

Ecosystem Restoration Plan for Encroached Grasslands in the Chilcotin Forest District

Prepared for:

Harry Jennings, P.Ag and the ER Steering Committee
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Objective

The objective of this plan is to provide sufficient background information to request approval for funding required to implement and maintain a restoration project on encroached grasslands in the Chilcotin. This project will aim to restore grasslands to their historical state, in order to increase forage for cattle and grassland habitat for wildlife.

Background and Justification for Treatment

In November of 2007, an Ecosystem Restoration Plan was created for the Cariboo-Chilcotin Grassland Benchmark by B.A. Blackwell & Associates¹. The plan took into account a wide range of variables and produced mapping that ranks encroached grasslands within the benchmark as having high, moderate or low priority for treatment.

The area we are proposing to treat is within the Grassland Benchmark, and has been designated as having high benefit of treatment and high to very high feasibility of treatment by Blackwell & Associates. A portion of this area (approx. 120 Ha) was treated to reduce forest encroachment in 1977 by local rancher Tim Bayliff. Treatments included slashing of all immature lodgepole pine in the area followed by broadcast burning of the area. As treatments have already been initiated in the area, continued restoration of these grasslands is desirable and will be supported by ranchers currently using the land. Restoration and subsequent monitoring of this area will reduce forest encroachment, therefore increasing valuable grassland and open forest ecosystems that will benefit both cattle and wildlife in the area.

Location of Proposed Treatment Area

The proposed treatment area encompasses approximately 2150Ha, and is located just south of the Chilko River, from Bull Canyon Provincial Park west to the Siwash Gathering Area. Figure 1, below, shows the location of the proposed treatment area. The site is shown in more detail in figure 2, with the proposed treatment area outlined in red. A small portion the land at Villa pasture and along the northeastern border of the treatment area will not be included as it is privately owned land. In addition, no treatment will be done on the outlined parcel of land labelled "Grazing lease" on the map, as it is leased under the Land Act (grazing lease # 8699). Of the 2150Ha treatment area, approximately 210Ha of land has been mapped as having significant encroachment. Figure 3 shows the average extent of encroachment within the proposed restoration area in green.

¹ Blackwell, B.A., Steele, F.M., MacKenzie, O.A., Needoba, A, and Gray, R.W.. 2007 Cariboo-Chilcotin Ecosystem Restoration Plan: Grassland Benchmark. Cariboo-Chilcotin Grassland Strategy Committee.

