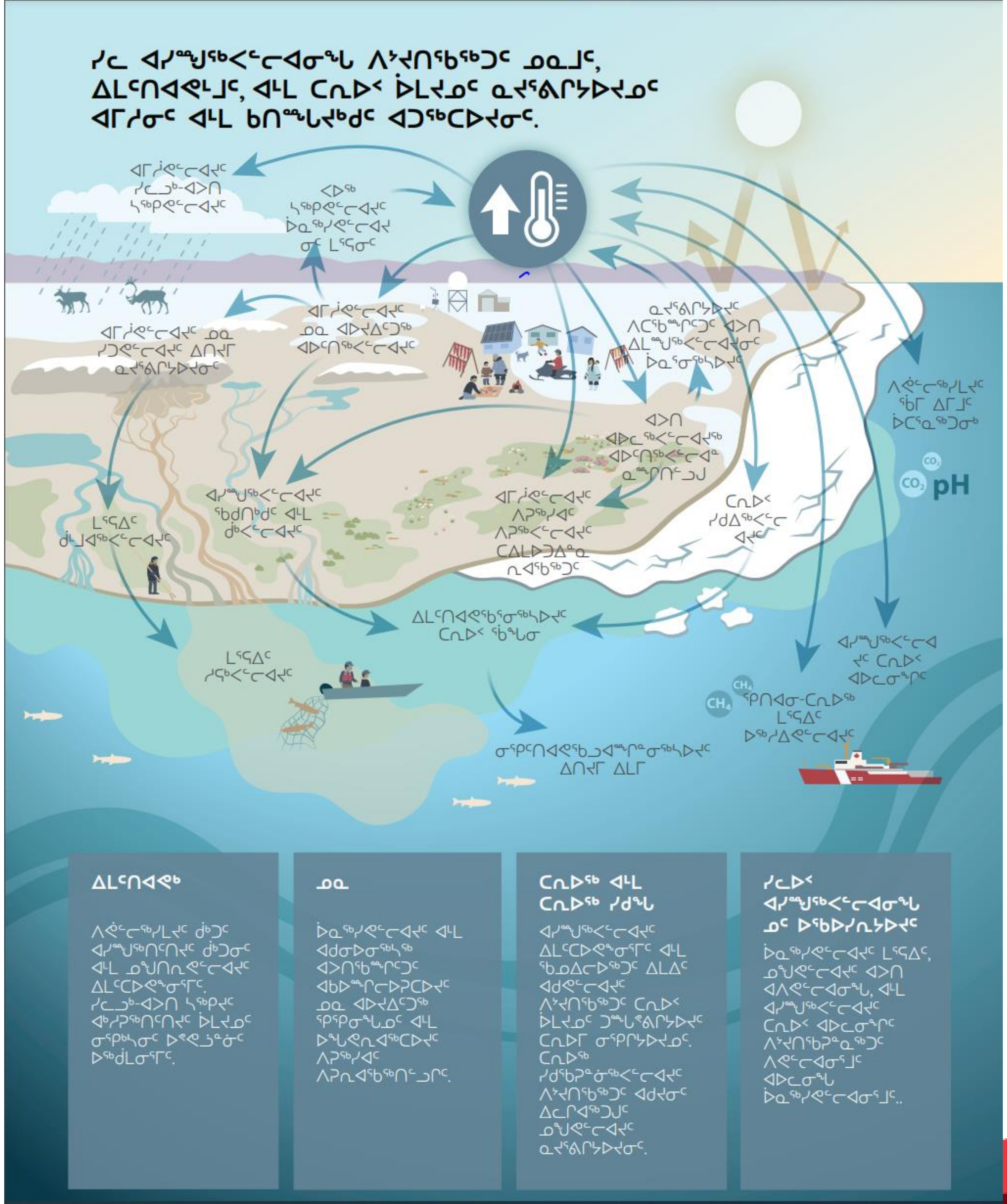
https://www.canada.ca/en/polar-knowledge/infographics/caribou-abundance-and-migration.html

ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᑐᒃᑐᓄᑦ ᐱᓇᓱᐊᖃᑎᒌᑦ - ᑐᒃᑐᑦ ᓄᙳᑕᐅᕙᓪᓕᐊᓐᖏᓪᓗᑎᒃ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᑦ ᖃᐅᔨᓴᐃᓂᒻᒪᕆᒃ ᐊᒻᒪᓗ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᖃᖏᑦ



https://www.canada.ca/en/polar-knowledge/infographics/caribou-abundance-and-migration.html

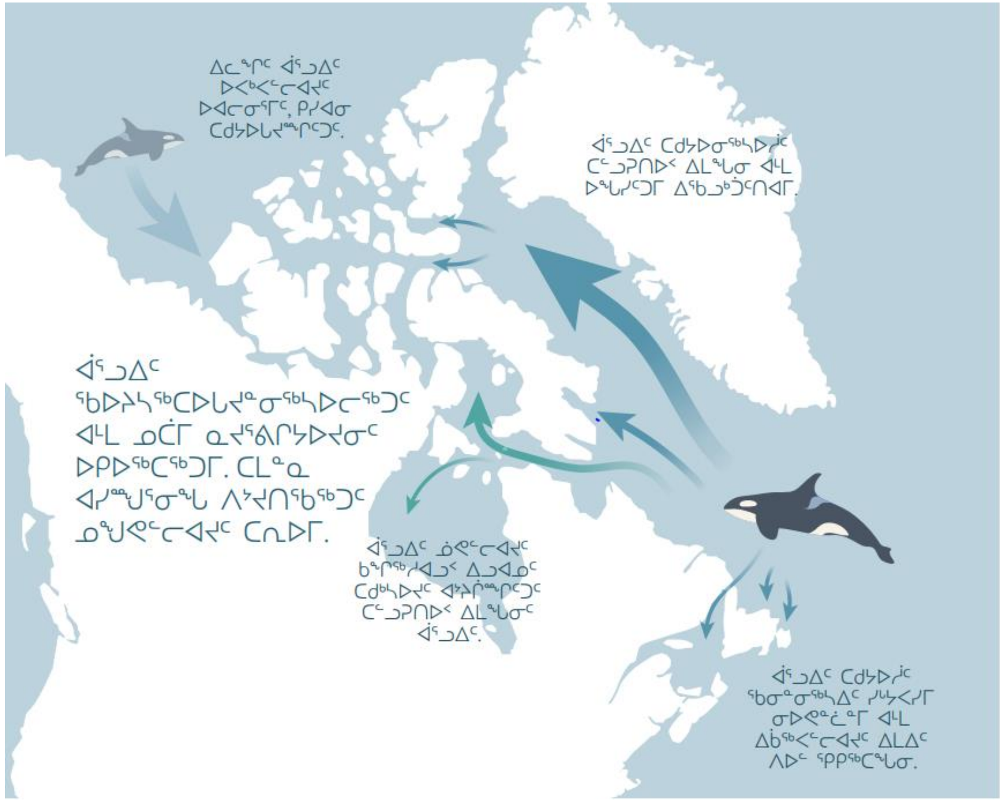
ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᑐᒃᑐᓄᑦ ᐱᓇᓱᐊᖃᑎᒌᑦ - ᓯᓚᐅᑉ ᐅᖅᑰᓂᖓ ᐊᓯᕈᖅᑐᖅ

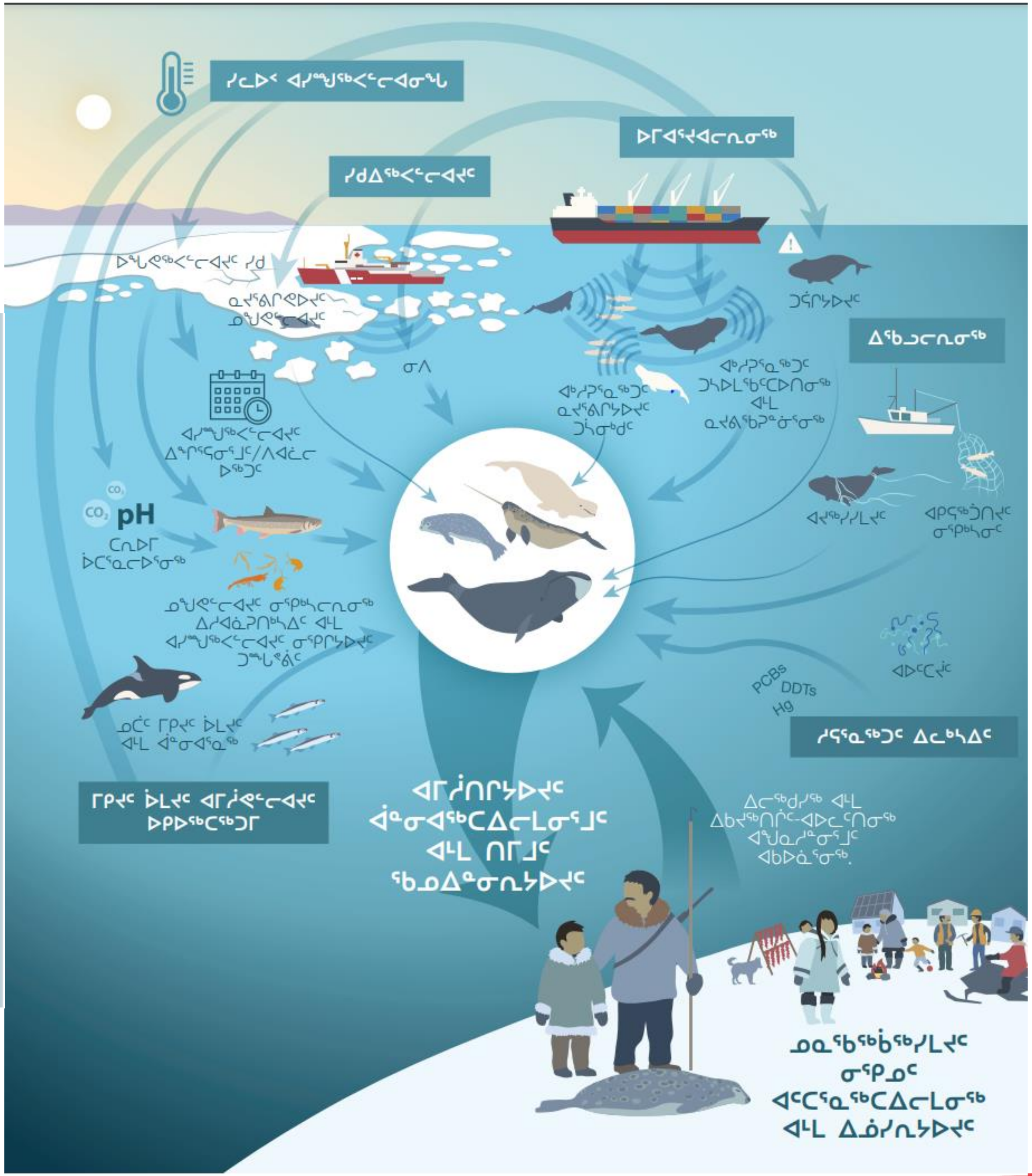


https://www.canada.ca/en/polar-knowledge/infographics/environmental-changes-temperature-impacts.html

