BC WILDFIRE SERVICE WILDFIRE RISK REDUCTION PLANNING STANDARD 2018

PURPOSE

The purpose of this document is to provide direction and guidance for wildfire risk reduction (WRR) planning projects that are funded by Forest Enhancement Society of BC or other Ministry of Forests, Lands, Natural Resource Operations and Rural Development programs. This standard describes the requirements for broad scale (such as a timber supply area) or tactical types of planning projects that are undertaken to analyze wildfire risk to identify specific priority areas and actions to undertake in order to achieve risk reduction objectives.

QUALIFICATIONS

The key outcome for wildfire risk reduction planning projects is the evaluation of wildfire risk in relation to fuel (ground truthed) and values that will identify priority project areas appropriate for prescriptions and treatment. As such, planning related projects should be conducted by qualified professionals working within their scope of practice as outlined in the 2013 the Association of BC Forest Professionals released *Interim Guidelines – Fire and Fuel Management.*

BACKGROUND

- The mandate for the BCWS Prevention program is to provide leadership and expertise in wildfire prevention and mitigation and to provide tools for wildfire response services. ISO 31000 is an internationally recognized standard that identifies a blueprint for risk management and has been adopted as policy by the province for risk-based management across government. British Columbia is seeking to use the ISO 31000 standard to develop a wildfire risk framework to inform risk management in a wildfire context. A risk-based framework consists of the consideration of likelihood of an unwanted wildfire event and the consequences to values as the measure of risk.
- Wildfire is a common occurrence in BC's fire maintained and fire dependant ecosystems. The 2017 and 2018 wildfire seasons were historic in terms of hectares burned and suppression costs. Increased wildfire activity present challenges associated with resource management for value protection. The combination of challenges on the land base requires risk-based planning to both utilize resources more efficiently and implement effective mitigation strategies.
- BC is a highly diverse province; wildfire risk is neither spatially nor temporally uniform across the province due to the location and types of high value resources and assets (HVRAs) (including social, economic, environmental) and the highly diverse fire threat. Differing risk levels require tailored risk management to minimize negative impacts to HVRAs at risk from wildfires and to provide for efficient cost effective wildfire management strategies.
- The linkage between investment in wildfire mitigation and wildfire response should be a key consideration in investing on the landbase. Investment helps enable cost effective wildfire response and helps minimize damage. Investment may come in the form of investing in FireSmart activities and/or fuel breaks/treatments. The relative importance and spatial/temporal continuity of investments carry implications for wildfire response strategies and tactics. The potential for impacting wildfire control strategies and tactics should be a key part of landscape, tactical and treatment planning.

- Wildfire management follows a clearly defined system for prioritizing incidents for response. The system is the Resource Sharing Wildfire Allocation Protocol (RSWAP). This protocol defines four priority levels based upon HVRAs at risk. In descending order of priority the four levels are; 1) life and property, 2) critical infrastructure, 3) high environmental and cultural values and, 4) other resources.
- Both provincial prioritization and local landscape or tactical scales need to allocate resources for investment based upon risk to HVRAs in order to effectively reduce the risk. The provincial scale is intended to focus upon concerns around life and property and critical infrastructure for high risk communities/areas within the province. The local scale considers all four RSWAP categories in more detail with the intention of developing mitigation strategies for values important locally within all four categories. Risk-based planning can occur at three scales ranging from site specific to tactical (e.g. watershed) to large scale landscape (e.g. timber supply area) planning. Importantly:
    - Each scale has different objectives and utilizes different methodologies to achieve the desired outcomes.
    - Planning at the tactical operational polygon scale typically requires a clear understanding by land managers of values and their prioritization within the BC Government prioritization scheme for values at risk (RSWAP themes described above). The desired outcome is treatments which are optimally located for their ability to reduce the likelihood of harm to priority values from wildfire. Contact your local BCWS Wildfire Prevention Officer and/or the BCWS Planning Specialist for additional information.
    - Site specific planning can then occur on optimally located treatment polygons.
- Planning across scales leads to reduced harm to values important to land managers and the public by optimizing fuels mitigation and creating improved fire response opportunities; it helps define how response to wildfire "fits" within the larger framework of land management within the province including the management of residual risk.

