

Best Management Practice

Trimming, removal and planting of trees and shrubs for routine maintenance purposes in Rouge National Urban Park

Background:

BMPs are one of four (4) possible pathways that Parks Canada can use to fulfill its obligations under CEAA when an EIA on a given project is required. BMPs are intended to be applied when Parks Canada has identified a class of routine, repetitive projects with well understood and predictable effects. This Best Management Practice allows the work described herein to be undertaken at RNUP with exceptions as noted.

<p>Name of Best Management Practice</p>	<p>Trimming, removal and planting of trees and shrubs for routine maintenance purposes in Rouge National Urban Park.</p>
<p>Scope of Application:</p>	<p>Activities covered by this Best Management Practice (BMP) include¹:</p> <p>Removal or trimming of trees and shrubs that:</p> <ul style="list-style-type: none"> - present a safety risk (to visitors, tenants, staff, contractors and / or the general public). - threaten a park asset (such as a building, road, trail, dam, etc.) - are encroaching on active agricultural land or otherwise impeding the operations of a farm (e.g. by restricting movement of equipment). - are encroaching on trails and / or visitor access points. <p>Planting of native, locally appropriate trees and shrubs to:</p> <ul style="list-style-type: none"> - replace those that were removed for any of the reasons listed above (for example, replacement of a shade / landscape tree or replacement of trees in hedgerows). - buffer, beautify, provide shade or otherwise enhance a residential, commercial or agricultural leased property. <p>Herbicide use to prevent vegetative suckering from cut stumps.</p> <p>Disposal of woody debris.</p> <p>Maintenance crew activities (i.e. Parks Canada (PC) staff and / or contractors).</p> <p>Machinery and equipment maintenance / transportation / operation.</p>

¹ Activities may be carried out by Parks Canada staff, and / or by contractors, tenants, volunteers, etc., who have been authorized to undertake the work.

<p>Exceptions:</p>	<p>Activities not covered by this BMP which will require a separate Environmental Impact Analysis (EIA) are the following:</p> <p>Any work that will result in soil disturbance within 5 m of a watercourse or waterbody, OR at any distance greater than 5m where there is risk of releasing soils / sediments into a watercourse or waterbody.</p> <p>The permanent creation or destruction of a vegetated feature of more than 20 metres in length or 200 square metres in area. (This does not include circumstances where an existing feature is being replanted, for example, part of a hedge or hedgerow.)</p> <p>The permanent destruction or alteration of any vegetated feature that is deemed to have cultural value or that contributes significantly to visitor experience objectives.</p> <p>Any work that will negatively impact a known archaeological resource or other cultural heritage resource.</p> <p>Any work that will impact a Species at Risk or its habitat, with the exception of Butternut (<i>Juglans cinerea</i>), and Kentucky Coffee Tree (<i>Gymnocladus dioica</i>) as further specified in the mitigation measures.</p> <p>Ecological restoration work, such as the removal of invasive species and / or planting of native species in natural or naturalizing areas.</p> <p>Tree removal associated with the implementation of a new project (this includes clearing for new trails / trailheads, construction of new buildings / structures, etc.)</p> <p>Initial landscaping associated with a new building or visitor facility, such as a trailhead or interpretive centre. (This BMP may subsequently be used to maintain / replace woody vegetation in accordance with the original, approved landscape plan.)</p> <p>Viewscape maintenance, including the clearing and / or management of trees to maintain visitor viewpoints and cultural landscapes. (This does not include maintenance of sightlines for traffic and / or visitor safety, which is considered a safety risk and is within the scope of this BMP.)</p> <p>Harvesting of trees for firewood and / or other forest products. (However, trees felled for reasons consistent with the scope of this BMP may be repurposed as firewood.)</p> <p>Removal of trees in a woodlot for the express purpose of woodlot management.</p>
<p>Approved geographic area of application:</p>	<p>This Best Management Practice (BMP) applies to federal lands within Rouge National Urban Park (RNUP) managed by the Parks Canada Agency and to any works undertaken by Parks Canada on lands proposed for inclusion in RNUP.</p>

