

Offsetting challenges for the EIA practitioner



Qualitative and regional approach is better

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Presentation plan

- Hydro-Québec overview
- Context of offsetting projects for hydro and power transmission projects
- Challenges and proposed best practices
- Conclusions

Hydro-Québec Overview

- Generates, transmits, and distributes electricity in Québec
- Installed capacity > 37 000 MW
- Clean energy Leader – **99 %** of its total output generated by hydropower
- In Québec, the electric sector produces only **0,8 %** of GHG emissions
- Exportation to the neighbouring provinces and USA



Project management context

- In the last 20 years, offsetting obligations for promoters have evolved
- The federal fish habitat policy (1986) introduced the « no net loss » principle, a real challenge for hydro projects
- A provincial act (2012) imposed the same principle to wetland losses
- « No net loss » policy is now applied to terrestrial fauna habitat and to forest. Compensations are needed for many transmission projects
- To define a full project offset package, that satisfies permit conditions, has become a significant investment in time and budget

Legal context

Offsetting is legally required for the loss of :

- Fish habitat
- Many wildlife species habitat
- Forest (<30% private land forest cover)
- Wetlands

Policy rules:

- The usual« loss » unit is the surface area
- The impact significance of the loss is rarely a matter for compensation
- Surface area compensation ratios
- Compensation work must be near to the impacted area
- No offset banking system yet



Offset proximity to the impacted area as a general criteria

Multiplication of offsets in urban areas : Urban planning difficulties especially for transmission infrastructures

Low ecological significance of multiple small works

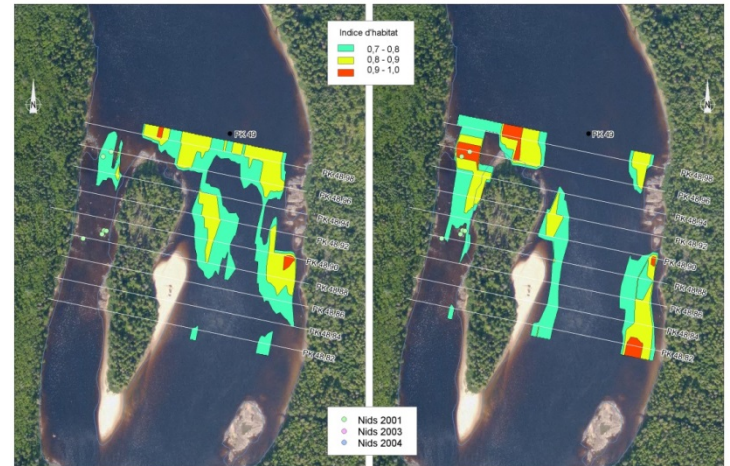
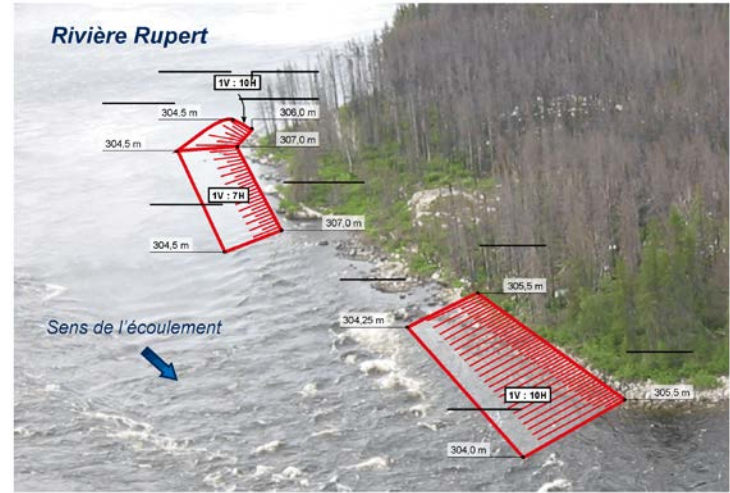
Best practice: Assess the potential impact of a compensation work at the population level (ecological corridor, green belt etc)



When proximity of offset to the impacted area is ecologically pertinent

Best practice: Assess impact of offset as critical habitat (not area)

