BC Parks Prevention Prescription Guidance

PURPOSE

BC Parks has a unique <u>mandate</u> to protect representative and special natural places within the province's Protected Areas System for world-class conservation, outdoor recreation, education and scientific study.

This Prescription Guidance is a companion document to the BC Parks Prevention Prescription template. It is intended to provide valuable background information and resources on BC Parks legislation and policy and must be used during the prescription development of any BC Parks wildfire prevention project, including fuel management and prescribed fire.

This guidance is to be used in conjunction with other guidance as provided by applicable funding sources.

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A. BC PARKS PROJECT IDENTIFICATION

Protected Area¹, Region

- Name the park, protected area, conservancy, ecological reserve or recreation area
- Name the applicable BC Parks Region

Prescription Name

• Name of the prescription (e.g. Shuswap Lake Provincial Park Fuel Management)

Class, Category

- Applicable protected area designations
 - Designation types determine which legislation applies to the protected area
 - o Contact BC Parks staff to provide Class and Category information

Lat/Long

• Provide a latitude and longitude coordinate for the project

Strategic Plans

- Applicable higher-level plan (e.g., Land and Resource Management Plans)
- Applicable park management planning document (i.e., management plan, management direction statement, purpose statement, zoning plan, master plan)
- Any other applicable BC Parks plan(s) for the protected (e.g., Fire Management Plan, Wildfire Response Plan, Ecosystem Based Management Plan, Wildlife Management Plan, Soil Management Plan, etc.)
- Other applicable plan(s) (e.g., Community Wildfire Resiliency Plan (CWRP), etc.
 - These plans may not include BC Parks but may help inform the landscape-level plan and communication strategy

Geographic Description

• General location description

B. PROJECT DESCRIPTION

Protected Area Description

- Protected Area Description: Provide an overview description of the protected area (e.g., protected area history, cultural history, disturbance history (fire, windthrow, insect, disease), predominant weather, forest health, invasive species infestations etc.)
- Protected Area Values: Provide an overview description of protected area values (e.g., cultural heritage values, First Nations values, archaeological values, species or ecological communities at risk or regionally significant wildlife, key wildlife and wildlife habitat, fish or fish habitat, water,

¹ "protected area" means any designation under the BC Parks protected areas system, including provincial parks, conservancies, protected areas, ecological reserves, and recreation areas unless otherwise stated.

- wetlands, or riparian habitat, other conservation values (e.g. old growth forest), socioeconomic values, recreational, aesthetic, or visitor experience values, and public use
- Protected Area Zoning Designations(s): List the zoning designations within the protected area and proposed treatment area if applicable

Treatment Summary

Provide a short summary (similar to an executive summary) that states the purpose of the
project, highlights key objectives and strategies, and describes the end-result of treatment (e.g.,
fire behavior and the conservation of protected area values)

Objectives

Objectives should be *specific* and describe *the end-result* of the treatment. End results should be *measurable or verifiable*

- Fire Behavior Objectives: specify fire behaviour objectives (e.g., reducing surface fire intensity, crown fire initiation and spread, and/or the potential for sustained ignition)
 - Fire behavior objectives should reduce the risk and impact of wildfire to park values and life and property, and improve suppression opportunities in the event of a wildfire
 - Fire Behavior objectives should be appropriate for the local Natural Disturbance regime and Biogeoclimatic Ecosystem Classification zone, subzone, and/or site series
- Conservation Objectives: specify objectives for the conservation of natural, cultural, and
 recreation values (e.g., maintaining or enhancing ecosystem structure, function, and processes,
 cultural heritage values, First Nations values, archaeological values, species or ecological
 communities at risk or regionally significant wildlife, key wildlife and wildlife habitat, fish or fish
 habitat, water, wetlands, or riparian habitat, other conservation (e.g. old growth forest),
 socioeconomic values, recreational, aesthetic, or visitor experience values, and public use)
 - Where conservation values are impacted by treatment, provide objectives that minimize impact to conservation values
 - The extent to which conservation of natural, cultural and recreational values is emphasized should be weighed against the significance of impacts to these values and the need for treatment

Note: To mitigate climate transformation impacts to BC Parks values, objectives should be determined considering the need to manage for ecological change over time.

