Fisheries Sensitive Watersheds (FSWs)

Background, Procedures, and the Horsefly River as a candidate

A Presentation to the Horsefly River Roundtable
(April 15th, 2010)

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Ministry of Environment

Outline

1. Background on Fisheries Sensitive Watersheds
2. Designation Procedure and Tools
3. Horsefly River as a Candidate

Part 1. Background on Fisheries Sensitive Watersheds (FSWs)

- Provincial Government Direction :
- One of Government's five goals for the decade

  "*To lead the world in sustainable environmental management, with the … best fisheries management, bar none.*"

- Ministry of Environment Business Plan Priority

History of FSWs in BC

- Forest Practices Code
- Forest & Range Practices Act

Government Authority

- Forest and Range Practices Act &
the Government Actions Regulation (s14)

...provides the authority to establish FSWs and the definition for Fisheries Sensitive Watersheds...

Legislative Authority

- Government Actions Regulation (s14) of FRPA

  What is a FSW?

  1. A legal designation of an area of land making up a watershed including an objective(s) describing desired conditions

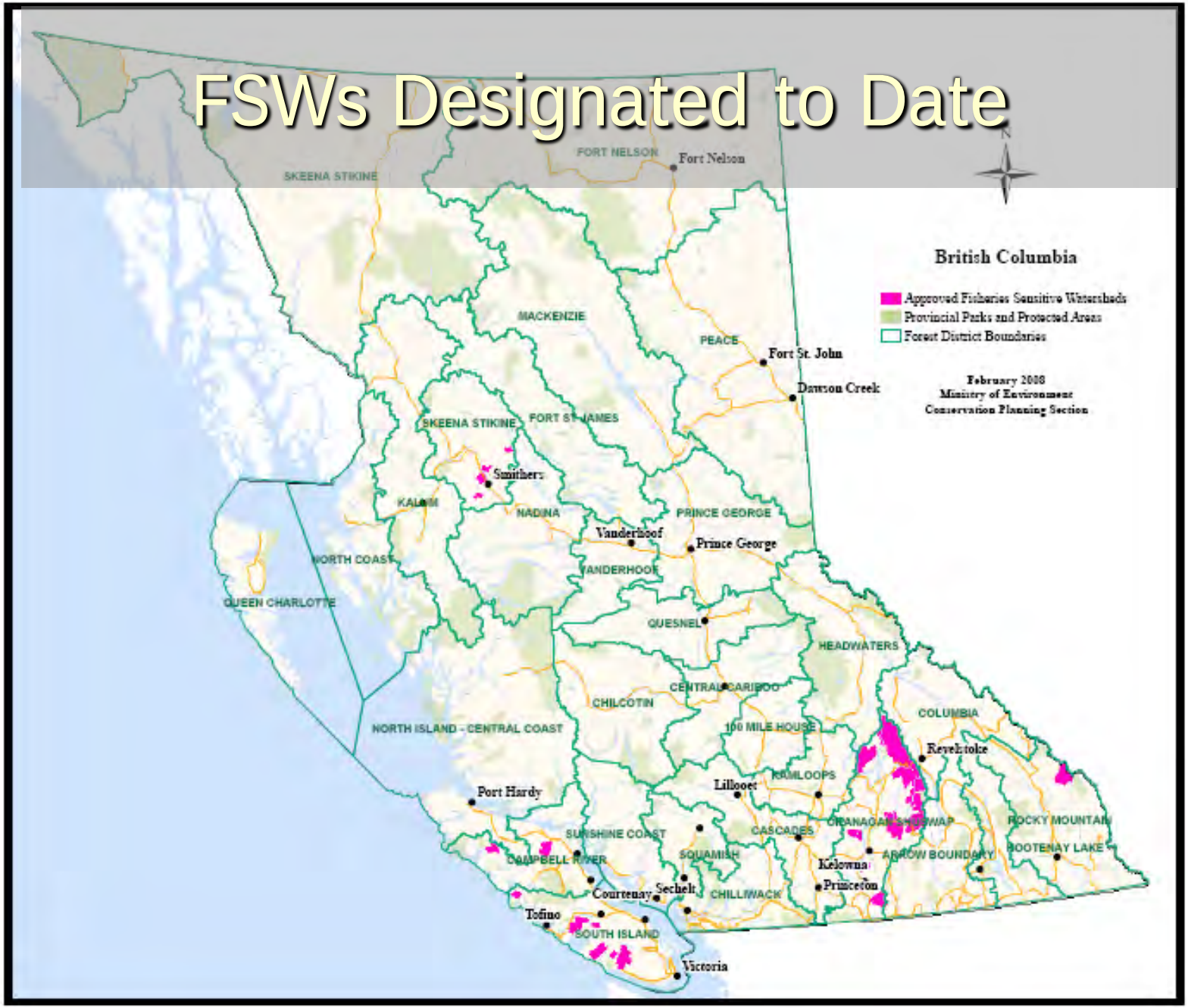
  2. Hosts both “significant fisheries values” and “watershed sensitivity”

  3. Applies to Crown managed forest and fee-simple TFL Sch “A” lands

Requirements in a designated FSW

- Designation requires “Special Management” to protect fish
- Forest Act agreement holder needs to develop results/strategies to meet objective(s)
- Base case starting point: professional hydro-geomorphological assessment of the watershed

