Forestry Team in Action

Forest Management Regime Approach to Carbon Offsets

On behalf of BC major licensees and the BC government, an interdisciplinary team, led by Forsite, looked into the viability of creating forest carbon offsets through implementing a range of alternative forest practices/activities at the forest management unit level. The Kamloops TSA and TFL 25 (mid-coast) were used as case study areas. The focus of the project was to understand opportunities and challenges with a Forest Management Regime approach to offsets, explore the viability of specific forestry activities under BC's draft Forest Carbon Offset Protocol (FCOP) accounting rules, and to make recommendations on improvements to the draft FCOP rules. The project found that a FMR approach offered several key advantages over smaller scale, single focus projects but care must be taken to address the added complexity/uncertainty associated with this approach. Several suggestions to enhance the FCOP document were also put forward, including an alternative approach to account for harvested wood products.

Project Lead and Contact

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Clients

Forest Sector Climate Action Steering Committee: Kelly McCloskey, RPF (Kelly McCloskey & Associates); Dave Peterson, RPF (Ministry of Forests, Lands and Natural Resource Operations); Ric Slaco, RPF (Interfor)
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Project Team

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Stein Valley Restoration Project

A wildfire in 2009 damaged trails and associated facilities in Stein Valley Nlaka'pamux Heritage Provincial Park near Lytton. An assessment of the nature and extent of the damage and recommendations for recovery work to restore the damaged facilities to the condition that prevailed before the fire, were required.

The wildfire covered approximately 10,000 hectares and affected about 25 km of established trails. Public Safety Canada's Disaster Financial Assistance Arrangements (DFAA) program helps provinces recover from major disasters and was utilized to provide funding for the restoration of the park facilities to pre-fire conditions.

Forsite Consultants Ltd. was retained to work with local First Nations community members to assess the damage to park facilities, provide a recovery plan and budget and implement the remediation work. An added component to the project was that the fire occurred within prime spotted owl habitat. Coordination with biologists from the BC Conservation Foundation was integral to maintaining habitat and structural components throughout the burn essential to the owl's security within the park.

The remedial work was completed by members of the Lytton First Nation community and consisted of danger tree falling and assessment, bridge repair, and trail repair, clearing, and marking.

As a result of this project, all of the affected trail system within the Stein Valley Nlaka'pamux Park has been restored to a useable state that is safe for all visitors to enjoy.

Project Team

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Upstream Oil and Gas Forest Management Solutions

Development of oil and gas resources continues to grow in importance to meet global energy needs. British Columbia has a growing role as a leader in providing secure and reliable energy sources. Working with Mark Sherrington of Shell Canada Ltd., Andrew Carpenter, RPF, is assisting Shell's development of environmental mitigation solutions. The project includes the development of workable, reliable field tools to mitigate disturbances after long linear construction such as a natural gas pipeline right-of-way.

Because the operating areas in northeast BC are frequented by sensitive animal species such as grizzly bears and northern mountain caribou, the project is specifically targeted at the establishment of plant species within its reclamation regime. These plant species will provide benefits such as soil stability, limits to white tail deer forage (e.g. grasses) to reduce wolf predation impacts on caribou, and natural soil nutritional supplementation (e.g. nitrogen fixing). To make this work, the selected plants include many traditional (e.g. *Pinus contorta*) and non-traditional species (e.g. *Alnus viridis*).

In 2009-2010, plant propagation services were secured through BC based service providers: Sylvan Vale Forest Nursery, Galahad Enterprises Inc., Windfirm Resources Inc. and the Saulteau First Nation. A total of four tree, five shrub and two forb plant species were grown from seeds or cuttings and planted into monitoring plots.

Andrew is also working with the upstream oil and gas sector to aid in the fulfillment of land management commitments to the Federal Crown, the Province of BC, regional Aboriginal stakeholders and shareholders in manners that will promote environmental protection, shared learning and continuous improvement.

Project Team

Reclaimit Ltd.: Andrew Carpenter, RPF (BC and AB)
Shell Canada Ltd.: Mark Sherrington
University of Northern British Columbia: Dr. Christopher Opio

Managing Forest Fuels in Jasper National Park

From 2006 to 2011, Landmark Forest Management Ltd has worked with Parks Canada in Jasper National Park (JNP) to develop, test and implement ecologically-based methods for managing forest fuels in ways that reduce community wildfire risk while protecting/enhancing wildlife habitat and visual qualities of the forest.