Effects Assessment and Mitigation

<p>Components of the environment that may be affected:</p>	<p>The overall intent of this BMP is to allow for routine management of woody vegetation in RNUP to ultimately benefit ecosystem health, agricultural function, cultural resource management, asset management, visitor experience and public safety. Therefore, the overall impact of the activities covered by this BMP is expected to be positive. However, negative impacts to the environment are possible under the circumstances outlined below.</p> <p>Negative impacts to flora and fauna could potentially occur if:</p> <ul style="list-style-type: none"> - vegetation is removed unnecessarily or excessively - wild animals are harmed, harassed, disturbed or displaced - animal nests or dens are destroyed - native plants that are rare or at-risk are removed or harmed - wildlife habitat is removed or altered - wildlife habitat is contaminated – for example, by a fuel spill or excessive sedimentation of a watercourse - invasive species are introduced and / or spread - herbicide impacts non-target vegetation or wildlife <p>Negative impacts to air, soils, water and landforms could occur if:</p> <ul style="list-style-type: none"> - fuel or other contaminants are released to the environment - equipment is operated during unsuitable conditions - exposed soil erodes into a watercourse - hydrology is altered - machinery / equipment (i.e. hedge trimmers, tractors, chainsaws, boom/bucket truck, wood chipper) used in the short term generates exhaust that could affect air quality (however, these types of disturbances are temporary and not foreseen to be a threat to local flora, fauna, and people) <p>Agricultural activities could be negatively impacted in the event that:</p> <ul style="list-style-type: none"> - the ability of farm equipment to access and maneuver in agricultural lands is altered - tile drains are damaged and / or the flow of tile drains is backed up - access routes, staging areas and / or storage areas impede agricultural operations - herbicide impacts farm crops - invasive species are introduced and / or spread <p>Cultural resources could be negatively impacted if:</p> <ul style="list-style-type: none"> - there are adverse effects on the heritage value or character-defining elements of a cultural resource or heritage place, including impacts to known or potential archaeological resources - a landscape feature of cultural heritage significance is removed or altered - the heritage value of a cultural landscape² or viewscape is affected by vegetation removal or planting - foundations and/or walls of a heritage building are damaged or destroyed - soils in areas with archaeological potential are disturbed or displaced
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² Refer to *Preliminary Inventory of Cultural Landscapes Rouge National Urban Park (Draft)*, Parks Canada, June 12, 2015.

	<p>Visitor experience could be negatively impacted if:</p> <ul style="list-style-type: none"> - a feature with aesthetic or other visitor experience value is removed or altered - desired / preferred visitor access and / or movement is impeded - noise or other forms of disturbance affect visitor experience <p>The health and socio-economic condition of local communities and / or First Nations could be impacted in the event that:</p> <ul style="list-style-type: none"> - farmland or watercourses become contaminated by a fuel or other chemical spill - sedimentation into a watercourse impacts a fishery - alterations to soils, grading and / or drainage have a negative impact on agricultural production - A feature that supports tourism or another form of local economy is removed or altered - individuals are injured as a result of the activities <p>The health and safety of staff, visitors, tenants and others could be negatively impacted if:</p> <ul style="list-style-type: none"> - the work area is not well signed and workers are not wearing personal protective equipment (PPE), or following accepted safe work practices and standard operating procedures - machinery / equipment / materials are moved, operated or stored improperly - workers are exposed to harmful biota (i.e. ticks, poison ivy, thorns, etc.) and / or inclement weather - felling of larger limbs / trees is carried out improperly - woody debris is moved or temporarily stored in an unsafe manner - accidents and / or equipment malfunction occur <p>All potential negative impacts listed above can be mitigated using the measures listed below.</p>
<p>Mitigation Measures:</p>	<p><u>Consultation</u></p> <ol style="list-style-type: none"> 1. All planting, removal or trimming of vegetation must be reviewed and approved by RNUP Resource Conservation staff. The review will include consideration of the appropriateness and scope of vegetation removal / planting, as well as the potential to impact non-target vegetation, rare and at-risk species, wildlife and wildlife habitat. Resource Conservation staff may add mitigation measures for individual projects as required to supplement this BMP.* 2. Cultural Resource Management (CRM) staff should be consulted if an activity has the potential to impact a known cultural resource, or buildings or landscape features that may have heritage value but that have not yet been identified or evaluated. Furthermore, any activity that will result in soil disturbance must be discussed with Parks Canada Terrestrial Archaeology staff to determine the potential impact of the work on buried / previously unknown cultural resources. (This includes all tree planting and any removal of roots.) An Archeological Overview Assessment (AOA) may be required to determine the potential archaeological impact of proposed work. Based on the results of an AOA, an Archaeological Impact Assessment (AIA) may be required in order to authorize the work. CRM and Terrestrial Archaeology staff may add mitigation measures for individual projects as required to supplement this BMP.* If it is determined that an activity will have a negative

impact on cultural resources that cannot be adequately mitigated using this BMP, it must be subjected to a separate EIA process (also refer to scope statement).