FSWs Designated to Date



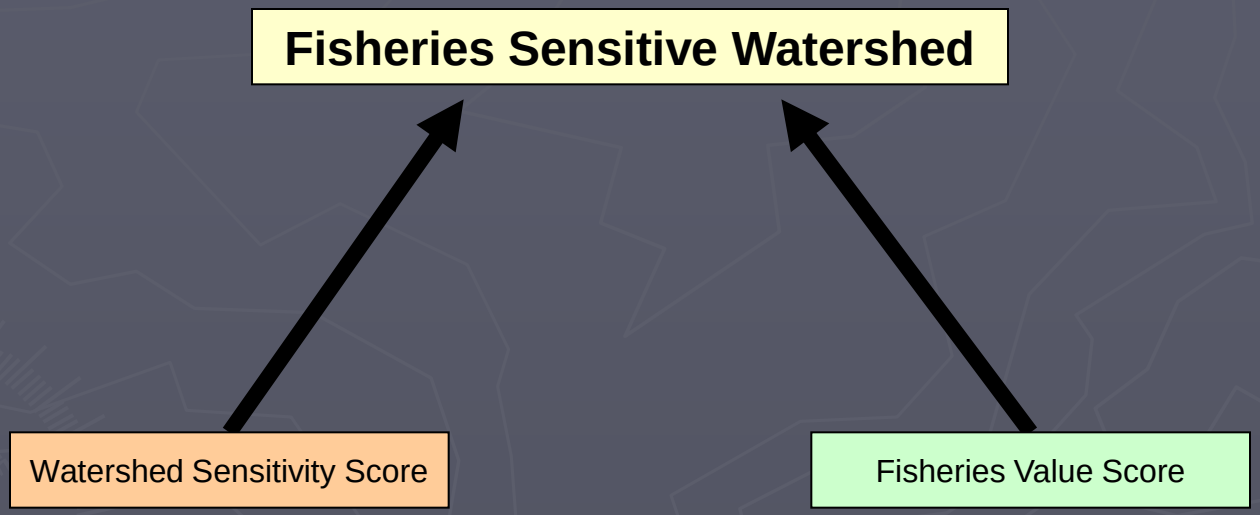
Part 2. Designation Procedure

1. Type I ➢ Sched 2 FSWs
2. Type II ➢ qualifying Land Use Plan FSWs
3. Type III ➢ all other FSWs*

FSW Designation Procedure

- Overriding program principles:
  - Provincial & regional consistency
  - Defensibility (technical and procedural)
  - Use of best available science/data
  - Continuous improvement & adaptive management

Watershed Evaluation Tool (WET)



Designation Procedure

- FSW identification and management:
  1. WET tool “course filter” & validation (1st pass)
  2. Regional level “fine filter” evaluation and verification (2nd pass)
  3. Comment & review (as per GAR requirements) with Licensees, First Nations & key stakeholder (3rd pass)
  4. FSW designation
  5. Licensee results/strategies development and MOFR plan approval
  6. Monitoring

Objectives

- What will FSW objectives look like?
  - Consistent with GAR s.14
  - Intended to conserve natural:
    1. **stream morphology and dynamics critical to fish (i.e. fish habitat attributes),**
    2. **hydrological regime; and…**
    3. **Application to entire watershed -- prevention of "cumulative hydrological effects" that would have an adverse effect on fish**

Objectives

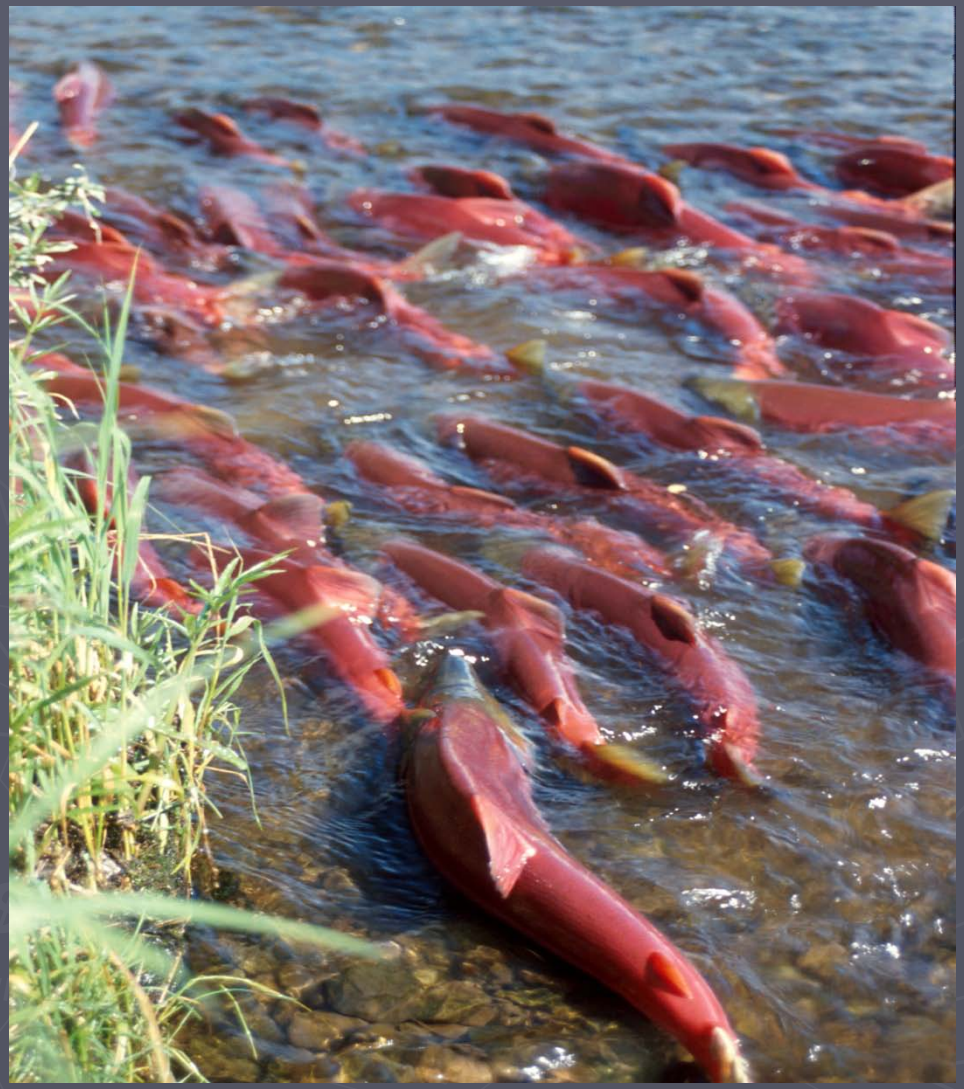
- Objectives may be tailored to suit known species/habitat requirements and conditions within the watershed(s)

- Objectives can be more specific with increasingly better information

Part 3. Horsefly River as a FSW Candidate

- Identified in Land Use Plan
- Land Use Plan objectives are not detailed and specific (ie. covers broad area)
- Ranked high provincially using the WET tool
- Initial work to identify a FSW boundary is underway (includes basin by basin review)

