**Burning Questions Project: Executive Summary**

The recent extreme fires in BC, coupled with our awareness that valuable data on fire effects are at risk of being lost, inspired us to undertake this project. Our goal was to identify key information needs related to the effects of fire on vegetation by talking with decision makers and then to collect and analyze the data and extend the results. We were funded by Forest Enhancement Society of BC (FESBC) and MFLNRORD to undertake a one-year study.

We talked with about 40 resource managers, fire specialists and researchers to identify research needs related to ecological effects of fire on ecosystems and to locate data sources. Many questions pertained to the effects of fire on selected components (e.g. forage, berries, invasive species, regeneration).

Our work was divided into two sub-projects – one focussed on the North and Central Interior and another on the Southern Interior. For the first sub-project data from 78 sites– some of which had been studied for over 20 years - were entered into the database and analyzed (approx. 8450 records). The Southern Interior sub-project focussed on 23 sites that had been sampled over multiple years (approx. 1316 records).

In the North and Central interior, we found plant community composition was most strongly related to long term fire history or fire climate and local site moisture and nutrient gradients. Differences between recently burned and unburned sites were comparatively small. These interior forest ecosystems are broadly adapted and resilient to fire. Conifer abundance in young seral stands had a significant impact on understory plant composition including the presence and abundance of plants of value to wildlife and people (e.g. moose browse, berry producers). Thus, factors such as whether a site was planted, what species was planted, and if herbicides were used to increase conifer growth were often more important to the trajectory of ecosystem recovery after disturbance, than whether the site was burned.

In the Southern Interior, restoration burn significantly reduced presence of Douglas-fir regeneration and large fuels. Burning to increase bunchgrass seems more successful in the IDF vs PP zone. Objectives regarding promotion of grassland plant communities had not been achieved 14- 17 years post-fire. Grazing may be interfering with achieving this objective. Exposed mineral soil increased somewhat after fire. Although necessary for establishment of desirable species, fire increases the risk of invasion by non-native species. The most common invasive plants observed here are of little concern, however some species of concern were observed.

We extended our results to decision makers through poster presentations at workshops and meetings as well as by personal contact with people responsible for program delivery. Options for making the database widely available through government and non-government agencies are being investigated and we are developing a plan for next steps in consultation with decision makers, academics and others.