DRAFT Response to Natural Disturbance in the Olympic Experimental State Forest Habitat Conservation Plan (HCP) Planning Unit

Date:

Application: The Olympic Experimental State Forest Planning Unit.

DISCUSSION

Natural Disturbance events such as windstorms, fires, insect outbreaks, and disease epidemics can result in forest stands that no longer retain characteristics to meet the stand objectives that were present before the disturbance. The 1997 *Habitat Conservation Plan* anticipated tree blow down in the OESF due to alignment of major river valleys with the prevailing wind directions, fully saturated soils during the winter months, and edge effects associated with openings adjacent to mature timber stands (1997 HCP, IV. 106). The 1997 *Habitat Conservation Plan* also states that "*although tree blow down is recognized as a significant problem for timber management on the western Olympic Peninsula, the exact relation between timber harvest and tree blow down is not well understood or documented* (IV. 112)".

The scale of natural disturbance events varies, from small areas (micro scale) of just a few trees to large-scale disturbances over hundreds of acres. Often areas affected by natural disturbance can be salvage harvested, insuring that monitory value is not lost to the trust beneficiaries (RCW 79.15.210). Different approaches to salvage harvesting depend on the scale and severity of the disturbance. In addition, habitat designations (such as northern spotted owl habitat, riparian or wetland) may require different salvage harvest approaches.

The guiding principle in salvage harvesting is to attempt to retain as much of the pre-disturbance habitat components that is practical.

Northern Spotted Owl Habitat Vulnerability to Natural Disturbances

The OESF contains Old Forest and Young Forest northern spotted owl habitat that is managed by minimum habitat thresholds per landscape (Refer to the OESF Northern Spotted Owl Procedure).

The 1997 Habitat Conservation Plan discussed natural disturbance. It stated:

> "*In an unfragmented landscape with abundant suitable habitat, loss of habitat from natural disturbance is generally not a threat to population viability. Given the highly fragmented pattern and reduced amount of the remaining suitable habitat, loss of habitat from fire, windthrow, or insect and disease infestation can pose a significant threat to spotted owls in certain areas. The Recovery Team determined that natural disturbance is a severe threat in the eastern Washington Cascades, a moderate*

threat in the Olympic Peninsula, and a low threat in the western Washington Cascades (USDI 1992b) (1997 HCP, III. 15)."

"*The Recovery Team (USDI 1992a) identified low population levels, poor population distribution, habitat loss, population isolation, and natural disturbances as major threats to owls on the Olympic Peninsula* (1997 HCP, III. 18)."

The 1997 Habitat Conservation Plan addressed the issue of blow down "salvage operations" on page IV.10. It states:

> *"DNR's HCP conservation strategies include commitments to develop and maintain wildlife habitat… over time in designated amounts and areas* (habitat thresholds per landscape)*. In general, such conservation commitments made in the HCP will take priority over other DNR management considerations. However, these conservation commitments may, in some cases, be inconsistent with activities DNR must consider under state statutes pertaining to salvage and forest health."*
> *"For example, salvage operations might be considered by DNR for reasons such as windthrow, fire, disease, or insect infestations. In conducting salvage activities, DNR shall, to the extent practicable:*
> 1. *Minimize the harvest of live trees to those necessary to access and complete salvage activities;*
> 2. *Maximize and clump the retention of large, safe, standing trees to provide future snags; and*
> 3. *Consider opportunities to retain concentration of snags and/or coarse woody debris which may benefit species…."*

Riparian Vulnerability to Natural Disturbances

Riparian areas are protected by the OESF riparian procedure (refer to OESF Riparian Procedure). Even with this protection, some riparian areas may be affected by natural disturbance. In cases where it is deemed that riparian buffers no longer serve their intended purpose or if the natural disturbance jeopardizes riparian health, a salvage harvest may be permitted.

Wetland Vulnerability to Natural Disturbances

Wetlands are protected by the wetland procedure (PR-14-004-110). Even with this protection, some wetland buffers and wetland areas may encounter natural disturbance. In some cases, salvage harvest may be permitted as long as it adheres to the wetland procedure and the 1997 *Habitat Conservation Plan*:

> *"forest management in forested wetlands and in the buffers of non-forested wetlands will minimize entries into these areas and utilize practices that minimize disturbance, such as directional felling of timber away from wetlands, and using equipment that causes minimal soil disturbance… If ground disturbance caused by forest management activities alters the natural surface or sub-surface drainage of a wetland, then restoration of the natural drainage shall be required. Soil compaction and rutting usually preclude the use of ground-based equipment in wetland areas (*HCP IV-70)."