Attributes that make the Horsefly a candidate for FSW



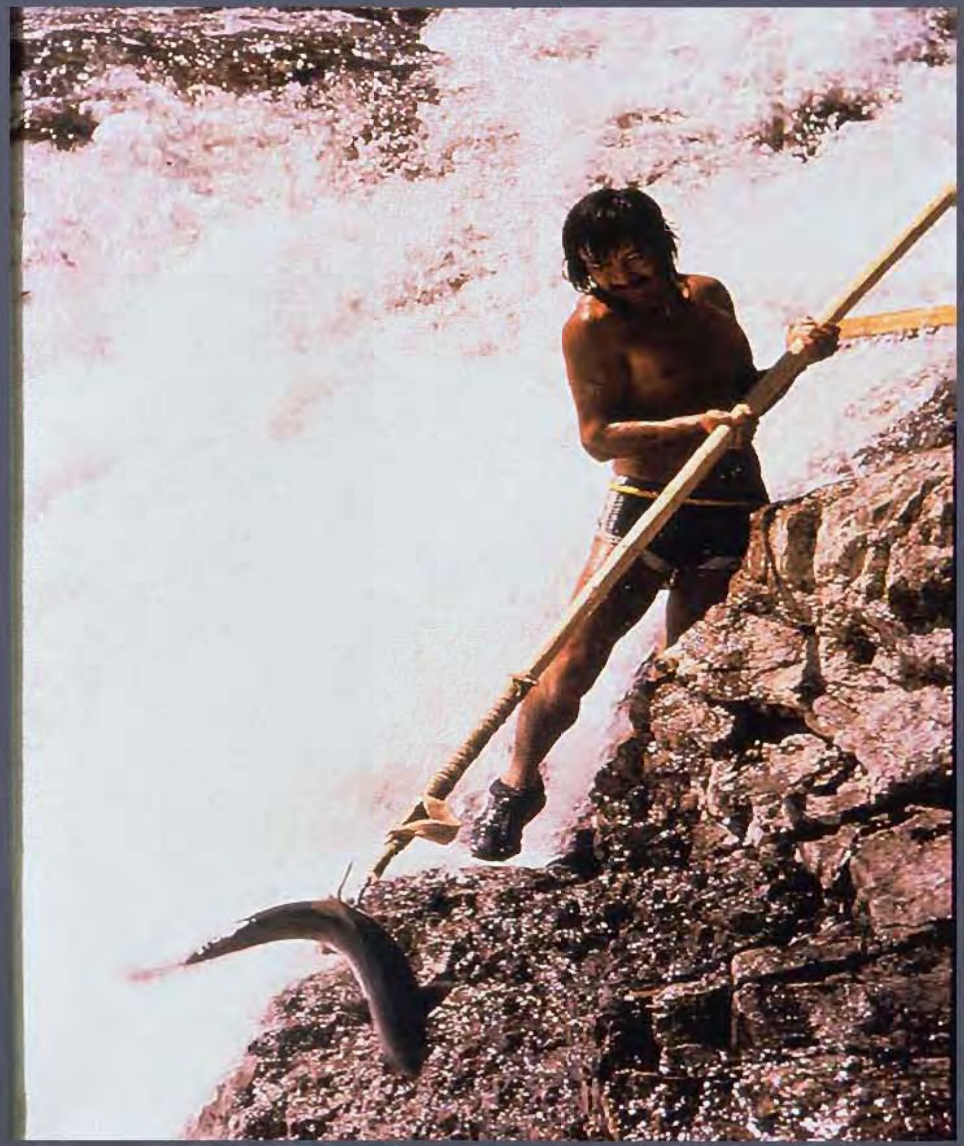
- To qualify as an FSW candidate, watersheds must meet two criteria: they must have significant fisheries values and watershed sensitivity

Extremely high fisheries values

- Sockeye, chinook, coho and kokanee salmon
- Unique late maturing rainbow trout.

Contributes significant ecological, social and economic values to the province of B.C..

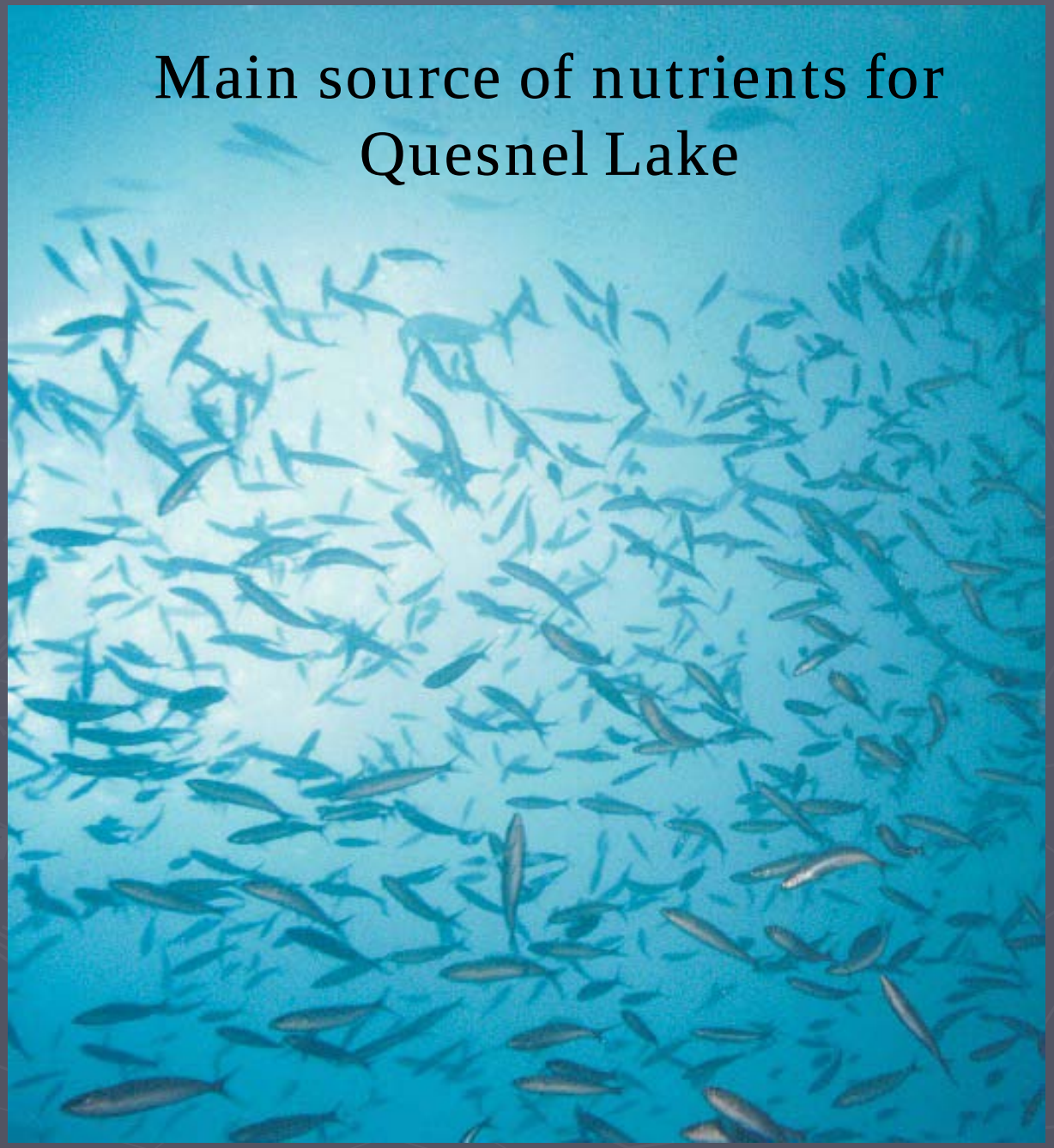
Dominant Horsefly sockeye runs can comprise over 50% of the total Fraser River sockeye production.