Examples : Sturgeon and Salmon spawning grounds (modified flow reach of hydro projects)

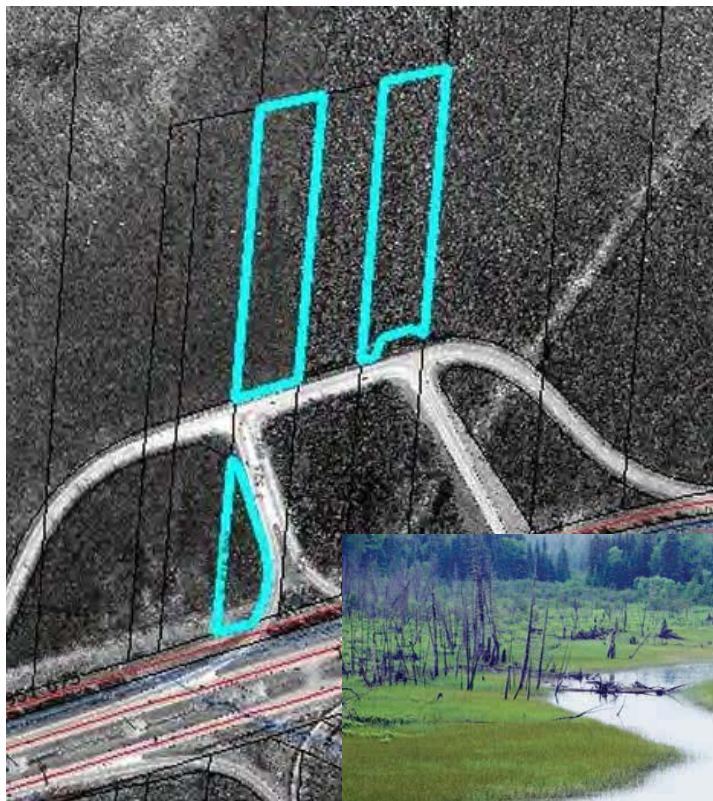


Multiple compensations applied to one impacted site

More than one type of compensation (wetlands, fauna habitat and forest) can apply to one land: With a 2-3 times compensation ratio per component, it multiplies by many the surface area of offset works

Best practice: Go for quality and diversity. Avoid multiple « creations » of homogeneous habitats.

Flexibility in terms of surface area (biodiversity indices?)



Land acquisition and/or improvement?

The improvement work (elimination of invasive plant species, tree planting, bank stabilisation etc) may be more expensive than the cost of the land itself

Best practice:

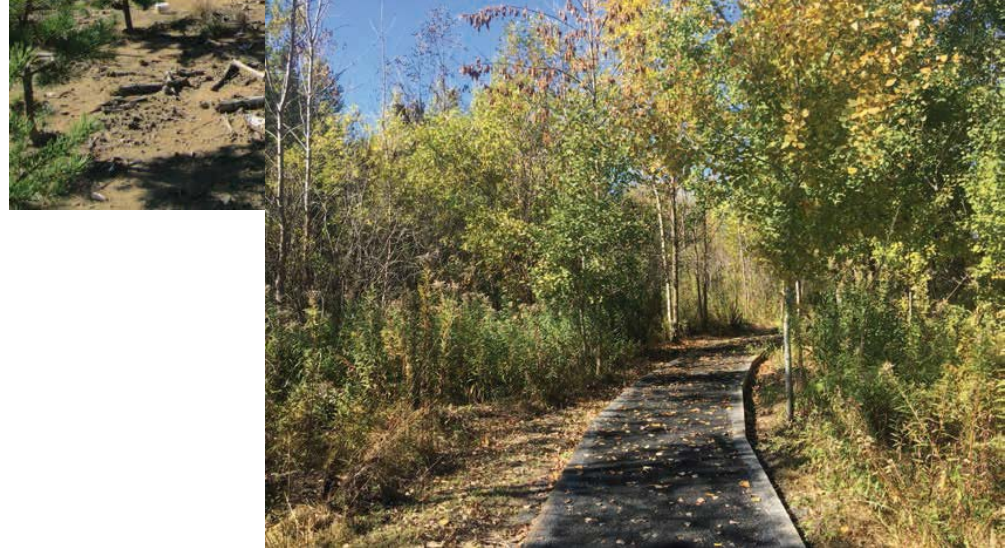
What is the regional priority? What other works have been done in the area? Are artificial habitats productive?