1. Proposal Scope

1.1 Currently, watershed or landscape units define the scale for tactical planning projects. Note that in some parts of the province watershed and/or landscape units are very large and so may require subdivision based on a fireshed (an area defined similar burn characteristics bounded by areas of different burn condition such as non-fuel) approach or some other logical boundaries. Consultation with either the BCWS Wildfire Prevention Officer is required when considering project scale.

1.2 Proponents who wish to propose large scale landscape projects must develop the project in consultation with the Zone Wildfire Officer, Land Manager and BCWS Planning Specialist.

1.3 A map of the planning project area including an appropriate sized buffer (5 – 10 km) must be included in the proposal.

2. Mandatory Requirements

2.1 Proponents must review applicable wildfire related plans (e.g. community wildfire protection plans (CWPPs), integrated investment plans (IIPs), and/or habitat or ecosystem restoration plans or projects).

2.2 Planning projects must build from all available information including the current provincial strategic threat analysis (PSTA) and Wildland Urban Interface (WUI) Risk Class Maps to assist with the development of project objectives and methodologies and to avoid duplication of effort.

2.3 A description of the project objectives such as identifying larger (i.e. not site) scale fire management objectives for the operational unit (e.g. *reducing fire size* or *reducing average fire intensity)*, identifying fuelbreak/treatment locations, and identifying changes in practice.

2.3.1 WRR planning proposal objectives must result in an outcome that identifies where specific fuel management activities will occur.

2.3.2 A required part of the final deliverable is a rationalization of the proposed fuel break or project priority area that was developed.

2.4 Building upon information reviewed above, methodologies that will be used to develop the final product must be described.

2.5 Coordination with BCWS and the Land Manager must occur throughout the project.

2.5.1 Proposed methodologies must be approved by BCWS.

2.5.2 Each methodology must include a rationale or analysis (e.g. BurnP3 before and after treatment, Prometheus runs, etc.) that demonstrates likely efficacy of fuel management activities in locations selected for those activities and include the parameters used to ensure the treatment meets its' objectives.

2.6 A final report including all relevant spatial products is required for these projects. Final report content should include but is not limited to: project introduction including objectives; project area description (fire history, fuels, description of values at risk, etc.); fire management specific objectives, methods and results; treatments efficacy discussion with future recommendations; georeferenced maps of activity/treatment areas.

2.7 Mapping must include existing low flammability *areas* incorporated into the plan including previously treated areas.

2.8 The Province of BC uses ArcGIS 10.3 and all spatial data submissions must be compatible with ArcGIS 10.3

2.8.1 Spatial data must be submitted in a file gdb format.

2.8.2 FGDB Projection: The projection standard is NAD_1983_BC_Environment_Albers (EPSG:3005), with parameters of: Central meridian: -126.0° (126°00'00" West longitude) Latitude of projection origin: 45.0 (45°00'00 North latitude) First standard parallel: 50.0° (50°00'00" North latitude) Second standard parallel: 58.5° (58°30'00" North latitude) False easting: 1000000.0 (one million metres) False northing: 0.0 Datum: NAD83, based on the GRS80 ellipsoid.

2.8.3 Data Quality: Submitted data must meet general data quality guidelines to ensure corporate data quality standards are met. Data with slivers, gaps between adjacent polygons, and geometry errors will not be accepted.

2.8.4 Metadata: Metadata must be provided for all spatial layers. The metadata standard is the North American Profile of ISO 19115:2003 and is required to be submitted in .xml format. Metadata must document the following:

2.8.4.1 A description of what each dataset represents for all datasets provided.

2.8.4.2 A description of each attribute and the codes/values used to populate it for all attributes provided.

2.8.4.3 Data Source information including where the data came from, the currency of the information and source contact details for potential follow-up.

2.8.4.4 For resultant datasets, metadata must also include the methodology and source data used in the creation of the resultant, the date of creation, and contact details for the person who created it.

Additional Notes

The BCWS will provide technical assistance including suggested appropriate methodologies and where available provide products to assist proponents in completing projects.