ACTION

Safety regulations pre-empt all other requirements and should be addressed to maintain worker safety. All green tree and snag retention are subject to the safety standards of the Department of Labor and Industries (Chapter 296-54-WAC), the harvest unit should be designed to conserve legacy cohorts and meet habitat targets without jeopardizing forest worker safety once on the ground activity commences. When harvest activity commences, forest worker safety is the paramount priority.

Region staff will assess natural disturbance events to determine the scale and severity of the event and the appropriate response. The method of assessment may vary from a forester noticing a high value tree that has fallen next to a road that will likely be stolen if not salvaged to aerial surveys of a large affected area. Once natural disturbance is documented, the region determines if salvage harvesting is economically viable. This decision is based on the professional judgment of region staff.

There are four size categories of salvage harvests: micro, small, medium, and large. This procedure addresses only micro through medium size salvage harvests in detail. Large-scale events are defined here and a basic framework for response is included, but because of the large scale of these events, the response will be determined on a case-by-case basis.

Micro Scale Natural Disturbance

A micro scale natural disturbance is defined as an incidental disturbance involving one to three trees that is easily accessible and would be subject to theft if left in place (for example, a large western redcedar near a road). The authority to salvage harvest a micro scale natural disturbance falls under the provisions for direct sales according to RCW 79.15.050 and DNR Procedure 11-000-01: Direct Sales. A sale of valuable material worth less than $25,000 may be sold to an applicant for cash at full-appraised value without notice or advertising. The Region Manager is responsible for ensuring that this sale method is used in accordance with accepted environmental review processes, provides current market prices for the products sold, and that the sale method provides the greatest benefit to the affected trust beneficiary. The Region Manager must sign these contracts on behalf of the State. Refer to Chart #-# for a flow chart of micro scale salvage sales.

Small Scale Natural Disturbance

Small-scale natural disturbance is defined as salvage harvest associated with natural disturbance of 1 to 20 acres (WAC 332-41-833 (i)[1] with an appraised value of less than $250,000. These are considered a categorical exemption from the State Environmental Policy Act (SEPA). Refer to Attachment B for a flow chart of small-scale salvage harvests. A forester will conduct salvage assessments for small-scale disturbances. Refer to Attachment D for the assessment form.

In riparian areas, an effort should be made to retain all standing wood (living and snags), maintain a threshold amount of large, woody debris, and retain any structure within the

[1] WAC 332-41-833(i) refers to timber sales containing harvest units of less than 20 acres; part (ii) refers to thinning or salvage timber sales of any unit size that DNR appraises at less than $250.000.

innermost 25 feet of the stream. Refer to the OESF Riparian Strategy for further guidance.

In northern spotted owl habitat, if the area is going to continue to be managed as habitat in the future, an effort should be made to retain all standing wood (living and snags) and maintain a threshold amount of large, woody debris. Refer to the OESF Northern Spotted Owl Procedure.

The amount of small-scale salvage harvesting in each landscape will be reported with the HCP Annual Report to the services.

Medium Scale Natural Disturbance

Medium scale natural disturbance is defined as salvage harvest associated with natural disturbance over 20 acres in size that does not change the region's harvest program for the year (does not change the volume goal for the year). Refer to Attachment C for a flow chart of medium scale salvage harvests. A region biologist will conduct salvage assessments for medium scale disturbances. Refer to Attachment D for the assessment form.

In riparian areas, an effort shall be made to retain all standing wood (live trees and snags), maintain a threshold amount of large woody debris, and retain any structure within the innermost 25 feet of the stream. Refer to the OESF Riparian Strategy for further guidance.

In northern spotted owl habitat, if the area is going to continue to be managed as habitat in the future, an effort should be made to retain all standing wood (living and snags) and maintain a threshold amount of large woody debris. Refer to the OESF Northern Spotted Owl Procedure.

