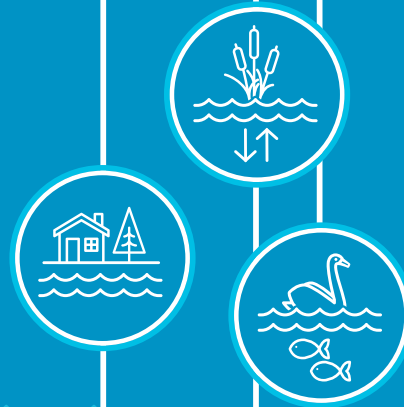




HYDRO STORAGE ENHANCEMENTS PART OF OUR
Future-Focused Portfolio

making the most of what we have



FINAL ROUND OF PUBLIC ENGAGEMENT

SOUTHERN LAKES ENHANCED STORAGE PROJECT

Thank you for working with us over the last ten years to research and discuss our proposed Southern Lakes Enhanced Storage Project. You've asked questions, provided comments and shared a diverse set of views.

We would like to hear from you again for your final comments on this project before we make a decision about whether to move this project forward for assessment by the Yukon Environmental and Socio-economic Assessment Board.

Learn more and have your say.
yukonenergy.ca/southernlakes

Call: (867) 393-5333

Email: communications@yec.yk.ca

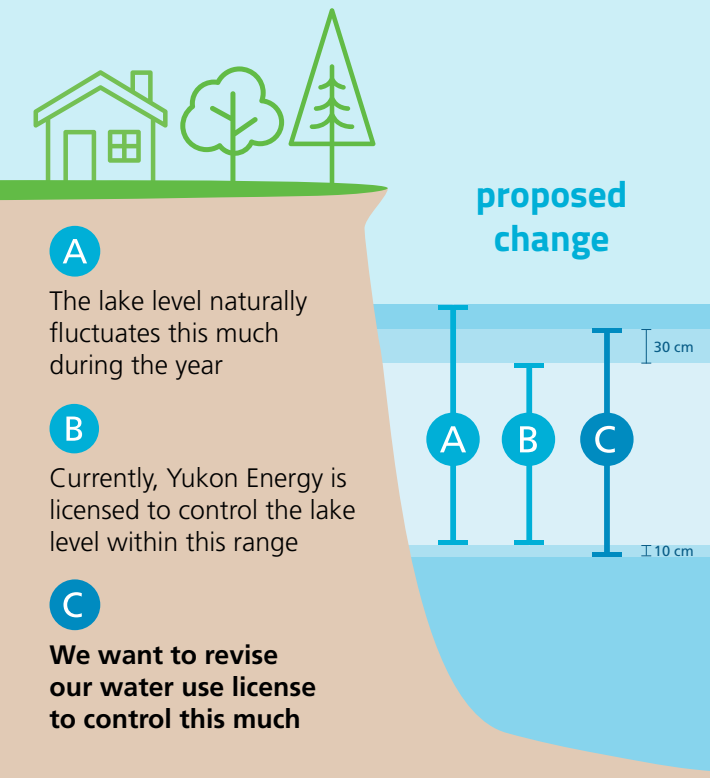


project details

The Southern Lakes Enhanced Storage is a renewable option that would:

- generate an additional 6.5 gigawatt hours of renewable electricity each winter (enough to power some 500 homes);
- reduce greenhouse gas emissions by about 3,100 tonnes a year (about the same as taking 650 cars off the road each year);
- save Yukoners about \$1 million a year at current diesel and LNG prices; and
- require no new dams or infrastructure.

In the fall and early winter, water levels would look about the same as they do in late summer. The rest of the year, the lakes would look just as they normally do.



what we've heard so far

Over the years, Southern Lakes residents and property owners have asked us about:

- erosion;
- groundwater;
- fish, wildlife, waterfowl and wetlands; and
- traditional land uses and heritage resources.

In 2015, we held two rounds of meetings with 40 property owners in six neighbourhoods who could potentially see erosion impacts as a result of the concept. We also had telephone conversations and face-to-face meetings with more than 150 residents potentially affected by groundwater issues. Seventy-one properties were physically surveyed to confirm infrastructure elevations and 12 properties were evaluated by an engineer for potential geotechnical/structural effects.

