



CHEAKAMUS
COMMUNITY
FOREST

Integrated Resource Mapping Project 2015

Final report of the total spatially assigned forest
protection within the Cheakamus Community Forest

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Background

A sub-committee of the Cheakamus Community Forest Board of Directors and staff was formed to complete several major projects. These include the establishment of Old Growth Management Areas, the Integrated Resource Mapping Project (IRMP) in 2015, and creating an Access Management Plan in 2016. These projects provide clear direction for the CCF and the public on future plans.

This report identifies the process and deliverables of the IRMP.

Process

In 2014, the sub-committee and staff met to discuss the goals of the IRMP project. The following were established:

Goal: to identify areas of ecological, cultural, economic or recreational importance that is:

- (a) protected from harvesting, or
- (b) require additional discussion and consultation if harvesting proposed.

Once those areas were determined, long range harvesting areas could be identified.

In 2015, CCF met with a number of commercial and public organizations to discuss priority issues and areas of interest. The CCF met with:

- Commercial recreation tenure holders
 - Blackcomb Snowmobile
 - Canadian Wilderness Adventures
 - Whistler RV/Powder Mountain Cat-skiing
 - Whistler Bungee
 - The Adventure Group (TAG)
- Public recreation groups
 - Alpine Club Canada, Whistler Chapter
 - WORCA (Whistler Off-Road Cycling Association)
- AWARE (Association of Whistler Area Residents for the Environment)
- Forest & Wildland Advisory Committee (RMOW)
- Squamish & Lil'wat Nations (partners in the CCF)

Definitions

See Maps in Appendix 1 showing spatial representation of each category.

Old Growth Management Areas:

- Provincial process completed in August 2015

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- Requirement of Forest & Range Practices Act
- Protected from logging but can be altered through process

Ecosystem Based Management (EBM) Reserve:

- a voluntary layer of protection by the CCF
- Protected from logging for ecological, cultural or recreation reasons

Special Management Zone:

- First Nations cultural area, or
- Important area for a commercial recreation tenure
- Additional consultation if logging proposed

Interface Zone:

- Area identified in CCF Forest Stewardship Plan
- Harvesting only for fuel management purposes

Landscape Level Fuel Thinning:

- Areas where fuel management (thinning) may occur

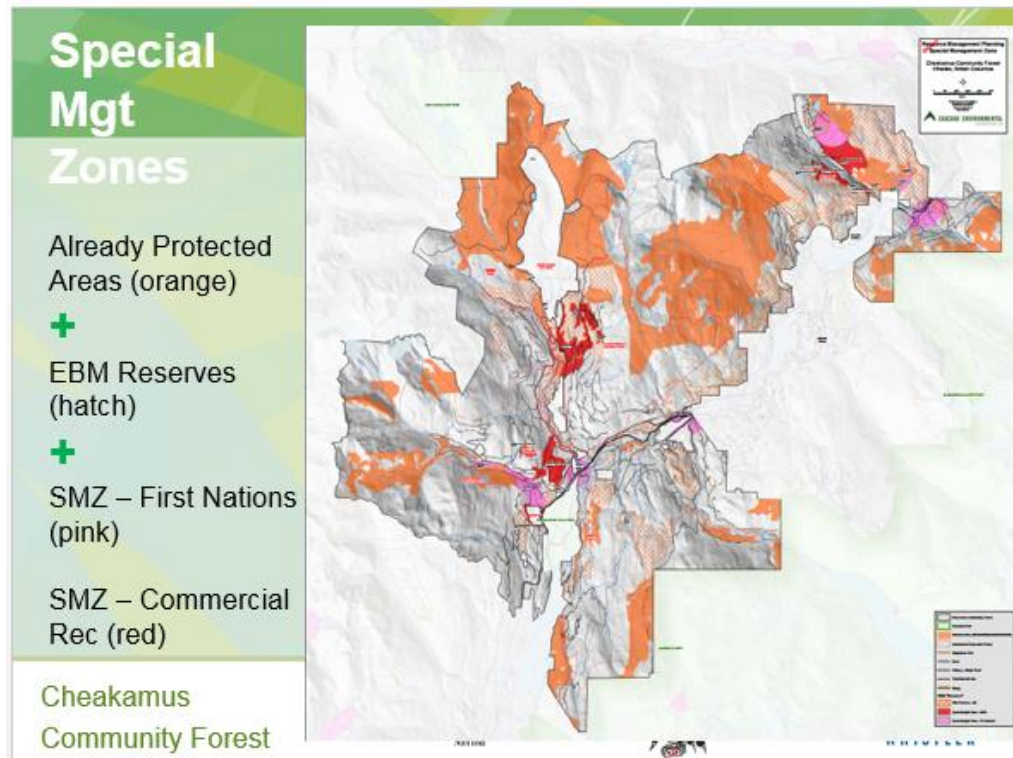
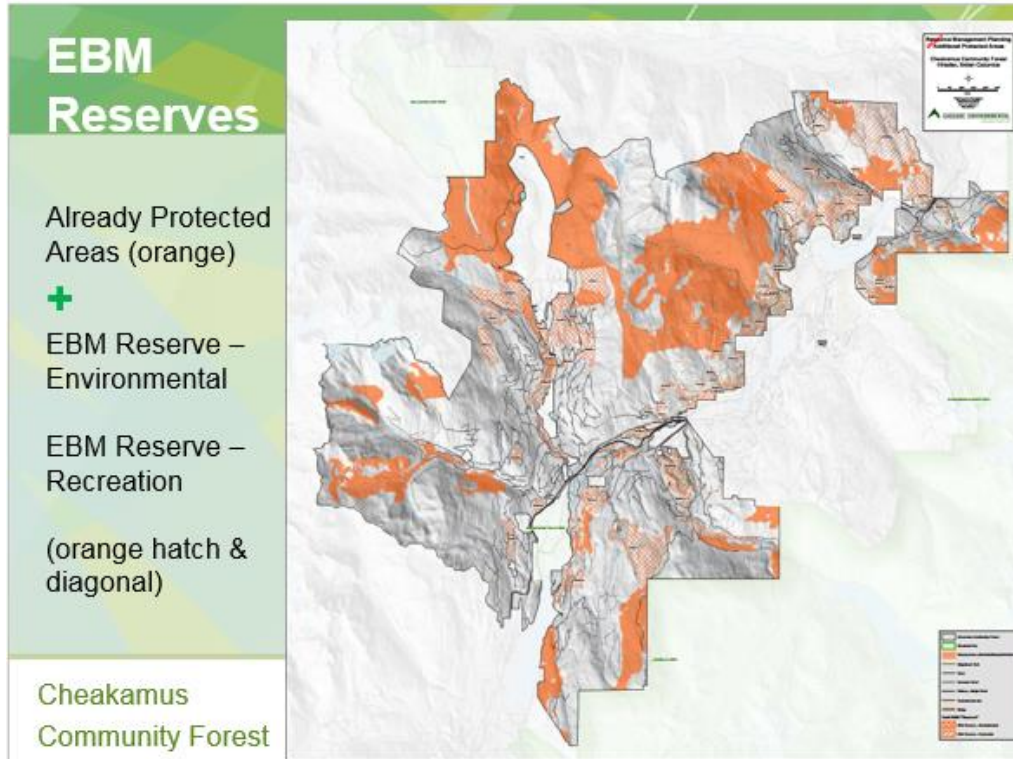
1 – 3 Year Harvesting Plan:

- Areas that will be harvested in next 1 – 3 years
- Good amount of certainty, market conditions willing

4 – 10 Year Conceptual Harvest Plan:

- General areas that may see harvesting
- Exact harvesting blocks have yet to be determined

APPENDIX 1: INTEGRATED RESOURCE MAPPING PROJECT MAPS (current as of Feb. 2016)

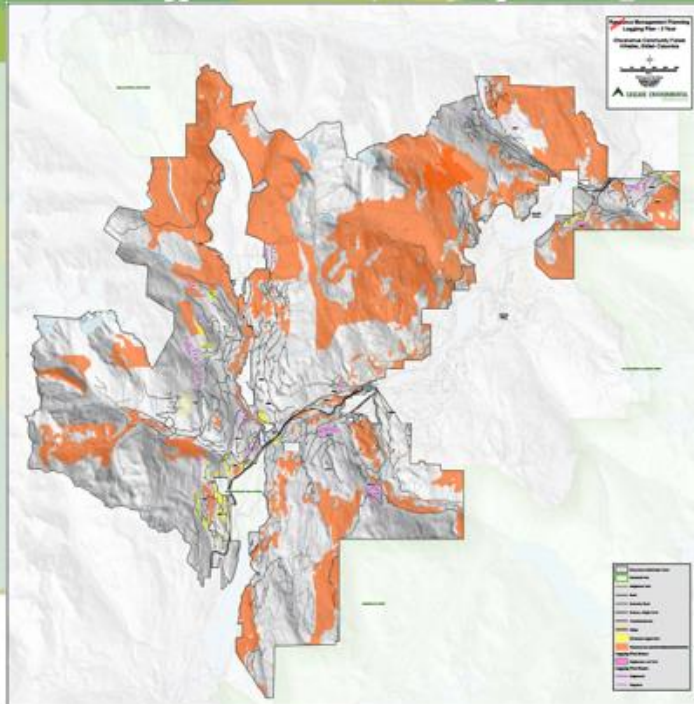


Future Harvesting Areas: 1 – 3 years

1 -3 Years:
Pink
Polygons

Previously
Logged:
Yellow
polygons

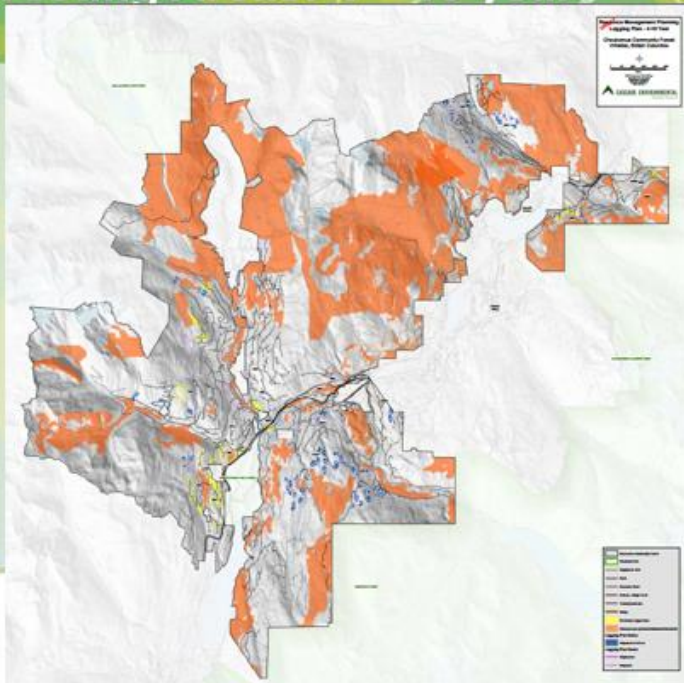
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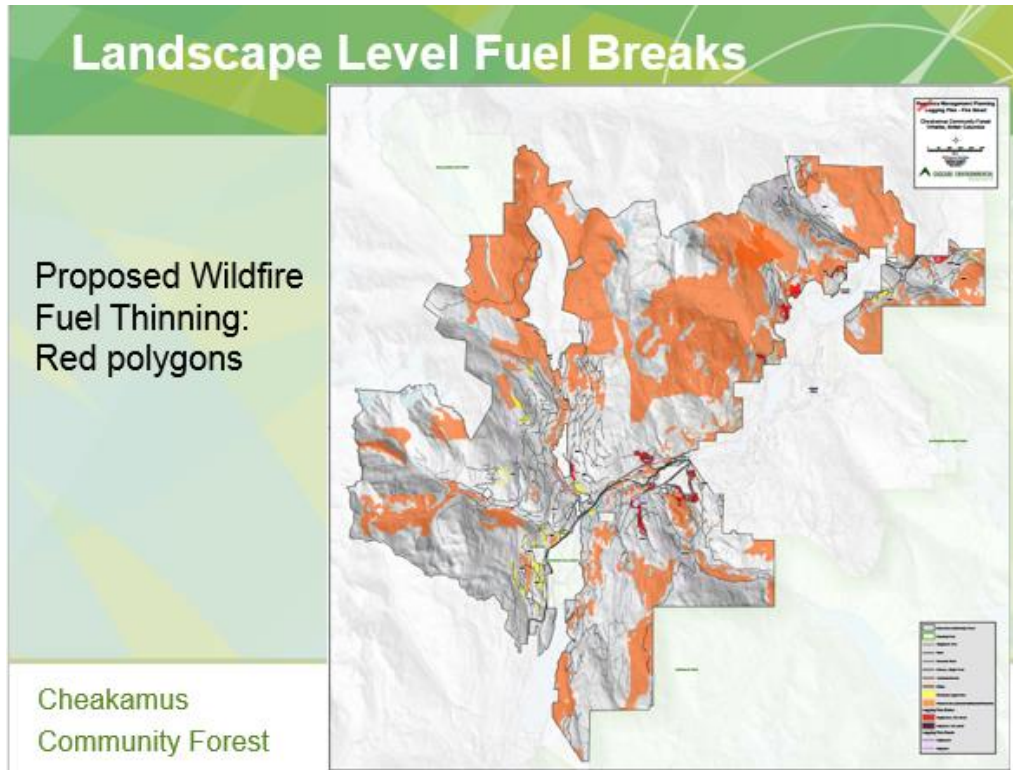


Future Harvesting Areas: 4 – 10 years

4 – 10 Years:
Blue polygons

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APPENDIX 2: CONSULTATION FEEDBACK/COMMENTS

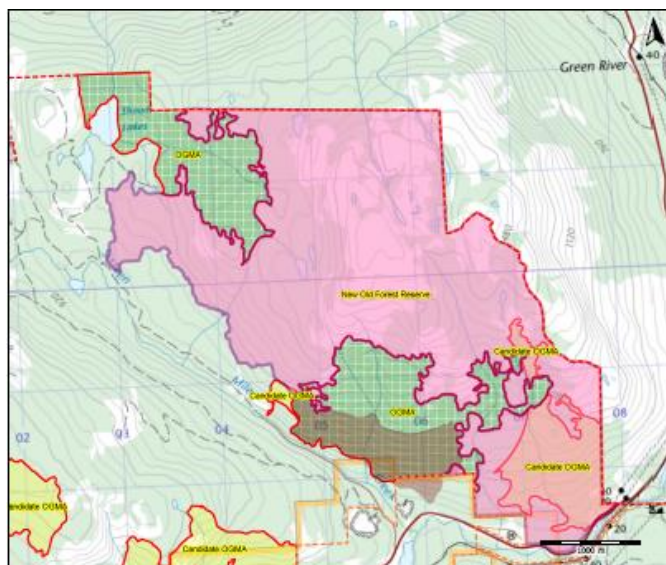
(In alphabetical order)