Government of Northwest Territories
Polar Knowledge Canada
Savoir polaire Canada
Queen's University
UBC
Wilfrid Laurier University
Laurier Inspiring Lives.
Université de Sherbrooke
University of Victoria
Ocean Networks Canada
University of Calgary
Memorial University

ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᑐᒃᑐᓄᑦ ᐱᓇᓱᐊᖃᑎᖏᑦ - ᐊᕐᕕᑦ ᐊᒻᒪᓗ ᐳᐃᓯᑦ ᐆᒪᔪᓕᒫᑦ ᐊᕙᑎᓕᒫᖏᓪᓗ ᐊᔾᔨᒌᙱᑦᑐᑦ





Fisheries and Oceans Canada

University of Manitoba

FJMC
FISHERIES JOINT MANAGEMENT COMMITTEE

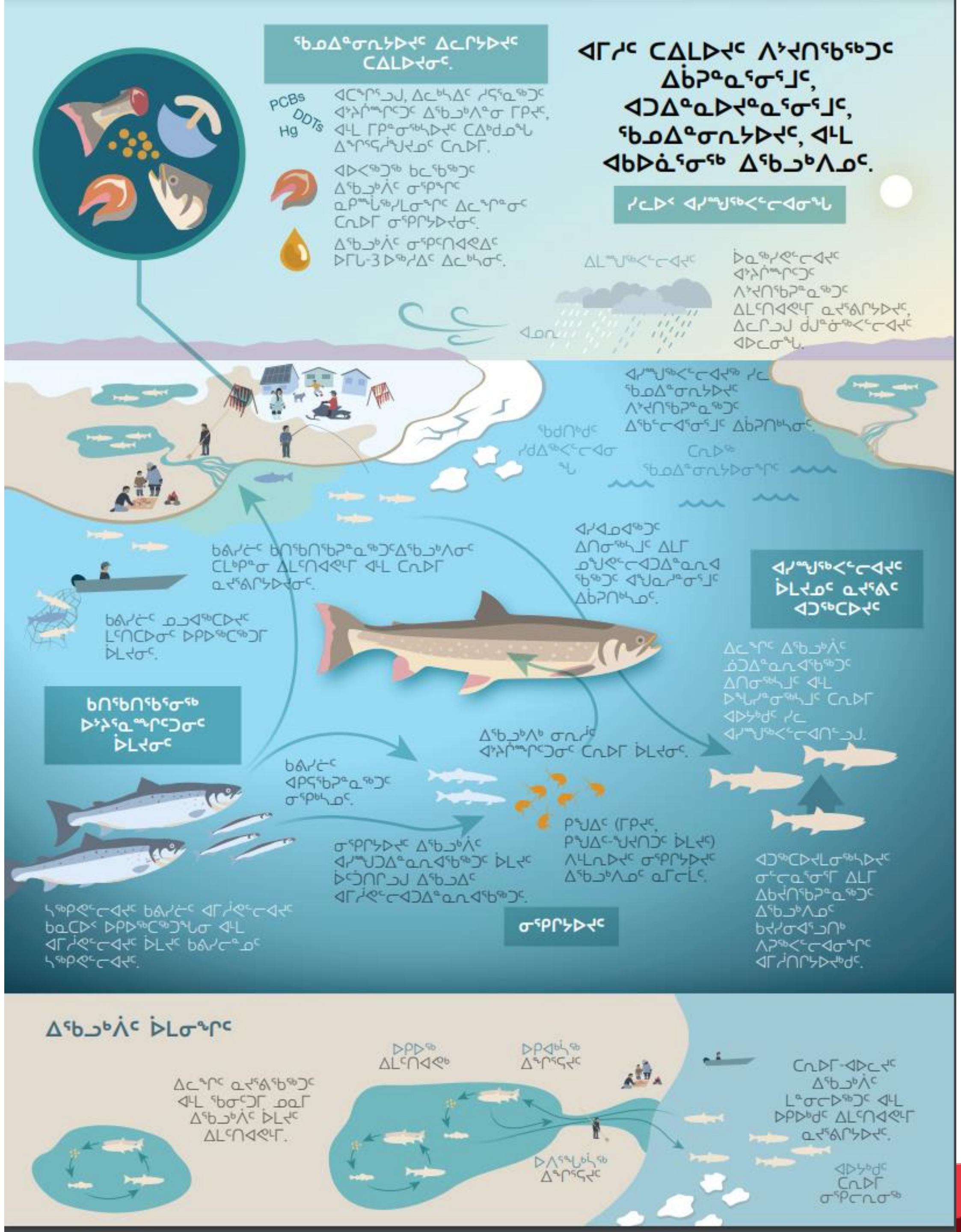
OCEANS NORTH

ocean wise.

WCS CANADA

https://www.canada.ca/en/polar-knowledge/infographics/marine-mammal-population-and-marine-ecosystem-biodiversity.html

ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᑐᒃᑐᓄᑦ ᐱᓇᓱᐊᖃᑎᒌᑦ - ᐃᖃᓗᐃᑦ ᐊᒻᒪᓗ ᐊᓯᖏᑦ ᐃᖃᓗᑦ



https://www.canada.ca/en/polar-knowledge/infographics/arctic-char-and-other-fish-population-dynamics.html

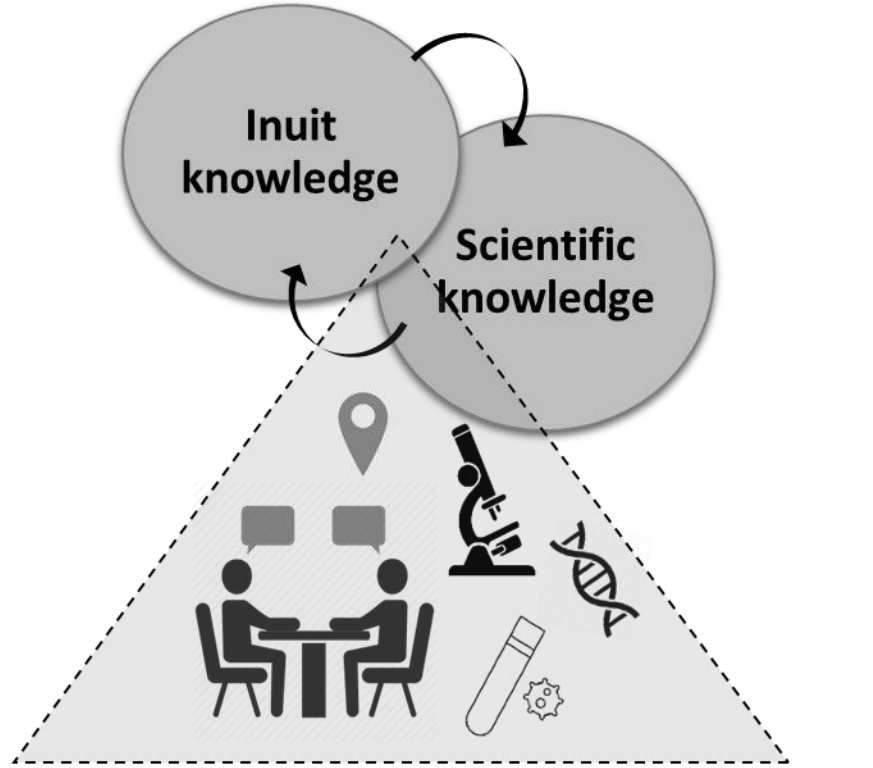
Fisheries and Oceans Canada
UNIVERSITÉ LAVAL
McGill UNIVERSITY
UNIVERSITY OF WATERLOO
UBC
Environment and Climate Change Canada

ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᑐᒃᑐᓄᑦ ᐱᓇᓱᐊᖃᑎᒌᑦ - ᓯᓚᐅᑉ ᐅᕐᑰᓂᖓᑕ ᐊᓯᕈᖅᑎᑕᖓᓄ ᐊᒃᑐᐃᓂᖓ ᓄᓇᖅᑲᖅᑳᖅᓯᒪᔪᑦ ᓂᕿᖏᓐᓄᑦ

https://www.canada.ca/en/polar-knowledge/infographics/climate-change-research-and-monitoring.html

TRENT UNIVERSITY · UNIVERSITY OF CALGARY · McMaster University · Environment and Climate Change Canada · Yukon · Government of Northwest Territories · TORNGAT WILDLIFE PLANTS & FISHERIES SECRETARIAT · NUNAVIK MARINE REGION WILDLIFE BOARD · uOttawa · UNIVERSITY of GUELPH · Polar Knowledge Canada · Savoir polaire Canada · Nunatsiavut Wildlife Management Board

ᐃᖃᓗᓕᒻᒥᐊᖅ ᐅᒪᔨᕐᓂᐊᖅᑎᓕᑦ – ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᖅ ᓂᕐᔨᑎᓂᓄᑦ ᒥᐊᓂᓇᓂᖅ: ᓄᓇᕗᒻᒥᓂ ᐱᕗᓇᑎᑦᑎᐸᔨᑕᐅᔨᑦ ᒥᐊᓂᓇᓵᓗᒋᑦ ᑐᑦᑐᐃᑦ, ᐅᒥᖓᒪᐃᑦ, ᐊᓪᒪᓗ ᑕᓵᔪᓂᖓ ᓂᕐᑭᖃᖅᑐᑦ ᑭᓱᓕᓂᕐᒥ



Participatory implementation and interpretation

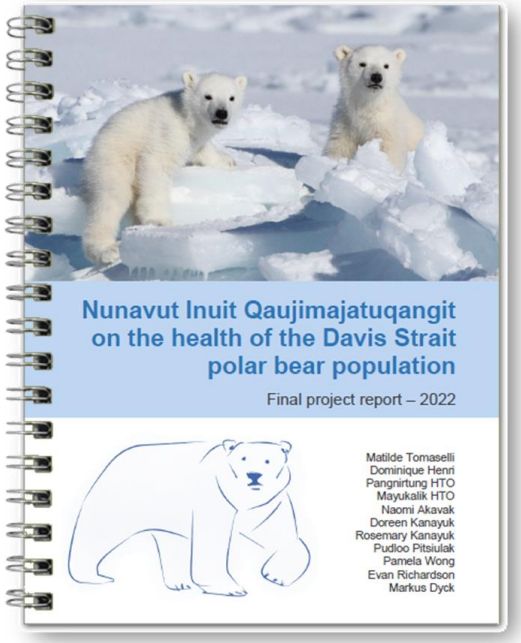
- ᐱᓇᔨᐊᖃᑎᒋᔭᓗᒋᑦ ᐃᖃᓗᓕᒻᒥᐊᖅ ᐅᒪᔨᕐᓂᐊᖅᑎᓕᖅᖢᒋᑦ ᐊᓪᒪᓗ ᑕᓵᔪᐊ ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᖃᑎᖅᑎᐅᑦ ᓄᓇᖓᓄᑦ ᓄᓇᕗᒻᒥ ᑐᕐᔪᐊᕐᓂᐊᖅᑐᓂᒃᑯᑦᓗᒋᑦ ᑲᔪᓇᓂᕐᒥᒃ ᐃᓕᓴᐃᓂᖅ