The acres of medium-scale salvage harvest in northern spotted owl habitat must be tracked between forest estate model runs. The landscapes in the OESF have different harvest histories and so vary in how far along they are in the restoration phase. If a series of medium size salvage harvests take place within northern spotted owl habitat between forest estate model runs, the accumulation of salvage harvests could be similar to a large-scale disturbance event. Large-scale natural disturbances have the potential to alter the length of the restoration phase for northern spotted owl habitat. Accumulated salvage of northern spotted owl habitat over one percent of the total acreage of state lands in a landscape between model runs is considered the threshold between a medium and potentially large-scale event. Salvage harvest must be monitored to determine whether it will exceed one percent of the total acres of state trust lands in each landscape. Refer to Table 1 for the salvage threshold in northern spotted owl habitat acreages for each of the eleven landscapes in the OESF.

In landscapes where salvage harvest in northern spotted owl habitat exceeds one percent of state trust lands in a landscape (Table 1) between forest estate model runs, DNR will consult with the Services prior to proposing additional salvage harvest. The purpose is to keep the Services informed of DNR's response to natural disturbance events.

Table 1 Amount of Medium Size Salvage Harvest in Northern Spotted Owl Habitat between Forest Estate Model Runs

Landscape	Acres of	One percent of	Anticipated decade

	state trust lands in Landscape	state trust lands in landscape in acres (Rounded)	of reaching restoration of minimum habitat thresholds for the Landscape Alternative
Clallam	17,275	173	Decade 5
Clearwater	55,202	552	Decade 5
Coppermine	19,245	192	Decade 7
Dickodochtedar	28,047	280	Decade 4
Goodman	23,800	238	Decade 3
Kalaloch	18,122	181	Decade 4
Queets	20,807	208	Decade 4
Reade Hill	8,480	85	Decade 1
Sekiu	10,015	100	Decade 6
Sol Duc	19,135	191	Decade 8
Willy Huel	37,427	374	Decade 6

The amount of road construction in northern spotted owl habitat also needs to be tracked. For details on harvest and road construction in northern spotted owl habitat refer to Procedure XXX: Northern Spotted Owl Management (OESF).

Each time the Forest Estate model for the OESF is re-run all activities (including salvage harvesting) that have taken place since the last run of the forest estate model will be incorporated. This will allow DNR to monitor that the anticipated decade for restoration of minimum thresholds for northern spotted owl habitat does not change.

The amount of medium scale salvage harvesting in each landscape will be reported with the HCP Annual Report to the services.

Large Scale Natural Disturbance

Large-scale events are impacting greater than one percent of the total acres in a landscape. These types of events are likely to affect multiple habitat types, including habitat for listed species and riparian habitat. Because large-scale natural disturbance events are likely to have significant impacts to the landscapes they occur in, planning for salvage harvesting would be conducted following an interdisciplinary team approach and in consultation with other state and federal agencies and affected Tribes. Agencies consulted would include the Washington Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration, and DNR's Forest Practices Division.

