Annual report
Cape Bounty Arctic Hydrological Observatory (CBAWO)

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ᓄᓇᐅᑉ ᐃᓕᖅᑯᓯᐊ ᐃᒪᖏᓗ ᐊᐅᓚᓂᕆᓲᖏ ᓄᕗᐊᑕ ᓂᔾᔪᑎᖃᐅᖅᑑᑉ, ᐅᖅᓱᕆᐊᖅ ᕿᑭᖅᑕᖕᓂ

ᐱᓕᕆᐊᕗᑦ ᑐᕋᒐᖃᖅᑐᖅ ᓇᓗᓇᐃᖅᓯᓇᓱᐊᓐᓂᒻᒥᒃ ᖃᓄᖅ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᐊᒃ ᑐᐃᒻᒪᖏ ᓄᓇᖑᓂᒃ ᐃᒪᐅᓪᓗ ᐃᒥᑦ ᑎᐊᖑᔾᔪᑖᓂᒃ. ᐱᓕᕆᓂᕗᑦ ᐃᓚᖃᖅᑐᖅ ᐃᑰᑕᓐᓂᒻᒥᒃ ᐃᖅᑲᓇᔭᐅᔪᓂᒃ ᐃᒥᖑᓂᓪᓗ ᑕᓲᑦ ᑰᒋᔭᖑᓗ ᑕᐃᑲᓂ ᓄᕗᐊᑕ ᓂᔾᔪᑎᖃᐅᖅᑑᑉ. ᓂᕈᐊᖅᓯᒪᔭᕗᑦ ᑖᒃᑯᐊ ᑕᓲᑦ ᐱᓪᓗᒍ ᑰᖏ ᓴᕝᕙᐅᑎᑦ ᑎᒻᒪᑕ ᓈᒻᒪᒃ ᑐᒥᒃ ᐃᓱᕈᑎᐅᓲᓂᒃ ᐃᑎᔭᐃᓪᓗᑕᓲᑦ ᖃᐅᔨᓴᕆᐊᖃᖅᑐᑎᒍᑦ ᐃᖅᑲᖓᖅᒥ ᑕᖅᑕᐅᖏᓐᓇᓐᓂᖓᓐ ᑰᓪᒍᑦ ᖃᐅᔨᓴᔫᑦ ᑕ ᐃᖅᑲᓇᔫᖏ. ᖃᐅᔨᓴᐃᓯᒪᔭᒍᑦ ᑕᐃᒪᐃᑦ ᑐᓂᒃ ᑕᓯᓐᓂᒃ ᑕᐃᑲᓐᖓᓂᑦ 2003 ᑲᔪᓯᒃ ᑲᓐᓂᕈᒪᓪᓗᑕᓗ ᖃᐅᔨᓴᐃᓂᑦ ᑎᓐᓂᒃ ᐊᕐᖀᒍᒃ ᑲᓐᓂᓗᓚᓐᓄᑦ ᐊᒡᒋᖅᑐᓄᑦ.

ᐊᐅᔭᖑᑦ 2013, ᑕᖕᒫᕝᕕᖃᓚᐅᖅᐳᒍᑦ ᒥᑭᑦᑐᒥᒃ ᓄᕗᐊᑕ ᓂᔾᔪᑎᖃᐅᖅᑑᑉ ᐱᒋᐊᖅᓗᓂ ᔪᓚᐃ 16 ᑎᑭᔾᓗᒍ ᐊᒡᒐᓯ 2 ᐅᓄᓈᖑᔪᓂᒃ ᐃᓄᖃᑲᐃᓐᓇᖅᓗᑕ 7-ᓂᒃ, ᐃᓚᒋᖅᓱᐅᑎᓪᓗᓂᐅᒃ ᑕᐱ ᐃᖃᓗᒃ ᖃᐅᓱᐃᑦᑐᒥᐅᑦ. ᖃᐅᔨᓴᓚᐅᖅᐸᕗᑦ ᑕᒪᐃᓐᓂᒃ ᑰᖏ ᑕᓯᖏᓗ, ᐊᒻᒪᑦᑕᐅᖅ ᐃᖃᓗᕝᕕᓪᓗᑎᒍᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᔅᓴᓂᒃ ᓴᕙᕋᓴᖅᑯᓂᖏ ᐅᓗᕆᐊᓇᓲᒥᒃ. ᖃᐅᔨᓴᒐᔅᓴᓂᒃ ᑲᑎᖅᓱᐃᒋᓪᓗᑕ ᐃᔅᔭᖑᓂᒃ, ᐊᒻᒪᑦᑕᐅᖅ ᖃᐅᔨᓴᐅᑎᓂᒃ ᓄᓇᐅᑉ ᐃᑭᐊᖑᓄᑦ ᐃᓕᐅᖅᑲᐃᒋᓪᓗᑕ.