- ᑐᑭᑕᑐᐅᕙᓪᓕᐊᔨᖅ: ᑲᓇᓂᓇᓗᒋᑦ ᐊᓵᓂᐊᓵᖅᑎᑲᓗᐊᖅᓴᓐᓂᑦ ᐊᓪᒪᓗ ᐊᔨᑭᖅᑕᖅᓯᔭᑐᑦ ᑕᕆᓵ ᐊᓪᒪᓗ ᔨᓂᐊᓵ ᑐᑦᑐᐃᑦ, ᐅᒥᖓᒪᐃᑦ ᐊᓪᒪᓗ ᑕᓵᔪᓂᖓ ᓂᕐᑭᖃᖅᑐᑦ - ᐊᒪᑭᐃᑦ, ᖃᖁᕐᑦ, ᐊᐅᓕᑦ - ᑕᐃᑲᓂ ᑭᓱᓕᓂᖅ (ᐃᖃᓗᓕᒻᒥᐊᖅ ᖃᓂᑭᔭᖓᓂ) ᐊᑐᖅᓯᓗᑎᑲ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖓᓂᑲᓂᑦ ᐃᓕᓗᑦ ᖃᐅᔨᓴᐃᓂᒪᓕᖅᑲᓂᖅ ᖃᐅᔨᒪᔭᐅᔨᓂᖅ

- ᐱᓕᕆᐊᖓᔪᖅ ᐃᖏᕐᕋᓱᑎᑕᐅᓱᒪᔨᖅ 2019 ᐊᓪᒪᓗ ᓯᓚ ᐱᓕᕆᐊᖓᔪᖅ

ᓄᓇᕗᑦ ᐃᓄᐃᑦ ᖃᐅᔨᓴᕐᓂᖅᓯᒪᖃᓐᓇᑐᖅᓱᓕᕆᔨᒐᓕᕐᓂᑦ ᖁᑭᖅᑕᓗᒃ ᐃᑭᕿᖓᓕᑦ ᓇᓄᖅᑐᑦ

- ᐱᓇᓴᕆᖅᑎᑦᓗᑎᒃ ᓱᓇᑕᐅᔪ ᓴᖅᓯᒪᔪᖅᑐᑦ (ᐅᑭᐅᖅᑕᖅᑐᑐᒃ ᖃᐅᔨᓴᓇᓴᕆᔨᕐᓂᖅ ᓱᓇᑕ, ᐊᖏᑎᓕᕆᔨᒪᔪᑦ ᓱᓇᑕ), ᓄᓇᕗᑦ ᓴᖅᓯᒪᔪᖅᑐᑦ (ᐊᖏᑎᓕᕆᔨᒪᔪᑦ) ᐊᒻᒪᓗ ᐅᓪᓚᕆᔨᕆᑎᖅᑎᒪᔪᑦ ᐸᖅᓂᖅᑐᖅ ᐊᒻᒪᓗ ᑭᒡᒉᑦ ᓄᓇᖅᓯᓂ ᖁᕿᖅᑕᓂ ᓄᓇᕗᑦ.



- ᑐᑭᒋᑐᑕᐅᓕᖅᓯᐊᕐᓂᖅ: ᓄᐊᕐᑎᓗᑕ ᐊᒻᒪᓗ ᑎᑎᕋᕐᓗᒋᑦ ᐃᓄᐃᑦ ᖃᐅᔨᓴᕐᓂᖅᓯᒪᖃᓐᓇᑐᖅᓱᓕᕆᔨᒐᓕᕐᓂᑦ ᓴᓇᔨᓴᕐᓂᖅᓯᒪᓂᖅ ᖁᓕᓯᐅᕐᓂᖅᓯᒪᖃᓐᓇᑐᖅᓱᓕᕆᔨᒐᓕᕐᓂᑦ ᐸᖅᓂᖅᑐᖅ, ᓄᓇᕗᑦ, ᐃᑲᔪᕐᓗᒋᑦ ᐊᐅᓚᑦᑎᐊᕆᐅᓂᐊᕐᓇᖅᑐᓂᒃᑯᓄᑦ ᐃᓕᓚᐊᖓᔪᑦ ᒪᓕᒐᓕᐅᖅᑐᑦ ᐃᓄᐃᑦ ᖁᑭᖅᑕᓗᒃ ᐸᖅᓂᖅᑐᖅ ᐃᑭᕿᖓᓕᑦ ᓇᓄᖅᑐᑦ.

- ᐅᓂᖅᑲᖓ ᑕᒪᑐᒪ ᐃᓄᓕᒫᓄᑦ ᐊᑐᐃᓐᓇᐅᔪᖅᑐᑦ: https://www.nwmb.com/en/conservation-education/list-all-documents/docs-for-articles/inuit-qaujimajatuqangit-documents/9383-nunavut-iq-polar-bear-report-davis-strait-june-2022-eng/file

ᐅᑎᕐᓇᖅ ᑎᓯᒥᐊᑦ ᐊᓐᓂᐊᖏᑦ ᒥᐊᓂᓚᕆᐅᔪᖅ

- ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᐃᖅᑲᓇᐃᔪᖃᑎᖅᑕᖅᑐᑦ ᑐᑭᓯᓂᐊᕆᓂᕐᓂᐊᕐᒪᑕ ᑕᒪᑐᒧᑦ ᑲᑎᒪᓂᖅ ᐊᒋᐊᕐᓂᑦ ᐊᑐᖅᑑᓂ ᐅᑭᐅᖅᑕᖅᑐᒥ ᓄᓇᓕᓂᖅ ᖃᓂᒪᔨᐸᑕᐅᑕᐃᓕᓕᔨᐸᑎᑦ ᐊᒻᒪᓗ ᐊᒋᐊᑎᑦᑎᓂᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᐃᓕᓴᕐᔪᑎᑦ
- ᐅᓇ ᐃᓕᖃᖅᑐᖅ ᐱᓇᖃᐅᑎᓗᑦ ᐱᓕᕐᓕᓂᐊᕐᓂᐊᕐᒪᑕ ᐊᒻᒪᓗ ᑐᐱᕐᓂᑎᓗᑎᒃ ᖃᐅᔨᒪᔭᒥᓂᒃ ᐅᑎᕐᓇᒥᒃ ᑎᓯᒥᐊᑦ ᐊᓂᓂᓚᐅᓂᒃᑯᑦ ᐅᑭᐅᖅᑕᖅᑐᓕᒥ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᐊᓂ
- ᐱᓕᕆᐊᕆᓂᐊᖅᓯᒍ ᐅᓇ ᐱᓇᔭᐅᓕᕐᓕᐊᓂᕆᓂᐊᖅᑕᖓ, ᑲᑎᒪᖃᑎᒋᔭᐱᓕᓕᐅᖅᑐᑦ ᐱᓇᓱᐊᖃᑎᒋᑦ ᑕᒃᑯᐊᓗ ᐃᓕᐅᕐᓗᑎᒃ ᐃᓄᐃᑦ ᐊᐅᓚᕐᑎᑦ ᐊᒻᒪᓗ ᐊᓱᖏᑦ ᑐᑭᓯᓂᐊᕆᐊᖃᖅᑐᑦ ᐱᑎᐊᖅᑎᑕᐅᓚᕐᓂᖅ 2022-ᒥ.
- ᐳᐃᒍᕐᓂᐊᓕᖏᑦᐳᓕᒍ:
  - ᑐᑭᓯᓇᓱᐊᖃᑎᒌᑎᑦ ᐊᒻᒪᓗ ᒪᓕᒃᓴᑦ ᐊᓕᓂᐊᖅᑕᐃᓕᓚᑎᑦᑎᓵᒃᑯᑦ ᑎᐅᓕᑐᐊᓕ ᓴᖅᒪᒃᑯᑦ ᒪᓕᒃᑕᐅᕐᓂᕐᒪᑦᓂᓪᓗ
  - ᐅᖃᐅᓯᓚᓗᑦ ᑐᕐᑯᖓᔪᑦ/ᐊᓕᓂᐊᔪᑦ ᑎᓯᒥᐊᑦ ᐅᒪᔪᓕᓚᓵᑦᓯᓪᓗᑦ.
  - ᑐᑦᓯᒪᑦᑎᐊᖓᓇᕐᓗᑎᑦ ᖃᐅᔨᓇᓱᖃᑦᑕᕐᓗᑎᑦ ᑲᓇᑕᒥ ᐅᑎᕐᓇᖅ ᑎᓯᒥᐊᑦ ᐊᓕᓂᐊᖅᑕᖅᑐᒃ (ᖃᓄᐃᓕᓯᖅᓯᒪᓕᖅᑎᑦ ᐱᓇᔭᓕᐊᓂᖅᑕᖅᑐᒥ ᒪᓕᒃᓴᑦ)
  - ᐊᑐᐃᓇᐅᔪᑦ ᖃᓚᕋᐅᓴᖅᑯᑦ ᐅᓵᓇ: <u>ᑲᓇᑕᒥ ᐅᑎᕐᓇᖅ ᑎᓯᒥᐊᖅ ᐊᓂᓂᐊᖅᑕᖅ – ᓄᓇᒥᐅᑕᐃᑦ ᐊᓂᓂᐊᓕᑦ ᓇᓗᓇᐃᖅᑐᑦ (argis.com)</u>
- ᑐᑭᓯᑎᐸᓂᓕᕆᓚᒃ ᐅᓵᓇ: https://www.canada.ca/en/polar-knowledge/publications/avian-influenza-in-canada.html
- ᓄᓇᓕᓂᖅ ᓴᖅᑭᖅᑐᑦ: https://www.gov.nu.ca/sites/default/files/en_prevent_the_spread_06062022.pdf ;

  https://www.gov.nu.ca/health/information/programs/avian-influenza; and Avian influenza in Canada - Canada.ca

ᖃᑎᖅᑕᐅᓕᖅ ᐊᓐᓂᐊᖅᑐᑦᑕᐃᓕᓚᑎᓂᑎᓂᓄᖅ ᐊᒻᒪᓗ ᓂᖃᖏᓴᖅ ᓄᓇᒥᑦ ᐃᓕᓴᕐᓂᐊᖅᑐᑦ ᑲᑎᒪᔨᓗᑎᒃ, ᑲᓇᑕᐅᐸᑦ ᖃᓄᖅᑐᑎᑕᐅᕐᓂᖅ ᖁᐅᓴᓴᖅᓯᓐᓚᓐᓂ, 2022