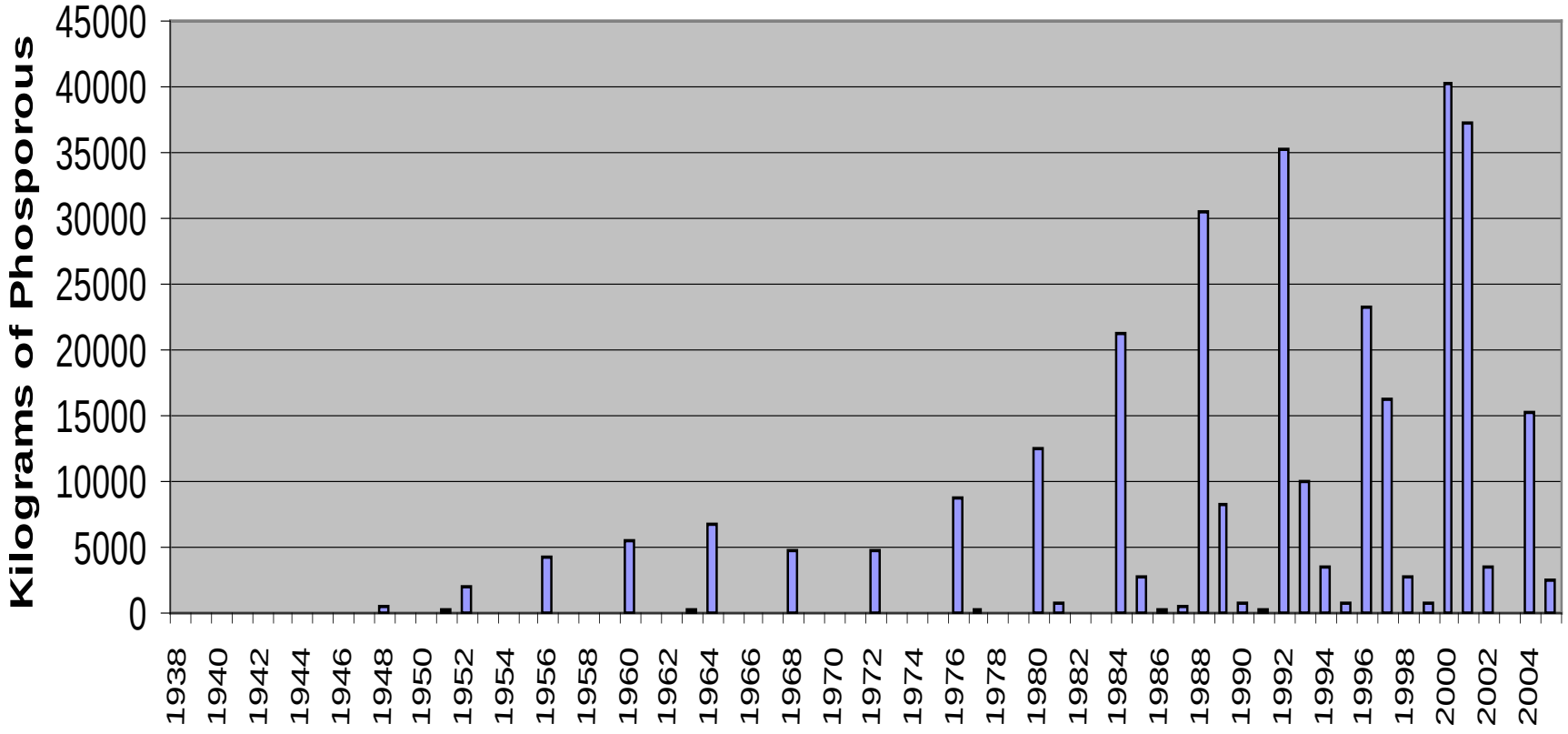
- The Horsefly River produces approximately 75% of the total rainbow trout production to Quesnel Lake.

