WELCOME

FRASER RIVER TUNNEL PROJECT

Early Engagement

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RECOGNITION OF TRADITIONAL TERRITORIES

The Province of B.C. acknowledges that the proposed Fraser River Tunnel Project is located on Coast Salish traditional lands.

Fraser River Tunnel Project

The proposed Fraser River Tunnel Project includes the construction of a **new toll-free, eight-lane immersed tube tunnel**, including three vehicle lanes and a dedicated transit lane in each direction, that will replace the existing George Massey Tunnel on Highway 99. The new tunnel will also include a separated active transportation corridor for cyclists and pedestrians for the first time.

The Project also includes:

- Replacement of the Deas Slough Bridge
- Removal of the existing tunnel once the new tunnel is in operation

NEW TUNNEL FEATURES

- Built to modern design standards
- Wider roadway tubes
- Enhanced lighting, and fire and life safety systems
- Separated active transportation corridor within the tunnel

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FRASER RIVER TUNNEL

Project Benefits

A new immersed tube tunnel will replace the George Massey Tunnel on Highway 99, providing people with a toll-free crossing that aligns with regional interests.

SAFETY

The new immersed tube tunnel will meet modern seismic standards and be built to modern design standards. It will also provide safe options for pedestrians, cyclists and other modes of active transportation.

ACTIVE TRANSPORTATION

The new tunnel will provide a dedicated active transportation connection for pedestrians and cyclists to cross the Fraser River on Highway 99 for the first time.

TRANSIT

Transit will be quicker, safer and more reliable, with dedicated bus-only lanes to accommodate fast and frequent bus rapid transit service.

RELIABILITY

The new tunnel will provide more capacity and more reliable travel for goods and service trips, allowing for increased business, economic growth and productivity.

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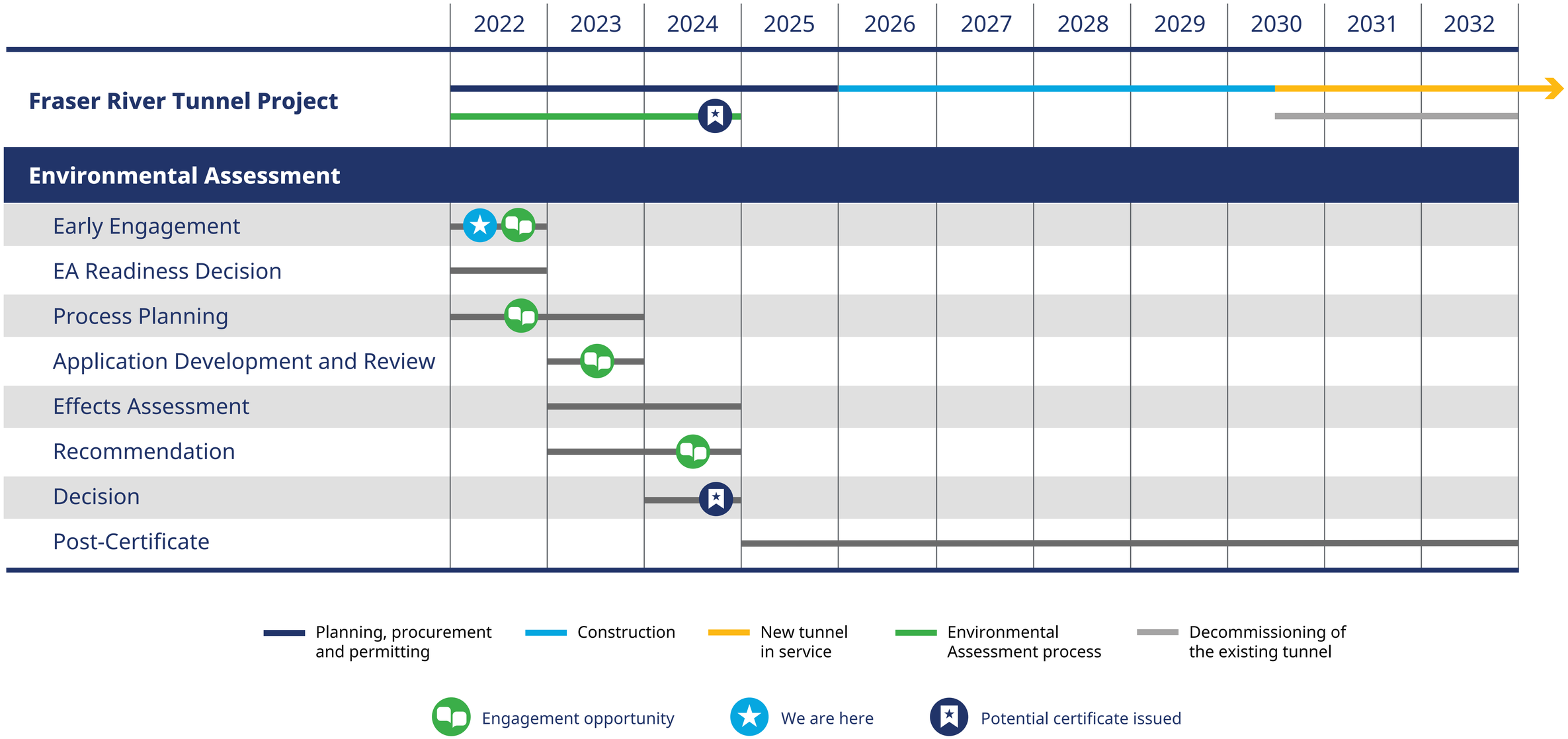
Planning and Delivery Process



