

Appendix 5: Excerpts from *Riparian Management Area Guidebook*

The following selections are excerpted from the Forest Practices Code *Riparian Management Area Guidebook* (December 1995). Some sections which do not apply to W1832 or which do not discuss management practices in riparian ecosystems have been omitted. Text in smaller font indicates additions or comments pertaining specifically to W1832. The complete *Guidebook* is available at <http://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/riparian/rip-toc.htm>

1 Introduction

This guidebook is provided to help managers, planners, and field staff comply with the Forest Practices Code of British Columbia Act and to set and achieve the management objectives for riparian management areas (RMA) specified in operational plans. It provides guidance on planning and conducting operations within the RMA and fisheries- and marine-sensitive zones. It should be used in conjunction with other guidebooks such as those developed for forest development plans, biodiversity, managing identified wildlife, and range use.

Riparian areas occur next to the banks of streams, lakes, and wetlands and include both the area dominated by continuous high moisture content and the adjacent upland vegetation that exerts an influence on it. Riparian ecosystems contain many of the highest value non-timber resources in the natural forest. Streamside vegetation protects water quality and provides a "green zone" of vegetation that stabilizes streambanks, regulates stream temperatures, and provides a continual source of woody debris to the stream channel. The majority of fish food organisms come from overhanging vegetation and bordering trees while leaves and twigs that fall into streams are the primary nutrient source that drives aquatic ecosystems. Riparian areas frequently contain the highest number of plant and animals species found in forests, and provide critical habitats, home ranges, and travel corridors for wildlife. Biologically diverse, these areas maintain ecological linkages throughout the forest landscape, connecting hillsides to streams and upper headwaters to lower valley bottoms. There are no other landscape features within the natural forest that provide the natural linkages of riparian areas.

The RMA consists of a riparian management zone and, where required by regulation, a reserve zone (Figure 1). Within the management zone constraints to forest practices are applied. The width of these zones is determined by attributes of streams, wetlands or lakes, and adjacent terrestrial ecosystems. Inventory information as well as clarification of these guidelines may be obtained from the appropriate resource agencies.

Lakeshore management areas and wildlife habitat areas will frequently be associated with riparian management areas. In that situation, the guidebook that affords the greatest protection should be considered the authoritative document.

While marine-sensitive zones and fisheries-sensitive zones do not require classification they should be identified in operational plans. This document provides guidance on management strategies adjacent to these features.

This document applies to the entire province. Cases where a guideline is specific to either the coast or interior of British Columbia have been indicated.

1.1 RMA objectives

The identification, riparian classification, and mapping of streams, wetlands, and lakes and the description of appropriate practices is the responsibility of the proponent of the operational plan. This guidebook describes and refers to standard approaches and methodologies that can aid in developing prescriptions for riparian areas. In the absence of government approved permits and plans, the approaches and guidelines described here will be used by government to assess riparian classification, management, and mapping.

Riparian management area objectives are implemented:

- to minimize or prevent impacts of forest and range uses on stream channel dynamics, aquatic ecosystems, and water quality of all streams, lakes, and wetlands
- to minimize or prevent impacts of forest and range use on the diversity, productivity, and sustainability of wildlife habitat and vegetation adjacent to streams, lakes, and wetlands with reserve zones, or where high wildlife values are present
- to allow for forest and range use that is consistent with 1 and 2 above.

To achieve riparian management area objectives, forest practices within the management zone should:

- Where a riparian management area has both a management zone and a reserve zone:
 - reduce the risk of windthrow to the reserve zone

