

Tłıchq All Season Road Project

EA1617-01 Technical Session

August 15-17, 2017

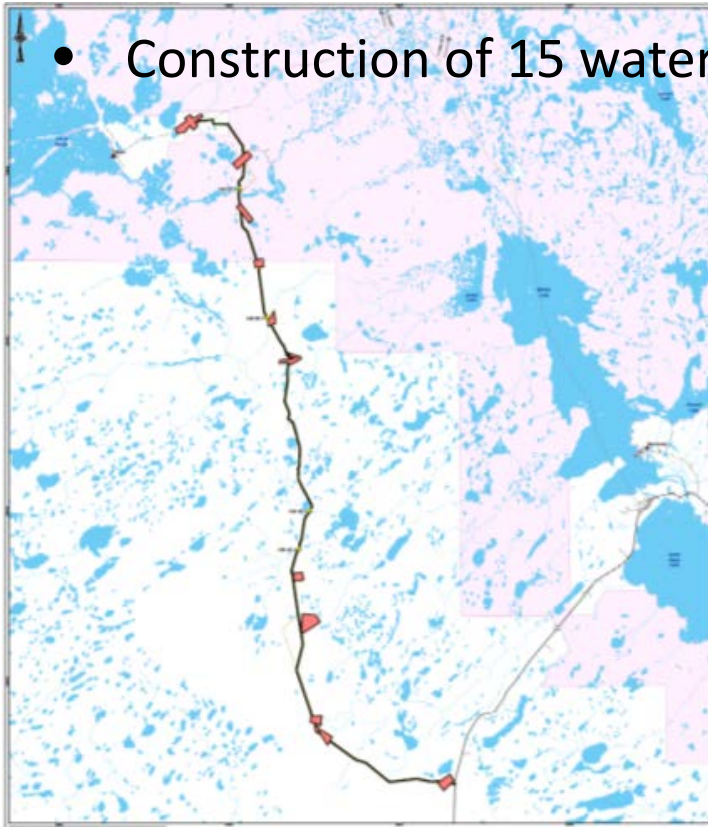
Behchokò, NT





Brief Project Description

- A two-lane all-season gravel road 94 km long from Hwy 3 to Whatì
 - with associated borrow sources, spur roads and construction camps
- Construction of 15 water crossings (11 large culverts and 4 bridges)



ITEM	STANDARD
Designation	RLU 80
Design Speed	80 km/h
Finished Roadway Width	8.50 m (3.50 m lanes and 0.75 m shoulders)
Normal Side Slopes	3:1
Minimum Surface Gravel	200 mm
Bridge Design Loading	CL-800





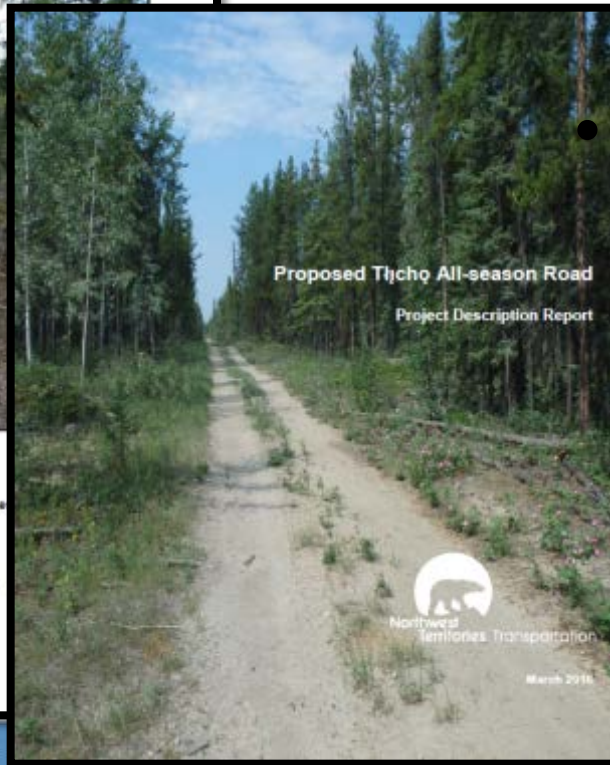
Developer's Assessment Report

ADEQUACY STATEMENT RESPONSE
for the
Tłı̄chǫ All-Season Road Project



EA1617-01
Prepared for the Government of the Northwest Territories
Prepared by Golder Associates Ltd.
April 2017
Submitted to:
Mackenzie Valley Environmental Impact Review Board
200 Scotia Centre
5102-50th Ave
Yellowknife, NT