The projects combined restoration of Douglas-fir and pine savannah ecosystems, FireSmart-ForestWise forest thinning, and fuel management using conventional equipment on ~ 400 ha of gentle terrain and a spyder hoe on ~ 100 ha of extreme slopes. Landmark's project responsibilities also included coordinating and supervising necessary sub-contractors and completing log marketing to supplement project funding.

In 2010, Landmark completed selective thinning treatments in JNP's signature Whistlers Campground to achieve objectives for wildfire protection and removal of trees that were potentially hazardous to campground users. Landmark's project highlights included processing wood into firewood and compost chips, designing in a stationary burn bin, coordinating the final clean up, and completing the project safely, on time and to JNP environmental standards.

According to Alan Westhaver, Vegetation/Fire Specialist for JNP, "the strong community support for this project demonstrates the benefits possible when innovative industry and agency fire managers team up to resolve community wildfire protection goals."

Project Team

Landmark Forest Management Ltd: Nicola Farrer, FIT; Charlie Gerstmar, RFT; Steve Giesbrecht, RPF; Kevin Hill, RFT; Brad Sindlinger, RFT; Rob Udy, RFT; Eric Vanderkwaak, RFT; Mark Wallace, RFT
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Alternative Method of Artificial Reforestation

In June 2011, the silviculture team at West Fraser Mills, Williams Lake Plywood Division, pursued an alternative method of artificial reforestation on upper elevation sites within the ESSF biogeoclimatic zone northeast of Likely, BC. Proven to be problematic to regenerate, these 'brushy,' snow press susceptible cutblocks were looked at with survival and natural conifer patterns in mind. The convention of uniform seedling distribution was abandoned for a more natural, clustered planting arrangement.

We selected stumps and extremely elevated, natural mounds protected by logs, slash or boulders as optimal microsites. Two-year-old spruce stock was planted as close as one metre from one another on these specific microsites. Between these raised planting clusters, the highly vegetated areas including lady fern, Indian hellebore, red elderberry, thimbleberry and cow parsnip were left as unplanted gaps. Focusing these planting arrangements in groups actually mimics the natural, mature conifer distribution of the local area.

The strategy was designed to enhance other forest values in addition to timber production. Mountain caribou and grizzly bear habitat is expected to be improved as forage opportunity and habitat connectivity mirrors that of the adjacent forests. As well, herbicide use and often intrusive mechanical site preparation methods can be avoided altogether. As always, nature should provide us the best planting prescriptions.

Project Team

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Contact

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Teachers Tour BC with the Festival of Forestry

The BC Festival of Forestry is a non-profit organization committed to teaching elementary and high school teachers about forestry in BC through quality professional development experiences.

They run tours each year that take 20 Lower Mainland and Victoria area teachers to rural communities in BC. The tours are free to teachers and provide an interactive learning experience to enhance teachers' understanding of the complexities of sustainable forest management.

In July, Michel Vallée, RPF, and Lois McNabb led the Mountain Tops to Coastlines tour. This tour took teachers to Merritt, Lillooet, Whistler and Squamish with various activities along the way. Over the course of four days, teachers visited many different kinds of forest sector businesses and got out in the bush to see some active logging and forest management. The tour included stops at:

- Ch-ihl-kway-uhk Forestry Limited Partnership, Chilliwack. Volunteer Host: Matt Wealick, RPF
- Aspen Planers Ltd. Volunteer Host: Jerry Canuel, RPF
- Coldwater Post and Rail, Merritt. Volunteer Host: Norm Brigden
- Nicola LogWorks, Merritt. Volunteer Host: John Boys
- Forestry Field Tour I, Merritt Area. Volunteer Host: John Boys
- Squamish Lil'wat Cultural Centre, Whistler
- FraserWood Industries, Squamish. Volunteer Host: Jamie Mak
- Forestry Field Tour II, Squamish Area. Volunteer Host: Jeff Fisher, RPF
- Squamish Adventure Centre

This past July we had 74 applicants for the 20 tour spots available. Teachers are interested in learning about forestry if we give them the opportunity!

Project Team

See the Festival of Forestry website: www.festivalofforestry.org

Contact

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Log Stringer Bridge Project

Recent log stringer bridge failures have resulted in an increased awareness of the complexities involved in the design, construction, and assurance of these structures. More specifically, the load effects produced by tracked vehicles when travelling over these structures without the use of lowbed equipment has become a concern especially as the shift is made to smaller diameter stands such as lodgepole pine or second growth Douglas-fir.