- ᖃᑎᖅᑕᐅᑦ ᐊᓐᓂᐊᖅᑐᑦᑕᐃᓕᓚᑎᓂᑎᓂᓄᖅ ᐊᒻᒪᓗ ᓂᖃᖏᓴᖅ ᓄᓇᒥᑦ ᐃᓕᓴᕐᓂᐊᖅᑐᑦ ᑲᑎᒪᔨᓗᑎᒃ ᐃᓂᖅᑐᑎᑕᐅᕐᓂᖅ, ᒪᐃ 2022

- ᐊᑭᓕᖅᑕᐅᓯᒪᔪᓗᑎᒃ ᑲᓇᑕᒥ ᐅᑭᐅᖅᑕᖅᑐᒍᑦ ᒪᑭᒪᓇᓯᐊᑭᑎᑎᓴᓕᒃ ᐱᓪᓚᓕᐊᑎᑦᑎᓯᑦ ᑎᒥᖅᓯ (ᑲᓇᐊ) - ᐅᑭᐅᖅᑕᖅᑐᒥ ᓄᑖᓂᒃ ᐱᓕᕆᔨᑕᐅᔨᓇᖅᑐᑦ ᓂᖃᓄᑦ ᑭᓇᐅᔭᖅᓴᖅ

- ᑐᑭᓯᓇᓯᖏᑲᓂᖅ ᐱᒋᐊᖅᑎᑕᐅᓗᓂ ᓄᓇᕐᑦ ᓚᐸᒪᑲᓯᑦ ᐊᓐᓂᐊᖅᑐᑦᑕᐃᓕᓚᑎᓂᑎᓂᓴᑲᓯᑦ ᑖᒃᓯᐊᓗ ᐃᓕᓴᕐᓂᐊᖅᓴᐅᐊᖅᓯᒪᓕ ᑲᓇᑕᒫᑦ ᐅᒪᔨᓂᖅᑐᑦ ᐊᒻᒪᓗ ᐅᒪᔨᓴᖅᑎᑦᑎᓂᐊᖅᑐᑦ

- ᐊᑐᖅᓯᓗᑎᒃ ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓯᐊᖅᓂᖅ ᑲᓇᑕ - ᑭᓇᐅᔭᖅᓴᖅᑭᓐᓂᒃ ᖃᐅᔨᓴᕐᑎᓄᑦ: ᐱᓵᓴᓕᖅᑎᑲᓂᓕᓚᑦ ᓄᓇᓕᖓ ᐅᒪᔨᓂᒃ ᒥᐊᓂᓗᓂᖅ, ᐃᖃᓗᓕᓯᒪᔪᓴᖅᑦ ᖃᐅᔨᓇᓯᕐᑕᐅᑎᐊᖅᓂᖅᑭᑦ ᐊᒻᒪᓗ ᖃᐅᔨᓴᕐᑎᑕᑦ <ᖁᔨᓂᑦ ᓄᓇᓕᖓ ᓄᓇᖅᓱᒥ (ᑲᓇᑕᓐ ᐃᓕᓴᕐᓂᐊᖅᓴᐅᐊᖅ)

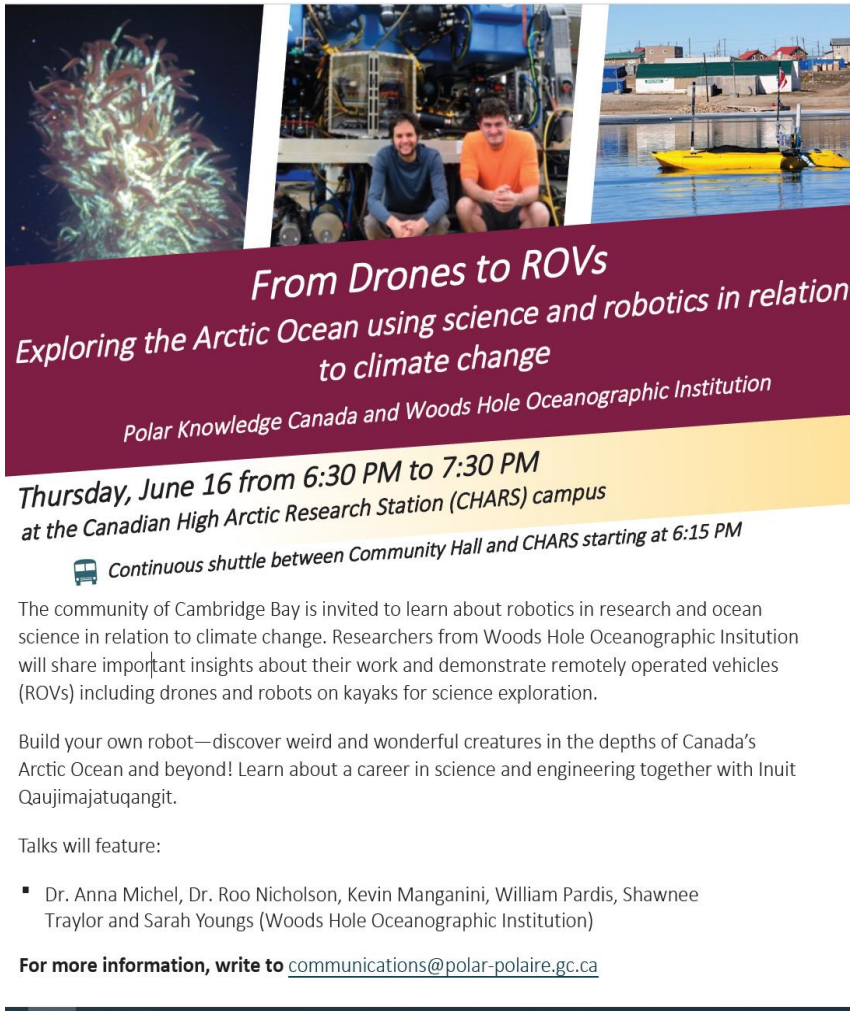
- ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓯᐊᖅᓂᖅ ᑲᓇᑕ ᐅᖃᐅᓯᒪᔪᖅᑭᑦ ᐊᒻᒪᓗ ᐃᓕᐅᑦᑎᐊᖅᑭᖅᓇᖏᓐᓂᒃ ᖁᑎᖅᑕᐅᑦ ᐊᓐᓂᐊᖅᑐᑦᑕᐃᓕᓚᑎᓂᑎᓂᓄᖅ ᐊᒻᒪᓗ ᓂᖃᖏᓴᖅ ᓄᓇᒥᑦ ᐃᓕᓴᕐᓂᐊᖅᑐᑦᑐᓂ ᑲᓇᑕᒪᓂᖅ 2022-ᒥᑦ 23-ᒧᑦ

ᓂᖅᓱᓂᒃᓯᑦ- ᓄᑖᖅ ᓂᖅᑭᓪᓕᑦ ᓂᖅᑎᓪᓗᐊᖅᓯᒪᓂ ᐊᒻᒪᓗ ᐳᐊᐃᐃᖅᓯᒪᓂ ᐃᓗᓗ ᓴᓇᔭᐅᓂᐊᖅᑐᖅ ᑕᓗᕐᔨᐊᒥ. ᓂᖅᓱᓂᒃᓯᑦᑐᖅᑐᖅ ᐊᖏᑐᓐᖏᑦᑐᓂᒃ ᓂᖅᑎᑦᑎᐊᓭᓐᓂ ᓂᖅᖃᖅᖁᓂᐊᒥᑦ, ᑲᓇᑕᒥ ᓴᐅᔨᓴᖅᓯᒪᓕᖅᓯᓐᓚ, ᐃᓄᐃᑦ ᐱᐅᔨᑐᖅᓯᒪᓕᖅᓯᓐᓚ, ᐃᓄᐃᑦ ᐊᐅᓪᓚᕆᑦᑕᕐᓗᓂᒃ ᓄᓇᑐᐃᓐᓇᒧᑦ ᐊᔨᓭᖅᑭᓐᓇᔨᓂᐊᖅᓚᒥ ᐊᒻᒪᓗ ᓄᑖᓂᒃ ᐃᓕᑦᑎᓗᓂᒃ, ᐊᑐᖅᑕᐅᑭᓐᓇᖅᓂᐊᖅᓚᒥ ᓂᖅᑭᓪᓚᕆᑦᑕᓪᓗᖅ ᑭᓇᐅᔭᖅᓴᐅᑎᑕᐅᑐᓗᒍ, ᐊᒻᒪᓗ ᓴᖅᑭᑦᑎᔨᑎᑕᓗᒍ ᓄᑖᓂᒃ ᐃᖅᑲᓇᐃᔾᔪᖅᓴᓂᒃ ᐃᓄᓐᓄᑦ. *(ᓴᖅᑭᐅᐅᓄᓐᖅᑐᖅ ᐊᑎᖅ ᐃᓕᓴᕐᓂᐊᖅᑐᑦ ᐳᓪᓕᐃᓕᓴᕐᓂᐊᖅᑐᑦ ᑕᓪᓕᐊᓂᓕᕆᔨᑦ/ᓄᓇᖅᑲᖅᑲᖅᓯᒪᔨᑦ ᑕᓪᓕᐊᓂᖅᓂᒃᓂᑦ)*

— ᐅᑭᐅᖅᑕᖅᑐᒥᒃ ᖃᐅᔨᒪᓇᓯᐊᖅᓂᖅ ᑲᓇᑕ

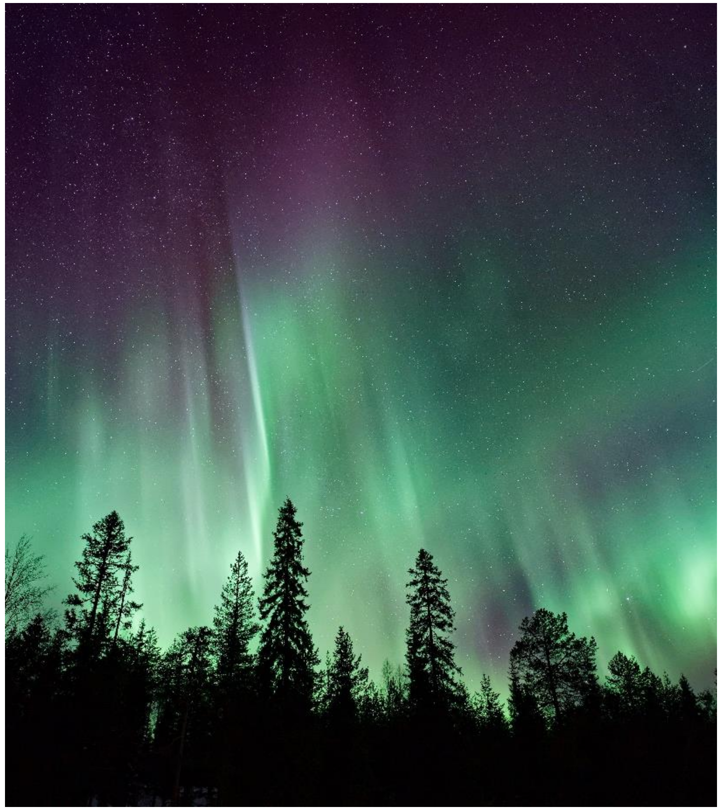
ᐅᑭᐅᖅᑕᖅᑐᒥᐅᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᐅᖃᐅᓯᐅᖏᓐᓂᑦ ᐊᒥᓱᓄᑦ ᑕᐃᒃᓂᓂ ᑲᑎᒪᔨᑦ ᐃᓕᓴᕐᓂᐊᕐᓂᖅ ᑲᑎᒪᔨᑦ ᖃᑎᖅᑐᐅᑦ, 2022