Proposed Tłı̄chǫ All-season Road
Project Description Report



- The Adequacy Statement Response addresses the MVEIRB Adequacy Statement
- The Project Description Report and the Adequacy Statement Response together constitute the **Developer's Assessment Report**



Project Updates Outline

- ASR technical review sessions
- Comparable NWT highways to TASR
- Draft WEMP and WMMP
- Information requests & responses
- ECCC migratory bird data analysis
- DFO aerial tour
- Traffic estimates
- Geotechnical program
- Procurement update
- Land exchange update





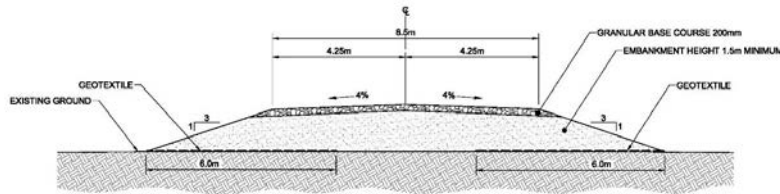
ASR Technical Review Sessions

- Two ASR Technical Review Stakeholder meetings were held:
 - May 17th at the Explorer Hotel with various stakeholders
 - May 25th with the Wek'èezhìi Renewable Resource Board and Yellowknives Dene First Nation
- Parties had valuable input about the project



Comparable NWT Highways to TASR

ITH



ITH



ITH



Hwy 1





WEMP and WMMP

- A **draft** Wildlife Effects Monitoring Program (WEMP) was circulated to parties on August 8.
- The WEMP is a component of the larger Wildlife Management and Monitoring Plan (WMMP).
- An updated WMMP should be available at the end of September 2017.



WEMP Components

- Traffic monitoring
- Access and harvest monitoring
- Boreal caribou collaring program
- Moose & bison population monitoring
- GNWT wildlife sighting and collision reporting program
- Barren-ground caribou collaring program
- Refinement of the study design



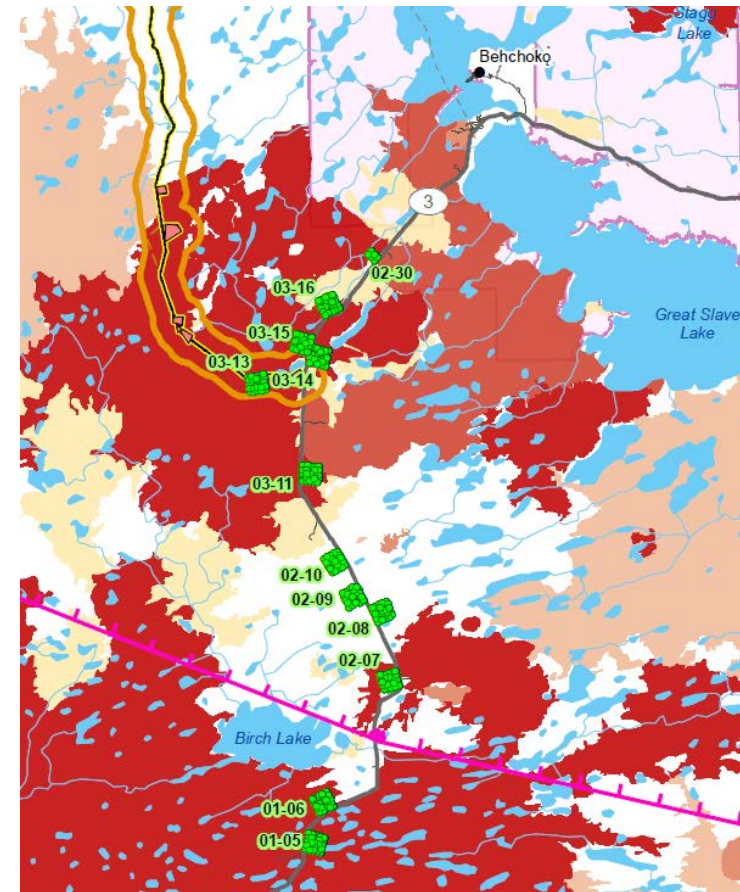
GNWT Response to IRs

- Information Request Responses (IRRs) were submitted to Review Board in stages between June 29 and July 21st, 2017.
- Key Issues were:
 - Assessment methods, socioeconomic mitigations, project design, and adaptive management.
- NSMA submitted additional IRs on July 14.
 - Review Board indicated these IRs were outside the official Board IR process.
 - GNWT provided responses to a number of NSMA's IRs on August 11, which were also provided to the Review Board for upload to the public registry.



