

Appendix C: Port Blakely Habitat Conservation Plan Comparison of HCP Conservation Measures and Oregon Forest Practice Statutes/Rules

	Forest Management Activity	Port Blakely HCP Conservation Measures	Oregon Forest Practice (OFP) Statute or Rule	OFP Statutes and Rules References
1	Upland habitat patches	<ul style="list-style-type: none"> `A minimum of 25% of required leave trees will be retained in the uplands. `Habitat patches will be 1/4 acre to 1-acre in size (but may be larger) and located around ecologically sensitive or unique habitats where they exist. `Patches may be variable shaped. `Patches are no-harvest leave areas, all trees and understory vegetation will remain intact. `If no upland sensitive habitats exist, place variable sized clumps in locations that consider habitat connectivity, species known to occur in the area and operational efficiency. `Consider 500' distance requirement (see below 'distance between wildlife trees'). `Upland habitat patches will be mapped and function as reserves for the life of the HCP. 	`No requirement	527.676 629-665-0210
2	Wildlife trees (green and snag) at regeneration harvest (harvest type 3)	<ul style="list-style-type: none"> `Retain 4 wildlife trees ($\geq 11"$ DBH and $\geq 30'$ tall) per harvested acre (wildlife trees may be alive or dead) `Retain all safe snags, and `Create snags (topped: $\geq 15"$ DBH and $\geq 12'$ tall, girdled: $\geq 15"$ DBH and $\geq 30'$ tall) at a rate of 1 per 10 acres harvested, at least 50% of which will be conifer, representative of the stand. `All retained trees meeting the size criteria count towards the 4 tree commitment. `Leave trees will not be available for harvest for the life of the plan, if standing and determined safe. 	<ul style="list-style-type: none"> `Retain 2 snags or 2 green trees, at least 30' tall & $\geq 11"$ DBH that are 50% conifer. `May be required for operations adjacent to Type F and D streams, in addition to RMA vegetation requirements, up to 25% of green tree requirements be placed in or adjacent to the RMA. `Operator may be required to retain green trees and snags required ORS 527.676 adjacent to small Type N streams subject to rapidly moving landslides likely to deliver wood to Type F or Type SSBT streams. The green trees and snags must be retained within an area that is 50 feet on each side of the small Type N stream and 500 feet upstream from a riparian management area of a Type F or Type SSBT stream. The number of green trees and snags is the equation $H - T$ where: H is the total number of green trees and snags required to be retained in the harvest type 2 or type 3 unit; and T is the number of trees retained in riparian management areas in the harvest unit that may be counted as harvest unit leave trees under OARs 629-642-0100(11) and 629-642-0400(12). 	527.676
3	Wildlife trees (green and snag) at commercial thin	<ul style="list-style-type: none"> `Retain 2 defective trees or snags of largest size class, or create 2 snags, or combination of both, per acre. `Created snags will be $\geq 12'$ in height. `Leave trees will not be available for harvest for the term of the plan, if standing and determined safe. 	`No requirement	527.676 629-665-0210
4	Legacy trees and snags	<ul style="list-style-type: none"> `Retain biological legacies from previous harvests if safe and operationally feasible, retain at site if felled. 	`No requirement	527.676 629-665-0210

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5	Distance between wildlife trees at regeneration harvest (harvest type 3)	`Wildlife trees will be placed throughout the unit such that no point within the harvest area will be more than 500' away from a wildlife tree (wildlife trees will be no farther than 1000' apart).	`No requirement	527.676
6	Understory tree retention (< 10" DBH) at regeneration harvest (harvest type 3)	`In addition to wildlife trees mentioned above, retain understory trees where they exist, if operationally feasible, in clumps or within harvest units at the edge, adjacent to non-buffered streams or aquatic areas and within ~25' of stream buffers. `Western Red Cedar may be scattered throughout unit.	`No requirement	629-642 629-665-0210
7	Legacy downed logs (Coarse Woody Debris)	`Retain existing downed trees ≥ 30" in diameter that are relics of past forests. `Do not disturb during ground operations if feasible.	`No requirement	527.676 629-665-0210
8	Downed logs and/or woody debris piles at regeneration harvest (Coarse Woody Debris) (harvest type 3)	`Provide ≥ 30 cu ft CWD per acre by retaining individual pieces or creating piles such that, `a) individual pieces will be > 10 cu ft each (~6' long X 17" diameter), whereas pieces containing >20 cu ft count as the volume of 2 pieces, and pieces containing >30 cu ft count as the volume of 3 pieces; or `b) woody debris piles will be created that are at least 10 cu ft in volume, located on slopes <35%, and that are 5-10 ft in diameter, comprised of piece sizes that average 10" diameter (but with a 20" diameter target) and are 1-3 ft long, which also contain an abundance of smaller wood, whereas piles containing >20 cu ft count as the volume of 2 piles, and piles containing >30 cu ft count as the volume of 3 piles; or `c) a combination of both a) and b) above.	`Provide 2 logs, at least 6' long & 10 cu ft, 50% conifer; OR 1 conifer log 6' long & 20 cu ft.	527.676