Objectives designed to resist undesired ecological change may:

a. support <u>historic</u> ecosystem structure, function, and processes by retaining or restoring ecosystem conditions that will persist into the future or are required for the protection of values (e.g., species at risk, cultural values, etc.).

Objectives designed to direct ecological change over time may:

b. support <u>future</u> ecosystem structure, function, and processes by managing for a new desired condition that is expected to be beneficial in future climates (as demonstrated by sound modelling), while remaining consistent with the intent of biodiversity conservation outlined in the BC Parks Conservation policy.

Strategies & Methods

Strategies should be capable of being measured or verified

- Describe *how* the objectives will be achieved (strategy) and the *process, procedure, or technique* to carry out the strategy (method). For example:
 - Thinning of tree layer 2 and 3: hand falling and brushing
 - Surface fuel reduction: hand piling and burning

C. FUEL TREATMENT UNIT (FTU) SUMMARY

- FTU ID
- Net area (ha) of the FTU
- Reserve Area (ha) areas reserved from treatment, including follow up or maintenance treatments such as prescribed fire (e.g., Critical habitat areas, riparian reserves etc.)
- No Treatment (ha) areas within a FTU that do not have characteristics that require treatment (e.g., roads, gravel campsite pads, etc.)
- > Create or remove columns in the FTU Summary table as needed to reflect treatment.
 - Do not use titles for columns related to commercial harvesting such as Non-productive (NP), Net Area to be Reforested (NAR), etc.
- Gross area (ha) of the FTU total area for treatment excluding No Treatment, Reserves, etc.
- Treatment regime treatments being applied to the FTU
- Fuel Treatment Unit Strategy Description
 - Describe how treatment units were determined (e.g., wildfire threat, treatment type, topography, timber type, vegetative cover, sensitive values, recreation features, park zonation, other FTU specific treatment specifications, etc.).
 - Describe any No Treatment or Reserve areas or other areas subtracted from the gross FTU area

D. SITE CHARACTERISTICS

- FTU ID
- Canadian Forest Fire Behavior Prediction System (CFFBPS) fuel type
- Timber type
- Biogeoclimatic (BEC) subzone, variant and site association
- Elevation (m)
- Slope Position
- Slope Range (%)
- Aspect
- Weather Station
 - Identify the representative weather station used to support calculations within this prescription. Describe what makes this weather station the most representative
- Initial Spread Index (ISI)
 - o Identify the wildfire ISI for the project area using the 90th percentile calculator
- Rate of Spread (ROS)
 - Identify the wildfire ROS for the project area

- Contact BC Parks staff to confirm the ROS with the BC Wildfire Service
- Fuel Type Determination
 - Describe how the CFFBPS fuel type was determined (e.g. mapping or field-verification)

E. SOIL CHARACTERISTICS

- FTU ID
- Soil texture
- Duff depth (cm)
- Coarse fragments (%)
- Soil Hazard Rating: Compaction, Erosion and Displacement

F. VALUES – LEGISLATION

Natural Resources Protected – Park Act section 9 (2), 9 (4); Environment and Land Use Act 7 (1)

Is the proposed treatment in a Class A or C park or protected area² necessary for the preservation or maintenance of park recreational values³?

• If in a Class A or C park, describe how the treatment is necessary for the preservation or maintenance of park recreational values².

Is the proposed treatment in a Class B park detrimental to the park's recreational values?

• If in a Class B park, describe how the treatment will not be detrimental to the park's recreational values.

Natural Resources Protected - Park Act section 9 (7), 12 (1), 12 (3); Environment and Land Use Act 7(1)

Will the proposed treatment restrict, prevent, or inhibit the use of the park or protected area⁴ (protected area designation type) for it's designated purpose⁵?

• If in a park of any class, describe how the treatment will not restrict, prevent or inhibit the use of the park for its designated purpose.

Natural Resources Protected - Park Act section 9 (9), 5 (3.1)

Will the proposed treatment hinder use of the conservancy for it's intended purpose?

² Protected areas established under the *Environment and Land Use Act*

³ In the context of the *Park Act*, "recreational values" include the full range of natural and cultural values within protected areas that support BC Parks mission to protect natural places for conservation, outdoor recreation, education, and scientific study.

⁴ Protected areas established under the *Environment and Land Use Act*.

⁵ "designated purpose" means, where applicable, the purposed dedicated to Class A parks under section 5 (3), the purpose associated with the specified category for the park under section 12 (1), and/or any purpose or role stated in the park's management planning document.