Alpine Club Canada – Whistler Chapter

- *Difficult to judge adequacy of proposed reserves without an accounting of adherence to EBM old forest representation targets in the CCF EBM plan.*
- *Purpose of proposed reserves should be clear – old forest representation vs recreation values for example. Show them in separate coloured layers, not lumped together.*
- *Recommend all shapes on layer (map polygons) “EBMreserves_Candidate OGMA” be renamed “Old Forest Reserve: and they should all be accepted as no-harvest areas. They are included as part of, but not all, of the purple theme on the EBM Reserves Map (Map 1)*
- *A new Old Forest Reserve should be added in the Cougar Mountain area as identified on the attached pdf; this would include areas in the Showh Lakes Designated Area, link up existing OGMA’s and reserve more old forest Douglas-fir (Map 2). See below.*
- *Careful harvesting based on the CCF Silvicultural Strategy need not compromise public and commercial recreation values. The key is consultation and accommodation.*
- *The area in the FSP Interface zone should be added as a Special Management Zone with harvesting allowed with a high level of consultation and accommodation.*
- *Visual Quality Objectives will eventually need to be legalized for the LRMP Front Country zone and these will cover much of the FSP Interface zone and some of the other Special Management Zones. These Visual Quality Objectives will add another level of protection for the Special Management Zones.*

Outcome: CCF separated EBM Reserves Environmental from Recreation focus. An EBM Reserve was placed over Cougar Mountain similar to area shown in Map 2 below. The area in the Forest Stewardship Plan interface zone was not added to the Special Management Zones (SMZs only for Commercial Recreation Operators and First Nations areas of interest).

Map 2



AWARE

- *AWARE requested simpler, clearer map representations of the different layers.*
- *Project background discussion including target level protection >30% - 40% with currently 19% old forest protection.*
- *EBM Reserve Labels: Not yet defined but will have ID# and primary perhaps secondary emphasis values attached.*
- *AWARE's position is that 30% protection is at the low end of protection, therefore the 30% chosen for EBM Reserves should be focused on environmental priority and the remainder be for recreation; ACTION: Committee to consider approach in final selection of candidate areas.*
- *Discussion around the Accounting Process; i.e. the reason for point 1 above. CCF identified the denominator should be 25,538 ha of total forested area within the CCF. No double counts but there must be recognition of a spatial protection already factored into EBM and Management Plan #2. Action: To be worked out at Committee level.*
- *AWARE requested clarity on how the Committee will rationalize priorities.*
- *AWARE requested that First Nations' Cultural Management Areas and Cultural Sites be combined but separated from the SRZ Commercial Recreation Areas. Action: revamp legend and theming.*
- *AWARE also suggested a series of "stakeholder proposal maps" showing all the proposals each on a separate map in order to refer back from the Draft Output map for Oct.28th. Action: Committee to consider next week.*
- *AWARE would like to provide their summary of Principles for Protection – considering the 30/70 ecological principles and the decision of ecological protection over recreation interests. Action: AWARE to present to Committee.*

Outcome:

- Final output created 4 layer map presentation; 1. Provincially Legislated Protection 2. Old Growth Protection 3. EBM Reserves (voluntary) 4. Special Management Zones (Cultural – Commercial Recreation Core)
- Final Target was set at a minimum of 30% for each BEC unit.
- Final plan output has referenced ID label and protection emphasis
- Committee considered AWARE's request to use environmental criteria (contiguous old forest) in the final selection and emphasis priority of the final candidates.
- Final product ensured no double counting or overlap and the denominator was reflective of the total forest area within the bounds of the Cheakamus Community Forest only.
- Final product used old forest protection as primary category and only included younger forest or the less rare MHmm1 subzone to fill gaps and logical contiguous reserves.
- Cultural Sites and Com. Rec Core areas were separated on the final output maps.
- A folio of stakeholders maps were used in the selection process of final EBM reserves.

RESPONSE TO AWARE's letter "principles for protection", "Cheakamus Community Forest – Proposed EBM Reserves Stakeholder Input submitted by AWARE" dated October 8, 2015, with 11 recommended guiding principles.

1. Recognize that the 30% retention parameter is the absolute lowest threshold for sustaining

Ecosystem function. Conservation science generally recommends a much higher percentage of retention (e.g., 50-70%) to ensure sustainable ecosystem function. It is also important to note that these risk thresholds were determined using ecological values only. Human values are considered in separate analyses.

Total conservation targets for this project have met the minimum threshold in the CWHms1 subzone which is primary area where forest management occurs. This spatial project of forest protection does not consider the additional protection from i) the very low rate of harvest (less than 0.2% of the total forest area); ii) additional stand level protection such as 7% of each ha harvested for Wildlife Tree Patches, Riparian Reserves and Management Zones. iii) the inevitable constrained and inoperable timber that is only mappable at the operational scale. iv) the commitment to protect unique and rare forest ecosystem as they are encountered and verified.

Human values have been incorporated through the MWP#2 for K3V and deals specifically with the aesthetic values and expectations on forest management.

2. Adopt the best practice highlighted in the CCF 2012 EBM Plan1 by formally increasing the minimum retention goal from 30% to 40% of natural ecosystem representation. Achieving this retention goal for every Site Series present in the CCF forested areas.

As Point 1 above, this can only be understood or made known over time.

3. Undertake the assessment needed to ensure a minimum of 40% of every Site Series (unique natural ecosystem type) represented in the CCF is retained rather than 40% aggregated of the overall CCF Timber Supply Area.

The CCF operates on some 33,000 ha of which 25,000 is forested, and is the only forest management entity within the Whistler Landscape Unit of some 90,000ha of which 39,000ha area forested. Site series representation must be done at the landscape level. Only by including the known rare sites within the urban green belts, areas contributed through provincial protected areas, wildlands and conservancies, plus the lands of the Whistler-Blackcomb CRA would the site series representation provide a true picture of what has been achieved for this region. The CCF management would see such a project such as this as a worthwhile cooperative endeavor with your group.

4. Allocate EBM Reserves to support the retention of ecosystems at levels that are proportional to their global / provincial / local rarity. Our suggestion would be: 100% retention of ancient forest (400yrs+); 50-70% retention of old forest (250yrs-400yrs), 40% retention of mid-seral forest with harvesting or reservation managed to prevent excessive mid-seral.)

These targets are outside of the scope of this project and information for these age classes are not known. The CCF's current stand level implementation will continue to target those trees within the upper age range for retention trees, in patches and/or as individuals providing genetic and biological legacies.

5. Retain areas for recreation values as additional to the minimum retention for natural ecosystem function. These areas should be labelled separately as 'Recreation Reserves' or 'EBM Reserve – Recreation'.