9	Downed logs at commercial thin (Coarse Woody Debris)	`Retain or create two downed pieces per acre, defective or of largest diameter class.	`No requirement	527.676 629-665-0210
10	Slash retention post-harvest	`After regeneration harvest, the banks and streambeds of waters of the state will be generally free of logging slash and as such will provide no potential to increase the rate of debris movement. `Some debris will recruit naturally and provide in-stream function. `Slash will be distributed or piled throughout the unit for retention to the extent possible.	`Prevent entry of slash into waters of the state.	629-615 629-630 629-665-0210
11	Regeneration harvest size (harvest type 3)	`Average 60 ac (averaged over a 10- year harvest plan), not to exceed 100 contiguous acres unless via an approved plan for an alternative practice. `May request approval for larger harvest areas in response to extraordinary environmental events.	`Regeneration harvest size may not exceed 120 acres and may extend up to 240 acres with approval.	527.740

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12	Reforestation	<ul style="list-style-type: none"> ` Reforest with ~435 seedlings per acre depending on best management practices and site class, tree species and tree size planted and local climatic conditions, within 2 years of completion of the operation. ` Four years post-planting all units will have a minimum of 250 trees free to grow. 	<ul style="list-style-type: none"> ` Reforest with a minimum of 200 seedling per acre or 120 saplings per acre or ensure 80 sq ft of basal area per acre is free to grow (11" DBH or larger), or ensure the equivalent basal area target is achieved based on a combination of tree sizes (dependent on site class). ` By the sixth full calendar year from the completion of the operation, establish a free to grow stand of trees which meets or exceeds the minimum stocking level required, generally 200 trees per acre in western Oregon. 	629-610
13a	RMA small fish	<ul style="list-style-type: none"> ` At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 20' of the bank full width, maintain 30' ELZ, horizontal distance. ` At regeneration harvest: 75' minimum no-harvest (unmanaged) buffer on both sides of stream, horizontal distance, variable width to include 50' no-harvest buffer around sensitive sites (wetlands, seeps, potentially unstable slopes). ` Protects all native fish species (including sculpin and other resident fish specie). ` At regeneration harvest, where LWD is minimal or does not exist in the stream, placement of up to 1 tree per 300', on average, rounding up to 4 per 1000' each side of stream, from within the riparian buffer. 	<ul style="list-style-type: none"> ` RMA 50' buffer with 20' no-harvest zone and a 30' managed zone, slope distance. ` Retain all trees leaning over the stream. ` Retain all downed wood and snags within RMA. ` Retain 40 sq ft basal area per 1000' of stream, for harvest type 3. ` Retain 50 sq ft of basal area per 1000' of stream, for harvest type 1, partial harvest or thinning. ` Anadromous fish, game fish and fish listed as Threatened or Endangered per state and federal ESA. ` Minimize equipment disturbance from 20 ft to 100 ft, in consideration of soils and slope; slope distance. ` Extend RMA 25 ft beyond any stream associated wetlands or side channel, slope distance. 	629-635 629-642 629-660
13b	RMA small SSBT	<ul style="list-style-type: none"> ` At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 20' of the bank full width, maintain 30' ELZ, horizontal distance. ` At regeneration harvest: 75' minimum no-harvest (unmanaged) buffer on both sides of stream, horizontal distance, variable width to include 50' no-harvest buffer around sensitive sites (wetlands, seeps, potentially unstable slopes). ` Protects all native fish species (including sculpin and other resident fish species). ` At regeneration harvest, where LWD is minimal or does not exist in the stream, placement of up to 1 tree per 300', on average, rounding up to 4 per 1000' each side of stream, from within the riparian buffer. 	<ul style="list-style-type: none"> ` RMA 60' buffer with 20' no-harvest zone and 40' managed zone, slope distance. ` Retain all trees leaning over the stream. ` Retain all downed wood and snags within RMA. ` Retain 37 sq ft basal area per 500' of stream in outer 40' of RMA for harvest type 3. ` Streams designated as salmon, steelhead, and bulltrout. ` Three prescriptions for SSBT streams. ` Minimize equipment disturbance from 20 ft to 100 ft, in consideration of soils and slope; slope distance. ` Extend RMA 25 ft beyond any stream associated wetlands or side channel, slope distance. 	629-635 629-642 629-660