• If in a conservancy describe how treatment will not restrict, prevent, or hinder the conservancy from meetings it's intended purpose.

Ecological Reserve Protection - Ecological Reserve Act section 2, 5, 5.1

Does the proposed treatment in an ecological reserve align with the purpose, activities, limits, terms, and conditions of ecological reserve disposition and use?

• If in an ecological reserve, describe how the treatment aligns with the purpose, activities, limits, terms, and conditions of ecological reserve disposition and use.

Archaeology and Heritage Conservation – Heritage Conservation Act Part 2

Are there any known archaeological sites, heritage resources, or sites of high archaeological potential within 50 meters of the project area?

- Provide a non-spatial description of any known archaeological sites, heritage resources, or sites
 of high archaeological potential protected under the Heritage Conservation Act within 50 meters
 of the project area.
 - Contact BC Parks staff to provide archaeological or heritage resource assessment information in the project area.
- Provide a description of mitigation measures to avoid impacting any known, potential, or unknown archaeological or heritage resources protected under the Heritage Conservation Act.
- Identify any permits required under the Heritage Conservation Act.

Wildlife Protection – *Wildlife Act* section 9, 26, 34; *Federal Fisheries Act* section 34 (1), 34.4 (1), (2), 35 (1), (2); Federal Migratory Birds Regulation section 5

Will the proposed treatment affect any protected wildlife, wildlife habitat, fish, or fish habitat?

- Describe any impacts to wildlife, wildlife habitat, fish, or fish habitat protected under legislation
- Describe mitigation measures to avoid impacting any wildlife, wildlife habitat, fish, or fish habitat protected under legislation, including but not limited to:
 - o fish-bearing streams and streams that are tributary to fish-bearing streams
 - nesting birds or their eggs, active nests, or nests suspected to be abandoned
 - Treatment during sensitive time periods or seasons that require special measures

Water Protection – Water Sustainability Regulation Part 2 Division 2, Part 3

Will any prescribed treatments modify the nature of a stream or impact a stream designated as sensitive?

- Describe any proposed modifications to the nature of a stream with a rationale describing why modification is necessary and describe any required change approval to authorize modification.
- Describe any impacts to streams designated as sensitive and mitigation measures to avoid or reduce impacts to streams designated as sensitive. Describe any authorizations required for sensitive stream impacts.

G. VALUES – POLICY

Note: the Forest and Range Practices Act (FRPA) does not apply within parks and protected areas, however, FRPA guidelines may be used as a baseline for management strategies in parks and protected areas where no guidance is provided specific to BC Parks.

For each value: If a value will be impacted, provide a <u>description of any impaired function</u>, including any <u>cumulative effects</u> and any increased <u>vulnerability from climate change</u>. Describe any <u>mitigation</u> <u>measures</u> that reduce impacts to values. Provide <u>recovery times</u> for values that are not being intentionally altered. Provide a <u>rationale</u> for any deviation from policy or an approved management planning document.

Ecosystem-Based Planning and Management – BC Parks Conservation Policy 5.1

Is the proposed project area adjacent to landscape designations or managed by BC Parks to support landscape designations or landscape ecological integrity?

Note: BC Parks is not obligated to meet requirements for adjacent or overlapping landscape designations, but treatment strategies should consider adjacent landscape planning and align with any park management planning document(s).

- Describe any adjacent or overlapping provincial, national or international landscape designation (e.g. Old Growth Management Areas, Ungulate Winter Range, critical habitat, National Parks).
- Describe any management by BC Parks for provincial, national or international landscape designations.
- Describe any other BC Parks management for landscape ecological integrity.
- Reference applicable park management planning document(s) and applicable sections of the BC Parks Conservation Policy.

Fish and Wildlife Management and Protection – BC Parks Conservation Policy 5.4

Does the proposed treatment strategy align with an applicable BC Parks fish or wildlife management plan or protection plan?

- Describe alignment with applicable BC Parks fish and wildlife management plan or protection plan (note: not all parks or protected areas have these plans in place).
 - Contact BC Parks staff to Provide any fish or wildlife management or protection planning documents.
- Reference applicable protected area management planning document(s) and applicable sections
 of the BC Parks Conservation Policy.

