Base Mine Extension Project Update

Winter 2022

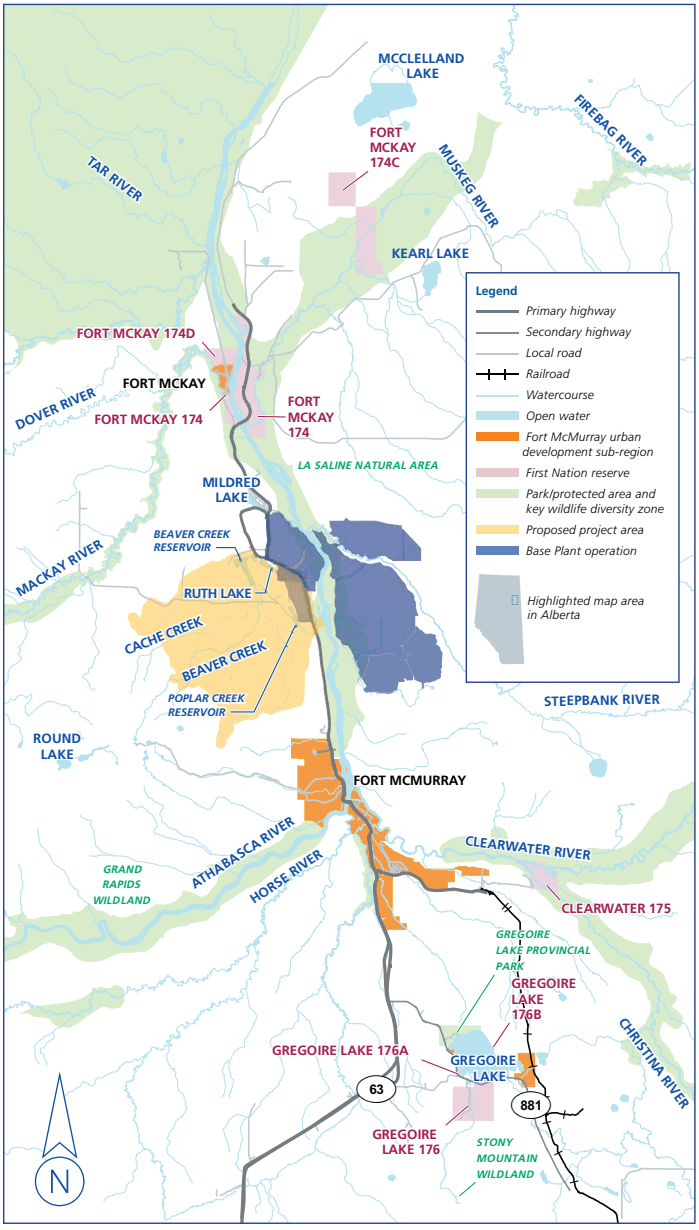


Figure 1. Project area map

Purpose

You are receiving this newsletter because we think you'd be interested in hearing about the Base Mine Extension project (the project). While we are still in the early stages of developing a regulatory application for the project, we want to ensure that you stay informed on our progress and plans. This is our second newsletter of 2022. You can find a copy of the August 2022 newsletter at **www. suncor.com/en-ca/what-we-do/oil-sands/base-mine-extension**. If you have questions, concerns or wish to be removed from this mailing list please reach out to basemineextension@suncor.com.

Background

The project is being proposed as an extension to our existing Base Plant operations. The project would consist of a new mine and primary extraction facilities on the west side of Highway 63 north of Fort McMurray, Alberta. The project is located adjacent to our existing operations, so that we can leverage existing secondary extraction facilities, upgrader and power utilities. The project is expected to produce up to 225,000 barrels per day of bitumen froth over 25 years. Production would start ramping up in the early to mid-2030s once the existing sources of bitumen at Base Plant are depleted.

The project is intended to replace, as opposed to expand, existing production. As such, Suncor views the project as a key component to the continued economic sustainability in the region.

A Year in Review

Suncor is in the early stages of completing the Impact Assessment to support the joint Provincial and Federal application for the project. Over the past year, Suncor has been busy working through the first steps in the assessment process which include:

Issues Scoping

- Identified issues from stakeholders that should be included in the assessment
  - Air pollution, noise levels, jobs, wildlife impacts etc.