The committee was unanimous in their decision to include non-motorized recreation emphasis area as EBM reserves to accomplish the targets.

6. Designate Recreation Reserves for non-motorized recreation values only, with priority given to public interests over private interests (erg. commercial recreation tenures).

Refer to Appendix 5

7. Ecological EBM Reserves should not overlap areas where an existing retention mechanism is in place.

Final plan ensured no overlaps occurred.

8. Ecological EBM Reserves should provide reference ecosystems, which are predominantly not impacted by humans and exist in perpetuity.

The Committee concurred and those listed in Appendix 4 as **Environmental** along with the **Legal Old Growth Management Areas** are considered reference ecosystems within the CCF.

9. Ecological EBM Reserves should be selected based on ecological values without being negated due to concerns for timber supply and revenue generation.

The Committee applied a number of reserves based on ecological criteria alone and accepted potential Timber Supply and revenue in their candidacy. E.g.: EBM#6,#17 and #10

10. Proposed EBM Reserves should be accompanied by a narrative providing: stakeholders requesting retention; the values for which designation is suggested (ecological/recreation); area (hectares); age class; and that Reserves proportion (percentage) of the total EBM allocation.

Refer to Appendix 3 and 4

11. The EBM Reserve network should be reviewed and assessed within five years to ensure it is achieving EBM goals. This assessment should focus on adding areas, where necessary, to better achieve those goals especially as more is learned about the species and ecosystems within the CCF. To ensure the ecological integrity of existing EBM Reserves, none should be removed during any future review.

Perpetuity of the EBM reserves:

The CCF is not in control of all land alienations and, as such, the EBM reserves apply only to the forest management under the Cheakamus Community Forest. Appendix 5, Policy document will govern the process for alterations or incursions that will inevitably occur over time,

whenever mapping projects such as this are done at such a map scale. This policy will maintain operational flexibility while meeting the biological integrity for which they were intended.

5 Year Review and Monitoring:

The CCF has accomplished a level of protection that is unparalleled in any other area based management unit for this montane region of BC. The CCF is the only forest management stewards within the 90,000ha landscape unit, and will undertake a review of the total forest protection within a 5 year period if: 1) monitoring results in a real or perceived significant change to the established forest protection elements (such as forest fire, insect or change of land use) occurs on greater than 3% (500ha) of the total; 2) provincial old forest targets are altered through government objectives; 3) the results of gap analysis performed on the Whistler Landscape Unit identifies a forest ecosystem that is truly underrepresented by the current protection and that either recruitment or existing old areas exist within the CCF portion of the forest.

Blackcomb Snowmobile

- *Blackcomb Snowmobile (BS) requested buffers along roads to prevent snow loss, especially on south facing slopes. BS feels logging done sensitively keeps the roads open which are a benefit to the company.*
- *Edna Creek connector – BS would like to see this built before winter 2015/16 season as it is crucial to providing routes in low snow years. Continued awareness of RMOW Forest & Wildland Advisory Committee concerns over road access in this area providing motorized (especially snowmobiles) access to a non-motorized use area. BS noted that very few public snowmobiles go out there and that they could manage it with signs and staff.*
- *EBM Reserves suggested around dinner cabin/Marshall Lake view shed, and around base.*

Outcome: CCF will be cognizant of concerns expressed over snow loss along south facing slopes and roads. EBM Reserve created around dinner cabin/Marshall lake view shed and base.

Canadian Wilderness Adventures

- *CWA's priorities are (in order): 1) leave all trees within the high intensity use area (staging area, lodge areas); 2) old growth within the tenure, particularly around the main zone; 3) the red cross-lined area on the map provided; and 4) all trees in the tenure.*
- *CWA maintains its own roads, likes the alders growing in on roads, does not need any machine made trails that would be of any value to CCF, has no bridge issues.*
- *CWA focuses on tourists who like trees (not wide roads, no clear cuts or even stumps, trying to move away from mechanized to people powered sports and activities)*
- *CWA has a management agreement to provide grooming services and fee collection for the designated snowmobile route Callaghan FSR. Prefers CCF not do anything once snow starts as needs to keep all the snow.*

Outcome: OGMAs covers high use snowshoe trail beside Callaghan Creek and old growth from lower base to settling pond. EBM Reserves were set over all old forest within core area above base and north of road system. Special Management Zone established.

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RMOW Forest & Wildland Advisory Committee (FWAC)

FWAC formed a subcommittee to review the IRMP process and results, and then the committee created the following document included here in entirety:

As some of the recommendations that follow will take some time to implement, it is suggested that the CCF commit to a review of the EBM Reserves within the next 5 years. FWAC understands that the CCF needs to firm up the available THLB to allow completion of one to ten year operating plans for the CCF and to this end FWAC would support using the current spatially defined THLB that the CCF has developed. The following suggestions are meant to be input for this suggested 5-year review, but FWAC would hope that the CCF will choose to act on some of these suggestions earlier as time and resources permit.

The following are FWAC's comments and recommendations:

This initiative is an important foundation component of the strategic planning required for the successful operation of the CCF and FWAC recognized the considerable amount of effort that the CCF has put into this initiative, and commends and supports the allocation of CCF resources to this end.

FWAC recognizes and supports the involvement and consideration around areas of First Nations cultural importance, commercial recreation tenures and community stakeholder's interests.

There should be periodic adaptive management, not to rethink the EBM Reserves writ large, but to react to new information or changes on the landscape (e.g. fire, non-forestry development that has compromised ecosystem values etc.).

FWAC strongly feels that the process should be driven by the CCF EBM plan documents - Cheakamus Community Forest Ecosystem-based Management Plan – December 2012. In addition, the process should incorporate the guidance supplied by the "Cheakamus Community Forest: Rare and Unique Forest Ecosystems" report with respect to blue and red listed and rare ecosystems. The general procedure for designing forest ecosystem networks outlined in the B.C. 1995 Biodiversity Guidebook procedure should also be incorporated, specifically guidance for including riparian areas and terrain sensitive areas.

Furthermore, it is suggested that a document be produced that outlines the methodology that was followed and a description of each class of Reserve and Special Management Zone, including what management activities are allowed in each. This document should also contain a numbered listing of the **Reserves** and **Special Management Zones** that identifies the values underlying the selection of each reserve. In addition, the document should include the maps produced as part of this initiative.

FWAC agrees that the objective of identifying old forest representation and other ecosystem representation should be clearly separated from the need to identify areas that need extended consultation and accommodation prior to any harvesting activity. In the case of old forest representation and other ecosystem representation, FWAC suggests that these should be clearly identified as no harvest zones and be counted against the targets suggested for protection in the Cheakamus Community Forest Ecosystem-based Management Plan – June 2011. With respect to areas

that need extended consultation and accommodation prior to any harvesting activity i.e. “**Special Management Zones**”, FWAC feels that the main issue is visual quality and with careful, constrained harvesting, these areas should be considered as part of the THLB and should not be counted against old forest representation and other ecosystem representation targets as suggested in the Cheakamus Community Forest Ecosystem-based Management Plan – December 2012.

With respect to management activities allowed in the various EBM reserves, it is suggested that the **EBM Reserves – Environmental** be treated in a similar manner to Old Growth Management Area (OGMAs) with no commercial harvesting allowed. In the case of other EBM reserves, Env/Rec. and Rec., it is suggested that management activities related to recruitment of old forest, FireSmart and other forest health issues be allowed.