River Fisheries

Main source of nutrients for Quesnel Lake

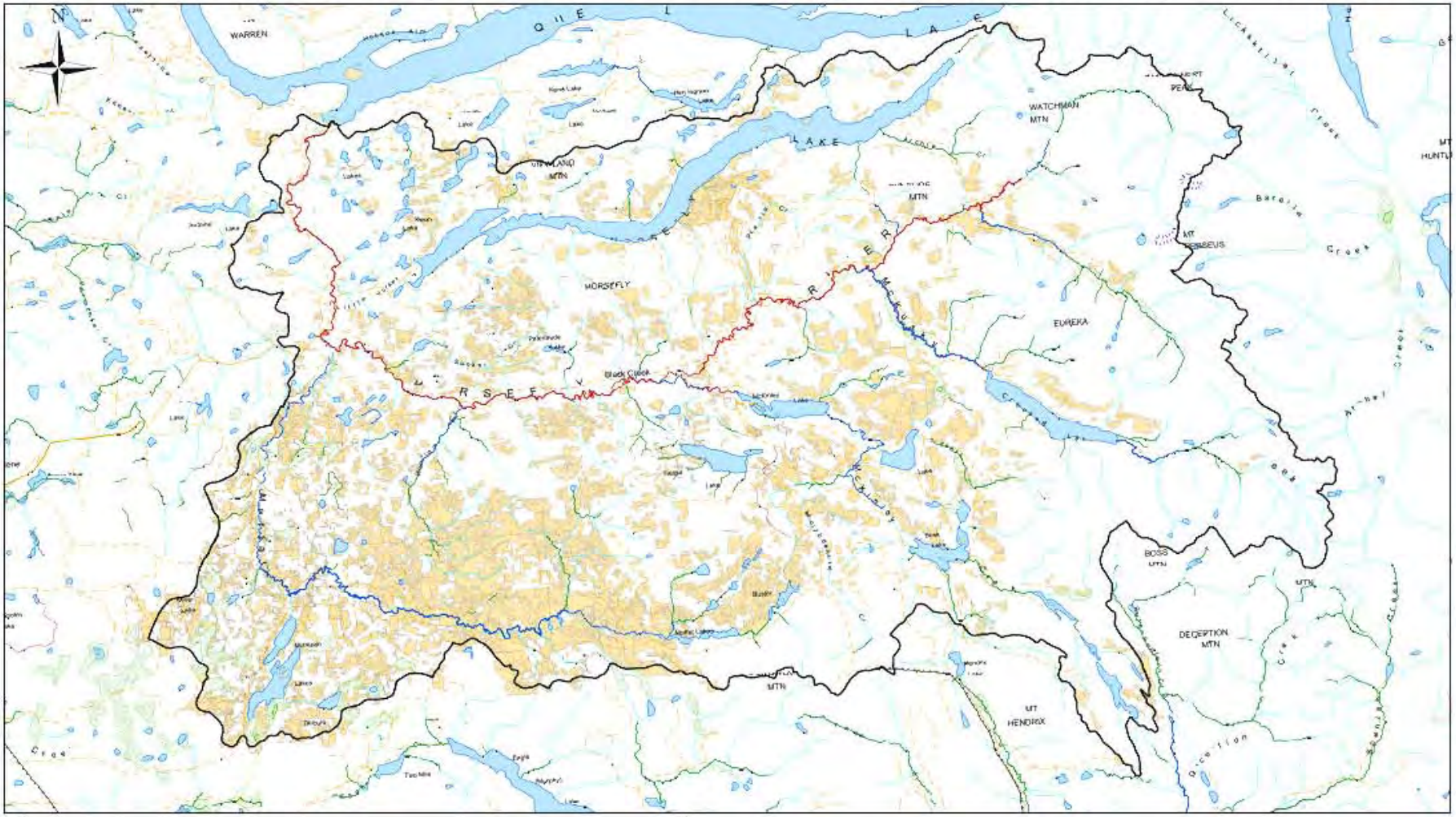


Contribution of marine (sockeye) derived phosphorous (kg.) to the Horsefly River and Quesnel Lake 1938 to 2006



Watershed Sensitivity

Stream Classification S1, S2 and S3 and Pine Leading Stands in the Horsefly River Watershed



