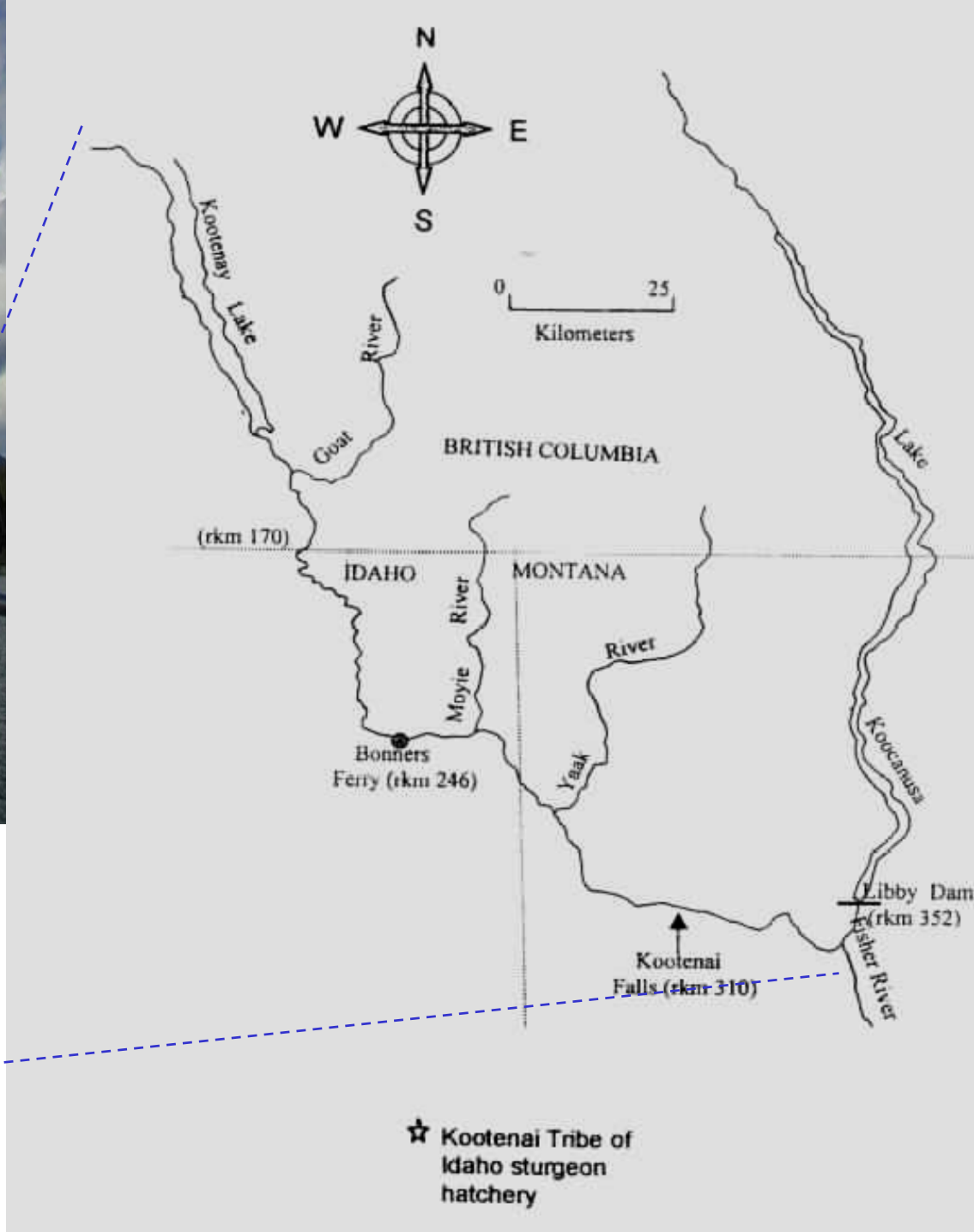
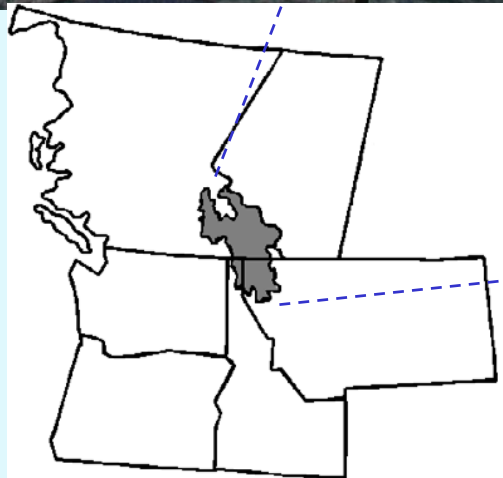