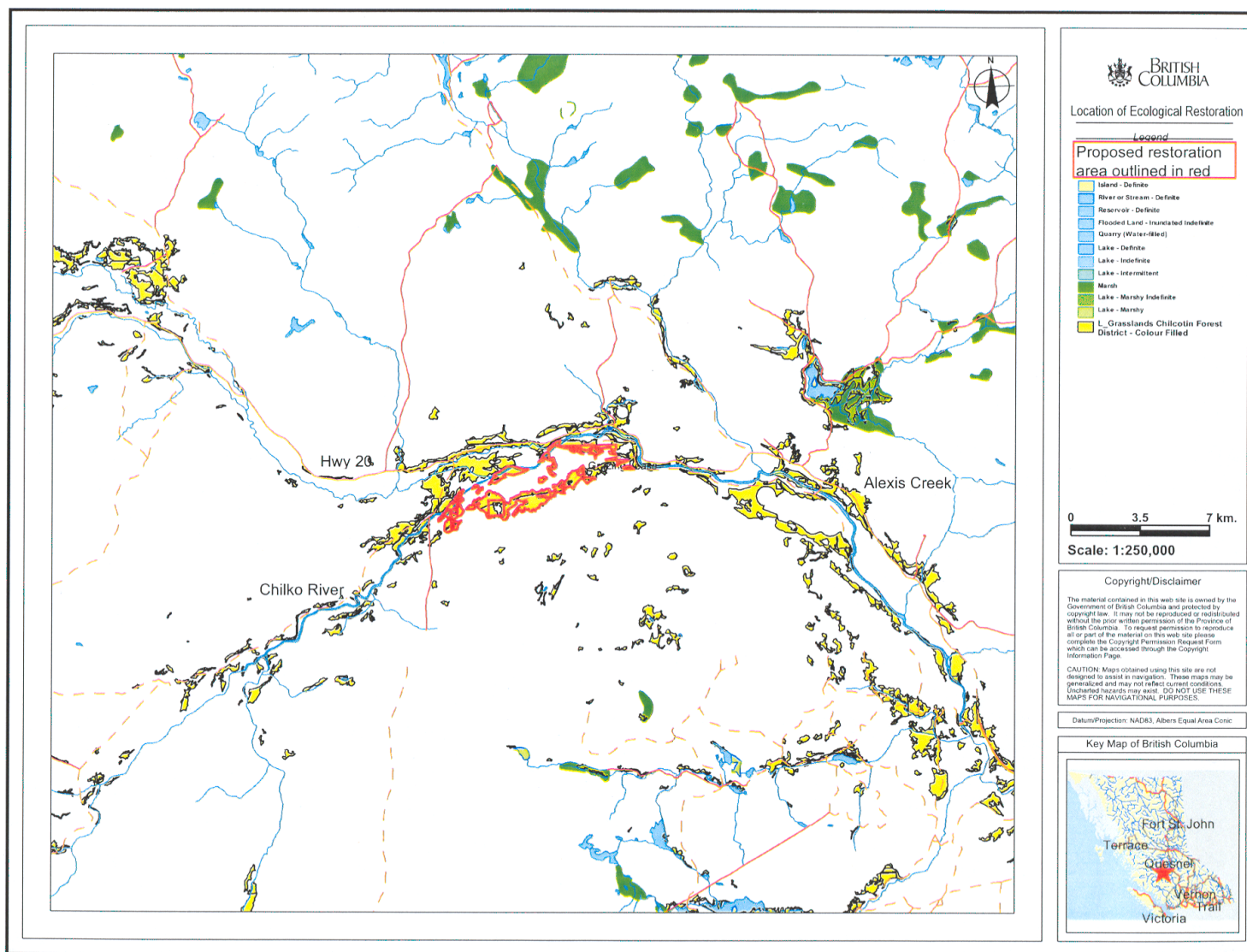


Figure 1. Overview map showing location of the proposed treatment area in red.