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14a	RMA medium fish	<p>`At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 20' of the bank full width, maintain 30' ELZ, horizontal distance.</p> <p>`At regeneration harvest: 90' minimum no-harvest (unmanaged) buffer on both sides of stream, horizontal distance, variable width to include additional 50' no-harvest buffer around sensitive sites (wetlands, seeps, potentially unstable slopes).</p> <p>`Protects all native fish species (including sculpin and other resident fish species).</p> <p>`At regeneration harvest, where LWD is minimal or does not exist in the stream, placement of up to 1 tree per 300', on average, rounding up to 4 per 1000' each side of stream, from within the riparian buffer.</p>	<p>`RMA 70' buffer with 20' no-harvest zone and a 50' managed zone, slope distance.</p> <p>`Retain all trees leaning over the stream.</p> <p>`Retain all downed wood and snags within RMA (unless felled for safety or fire risk).</p> <p>`Retain 140 sq ft basal area per 1000 ft of stream for harvest type 3.</p> <p>`Retain 180 sq ft of basal area per 1000' of stream, for harvest type 1, partial harvest or thinning.</p> <p>`Anadromous fish, game fish and fish listed as Threatened or Endangered per state and federal ESA.</p> <p>`Minimize equipment disturbance from 20 ft to 100 ft, in consideration of soils and slope; slope distance.</p> <p>`Extend RMA 25 ft beyond any stream associated wetlands or side channel, slope distance.</p>	629-635 629-642 629-660
14b	RMA medium SSBT	<p>`At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 20' of the bank full width, maintain 30' ELZ, horizontal distance.</p> <p>`At regeneration harvest: 90' minimum no-harvest (unmanaged) buffer on both sides of stream; horizontal distance; variable width to include additional 50' no-harvest buffer around sensitive sites (wetlands, seeps, potentially unstable slopes).</p> <p>`Protects all native fish species (including sculpin and other resident fish species).</p> <p>`At regeneration harvest, where LWD is minimal or does not exist in the stream, placement of up to 1 tree per 300', on average, rounding up to 4 per 1000' each side of stream, from within the riparian buffer.</p>	<p>`RMA 80' buffer with 20' no-harvest zone and 60' managed zone, slope distance.</p> <p>`Retain all trees leaning over the stream.</p> <p>`Retain all downed wood and snags within RMA (unless felled for safety or fire risk).</p> <p>`Retain 69 sq ft basal area per 500 ft of stream in outer 60' of RMA for harvest type 3.</p> <p>`Streams designated as salmon, steelhead, and bulltrout.</p> <p>`Three prescriptions for SSBT streams.</p> <p>`Minimize equipment disturbance from 20 ft to 100 ft, in consideration of soils and slope; slope distance.</p> <p>`Extend RMA 25 ft beyond any stream associated wetlands or side channel, slope distance.</p>	629-635 629-642 629-660
15	RMA large fish	<p>`At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 20' of the bank full width, maintain 30' ELZ, horizontal distance.</p> <p>`At regeneration harvest: 100' minimum no-harvest (unmanaged) buffer on both sides of stream; horizontal distance; variable width to include additional 50' no-harvest buffer around sensitive sites (wetlands, seeps, potentially unstable slopes).</p> <p>`Protects all native fish species (including sculpin and other resident fish species).</p>	<p>`RMA 100' buffer with 20' no-harvest zone and a 80' managed zone, slope distance.</p> <p>`Retain all trees leaning over the stream.</p> <p>`Retain all downed wood and snags within RMA.</p> <p>`Retain 270 sq ft basal area per 1000 ft of stream for harvest type 3.</p> <p>`Retain 350 sq ft basal area per 1000' of stream, for harvest type 1, partial harvest or thinning.</p> <p>`Anadromous fish, game fish and fish listed as Threatened or Endangered per state and federal ESA.</p> <p>`Minimize equipment disturbance from 20 ft to 100 ft, in consideration of soils and slope; slope distance.</p> <p>`Extend RMA 25 ft beyond any stream associated wetlands or side channel, slope distance.</p>	629-635 629-642 629-660

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16	RMA small non-fish seasonal	<ul style="list-style-type: none"> `Disturbance to soil will be minimized, maintain 30' ELZ, horizontal distance. `Retain understory trees and shrubs ≤10" diameter where they exist along the stream and where feasible. 	<ul style="list-style-type: none"> `No general RMA requirement for small Type N seasonal stream. `May require retention of required green trees and snags adjacent to small Type N streams subject to rapidly moving landslides likely to deliver wood to Type F or Type SSBT streams. 	629-635 629-642 629-660
