



Cultural Keystone Species in Oil Sands Reclamation, Fort McKay, Alberta, Canada

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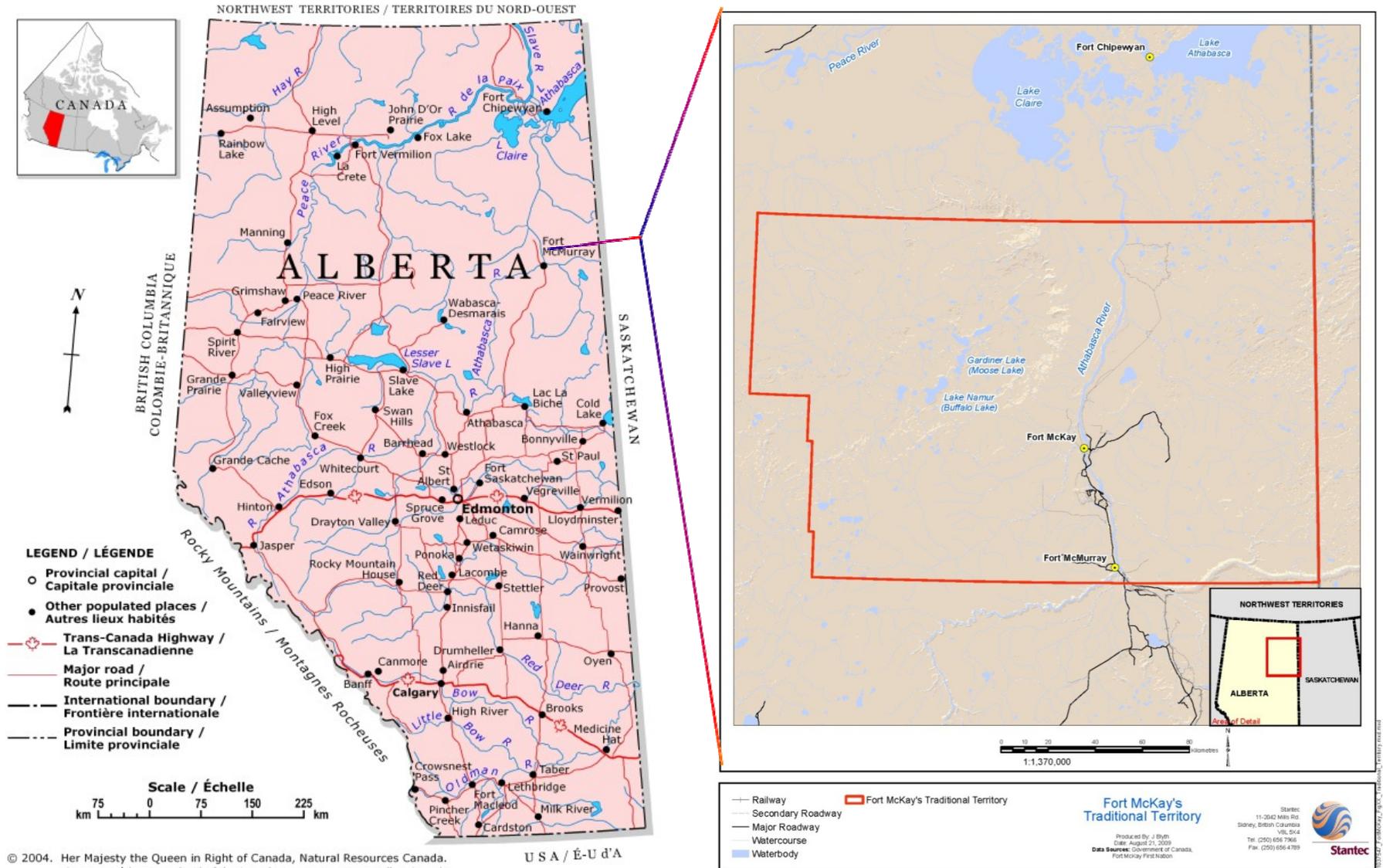
Thank You:

- **Fort McKay TEK Project Team Elders**

Andrew Boucher, Rena Boucher, Mary Bouchier, Gary Cooper, Flora Grandjambe, James Grandjambe, Wilfred Grandjambe, Celina Harpe, Dorothy McDonald, Fred McDonald, Victoria McDonald, Francis Orr, Walter Orr, Elsie Rolland, Elizabeth Stokes, Mary Tourangeau, Clara Wilson

- **The community of Fort McKay – this truly is their project**

The Setting



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Map taken from: <http://atlas.nrcan.gc.ca>