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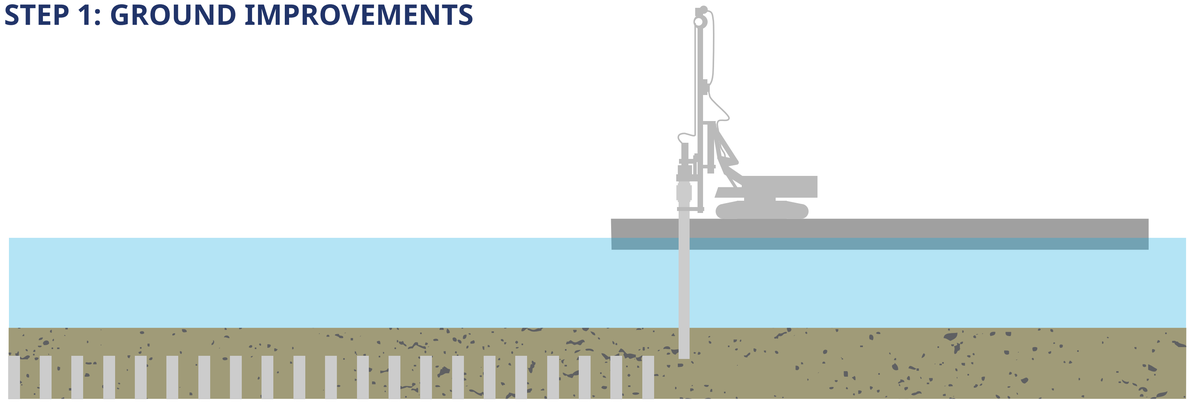
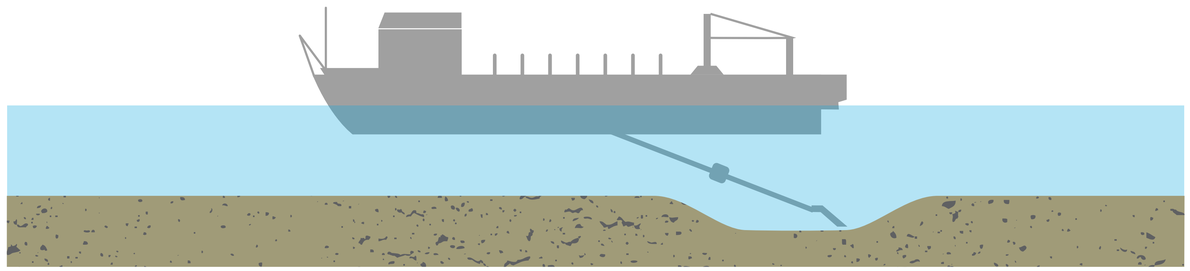
Tunnel Construction