Invasive Species – BC Parks Conservation Policy 5.5, 5.6.3

Are invasive species present in the proposed treatment area or likely to be introduced and spread as a result of the proposed treatment?

- Describe any invasive plant species present in the proposed treatment area.
- Describe any invasive plant species likely to be introduced or spread because of the treatment.
- Provide practices to mitigate the introduction and spread of invasive species including any BC
 Parks Best Management Practices for invasive species.

• Provide an attached list of any invasive plant species mapped in InvasivesBC or other regional resources (required attachment in Section Q).

Habitat Manipulation – BC Parks Conservation Policy 5.9

Are the proposed strategy and methods an environmentally sensitive approach to treatment that avoids or minimizes negative environmental impacts?

- Describe how treatment strategies and methods are environmentally sensitive and avoid or minimize negative environmental impacts.
- Reference applicable protected area management planning document(s) and applicable sections of the BC Parks Conservation Policy.
- Reference any BC Parks Best Management Practices for Tree Removal <u>Planning</u>, <u>Road Design</u>, and <u>Harvesting</u>.

Habitat Manipulation – BC Parks Conservation Policy 5.9

Does the proposed treatment strategy avoid or minimize negative impacts to recreation infrastructure and features, forest recreation aesthetics, and scenic qualities?

- Describe how treatment strategies and methods avoid or minimize negative impacts to:
 - recreation infrastructure (trails, campgrounds etc.), recreation features, aesthetics, scenic qualities, and any other visitor experience values (note: VQOs are not established within parks or protected areas but visual quality plays a role in recreational values)
- Reference applicable protected area management planning document(s), protected area zoning designation (if applicable) and applicable sections of the BC Parks Conservation Policy.

Geologic and Hydrologic Features and Processes – BC Parks Conservation Policy 5.11

Does the proposed treatment area include areas where geologic, hydrologic or soil features are considered sensitive or unstable?

- Describe any geologic or hydrologic features that are considered sensitive and provide mitigation measures to avoid or reduce impacts to features.
- State any need for a terrain stability assessment with a rationale describing why the assessment is necessary.
- Reference applicable protected area management planning document(s) and applicable sections of the BC Parks Conservation Policy.

Cultural Heritage – BC Parks Conservation Policy 5.13

Are any cultural heritage features or cultural heritage zones present in the treatment area?

Note: In BC Parks, <u>cultural heritage</u> refers to the full range of cultural heritage features, including archaeological, non-archaeological Indigenous, historical (both Indigenous and non-Indigenous past), paleontological and natural heritage that has cultural meaning.

Note: A cultural heritage <u>feature</u> Is anything that has heritage value to BC Parks or to the wider community. A feature does not have to be a certain age or have a particular construction date to be considered a heritage feature and can be a structure, building, group of buildings, district, landscape, archaeological site or any other place or feature that has been identified as having heritage value.

- Describe any cultural heritage features or cultural zones in the project area
 - Contact BC Parks staff to provide information on any cultural heritage features or cultural zones in the project area.
- Describe any mitigation measures that avoid impacts to cultural heritage features or cultural zones present within the treatment area.

Soil Disturbance

Fuel Treatment Unit, proposed max. soil disturbance, estimated soil disturbance, and rationale

Note: Soil disturbance specifications should reflect the lowest amount of disturbance possible given the prescribed treatment. FPPR soil disturbance limits should not be used where more accurate or appropriate proposed and estimate specifications can be determined.

Review proposed soil disturbance with BC Parks staff to determine any resulting requirements for archaeological assessments.

- Provide soil disturbance specifications for proposed Maximum and Estimated percent area and area (ha)
- Describe rationale for soil disturbance estimates and mitigation strategies
- Reference applicable BC Parks Best Management Practices

Riparian Management

- Riparian management should follow BC Parks Best Management Practices for Tree Removal
 - BMPs specify that riparian areas should be classified using Forest Practices Code of BC Riparian Management Area Guidebook units (Riparian Reserve Zone, Riparian Management Zone)
- Provide any Riparian Reserve Zone (RRZ) specifications
 - RRZs are areas where treatment is limited to activities that will not have material adverse effects on riparian or aquatic ecosystems
 - o Describe any RRZ specifications
- Provide any Riparian Management Zone (RMZ) specifications
 - Riparian Management Zones are areas where treatment specifications have been modified to protect fish, wildlife habit, biodiversity, and water values
 - Describe any Riparian Management Area specifications

Note: Riparian Management Area Guidebook RRZs and RMZs widths can be increased where necessary to achieve adequate stream protection. It may be necessary to establish RRZs or RMZs for S4-S6 streams.