17	RMA small non-fish Domestic	<ul style="list-style-type: none"> `At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 25' of the bank full width; maintain 25' ELZ, horizontal distance. `At regeneration harvest: 50' minimum buffer, horizontal distance. `Buffer will consist of a 25' no-harvest zone and a 25' managed buffer for the entire length of domestic use. `Managed buffer will include 50% relative retention of original live trees by DBH class, representative of stand and well-distributed to outer edge. `Buffer will be wider where necessary to retain sensitive sites undisturbed (wetlands, seeps, potentially unstable slopes). `Understory trees and shrubs ≤10" dbh, snags of any size and coarse woody debris will be retained where they exist. `PB will contact municipality or resident prior to commercial harvest operations or road building. 	<ul style="list-style-type: none"> `Retain all understory vegetation within 10' of stream edge, all trees within 20' of edge, and all trees leaning over the channel, slope distance. `May require retention of required green trees and snags adjacent to small Type N streams subject to rapidly moving landslides likely to deliver wood to Type F or Type SSBT streams. `Operator must notify the water system manager of a planned chemical operation at least 15 days before the operation commences, for aerial application of chemicals within 100 feet, or ground application of chemical within 50 feet of domestic portions of Type F, Type SSBT or Type D streams, and the water use is by a community water system. `Conditional requirements: Interior Geographic Region: retain understory and unmerchantable trees within 10 feet each side of stream for portions of perennial small Type N streams where the upstream drainage area is greater than 330 acres; and Western Cascade Geographic Region: no vegetation retention requirement for perennial small Type N streams. `Minimize equipment disturbance from 20 ft to 100 ft, in consideration of soils and slope; slope distance. 	629-635 629-642 629-660
18	RMA small non-fish perennial	<ul style="list-style-type: none"> `At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 20' of the bank full width, maintain 30' ELZ, horizontal distance. `At regeneration harvest: 50' minimum buffer on both sides of stream, horizontal distance. `Buffer will consist of a 25' no-harvest zone and a 25' managed buffer for the entire length of perennial flow. `Managed buffer will include 50% relative retention of original live trees by DBH class, representative of stand and well-distributed to outer edge. `Buffer will be wider where necessary to retain sensitive sites undisturbed (wetlands, seeps, potentially unstable slopes). `Understory trees and shrubs ≤10" dbh, snags of all sizes and coarse woody debris will be retained where they exist. 	<ul style="list-style-type: none"> `May require retention of required green trees and snags adjacent to small Type N streams subject to rapidly moving landslides likely to deliver wood to Type F or Type SSBT streams. `Conditional requirements: Interior Geographic Region: retain understory and unmerchantable trees within 10 feet each side of stream for portions of perennial small Type N streams where the upstream drainage area is greater than 330 acres; and Western Cascade Geographic Region: no vegetation retention requirement for perennial small Type N streams. 	629-635 629-642 629-660

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19	RMA medium non-fish or Domestic	<ul style="list-style-type: none"> `At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 20' of the bank full width, maintain 30' ELZ, horizontal distance. `At regeneration harvest: 80' buffer on both sides of stream, horizontal distance. `Buffer will consist of a 55' no-harvest zone and a 25' managed buffer. `Managed buffer will include 50% relative retention of original live trees by DBH class, representative of stand and well-distributed to outer edge. `Variable width to include 50-ft no-harvest zone around stream-associated sensitive sites, such as wetlands, seeps and potentially unstable slopes. `Understory trees and shrubs ≤10" dbh, snags of any size and coarse woody debris will be retained where they exist. `For domestic water supplies, PB will contact municipality or resident prior to commercial harvest operations or road building. 	<ul style="list-style-type: none"> `RMA 50' buffer with 20' no-harvest zone and 30' managed zone, slope distance. `Retain all trees leaning over the stream. `Retain all downed wood and snags within RMA. `Minimize soil disturbance` Retain 50 sq ft basal area per 1000 ft of stream for harvest type 3. `Minimize equipment disturbance from 20 ft to 100 ft, in consideration of soils and slope; slope distance. `Operator must notify the water system manager of a planned chemical operation at least 15 days before the operation commences, for aerial application of chemicals within 100 feet, or ground application of chemical within 50 feet of domestic portions of Type F, Type SSBT or Type D streams, and the water use is by a community water systemft, in consideration of soils and slope; slope distance. `Extend RMA 25 ft beyond any stream associated wetlands or side channel, slope distance. 	629-635 629-642 629-660
