

Key studies that were released after the Joint Review Panel concluded, but before the federal cabinet decision:

Critical humpback study not considered

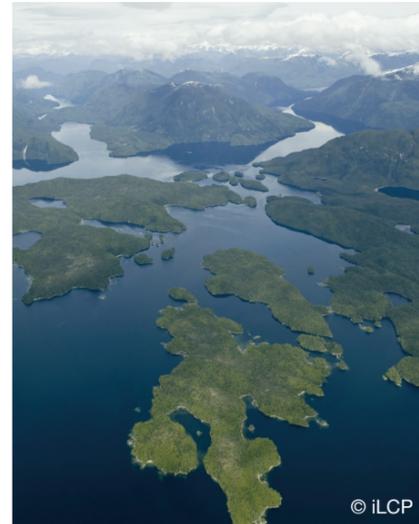
In October 2013 — four and a half years after its due date, and too late for consideration by the JRP — the federal government released its final recovery strategy for the Pacific Humpback Whale.

Toxic spills and vessel traffic are identified as two threats to the survival and recovery of humpback whales, and the strategy shows how the whales' critical habitat overlaps with Northern Gateway's proposed tanker route.

The delay of this report resulted in critical habitat not being accounted for in the JRP's

recommendation on Northern Gateway. As of April 2014, the federal government is required to legally protect humpback whale critical habitat, which calls into question the viability of Northern Gateway's plan to transit tankers through their north coast habitat.

Recently, several conservation organizations took the federal government to court over its failure to implement recovery plans for species including the Pacific humpback within legislated timelines.



Does Bitumen Float or Sink?

Federal study contradicts Enbridge testimony

Northern Gateway would transport bitumen diluted with condensate, a lighter petroleum product. The question of whether bitumen sinks was raised throughout the JRP hearings because sunken oil is difficult and often impossible to recover.

Enbridge asserted that there was no strong evidence that bitumen sinks. The B.C. government and other groups asserted that the science was unclear, or pointed to Enbridge's 2010 spill in the Kalamazoo River, where after three years of clean-up, the US Environmental Protection Agency ordered Enbridge to do more

dredging of sunken bitumen from the river bottom.

In January 2014, the federal government released a report that found diluted bitumen sinks when mixed with sediments, which are common in northern B.C. rivers.

Unfortunately, the report's release came too late for the JRP to consider it in its review. While the JRP's final report concluded bitumen is unlikely to sink, the federal study and the Kalamazoo experience point to a different conclusion.

If a pipeline spill were to occur in a northern B.C. river, the oil would

likely sink due to the presence of sediments. Dredging would risk destroying sensitive salmon spawning habitat and full oil recovery would be impossible.

"[Enbridge] Northern Gateway is not yet prepared to deal with sunken oil in the event there were a spill of dilbit into a British Columbia watercourse."

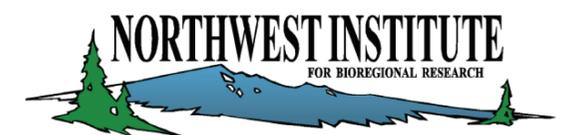
- The BC Government's submission to the Joint Review Panel

Radically Different Conclusions

Comparing the BC government's submissions on Enbridge Northern Gateway with the Joint Review Panel's final report

"[Enbridge Northern Gateway] should not be granted a certificate on the basis of the promise to do more study and planning once the certificate is granted. The standard in this case must be higher. 'Trust me' is not good enough in this case."

- Province of B.C.



JRP by the Numbers

1,159

Number of citizens who delivered oral statements to the Joint Review Panel in opposition to the Northern Gateway pipeline.

2

Number who delivered oral statements in support.

9,159

Number of written submissions sent to the Joint Review Panel in opposition.

239

Number of written submissions sent in support.

“So the conclusion was that a large spill would cause significant adverse environmental effects, but those adverse effects would not be permanent or widespread. That’s quite a departure from the common view that a major oil spill would be an irrevocable catastrophe. It also bypasses a widespread concern that no one actually knows how diluted bitumen behaves during a leak.”