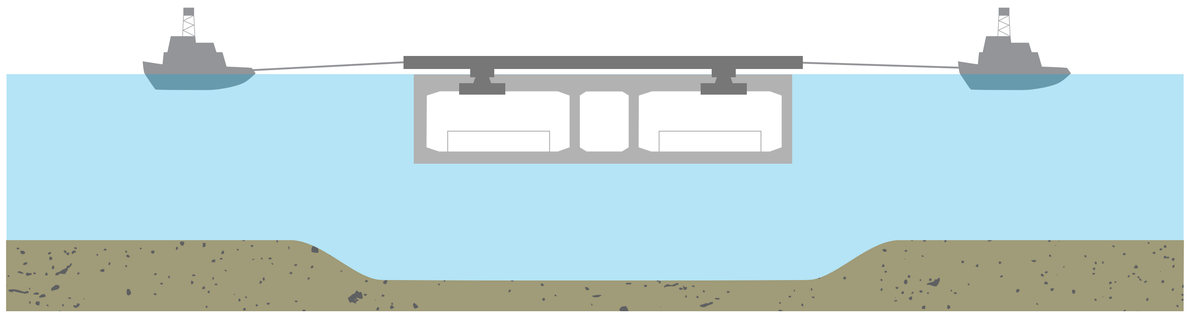
STEP 1: GROUND IMPROVEMENTS



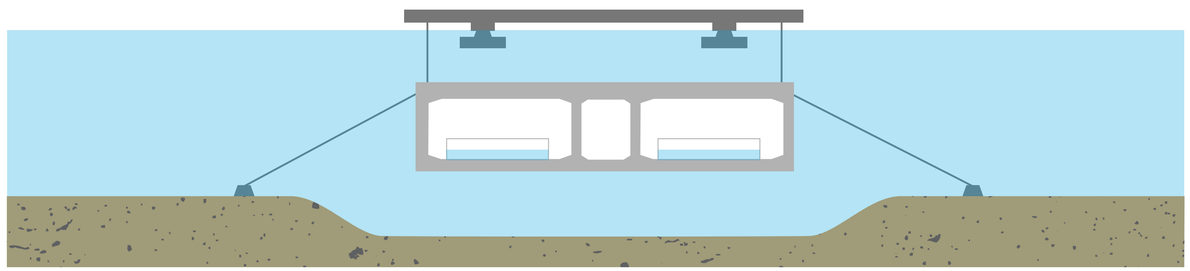
STEP 2: TRENCH EXCAVATION



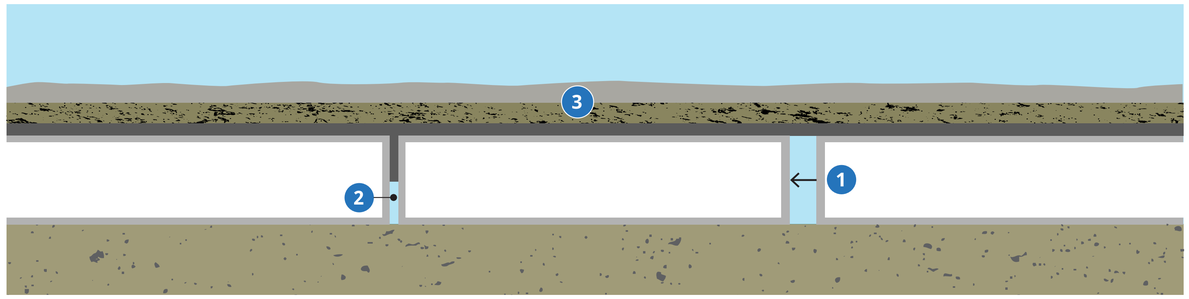
STEP 3: TOW IMMERSED TUBE TUNNEL



STEP 4: POSITION IMMERSED TUBE TUNNEL



STEP 5: SEAL SECTIONS AND ADD PROTECTIVE LAYERS



WHAT IS AN IMMERSED TUBE TUNNEL?