Assessment Components

- Identified specific assessment components and indicators to address these issues
  - Air quality (dust levels), wildlife (ecologically/ traditionally important species)

Establishing Boundaries

- Determined area over which potential project effects could impact each component
  - Review research to understand how far dust or other air pollution can travel

Describing Existing Conditions

- Collected baseline data for each assessment component within determined boundaries
  - Monitoring of dust levels near to the proposed project site

Engagement on Issues, Assessment Components & Boundaries

Suncor have taken the issues that have been identified on the federal project registry website, as well as issues that have been raised during early engagement and will consider them as assessment components and indicators. This includes issues raised through the 2021 virtual public town hall as well as those raised by Regional Municipality of Wood Buffalo (RMWB) staff in a 2022 technical session. Additionally in 2022, Suncor held several technical information sessions and follow-up meetings with Indigenous communities in the region to understand their feedback. Through these engagement activities we have heard that the following issues are among the most important to Indigenous communities and stakeholders:

- Air Quality (Dust and silica)
- Noise
- Water quality and flows within the Athabasca River and Peace Athabasca Delta
- Access and exercise of Indigenous rights
- Visibility of the project from key vantage points and light pollution
- Wildlife
- Vegetation (Muskeg, wetlands and traditional plants)
- Jobs (Existing workforce, autonomous haul trucks, preference to locals)
- Proximity, location and safety considerations
- Tailings ponds
- Infrastructure and Recreation (Highway 686, ATV Trails)

Baseline Data Collection

Suncor has been busy in 2022 completing a number of field programs to collect baseline data to better understand the existing environmental conditions in and around the project area. These programs complement studies done in previous years to address the issues raised by Indigenous communities, stakeholders and associated assessment components. In 2022, there were 34 field visits to collect baseline data for the following programs:

Air quality
- dust levels

Aquatic health
- fish tissue
- plants
- bottom feeding organisms
- sediment quality

Fish
- populations
- habitat
- food conditions

Groundwater
- water quality
- water levels in the 78 active wells across site

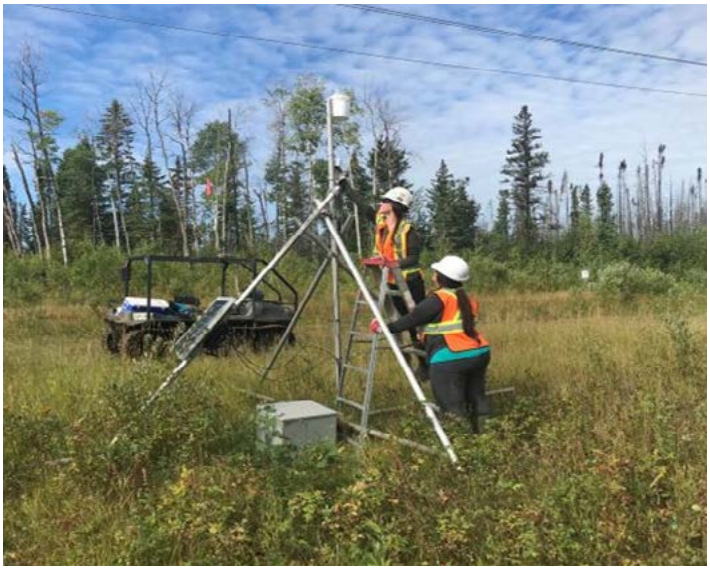
Hydrology
- streamflow and ice thickness measurements at 13 locations across site

Water quality
- water and sediment sampling at 14 locations
- snow quality at 6 locations

Wildlife
- bat, bird and insect surveys

Visual
- photos taken at key vantage points to understand visual and light effects

A worker performs a site visual assessment



Workers monitor equipment as part of a dust assessment

These programs will add to the data collected over the past 15 years at this project site as well as regional and community led monitoring programs in the RMWB. Additional field work is currently being considered for 2023 based on regulatory requirements as well as Indigenous community and stakeholder feedback.

Baseline Field Programs: Aquatic Health, Fish & Fish Habitat

Suncor and environmental consultants, WSP Golder, have been collecting environmental baseline information from the Base Mine Extension (formerly Voyageur South) local study area since 2004. An important component of these studies is the collection of data to characterize fish and fish habitat in the watersheds within or adjacent to the proposed project development area. Since 2004, Suncor and WSP Golder have collected data at 27 study sites in the local study area, to understand the potential environmental impacts from the project on aquatic health and fish habitat.