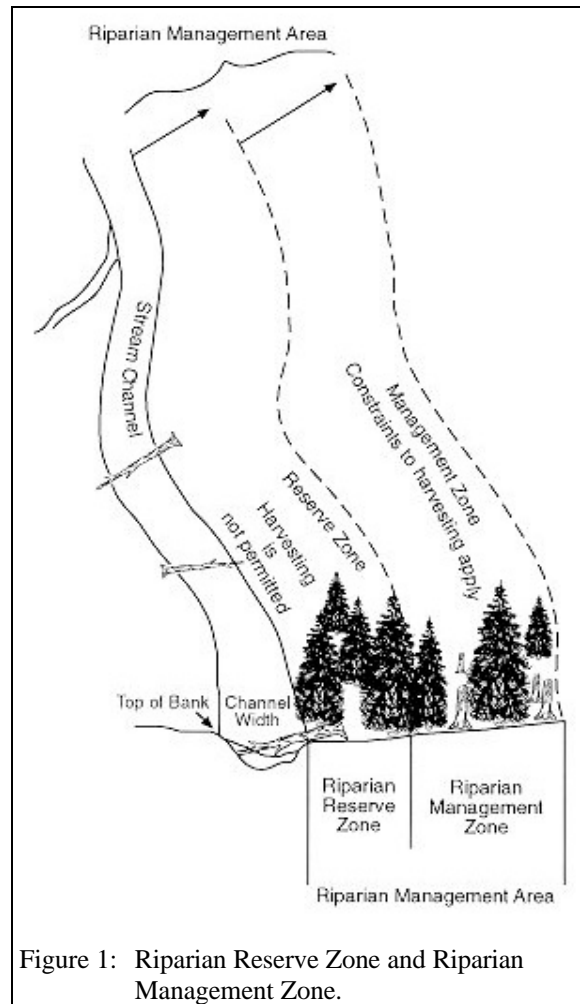


Figure 1: Riparian Reserve Zone and Riparian Management Zone.

- retain important wildlife habitat attributes including wildlife trees, large trees, hiding and resting cover, nesting sites, structural diversity, coarse woody debris, and food sources characteristic of natural riparian ecosystems.
- Where a riparian management area has only a management zone:
 - retain sufficient vegetation along streams to provide shade, reduce bank microclimate changes, maintain natural channel and bank stability and, where specified, maintain important attributes for wildlife
 - adjacent to wetlands and lakes, retain key wildlife habitat attributes characteristic of natural riparian ecosystems.

2 Streams

3 Wetlands

4 Lakes

5 Modifying the RMA

6 Forest practices within the RMA, fisheries-sensitive zones, and marine-sensitive zones

This section provides recommendations regarding silviculture, harvesting, and road construction practices within the RMA. Range use guidelines are contained in the section "Range in riparian areas."

(Discussion of retention levels follows in original. Policy under the KB HLP¹ calls for a 30 meter both sides riparian management zone on streams directly related to domestic water intakes. This RMZ is to be managed to the best practices set out in this Guidebook, which call for a maximum overall retention level of 25% of forest basal area.

The riparian management approach set out in the Management Plan for W1832 is to direct 50% of timber yield within Riparian Management Zones to the creation and maintenance of old growth habitat and coarse woody debris. Leave trees, old growth structures, and coarse woody debris will be concentrated in the riparian ecosystem within the Riparian Management Zone. This management goal will be implemented using a 10 meter Riparian Reserve Zone around all creeks and wetlands, regardless of adjacency to water intakes, and by partial cutting in the remaining 20 meter width of the Riparian Management Zone

The 10 meter riparian reserve zone will result in approximately 30% basal area retention in the required 30 meter RMZ. The remainder of the forest in the RMZ, as will the forest in the cutblock, will be managed using partial cutting approaches which maintain functioning forest ecosystems and forest structures. This will result in additional retention within the RMZ, with total retention within the 30 meter RMZ likely significantly exceeding the stated target levels.)

The following section applies to all riparian areas plus FSZ and MSZ and are to be viewed as 'Best Management Practices' to guide development of prescriptions for the RMA of each riparian class.

¹ Kootenay Boundary Higher Level Plan Order, December 2000, Government of B.C. and Strategies for the Kootenay Boundary Higher Level Plan, May 14 2001, Ministry of Forests.

6.1 General guidelines

Riparian features may be encountered in the field that have not been identified in the silvicultural prescription or logging plan. In such circumstances, forest harvesting adjacent to the stream, wetland or lake should cease until the appropriate feature is classified and the practice is implemented. For audit purposes and where appropriate, changes should be reflected in an amended silvicultural prescription/logging plan. If environmental damage has occurred, the appropriate government agency should be contacted.