L_Stream Classification Single Line Cariboo Region - Line
- S1
- S2
- S3

Pine Leading Stands *Pine Leading Stands*

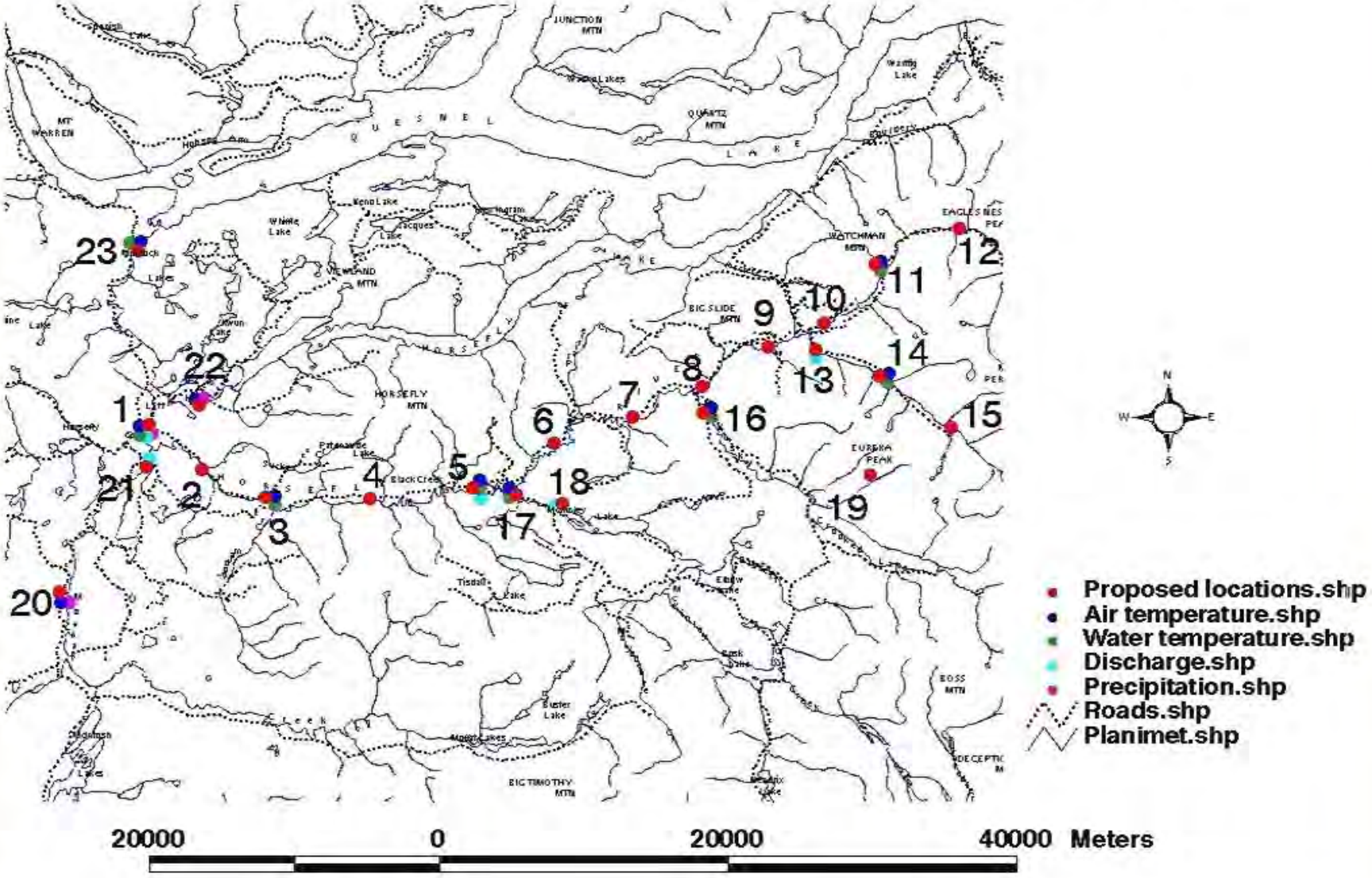
Horsefly_watershed_boundary

1:123,243

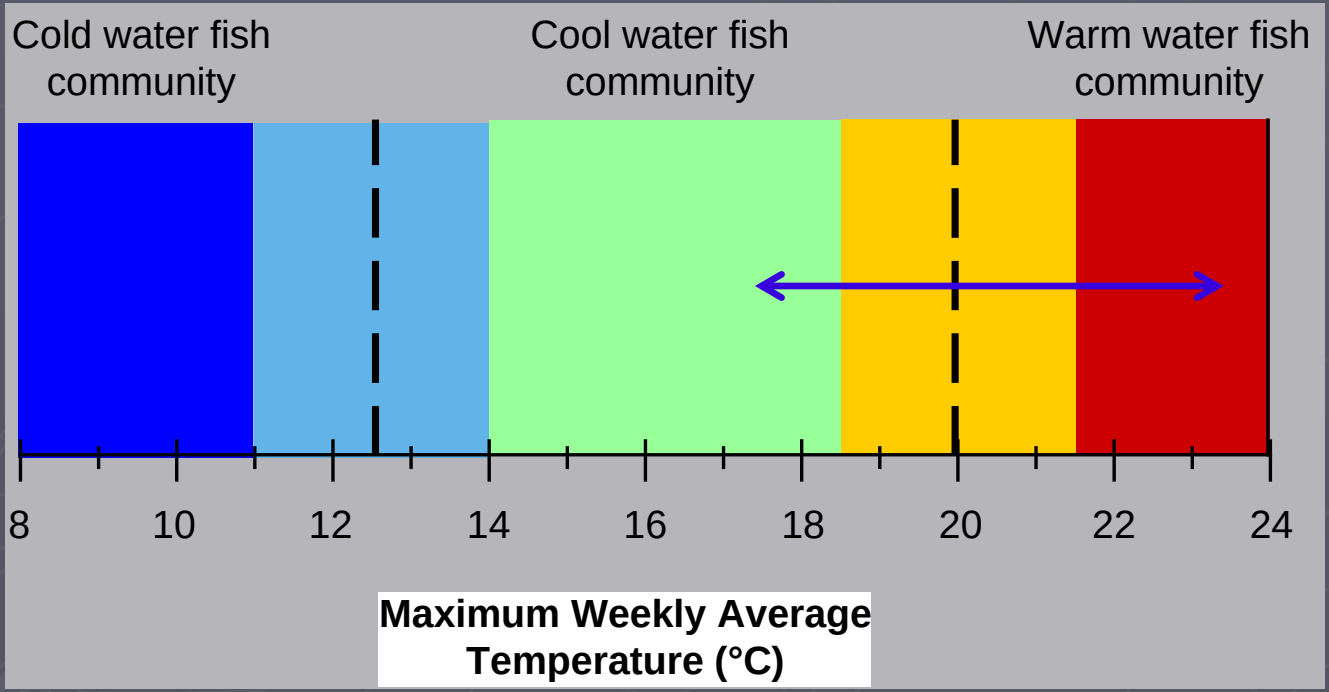
0 2.5 5 10 Kilometers

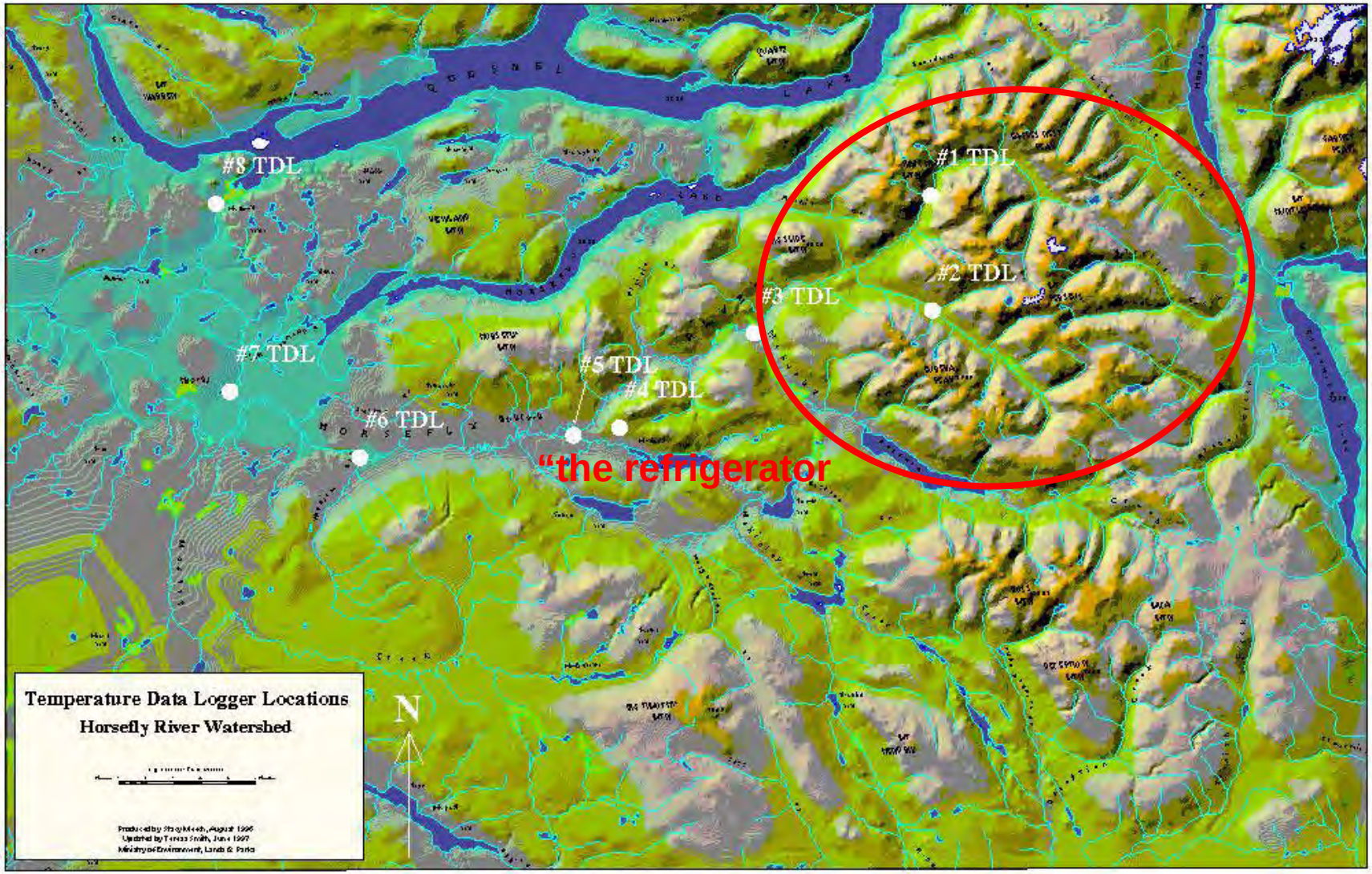
Map Produced by Ministry of Environment
Filepath: W:\wlap\wmf\Workarea\nfreeman\PP09_011_trout_Horsefly_S123_Pine\P09_011_trout_Horsefly_S123_Pine_22x34.mxd
Date Created: Mar 3, 2009
Created By: nfreeman, MOE, Williams Lake