- ᐅᑭᐅᖅᑕᖅᑐᒥᐅᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᐅᖃᐅᓯᐅᖏᓐᓂᑦ ᐊᒥᓱᓄᑦ ᑐᓂᓯᒪᔪᑦ ᑕᐃᒃᓂᓄᑦ ᖃᐅᔨᓴᖅᑎᓄᑦ ᑐᓴᖅᑕᐅᑎᓪᓗᒍᑦ ᐊᓪᒪᓗ ᑐᓴᕐᕕᒋᓪᓗᒍᑦ ᖃᐅᔨᒪᔭᖏᓪᓂᒃ ᓄᓇᓕᑦ ᐊᓪᒪᓗ ᖃᑎᖅᑐᐅᑦ
- ᐅᑭᐅᖅᑕᖅᑐᒥᐅᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᑐᑭᓯᓇᓱᖃᑎᒌᓪᓗᒍᒃ ᐊᓪᒪᓗ ᐱᓇᓱᖃᑎᖃᖏᓪᓗᒍᒃ ᖃᐅᔨᓴᖅᓯᒪᓂᖅ, ᖃᐅᔨᒪᔨᓂᒃ ᑎᒍᒥᐊᖅᑎᐅᔪᓂᒃ ᐊᓪᒪᓗ ᕿᐊᓪᓕᒃᑯᑦ ᐃᖅᑲᓇᐃᑦᑐᑎᐊᖅ
  - 100 ᐃᓕᓴᓂᐊᖅᑎᑦ ᖁᔭᐊᒥᓕᐅᖅᑕᖏᓐᓇ ᐱᓕᕆᐊᕆᔨᓴᓕᒥᐅᔪᒃ ᐃᓄᖓᐊᖅ ᐊᐅᓕᐅᑎᓕᒃ
- ᐅᑭᐅᖅᑕᖅᑐᒥᐅᒃ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᐅᖃᐅᓯᐅᖏᓐᓂᑦ ᐊᒥᓱᓄᑦ 2022 ᐅᔭᓂᖏᓐᓇ ᐱᓯᒪᔨᑦ, ᐊᓯᖏᓪᓂᕐᓗ:
  - ᐃᒪᖃᐅᑕᓕᕆᔨᒃᑯᑦ ᑎᒥᖏᑦ - ᐃᓄᖓᐊᓂᒃ ᐅᐊᕼᒍᖅᑐᑦ ᐸᑕᓕᒍᖅᑐᑦ ᐃᒪᖃᑦᒃ ᖃᐅᔨᓴᕿᑕᐅᔨᑦ ᐱᕐᔪᑎᑦᓗᒍ ᓯᓕᐅᑦ ᐅᖃᓂᖓᓐᓇ ᐊᓯᕿᓂᖏᓐᓇᓄᓕᒥᑦ
  - ᓄᓇᖅᑦ ᑲᖏᒪᒃᑯᑦ - ᖃᑎᖅᑐᐅᑦ ᐊᓴᓕᐃᑦ ᖃᐅᔨᓇᓱᑕᐅᑦᑎᐊᖅᓂᖏᑦ - ᐸᑲᓇᓂᖏᑦᑐᑎᒍᑦ, ᓄᓇᓕᖓᓂᑦ ᐃᖏᕐᕋᑎᑕᐅᔪᒪᔨᑦ
  - ᑲᓇᑕᒥ ᑕᑯᓚᖃᖅᓇᒃ ᓄᓇᒥᐅᑕᖅᓂᒃ - ᐅᑭᐅᖅᑕᖅᑐᒥᐅᒃ ᐱᑕᖅᑐᑦ ᑭᐅᔭᓂᖏᑦ ᓯᓚᐅᑉ ᐅᖃᓂᖓᓐᓇᑕ ᐊᓯᕿᓂᖏᓐᓇᓄᓕᒥᑦ
- ᑕᒪᕐᓯ ᑐᓴᖏᔪᑎᑎ - ᑕᑯᓇᓱᖃᑦᑕᖅᓯᒪᔪᓐᓇᖅ ᓄᓇᕗᓂᓂ ᓴᖅᑭᖅᓯᑎᑕᐅᓕᕐᓂᑦ!



ᐅᑭᐅᖅᑕᖅᑐᒥ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᑮᓇᐃᔭᐃᑦ ᐅᑎᕈᓐᓇᓐᖏᑦᑐᑦ ᐊᒻᒪᓗ ᐃᑲᔫᓯᐊᒃᓴᐃᑦ - ᓂᕈᐊᖅᑕᐅᓯᒪᔪᓄᑦ ᐱᓕᕆᐊᖑᔪᒪᓪᓗᑎᒃ ᑮᓇᐅᔮᒃᓴᖏᑦ

- **ᑳᒃᑯᓕ ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖅ** - ᖃᓂᒪᓐᖏᑦᑎᐊᖃᓪᓗᒋᑦ ᓂᕐᔪᑎᑦ, ᖃᓂᒪᓐᖏᑦᑎᐊᖃᓪᓗᒋᑦ ᓄᓇᓖᑦ: ᐊᑐᖅᓯᔪᑦ ᒪᓕᑦᑎᐊᖅᓱᑎᒃ ᖃᐅᔨᒪᔭᐅᔪᓂᒃ ᐊᑐᖅᑕᐅᑦᑎᐊᕐᓂᐊᕐᒪᑕ ᓂᕐᔪᑎᑦ ᓄᖑᑕᐅᕙᓪᓕᐊᓐᖏᓪᓗᑎᒃ
- **ᑭᕙᓪᓕᖅ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ** - ᐃᓚᓕᐅᑎᓪᓗᒍ ᖃᓪᓗᓈᑦ ᖃᐅᔨᓴᕈᓯᖏᑦ ᐊᒻᒪᓗ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦᒥᐊᓂᖅᓯᔾᔪᑎᑦ ᐃᑲᔫᑎᑦ ᐃᒪᑦᑎᐊᕙᓐᓄᑦ ᐊᒻᒪᓗ ᐃᖃᓗᓐᓄᑦ ᖃᓄᐃᖏᑦᑎᐊᕐᓂᐊᕐᒪᑕ ᐃᓅᔾᔪᑎᑦ, ᖃᒪᓂᑦᑐᐊᖅ ᐊᕕᒃᑐᖅᓯᒪᔪᓂ ᓄᖑᑕᐅᕙᓪᓕᐊᖁᓇᒋᑦ ᒥᐊᓂᕆᔾᔪᑕᐅᔪᖅ
- **ᕿᑎᕐᒥᐅᑦ ᐊᕕᒃᑐᖅᓯᒪᔪᓂ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᑦ** - ᕿᑎᕐᒥᐅᑦ ᑐᒃᑐᖏᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ: ᐱᕙᓪᓕᐊᑎᑦᑎᓂᖅ ᐃᓄᓐᓂᑦ-ᐃᖏᕐᕋᑎᑕᐅᔪᓂᒃ ᒥᐊᓂᕆᔾᔪᑕᐅᔪᑦ
- **ᒍᐃᓐᓱ ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖓ** - ᓴᕿᑦᑎᖃᑎᖓᓪᓗᑎᒃ ᓄᓇᖅᑲᖅᑳᖅᓯᒪᔪᑦ ᖃᐅᔨᒪᔭᖏᑦ ᐊᒻᒪᓗ ᖃᐅᔨᓴᖅᑎᒪᓇᑦ ᖃᐅᔨᒪᔭᖏᑦ ᑐᑭᓱᖃᑎᒌᑦᑎᐊᕐᓗᑎᒃ ᓈᒻᒪᖏᑦᑐᓕᐅᕆᓂᐊᓐᖏᒻᒪᑕ ᐊᕙᑖᓂᑦ ᓇᓄᐃᑦ ᐃᓄᐃᓪᓗ ᐊᒻᒪᓗ ᐃᓄᐃᑦ ᒥᑎᓪᓗ
- **ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᑦ** - ᕿᑎᕐᒥᐅᑦ ᐊᒃᓱᑦ ᒥᐊᓂᕆᔭᖏᑦ - ᐸᕝᕕᓇᑎᒃ ᐊᒻᒪᓗ ᓄᓇᓕᖕᓂᑦ-ᐃᖏᕐᕋᑎᑕᐅᔪᑦ
- **ᑲᓪᓗᑕᓐ ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖅ**–ᐱᕚᓪᓕᖅᑎᓪᓗᒋᑦ ᓄᓇᓕᖕᓂ ᐆᒪᔪᓃ ᒥᐊᓂᕆᔾᔪᑕᐅᔪᑦ, ᐃᖃᓗᒐᓱᒻᕕᐅᔪᓐᓇᖅᑐᑦ ᖃᐅᔨᔭᐅᓇᓱᑦᑎᐊᕐᓗᑎᒃ, ᖃᐅᔨᓴᕈᑎᓖᑦ ᐸᕿᔨᓄᑦ ᓄᓇᒥᒃ ᓄᓇᕗᒻᒥ
- **ᓯᓚᕐᔪᐊᒥ ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᑮᓇᐅᔭᒃᓴᖅ ᑲᓇᑕ** - ᓯᕗᓂᒃᓴᑦᑎᓐᓂ-ᐊᑐᖅᑕᐅᔪᓐᓇᕐᓂᐊᖅᑐᓂᒃ ᓄᓇᓕᖕᓂ ᓂᕿᓪᓚᑖᓂᒃ ᓂᕿᒃᓴᖅᓯᐅᕈᓐᓇᕐᓂᖅ: ᓄᓇᓕᖕᓂ ᓱᕈᖅᑕᐃᓐᖏᑦᑐᓂᒃ ᓄᖑᑕᐅᕙᓪᓕᐊᓂᐊᓐᖏᓪᒪᑕ ᐋᕿᒃᓯᒪᔾᔪᑎᒃᓴᐃᑦ ᓄᓇᒥ ᐊᒻᒪᓗ ᐳᐃᔾᑦ ᓂᕐᔪᑎᑦ ᑲᓇᙱᓂ ᕿᑎᕐᒥᐅᑦ ᓄᓇᕗᒻᒥ
- **ᐅᑭᐅᖅᑕᖅᑐᓕᒫᒥ ᐃᓐᓇᑐᖃᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ** - ᐅᑯᐊ Hᑦᓴᓐ ᐸᐃ ᑲᑐᔾᔨᖃᑎᒌᑦ, ᐃᖏᕐᕋᓯᑎᑦᑎᓂᖅ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᓂᒃ ᐊᕙᑎᑦᑎᓂᒃ ᐸᕿᔨᐅᓂᕐᒧᑦ
- **ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ** - ᓂᕿᒃᓴᖅᓯᐅᕐᓂᖅ ᐊᒻᒪᓗ ᐊᓯᕙᖅᓯᒪᓂᖅ: ᐃᒃᐱᐊᕐᔫ, ᐃᖃᓗᐃᑦ, ᕿᑭᖅᑕᕐᔪᐊᖅ
- **ᖁᕐᓗᖅᑑᖅ ᐊᖑᓇᓂᐊᖅᑎᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ** –ᓄᓇᓕᖕᓂ ᒥᐊᓂᕆᓂᖅ ᖃᓂᒪᓐᖏᑦᑎᐊᖃᓪᓗᒋᑦ ᐊᒻᒪᓗ ᓄᓇᒥᖔᖅᑐᑦ ᐃᓚᓕᐅᑎᔪᑦ ᑳᐳᒪᐃᓐ ᑰᖓᓄᑦ
- **ᓚᕖᓪ ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖅ** - ᐃᖃᓗᐃᑦ ᓄᒃᑕᕐᕕᖏᑦ ᐊᓯᕈᖅᐸᓪᓕᐊᔪᒥ ᐅᑭᐅᖅᑕᖅᑐᓕᒫᒥ
- **ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ** - ᐃᓚᓕᐅᑎᔪᑦ ᐃᑦᑕᕐᓂᑕᐃᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ ᐃᓗᐊᓄᑦ ᕿᑎᕐᒥᐅᑦ ᓄᓇᖏᓐᓂᒃ ᖃᐅᔨᓴᐅᔪᑐᖃᓕᕆᓂᖅ