Coeur d'Alene, Idaho
31 March – 4 April, 2003

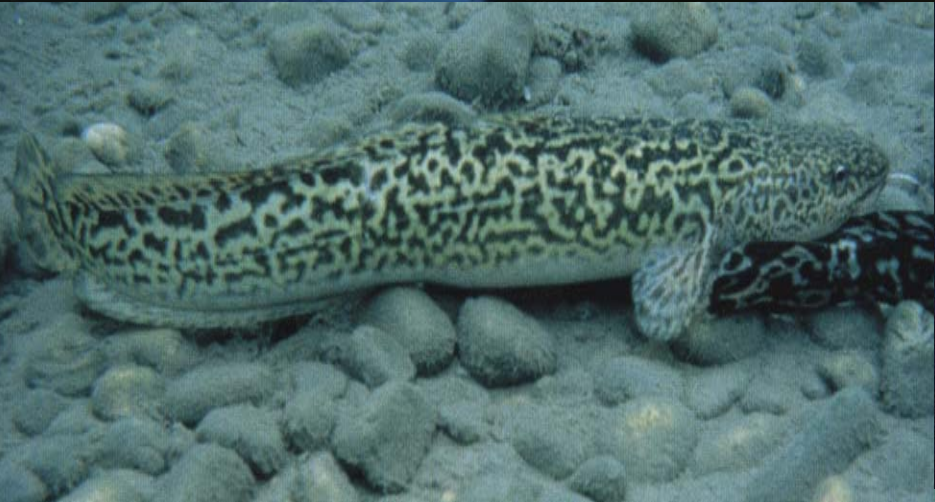
*The Kootenai River
Ecosystem:
A Challenge for the
Stressor Identification
Process*

Presented by
Charlie Holderman,
Kootenai Tribe of Idaho



The Ecosystem Past - “What Condition its Condition WAS In”

- Perhaps naturally oligotrophic, but,
- Healthy vital stocks of sturgeon, burbot, cutthroat, redband, kokanee, present
- Provided sustenance for KTOI for centuries



The Ecosystem Present - “What Condition its Condition IS in”

- Often described as a “collapsed ecosystem”
- K.R. white sturgeon, endangered 1994
- Burbot, petitioned for listing
- RBT CTT CPUE’s Low - Relative historical
- Bull trout, rare
- South-arm kok “functionally extinct”
- Increase of whitefish?