After consulting with you, we have confirmed the areas that would and wouldn't be affected by the proposed project and developed various mitigation solutions to address what matters to you.



shorelines at risk of additional erosion

- 1 NORTH M'CLINTOCK (14)**
- 2 ARMY BEACH (16)**
- 3 ALASKA HWY SECTION AND S-206 (1)**
- 4 JUDAS CREEK (4)**
- 5 TAGISH LAKE OUTLET (6)**
- 6 TAKU SUBDIVISION NORTH (28)**

There is already naturally occurring erosion in some areas of the Southern Lakes. This erosion will continue with or without this enhancement project.

The bulk of the lakes' shorelines are resilient to erosional forces (e.g., steep and/or rocky).

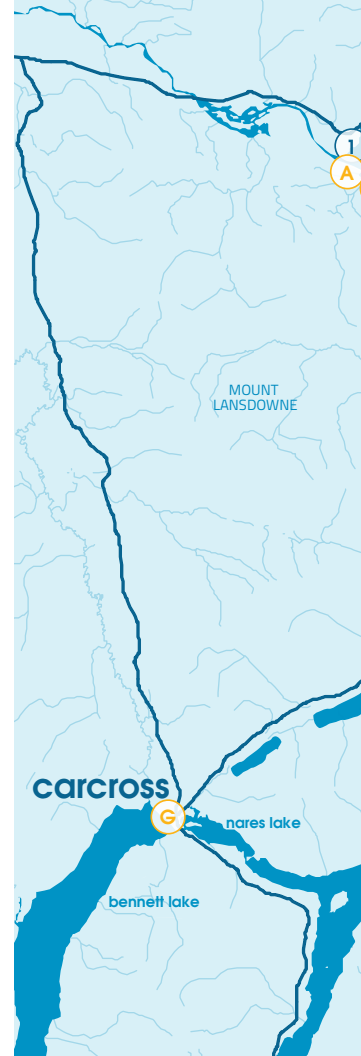
This project would cause increased erosion around 69 shoreline properties in six areas.

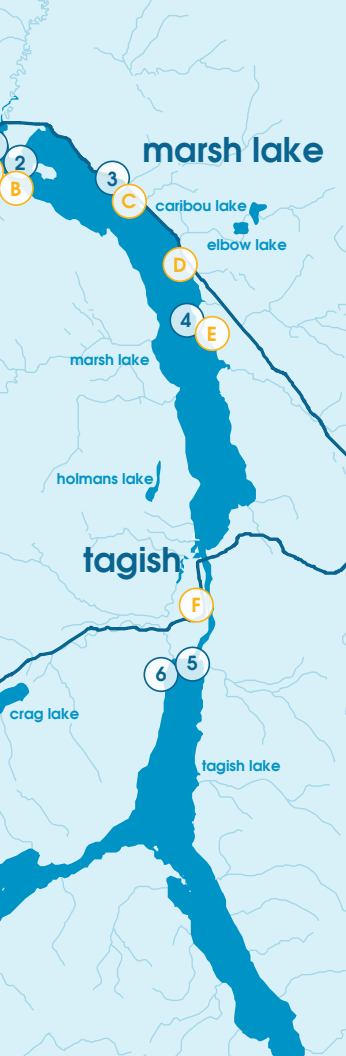
WHAT RESIDENTS HAVE TOLD US

- When considering mitigation options, effectiveness and durability are the most important factors.
- Judas Creek residents preferred groynes (rock structures that extend into the water to disrupt waves).
- Residents in other affected areas preferred riprap (large rocks with or without vegetation).

ACTION PLAN

- ✓ Yukon Energy will build and maintain engineered protection along the shoreline of properties that may be affected by the project.
- ✓ Protection would be completed by "shoreline unit" (a multi-property approach); not on individual property shorefronts.
- ✗ Yukon Energy will not build shoreline protection in areas not identified with a number on the map. Research has found that this project would not increase the rate of erosion that already happens in these areas.





properties potentially affected by groundwater



- A SOUTH M'CLINTOCK (16)**
- B ARMY BEACH (21)**
- C M'CLINTOCK PLACE (3)**
- D OLD CONSTABULARY (4)**
- E JUDAS CREEK (3)**
- F TAGISH (9)**
- G CARCROSS (1)**

Some property owners in the Southern Lakes already experience issues with groundwater affecting their septic fields/tanks, basements/crawlspaces, and sumps.

This project would result in a slightly longer duration of seasonal high groundwater levels in some low-lying areas (mostly a matter of effects seen in summer lasting longer into the fall).