ᐅᑭᐅᖅᑕᖅᑐᒥ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᑲᓇᐃᔭᐃᑦ ᐅᑎᕈᓐᓇᓐᖏᑦᑐᑦ ᐊᒻᒪᓗ ᐃᑲᔫᓯᐊᒃᓴᐃᑦ - ᓂᕈᐊᖅᑕᐅᓯᒪᔪᓄᑦ - ᐱᓕᕆᐊᖑᔪᒪᓪᓗᑎᒃ ᑲᓇᐅᔭᒃᓴᖏᑦ

- **ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᑦᔨᖃᑎᒌᑦ** - ᓂᕿᒃᓴᖅᓯᐅᕐᓂᖅ ᐊᒻᒪᓗ ᐊᓯᕙᖅᓯᒪᓂᖅ: ᐃᒃᐱᐊᕐᔪᒃ, ᐃᖃᓗᐃᑦ, ᕿᑭᖅᑕᕐᔪᐊᖅ
- **ᑭᕙᓪᓕᖅ ᐃᓄᐃᑦ ᑲᑐᑦᔨᖃᑎᒌᑦ** - ᐃᓚᓕᐅᑎᓪᓗᒍ ᖃᓪᓗᓈᑦ ᖃᐅᔨᓴᕈᓯᕐᒋᑦ ᐊᒻᒪᓗ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦᒥᐊᓂᖅᓯᑦᔪᑎᑦ ᐃᑲᔪᑎᑦ ᐃᒪᑦᑎᐊᕙᓐᓄᑦ ᐊᒻᒪᓗ ᐃᖃᓗᓐᓄᑦ ᖃᓄᐃᖕᒋᑦᑎᐊᕐᓂᐊᕐᒪᑕ ᐃᓅᑦᔪᑎᑦ, ᖃᒪᓂᑦᑐᐊᖅ ᐊᕙᒃᑐᖅᓯᒪᔪᓂ ᓄᖑᑕᐅᕙᓪᓕᐊᕐᑯᓇᒋᑦ ᒥᐊᓂᕆᔾᔪᑕᐅᔪᖅ
- **ᑳᒃᑯᓕ ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖅ** - ᖃᓂᒪᓐᖏᑦᑎᐊᕐᑯᓪᓗᒋᑦ ᓂᕐᔪᑎᑦ, ᖃᓂᒪᓐᖏᑦᑎᐊᕐᑯᓪᓗᒋᑦ ᓄᓇᓖᑦ: ᐊᑐᖅᓯᔪᑦ ᒪᓕᑦᑎᐊᖅᓱᑎᒃ ᖃᐅᔨᒪᔭᐅᔪᓂᒃ ᐊᑐᖅᑕᐅᑦᑎᐊᕐᓂᐊᕐᒪᑕ ᓂᕐᔪᑎᑦ ᓄᖑᑕᐅᕙᓪᓕᐊᓐᖏᓪᓗᑎᒃ
- **ᖁᓪᓕᖅ ᐆᒻᒪᖁᑎᓕᕆᔩᖏᑦᑕ ᑎᒥᖁᑖ** – ᓄᓇᐅᑉ ᐆᓇᕐᓂᖓ ᐃᑲᔫᑎᒃᓴᓄᑦ ᖃᐅᔨᓇᓱᐊᑦᑎᐊᕐᓂᖅ ᓄᓇᓕᖕᓂ ᐆᒻᒪᖁᑎᖃᐅᑎᒃᓴᓄᒃ ᐸᕐᓇᐃᓂᖅ, ᓄᓇᕗᒻᒥ.
- **ᕿᑎᕐᒥᐅᑦ ᐊᕙᒃᑐᖅᓯᒪᔪᓂ ᐆᒪᔪᓕᕆᔾᔪᐊᒃᑯᑦ ᑲᑎᒪᔩᖏᑦ** - ᕿᑎᕐᒥᐅᑦ ᑐᒃᑐᖏᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ: ᐱᕙᓪᓕᐊᑎᑦᑎᓂᖅ ᐃᓄᖕᓂᑦ-ᐃᖏᕐᕋᑎᑕᐅᔪᓂᒃ ᒥᐊᓂᕆᔾᔪᑕᐅᔪᑦ
- **ᐆᓴᓐ ᒍᐃᒡ ᓄᖑᓗᐊᖅᑕᐃᓕᑎᑦᑎᓂᖅ ᑲᑐᑦᔨᖃᑎᒌᑦ** – ᐅᑭᐅᑦᑲᑦᑐᓕᒫᖅ ᓄᓇᓕᖕᓂ ᐊᐅᒃᑕᔫᓕᕆᓂᖅ ᐃᖏᕐᕋᓯᑎᓯᒪᔭᖓᑦ
- **ᑳᓗᑕᓐ ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖅ**–ᐱᕚᓪᓕᖅᑎᓪᓗᒋᑦ ᓄᓇᓕᖕᓂ ᐆᒪᔪᓂᒃ ᒥᐊᓂᕆᔾᔪᑕᐅᔪᑦ, ᐃᖃᓗᒐᓱᐊᖕᕕᐅᔪᓐᓇᖅᑐᑦ ᖃᐅᔨᔭᐅᓇᓱᑦᑎᐊᕐᓗᑎᒃ, ᖃᐅᔨᓴᕈᑎᑖᑦ ᐸᕿᔨᓄᑦ ᓄᓇᒥᒃ ᓄᓇᕗᒻᒥ
- **ᐃᒡᓗ ᑎᒥᖓ** –ᐅᑭᐅᖅᑕᖅᑐᒥ ᐊᖏᕐᕋᒃᓴᐃᑦ ᓯᕗᓂᒃᓴᑎᓐᓂ: ᓄᓇᒥᑦ ᐆᒻᒪᖁᑎᖃᐅᑎᖃᖅᑐᑦ ᐊᒻᒪᓗ ᐆᒻᒪᖁᑎᖃᐅᑎᓂᒃ ᐊᑐᓗᐊᓐᖏᑦᑐᓕᕆᓂᖅ
- **ᓯᓚᕐᔪᐊᒥ ᐆᒪᔪᓕᕆᓂᕐᒧᑦ ᑲᓇᐅᔭᒃᓴᖅ ᑲᓇᑕ** - ᓯᕗᓂᒃᓴᑦᑎᓐᓂ-ᐊᑐᖅᑕᐅᔪᓐᓇᕐᓂᐊᖅᑐᓂᒃ ᓄᓇᓕᖕᓂ ᓂᕿᓪᓚᑖᓂᒃ ᓂᕿᒃᓴᖅᓯᐅᕈᓐᓇᕐᓂᖅ: ᓄᓇᓕᖕᓂ ᓱᕈᖅᑕᐃᓐᖏᑦᑐᓂᒃ ᓄᖑᑕᐅᕙᓪᓕᐊᓂᐊᓐᖏᒪᑕ ᐋᕿᒃᓯᒪᔾᔪᑎᒃᓴᐃᑦ ᓄᓇᒥ ᐊᒻᒪᓗ ᐳᐃᔾᑦ ᓂᕐᔪᑎᑦ ᑲᓇᖕᓇᖕᒐᓂ ᕿᑎᕐᒥᐅᑦ ᓄᓇᕗᒻᒥ
- **ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᑦ** – ᓯᒃᔭᓂᒃ ᓄᑖᕈᖅᑎᑦᑎᓂᖅ ᐃᓂᑐᖃᖕᓂᐅᓂᒃ ᓄᓇᕗᒻᒥ: ᑐᑭᓯᓂᖅ ᐊᒃᑐᐃᓂᖓ ᓱᑲᔪᒥᒃ ᐅᒪᔪᓕᒫᓂᒃ ᐊᕙᑎᓕᒫᖏᓐᓂᓪᓗ ᐊᓯᕈᖅᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᓄᓇᓕᖕᓂ.
- **ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖅ ᐋᑐᐋ** –ᓯᕐᒥᑦ ᐃᒥᖓ ᖃᐅᔨᓴᖅᑕᐅᕗᖅ: ᓄᓇᓕᖕᓂᑦ-ᐃᖏᕐᕋᑎᑕᐅᔪᖅ ᐊᕙᑎᒥᒃ ᖃᐅᔨᓴᐃᓂᖅ ᐊᐅᔪᐃᑦᑐᕐᒥ
- **ᑎᒥᖓ ᑲᓇᑕᒥ ᖃᐅᔨᓴᖅᑎᒻᒪᕇᑦ** – ᐊᑦᑕᕐᓇᖅᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐃᒥᖅᑕᕐᕕᖏᑦ ᐊᕙᑎᕗᑦ ᐊᓯᕈᖅᑎᓪᓗᒍ
- **ᕿᑎᕐᒥᐅᑦ ᐃᓄᐃᑦ ᑲᑐᑦᔨᖃᑎᒌᑦ** - ᐃᓚᓕᐅᑎᔪᑦ ᐃᑦᑕᕐᓂᑕᐃᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ ᐃᓗᐊᓄᑦ ᕿᑎᕐᒥᐅᑦ ᓄᓇᖏᓐᓂᒃ ᖃᐅᔨᒪᔭᐅᔪᖃᓕᕐᓂᖅ

ᑲᓇᑕ - ᐃᓄᐃᑦ ᓄᓇᖅᑐ - ᐸᓇᐃᑎᑦ ᑭᖅᑕᒻ ᐅᑭᐅᖅᑕᖅᑕᖅᑐᒥ ᖃᐅᔨᓴᓕᑎᖅᑐᑦ (#CINUK)