3. Visitor Experience (VE) staff should be consulted if an activity has the potential to impact a feature or area of significance to visitor experience and / or if the activity has the potential to have a temporary negative impact on the experience of visitors (through noise, disturbance, interference with visitor programming, etc.). VE staff may add mitigation measures for individual projects as required to supplement this BMP.* If it is determined that an activity will have a long-term negative impact on VE that cannot be adequately mitigated using this BMP, it must be subjected to a separate EIA process (also refer to scope statement).
4. RNUP Realty Services should be consulted before carrying out activities that may affect tenants or that occur on tenanted lands. The scope, methodology and timing of work will be determined in consultation with affected tenants as required. Realty Services staff may add mitigation measures for individual projects as required to supplement this BMP.*

Natural Resource Protection

5. Vegetation removal should be avoided between April 1 and August 15 to protect nesting birds. If emergency removal of vegetation is absolutely necessary during this time, a qualified biologist will survey the trees / shrubs to be removed to ensure that no active bird nests are present. In the event that an active bird nest is present, any work that might disturb the nest must be postponed until birds leave the nest, and appropriate safety measures should be implemented in the interim.
6. In addition to the above, the affected area should be carefully surveyed prior to the commencement of work (including work that occurs outside of the migratory bird protection timing window) by a qualified biologist to identify any nests, dens, other sensitive wildlife features or sensitive non-target vegetation that may be impacted. If any of these are found on site, Parks Canada staff must be notified and the feature must be protected using measures appropriate to the species and satisfactory to Parks Canada Resource Conservation staff.
7. All trees and shrubs planted must be native, locally appropriate and suitable to the specific site conditions.
8. Wild animals that may be present on site during project activities shall never be harmed, harassed, or chased. If wild animals do not or cannot leave the work area in time to allow work to proceed, Resource Conservation staff must be consulted and may decide either to stop / delay work or move an animal if it is appropriate and possible to do so without causing harm to that animal or other wildlife.
9. No soil disturbance will occur within 5m of a watercourse or wetland, and no soils / sediments shall be released into a watercourse or wetland (unless subjected to a separate EIA – see scope statement).
10. A Butternut (*Juglans cinerea*) may only be removed or trimmed if it is certified as a non-retainable tree by a Certified Butternut Health Assessor. Records must be kept of all Butternut trees removed or trimmed. No retainable Butternut trees or any other Species at Risk, with the exception of

	<p>Kentucky Coffee Tree³, shall be affected by project activities (unless authorized as part of a separate EIA process – see scope statement). A Species at Risk Act (SARA) authorization⁴ will be issued to anyone working within this BMP to permit the cutting / trimming of Butternut and Kentucky Coffee Tree.</p> <ol style="list-style-type: none"> 11. Planting of Butternut (<i>Juglans cinerea</i>) seeds or seedlings provisioned from retainable mother trees in the local seed zone is encouraged, with approval from a Certified Butternut Health Assessor. A SARA authorization⁴ will be issued to anyone working within this BMP to permit the planting of Butternut accordingly. No Butternuts (pure or hybrid) from any other known or unknown source shall be planted. 12. Disturbed areas should be seeded with appropriate species (as approved / recommended by Parks Canada Resource Conservation staff) to prevent erosion. <p><u>Cultural resource protection</u></p> <ol style="list-style-type: none"> 13. In the event that cultural / archaeological resources are unearthed, all work will cease immediately, the artefact will be left in place and the Parks Canada Project Manager will be contacted. The Project Manager should contact Parks Canada's Terrestrial Archaeology staff for an assessment of the cultural material found and to discuss if any mitigation measures need to be implemented. <p><u>Agricultural protection</u></p> <ol style="list-style-type: none"> 14. In areas where tile drain outlets may be present, they must be identified and protected. Any tile drain outlets that may potentially be impacted by project activities will be inspected upon completion of work and will be cleaned out and / or repaired if necessary. 15. If heavy equipment needs to be driven off of established driveways, small tracked equipment will be used in order to minimize soil compaction, avoid damage to tile drains and other farm infrastructure, and mitigate damage to landforms and buried cultural resources. <p><u>Equipment and machinery operation</u></p> <ol style="list-style-type: none"> 16. All equipment / tools / machinery shall be used only by individuals who are trained, licensed and / or otherwise qualified, in accordance with all applicable laws and regulations. All necessary Personal Protective Equipment is to be used at all times. 17. All equipment is to be maintained in good working order. Use of any piece of equipment that shows signs of malfunction or fluid leakage will cease immediately. 18. Refueling of equipment will take place at least 30m from any watercourse or waterbody. A spill kit will be available at all times when equipment containing fluids (oil, gasoline, etc.) is present on site and the operator will be trained to deploy it. Any spills will be immediately reported to Parks
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³ Kentucky Coffee Trees have been planted as specimen trees within and adjacent to RNUP. Although this species does not naturally occur in RNUP and all individuals are planted, a SARA authorization will be issued to all individuals working within this BMP to permit cutting / trimming of the trees, as a precautionary approach.

