



Presentation to the Select Committee on Hydraulic Fracturing

September 26, 2013

9:00 am





Presentation Overview

- Environment Yukon's role in the oil and gas process
- Environmental legislation and processes
- Draft Water Strategy
- Water Workshop
- Environmental risks and benefits
- Environmental Challenges
- Yukon Reality
- Path to Readiness
- Other Information and Contacts

Regulatory Framework – Oil and Gas Process

Baseline Data and Planning

Rights Disposition Process

Request for Postings

Request for Postings Review

Call for Bids

Permits

Pre-Project Reviews

Licensing and Approvals Processes

Operations Review

YESAA Process

Permitting

Water Licensing

Well Operation Approval

Land Use & Air Emissions Permit

Operations

Inspections

Well Operation Approval, Land Use and Air Emissions Permit

Abandonment

Monitoring



Legislation/Processes

Legislation:

- *Waters Act*
- *Environment Act*
- *Wildlife Act*
- *Parks and Land Certainty Act*
- *Dempster Highway Area Development Regulations*

Processes:

- Enforcement of water licences
- Corporate lead for Yukon Water Board interventions
- Departmental input into YESAA
- Implementation of the Yukon Water Strategy

Draft Water Strategy



Draft Yukon
Water Strategy
FOR PUBLIC REVIEW

Public Review of the
Draft Yukon Water Strategy
WHAT WE HEARD: A SUMMARY OF COMMENTS

- Purpose
- Participants
- Priority areas/actions
- What we heard
- Next Step

Water Workshop



July 11, 2013

Water Workshop Summary

Purpose and Goals

The purpose of the workshop was for Yukon regulators and water managers to better understand how Yukon's surrounding jurisdictions manage and monitor surface and groundwater as it relates to oil and gas development.

The main goals of the workshop were to identify:

- (1) The key hydrological and hydrogeological considerations related to potential oil and gas development based on experience from other jurisdictions;
- (2) The key baseline data required to manage water in areas where oil and gas exploration is taking place (i.e. Eagle Plains, Liard Basin). And, to determine potential data-collection projects;
- (3) Recommendations for managing and regulating water based on current and anticipated petroleum development scenarios.

These goals align with several of the priorities identified in the *Draft Yukon Water Strategy*, specifically: promoting the sustainable use of water; improving the generation and use of water information; assessing and improving government management programs; and planning for water needs now and in the future.

Synopsis

The **Water Workshop** was held June 25 and 26, 2013.

- *Day 1* included a broad group of water managers, regulators and technical staff from YG (Environment; Energy, Mines and Resources; Executive Council Office; Health and Social Services) and YESAB, as well as special invite guests from our surrounding jurisdictions (BC, AB, NWT and Alaska). The day began with "Setting the Yukon Context" and featured presentations about the Yukon hydrological knowledge base, regulatory regime and potential development scenarios. This was followed by presentations from our surrounding jurisdictions about how surface and ground water is managed and monitored for oil and gas development. Participants were asked to compare the similarities and differences between Yukon and the other jurisdictions as well as provide ideas/suggestions for improvement in Yukon.
- *Day 2* - a small and focussed group, including all of the presenters from other jurisdictions, met to discuss key water-related considerations for Yukon and make recommendations for managing and monitoring water in the Eagle Plains basin (addressing goal 3). Discussions were held in three break-out groups that focussed on regulatory, surface water and groundwater considerations.

A list of the participants can be found in **Appendix A**. The agenda can be found in **Appendix B**. Copies of the presentations are provided in **Appendix C**. The notes below summarize the discussion as it relates to the workshop goals.

- Purpose
- Participants
- Goals
- What did we learn?



Environmental Risks and Benefits

Risks

- Water quality and consumption
- Air pollution and emissions/fugitive emissions
- Fish and wildlife
- Soil
- Permafrost
- Induced earthquakes

Benefits

- Reduce greenhouse gas emissions
- Local energy source
- New partnerships
- Expand environmental knowledge



Management Challenges

Water

- Protection of water quality
- Management of large volumes of waste water
- Protection of water resources
- Water scarcity