The Poplar Creek watershed and the Beaver Creek watershed are two important locations that are included in the local study area. These two watersheds collectively harbour several species of fish that fall under the categories of sport fish, non-sport fish (suckers), or forage fish (e.g. minnows). An important distinction between these two watersheds and a main driver of fish distribution, is their connection to the Athabasca River. The Poplar Creek watershed is directly connected to the Athabasca River and is open to migratory fish populations, whereas the Beaver Creek watershed is not and has not been since the completion of the Beaver Creek Diversion in 1976.

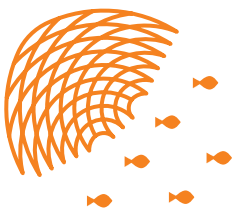
View of Northern Pike captured using backpack electrofishing from a lower reach of Poplar Creek.

View of a White Sucker captured using gillnets from Ruth Lake.

The information collected on fish community and fish habitat helps form a picture of how different species of fish use existing habitat or could use the habitat at the study sites. This information will inform impacts on fish and fish habitat associated with the proposed project. Suncor and WSP Golder will supplement the data collected with regional studies dating back to the late 1960s and share the findings in the Impact Assessment phase of the Impact Assessment process.

Examples of Fish Sampling Techniques

Boat/backpack electrofishing



Gill netting

Minnow trapping

Traditional Knowledge

Traditional Knowledge is a key component in determining the existing conditions of the project area. This can provide an understanding of what conditions existed prior to monitoring being conducted and also provides an understanding of the connection of Indigenous Peoples to the land and environment. Suncor has been collaborating with Indigenous communities through the following activities in 2022 to receive and understand Traditional Knowledge related to the project area and region:

- Baseline study design methods workshop
- Site visits including baseline data collection demonstration and information sharing
- Collaboration on specific studies
- Indigenous-led studies including traditional land use, health, socio-economic, impact to culture and rights

Baseline Study Design Methods Workshop

A baseline study design workshop was held on June 28, 2022 with Indigenous communities to receive Traditional Knowledge on the 2022 field program. This included understanding species of interest, techniques for monitoring and locations of importance to communities that should be considered for monitoring.

Baseline design study workshop, Fort McMurray June 28, 2022

A Community Perspective on the Base Mine Extension Site Visit

Rollo Goodwin, Willow Lake Métis Nation

In September, Suncor hosted five site visits at the project footprint. A number of Indigenous communities from the RMWB, the Northwest Territories and northern Alberta communities primarily around the Lac La Biche / Athabasca area, participated in a presentation to go over the details of the project, followed by a site visit of portions of the project footprint. In total, 13 communities participated with approximately 130 community members visiting the area.

The site visit was an opportunity for participating Indigenous groups to see the project footprint in-person, share their knowledge, ask questions, and raise concerns with the project team. Rollo Goodwin, of Willow Lake Métis Nation, took part in one of the site visits and shared that he thought the visit was a good opportunity for groups affected by the project to raise their questions, “I really liked how our questions were answered. Suncor had the people there to answer the questions,” shared Rollo.

When asked what he noticed on the project footprint, Rollo observed that although much of the project footprint is burnt due to the 2016 Horse River Wildfire, re-growth is happening. “When I sat and looked around, I could see that the acorns on the spruce trees are really thick this year. I mentioned it while sitting around the fire and picked one up,” Rollo shared, also observing that the spruce tree re-growth is well underway.

As part of the tour of the project footprint, Suncor demonstrated data collection monitoring techniques to share information with the attendees about the baseline study field program. This included information on air quality, aquatic health, fish and fish habitat, hydrology, and wildlife and wildlife habitat. Rollo remarked that one thing he took away from these discussions was particularly how intensive the fish studies are and the type of fish being caught. Rollo mentioned he was also surprised by the number of bats and bat species in the project area and shared, “I have caught a few [bats] in my trapline, but I didn’t know

there was that many."

When asked if he thought the site visit gave attendees a better understanding of the project area and baseline studies being done in the area, Rollo shared he thought it did. He also commented that the information regarding Suncor's progressive reclamation was particularly interesting, "As it [the project] progresses, Suncor is going to reclaim behind it [the disturbance]. As Suncor uses the land and doesn't need it anymore, they are putting the land back to nature and to what it was."

Suncor is committed to ensuring the final reclamation of the landscape has the equivalent land capability and it is integrated with the surrounding area and ecosystems. The goal is to establish reclaimed boreal forest in upland and lowland communities with key characteristics like biodiversity and water suitability for the natural environment.