The Setting



Photo: Justin Straker

The Setting

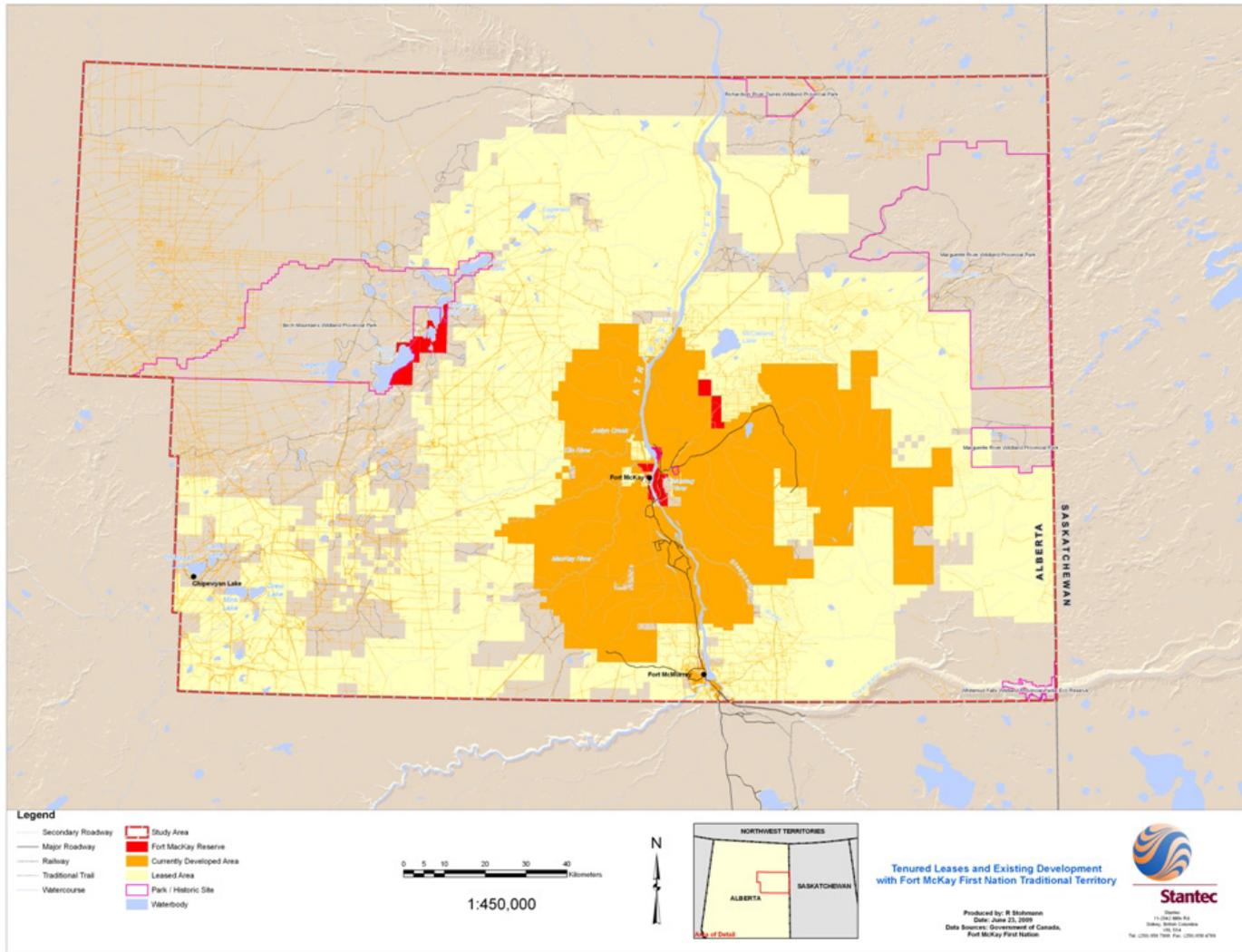




Photo: Justin Straker

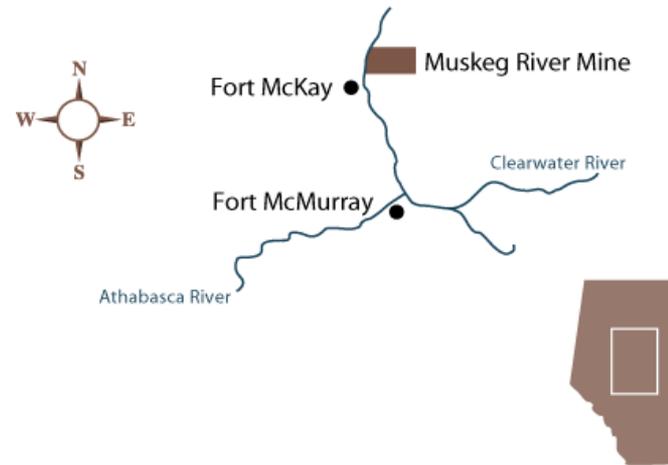
The Need for a New Approach to Reclamation