- **ᑲᓇᑕ-ᓯᓚᕐᐸᐊᖅ ᐃᓄᐃᑦ ᓄᓇᖅᑐᓂᓄ ᐸᓇᐃᑎᑦ ᑭᖅᑕᒻ ᐅᑭᐅᖅᑕᖅᑕᖅᑐᒥᑲ ᖃᐅᔨᓴᓕᑎᑦ** - ᐃᑲᐸᖅᑎᑭᓗᓪᓚᑎᑲ ᖃᐅᔨᓴᓕᑎᑦ ᑭᓇᐅᔭᖅᓴᑦ ᐊᐅᓪᓚᑕᐅᐸᑦ ᑲᓇᑕ (ᐅᑭᐅᖅᑕᖅᑕᖅᑐᒥᑲ ᖃᐅᔨᓴᓇᓯᐊᕐᓂᖅ ᑲᓇᑕ, ᑲᓇᑕᒥ ᖃᐅᔨᓴᖅᑎᑦ ᑲᑎᒪᔨᖏᑦ, ᒥᖅᖢᐃᖅᓯᕐᓂᕆᔨᑲᑦ ᑲᓇᑕ ᐊᓚᓗ ᑯᐸᐃᖏᒥ ᖃᐅᔨᓴᓕᑎᖅᓴᓂᓄ ᑭᓇᐅᔭᖅᓴᖅ) ᐃᓄᐃᑦ ᑕᐱᓱᑦ ᑲᓇᑕ ᐊᓚᓗ ᐸᓇᐃᑎᑦ ᑭᖅᑕᒻ
- ᓇᓕᖅᑲᓕᐅᕈᑎᓴᐃᑦ ᑭᓇᐅᔭᖅᓴᑦ ᑕᐳᑯᓇᖏᑦ ᐸᓇᐃᑎᑦ ᑭᖅᑕᒻ ᐊᓚᓗ ᑲᓇᑕ ᐃᑲᐸᖅᑐᑦ 20.1 ᒥᓕᐊᓵ ᖃᑭᐸᐸᑎᓴᓂ ᐅᑭᐅᖅᑕᖅᑕᖅᑐᒥ ᖃᐅᔨᓴᖅᑎᑎᐊᖅᓂᐊᖏᒪᑕ, 2022-ᒥᑦ 2024/25-ᒧᑦ
- **ᐊᑐᓂ ᐱᓕᓀᐊᖏᔪᓇᓂᑦ ᐃᓄᐃᓂᓂ ᓂᕆᔨᓇᖏᑦ ᐸᓇᐃᑎᑦ ᑭᖅᑕᒻ ᐊᓚᓗ ᑲᓇᑕ ᖃᐅᔨᓴᖅᑎᑦ ᑲᓚᓗ ᑕᔪᑎᑦᑎᐸᑦ ᓄᓇᕗᓂᓂ ᐱᓇᓯᐊᖅᖢᓇᖅᑐᑦ ᑲᓚᓗ ᖃᐅᔨᓴᖅᑎᓕᕐᓗᑎᑦ**
- 13 ᐱᓕᓀᐊᖏᑦ ᐱᒋᐊᖅᑐᑦ ᐊᐃᓀᓕ 2022:
- ᖃᓄᓗᓇᑐᑦ: https://www.canada.ca/en/polar-knowledge/news/2022/05/successful-canadian-inuit-and-uk-research-teams-announced-for-major-new-arctic-research-programme.html
- ᐃᓄᒃᑎᑐᑦ: https://www.canada.ca/content/dam/polar-polaire/news/CINUK-2021-2025-announcement-new-release-inuktitut.pdf

ᐅᑭᐅᖅᑕᖅᑐᒥ ᖃᐅᔨᒪᓇᓱᐊᕐᓂᖅ ᑲᓇᑕ ᖃᐅᔨᓴᕈᑎᓄᑦ ᑮᓇᐅᔾᖃᐃᑦ - ᓂᕈᐊᕐᓗᒍ ᑲᓇᑕ - ᐃᓄᐃᑦ ᓄᓇᖓ - ᔪᓇᐃᑎᑦ ᑭᖕᑕᒻ ᐅᑭᐅᖅᑕᖅᑐᒥ ᖃᐅᔨᓴᕈᑎᖓᑦ ᑮᓇᐅᔾᖃᖏᑦ ᐱᓕᕆᐊᖑᔪᓄᑦ

- ᐃᓄᐃᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐱᓕᕆᔾᔪᑏᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐅᓯᑲᖅᑕᖅᑐᑦ ᐊᑦᑕᕐᓇᖅᑐᑦ ᐃᓄᐃᑦ ᓄᓇᖓᓂ - ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖅ ᐋᑐᕚ
- ᓴᓇᖕᖑᐊᕐᓂᖅ ᐊᒻᒪᓗ ᓯᓚᐅᑉ ᐅᕐᑰᓂᖓ ᐅᖃᐅᓯᐅᔪᖅ - ᐃᓄᐃᑦ ᒪᒃᑯᒃᑐᓂᑦ, ᒪᒥᓴᕐᓂᖅ, ᐊᒻᒪᓗ ᐊᕙᑎᑦᑎᓂᒃ ᐸᕿᓂᖅ - ᓴᖄᑦᓱᐊᓐ ᐃᓕᓐᓂᐊᕐᕖᔪᐊᖅ
- ᓯᒫᑦᐊᐃᔅ - ᓵᓕᕆᔭᐅᑕᐃᓕᖅ ᓴᖑᓂᖅᑖᕐᓂᖅ ᓄᓇᓕᑦᑎᓐᓄᑦ ᓄᓇᓐᖑᐊᓕᐅᕐᓗᒋᑦ ᒪᓂᕋᐅᓐᖏᑦᑐᑦ ᓯᑯᑦ ᐊᒻᒪᓗ ᐃᒪᓕᑦ ᓯᑯᑦ ᐊᑦᑕᕐᓇᓐᖏᑦᑐᒥᒃ ᐃᖏᕐᕋᕙᐅᓂᐊᕐᒪᑦ ᐃᓄᐃᑦ ᓄᓇᖓ - ᒥᒧᐊᓕᐅ ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖅ
- ᐋᑐᑎᖃᖅᑐᓂᒃ ᐊᒃᑐᓇᐊᖅᑕᐃᓕᑎᑦᑎᓂᖅ ᐊᒻᒪᓗ ᓱᖏᐅᓴᓂᖅ ᐊᓯᕈᖅᐸᑉᓕᐊᓂᖓᓄᑦ ᓱᕋᔾᔭᐃᖅᓯᒪᓗᒋᑦ ᓯᓪᔭᐃᑦ ᓯᕗᓂᒃᓴᑦᑎᓐᓄᑦ - Hᐋᓪᓚᒃᑯᑦ ᑕᓗᕐᔪᐊᖅ
- ᑮᒋᐊᖅ ᐸᒥᐅᖅᑐᖅ ᐊᒻᒪᓗ ᐃᓅᓯᓕᕆᓂᕐᒧᑦ-ᐆᒪᔪᓕᓖᑦ ᐊᕙᑎᓖᖏᓪᓗ ᑲᔪᓯᑎᐊᖏᓐᓇᕐᓗᑎᒃ ᐃᓄᐃᑦ ᓄᓇᖓᓂ - ᒍᐃᐴᓕᑦ ᓗᓕᐋ ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖅ
- ᓄᓇᐳᑦ ᕿᓂᖅᑎᑦ ᐸᖅᓴᐃᔨᑦ ᐱᓕᕆᐊᖑᔪᖅ: ᐃᑲᔪᖅᑐᖅ ᐃᓄᖕᓂᒃ ᐋᓐᓂᐊᖃᖅᑕᐃᓕᑎᑦᑎᓂᕐᒧᑦ ᐊᒻᒪᓗ ᒪᒥᓴᐃᓂᕐᒧᑦ, ᓂᕿᒃᓴᖅᓯᐅᕐᓂᕐᒧᑦ, ᒪᑭᒪᓇᓱᐊᕈᑎᒃᓴᑦ ᑮᓇᐅᔾᔭᓕᐅᕈᑎᑦ, ᐊᒻᒪᓗ ᓄᓇᓕᖕᓂ ᓴᐱᓕᖅᑕᐃᓕᒪᓂᖅ ᓴᖏᒃᑎᓇᓱᐊᕐᓂᖅ ᓄᓇᕗᑦ ᑕᒪᕐᒥᒃ ᓄᓇᖃᑎᓲᑦ - ᓯᑦ ᕗᓚᓯᔅ Hᐋᕕᐋ ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖅ
- ᓄᓇᒥ ᐆᒪᕐᑯᑎᖃᐅᑎᖃᕐᕕᑦ ᐃᓚᓕᐅᑎᓗᑎᒃ ᐅᖓᓯᒃᑐᒦᑦᑐᓂ ᓄᓇᓕᖕᓂ, ᑎᑭᐅᑎᓯᒪᔪᓐᓇᓐᖏᑦᑐᓄᑦ ᐃᒡᓗᕋᓛᕐᓄᑦ ᓄᓇᕗᒻᒥ - ᓄᓇᕗᑦ ᓄᒃᑭᒃᓴᐅᑏᑦ ᑯᐊᐳᓈᓴᓐ
- ᐃᓄᒃᓯᐅᑎᑦ: ᓂᕿᒃᓴᑦ ᓄᓇᕗᒻᒥ ᐊᒻᒪᓗ ᓴᕿᑕᐅᓗᑎᒃ ᐃᓄᐃᑦ ᓂᕿᓪᒪᑖᖏᑦ - ᔪᐊᒃ ᐃᓕᓐᓂᐊᕐᕕᒃᔪᐊᖅ

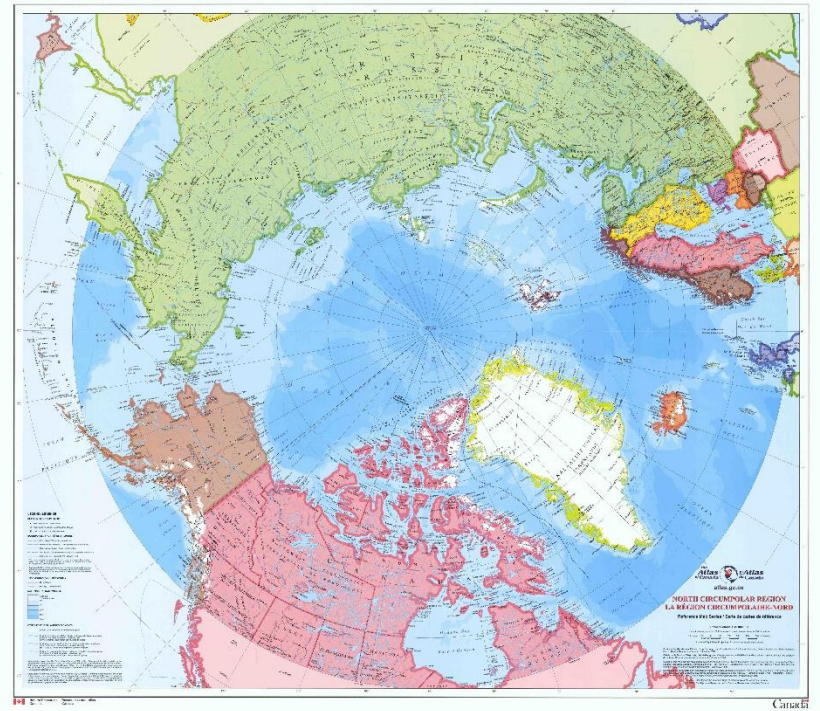
ᓯᓚᕐᓴᐅᒥ ᖃᓄᐃᓕᓐᐅᕈᑕᐅᔾᔨᓪ ᖃᓄᐃᓕᓐᓂᓚᕐᓕᓂᑦᑎᓪᑕ

- ᑲᓇᑕ ᐊᒻᒪᓗ 6 ᐊᓯᖏᑦ ᐅᑭᐅᖅᑕᖅᑐᑐᒥ ᓄᓇᓕᓪ ᓯᓚᕐᓴᐅᒥ ᓄᖅᑎᑕᖏᑦᑕ ᐅᑭᐅᖅᑕᖅᑐᑐᒥ ᑲᑎᒪᔨᑦ ᖃᓄᐃᓕᓐᐅᕈᑎᒋᖏᓐᓄᓕᓪ ᑭᐅᔨᓪᓗᑎᑉ ᐅᓪᓚᐊ ᓄᓇᐃᖅᓯᓂᖏᓐᓄᓕᓪ ᔪძᓚᐃᓐᒥᑦ