An immersed tube tunnel is an underwater tunnel composed of prefabricated tunnel elements that are floated and towed to the tunnel alignment, lowered into place with ballast tanks and then linked together.

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Project Components Map

Temporary moorage locations are included in the Project footprint. Locations to be determined.

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Project Components

PROJECT COMPONENTS	DESCRIPTION
PERMANENT WORKS	
North Tunnel Approach	Tie-ins to the existing Highway 99 mainline and ramps, a Rice Mill Road overpass and a CN Railway overpass over the north portal will be constructed.
North Portal and Technical Building	Roadway structures leading to the new ITT, and a tunnel operations building will be constructed.
Immersed Tube Tunnel (ITT)	New eight-lane ITT will be installed under the Fraser River and connected to Highway 99 by the north and south portals.
South Portal	Roadway structures leading to the new ITT will be constructed.
Deas Slough Bridge	A new Deas Slough Bridge will be built and will be designed to maintain the existing navigation clearance.
TEMPORARY WORKS	
Tunnel Element Casting Basin	The tunnel elements will be fabricated in a dry casting basin. Then the casting basin will be flooded to allow the completed tunnel elements to be floated out and lowered into the prepared trench.
Temporary Off-Site Moorage	Secure temporary off-site moorage locations will be required to stage the completed tunnel elements prior to immersion. Temporary off-site moorage will be located within 11 km downstream of the existing tunnel or 6 km upstream of the existing tunnel.
TO BE REMOVED	
George Massey Tunnel	The existing tunnel will be removed. The existing portals will be removed to below grade and backfilled.
Existing Deas Slough Bridge	The existing Deas Slough Bridge will be removed.

A complete list of project components is available in Table 3.1-1 in the Fraser River Tunnel Project Initial Project Description.

Key Areas of Study

The Project will look at how existing and future conditions may be affected by Project-related activities and components. The areas of study currently identified for the Environmental Assessment are:

Physical conditions such as air quality and greenhouse gas emissions, atmospheric and underwater noise, hydrology, water and sediment quality, and disturbed areas.

Biological conditions such as vegetation and terrestrial ecosystems, wildlife and wildlife habitat, fish and fish habitat, and marine mammals.

Human environment conditions such as employment and economy, land use, marine use, visual quality, services, infrastructure and transportation, cultural heritage and human health.

More information is provided in Section 8 of the Fraser River Tunnel Project Initial Project Description.

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Physical Conditions

The following key areas of study have been identified to support the assessment of the potential Project effects on physical conditions. Studies will be undertaken to ensure an understanding of how the areas may be impacted by the proposed Project and how potential effects may be avoided or mitigated. Input during this comment period from Indigenous groups, stakeholders and the public will be used to refine the list. Project staff can assist with documenting your feedback on the key areas of study.

STUDY AREA	RATIONALE	POTENTIAL PROJECT-RELATED EFFECTS TO BE STUDIED
Air Quality	Project-related construction and operations activities have the potential to change existing air quality.	> Air quality changes from construction-related activities > Air quality changes once the new tunnel is operational
Greenhouse Gas Emissions	Project-related construction and operations activities have the potential to change greenhouse gas (GHG) emissions.	> Direct and indirect GHG emissions from construction-related activities > Direct and indirect GHG emissions once the new tunnel is operational
Atmospheric Noise	Project-related construction and operations activities have the potential to change existing atmospheric noise conditions.	> Noise from construction-related activities > Noise levels once the new tunnel is operational
Underwater Noise	Underwater noise during construction and operations activities has the potential to affect fish, fish habitat and marine mammals.	> Underwater noise from construction-related activities > Underwater noise caused by traffic once the new tunnel is operational