The project would not increase the amount of groundwater under affected properties.

Fifty-seven properties would be affected.

WHAT RESIDENTS HAVE TOLD US

- When speaking with and visiting affected residents, we determined what the specific effects to each property would be and the type of mitigation that would be needed.

ACTION PLAN

- ✓ Yukon Energy will work directly with affected residents and property owners to install the specific solutions needed at each site to address groundwater concerns.
- ✗ Yukon Energy will not install solutions to address groundwater in areas not identified with a letter on the map. Research has found that this project would not increase the amount or duration of seasonal high groundwater levels that already happens in these areas to a degree that might affect subsurface infrastructure.

Wondering if your specific property will be affected?

Visit [yukonenergy.ca/southernlakes](https://www.yukonenergy.ca/southernlakes) for detailed maps that show the specific properties that will be affected by the project.



fish, wildlife, waterfowl and wetlands

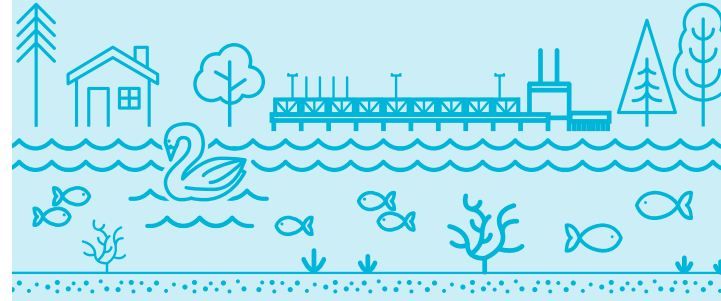
In researching this potential project, studies looked at more than 200 species of plants and animals.

Research revealed the project would have minimal effects on fish, wildlife, waterfowl and wetlands in the project area.



traditional land uses and heritage resources

We recognize the strong traditional and cultural connection between local First Nations and the Marsh, Tagish and Bennett lakes. Yukon Energy continues to have discussions with the Carcross/Tagish First Nation, Kwanlin Dün First Nation and Ta'an Kwäch'än Council to understand and mitigate any impacts of erosion or groundwater on Traditional and Settlement Lands in the project area.



adaptive management

Before the project can go ahead, limits of acceptable/unacceptable change will be set. With careful monitoring, the range can be adjusted to address any issues that might arise.

next steps

If the decision is to proceed then

SUMMER AND FALL 2019

Final round of public engagement and continued discussions with Carcross/Tagish First Nation, Kwanlin Dün First Nation and Ta'an Kwäch'än Council

SPRING 2020

Yukon Energy Board decision about the project

EARLY 2020

What We Heard report released

SPRING AND SUMMER 2020

Continued discussions with Carcross/Tagish First Nation, Kwanlin Dün First Nation and Ta'an Kwäch'än Council

SPRING 2021

YESAA recommendation received; application to amend water use license submitted; *Fisheries Act* Authorization application submitted

LATE WINTER, SPRING AND EARLY SUMMER 2022

Erosion and groundwater solutions installed

FALL 2020

YESAA* project proposal submitted

WINTER 2021

Permits obtained

FALL/WINTER 2022

Use of expanded storage range in Southern Lakes; more renewable electricity generated at Whitehorse Rapids every winter

An ongoing monitoring program will be implemented to confirm effect predictions and mitigation effectiveness.

*Yukon Environmental and Socio-economic Assessment Act

Learn more and have your say

For detailed studies and reports, visit yukonenergy.ca/southernlakes

Call: (867) 393-5333
Email: communications@yec.yk.ca



Take the survey

We've asked the Yukon Bureau of Statistics to help us gather your input on this project by collecting your views in an online survey. The survey will be open October 15 to November 8, 2019 with follow-up calls happening in late November and early December. A letter with the PIN number you'll need to complete the survey will be mailed to you later this month.

Attend an information session



TAGISH

October 2
5:30 – 7:30 pm
Presentation at 6 pm
Tagish Community Centre

CARCROSS

October 7
5:30 – 7:30 pm
Presentation at 6 pm
Carcross Learning Centre
Clan Room

WHITEHORSE

October 15
5:30 – 7:30 pm
Presentation at 6 pm
High Country Inn

MARSH LAKE

October 16
6:30 – 8:30 pm
Presentation at 7 pm
Marsh Lake Community Centre

More events are being planned.

Visit yukonenergy.ca/southernlakes for a complete event listing.