The Cheakamus Community Forest Ecosystem-based Management Plan – December 2012, suggests protection of appropriate proportions of Red and Blue listed ecosystem. The “Cheakamus Community Forest: Rare and Unique Forest Ecosystems” report offers further guidance on this issue. Red listed ecosystems are the most significant as they are either endangered or threatened and should be completely protected in accordance with a “fine filter” approach. According to this report, there are no red ecosystems in the Mountain Hemlock zone, two red ecosystems on fluvial benches in the Coastal Western Hemlock moist sub maritime zone and six red ecosystems in the relatively small area in Coastal Western Hemlock dry sub maritime zone in the Whistler Landscape unit.

Red listed ecosystems have been identified in the TEM mapping done for the Whistler Landscape Unit, but many of the TEM polygons that contain red listed ecosystems are mapped as complexes of ecosystems with some that are not Red. The total area of TEM polygons that contain red listed ecosystems is not large and FWAC suggests that, in the longer term, the resolution of the TEM mapping be increased to separate out the Red listed ecosystems.

FWAC recommends that the CCF revisit the areas designated **EBM Reserves – Environmental** to ensure that all red ecosystems are included. In many cases, including Forest and Range Practices Act Regulations mandated Riparian Reserve Zones or RRZs will accomplish this. Red ecosystems in the relatively small Coastal Western Hemlock dry sub maritime zone in the Whistler Landscape unit occupy a significant proportion of that zone, but due to past wildfires, most of these are not old forest. Again, FWAC recommends an eventual 40% old forest target for this zone, with an appropriate area added to the **EBM Reserves – Environmental area**. Due to the fragmented nature of the red ecosystems in this area, somewhat more than 40% retention may be appropriate to produce operationally viable polygons and management should be focused on recruiting old forest conditions in these younger forests.

The report indicates that “blue listed ecological communities are not endangered or threatened, but are considered of special concern because of features that make them more sensitive to human or natural disturbance”. Furthermore, the report indicates that blue listed ecological communities are common in the Whistler Landscape unit. The report further suggests that a “coarse filter” approach based on the areas in the proposed CCF Environmental Reserves should adequately protect blue listed ecosystems and FWAC supports this approach.

FWAC also suggests that adequate ecosystem representation at the Site Series level is an important ecosystem representation issue. This would include the “rare” ecosystems and blue ecosystems identified in the “Cheakamus Community Forest: Rare and Unique Forest Ecosystems” report. The Ecosystem mapping is available (TEM) and the FWAC suggests that a GIS analysis be undertaken to

understand how well the range of ecosystems at the landscape level are represented once the additional CCF protected areas are established. FWAC is not suggesting that an effort be made to balance the proposed additional CCF protected areas by site series, but if any significant gaps in ecosystem representation are identified, this should be addressed. It may be that grouping ecosystems into similar site groups as was done for the original RMOW TEM would facilitate this undertaking.

FWAC suggests that a simplified tabular age class summary of the presently and proposed protected areas and proposed Special Management Zones be prepared to accompany the maps.

FWAC also noticed that the maps still show an overlap of the CCF and the Whistler Olympic Park. These are Provincial Tenures and the Province is responsible for the legal/GIS description of their boundaries. It is suggested that the CCF request that Province clean up these discrepancies.

In some cases, the proposed protected areas are adjacent to but not touching existing protected areas or the CCF Boundary thereby creating slivers and very small polygons that are not operationally viable. FWAC suggests that all proposed protected areas and Special Management Zones be examined for these slivers and polygons with the objective of eliminating them where possible.

The proposed protected area in the upper reaches of 19 Mile Creek overlaps the 19 and 21 Mile Creeks – upper Madely Wildlands and makes for a confusing map presentation. FWAC understands that the area was not “double counted” in the area summary, but FWAC suggests that the area of the proposed protected area within the Wildlands be clipped off at the Wildlands boundary and eliminated for clarity. There may be other similar situations that should also be simplified.

Additional geographic areas that may need additional consideration include:

- Portion of Skywalk Trail in 16 Mile Creek drainage (near Screaming Cat Lake).
- Something near Highway 99 near heliport.
- South of One Duck Lake on Crown Land and behind Emerald Subdivision.

Points where FWAC did not have unanimous agreement but feels are important points for CCF to consider:

Provincial Legislation (the Forest and Range Practices Act Regulations) requires no-harvest zones be established on crown forest land around all significant streams, rivers, lakes and wetlands (Riparian Reserve Zones or RRZs) and requires additional restricted harvesting zones around the no-harvest zones (Riparian Management Zones or RMZs). There is a significant area in the Whistler Landscape Unit that would require RRZ and RMZ designation yet these are not included in the areas identified as presently protected. FWAC suggests that these riparian areas have high biodiversity value and should be included as **EBM Reserves – Environmental**; this would include all RRZ's and some RMZ's as appropriate; it is suggested that, at the least, this would include RMZs that are adjacent to RRZs. It is suggested that these additional areas should be counted against the targets suggested for protection in the Cheakamus Community Forest Ecosystem-based Management Plan – June 2011. Areas of old forest areas adjacent to riparian reserves should be considered for addition to the riparian based **EBM Reserves – Environmental**. Also, inclusion of these riparian areas will overlap some of the areas already proposed for protection such as the areas along the upper Cheakamus River in the Whistler Interpretive Forest and along Callaghan Creek; it is suggested that these areas should be rationalized into one riparian **EBM**

Reserves – Environmental. Some FWAC members suggest that the current legislation that protects riparian areas from logging precludes the need to include these areas as EBM Reserves.

FWAC suggests that slope class maps and TEM information be used to identify potentially unstable and sensitive terrain and that these areas be removed from the THLB. It would seem appropriate to add and/or combine these areas to **EBM Reserves – Environmental areas.** Some FWAC members are of the opinion that unstable terrain should not be logged in the future and these areas do not warrant an EBM Reserve designation.

The Cheakamus Community Forest has committed to management based on Ecosystem Based Management principles - EBM. The Cheakamus Community Forest Ecosystem-based Management Plan – December 2012 discusses in detail what EBM means in practice. One important EBM tenant is to manage for biodiversity over large spatial scales and land ownerships, i.e. at the landscape level. For the Cheakamus Community Forest, this means considering biodiversity at the level of the Whistler Landscape Unit (WLU) and setting targets for ecosystem representation at the landscape level. The CCF's initiative to identify protected areas and the CCF THLB has not focused on the WLU, but rather only the CCF. There is considerable old forest within the WLU, but outside the CCF that should be considered in assessing local biodiversity. The FWAC supports the target setting approach that the CCF has used, but would urge the CCF to move from the 30% to a 40% old forest retention as soon as possible. The argument can be made that the CCF has no control over the forest and wildland biodiversity on other ownerships (largely Provincial Parks and Conservancies and the Whistler/Blackcomb controlled recreation area) and that the non-CCF areas of old forests are largely fixed. Even so, as the major timber tenure holder in the WLU and given the communities stake in maintaining an appropriate level of biodiversity in the WLU, FWAC suggests that the CCF re-examine the protected area targets at the WLU level and adjust them as needed. Some FWAC members wish to apply the 40 % old forest retention to ecosystems solely within the CCF since the larger WLU contains lands that are already protected as Provincial Park.