20	RMA large non-fish or Domestic	<ul style="list-style-type: none"> `At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 20' of the bank full width; maintain 30' ELZ. `At regeneration harvest: 80' buffer on both sides of stream; horizontal distance. `Buffer will consist of a 55' no-harvest zone and a 25' managed buffer. `Managed buffer will include 50% relative retention of original live trees by DBH class, representative of stand and well-distributed to outer edge. ` Variable width to include 50-ft no-harvest zone around stream-associated sensitive sites, such as wetlands, seeps and potentially unstable slopes `Understory trees and shrubs ≤10" dbh, snags of any size and coarse woody debris will be retained where they exist. `For domestic water supplies, PB will contact municipality or resident prior to commercial harvest operations or road building. 	<ul style="list-style-type: none"> `RMA 70' buffer with 20' no-harvest zone and 50' managed zone, slope distance. `Retain all trees leaning over the stream. `Retain all downed wood and snags within RMA. `Retain 110 sq ft basal area for harvest type 3. `Minimize equipment disturbance from 20 ft to 100 ft, in consideration of soils and slope; slope distance. `Extend RMA 25 ft beyond any stream associated wetlands or side channel, slope distance. 	629-635 629-642 629-660
21	Channel migration zone/ side channel	<ul style="list-style-type: none"> `Same buffers and management prescriptions as its associated stream, measured from the edge of the braid or side-channel. 	<ul style="list-style-type: none"> `Protect with minimum 25' buffer, if side channel extends beyond RMA, then extend buffer by 25', slope distance. 	629-635 629-642 629-660

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22	RMA- lakes and stream-associated wetlands >8 acres, Type F and Type N, and bogs of any size	<p>`At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 20' of the bank full width, maintain 30' ELZ, horizontal distance.</p> <p>`At regeneration harvest: 100' minimum buffer width, horizontal distance.</p> <p>`Buffer will consist of a 50' no-harvest zone and 50' managed buffer, horizontal distance.</p> <p>`Managed buffer will include 50% relative retention of original live trees by DBH class, representative of stand and well-distributed to outer edge.</p> <p>`Understory trees and shrubs ≤10" dbh, snags of any size and coarse woody debris will be retained where they exist.</p>	<p>`RMA 100' buffer, slope distance, with managed buffer throughout 100', except small Type N stream.</p> <p>`Retain understory vegetation, all snags and downed wood, and 1/2 of the trees by species and size.</p> <p>`Protect understory vegetation and soil from disturbance.</p> <p>`Stream-associated wetlands >8 acres: -20' No Touch zone on stream channel; -Apply significant wetland protection measures to the remainder of the significant wetland and buffer, including the stream RMA, leaving 50% of the live trees by species and diameter classes. -The 50% retention must also meet the basal area target for the appropriate Type F or SSBT RMA and the live tree conifer count and distribution requirement for SSBT RMA's.</p> <p>`Minimize equipment disturbance: wetlands >8 acres from the edge to 100 feet; depending on the type of streams or lakes, from 20 ft to 100 ft, all in consideration of soils and slope; slope distance.</p>	629-635 629-642 629-645 629-650
23	RMA- lakes >1/2 - <8 acres (non-fish)	<p>`At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 20' of the bank full width, maintain 30' ELZ, horizontal distance.</p> <p>`At regeneration harvest: 50' minimum buffer width, horizontal distance.</p> <p>`Buffer will consist of a 25' no-harvest zone and 25' managed buffer, horizontal distance.</p> <p>`Managed buffer will include 50% relative retention of original live trees by DBH class, representative of stand and well-distributed to outer edge.</p> <p>`Understory trees and shrubs ≤10" dbh, snags of any size and coarse woody debris will be retained where they exist.</p> <p>`Applies to natural lakes only (not mill ponds).</p>	<p>`RMA 50' buffer, slope distance, with 50% relative retention well distributed to outer edge; retain edge trees.</p> <p>`Retain all downed wood and snags within RMA.</p> <p>`Protect understory vegetation and soil from disturbance.</p> <p>`Include in stream RMA, where wetlands or streams extend beyond RMA, expand RMA to include wetland plus 25'.</p> <p>`Minimize equipment disturbance from 20 ft to 50 ft, in consideration of soils and slope; slope distance.</p>	629-635 629-642 629-650 629-655
24	RMA- lakes <8 acres and stream-associated wetlands < 8 acres (fish bearing)	<p>`At commercial thin harvest when overstocked (>240 TPA) and uniform conditions: no removal of trees leaning over the channel or within 20' of the bank full width, maintain 30' ELZ, horizontal distance.</p> <p>`At regeneration harvest: retain 50' minimum no-harvest buffer around lake or wetland; horizontal distance, measured from the wetland or lake edge.</p>	<p>`RMA 50' buffer, slope distance, with 50% relative retention well distributed to outer edge; retain edge trees.</p> <p>`Retain all downed wood and snags within RMA.</p> <p>`Protect understory vegetation and soil from disturbance.`Include in stream RMA, where wetlands or streams extend beyond RMA, expand RMA to include wetland plus 25'.</p> <p>`Minimize equipment disturbance from 20 ft to 50 ft, in consideration of soils and slope; slope distance.</p>	629-635 629-642 629-650