6.1.1 Activities within streams and wetlands

No activities within streams or wetlands are planned under this FDP.

Streams, wetlands, and lakes should not be entered. Instream activities on fish streams, or on stream reaches that could affect fish habitat, or on stream reaches that could affect fish habitat or water quality downstream, may only be undertaken when constraints relative to fish life history or expected streamflows allow. Refer to Appendix 2 for general windows for instream work by regional area and species.

In addition to classified streams, wetlands, and lakes, there are wet depressions or receiving sites that are not classified. The tracks and wheels of ground-based equipment should not be operated within 5 m of any stream, wetland, or lake feature whether classified or not.

6.1.2 Roads and crossings

Roads within an RMA that are parallel to a stream, wetland, or lake should be designed to minimize short- and long-term impacts on the RMA. This can be done by methods such as minimizing road bed width, minimizing right-of-way width, end-hauling, full bench construction, constructing temporary roads, and deactivating roads after harvesting is completed. Temporary and permanent stream crossings should not damage fish habitat or create blockages to fish passage. This includes small channels that provide access to fisheries-sensitive zones. Temporary stream crossing methods should include crossing streams at right angles and the use of box culverts to avoid damage to streambanks. Temporary crossing sites should have stable banks and avoid instream, stable LWD. Remove all temporary structures once operations are completed. When streambank disturbance is evident and erosion is likely to occur, bank armoring and streamside vegetation must be re-established.

Existing main roads within the RMA can continue to be used. Spur roads within the RMA should be permanently deactivated once they are no longer used.

Streams and side channels should not be artificially channeled to reduce the number of culverts required. Each channel should be adequately culverted. Extra and oversized culverts should be installed where roads cross the active floodplain. In addition, fill heights should be minimized within the active floodplain and the fill protected from erosion. Avoid fill construction on floodplains that parallel the stream.

6.1.3 Falling and yarding

Falling and yarding should be away from, or parallel to, a stream, wetland, or lake.

(The section continues with a discussion of techniques for yarding over creeks. Logs will not be moved over or through creeks or wetlands in W1832.)

6.1.4 Uphill falling

(This section discusses falling directly beside streams. Streams and wetlands will be surrounded by a 10 meter Riparian Reserve Zone in the proposed development, so this section does not apply.)

6.1.5 Stream clean-out

(This section discusses cleanup after falling or yarding across streams. . Streams and wetlands will be surrounded by a 10 meter Riparian Reserve Zone in the proposed development, so this section does not apply.)

6.1.6 Fisheries-sensitive zones

Fisheries-sensitive zones (FSZs) are side and back channels, ponds, swamps, seasonally flooded depressions, lake littoral zones, and estuaries that are seasonally occupied by over-wintering fish.

(There are no fisheries sensitive zones in or adjacent to W1832.)

6.1.7 Marine-sensitive zones

Marine-sensitive zones (MSZs) include herring spawning areas, shellfish beds, marsh areas, existing aquaculture sites, juvenile salmonid rearing areas, and adult salmon holding areas.

(There are no marine sensitive zones in or adjacent to W1832.)

6.1.8 Windthrow hazard management

Riparian management areas in stands of moderate or high windthrow hazard require special management practices to reduce windthrow potential when logging is proposed within and adjacent to them. Where a reserve zone is required, windthrow hazard management should be designed primarily to protect the reserve zone and only secondarily to protect trees within the management zone.

6.1.8.1 Assessing windthrow risk

The Windthrow Handbook for British Columbia Forests (Research Program Working Paper 9401) should be consulted for guidance when assessing windthrow risk or developing prescriptions to reduce the risk of windthrow. Windthrow risk assessments should incorporate local knowledge and experience and should be assessed for the general area and, in greater detail, for each area with significantly different soil depth or drainage, stand structure, and tree species composition. Windthrow risk assessment should be a best judgment interpretation based on an evaluation of regional, local, and site-specific available information.