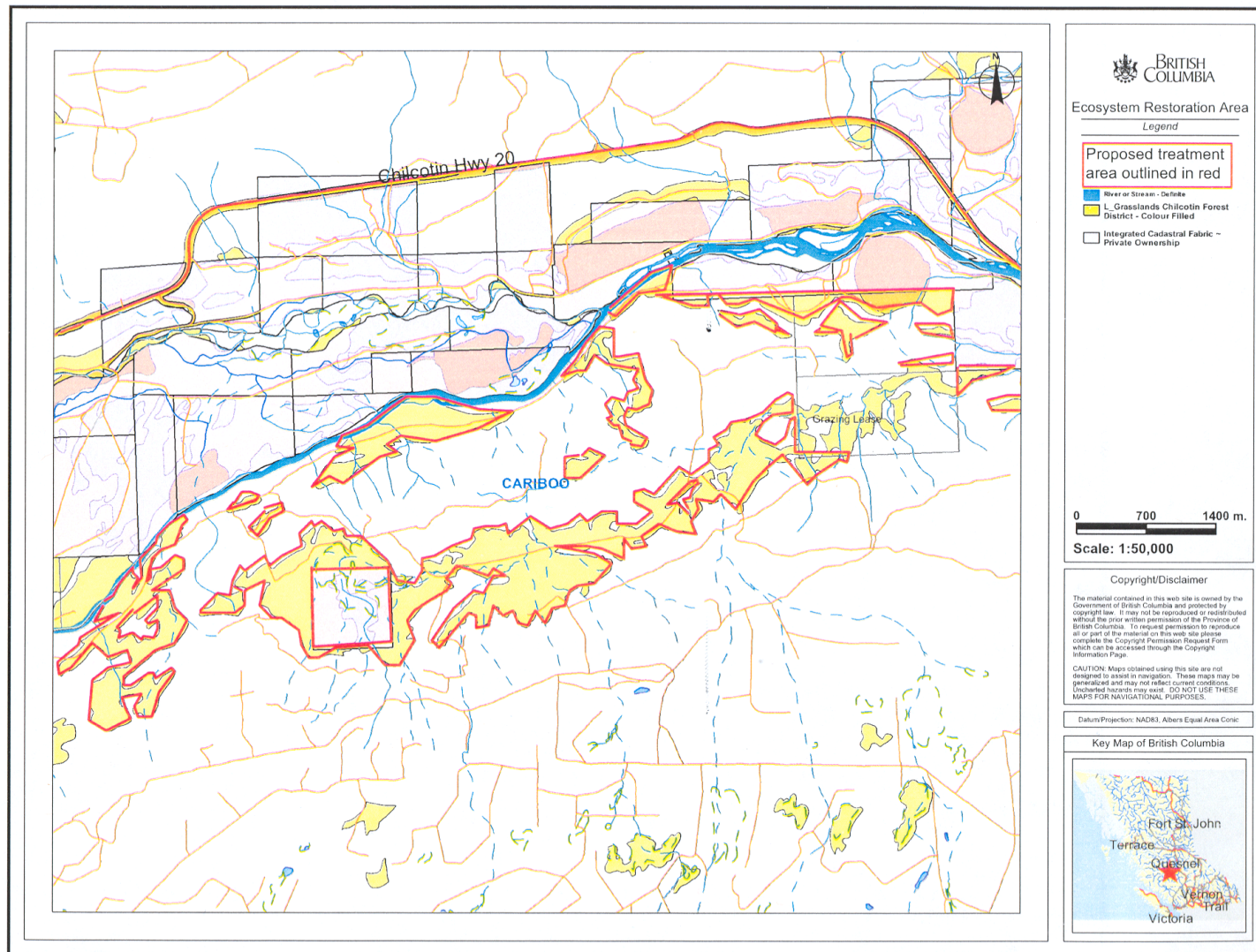


Figure 2. Map of proposed area for ecological restoration of encroached grasslands. The proposed restoration area is outlined in red and grasslands are shown in yellow. Note that private and leased land is excluded from the treatment area.