H. IDENTIFIED SPECIES & ECOSYSTEMS OF CONCERN

SPECIES (flora and fauna)

- Describe species of concern, their status or conservation concern, presence/habitat requirements in the treatment area, potential impacts that could result from the proposed treatment and mitigation measures to avoid or reduce impacts.
- Work with the BC Parks team and local specialists to understand and identify relevant listed or regionally important species or ecosystems. References could include:

- BC Species & Ecosystem Explorer or Conservation Data Centre for Red and Blue listed species
- Species at Risk Act, endangered and threatened species and critical habitat
- Any applicable BC Government species <u>recovery planning</u>
- Applicable protected area management planning and applicable sections of the BC Parks Conservation Policy

ECOSYSTEMS

- Describe ecosystems of concern, their status or conservation concern, occurrence in the treatment area, potential impacts that could result from the proposed treatment and mitigation measures to avoid or reduce impacts.
 - Describe how any ecosystems of concern stand structure, composition and diversity will be affected by the proposed treatment.

ENVIRONMENTAL MONITORING

 Indicate any recommended environmental monitoring during implementation of the proposed treatment (e.g., to ensure critical mitigation measures for species or ecosystems of concern are implemented as prescribed and/or are adequately protecting a species or ecosystem of concern).

I. FIRST NATIONS ENGAGEMENT AND CONSULTATION

- Indicate whether initial engagement letters were sent to First Nations at project initiation.
 - o Contact BC Parks staff to provide this information.
- Indicate whether eco-cultural values have been identified by First Nations and considered in the prescription.
 - Contact BC Parks staff to provide this information
- Indicate whether First Nations consultation is complete
 - Contact BC Parks staff to provide this information

Note: Complete the below after First Nations consultation on the draft prescription is complete

- List any concerns, proposed management, and resulting measures to address arising through First Nations consultation.
 - Work with BC Parks staff and First Nation(s) where coordinated by BC Parks staff to determine measures to address concerns or proposed management.

J. STAKEHOLDER ENGAGEMENT

- Indicate whether stakeholder engagement is complete
- List any concerns or proposed management raised by stakeholders and resulting measures to address.
 - Contact BC Parks staff to provide stakeholder concerns
 - Work with BC Parks staff to determine measures to address concerns

K. TREATMENT SPECIFICATIONS

K.1 FUEL MANAGEMENT

• Identify fuel treatment units that apply to the treatment specifications

Surface Fuel Loading

- Provide existing surface fuel weight (kg/m2) and distribution, and specify target weight (kg/m2) and distribution for (woody):
 - Fine fuel (≤ 7cm);
 - Large fuel (>7cm 20cm) and;
 - o Coarse fuel (> 20cm) size classes
- Provide the method used to measure existing and target surface fuel loading

Pruning

- Specify tree layers for pruning, if prescribed
- Specify a pruning height (m), if prescribed
 - Specify the percent live crown that can be pruned

Canopy Fuel

- Describe the existing canopy fuel arrangement and the target canopy fuel arrangement
 - Consider providing a description of the existing and target canopy fuel horizontal and vertical fuel stratum gaps
 - Consider providing existing and target canopy bulk density (kg/m3). See <u>Fire</u>
 <u>Management Stocking Standards Guidance</u> for further canopy bulk density target information.

Crown Closure

Provide existing and specify target crown closure (%)

Thinning

- Provide thinning specifications for applicable tree layers and/or applicable DBH ranges
 - Specify horizontal spacing between trees and/or tree layers as necessary, including any horizontal and vertical spacing between understory/ladder fuel stems and crown fuel stems

Debris Piling

- Provide debris piling specifications for burning
 - Specify pile size, distribution, and setbacks (e.g., away from retained trees, stumps, surface root systems, park infrastructure, reserve areas, etc.)
 - Include any relavent practices for pile construction as described in the <u>Wildfire Risk</u>
 <u>Reduction Pile Construction and Burning Guidance document</u>, e.g., steep slope pile
 burning, covering piles with tarps or butcher paper for curing, etc.