The Provincially approved Cheakamus Community Forest FSP (Forest Stewardship Plan) identifies an "Interface Zone" adjacent to and North of the Community and is defined as a no harvest zone with the exception of FireSmart treatments. The Interface Zone contains some polygons proposed for protection while there are other sensitive ecosystems that are not proposed for protection such as the small ponds below the Westside road in the Emerald Forest. FWAC suggests that the total "Interface Zone" be placed in an "**EBM Reserve – Env/Rec.**" and be counted against the targets suggested for protection in the Cheakamus Community Forest Ecosystem-based Management Plan – December 2012. Some FWAC members feel that this will never be logged due to the proximity to the urban area therefore does not warrant the need to be defined as an EBM Reserve. As much of the zone is now covered in young forest, management should be directed towards recruitment of old forest and FireSmart treatments should facilitate this recruitment. Much of the lower Whistler valley has been urbanized, and recruitment of this interface area into old forest would significantly increase local biodiversity as well as move a very popular tourism asset to a more natural state.

End of FWAC document.

Outcome:

1. Revisions to IRM Plan:

- a. Polygon classification and management direction:

- i. EBM Reserve – Environmental – no primary forest activity permitted subject to amendment provisions. Promote preservation to all other stakeholders.
 - ii. EBM Reserve – Public Recreation-permitted forest management activities are limited to fuel reduction, forest health treatments, riparian or specified restoration projects and access management.
 - iii. EBM Reserve - Commercial Recreation-proponent driven forest management activities only. CCF to be notified of all road, trail or tree removal projects in advance.
 - iv. EBM –Special Management - all planned forest management activities are coordinated with proponent.
- b. Age Class Report is now included into final plan document. See Appendix 6.
 - c. The polygon overlap has been corrected for the identified 19-21 mile creek overlap of Wildland and EBM Reserve.

2. Future Direction and Considerations to the IRM Plan:

- a. A periodic or 5 year review of the plan to re-confirm old forest protection targets is appropriate, and will include clarification or updated information on the following known additional protection elements: wildlife tree patches; riparian area budgeting; steep and/or unstable slopes, recruitment opportunity within the Interface FDUs. Included in a review will be effectiveness of the amendment policy and stated polygon objectives.(Refer to AWARE outcome)
- b. Concur that site series representation and the application of gap analysis is best considered at the Whistler Landscape scale (refer to AWARE outcome)

3. Information and Discussions on Forest Management within the CCF:

- a. Provincial layer cleanup of sliver fills and gaps around WOP is duly noted.
- b. Red listed ecosystems are protected at the stand level based on field verification. Silviculture Site plans use the current TEM mapping themes to flag potential occurrences.
- c. Current level of total forest protection within the CWHms1 subzone is considered sufficient for consideration of blue listed old forest ecosystems.
- d. CWHds1 is off limits to all forest development for the mid-term.

The Adventure Group (TAG)

- *CCF harvesting or fuel management doesn't interfere with TAG's ability to operate*
- *Creates no safety issues (road usage, new avalanche exposures, etc.)*
- *CCF operations don't have negative impacts on guest experience*

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- *Creates access to new areas of interest (i.e. towards the alpine on Cougar Mtn.) or improves existing roads/trails*
- *Ultimately produces a sustainability showpiece for both the CCF and TAG*
- *Reduces exposure to forest fires*

Outcome: OGMA on NE side of 16 Mile Creek in lower valley. EBM Reserve created over upper elevations of Cougar Mountain. EBM Reserves corridor on south west side of the valley above highest road. Fuel management area identified.

Whistler Bungee

- *Viewscapes are along the river and ridge above Whistler Bungee. Adjacent Old Growth Management Area already protects key view shed. Logging above the OGMA may take place in 5-10 years.*
- *Truck traffic was identified as a concern. Seasonality and daily timing were discussed. CCF will work with Whistler Bungee to ensure future harvesting and truck traffic doesn't negatively impact Whistler Bungee. Preference is for trucking to occur during slow hours of day (morning), and harvest in spring or fall.*

Outcome: CCF created EBM Reserve over the view shed area and will consult with Whistler Bungee on any activities that may be proposed in the general area and toward the highway.

Whistler RV and Powder Mountain Cat-Skiing

- *Harvesting is positive for back country skiing. 2014 logging off the end of the RV parking lot was a positive working experience.*
- *EBM Reserve & other requests to CCF:*
- *Buffer around RV Park to retain forested feel for campers*
- *In future, Whistler RV wants to build a trail from RV Park along benches to east up to Brew Lake for summer and winter use. Keep in mind if logging proposed in future in this area.*

Outcome: EBM Reserve placed around RV Park.

WORCA

- *The CCF commits to no net loss of WORCA-recognized trails. It will re-route or re-build if a trail is affected by logging. There is a possibility that some old roads that are now used as trails may need to be re-opened for harvesting in the future.*
- *The CCF will work with WORCA to plan trails within an approved compartment area but still needs to consult with First Nations.*
- *Old Growth Management Areas can have trails built in them with a permit, and existing trails within the newly established OGMA's will remain in place.*
- *WORCA will update CCF when new trails established/authorized. CCF and WORCA will consult on a site by site basis when harvesting proposed in an area with a trail.*

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- *WORCA proposed the following areas for EBM Reserves: Jane Lakes area including Jane Lakes trail from Loggers Lake road; connecting the two OGMA's above Emerald Estates and by Screaming Cat Lake; Wedge area OGMA to include Out There trail.*

Outcome: EBM Reserve created over Jane Lakes and corridor from Loggers Lake, and between Screaming Cat Lake and Emerald Estates. Out There trail is not a sanctioned WORCA trail and was not included in an OGMA or EBM Reserve. It is road accessed second growth that will likely be harvested at some point in the future. Trails will be managed as per the CCF's Forest Stewardship Plan's Operational and Planning Commitments Policy CCFVIS – 02 for Defined Recreational Elements:

- Retaining within the foreground zone, as a minimum >1/3 of total trees uniformly as practicable on at least 1/3 of the linear distance when directly adjacent to a public roadway or Defined Recreation Element.
- The foreground zone will extend 50m from the edge of a paved roadway and 30m in all directions from any Defined Recreational Element.