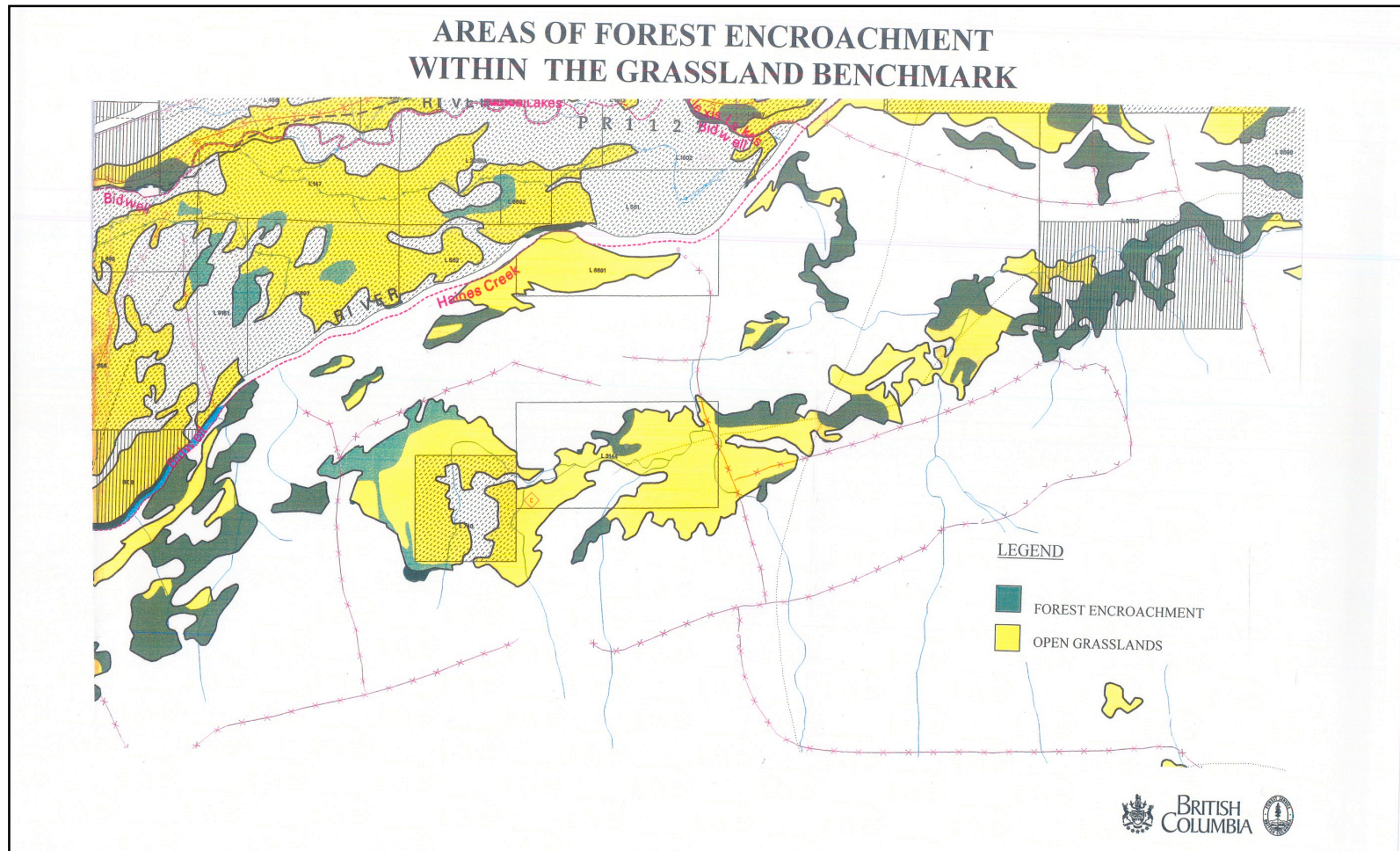


Figure 3. Map showing the average extent of encroachment within the proposed ecological restoration area. The areas in green will be the focus of this project.

Site Characteristics

The majority of ingrowth in this area has been pine and aspen, but some Douglas fir is also present. No major water bodies are located within the treatment area. Specific site information will be acquired once this project has been approved.

The proposed project has been discussed with David Rusch, Forest Health Technician for the Chilcotin Forest District. David has advised that fallen Douglas fir greater than 20cm dbh will present a risk of increasing bark beetle populations in the area. To avoid this potential problem, we will plan to leave all fir greater than 20cm dbh standing. If any fir greater than 20cm dbh are cut down this winter, they will be piled and burned or physically removed by May 1st, 2008, as recommended by David Rusch. Since it is primarily pine that will be cut down, leaving the fallen trees on site to cure as long as required will not affect beetle populations and therefore will not be an issue. Aspen will not be removed as cutting this species will only cause it to increase suckering and spread further throughout the area.

There are two range exclosures located in proximity to the treatment area. The 'Villa Pasture Exclosure' is located within the treatment area, and the 'Siwash Crested Wheat Exclosure' is located just west of the treatment area. Data obtained from monitoring of these exclosures in the past may be used to predict and compare post-treatment recovery rates.