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25	RMA- lakes >1/4 - < 1/2 acres, stream associated seeps and wetlands < 8 acres, and isolated seeps and wetlands > 1/4 acre - < 8 acres (all non-fish)	<ul style="list-style-type: none"> `At regeneration harvest: no disturbance of feature, include in variable width stream buffer if stream-associated. `Preferential area for additional leave trees. `Maintain 30' ELZ, horizontal distance. 	<ul style="list-style-type: none"> `No additional buffer required. `Retain all downed wood and snags within feature. `Protect understory vegetation and soil from disturbance within and adjacent to feature. 	629-630 629-650 629-655
26	Equipment Limitation Zone (ELZ)- streams, lakes and wetlands	<ul style="list-style-type: none"> `Maintain 30' - 100' ELZ depending on stream/lake/wetland type with minimal disturbance to soils, coarse woody debris, snags and understory vegetation; horizontal distance. 	<ul style="list-style-type: none"> `Minimize equipment disturbance: wetlands >8 acres from the edge to 100 feet; depending on the type of streams or lakes, from 20 ft to 100 ft, all in consideration of soils and slope; slope distance. 	629-635 629-642 629-645 629-655
27	Riparian zone Large Woody Debris (LWD)	<ul style="list-style-type: none"> `At regeneration harvest: where LWD is minimal or does not exist in the stream, placement of up to 1 tree per 300', on average, rounding up to 4 per 1000' each side of stream in medium and small fish streams, from within the riparian buffer. `Trees will be pushed in with equipment where possible (otherwise hand-felled), singly or in a group, based on the ODFW 2010 Guide to Placement of Wood. `Equipment will not enter the 30' ELZ or push over/cut trees from within 20' of the stream edge. `Placement of riparian trees as LWD will not be conducted if it compromises other riparian functions including shade and bank stability. 	<ul style="list-style-type: none"> `No requirement. `Voluntary LWD placement in medium and small Type F stream, under ODF-ODFW guidance, receives live tree basal area credit. 	629-635 629-642
28	Special Management Areas (SMAs) (ecologically sensitive and unique habitats)	<ul style="list-style-type: none"> `At regeneration harvest: potentially high hazard slopes, isolated seeps, wetlands and other unique or ecologically sensitive habitats will be protected to the extent possible; these SMAs will be priority sites for placement of leave trees. 	<ul style="list-style-type: none"> `May require retention of required green trees and snags adjacent to small Type N streams subject to rapidly moving landslides likely to deliver wood to Type F or Type SSBT streams. 	527.676 620.630 629-642
29	Potentially unstable slopes	<ul style="list-style-type: none"> `At regeneration harvest: bedrock hollows, convergent headwalls or inner gorge features with >70% slopes adjacent to fish streams will be protected with a 50' no-harvest buffer from edge of feature; horizontal distance. `Similar conditions along non-fish streams will be protected with retention of trees within feature plus trees along feature where the crown drips within the feature. `Similar conditions along disconnected streams will be prioritized for upland leave trees retention. `Deep-seated landslides with slopes >65% slopes and convex or planar slopes >80% will be evaluated in consultation with a licensed geotech to develop management options. `Quarries will not be developed within 100' of these features and road construction will be avoided, unless via an ODF approved plan for an alternate practice. 	<ul style="list-style-type: none"> `Type F and D streams, in addition to RMA vegetation requirements, may require up to 25% of green trees requirements placed in or adjacent to the RMA. `May require retention of required green trees and snags adjacent to small Type N streams subject to rapidly moving landslides likely to deliver wood to Type F or Type SSBT streams. `Operators and ODF determine public safety exposure from shallow, rapidly moving landslides. `Quarry development shall be conducted using practices which maintain stable slopes and protect water quality. `Require an approved plan for alternate practices to locate roads: where fill is placed in stream channels; in riparian management areas; crossing wetlands; on HLHL, especially when rock is weak; cutting across the toe of old landslide deposits above streams; on steep slopes with easily eroded soils (granitics). 	527.676 629-625 629-630 629-635 629-642

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30	Road construction	<ul style="list-style-type: none"> `Year round road construction best management practices are designed to prevent sediment entry to streams which include clearing and grubbing, sub-grade construction, stream crossing designs, road surfaces, drainage management and ditch construction. `Sensitive sites (SMAs) and aquatic features are avoided to the extent possible. 	<ul style="list-style-type: none"> `During wet periods operators shall construct roads in a manner which prevents sediment from entering waters of the state. 	629-625