Debris Burning

• Provide debris burning specifications

- Specify target pile debris consumption
- Specify any prescribed pile rehab (e.g., spreading loose soil or vegetation over burned piles

Prescribed Fire

If prescribed fire (resource management open fire) is being prescribed:

- Describe the historical fire dependence of the ecosystem, approximate fire cycle and return interval, and pre-fire fuel conditions
- Specify objectives and desired effect(s) of the prescribed fire (e.g. desired amount of duff consumption; surface fuel reduction targets: type and size of material to be consumed, % burn coverage, crown fraction burned or desired tree mortality, crown base height targets; acceptable percent of leave tree mortality; percent acceptable understory survival, etc.)
 - Discuss proposed fire effects with BC Parks staff to assess the full scope of fire effect impacts and gain endorsement
- Specify fire effects monitoring. Provide a specific, measurable, realistic, and time- bound range
 of outcomes for each of these objectives, so that burn objectives are achievable and can be
 easily incorporated into a prescribed fire burn plan.
 - Discuss the proposed monitoring regime with BC Parks staff to assess internal and external monitoring needs and gain endorsement
 - It is important that Fire Effects indicators, such as fire severity, are consistently measured across projects when possible. A tool that can be utilized by fire practitioners to measure burn severity is the Burn Severity Table found on page 110 of the US National Park Service Fire Monitoring Handbook,.
 - While the BC Government doesn't currently have standard guidance on monitoring Fire Effects, there are external guidance documents available to help fire practitioners determine best sampling methodology and monitoring protocols to evaluate their burn objectives. When possible, a qualified FEMO (fire effects monitor) should be included in the burn operation to collect information such as onsite weather, fire behaviour, fuel conditions and smoke information. Guidance documents currently used by many FEMOs in Canada to aid in planning their monitoring efforts are the US National Park Service Fire Monitoring Handbook, the National Wildfire Coordinating Group Fire Effects Guide and the Alaska Wildland Fire Coordinating Group Fire Effects Monitoring Protocol.
- FTU design should include logical burn units to incorporate natural, existing, or other control
 lines to be utilized during implementation of the burn. Development of these burn units should
 be considered and carried out during the implementation of earlier phases of operational
 treatments to maximize efficiencies and help set up the treatment unit for subsequent burning.
- The Containment Area that will be incorporated within the prescribed fire burn plan should be identified on the prescription map and attached to the prescription.

K.2 BIODIVERSITY AND OTHER CONSIDERATIONS

Wildlife Tree Retention

- Provide any *special* wildlife tree retention or recruitment specifications
 - Note a Wildlife Dangerous Tree assessment must be carried out using the Parks and Recreation Sites module. This assessment will identify proposed wildlife tree retention and dangerous tree safety procedures. Prescription specifications must not include direction to cut or modify trees assessed as dangerous. Approval from BC Parks must be obtained prior to cutting or modifying trees assessed as dangerous⁶.

Coarse Woody Debris

- Provide existing and specify target coarse woody debris retention (pieces/ha), and specify any recruitment of coarse woody debris, if prescribed
 - Chief Forester <u>Guidance</u> on Course Woody Debris Management: Wildfire Mitigation
 Treatments can be used as a guide where no park specific guidance is provided.

Forest Health Impacts

• Describe any existing forest health concerns in the project area and any impacts to forest health that could result from the proposed treatment

Describe how treatment unit design and/or treatment specifications mitigate negative forest health impacts or improve forest health where applicable

Windthrow Management

- Indicate if windthrow is a concern in the treatment area and describe how windthrow was assessed
 - o If windthrow is a concern, describe how treatment unit design and/or treatment strategies mitigate windthrow damage

Seasonal And Weather Constraints

• Describe any operational implementation seasonal or weather constraints (e.g., migratory bird nesting seasons, sensitive soil, public campground use, etc.), and specify an implementation window that avoids or reduces constraints.