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APPENDIX 3: BIOGEOCLIMATIC ZONE SUMMARY

BEC Zone	CCF Total (ha)	CCF Forested (VRI)	Protected (ha)		Additional Protection (ha)		Total Protected (forested)		Proposed Protection (ha)				Total Protection		Special Mgmt Zone	
			OGMA (forested)	Wetlands (forested)	Grizzly WHA (forested)	UWR (forested)	EBM Reserve - Env	EBM Reserve - Env/Rec	EBM Reserve - Rec	Total Proposed Protection	Total Protected	Percent of Forested	SMZ - First Nations	SMZ - Com Rec Operator		
<i>CWHds1</i>	199	195	66.9	0	0	0	66.9	34.3%					66.9	34.3%		
<i>CWHms1</i>	16600	15790	1904.7	138.1	8.6	27.2	2078.6	13.2%	2004	338.3	363.2	2706	4784	30.3%	392.2	620.1
<i>MHmms2</i>	8860	8636	1193.2	2332.4	210.7	34.7	3771	43.7%	470.7		536.5	1007	4778	55.3%		28.8
<i>MHmmp2</i>	4410	3747	0	2457.5	175.3	37.5	2670.3	71.3%	0.38			0.38	2671	71.3%		
<i>CMA (Alpine)</i>	2950	1361	0	1216.6	9.8	51.5	1277.9	93.9%					1278	93.9%		
	33018	29729	3164.8	6144.6	404.4	150.9	9864.7	33.2%				3713	13578	46%	392.2	648.9

BEC Zones

- CWHds1 = Coastal Western Hemlock southern dry subarctic (around Daisy Lake)
- CWHms1 = Coastal Western Hemlock southern moist subarctic (lower elevations)
- MHmms2 = Mountain Hemlock leeward moist maritime (mid-mountain elevations)
- MHmmp2 = Mountain Hemlock Moist Maritime Parkland (transition between upper forests and alpine)
- CMA = alpine

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APPENDIX 4: CCF RESERVES POLYGON ID, SOURCE & RATIONALE FOR INCLUSION

Polygon ID	ConstrStat	Source	Hectares	Rating	Comment	Type
1	EBM Reserve - Env	AWARE	73.4	High	Callaghan Upper Ponds CMA	Environmental
2	EBM Reserve - Env	AWARE	26.0	High	Callaghan Lower Ponds CMA	Environmental
3	EBM Reserve - Env	AWARE	8.4	High	Lower Basalt Creek	Environmental
4	EBM Reserve - Env	AWARE	40.7	High	Brew Headwaters	Environmental
5	EBM Reserve - Env	AWARE	111.0	High	Old Forest above Whistler Olympic Park	Environmental
6	EBM Reserve - Env	CCF	294.5	High	Environmental, AWARE, WORCA, Jane Lakes area	Environmental
7	EBM Reserve - Env	CCF	21.4	High	Lower 'yer Seat and Train Wreck area	Environmental
8	EBM Reserve - Env	CCF	66.4		Environmental + TAG operating area	Environmental
9	EBM Reserve - Env	CCF	20.4	High	Callaghan Old Growth Knob	Environmental
10	EBM Reserve - Env	CCF	150.0	High	Environmental + Canadian Wilderness Adventures core use zone	Environmental
11	EBM Reserve - Env	CCF	57.1		Environmental + Canadian Wilderness Adventures core use zone	Environmental
12	EBM Reserve - Env	CCF	4.7		Environmental + Canadian Wilderness Adventures core use zone	Environmental
13	EBM Reserve - Env	CCF	2.6		Environmental + Canadian Wilderness Adventures core use zone	Environmental
14	EBM Reserve - Env	CCF	6.8		Environmental + Canadian Wilderness Adventures core use zone	Environmental
15	EBM Reserve - Env	CCF	17.9		Environmental + TAG operating area	Environmental
16	EBM Reserve - Env	CCF	133.1	High	Callaghan Alexander Falls Area	Environmental
17	EBM Reserve - Env	CCF	13.6	High	Logger's Lake Wet Cedar Reserve	Environmental
18	EBM Reserve - Env	CCF	29.4	High	Petticoat Lake	Environmental
19	EBM Reserve - Env	CCF	11.7	High	Environmental + BSL Cabin Marshall Lake	Environmental
20	EBM Reserve - Env	CCF	14.5	High	Red Listed polygon	Environmental
21	EBM Reserve - Env	CCF	15.9	High	Sugar Cube	Environmental
22	EBM Reserve - Env	CCF	491.8	High	West Interface Old Forest	Environmental

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23	EBM Reserve - Env	CCF	315.9	High	RRC Old Forest	Environmental
24	EBM Reserve - Env	CCF	28.9	High	Environmental + Blackcomb Snowmobile core use zone	Environmental
25	EBM Reserve - Env	CCF	6.2	High	Environmental + Blackcomb Snowmobile core use zone	Environmental
26	EBM Reserve - Env	CCF	1.1	High	Environmental + Blackcomb Snowmobile core use zone	Environmental
27	EBM Reserve - Env	Old Forest	48.4	High	Objective for Management Blackwell	Environmental
28	EBM Reserve - Env	Old Forest	315.5	Low	Objective for Management Blackwell	Environmental
29	EBM Reserve - Env	Old Forest	22.9	low	Objective for Management Blackwell	Environmental
30	EBM Reserve - Env	Old Forest	90.7	Medium	Objective for Management Blackwell	Environmental
31	EBM Reserve - Env	Old Forest	9.0	Medium	Objective for Management Blackwell	Environmental
32	EBM Reserve - Env	Old Forest	5.4	Medium	Objective for Management Blackwell	Environmental
33	EBM Reserve - Env	Old Forest	40.2	High	Objective for Management Blackwell, also rec trail values	Environmental/Public Recreation
34	EBM Reserve - Env	Old Forest	45.1	low	Objective for Management Blackwell	Environmental
35	EBM Reserve - Env/Rec	Old Forest	51.4	High	Objective for Management Blackwell, also rec trail values	Environmental/Public Recreation
36	EBM Reserve - Env/Rec	Old Forest	128.5	High	Objective for Management Blackwell, also rec trail values	Environmental/Public Recreation
37	EBM Reserve - Env/Rec	Old Forest	21.1	High	Objective for Management Blackwell, also rec trail values	Environmental/Public Recreation
38	EBM Reserve - Env/Rec	Old Forest	1.4	High	Objective for Management Blackwell, also rec trail values	Environmental/Public Recreation
39	EBM Reserve - Env/Rec	WORCA	4.1	High	Young Lust	Environmental/Public Recreation
40	EBM Reserve - Rec	CCF	32.2	high	public recreation, recruitment option	Public Recreation
41	EBM Reserve - Env/Rec	Public Consultation	131.8	High	Old Forest + Logger's Lake area	Public Recreation
42	EBM Reserve - Rec	WORCA	82.7		Howler/North Flank area	Public Recreation
43	EBM Reserve - Rec	WORCA	24.6		Comfortably Numb Start	Public Recreation

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44	EBM Reserve - Rec	WORCA	20.7	low	Foreplay, end of Comfortably Numb	Public Recreation
45	EBM Reserve - Rec	WORCA	11.0	low	Rockwork Orange. Korova Milkbar, Wizard Burial Ground	Public Recreation
46	EBM Reserve - Rec	WORCA	46.6	low	27 Switchbacks, Billy Epic	Public Recreation
47	EBM Reserve - Rec	WORCA	2.7	low	Pura Vida	Public Recreation
48	EBM Reserve - Rec	WORCA	1.9	low	Pura Vida	Public Recreation
49	EBM Reserve - Rec	WORCA	8.8	low	End Comfortably Numb/YummyNumby	Public Recreation
50	Special Mgmt Zone - CRO	Blackcomb Snowmobile	138.2		Blackcomb Snowmobile core use zone	Commercial Recreation
51	Special Mgmt Zone - CRO	Blackcomb Snowmobile	7.9		Marshall Lake Cabin Area	Commercial Recreation
52	Special Mgmt Zone - CRO	CWA	253.5		Canadian Wilderness Adventures core use zone	Commercial Recreation
53	Special Mgmt Zone - CRO	CWA	13.2		Canadian Wilderness Adventures core use zone	Commercial Recreation
54	Special Mgmt Zone - CRO	The Adventure Group	156.1		TAG visual quality	Commercial Recreation
55	Special Mgmt Zone - CRO	The Adventure Group	6.4		TAG operating area	Commercial Recreation
56	Special Mgmt Zone - CRO	The Adventure Group	35.3		TAG operating area	Commercial Recreation
57	Special Mgmt Zone - CRO	The Adventure Group	3.3		TAG operating area	Commercial Recreation
58	Special Mgmt Zone - CRO	The Adventure Group	12.0		TAG operating area	Commercial Recreation