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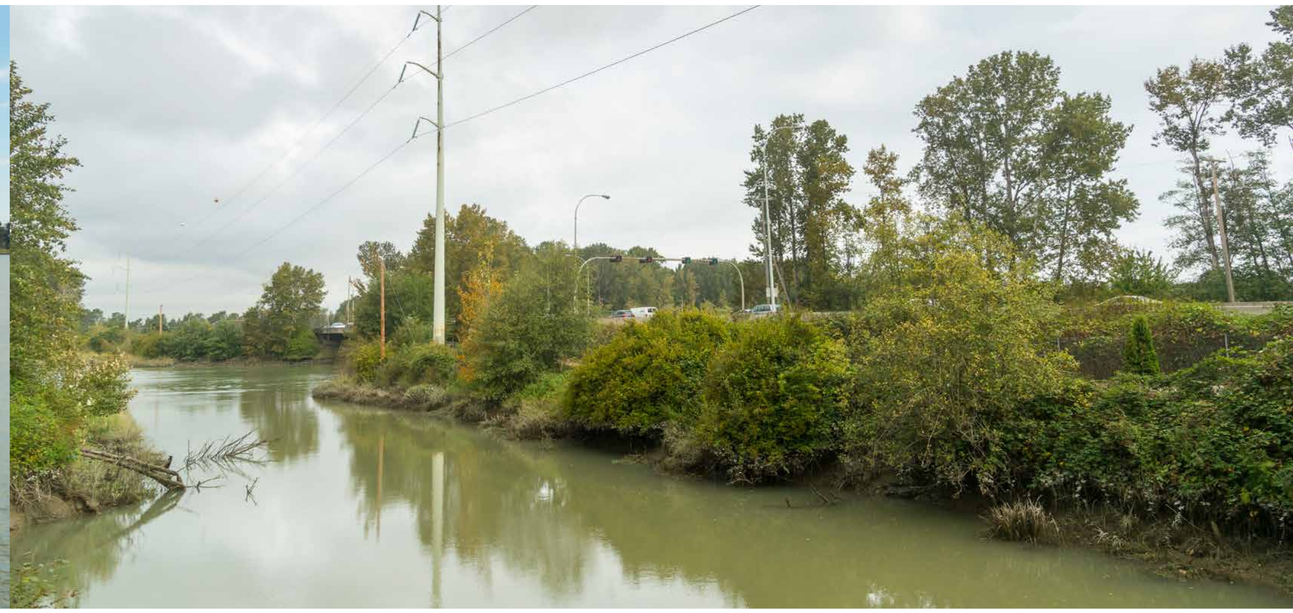
Physical Conditions

STUDY AREA	RATIONALE	POTENTIAL PROJECT-RELATED EFFECTS TO BE STUDIED
Fraser River Hydrology	Temporary changes in water levels, river velocity, sediment transport and turbidity, flow conditions and erosion and deposition patterns during construction have the potential to affect fish and fish habitat, marine mammals, agricultural and marine use.	> Changes to river hydraulics during construction > Changes to river hydraulics due to permanent infrastructure during operations
Water and Sediment Quality	Changes in water and sediment quality during construction have the potential to affect fish and fish habitat, marine mammals and vegetation along the shorelines.	> Potential stormwater runoff, erosion or spills, and temporary redistribution of riverbed sediments
Disturbed Areas	Contaminated sites within the Project area may pose risks to human health and the environment.	> Project interaction with known developed or disturbed land and/or brownfields within Project area



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Biological Conditions

The following key areas of study have been identified to support the assessment of the potential Project effects on biological conditions. Studies will be undertaken to ensure an understanding of how the areas may be impacted by the proposed Project and how potential effects may be avoided or mitigated. Input during this comment period from Indigenous groups, stakeholders and the public will be used to refine the list. Project staff can assist with documenting your feedback on the key areas of study.