⁴ SARA Authorizations apply only on Federally owned lands. If this BMP is applied on non-federal lands where a Species at Risk may be affected, a permit under the Ontario Endangered Species Act may be required and the Ontario Ministry of Natural Resources should be contacted for further direction.

Canada staff, the Ontario Ministry of Environment spills reporting line (1-800-268-6060) and Environment Canada (613-239-6065).

19. All equipment must be cleaned prior to entering and leaving work sites to prevent the spread of invasive species, according to the Ontario Invasive Plant Council's Clean Equipment Protocol for Industry.
20. Equipment will not traverse watercourses and there will be no in-water work.
21. Work will be confined to the minimum possible area of disturbance.

Disposal and transport of materials

22. Felled trees may be used for firewood or to enhance habitat on restoration sites (when prescribed specifically as part of a restoration plan approved in a separate EIA). Cut woody debris may also be spread in nearby natural areas to mimic deadfall, if deemed appropriate by Resource Conservation staff on a case-by-case basis. Seed-laden branches of invasive trees can be buried at least 1m deep to prevent growth and allow them to decompose naturally. Any woody material that cannot be repurposed / disposed of on site in the ways described above will be chipped and removed to a composting facility (if available), or landfill, or may be heat-treated for re-use as mulch. In some cases, where deemed appropriate by Resource Conservation staff, wood chips may be spread directly on site in a thin layer and in a manner that does not smother / interfere with native flora and fauna.
23. Woody material will be carefully transported in a manner that does not cause damage to existing vegetation, natural areas, crops or agricultural lands.
24. Any loads of materials (soils, debris, garbage, etc.) entering and exiting the site will be properly covered and secured.

Safe work practices and Standard Operating Procedures

25. Trees are to be felled in a manner that prevents them from hanging up and / or causing damage to surrounding vegetation, buildings, or other park assets. If any surrounding trees or structures are inadvertently damaged during tree removal, this will be reported immediately to Parks Canada.
26. When removing vegetation adjacent to any areas utilized by the public, staff or tenants, these work areas must be appropriately signed and closed. If visitor access or experience is to be impeded in any way by project activities, VE staff will be consulted so that they have the opportunity to post / advertise closures, detours and hazards, and any necessary adjustments to timing and execution of the work will be accommodated.
27. If working around power lines, only a contractor qualified to work around high voltage lines may cut and / or remove the limbs / trees.

Herbicide use

28. In accordance with Parks Canada's *Integrated Pest Management Directive (IPMD)*, and with an approved *Integrated Pest Management Plan (IPMP)* for RNUP if available, specified common trees and shrubs that have been cut at the base can be hand painted or dabbed with herbicides on the cut trunk to prevent suckering. There will be strict compliance with the IPMD (and IPMP if available) and product label directions. Appropriate signage and area closures will be in place as per the pesticide application regulations. Only licensed pesticide applicators are permitted to carry out pesticide application.

Conditions:	<ol style="list-style-type: none"> 1. When the work being undertaken is on leased lands, RNUP Realty Services must provide the Tenant with the proper notification as per the terms of the lease, unless the work is considered to be an emergency, in which case Realty Services will ensure that efforts are made to notify the Tenant in as timely a manner as possible. 2. All work must be performed in accordance with the Rouge National Urban Park Act and Regulations and all applicable statutes, laws and regulations in force at the time.
	<p><i>* There may be circumstances where a slight modification to a BMP is required to ensure that all potential impacts are mitigated. Additional mitigation measures and other minor modifications and supplements to this BMP may be applied to specific projects with approval from the Sustainable Land Use Manager.</i></p> <p><i>NB - The Field Unit Superintendent or designate may determine that a BMP alone may not be sufficient to detect or prevent adverse environmental effects, and recommend a Basic Impact Analysis (BIA) or Detailed Impact Analysis (DIA) instead.</i></p>

Development and Review Team

Team of experts who took part in the development and review of the BMP:		
1.	Maria Papoulias (author)	Project Manager, RNUP
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13.	Patrick Latreille	Law Enforcement Supervisor, RNUP
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15.	Dwayne Doucette	A/ Asset Manager, RNUP

Field Unit Superintendent Approval

Name: <i>Pamela L. Veinotte</i>	Date:
Signature: <i>Pamela L. Veinotte</i>	<i>3/3/16</i>