Horsefly Data Recording Locations



Fish community thermal boundaries




#8 TDL
#1 TDL
#2 TDL
#3 TDL
#7 TDL
#5 TDL
#4 TDL
#6 TDL
"the refrigerator
Temperature Data Logger Locations
Horsefly River Watershed
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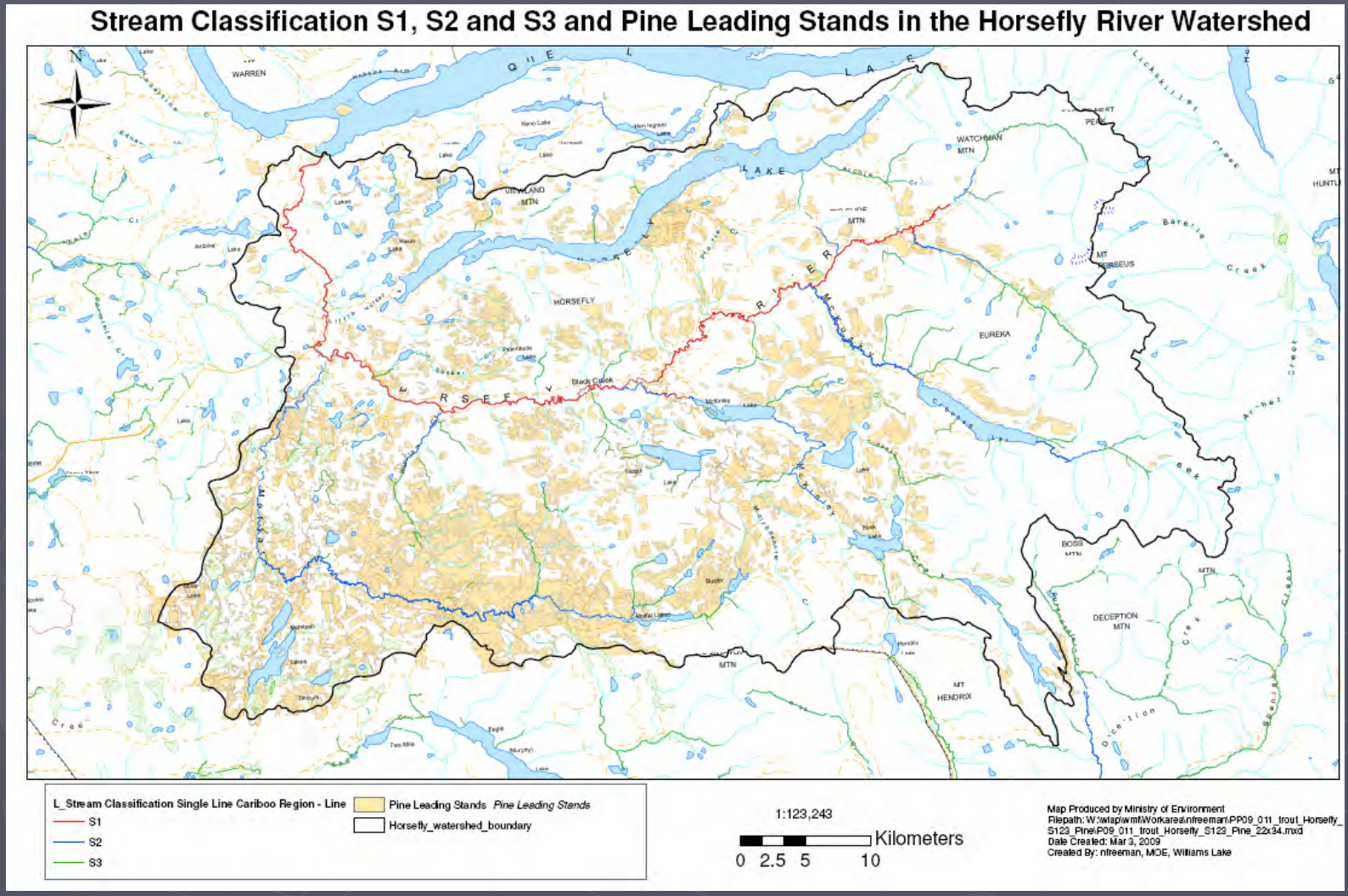
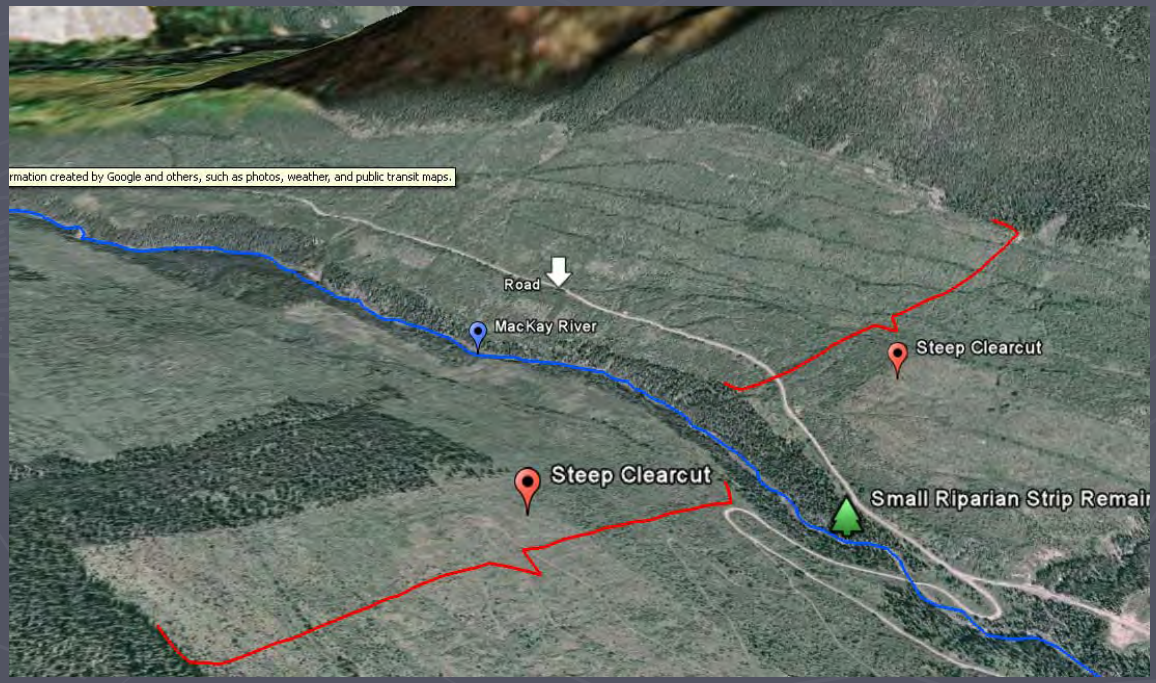
“Back on track”
What have we been doing with respect to the proposed Horsefly FSW designation