ᑕᒪᑐᒪᓂ 2014, ᑕᑯᔅᓴᕈᐃᔪᒪᔪᒍᑦ ᑕᖕᒫᕝᕕᒻᒥᒃ ᓄᕗᐊᑕ ᓂᔾᔪᑎᖃᐅᖅᑑᑉ ᒪᐃ ᓄᓇᖑᐊᒍᑦ ᓇᔪᓪᓗᑎᒍᓪᓗ ᑎᑭᓐᓇᓱᓪᓗ ᐋᒡᒐᓯ ᐅᑉ ᕿᑎᖅᐸᓯᐊ. ᐅᐱᓐᖓᒃᑯᑦ, ᓇᓗᓇᐃᖅᓯᑕᓪᓗᒍ ᖃᐅᔨᓴᒐᔅᓴᓂᓪᓗ ᑲᑎᖅᓱᐃᓗᑕ ᐊᐳᑎᐊᓂᒃ ᐃᒥᖓᓗ ᖃᐅᔨᓴᒐᔅᓴᒥᒃ ᐱᕝᕙᐅᖅᑯᑕᓪᓗᓂ ᓂᐅᖅᑐᖅᓯᒪᔭᒃᑯᑦ ᓯᑯᐊᒍᑦ. ᓇᕈᓂᓕᒫᕗᑦ ᓇᖕᖏᐊᓐᓇᖕᖏᓐᓗᒍ ᓯᑰᒃᑯᑦ ᖁᒍᑎᖃᓗᑕ. ᖃᐅᔨᓴᕈᑎᓄᑦ ᓯᓚᖑᓂᑦ ᑰᓐᓂᐊᑕ ᓴᓐᖓᓂᑎᓴᖑᓂᑦ ᐊᐅᔭᒃᑯᑦ, ᖃᐅᔨᓴᐅᑎᓂᒃ ᐃᓚᐅᖅᑲᐃᓂᐊᖅᑐᒍᑦ ᑕᓯᖏᒍᑦ ᑰᖏᒍᓪᓗ ᑐᑭᓯᔅᔪᑎᒋᓂᐊᖅᑕᑦᑎᓐᓂᒃ ᖃᓄᖅ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᐊᓄᑦ ᐊᒃᑐᖅᑕᐅᓲᖏᓪᒪᖔᑦ ᑰᖏ. ᖅᑰ ᑲᓐᓂᐊᒍᑦ, ᐃᒪᐅᑉ ᐃᓕᖅᑯᓯᐊ ᖃᓇᑎᒋ ᐃᓯᖅᑎᒋᒻᒪᖏ, ᑕᕆᐅᖅᑯᓂᖏ ᐱᕈᖅᑐᕕᓃᑦ ᐊᓯᖏ ᓗᓂᖃᐅᓲᑦ ᐆᒪᔪᓴᓛᓄᑦ. ᐃᑲᔪᐃᓂᖅᑐᒪᑦ ᑕᒪᓐᓇ ᑐᑭᓯᐅᒪᓂᑎᓐᓄᑦ ᖃᓄᖅ ᐃᒪᖑ ᓄᓇᖑᐊᓯᔅᓴᓐᓂᖄᖑ ᒪᖒ ᓯᓚᖑᐊᓯᔅᓴᓚᖅᑎᓪᓗᒍ, ᖃᓂᓪᓗᓴᖅᑮᔪᓐᓇ ᓇᓂᖑᐱᕈᖅᑐᖏᓄᑦ ᐅᑭᐅᖅᑕᖅᑑᑉ ᓂᔾᔪᑎᖑᐱᓂᓗ.