- From Fort McKay's perspective social processes are reflected in and exist concurrently with ecological ones
- Most conventional reclamation falls short of Fort McKay's reclamation goals, including:
 - Very little has been reclaimed after 30+ years of development
 - Lack of participation in defining “equivalent land capability”
 - Desire for better inclusion of cultural values (such as spirituality) in reclamation design and process
 - Necessity to maintain connection to site under development
 - Important to consider current use and plan for future use
 - Need better connectivity to areas adjacent to mine lease

Project Context

The scale and pace of development and associated impacts on the community necessitates a integrative approach to address community-landscape issues (both biological and cultural diversity are affected)

The community of Fort McKay began the “Fort McKay TEK Project” to explore ways to reclaim both social and ecological components affected by development (with strong support from Albian Sands)



Project Intent



Photo: Barry Hochstein

Identify a mechanism to more meaningfully use Traditional Environmental Knowledge to help inform the reclamation process after mining

Address environmental, social and spiritual components in land reclamation

Encourage and support community involvement in reclamation

The Approach: Cultural Keystone Species

Culturally salient species that shape in a major way the cultural identity of a people, as reflected in the fundamental roles these species have in diet, materials, medicine and/or spiritual practices

(Garibaldi and Turner 2004)

Inextricably Linked

Biodiversity :

the total diversity of living things, at genetic, species and ecosystem levels

Cultural Diversity:

the total diversity of human cultures at different scales of similarity and difference



Biosphere :

the entire area of the earth - land, water and air - inhabited by living things

Ethnosphere:

the sum total of human thought, language, beliefs, and institutions made manifest by the myriad of world cultures (Wade Davis 2001)

Project Approach: Cultural Keystone Species



Photo: Seeds of Change



Photo: Larry Dueck, DFO Canda

Why Use Cultural Keystone Species?

- Provides a culturally relevant compass to guide people as they engage in long-term reclamation and land use planning. Through the intentional focus on returning healthy populations of key species to reclaimed areas, the CKS model reinforces their significance to local people;
- Offers a tool for translation of knowledge;
- Provide a starting point for further analysis of environmental change and community resilience in the face of that change;

Why Use Cultural Keystone Species?

- Offers a better understanding of the interactions of cultural keystone species and other species;
- Directs attention to a finite number of culturally salient and meaningful species which is fiscally and logistically more manageable; and
- Promotes community participation - the communities who consider these species to be keystone may have the most obvious reason for wanting to see their sustainable return.

Cultural Keystone Species in Fort McKay



Beaver (*Castor canadensis*): help shape and build the land



Moose (*Alces alces*): heavily used for food and as a source of clothing material and implements



Ratroot (*Acorus americanus*): highly valued medicinal plant



Cranberries and blueberries (multiple species): prized seasonal food and medicine

Project Findings

CKS have shown to be helpful at translating cultural landscape information in a way that is understandable to western researchers

When industry come, the bosses or whatever, they talk their English, well, everybody speak English anyway. I listen good, the half of it I don't understand what he's talking about. And if I talk to you, and if you don't understand me, what I was talking about, and if you don't understand four or five words in between, you're out. You're out of what you're listening [to].

Fort McKay Elder Francis Orr

Project Findings

More time focusing on species relevant to community members has encouraged sharing of traditional knowledge with direct implications for reclamation.



Project Findings

CKS offer a relatable linkage that people can visualize and discuss between the current state of the developed landscape and the long-term goals for the land following reclamation .

Directed attention being paid to include key plant species in reclamation design as well as associated species.



Project Findings - Challenges

One of the most elusive goals of the project was to address spirituality in the process of reclamation. People's spirituality does not exist in a locatable place, but rather in experience and physical movement on the land.



If you fly them [children] to an area (rather than have them walk or sled there) that is:

“like dropping them in a bowl. What have they learned? Nothing. They have to walk [in order] to learn.”

James Grandjambe
Cree Elder, Fort McKay

Project Findings - Challenges

Scale of oil sands disturbance and subsequent reclamation is so immense that some community recommendations for reclaiming CKS may be impractical.



Muskeg – A Keystone Habitat?

My father would tell you that our body is like the earth. We need a heart to live. And he would tell you that the muskeg is your heart, and that the mountains are your brain, and the creeks and rivers are your blood vessels...Muskeg is very important to rivers and creeks and everything in them. Muskeg is connected through water to the rest of the earth. With that comes our spiritual values and how we are connected and respect the earth

(Cecelia Fitzpatrick, Fort McKay Councilor, 2003)

Conclusions

Allocate appropriate time and resources for a collaborative adaptive process with participating communities

Emphasize the concept of process in “social-ecological” reclamation (e.g., Elder Advisory Groups targeting CKS)

THANK YOU