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59	Special Mgmt Zone - CRO	Whistler RV/Powder Mountain	22.9		100m Buffer on Whistler RV Parcel	Commercial Recreation
60	Special Mgmt Zone - FN Cultural	Lil'wat	121.0	High	Berry Gathering	FN Cultural
61	Special Mgmt Zone - FN Cultural	Lil'wat	145.2	High	Cultural Site (Hunting Blind)	FN Cultural
62	Special Mgmt Zone - FN Cultural	Lil'wat	42.7	High	RAAD Arch Sites	FN Cultural
63	Special Mgmt Zone - FN Cultural	Lil'wat	17.3	High	Berry Gathering	FN Cultural
64	Special Mgmt Zone - FN Cultural	Lil'wat	0.8	High	Mushrooming	FN Cultural
65	Special Mgmt Zone - FN Cultural	Lil'wat	6.9	High	Mushrooming	FN Cultural
66	Special Mgmt Zone - FN Cultural	Lil'wat	26.7	High	Mushrooming	FN Cultural
67	Special Mgmt Zone - FN Cultural	Lil'wat	32.0	High	RAAD Arch Sites	FN Cultural
68	Special Mgmt Zone - FN Cultural	Lil'wat	1.2	remove	Mushrooming, clip to CCF boundary	FN Cultural
69	Special Mgmt Zone - FN Cultural	Lil'wat	0.3	remove	Mushrooming, clip to CCF boundary	FN Cultural

APPENDIX 5: Voluntary EBM Reserves Project – Alteration, Incursions and Amendment Policy

Alterations, Incursions and Amendment Policy (DRAFT)

- A. **Reserve Objectives Priority:** during stakeholder input and crafting of reserve potential a priority objective has been assigned to each reserve. A reference number and primary label is affixed. Although there is considerable overlap for multiple objectives it is the expectation that the primary objective being identified as principle to the long term integrity of the reserve objective.
- B. **Statutory Expectations for Reserves:** the reserves as shown have no legal protection other than they provide direction to the forest management of the CCF. It is hoped however that with these stated objectives they would be recognised by all other resource uses. Referrals to the CCF would consider and expose these EBM Reserves objectives in hopes that the proponent considers mitigation or avoidance if not compatible.
- C. **Reserve Options Old Forest vs Recruitment:** Since much of the selection criteria was focussed on forest protection of original forest. Younger forests used to protect a recreation feature, riparian area or use trail were considered subordinate to the selection process and will in time recruit to mature and eventually old forest conditions.
- D. **Reserve Incursions:** these are thought to recognize permissible uses of EBM reserves for public, commercial recreation and/or interpretation opportunities. Access within the reserves whether by existing old road systems or trails can be maintained or expanded when they meet the primary objectives. New road construction or upgrading of existing resource roads will be avoided, however if other options to avoid incur >15% additional costs for construction difficulty or in road lengths then roads will be constructed through a reserve but will be subject to the amendment provisions below.
- E. **Reserve Area Amendments:** at the scale of planning used in this project, there will be the inevitable need for area amendments. The following amendment provisions will be utilized:
 - 1) Retain all trees within a reserve except to fell where necessary for the following:
 - (a) -removal of danger tree identified as a safety hazard to the public, when those trees are left in place as coarse woody debris.
 - (b) -to prevent the spread of insects or diseases posing a significant threat to the surrounding forest.
 - (c) -carrying out fuel reduction activities within the Interface FDUs that require upgrade to existing or construction of new access road or skid trails required to implement a fuel treatment project.
 - 2) The area of change or alteration to a reserve area without the need for formal replacement will be:
 - a. 3% of the total reserve area as mapped for reserves <30ha;
 - b. 5% of the total reserve area as mapped for reserves >30 and <100;
 - c. Replacement area will be required for any alteration above these limits if carried out by the Community Forest during its primary forest activities. The areas amended will be directly adjacent to the reserve area and be of similar attributes, ages and structure than what is removed through alteration.

- F. **Catastrophic Loss or Removal through Other Enactments:** No replacement will occur if the change is a result of another enactment such as Hydro Line Expansion, Mining or Urbanization. Rather it will be the role of CCF management to identify the potential loss to the proponent and determine if mitigation is at all possible.

In the event of future damaging agents (fire, blowdown or insect) affect a reserve, they will be off limits to any timber salvaging and shall contribute to diversity of seral stage conditions in the forest.

Climate change may be the only factor in the longevity and preservation of current forest attributes of these reserves. Perhaps beyond the scope of this project these reserves may support options to understand, predict and ensure forest resilience over time.

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APPENDIX 6: AGE CLASS SUMMARIES FOR PROTECTED AREAS AND ADDITIONAL (VOLUNTARY) PROTECTED AREAS

BEC Zone	Age Class	Count	Area (ha)
CMAunp	3	1	0.5
CMAunp	5	1	8.3
CMAunp	6	1	7.1
CMAunp	8	2	40.2
CMAunp	9	3	5.2
CWHds1	5	2	1.5
CWHds1	6	1	44.7
CWHds1	7	1	1.0
CWHds1	8	4	19.2
CWHds1	9	1	0.6
CWHms1	1	8	41.7
CWHms1	2	29	112.2
CWHms1	3	7	16.3
CWHms1	5	5	3.9
CWHms1	6	5	21.4
CWHms1	7	4	29.6
CWHms1	8	34	284.7
CWHms1	9	152	1566.2
MHmm2	1	2	27.2
MHmm2	2	5	1.9
MHmm2	3	3	23.1
MHmm2	4	7	54.6
MHmm2	5	9	30.5
MHmm2	6	6	17.3
MHmm2	7	1	1.1
MHmm2	8	43	213.2
MHmm2	9	291	3402.2
MHmmp2	3	3	14.3
MHmmp2	4	5	23.9
MHmmp2	5	6	26.9
MHmmp2	6	8	60.0
MHmmp2	7	4	14.2
MHmmp2	8	53	522.1
MHmmp2	9	153	2009.0

Legally protected areas on left.

Additional voluntary protected areas on right.

BEC Zone	Age Class	Count	Area (ha)
CWHms1	1	14	42.9
CWHms1	2	74	684.3
CWHms1	3	21	142.5
CWHms1	4	19	125.5
CWHms1	5	18	68.0
CWHms1	6	18	121.3
CWHms1	7	9	21.6
CWHms1	8	80	585.6
CWHms1	9	172	1578.5
MHmm2	1	1	12.0
MHmm2	2	4	23.5
MHmm2	4	3	4.7
MHmm2	5	3	4.2
MHmm2	6	8	39.0
MHmm2	8	34	406.0
MHmm2	9	37	316.7