Windthrow risk is determined by the interaction between factors that affect the force of the wind acting on the tree and factors that affect the resistance of the tree to overturning. Force of the wind is increased by higher wind velocity and turbulence, increased exposure to wind, greater tree height-to-diameter ratio, greater crown size and crown density, and reduced stand density. Resistance to overturning is reduced by poor root anchorage due to

saturated soils and restricted rooting depth, occurrence of root or bole rot, extent of interlocking root systems, and past exposure to winds. Soil factors that control rooting depth contribute most significantly to windthrow risk.

High risk stands generally occur where high wind force is likely to occur and resistance to overturning is low. Moderate risk stands occur where root anchorage is poor but wind force is low, root anchorage and wind force is moderate, or root anchorage is good but wind force is likely high. Low risk stands occur where there is a high resistance to overturning and wind force is moderate or low.

Windthrow risk is generally greatest on the windward edge of a stand and decreases a short distance into the stand, although turbulence can result in windthrow several tree heights into the stand. Most windthrow occurs within the first three years following harvesting. However, windthrow risk can increase over time as management activities affect windflow and soil conditions.

Local knowledge is an important consideration when assessing windthrow risk. Certain areas are known to be particularly windy. A history of frequent windthrow and evidence of windthrow or stem breakage in natural stands is an indication that windthrow is likely to occur after harvesting.

6.1.8.2 Windthrow management strategies

Strategies to reduce the risk of windthrow should be considered wherever trees are retained and windthrow risk is moderate or high along all or a portion of the RMA. Windthrow management strategies include locating the tree retention boundary to reduce the risk of windthrow, selecting the most windthrow resistant trees within the management zone for retention, and reducing the force of the wind on the crowns of retained trees. Selected strategies should not only address windthrow risk but also the other values that are being protected in the RMA.

Options to reduce windthrow risk to reserve zone

Where windthrow risk is moderate or high in the reserve zone, a sufficient number of trees should be retained within the management zone to protect the windfirmness of the reserve zone. Options include:

- location and design of logging boundaries:
 - realign RMA boundary to a windfirm edge such as rock bluffs, non-merchantable timber, or soil type change
 - leave a buffer at least 20 m wide of well-drained, deep soils between areas of poorly drained or shallow soils of the RMA and the edge of the harvested opening
 - where no natural windfirm features are available, consider widening the management zone to a moderate to low windthrow risk stand and align the boundary so that it is at an angle or parallel to the prevailing storm winds
 - leave relatively straight boundaries on the outer edge of the RMA; this can be accomplished adjacent to meandering streams by leaving variable width patches of trees in the management zone; do not leave any sharp corners or indentations that are exposed to the wind

- where the management zone is more prone to windthrow than the reserve zone, low tree retention in the management zone may be the most appropriate option.
- edge stabilization treatments:
 - feather the outer edge of the management zone by removing trees prone to windthrow
 - preference should be given to removing the following trees:
 - unsound trees including diseased, deformed, forked, scarred, mistletoe infested, and root rot infested trees;
 - trees with asymmetric or stilt roots;
 - trees growing on unstable substrates such as rocky knolls, large boulders, nurse logs, or wet depressions;
 - tall non-veteran trees, especially those with disproportionately large crowns
 - Preference for retention should be given to sound, well-rooted veterans (e.g., snag-top cedars) or deciduous trees; sound trees (strong roots and good taper) with relatively small, open crowns; and sound snags when safety is not compromised.
 - In multi-storied stands, the outer wind-exposed edge of the management zone may be additionally feathered by removing dominant trees from the leading edge, partially retaining codominant trees, and fully retaining suppressed trees within 20–30 m of the edge. This practice is not recommended in single-storied, high density stands.
 - top and/or prune (limb) individual trees with a high windthrow risk in the management zone and/or reserve zone
 - reduce the crown of these trees by 20–30 per cent
 - topping or pruning in the reserve zones should include only high windthrow risk trees that may cause significant detrimental effects to stream channels or wildlife habitat if they were windthrown;
 - combine edge feathering and topping or pruning in high hazard areas.