31	Road maintenance	<ul style="list-style-type: none"> `Year round road maintenance best management practices are designed to prevent sediment entry to streams which include cross drains site selection, energy dissipaters, installation, water bars, drivable dips, water bars, berms, ditch-outs and erosion control. `Sensitive sites (SMAs) and aquatic features are avoided to the extent possible. `Road abandonment and deactivation plans are designed to prevent sediment delivery to streams. 	<ul style="list-style-type: none"> `Operators shall maintain active and inactive roads in a manner sufficient to provide a stable surface and to keep the drainage system operating as necessary to protect water. 	629-625
32	Culverts - general	<ul style="list-style-type: none"> `All culverts will be designed and installed to pass all life-stages of all native fish, and capable of accommodating 100-year peak flow return intervals. 	<ul style="list-style-type: none"> `Design to accommodate 50-year return interval or peak flow. 	629-625
33	Fish passage at road crossings	<ul style="list-style-type: none"> `All streams are surveyed for fish presence and culverts are assessed for fish passage capability prior to road construction or road reconstruction. All structures installed, reconstructed, or maintained within streams that are classified as 'fish use' will provide for fish passage. `Culverts are designed to pass all native fish species and preclude blockage or establishment of fish passage barriers. `Existing known fish passage barriers will be fixed within the first 5 years of permit issuance. `New artificial fish passage barriers discovered during forest management operations or acquired will be fixed within 3 years of discovery/acquisition. 	<ul style="list-style-type: none"> `Machine activity in streambeds are restricted to periods of low water flow. `Other state laws: fish passage is required in all waters of this state in which native migratory fish are currently or have historically been present, ensuring fish passage required based on prioritization by ODFW. `New construction and reconstruction of roads over classified fish use streams are required to provide for fish passage. 	629-625 629-635
34	Culvert size - non-fish perennial (Np) and non-fish seasonal (Ns)	<ul style="list-style-type: none"> `Culverts facilitating non-fish perennial (Np) flow will be 24" minimum diameter. `Culverts facilitating non-fish seasonal (Ns) flow will be 18" minimum diameter. `All Np and Ns crossing designs will be capable of accommodating 100-year peak flow return intervals. 	<ul style="list-style-type: none"> `Designed to accommodate 50-year peak flow. 	629-625
35	Culvert size - cross-drain	<ul style="list-style-type: none"> `Cross-drain culvert size will be a minimum diameter of 18". `Cross-drain culverts will be located as close to the stream crossing as possible while still allowing the outfall to deposit sediment on, and absorb water into, the forest floor. 	<ul style="list-style-type: none"> `Locate cross-drains so water is able to filter into the forest floor before entering the stream. `Technical guidance recommends minimum culvert diameter of 18 inches for cross drains. 	629-625

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36	Stream-Adjacent Parallel Roads (SAPR)	<p>Stream-Adjacent Parallel Roads (SAPR), i.e., those located within the buffer of a stream and that are generally aligned parallel to the stream, are evaluated to determine feasibility for removal.</p> <p>Remove or relocate 1.9 miles of SAPR will be conducted within the first 5 years of permit issuance.</p>	<p>Ensure roads are located where potential impacts to waters of the state are minimized including wetlands, RMAs, channels or floodplains. Maintain roads to provide stable surface and operating drainage systems to protect water quality.</p>	629-625 629-642
37	Quarrying and rock pits	<p>All rock pits and quarrying activities will be located outside of stream channels and riparian management areas to prevent delivery of sediment into water, and to prevent erosion or landslides.</p>	<p>Don't locate inside channels, prevent overburden and wastes from entering waters of the state; stabilize banks, headwalls, and other surfaces to prevent erosion.</p>	629-625
38	Spotted owl	<p>Nest site protection: protect up to 3 active nest sites and/or pairs as long as occupied; no harvest will occur within 70 acres of highest quality habitat around the nest/pair.</p> <p>Defer harvest around nest sites and pairs for 5 years after a pair is last observed.</p> <p>Foraging/dispersal habitat: ensure at least 7500 acres (or 26% of ownership) of foraging/dispersal habitat is available across the Plan area.</p> <p>Disturbance restrictions: implement 1/4 mile seasonal noise disturbance restrictions March 1 to September 30 for specified activities.</p> <p>Riparian habitat: a variable width riparian buffer can extend an additional 50' to provide a safety zone for the protection of legacy snags in areas within the Provincial median annual home range (1.2 miles for the Oregon Cascades) of owl nest trees and activity centers.