ECCEC Migratory Bird Data

- GNWT committed to analyzing the data
- ECCEC provided data on June 30
- Results will be available prior to due date for intervenor technical reports (i.e. prior to end of September)





DFO Aerial Tour

- DFO was invited on the TASR corridor aerial tour on August 9th in order to better understand field conditions at the water crossings.





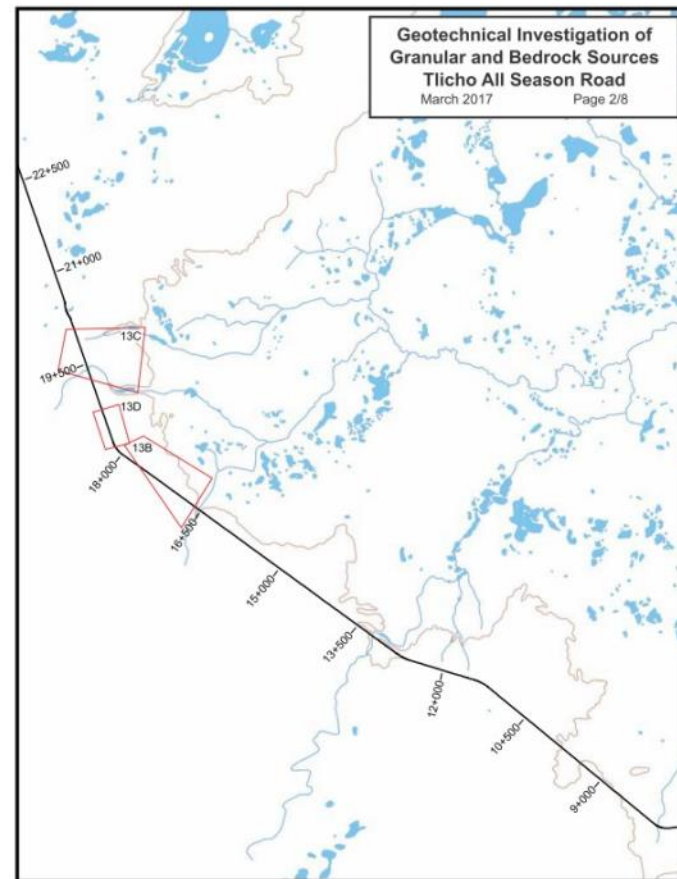
Traffic Estimates

- Design criteria road standard will allow for an average daily traffic volume of up to 200 vehicles/day.
- Expected traffic estimates comparable to similar NWT public highways (portions of Hwy 6 & 7).
- 20-40 vehicles/day estimate includes:
 - Fortune's Nico Mine traffic (9)
 - Contingency for increased access, population growth, diversion of air travel into vehicle traffic (8)
 - INF O&M traffic (6)
 - Whatì winter road traffic converted into an annual/day value (12)
 - Commercial loads (0.5)
 - **Total Estimate = 35.5 vehicles/day**
- Draft WEMP includes adaptive management regarding traffic should the volumes in any way exceed expectations.



Geotechnical Program

- Final geotech data reports and recommendation reports of the culverts, bridges and road alignment are still pending.
- Phase II geotech fieldwork at borrow sources was completed on July 27th.
- An ENR-approved caribou protocol was utilized to ensure summer geotech field crews were not working in areas where collared caribou were present.
- Draft geotechnical and geochemical data reports for the borrow sources will not be available until the Fall.





Procurement Update



- RFQ issued by the GNWT on March 20, 2017 and closed on June 9, 2017.
- RFQ evaluations are currently underway.
- Media release will announce shortlisted proponents.
- When procurement process is complete, the Preferred Proponent will design, build, finance, operate and provide maintenance, repair for the TASR for a 25 year period.



GNWT-TG Land Exchange

- Land exchange, use and access agreement near completion.
 - Exchange does not occur until after EA.
 - Tłıchǫ Government remains a decision maker for EA.
- Agreement ensures the proper legal arrangements have been made between both governments in order for the project to proceed through the regulatory phase and into construction.



GNWT Response Structure for Tech Session

- Russ Neudorf – primary GNWT speaker
- Departmental representatives – to speak on respective mandates
- Golder Associates – to speak on effects analysis
- Tłıchǫ Government and/or Firelight – to speak on community driven programming and mitigations



Thank you!