STUDY AREA	RATIONALE	POTENTIAL PROJECT-RELATED EFFECTS TO BE STUDIED
Vegetation and Terrestrial Ecosystems	Portions of the Project alignment support ecological communities, which may include at-risk plant species.	> Effects on plant species or ecosystems
Wildlife and Wildlife Habitat	Terrestrial wildlife species and aquatic birds and their habitat have the potential to be affected by construction activities and in-river work. Construction noise and activities may affect habitat connectivity and access.	> Temporary disturbance during site preparation and construction activities > Temporary change in available habitat
Fish and Fish Habitat	The Project involves in-river construction activities, such as installing the new tunnel and removing the current tunnel, which have the potential to affect fish and fish habitat.	> Effects on fish and fish habitat, with a specific focus on salmon, sturgeon, eulachon and trout
Marine Mammals	Project construction-related activities may affect marine mammals that may be present in the Project area.	> Underwater noise and effects from in-river construction activities > Effects on food sources (fish and fish habitat) for marine mammals

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Human Environment Conditions

The following key areas of study have been identified to support the assessment of the potential Project effects on human environment conditions. Studies will be undertaken to ensure an understanding of how the areas may be impacted by the proposed Project and how potential effects may be avoided or mitigated. Input during this comment period from Indigenous groups, stakeholders and the public will be used to refine the list. Project staff can assist with documenting your feedback on the key areas of study.

STUDY AREA	RATIONALE	POTENTIAL PROJECT-RELATED EFFECTS TO BE STUDIED
Visual Quality	Construction activities may result in temporary visual changes from related equipment and materials.	> Temporary visual changes during construction
Cultural Heritage	The Project involves groundworks that could potentially affect heritage sites or artifacts.	> Potential disturbance of sites or objects of archaeological or historical significance
Human Health	Project-related changes in air quality and noise conditions have the potential to affect human health.	> Health effects due to changes to environmental exposure, including to air emissions, soil, surface water, sediment or traditional foods
Community Health and Well-Being	Project construction and operations could result in changes in human health conditions in and around the Project area.	> Health and nuisance effects from changes in noise and vibration > Active transportation connections and public safety > Indigenous and recreational land and marine use, health and well-being

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Human Environment Conditions

STUDY AREA	RATIONALE	POTENTIAL PROJECT-RELATED EFFECTS TO BE STUDIED
Marine Use and Transportation	In-river work could potentially affect marine access and area use, Indigenous interests, presence and availability of marine resources, and marine recreation.	> Marine and foreshore area access and use > Indigenous, commercial and recreational marine resources > Marine commercial navigation and recreational environmental setting
Land Use	Land-based construction activities could affect land availability, access and area use, Indigenous interests and presence of land-based resources for recreational purposes.	> Land-based access and use > Indigenous, commercial and recreational land-based resources (e.g., wildlife) > Land-based recreational environmental setting
Agriculture	Agricultural land may be affected by the Project.	> Agricultural land availability and capability > Irrigation and drainage systems > Farm utilities, infrastructure and transportation
Services, Infrastructure and Transportation	Key municipal services, infrastructure and transportation could be affected by the Project during and after construction.	> Project use of water, emergency services and waste removal > Effects on utilities > Project demand on housing for the labour workforce > Traffic volumes and routes, road networks and access, level of service
Employment and Economy	The Project is expected to affect Metro Vancouver's labour market, employment and contracting opportunities, economic development and business activity.	> Project expenditures and labour requirements > Employment and labour market balance, local supplier and government revenues > Use of local services and infrastructure, government expenditure requirements > Physical disturbance to nearby business activity and revenues

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Cumulative Effects Assessment

- Considers potential incremental effects of other present and reasonably foreseeable projects that could interact with potential residual Project construction and operational effects
- Will be included in the Environmental Assessment
- Will be informed by the following:
  - Engagement with Indigenous groups
  - Traditional use information provided by Indigenous groups
  - Existing conditions studies and other historical and publicly available data
  - Approved land use plans surrounding the Project
  - Effects assessments for other existing and reasonably foreseeable future projects that have recently undergone or that are currently undergoing a formal Environmental Assessment process
  - Review of potential overlapping effects from present and reasonably foreseeable future developments that do not trigger a formal Environmental Assessment
  - Feedback from regulatory agencies, stakeholders and the public

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Engaging with Indigenous Groups

The Ministry is committed to strong and collaborative working relationships with the identified Indigenous groups.