- **Columnist Les Leyne, Victoria Times Colonist**



Doug Eyford on the JRP and First Nations

“The issues that First Nations communities want to have addressed simply aren’t being addressed in the way

business is being conducted at present,” said Mr. Eyford, the Canadian government’s special representative on West Coast Energy Infrastructure. “From the perspective of First Nations communities, their view is that the essential, upfront conversation just isn’t happening because Canada is saying ‘We’re going to discharge our obligation through the regulatory process.’”

Doug Eyford is the Canadian government’s special adviser for Canada’s West Coast energy projects

Same project, different conclusions



The BC Government

Here’s what the BC Government submitted in May 2013 as their final written input to the Joint Review Panel.

On bitumen sinking

“The Province has serious concerns about the lack of clarity and certainty about what dilbit will do if it were to enter the water... [Enbridge] Northern Gateway is not yet prepared to deal with sunken oil in the event there were a spill of dilbit into a British Columbia watercourse.”

On spill response

“the Province submits that [Enbridge] Northern Gateway has not shown that it will be able to establish a spill response regime capable of responding effectively to spills in the marine environment, let alone one that is “world class.””

On geological hazards

“[Enbridge] NG asserts that full-fore spills will be very rare. However, ...NG’s analysis of the geohazards that the pipeline could face is at the preliminary stage.”

On long-term spill effects

“the effects of a spill on threatened species, such as eulachon, for instance, would not necessarily be reversible. Already weakened populations may simply not recover.”

On Enbridge’s commitments

“Enbridge has not demonstrated an ability to learn from its mistakes in order to avoid spills. ...there are serious reasons for concern that the commitments it has made in this proceeding will be hollow.”

In conclusion

“the Province cannot support the approval of, or a positive recommendation from the JRP regarding, this project as it was submitted to the JRP.”

The Joint Review Panel

And here’s what the Joint Review Panel concluded in its December 2013 final report.

On bitumen sinking

“We found that diluted bitumen is no more likely to sink to the bottom than other heavier oils with similar physical and chemical properties... We found that a diluted bitumen spill is not likely to sink as a continuous layer that coats the seabed or river bed.”

On spill response

“[Enbridge] Northern Gateway and other parties have provided sufficient information to inform the Panel’s views and requirements regarding malfunctions, accidents, and emergency preparedness and response planning at this stage of the regulatory process.”

On geological hazards

“The Panel is of the view that Northern Gateway’s precautionary approach regarding geohazards is consistent with good engineering practice.”

On long-term spill effects

“The Panel finds that a large spill would not cause permanent, widespread damage to the environment. Evidence from past spills indicates that, although each large spill event is a unique event, the environment recovers to a state that supports functioning ecosystems similar to those existing before the spill.”

On Enbridge’s commitments

“We also recognized Northern Gateway’s commitment to a corporate culture of continuous improvement, for example, relating to its pipeline integrity programs.”

In conclusion

“After weighing the evidence, we concluded that Canada and Canadians would be better off with the Enbridge Northern Gateway Project than without it.”

Insufficient insurance could leave B.C. taxpayers on the hook for cleanup

The JRP final report recommended that Enbridge be required to provide \$950 million in liability insurance to cover the costs of a large oil spill. This amount is based on a 5,000 cubic metre spill.

An October 2013 report by the BC government looked at the province’s oil spill response capability and found, according to Premier Christy Clark, that “we are woefully under-resourced.”

By comparison, Enbridge’s Kalamazoo spill was approximately 3,000 cubic metres and to date has cost over \$1 billion to clean up (the cleanup is still not complete).

The Kitimat, Morice and Clore rivers are remote, high-gradient salmon streams in rugged, snowy terrain. This makes spill clean-up more difficult, if not impossible, and thus much more costly than with the low-gradient, accessible Kalamazoo.