Tłıchq All Season Road Project

Technical Session, 15 August 2017

Government of
Northwest Territories



Wildlife

Kyle Knopff (Ph.D.)
Wildlife Biologist



Assessment Summary

- Provided precautionary and ecologically relevant impact predictions
- Considered TK from the area about wildlife VCs, mitigation, and wildlife distribution
- Identified mitigation
- Small habitat loss, no fragmentation of populations
- No strong mechanism causing a long-term or irreversible change in reproduction or survival rates



Undisturbed habitat differences: boreal caribou

- ASR used different land cover and projection
- Updated the development and burn landscape to 2016
- Included NICO and Mackenzie Highway Project as RFDs
- NT1 undisturbed habitat remains above 65% threshold and does not change the status of boreal caribou at Base Case





Barren-ground and Boreal Caribou Harvest

- Project will improve road access for harvest in the region, but north of Whatì will still require use of the existing winter road system.
- There are current harvest management actions to limit harvest of barren-ground caribou.





Wildlife-vehicle collisions

- Collision reports for Highway 3 indicate caribou collisions are extremely rare.
- Low numbers of strikes expected during Project operation due to low traffic volume and speed.





Changes to predation

- There is a network of trails (linear features) present that can be used by wolves in the Base Case.
- Wolves or bears using the Project as a travel corridor may be more susceptible to harvest pressure.
- Regeneration of recent burns may increase densities of moose which may attract/increase wolves and increase predation risk to caribou; the Project does not affect this.





Questions?





Assessment of Effects to Fish

Outline

- Assessment Scope
- Baseline Summary
- Project Footprint
- Mitigation Measures
- Residual Effects Analysis



Baseline - Fish and Fish Habitat

- Waterbodies support productive fisheries
- 18 fish species in RSA (including Marian River)
- Small streams
 - Ninespine Stickleback
- Large rivers
 - Sucker species
 - Northern Pike
 - Burbot
 - Arctic Grayling
 - Walleye
 - Whitefish species
 - Lake Trout





Baseline - Fish Harvesting

- Primarily subsistence fishing (local residents of Whatì).
- Harvesting locations include Lac La Martre, La Martre River, Boyer Lake, James River, James Lake, and others.