Watershed profiles

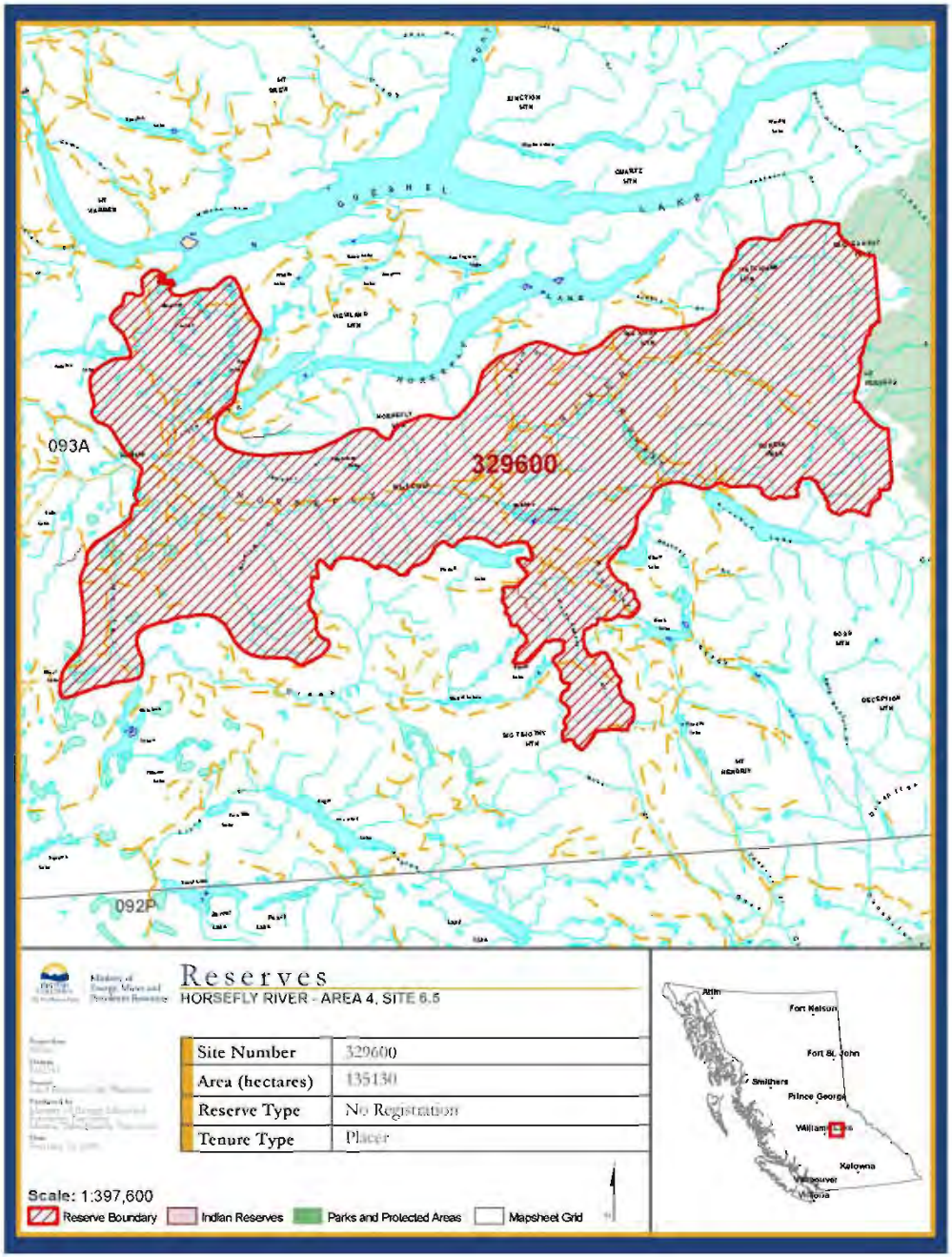
1. Fisheries Values – species richness, special stocks and ecosystem atributes.

2. Watershed Sensitivity – terrain stability, stream channel stability, existing disturbances and surface erosion due to road developments



Next Steps

- Completion of basin/sub-basin review
- Development of a proposed boundary and set of objectives
- Consultation
- Designation – later in 2010


093A
329600
092P
Reserves
HORSEFLY RIVER - AREA 4, SITE 6.5
Site Number 329600
Area (hectares) 135130
Reserve Type No Registration
Tenure Type Placer
Scale: 1:397,600
Reserve Boundary
Indian Reserves
Parks and Protected Areas
Mapsheet Grid
Atlin
Fort Nelson
Fort St. John
Smithers
Prince George
Kelowna