K.3 STAND TABLE SUMMARY

- Complete the stand table summary (Crown Base Height Range, Average Tree Height, Existing, Cut, and Leave, and Layer Reduction and Proportion of Total Stems Pre and Post treatment) for each layer (split Layer 1 into size classes as per size classes used in the Stand Table Appendix). Provide data for all species together in each layer, including live and dead).
- Layer Reduction column: provide the percent reduction in post-treatment stems per hectare
 - o (Cut SPH / Existing SPH) x 100 = percent reduction
- Proportion of Total Stems Pre and Post column: provide the proportion of total stems that the layer comprises of all layers pre and post-treatment

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⁶ Wildlife Dangerous Tree Assessor's Course Workbook Parks and Recreation Sites Course Module

- (Layer Existing SPH / Total All Layers Existing SPH) x 100 = proportion of total stems pretreatment
- (Layer Leave / Total All Layers Leave) x 100 = proportion of total stems post-treatment

K.4 STAND TABLE APPENDIX

- Complete the full Stand Table appendix if tree removal is prescribed. Indicate if the Stand Table Appendix will be completed
- If a timber cruise is required to determine volume for the project, provide cruise data as an attachment
- Use appropriate diameter classes to ensure adequate data for treatment specifications and fire behavior model inputs. Add or remove diameter classes as required
- If basal area is desired, confirm with BC Parks staff if SPH is required in addition to basal area.

K.5 TREE REMOVAL

- Indicate if merchantable tree removal and disposal is prescribed. If prescribed, provide merchantability criteria and a volume estimate (m^{3/}/ha) by tree species.
- Indicate if residual fibre utilization is prescribed. If prescribed, provide utilization criteria and a volume estimate (m³/ha) by tree species.

Harvesting System

- Provide a general description of the recommended harvesting system to fall, process, transport (roads, landings, trails, paths), load, and haul logs or debris, and dispose of slash.
- If the use of mechanical equipment for treatment implementation is optional (e.g., hand or mechanical debris piling), ensure treatment impacts and mitigation measures throughout the prescription account for all optional treatment strategies.
- The proposed harvesting system and recommended equipment should align with BC Parks Best Management Practices for Tree Removal Planning

K.6 HOW TREATMENT SPECIFICATIONS MEET PROJECT OBJECTIVES

- Describe how treatment specifications were determined, including but not limited to: target surface fuel loading, pruning height, thinning density, crown fuel, crown closure, CWD retention, and wildlife tree retention.
 - Attach supporting documentation or references. The Critical Surface Fire Intensity
 <u>Worksheet</u> and any other documentation that demonstrates how post-treatment fuel
 conditions meet WRR and/or project objectives must be attached.
 - Important: Where BC Parks legislation or policy conflicts with funder targets or criteria, a professional quality rationale should be provided describing the variance from targets or criteria (see BCWS <u>Fuel Management Prescription Guidance</u>).
- Describe how treatment specifications meet project objectives
 - Describe how treatment specifications meet project fire behavior objectives
 - Describe specific and measurable fire behavior outcomes
 - Include considerations of site-specific fire behavior and resulting treatment unit placement, width, anchoring, and any other design features
 - Describe how treatment specifications meet project conservation objectives (natural, cultural, and recreation).

L. POST TREATMENT RESPONSE & RECOMMENDED FOLLOW UP

- Describe expected vegetation response in the tree, shrub and herb layers
- Describe any rehabilitation requirements (e.g., rehab of temporary roads, trails, paths, etc.)
- Post-treatment Report:
 - Specify post-treatment surveying required to report on treatment outcomes, including but not limited to stems per hectare, surface fuel loading (kg/m²), crown base height, and before and after photos. Contact BC Parks staff to establish any project specific post-treatment survey and reporting requirements.
 - The post treatment report must follow the applicable standards for post-treatment surveying in the BCWS Fuel Management Survey Data Collection Standard.
- Fuel Treatment Unit Cleanup:
 - Provide specifications for any necessary post-treatment cleanup (e.g. ribbon to be removed).
- Recommended Maintenance / Monitoring:
 - O Provide a maintenance plan based on the length of time the treatment will be effective in achieving the fire behaviour targets and outcomes. Include the time post-treatment, activity/treatment description (a maintenance treatment or a monitoring survey), applicable FTUs, and comments that describe monitoring triggers for treatment such as increased fuel load (kg/m²) or a reduction in inter-tree spacing.
 - Consider that treatments should be monitored and re-treated at the most economical time frame (e.g., prescribed burning when regen/layer 4 trees are susceptible to low intensity fire). A more frequent maintenance treatment may also be more economical.

M. OTHER CONSIDERATIONS AND REQUIREMENTS

Adjacent Land Ownership

Has adjacent land ownership been accounted for?