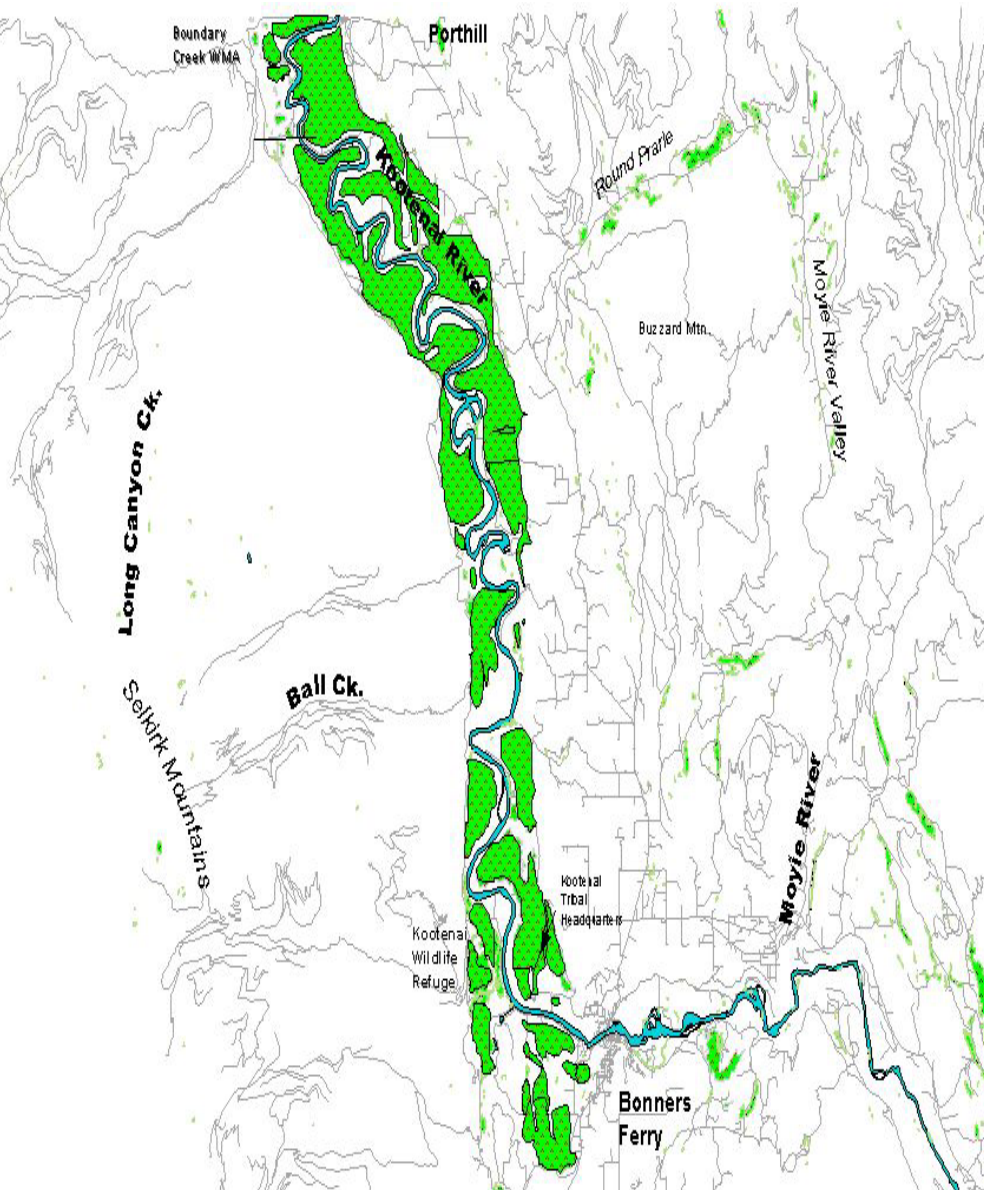
LIBBY DAM



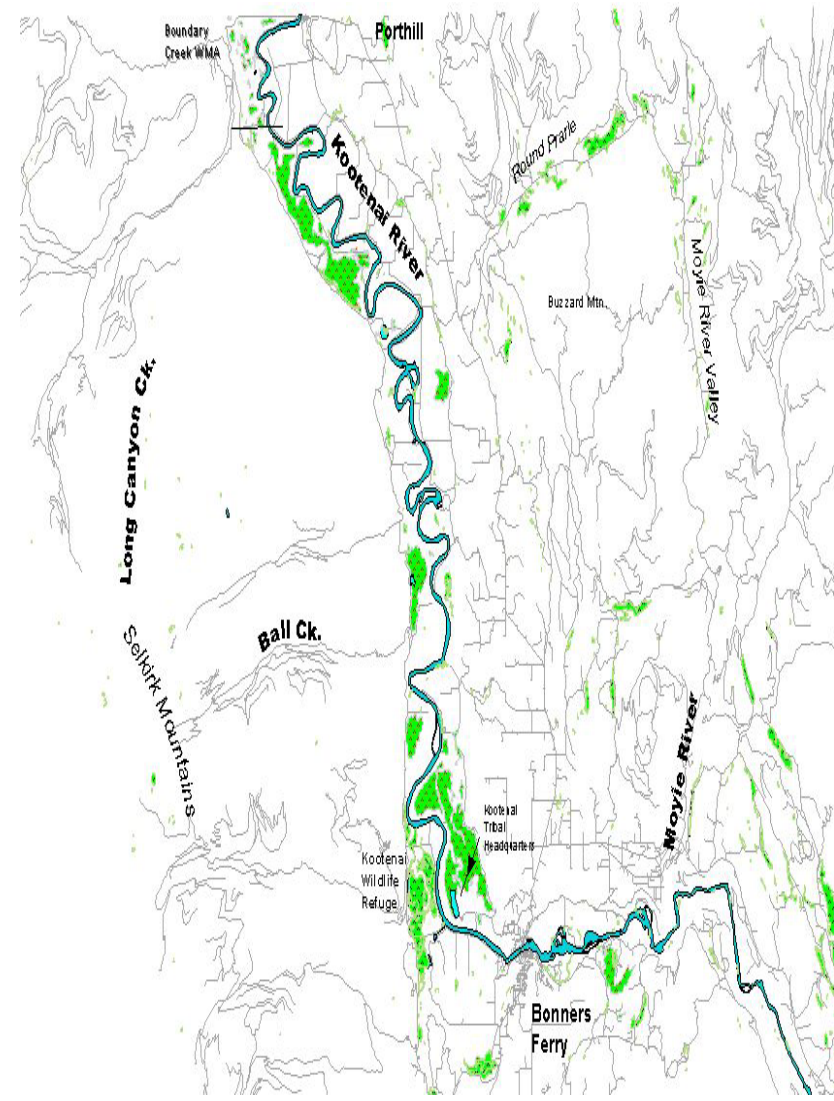
Levee: Lower Kootenai R.