In response, BC forest and engineering professionals have been working with both Limit States and Allowable Stress design principles to develop design aids and tools that allow a more comprehensive evaluation of previously load rated structures and in the design of proposed structures. The result is a greater understanding of the superstructure as a system and of each individual member. The professional teams involved feel strongly about the use of sustainable products (such as wood) as a working material for these and other applications such as retaining walls and abutments. Through designs specific to the situation and through professional collaboration, these structures remain in service and continue to be built. The structures provide a safe crossing while reducing operational costs and allowing access into stands of timber where classic stringer tables are now obsolete.

Project Team

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Mission Interpretive Forest

The Mission Interpretive Forest represents a precedent-setting 're-visioning' for some of British Columbia's Crown land. The District of Mission's Municipal Forest is a community-based Tree Farm Licence (#26) of 10,500 hectares, in operation since 1958. However, as much as it is so close to the most populous region of BC, it is still very much a rural forested area, struggling with serious social challenges with unorganized and uncontrolled outdoor recreational activities. It is recognized that without intervention, significant environmental values will continue to deteriorate.

The vision is to transform this beautiful region alongside Stave Lake, north of Mission, into a compelling destination for residents and visitors alike and to provide positive forest experiences. This involves the development of partnerships with local First Nations communities and identifying the right partners to create viable commercial recreation and tourism ventures, while also creating learning opportunities and multi-user access to a working community forest.

While we await sign-off of the Interpretive Forest status, we are working with Aboriginal Tourism Association of BC to develop First Nations tourism protocols, have secured multi-level political support, and are building mutually-beneficial tourism connections throughout the Lower Mainland.

We look forward to providing a 'before and after' update as we bring our initiatives to fruition.

Project Team

Aboriginal Tourism Association of BC: Cheryl Chapman
District of Mission: Kelly Kitsch, RFT; Bob O'Neal, RPF
North Shore Project Leadership: Terry Hood
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Project Funding

District of Mission
Ministry of Forests, Lands and Natural Resource Operations

Seasonal Habitat Requirements of Sooty Grouse on Haida Gwaii

Little is known about sooty grouse on Haida Gwaii, even though they are the only mid-sized herbivore endemic to the islands. The project team has therefore initiated a study of sooty grouse to determine distribution, habitat use, nest and brood rearing site selection, and seasonal migration patterns.

While grouse are likely distributed through a range of habitat types, it is thought they thrive in sites with a patchy scrub layer and discontinuous canopy, characteristic of old-growth stands as well as some younger second-growth stands. To date, 18 grouse, both male and female, have been fitted with radio collars. The team has been following the grouse throughout the winter, courtship and nesting periods and is currently monitoring dispersal patterns. Crew members not only follow the birds using radio telemetry but also walk into the sites to note habitat characteristics.

Knowledge gained from this research will help managers interpret the effect of current landscape planning on the habitat suitability for grouse. It will also improve understanding of the availability of grouse as a prey source for recovery of the threatened northern goshawk (*Accipiter gentilis laingi*), which is a land-use plan focal species.

Project Team

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Project Funding

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Ulanga District Community Tree Nursery

A community tree nursery is being established in the Ulanga District, Morogoro Region of Tanzania in East Africa. This nursery will help overcome the primary barrier to sustainable forest management in the area: a limited access to adequate planting material. The nursery, currently under construction, will be managed by the Ulanga District Council to produce 100,000 seedlings a year, empowering community members to improve their own local conditions. Supplying seedlings to enable local tree planting will not only stimulate socio-economic development but also help rehabilitate degraded sites, increase biological diversity, regulate water flow and quality, prevent soil erosion, and mitigate local and global climate change.

A diverse range of species will be produced to meet a wide range of community needs. The primary need, which is also the source of much deforestation, is the use of wood as a cooking fuel. Fuel, along with other products, like fodder, food, medicine, building materials and many more are often used by community members for subsistence proposes. The nursery with also provide educational programs to help community members select, plant and maintain trees while providing techniques to ameliorate stress to remaining forests.

Project Team

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Contact

If individuals, companies or organizations are interested in being involved with this project please contact Mitch Wilson, FIT at:
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