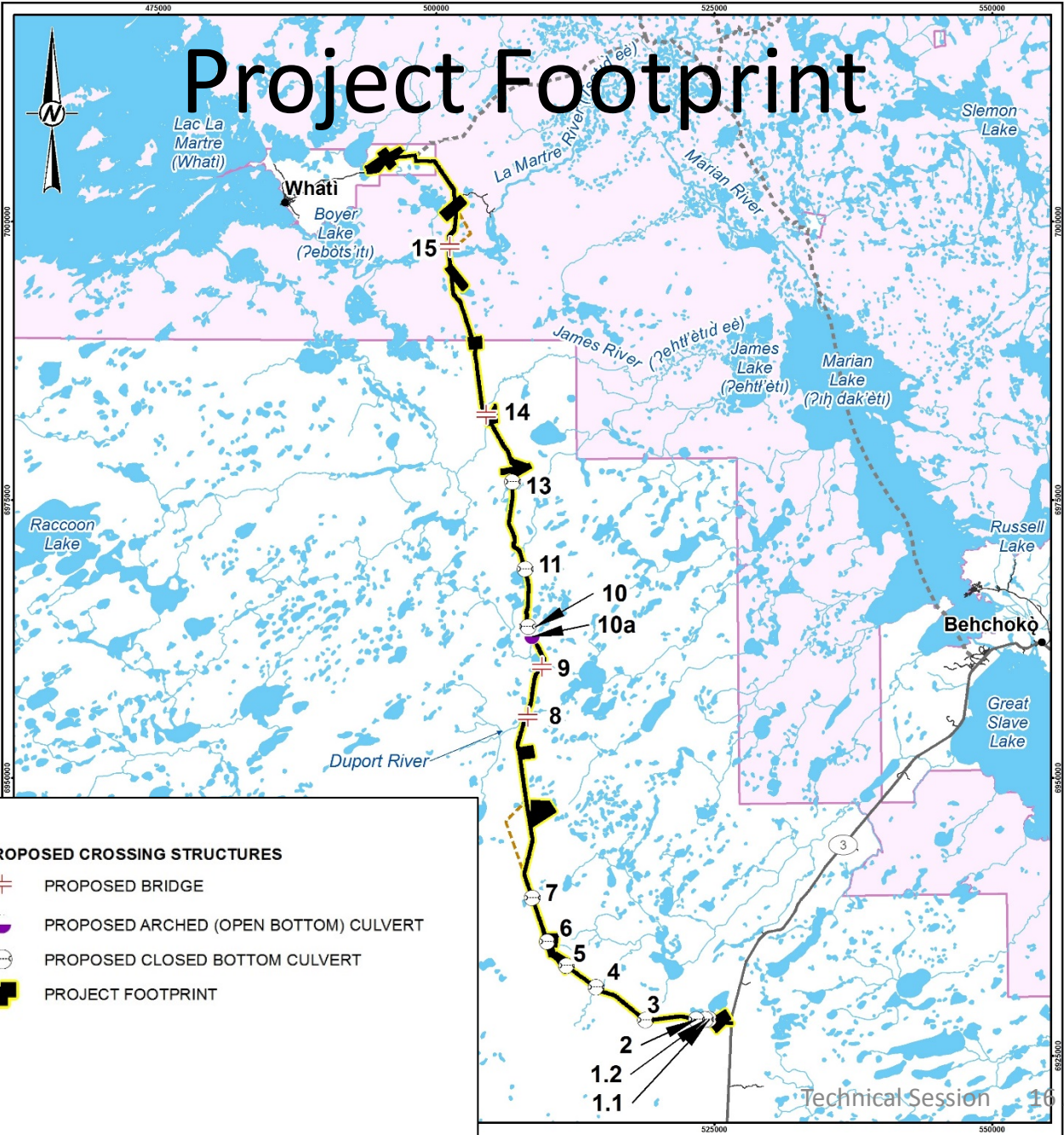
Baseline - Fish Harvesting

- Some recreational sport fishing with limited access for non-Whatì residents.
- Primarily at Lac La Martre through fishing lodge, catch and release.





Project Footprint



LEGEND

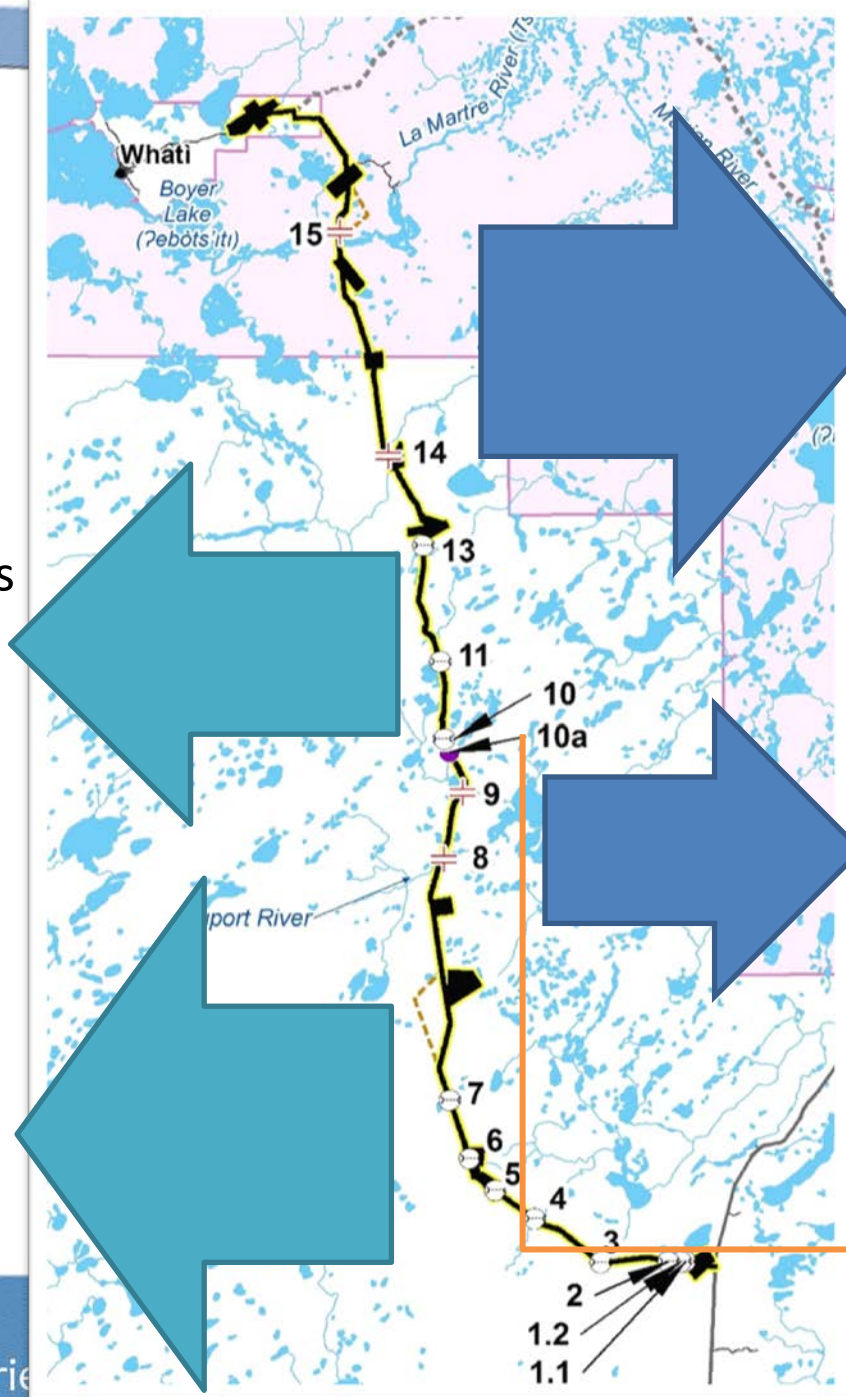
●	POPULATED PLACE	—+—	PROPOSED BRIDGE
—	ALL-SEASON ROAD	—()—	PROPOSED ARCHED (OPEN BOTTOM) CULVERT
—	LOCAL ROAD	—()—	PROPOSED CLOSED BOTTOM CULVERT
- - -	WINTER ROAD	■	PROJECT FOOTPRINT
- - -	OLD AIRPORT ROAD		
—	WATERCOURSE		
■	TłıCHQ LAND		
■	WATER BODY		