Options to reduce windthrow risk in the management zone

Options to reduce the risk of windthrow to trees retained in the management zone include topping or pruning (see above) and selection of the most windfirm trees for retention.

Trees with the following characteristics tend to be the most windfirm:

- small, open crowns
- good root anchorage in deep, well-drained soils
- no root or bole rot
- low height-to-diameter ratio for stand (relatively large taper)
- short trees
- trees that have been growing in relatively open stands
- broad-leafed deciduous species

- specific conifer species
- sound snags
- sound, well-rooted veteran trees.

6.1.8.3 Removal of windthrown trees

When windthrow occurs within a RMA, the remaining standing trees should be left as a protective buffer for other trees of the RMA. Windthrown trees should not be removed from the RMA, as they provide valuable wildlife habitat. Windthrown trees should be removed only if habitat would be improved by their removal and removal will not result in damage to the surviving trees. Windthrown trees should be assessed for removal by a forest health specialist where there is a risk of increasing bark beetle populations and the resultant increase in tree mortality. Windthrown trees that have entered a stream should be removed only if they will destabilize the streambank or channel. Unnecessary removal of windthrown trees from streams can result in significant channel destabilization. All removal of windthrown trees from an RMA must be as specified in an approved silviculture prescription or logging plan.

6.1.9 Wildlife tree management

A wildlife tree is a standing live or dead tree with special characteristics that provide valuable habitat for conservation or enhancement of wildlife (large diameter and height for site, current use, declining or dead, valuable species type, location, and relative scarcity). High quality wildlife trees are frequently present in riparian areas and are used by a variety of species. The proximity of these trees to the edge of streams, wetlands, lakes, and marine-sensitive zones increases their value for some wildlife species. Wildlife trees also provide a source of coarse woody debris used by many riparian species and large woody debris for maintaining stream channel characteristics.

The Biodiversity Guidebook and Managing Identified Wildlife Guidebook provide recommendations for the amount, type, and distribution of wildlife trees to be left within a cutblock and area adjacent to the perimeter of the cutblock. Although wildlife trees should be distributed across the planning area, riparian habitats are priority sites for meeting these recommendations. Not only are high quality wildlife trees present in many riparian areas, but the riparian management area also provides an opportunity for leaving wildlife trees with the least effect on timber harvesting operations.

6.1.9.1 Wildlife trees in the reserve zone

Reserve zones adjacent to streams, wetlands, and lakes protect many wildlife trees and provide a source of future wildlife trees. However, some wildlife trees within the reserve zone can pose a risk to workers operating in the management zone or the cutblock outside the RMA (see Figure 17). These include standing dead trees that are vertical or lean towards the management zone, as well as some live trees with large dead branches or tops. The best strategy for protecting these trees is for a qualified wildlife tree assessor to mark them as wildlife trees and establish no-work zones around them. The size of the no-work zone will vary by tree and site. Generally, the size of the no-work zone will be one or two tree lengths.

Not all wildlife trees in the reserve zone that pose a risk to workers in the management zone need to be protected by a no-work zone. If wildlife tree requirements have been met outside of the RMA and no eagle, osprey, or great blue heron nest trees or high value wildlife trees are present, wildlife trees deemed hazardous to worker safety within the reserve zone may not need to be protected. Mitigative measures should be taken to protect high value wildlife trees (consult the Wildlife/Danger Tree Assessor's Course Workbook).

When making a determination to remove a wildlife danger tree from a reserve zone, as provided for in the Operational Planning Regulation, a wildlife tree assessment should be completed by a qualified wildlife tree assessor. If a tree is determined to be unsafe and of low wildlife value it may be felled. Trees felled in the reserve zone should be left as coarse woody debris. Trees killed by bark beetles, where beetles remain under the bark, that pose a high risk to adjacent stands should be removed or treated to kill the bark beetles prior to emergence. Trees to be felled should be identified in an approved silviculture prescription and/or logging plan.