ᕿᒥᕐᕈᓇᓐᓂᐊᓪᒥᔭᕗᑦ ᐳᕈᖅᑐᐃᑦ ᓲᒃ ᑲᓂᑎᔭᖏ ᐱᕈᖅᓗᑎᒃ ᑲᔪᓯᑎᓪᓗᒍᓗ ᓄᓇᐅᑉ ᐃᑭᐊᖏ ᖁᐊᖑᐃᓐᓇᓲᖑᐊᓯᔅᐳᖅᑕᓐᓂᖃ ᒪᖒᓄᑦ. ᐃᑲᔫᑎᖅᑕ ᓚᓐᒃ ᑭᒍᖅ ᐱᓕᕆᓂᐅᔪᖅ ᑕᒪᓐᓇ ᓄᓇᖑ ᐊᒃᑐᖅᑕᐅᓯᒪᒻᒪᑦ ᓯᑭᓂᐅᓚᑦ ᐅᖅᑰᓂᑦ ᓚᓇᐅᔪᒥᒃ ᐊᕐᖀᒍᖏᑦ 2007-12 ᑕᒪᓐᓇ ᑐᓯᓴᐃᓯᒪᓪᓗᓂ ᐊᒃᑐᐃᓯᒪᓪᓗᓂᓗ ᓄᓇᐅᑉ ᐅᑭᐊᖏᓂᒃ ᖁᐊᖑᐃᓐᓇᖑᓗᐊᒥᒃ. ᖃᐅᔨᓴᓴᓯᒃᑐᑦ ᖃᓂᖅ ᑕᒪᓐᓇ ᐊᐅᖅᑯᐅᑎᖅᑯ ᑕᓕᓂᐊ ᓄᓇᐅᑉ ᐅᑭᐊᖑᐊᒃ ᑐᐃᓯᖑᓕᓯ ᐊ ᐊᕝᐱᖏᓂᒃ ᐃᒥᓇᔪᖏᓂᓗ.

Landscape and water processes at Cape Bounty, Melville Island

Our work is intended to determine how climate change affects the land and water quality. Our work involves obtaining sediment and water samples from the lakes and streams at Cape Bounty. We have chosen these lakes because the rivers appear to supply abundant sediment and deep lakes are needed to preserve the sediments for our research. We have been doing this work since 2003 and hope to continue for several more years.

In 2013, we had a small camp at Cape Bounty from July 16 to August 2 with up to seven people, including Debbie Iqaluk from Resolute. We sampled the rivers and lakes, and collected fish samples to measure the mercury in them. We also collected soil samples, and added more soil temperature stations.

In 2014, we will establish a camp at Cape Bounty in late May and be there until mid-August. In the spring, we will measure and sample the snow and collect water samples from the lake through holes in the ice. All travel during this early period will be with a skidoo and sled. To measure weather and stream flow during the summer, we will place instruments in the lake and on the rivers to tell us how the rivers respond to weather. Additionally, we will measure the water quality by sampling the water and measuring sediment, salts, carbon and nutrients in the samples. This work is important for understanding how water and the land will change as climate changes, and the potential effects on wildlife vegetation.

We will also measure the vegetation growth and continue to study the changes to the permafrost at Cape Bounty. This work is important because this area was affected by very warm temperatures from 2007-12 and this disturbed and changed the permafrost. We are trying to determine how this affects the environment and water.