

The Social and Technical Challenges of Large Service Areas for Fish Habitat Banks in Canada



1. Habitat Banking
2. Linear Infrastructure
3. CN Projects
4. Technical & Social Challenges
5. Solutions
6. Questions

Outline



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Habitat Banking

Habitat Banking

- US
 - Well-established concept
 - Clean Water Act
- Canada
 - Relatively new
 - Fisheries Act



Habitat Banking

- Fisheries Act (Canada – federal)
 - Administered by Fisheries and Oceans Canada (DFO)
 - Authorization is required for impacts to fish and fish habitat
 - Offsetting is required as part of the Authorization
 - 2019 revisions formally added proponent-led habitat banks
 - Habitat banking provides a mechanism for offsetting before project impacts occur



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Habitat Banking

Brad Fairley, MES

- “Recent Changes to the Fisheries Act have changed the Landscape for Mitigation Banking in Canada”
- Session K-102



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Linear Infrastructure

Linear Infrastructure

- DFO's justification for habitat banking as for their use in linear developments
 - Pipelines
 - Railways
 - Roads
- Impacts typically from:
 - Watercourse Crossings
 - Watercourse infilling/realignments



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Linear Infrastructure

- Many small impacts along the length of the infrastructure.
- Many impacts = many offsetting requirements
- Offsetting typically limited to small projects with low fish habitat value
- Habitat banking can
 - Offset many small impacts
 - Create high value fish habitat
 - Requires large (i.e., long) service area



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CN Projects

CN North Saskatchewan River Projects

- CN has 2 large bridge projects on the NSR that will require offsetting
- CN has future projects within the NSR watershed that will require offsetting
- A habitat bank could provide offsetting for all these projects + additional future projects



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CN Network



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North Saskatchewan River is Unique

- No Dams
- Lake Sturgeon use large range
- Lake Sturgeon are a priority
 - “Endangered” (COSEWIC)
 - “Under Consideration” (SARA Schedule 1)
 - “Threatened” (Alberta Wildlife Act)
 - “At Risk” (General Status of Alberta Wild Species Report)
 - Angler harvest prohibited (Saskatchewan)



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CN NSR Habitat Bank is Rare Opportunity

- Service area stretches more than 800 km
- Spans 2 provinces (AB & SK)
- Provides offsetting for both large bridge projects, as well as other future projects within the service area of the bank
- Affords CN large economies of scale and permitting efficiencies
- Opportunities for future projects as deposits to the bank



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Technical & Social Challenges

Technical & Social Challenges

- 2 Provinces:
 - Provincial and regional fisheries management objectives
- Many First Nations and Indigenous Communities
 - Community and territorial fisheries management objectives
- Many landowners & stakeholders
 - Land and water management objectives



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Technical & Social Challenges

- Location and design of conservation project needs to
 - Meet fisheries management objectives
 - Align with First Nations and Indigenous Communities
 - Receive consent from landowners and stakeholders



Technical & Social Challenges

- Distance between conservation project and future impacts that will require offsetting
 - Conservation project improves fish habitat in one location
 - Impacts that require offsetting occur within service area – impact sites may be far away
 - Fish habitat improved in one location and impacted in other locations





Solutions

Solutions to Large Service Areas

- Distance-based ratios
 - Number of credits required for offsetting is based on distance from conservation project
 - Cost (i.e., number of credits) increases for proponent for impacts further away from conservation project



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Solutions to Large Service Areas

- Multiple conservation projects
 - 2 or more conservation projects within large service area
 - Conservation projects may be constructed near planned future impacts



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Summary

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- Habitat banking offers regulatory mechanism to create high value fish habitat to offset for project impacts
- NSR and Lake Sturgeon represents a unique opportunity for habitat banking for CN
- Challenges exist with large service areas and distance between conservation project and planned future impacts
- Solutions available



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Questions?

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