</p> <p>Landscape habitat mosaic: At regeneration harvest, implement prescriptions during harvest operations that will benefit multiple species including owls and their prey by: creating and retaining snags and legacy trees/features; retaining 4 wildlife trees per acre; retaining understory trees <10"; retaining upland habitat patches, CWD and slash; retaining wider buffers along streams and protecting sensitive sites such as seeps, wetlands and potentially unstable slopes.</p> <p>Regeneration harvest age will be extended to 50 years and harvest unit size will be 60 acres, on average.</p> <p>Invasive plant species will be treated to the extent possible.</p> <p>Additional spotted owl recovery activities: coordinate and participate with USFWS on agency-proposed recovery actions including consideration of the HCP lands for spotted owl research projects and addressing spotted owl threats.</p>	<p>Retain 70 acres of highest quality habitat for all owls nesting or in pairs.</p> <p>Defer harvest around nest sites and pairs as long as active and for 5 years after a pair is last observed.</p> <p>Implement 1/4 mile seasonal disturbance restrictions March 1-Sept 30 for specified activities.</p>	629-665- 0210

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39	Pacific fisher	<ul style="list-style-type: none"> `Implement provisions consistent with the Oregon Fisher CCAA. `Disturbance restrictions: implement 0.25 mile seasonal noise disturbance restrictions around den sites March 15 to September 30 for specified activities. `Restrict animal control & trapping activities within 2.5 miles of occupied dens. `Cover man-made structures that could trap fishers. `Support recovery efforts. `Create and retain down wood and/or CWD 'biodens' as described above. 	`No requirement	629-665
40	Gray wolf	<ul style="list-style-type: none"> `Den site protection: protect up to two active den sites, for a minimum of 3 years but for as long as occupied. `Disturbance restriction: implement 0.5 mile seasonal noise disturbance restrictions around den sites March 15 to July 30 for specified activities `Create a landscape-wide habitat mosaic with suitable early-seral and edge habitat favored by prey species. `Retain legacy down wood and create 'biodens' as described above. `Restrict motorized public access. `Coordinate with USFWS to develop priorities and management plans if additional active den sites are located. 	`No requirement	629-665
41	Northern goshawk	<ul style="list-style-type: none"> `Nest site protection: protect 30 acres of forest habitat around up to two active nest sites for a minimum 3 years but as long as occupied. `Disturbance restriction: implement 0.5 mile seasonal noise disturbance restrictions around nest sites March 1 to August 31 for specified activities. `Create a landscape-wide habitat mosaic with suitable early-seral and edge habitat favored by prey species. `Coordinate with USFWS to develop priorities and management plans if additional active nest sites are located. 	`No requirement	629-665
42	Bats	<ul style="list-style-type: none"> `Retain live and dead trees distributed acrosss the landscape, plus create additional snags during regeneration harvest. `Conservation strategy to protect streams and wetlands. `Conservation strategy to protect caves. `Bridges that are replaced will be equipped with structures suitable for roosting bats. 	`No requirement	629-665
43	Cascades and coastal tailed frogs, cascades torrent salamander	<ul style="list-style-type: none"> `Conservation strategy to protect streams and wetlands. 	`No requirement	629-665
44	Oregon slender salamander	<ul style="list-style-type: none"> `Conservation strategy to retain/ create coarse woody debris. 	`No requirement	629-665
45	Western pond turtle	<ul style="list-style-type: none"> `Conservation strategy to protect streams and wetlands. 	`No requirement	629-665

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46	Public access	<ul style="list-style-type: none"> `Motorized vehicle access: all roads will be closed to unauthorized motorized traffic with authorized road use relegated to primary access roads and shared roads only. `Walk-in access: open to public in limited capacity. 	<ul style="list-style-type: none"> `No requirement 	all wildlife
46	Restoration	<ul style="list-style-type: none"> `Contribute to watershed restoration projects through in-kind, product or monetary support at a minimum rate of \$10,000 per year and a maximum rate of \$25,000 per year. `The restoration commitment will increase at thresholds based on increases in ownership acres as described below, not to exceed 25% based on initial HCP acres. `Annual restoration contribution will increase based on ownership acres. <ul style="list-style-type: none"> 30,000-32,999 acres = \$25,000/ annually 33,000-35,999 acres = \$27,500/ annually 36,000-37,500 acres = \$31,250/ annually 	<ul style="list-style-type: none"> `No requirement; `Voluntary large key piece placement in Type F and SSBT streams according to Oregon Guide to Placement of Wood, Boulders and Gravel for Habitat Restoration; live tree retention basal area credit 	629-642-0200 629-642-0300