 Describe adjacent land ownership and any resulting treatment specifications related to adjacent land ownership (e.g., buffers, modified treatment specifications, specifications for treatment collaboration, etc.)

Utilities, Critical Infrastructure & Assets

Are utilities located in, or adjacent to, the proposed treatment area?

• Describe any utilities within or adjacent to the proposed treatment area that may be impacted by the proposed treatment. Describe any treatment specifications relating to utilities.

Is critical infrastructure located in, or adjacent to, the proposed treatment area?

- Critical infrastructure is defined as: "facilities, networks, assets...essential to the health, safety, security or economic well-being of Canadians and effective functioning of government"
- Identify any critical infrastructure within or adjacent to the proposed treatment area that may be impacted by the proposed treatment
- Describe any treatment specifications relating to critical infrastructure

Are BC Parks assets located in, or adjacent to, the proposed treatment area?

- BC Parks assets can include investments, facilities or BC Parks-owned infrastructure
- Describe any treatment specifications relating to BC Parks assets
- Contact BC Parks staff to provide site-specific BC Parks asset information

Public Safety

Have specific public safety concerns been identified in or adjacent to the proposed treatment area?

Describe any identified concerns within or adjacent to the proposed treatment area

Access & Traffic Control

Are there any foreseen issues with access and traffic during and post-treatment?

Describe any expected issues with access and access control during and/or post-treatment

Is traffic control required at any point during operations?

Describe issues with traffic control and mitigation recommendations

Smoke Management

Does a smoke management plan beyond OBSCR Exist for the proposed treatment area?

- State relevant legislation for smoke management compliance (i.e. Environment Management Act and Open Burning Smoke Control Regulations) and any other alignment with existing local smoke management plans. State any existing local plans and any requirements to ensure consistency with objectives.
- Per legislation and alignment with any local smoke management plans, list the minimum venting indices required, the source of stated venting forecasts, and any special measures in place to manage smoke (e.g. roadside warning signs, flagpersons at night, special burning equipment, curing slash prior to burning, etc.).

N. AUTHORIZATIONS

- BC Parks Authorization(s) (e.g. Park Use Permit)
 - Work with BC Parks regional staff to determine and describe which BC Parks authorization(s) are required (*Park Act* section 20, 20.1, 21, 23)
- Forest Act Authorization(s) (e.g. cutting licence, road permit).
 - Describe required Forest Act authorizations

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⁷ Public Safety Canada: Critical Infrastructure. https://www.publicsafety.gc.ca/cnt/ntnl-scrt/crtcl-nfrstrctr/index-en.aspx. Accessed April 2020.

- BC Parks does not require Forest Act authorization for timber cut, damaged, or destroyed within park boundaries. The Park Act authorizes this within parks and protected areas.
- Timber (or residual fibre) being disposed of (transported) outside of the protected area system must be carried out in accordance with the Forest Act.
- Refer to the "Guidelines for Tree Removal in BC Parks" document for information on timber disposal in parks and protected areas. Contact BC Parks staff for this document.
- Other (e.g. MOTI, local government, utilities)
 - Describe other required authorizations

O. OUTSTANDING WORKS

Identify any outstanding works and associated timeframes (where available)

P. PROFESSIONAL DOCUMENTATION & DECLARATION

- Enter forest professional information, certification statement and attach completed Ministry of Environment and Climate Change Strategy Professional Declaration and Conflict of Interest Declaration forms.
 - o Documents are available from the <u>Professional Accountability Policy website</u>.

Q. ATTACHMENTS

- Identify attachments to the prescription
 - o Attach any supporting documentation (i.e. Species at Risk list)

BC PARKS PRESCRIPTION SUMMARY DOCUMENT

- This document must be completed and attached to the prescription.
- Summary Document content must be consistent with the approved BC Parks Prevention Prescription document.

MAPPING STANDARDS

Maps and spatial data are to follow the requirements outlined in the most recently published BCWS "Fuel Management Prescription Spatial Requirements" found here.

- Contact BC Parks staff to review and confirm mapping deliverables and review any WRR GDB and MXD template availability/requirements.
- Ensure BC Parks legal boundaries and infrastructure are included in mapping. Contact BC Parks staff to review and determine infrastructure to include in mapping.

Note: separate harvesting or road building map may be required depending on the treatment.