- COP26 ᓯᓚᐅᑦ ᐅᖃᓗᓂᓪᓕᐊᓂᖏᓐᓇ ᐊᓯᕈᖃᓂᖏᓐᓇ ᑲᑎᒪᐅᑕᐅᓪᓗᓂ, ᓴᓪᓯᓗ, ᓯᑲᑦᓪᓵᓪᑦ, 2021 - ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᖃᐅᔨᒪᓇᓯᐊᖃᖅᓂᖅ ᑲᑎᑕ ᖃᒥᖃᕈᐃᑦ: ᓄᓇᖅᑲᖅᑲᖅᓯᒪᔪᑦ ᓇᖅᒥᓂᖅ ᐅᒪᔨᓇᖅᑐᑦ ᖃᐅᔨᓴᕈᑎᑦ ᐱᐅᓂᖅᓴᒥᑦ ᓯᓚᕐᓴᐅᒥ ᐅᖃᓗᓂᓪᓕᐊᓂᖏᓐᓇ ᐊᓂᖅᓯᓚᐅᓂᐊᖅᑎᑦ

- ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᖃᐅᔨᒪᓇᓯᐊᖃᖅᓂᖅ ᑲᑎᑕ ᐱᓭᓪᓕᐊᑎᑦᑎᓂᖅᑕᖅ ᐊᓭᑎᑦᑎᓂᓂᑦ ᖃᐅᔨᓴᖅᑎᑕ ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᐊᒻᒪᓗ ᐅᑭᐅᖅᑕᖅᑐᒥᓵᖏᓪᓕᑦᑐᒥᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᓂᑦᑐᒥᑦ ᐊᒻᒪᓗ ᐱᓕᕆᔨᓇᖅᑕᒥᓂᖅᓴᑦ

    - ᑲᓪᓚᓂᑎᑕ ᓂᕈᐊᖅᑕᐅᓚᓂᑦ ᓚᕕᓪᐅᖅᑎᑦ ᖃᐅᔨᓴᕐᓂᖏᓐᓇ ᐊᓪᓚᑎᑦ ᐊᖏᕈᑎᒍᑦ
    - ᑕᒪᐃᓪᓂᑦ ᐃᓕᓴᕆᐅᓪᓗᓂᑦ ᐊᑕᒍᑦ ᑲᑎᒪᔨᑦ ᐊᐅᓚᑦᓚᕐᓂᑦ ᑲᑎᑕᒥ ᐊᓪᓚᑎᑦ ᐱᓕᕆᔨᓂᑎᑦᓴᕈᑎᐅᔪᖅ



3rd ARCTIC SCIENCE MINISTERIAL

IASC

ARCTIC COUNCIL

COMNAP Council of Managers of National Antarctic Programs

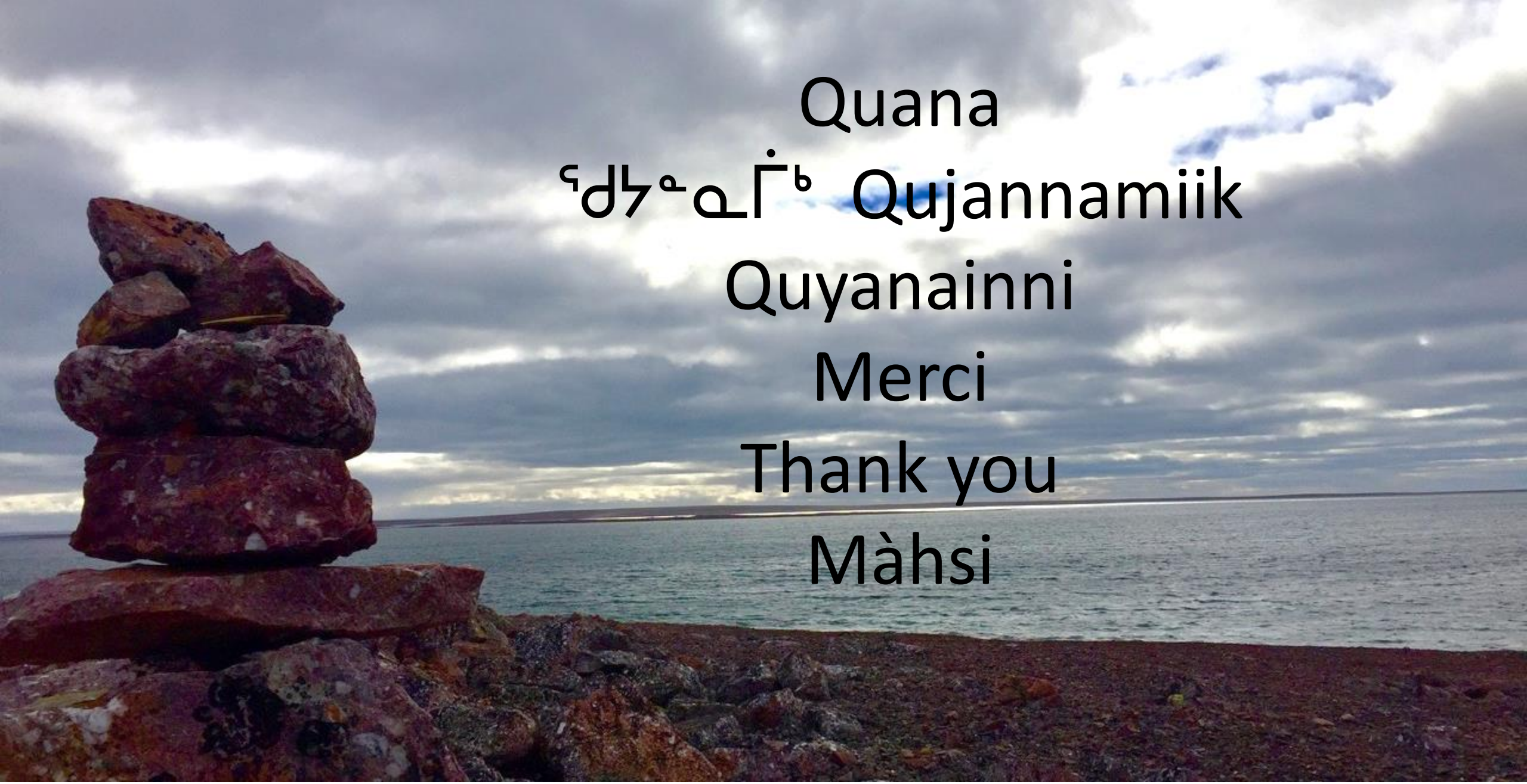
ᓯᕗᒻᒧᑦ ᑕᑯᓇᓯᐊᕐᓂᖅ ᐊᒻᒪᓗ ᓴᓇᖅᑐᑎᒃᓴᖅ

1) **ᐅᑭᐅᖅᑕᖅᑐᒥᐅᑦ ᖃᐅᔨᒪᓇᓯᐊᕐᓂᖅ ᑲᓇᑕ ᐱᓕᕆᑎᑦᑎᐊᕆᓂᐅᑦ ᖃᒥᕐᕿᐊᕐᓂᖏᑦ, 2022-ᒥᑦ 23-ᒧᑦ** - ᖃᐅᔨᓴᐃᓂᒪᒃᑕᐅᑦ, ᓄᑦᑦ ᐱᓕᕆᔨᒃᑕᐅᔪᖅ, ᖃᐅᔨᒪᓴᐅᔪᓂᐅᑦ ᐊᐅᓚᑦᑎᔨᕆᑎᑦ ᐊᒻᒪᓗ ᑲᑎᒪᓂ ᐅᑭᐅᖅᑕᖅᑐᒥᐅᑦ ᖃᐅᔨᒪᓇᓯᐊᕐᓂᖅ ᑲᓇᑕ ᑐᓴᕈᒪᓐᓇᐅᑉ ᐅᖃᐅᑎᓴᐅᔪᒪᔭᓗᑎᒃ ᐅᑯᓄᖏᑦ:

- ᐅᑭᐅᖅᑕᖅᑐᒥᐅᑦ ᖃᐅᔨᒪᓇᓯᐊᕐᓂᖅ ᑲᓇᑕ ᐱᓕᕆᑎᑦᑎᐊᕆᓂᐅᑦ ᖃᐅᔨᓴᕈᑎᖅᑕᑦ - ᓄᑦᓂᑦ ᐃᓱᒪᓕᕈᑎᒃᓴᓂᑦ, ᑐᑭᒧᐊᒃᑎᑦᑎᔨᑎᑦ

- 2023 ᐅᑭᐅᖅᑕᖅᑐᒥᐅᑦ ᖃᐅᔨᒪᓇᓯᐊᕐᓂᖅ ᑲᓇᑕ ᑲᑎᒪᓂᖅ ᓴᖅᑭᑎᐸᓕᐊᓂᐊᕐᒪᑕ ᓄᑦᓂᑦ ᖃᓄᐃᓕᕈᑎᒃᓴᓄᑦ ᐊᒻᒪᓗ ᑐᖁᖅᑕᒃᓴᓄᑦ, 2025-ᒥᑦ 2030-ᒧᑦ

- ᓂᓚᐅᓇᖅᑐᖅ 2024 ᑐᒃᓯᕐᕆᐅᑎᓂᒃ ᐱᔪᒪᓂᐊᖅᑐᑦ - ᓄᑦᑦ ᖃᐅᔨᓴᐃᓂᒪᒃᑕᓐᓄᑦ, ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖅᓄᑦ ᐊᒻᒪᓗ ᓄᑦᑦ ᐱᓕᕆᔨᓕᖅᑐᑦ ᖃᐅᔨᓴᕈᑎᓄᑦ ᑭᓇᐅᔭᓴᓐᓂᐅᓂᑦ.



Quana

ᖁᔪᓂᓪᓕᒋᑦ Qujannamiik

Quyanainni

Merci

Thank you

Màhsi