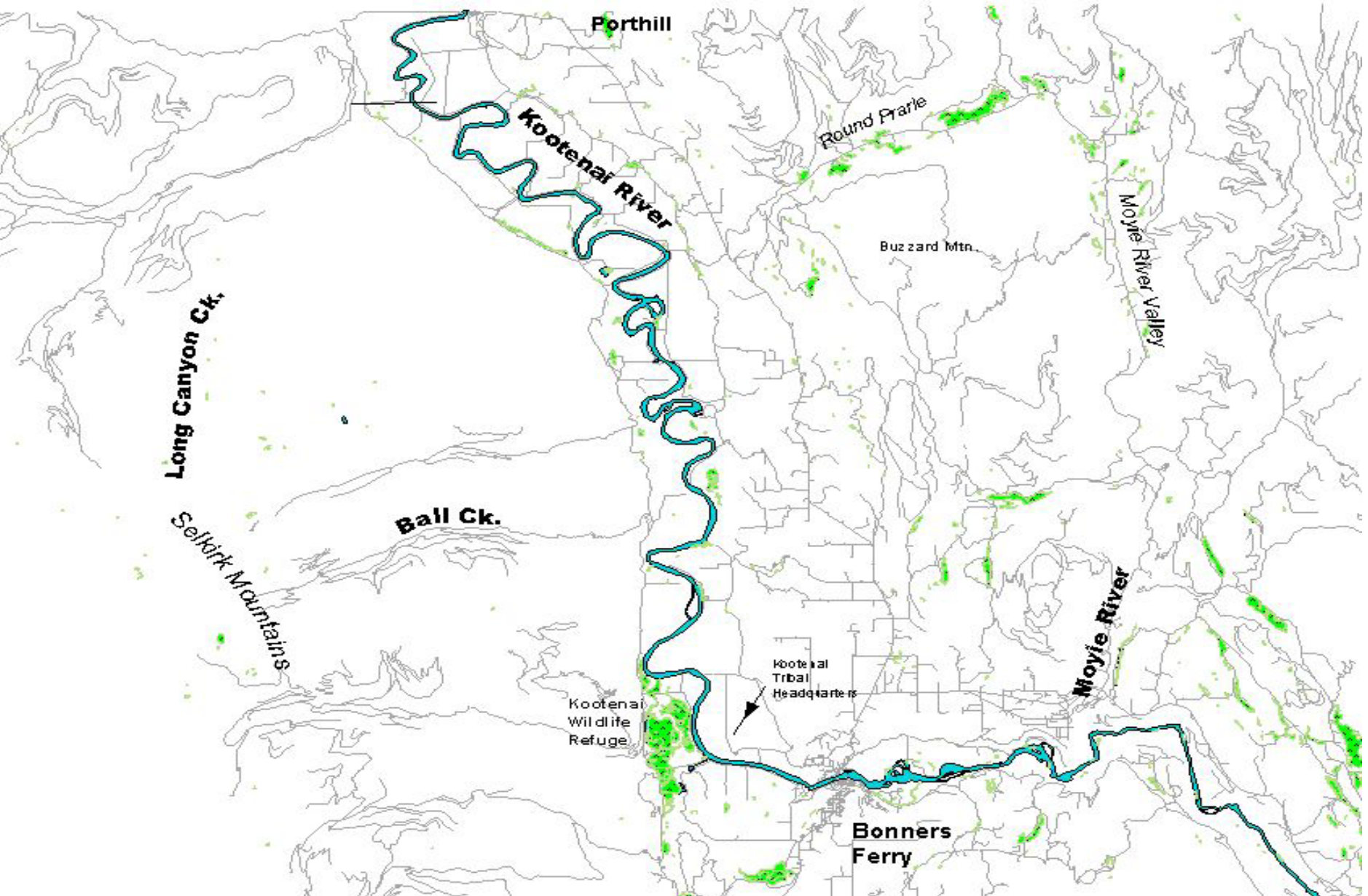
Wetlands, circa 1850



Wetlands, 1928

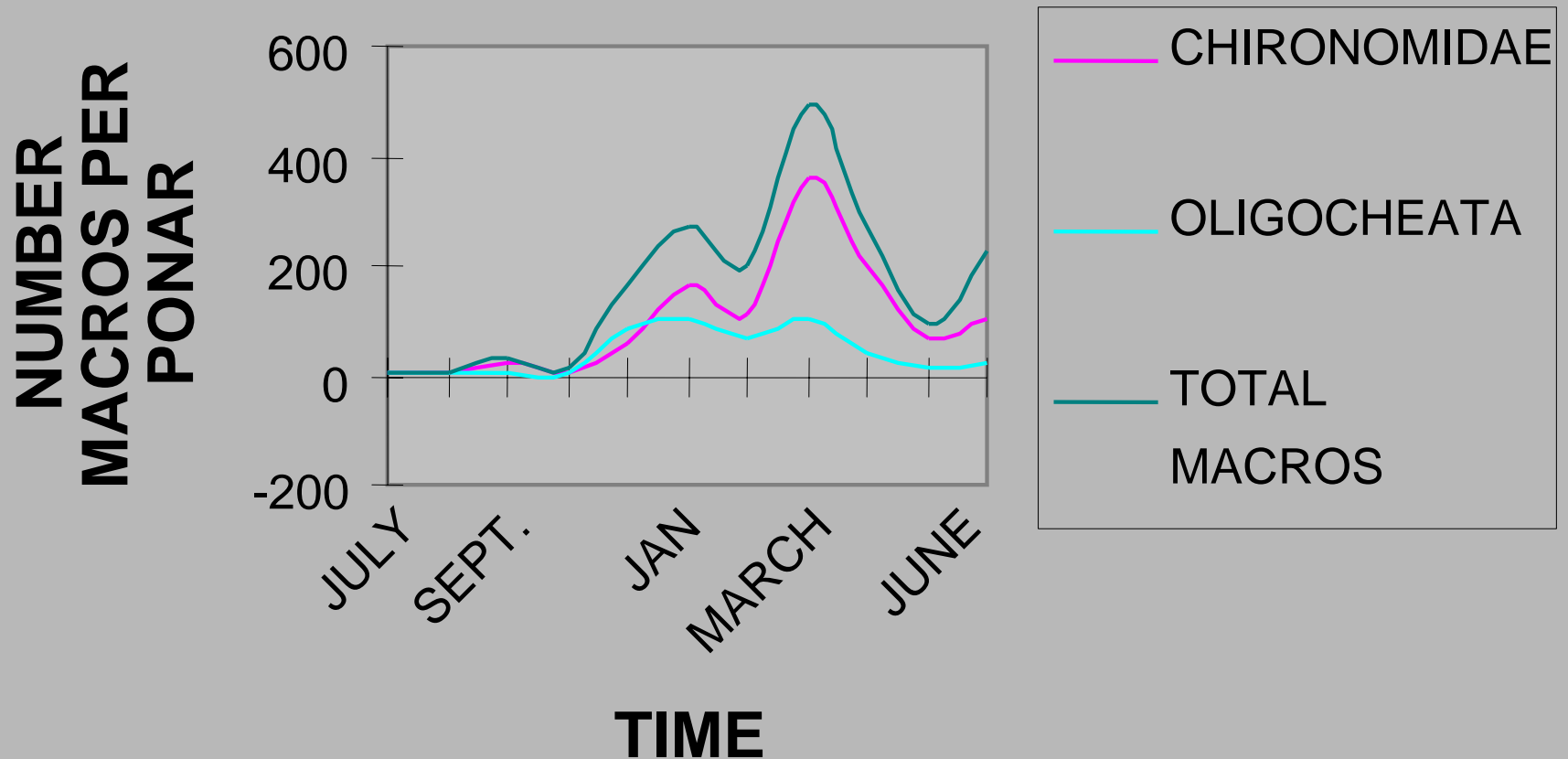


Wetlands, 2003

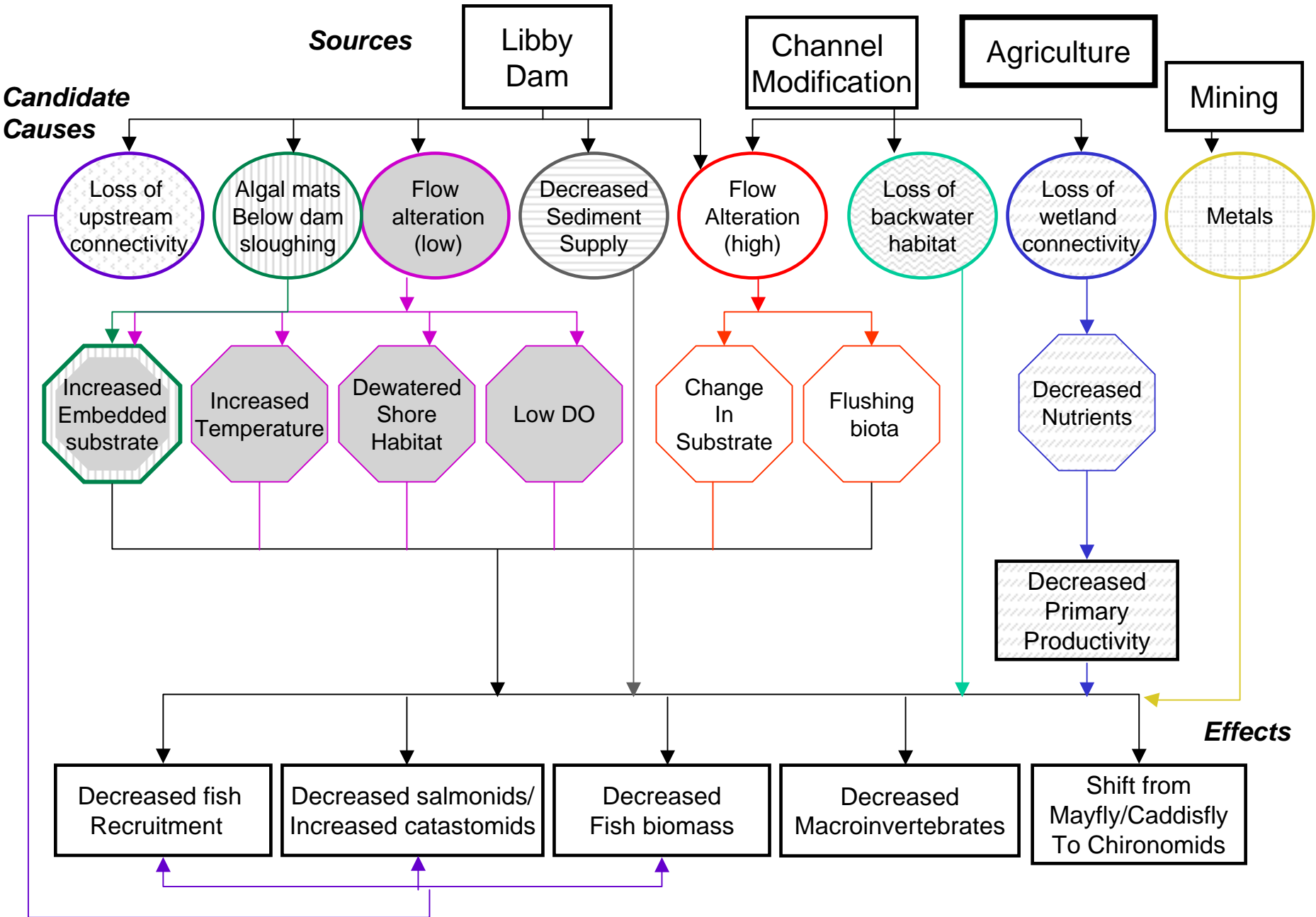




MACROINVERT DENSITY IN LOWER KOOTENAI RIVER (PORTHILL-DEEP CR.; N = 107)



Kootenai River Conceptual Model



Candidate Causes

- Reduced nutrients limiting food base
- Altered temperature regime due to dam
- Lack of connectivity
- Reduced spawning areas due to altered flow and substrate sorting
- Toxic impacts
- Loss of backwater habitat due to impoundment
- Fishing pressure
- Reduced sediment supply
- Increased embeddedness

Listing Candidate Causes: Kootenai River

1. Identify the candidate causes and associated pathways.
2. Are there additional pathways not represented by the model?
3. What data would be valuable for eliminating causes or supporting a candidate cause?
4. What additional data would be useful to have?