First Nations Consultation

A letter describing the proposed restoration project was sent to the Stone Band, Alexis Creek Indian Band, Anaham Band and the Tsilhqot'in National Government (TNG) on November 6, 2007. A map similar to figure 1 (above) was attached to the referral letter. Mary Thurow responded to the referral on behalf of TNG on December 12, 2007 and requested additional information regarding how and when the trees would be removed and by whom. More detail regarding the exact location of tree removal was also requested. An email reply was sent on December 17, 2007. The map shown in figure 2 was attached to show the treatment areas in more detail. The email explained that it is our intent to have local contractors complete the work and that an invitation to bid on the job will be advertised early in the new year. The deadline for response, as stated in the original referral letter, is January 8, 2008. It is expected that an in person or phone meeting will occur with TNG and Range staff to discuss the proposed project in the near future.

Treatment Methodology

If approved, the following steps will be taken to initiate ecological restoration of encroached grasslands between Bull Canyon and the Siwash Gathering area:

1. Consultation with First Nations and licence/permit holders in the area will be continued to a point where all parties involved support the restoration of grasslands in this area. First Nations consultation has been initiated as described above. Chilancoh Ranch has a grazing licence in this area (RAN075607).
2. Approximately one plot per hectare will be established within the encroached areas (ie. the green areas in figure 2, above). The plots will be established following basic silviculture survey techniques to determine encroachment density pre- and post-treatment. Digital photographs will also be taken at each plot. Data and photos from plots can be used to monitor change over time within the treated areas.
3. The amount of merchantable timber present will be assessed to determine whether harvesting of this timber is desirable. It is currently anticipated that no logging will be done, at least in the first phases of this restoration project, and that only trees <20cm dbh will be removed using brush saws and chainsaws.
4. Discussions with MOE staff regarding possible species at risk in the area will take place, and precautions will be taken, if required. Records from the Conservation Data Center for the proposed area indicate that the only known listed species in close proximity to the treatment area is the Spotted Bat at Bull Canyon. Long-billed curlews have also been sighted near the area, but the timing of treatments should not impact this species.
5. Depending on recommendations from Harry Jennings and the extent of encroachment, the area will be broken down into approximately 40-50Ha treatment units and the perimeter of each unit will be flagged. These smaller treatment units will be designated in order to simplify cutting contracts and subsequent burn plans. The perimeter of the units will be layed out following the historical forest boundary, taking natural contours and openings into account to aid in future burning of the unit, where possible.
6. Tree removal prescriptions will be created for each unit, following the “Best Management Practice Guideline for Harvesting Treatments on CCLUP Grassland Benchmark Sites”, as well as prescriptions written for grassland restoration projects recently initiated in the Cariboo region by Rob Bardossy and his team.
7. Once the tree cutting contracts have been awarded, pre-work field trips will be conducted with the successful bidder(s). Monitoring of the tree cutting work will take place throughout the term of the contract.

8. A carefully designed burn plan will be created by a certified burn boss, for portions of the treatment area where burning is possible and will likely have a positive impact. Some treatment units may require piling and burning instead of broadcast burning due to insufficient ground fuel to carry a fire throughout the area. As burning is anticipated, Steve Richburg and Rob Bardossy will be involved from the initial planning stages.
9. After allowing fuels to cure, prescribed burning will be conducted where possible, taking into account timing of ungulate and cattle usage. If the trees are cut down this winter (early 2008), it is anticipated that fuels will have dried sufficiently to conduct the burning by the spring of 2009, at the earliest.
10. After completion of treatments, the reference plots will be re-visited to ensure desired results were achieved (ie. encroached areas have been reduced to open grassland conditions). Species lists and percent ground cover estimates can be completed for the plots as well to monitor the change in vegetation communities over time.
11. Monitoring of the treated areas should continue over both the short- and long-term to ensure:
 - a. grazing levels do not prevent recovery of the grasslands
 - b. noxious weeds are not invading in areas disturbed by treatments
 - c. any future conifer regeneration in the area is noted and treated before it reaches 1m in height.