Hire an expert; examine the cost of work and long term maintenance vs acquisition of a pristine land;



Private land :market value is increased when governmental agencies identify the preferred sites

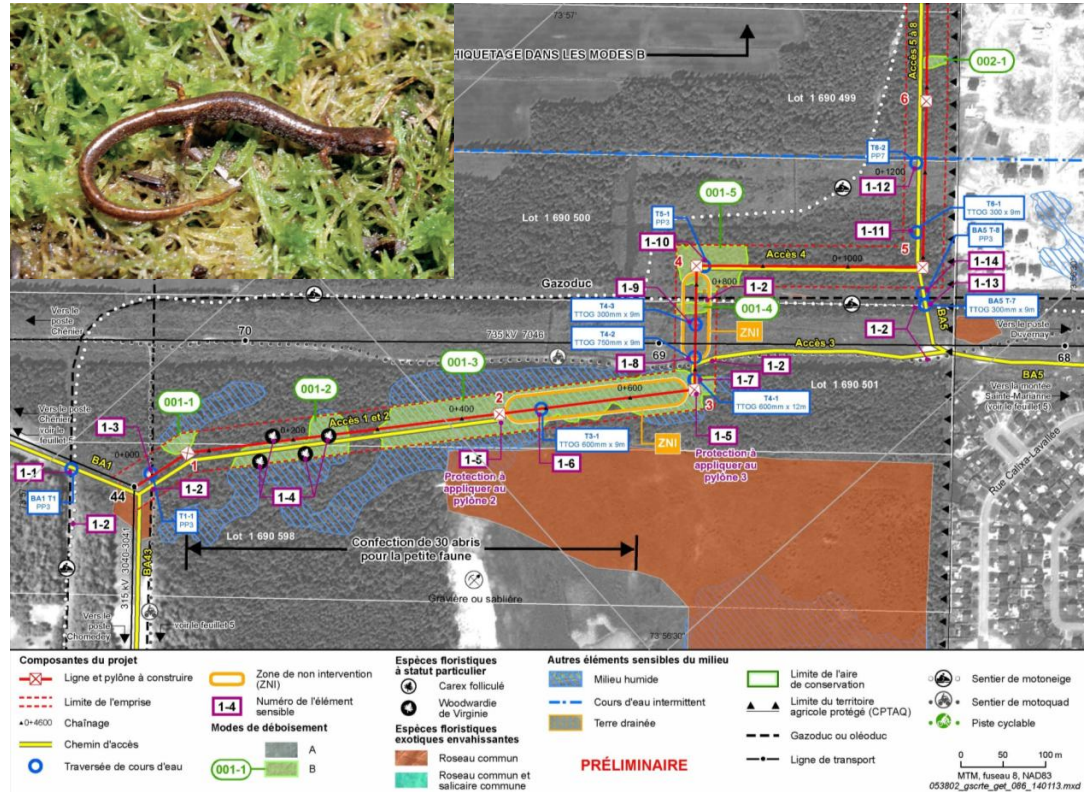
Best practice: Start searching for opportunities early in the projetc; don't wait for civil servants to propose sites; Develop a multiple compensation package; pick the best deal, negotiate...



There are many stakeholders, with different interests in offset projects

- Government (provincial federal, more than one ministry)
- Regional authority
- Municipality
- Conservation agency
- Private owner

Best practice: get all these people together in one « offset committee »



Conclusions

- Significance of impact on biodiversity/productivity, matters more than surface area for offset purposes
- Quality should compensate for quantity
- A regional approach is often better than « near the impact »
- Get people to work together, stakeholders have different priorities
- Take into consideration the long term maintenance cost and viability because ecosystem « creation » is tricky...

Questions?

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