The Ministry has been engaging with Indigenous groups on the crossing since 2013 and, at the request of Indigenous groups, has developed an engagement plan that builds on all previous engagement.

Since the Project announcement in August 2021, the Ministry has been engaging specifically on the delivery of the tunnel project.

The current focus of Indigenous engagement includes:

- Initial Project Description
- Existing conditions studies
- Technical testing programs (dredging, geotechnical, hydrology)

INDIGENOUS KNOWLEDGE

The Ministry is following the EAO's requirement to use the best available science, Indigenous knowledge and local knowledge in decision-making. The Ministry's approach to engaging Indigenous knowledge holders has been developed through respectful dialogue with the identified Indigenous groups and follows guidance as set out by the EAO.

The Ministry will work to integrate Indigenous knowledge into the Project's plans, processes and designs, where possible.

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Public Engagement

The Ministry is committed to early and transparent engagement with the public.

Principles that will guide the Fraser River Tunnel Project public engagement program:

OPENNESS

Notification of activities in a timely manner, and engagement materials made widely available.

RELEVANCE

Provide information and solicit feedback on key areas of interest.

TRANSPARENCY AND AUTHENTICITY

Clearly communicate the purpose of engagement activities and how input will be used.

INCLUSIVITY

Gender-Based Analysis Plus (GBA+) approach to the engagement programs and activities.

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Commitment to Engagement

The Ministry is committed to ongoing engagement throughout the Project.

KEEP IN TOUCH WITH THE PROJECT TEAM

EMAIL

highway99tunnelprogram@gov.bc.ca

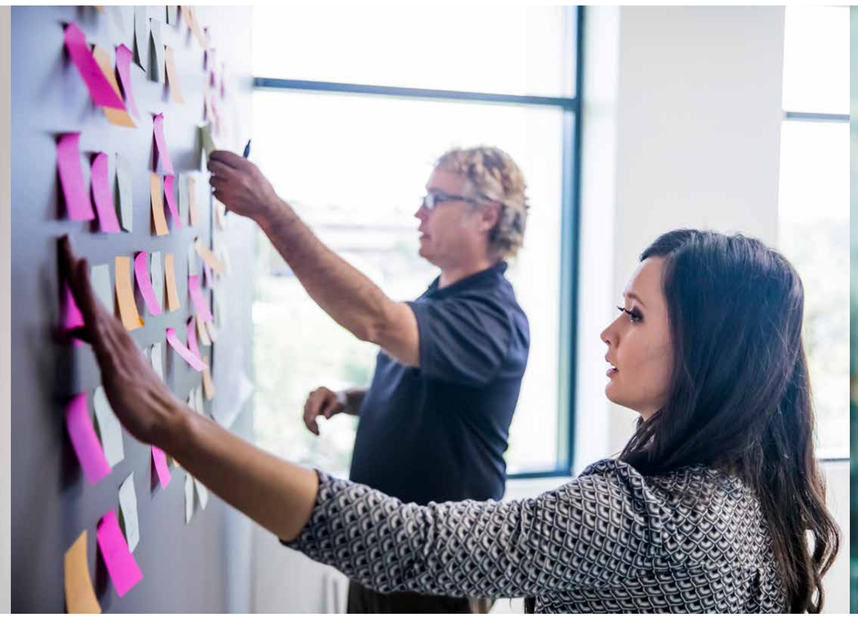
WEBSITE

Sign up to receive project updates

engage.gov.bc.ca/fraserrivertunnel

PROJECT COMMUNITY OFFICE

Coming fall 2022



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