Air/Soil Pollution

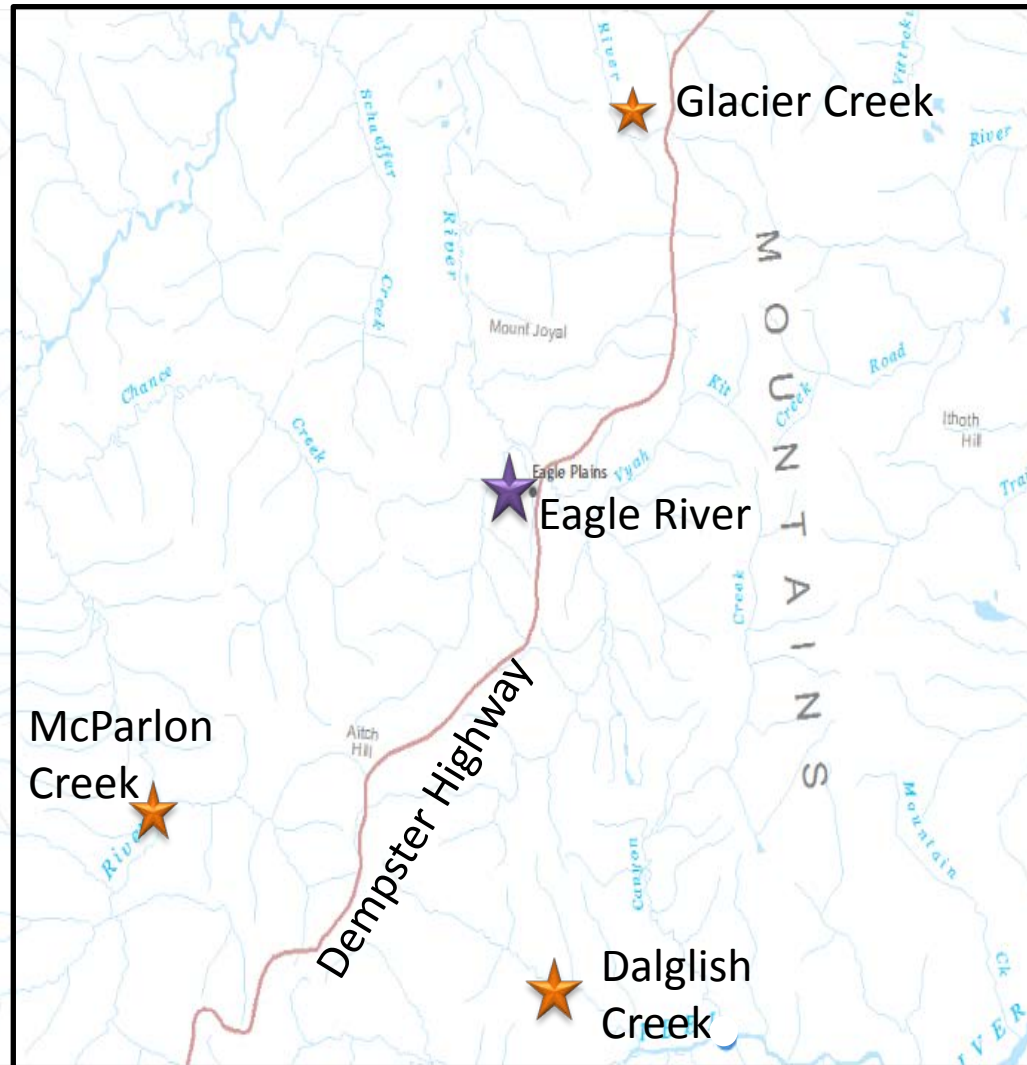
- Protection of air quality
- Management of greenhouse gas emissions
- Clean-up standards for soils
- Monitoring

Fish and Wildlife

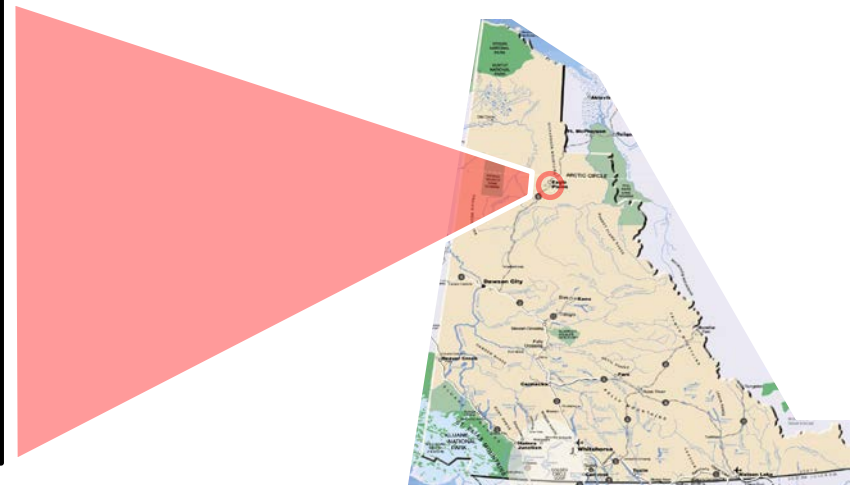
- Impacts from intense activity
- Removal, fragmentation and/or disruption of habitat
- Cumulative impacts

Water Monitoring Network

Eagle Plain Basin



- New water monitoring sites added in August 2013:
 - McParlon Creek
 - Dalglish Creek
 - Glacier Creek
- To be added this fiscal:
 - Eagle River





Yukon Reality

In a Northern Climate

- Cold, short summer season and remote locations
- Permafrost impacts
- Lack of infrastructure

As a Small Organization

- Limited experience
- Limited capacity
- Necessary regulatory tools



Path to Readiness

- Develop capacity
- Establish tools for:
 - Base line information
 - Waste water management
 - Northern complexities
 - Fugitive emissions
- Review and revise our policies



Other Contacts and Information

- Suggested Contacts:
 - National Energy Board
 - Environment Canada
 - BC Oil and Gas Commission
 - Alberta Energy Regulator
- Information and Reference Materials



Closing

- Questions?