6.1.9.2 Wildlife trees in the management zone

All dead wildlife trees that do not pose a risk to workers should be left within the management zone adjacent to the reserve zone or adjacent to the stream, wetland, or lake where no reserve zone is required. Trees retained within the management zone should emphasize wildlife tree attributes. In addition, consider establishing wildlife trees within management zones to meet wildlife tree objectives described in the Biodiversity Guidebook. If harvesting is done by feller buncher, consider felling some wildlife trees at a height near 3 m to create "stubs."

6.1.10 Silviculture treatments

Forest harvesting within the management zone should minimize disturbance to understorey vegetation and avoid damage to remaining trees. Disturbance should be limited to that necessary to achieve successful regeneration.

The following guidelines outline recommendations for silvicultural treatments within the riparian management area:

- Carry out single-tree forest health treatments when damaging agents such as bark beetles threaten the integrity of the RMA or the forest adjacent to the RMA stands. Preferred strategies for managing bark beetles in the RMA include "Prevention, Suppression, and Maintain Low" strategies (see Bark Beetle Management Guidebook).
- Minimize the impact on the naturally occurring understorey vegetation within the management zone of streams, wetlands, and lakes.
- Maintain natural levels of coarse woody debris within the RMA.
- Address root diseases in the RMA through the use of alternative tree species or other options, rather than stump removal.
- Choose silvicultural strategies and equipment to minimize ground disturbance within the RMA.
- Conduct broadcast burning within the RMA only where no treed reserve exists unless specified in an approved silviculture prescription or burning permit.

6.1.11 Vegetation management

When selecting treatment options for vegetation management within the RMA, consider the potential impact of the treatment on all resources. The following measures are recommended for all vegetation management applications.

- Where vegetation management is required to meet reforestation or restoration objectives, treatment within the RMA should be restricted to selective treatment of vegetation in direct competition with desirable trees.

(Remainder of section addresses pesticide use issues. Pesticides will not be used in W1832.)

6.2 Specific guidelines

In addition to the general guidelines outlined above, specific measures have been developed for each riparian class, active floodplain, and for large rivers.

A watershed assessment using the Interior Watershed Assessment Procedure or the Coastal Watershed Assessment Procedure may be required for community watersheds or watersheds with high fishery values (as determined by B.C. Forest Service and BC Environment). The results of these assessments may influence the best management practice within these RMAs. However, "RMA objectives" found in this guidebook should not be compromised. Consult the WAP guidebooks for the specific recommendations that apply.

6.2.1 S1, S2, and S3 streams

There are no S1, S2, or S3 streams in the area of W1832 affected by development activities proposed in this FDP.)

6.2.2 Active floodplains

(There are no active floodplains within W1832.)

6.2.3 Large rivers

(There are no large rivers within W1832.)

6.2.4 S4, S5, and S6 streams

Forest practices in the management zone adjacent to S4, S5, and S6 streams should be planned and implemented to meet riparian objectives including wildlife, fish habitat, channel stability, and downstream water quality.

(While W1832 contains mostly Class S6 streams or smaller unclassified streams, the KB-HLP Strategies require implementing the best management practices for S4 streams (interior). These are set out in the Guidebook Table 11, reproduced below.)

The primary objective of the management zone of S4 streams in the interior is to provide for the protection and management of fisheries, important wildlife habitats, and water quality associated with these streams. These streams provide important furbearer as well as fisheries habitat and significantly influence downstream fisheries values. Timber harvesting and other activities should be consistent with the requirement to maintain stream channel processes, stream temperatures, wildlife trees, and habitat for furbearers and other wildlife.

Best Management Practice

- Retain all trees within 10 m of the streambank.
- Retain wildlife trees within 10 m of the streambank by establishing safe work zones within the remainder of the management zone. Retain wildlife trees consistent with the section "Wildlife trees in the management zone."
- Fall and yard away.