CSP Culverts

Bridges

- Clear-span designs span active channel
- Minimal disturbance below high water mark
- Use of work platforms for equipment
- Piers (crossing 15) outside of active channel
- RAP = Sept 15-Jul 15

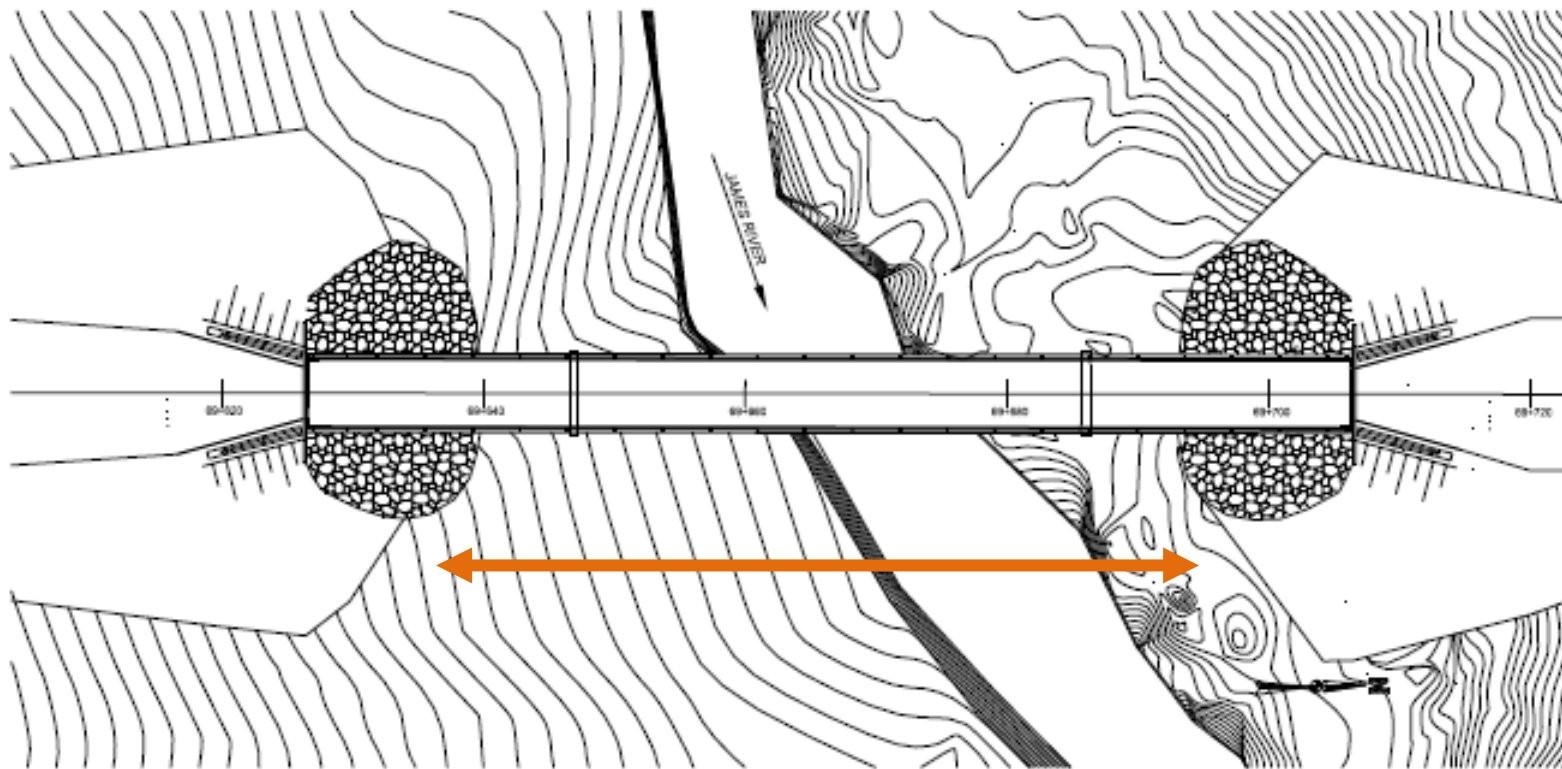


Arch Culvert

- Designs based on 1 in 100 year flood
- Crossing 5 & 6 include large culverts
- Installed below high water mark
- Isolation methods if flowing
- Slope optimized for fish passage during installation
- RAP = April 1-July 15



Clear Span Bridges at Crossings 8, 9, 14 & 15



Bridge abutments span active channel and floodplain
to minimize disturbance and maintain fish passage



Residual Effects Analysis

- Increased access from proposed TASR will have negligible to low residual effects on existing fisheries within the RSA due to:
 - productive fisheries within RSA (e.g., Lac la Martre)
 - current harvest levels well below potential yield
 - relatively small population of ‘fishers’ in the NWT
 - waterbodies will remain ‘remote’ due to distance between TASR and a major population centre
 - most recreational fishers will not travel far to fish



Cumulative Impacts

- Reasonably Foreseeable Developments (e.g., Nico) are not expected to interact cumulatively with the residual effects of existing developments/activities and the Project
 - additional access to waterbodies within the RSA is not expected to occur as a result of these projects.
- Incremental and cumulative changes from the Project and other developments should not have a significant adverse impact on the productivity of the fishery.



Monitoring

- DFO is expected to continue to manage fish and fish habitat (in cooperation with TG and WRRB).
- GNWT will continue to enforce sport fishing regulations.
- Environmental monitoring at proposed crossing sites during construction.
- Post construction monitoring will be conducted at crossing sites.