Suncor would like to thank Rollo for his contribution to the newsletter as well as all those who participated in the site visits.

Rollo Goodwin (seen in blue), Willow Lake Métis Nation during project site visit

Project site visit

Collaborating with Fort McMurray Métis 1935 on Freshwater Clams Baseline Field Work

An interview with Len Hansen, Fort McMurray Métis 1935

As mentioned above, Suncor has been engaging with Indigenous communities, government and other stakeholders to understand what topics of particular concern or interest are important to them early in project planning. By asking these questions early on we can consider the issues as part of our fieldwork and data collection planning and process with the aim of developing an Impact Assessment that is meaningful to those that the project may positively or negatively impact.

We heard from Fort McMurray Métis 1935 representatives that freshwater clams were important. This species had not been identified nor included in previous assessments in the Wood Buffalo area and Suncor were unfamiliar with where and how we might collect the data. We went back to Fort McMurray Métis 1935, who developed a monitoring program for freshwater clams and were able to partner with them and use their expertise to inform our baseline field studies for the project. This past summer we went into the field with Fort McMurray Métis 1935 community members, and they showed us how to collect baseline field data on freshwater clams.

We asked Len Hansen, of Fort McMurray Métis 1935, a community member involved with the field data collection, why freshwater clams were important to him. Len explained that freshwater clams are an essential part of a healthy waterway. "Freshwater clams are indicators of the water systems and let you know how healthy the water systems are. If you found them, you could take them, boil them up or throw them on the fire and eat them, but that is not their primary function. The primary function is to filter the water," stated Len.

We also asked Len about his experience with Suncor and the freshwater clam data collection field work. Len explained that his experience in the field with Suncor was similar to other oil sands projects. Len shared that it has been interesting being involved with Fort McMurray Métis 1935's freshwater clams monitoring program as it was something that has not been done before. "The exciting part is to figure out what you're going to do to make it all work that is beneficial to everybody and beneficial to getting the information that people are looking for," stated Len. Len advised that the freshwater clam monitoring program is a good example of how communities can partner with industry and gain valuable information because it demonstrates how everything in the environment is connected. "This clam study is part of the whole aspect of Mother Nature that controls how stable and healthy the water is. If the water is healthy everything should be healthy because everything needs water."

Suncor would like to thank Len for his contribution to the newsletter.

Cultural Moment

The northern lights are not only spectacular to look at, but they also hold significant importance to Indigenous communities. For many, the northern lights are sacred as they represent the spirits of deceased ancestors dancing, hunting, playing games and travelling to their hunting grounds. Many communities will camp in places of importance to watch the northern lights and sit in silence to allow nature, the Creator and the ancestors to communicate with them.

Written by Kelsey (syəmyim) Norton, Nlaka'pamux of Spuzzum First Nation

Next Steps

Suncor will continue to engage with you as the project progresses to keep you informed of project updates and opportunities to provide input on the project.

Indigenous Consultation & Engagement

Operating for more than 50 years in the Wood Buffalo region, Suncor has worked to build positive, meaningful relationships with those it shares the region with.

Suncor provides opportunities to participate in an open and transparent process that facilitates engagement. We acknowledge the interests of local Indigenous people regarding our environmental stewardship and engage with them on matters such as end-land use, air quality and local operational updates.

Consultation occurs regularly and directly on key projects. Specific to Base Mine Extension, we began early engagement with many Indigenous communities and work to mitigate project-specific concerns and provide socio-economic benefits and opportunities.

Happy Holidays

The Base Mine Extension project team would like to wish you all a happy and safe holiday season. We look forward to connecting with you in 2023.

Journey of Reconciliation

Our relationships with Indigenous communities over the past 50 years has been a journey. We have learned so much along the way and know that earning the trust and respect of Indigenous Peoples and communities are fundamental to strengthening our relationships, our organization and our business.

In 2021 we developed the Journey of Reconciliation to progress the way we think and act to build mutual trust and respect with Indigenous Peoples. Through this journey, we are progressing the way we think and act to build mutual trust and respect with Indigenous Peoples. To learn more please visit www.suncor.com/en-ca/sustainability/indigenous-relations/journey-of-reconciliation.

How to Reach Us

If you have any questions, concerns or comments please reach out to our project team at:
Email: basemineextension@suncor.com
Toll-Free: 1-855-955-3054

Additional information can be found on the project webpage at:
www.suncor.com/en-ca/what-we-do/oil-sands/base-mine-extension