Where the best management practice cannot be achieved due to moderate or high windthrow hazard:

- Harvest windthrow-prone trees and maintain as many of the windfirm trees as possible that have the characteristics described in "Options to reduce windthrow risk in the management zone," within 10 m of the channel.
- Fall and yard away. Remove slash and debris inadvertently deposited in the stream at the time of harvest (see "Falling and yarding"). Where a shallow rooted, wind-prone leaner is felled, fell the tree so that the butt clears the channel or the stem spans both streambanks. Remove only those stems that can be lifted without damage to the channel or bank. For those stems that cannot be lifted clear, leave the portion of the stem that spans the channel. Ensure the stem and limbs do not obstruct stream flow or fish passage.
- Retain wildlife trees consistent with the section on "Wildlife trees in the management zone."
- Retain nonmerchantable conifer trees, understory deciduous trees, shrubs, and herbaceous vegetation within 10 m of the channel to the fullest extent possible.

Figure 2: Guidebook Table 11: Best management practices for Class S4 streams.

6.2.5 Wetlands and lakes

The following guidelines apply to the management zone of all wetlands (W1 to W5) and lakes (L1 to L4).

The objectives of the management zone adjacent to wetlands and lakes is to protect the integrity of the reserve zone where one is required, and to maintain important wildlife values where no reserve zone is required.

Tables 14 through 16 outline guidelines for management zones adjacent to all wetlands and lakes. Wetlands and lakes have been separated according to their frequency on the landscape. In biogeoclimatic units where wetlands and lakes are uncommon, individual wetlands or lakes have greater importance for wildlife than where they are common.

Retention percentages for the management zone for dominant and codominant trees in Tables 14, 15, and 16 are for the harvest area (cutblock) and not the entire wetland RMA. Residual trees should be concentrated near the wetland or reserve zone but should also be used to provide no-work zones to protect wildlife hazard trees, and other wildlife features such as trails, moist sites, and deciduous patches.

(Table 15 in the guidebook is the appropriate table for the W183, based on biogeoclimatic subzone.)

Wetlands and lakes are moderately common in these biogeoclimatic units. Consequently, protection of individual wetlands and lake RMAs should generally be greater than in other landscapes where wetlands and lakes are more common (Table 16). In local landscapes where few wetlands are present or where a high proportion of wetland RMAs have been harvested with lower retention levels than specified here, the retention guidelines contained in Table 14 should be considered. Reserve zones are required on wetlands and lakes greater than 5 ha (except L1 lakes > 1000 ha) in these biogeoclimatic units and a management zone is required on wetlands and lakes 1–5 ha. Wetlands and lakes < 1 ha do not have an RMA. Management strategies should maintain the integrity of the reserve zone and maintain important wildlife habitat values of the management zone where a reserve zone is not required. Significant numbers of dominant and codominant trees, understorey vegetation, and wildlife trees should be retained for wildlife habitat.

Best Management Practice

- Manage windthrow risk to the reserve zone consistent with the section "Windthrow management strategies."
- Retain at least 40% of the codominant conifers having the characteristics described in "Options to reduce windthrow risk in the management zone" and all deciduous trees concentrated near the reserve zone or near the wetland or lake edge where no reserve zone is required and/or in patches to buffer important wildlife features. Distribution of the specified retention levels may vary within the management zone to reflect site characteristics, stand conditions, windthrow hazard management, and wildlife habitat features. For example, sections of the management zone may have low retention if adjacent sections have full or high retention.
- Retain wildlife trees within the reserve zone of these wetlands and lakes by establishing safe work zones within the management zone. To the extent reasonable, retain wildlife trees either in patches or as single trees, within 10 m of the wetland or lake edge where a reserve zone is not present, to help meet landscape level wildlife tree objectives (see "Wildlife trees in the reserve zone" and "Wildlife trees in the management zone").
- Retain most nonmerchantable conifer trees, understorey deciduous trees, shrubs, and herbaceous vegetation within 10 m of reserve zone, or 20 m of the wetland or lake edge where there is no reserve zone.
- Buffer important wildlife features such as major game trails, licks, denning sites, and moist understorey habitats with vegetation to maintain cover or visual screening.