Tłıchq All Season Road Project

Technical Session 17 August 2017

Government of
Northwest Territories



Socio-Economics

Jesse O'Brien (B.A. (hons), M.A.)
Socio-Economist, ESIA Practitioner



Assessment of Socio-Economic Effects

Introduction

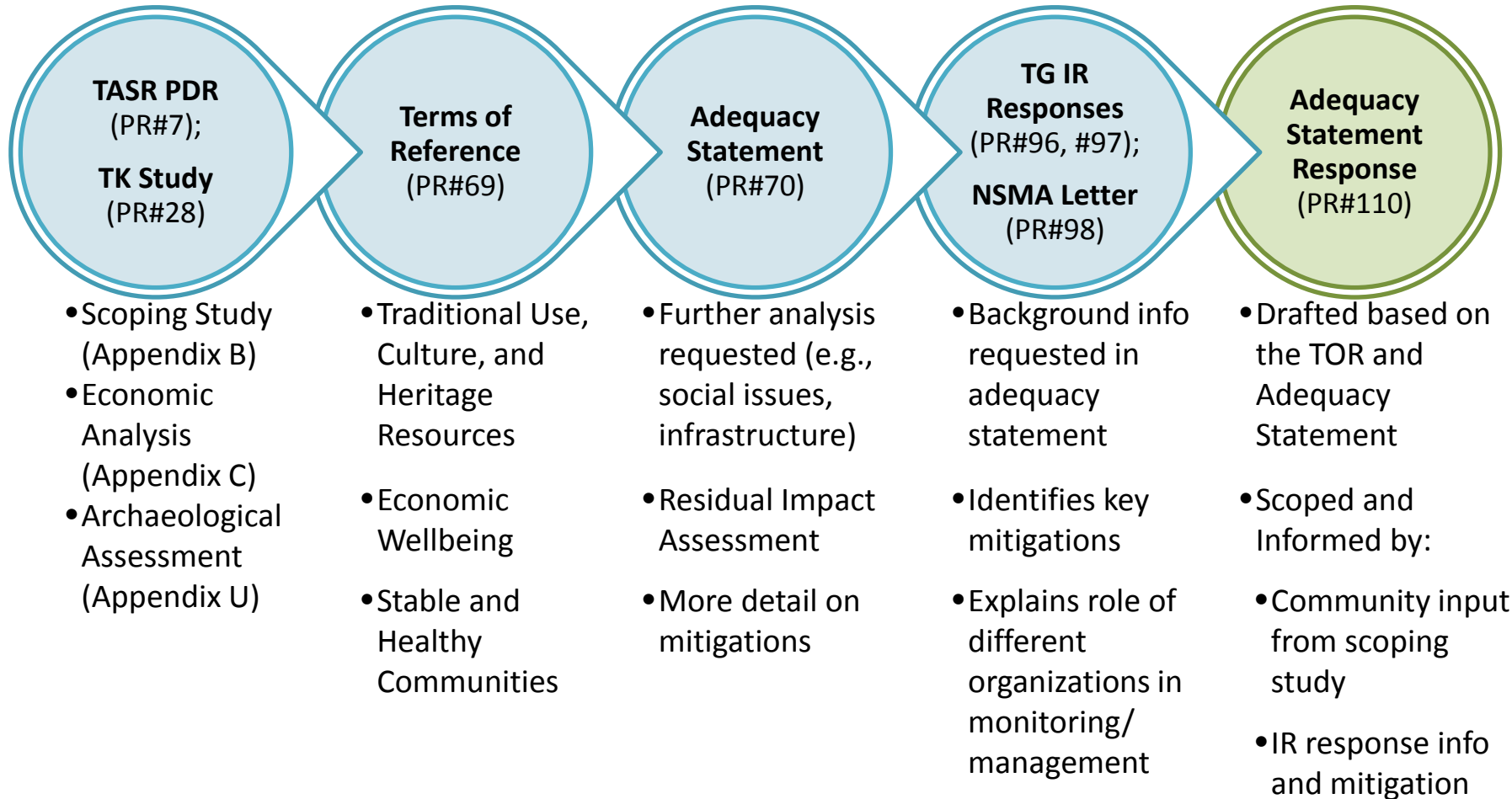
- Work to date informing the SEIA
- Incorporation of community knowledge and perspectives
- Summary of socio-economic topics covered in the SEIA / key pathways of effect
- Focus of socio-economic information requests
- Closing



Whatì, 2010



Assessment of Socio-Economic Effects





Assessment of Socio-Economic Effects

Scoping Study (PR#7 Appendix B)

Potential Benefits ↑

- Employment opportunities
- Economic/business development
- Access to lower-cost goods
- Enhanced mobility
- Reduced isolation
- Reliable, inexpensive transportation
- Improved transportation safety

Potential Risks ↓

- Increased industrial development
- Impacts to local culture, harvesting
- Outsiders coming in
- Community absenteeism
- Changing community
- Access to drugs and alcohol
- Impacts to vulnerable groups



Assessment of Socio-Economic Effects

Monitoring and Adaptive Management

- Project has been in development for many years, with extensive discussion around social impacts, mitigations, and monitoring responsibilities (e.g., CGW, TCSA, GNWT H&SS, WI-AC, LHO, RCMP, TREDWG).
- Tłıchǫ mitigations aimed at community-level health and wellbeing effects, food security and harvesting on Tłıchǫ land.
- GNWT mitigations aimed at public/community health and safety, education, traffic.



Assessment of Socio-Economic Effects

Information Requests

- Equitable employment (MVEIRB IR 9, 10)
- Vulnerability, particularly of young women (MVEIRB IR 11)
- Substance abuse (MVEIRB IR 12, 13 and 14)
- Emergency response (MVEIRB IR 16)
- Food security and harvesting (MVEIRB IR 17, 18 and 19)
- Fisheries regulation (NSMA 2, 3 and 4)



Assessment of Socio-Economic Effects

Technical Session Discussion

- Responses to Information Requests (IRs), and outstanding questions
- Roles and responsibilities for monitoring / management



Connection of TASR route to the Whatì Community Access Road