APPROVED BY: _____ Date: _____

, Manager

Forest Resources and Conservation Division

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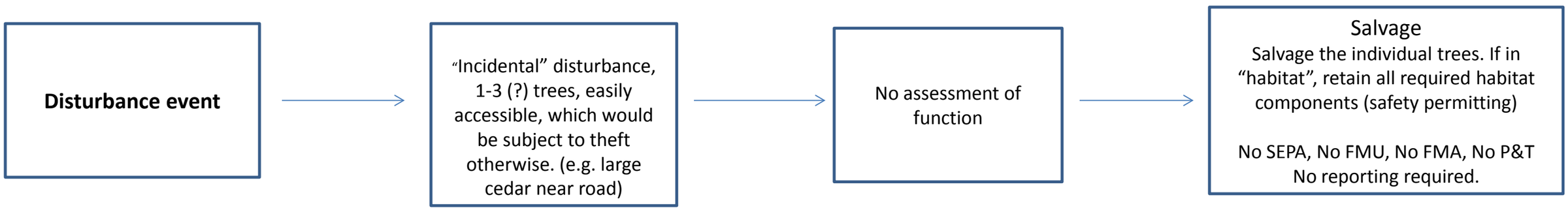
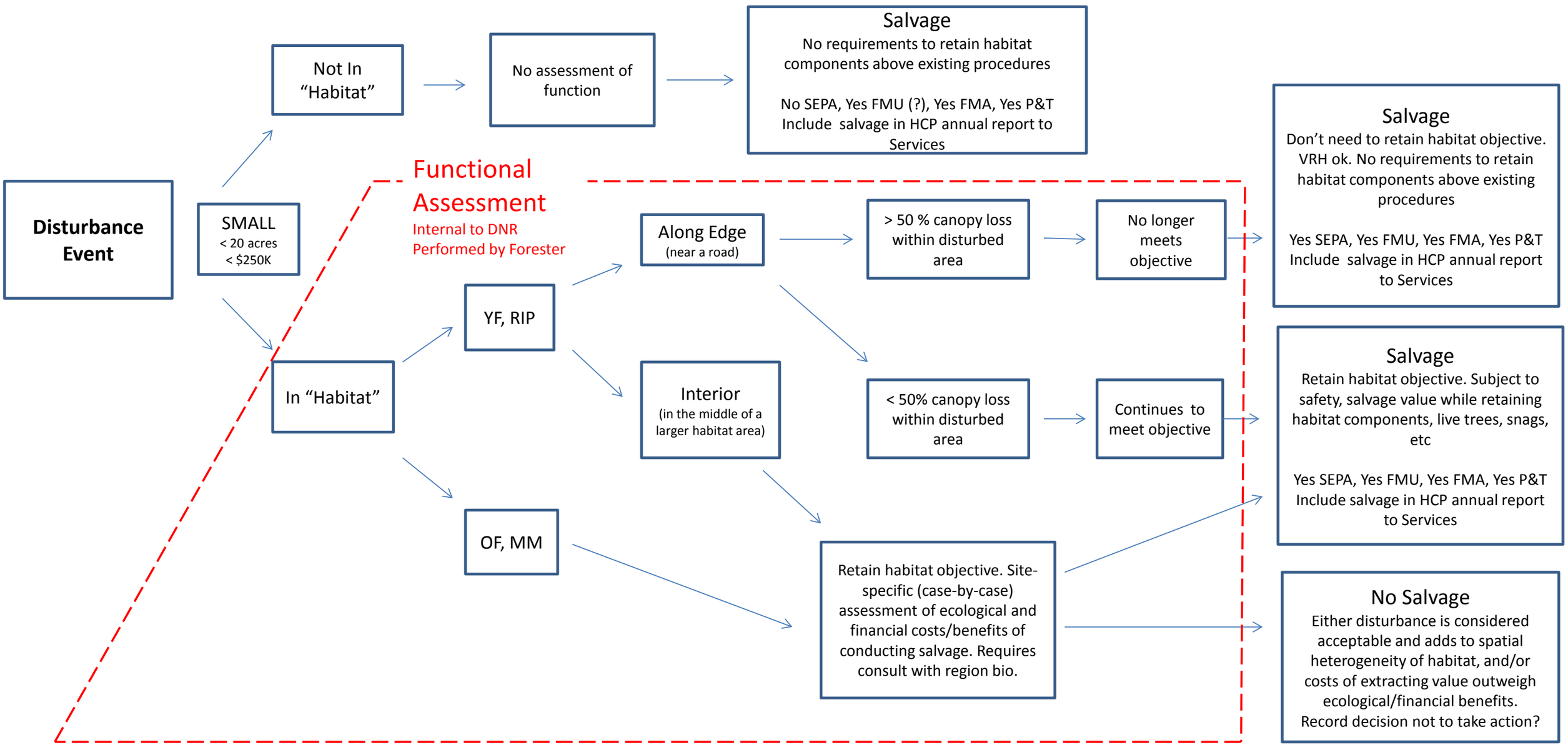
Attachment A: Draft Micro Scale Disturbance Events



Direct sales according to RCW 79.15.050, a sale of valuable material worth less than$20,000 may be sold to an applicant for cash at full appraised value without notice or advertising. The Board of Natural Resources must, by resolution, establish the value amount of a direct sale not to exceed twenty thousand dollars in appraised sale value, and establish procedures to ensure that competitive market prices and accountability are guaranteed.

If the disturbance event occurs in an old growth stand, the trees should be left as large woody debris unless they are not in a suitable location i.e. fell in a road, or if region staff determine the risk of theft is high. If old growth blowdown is removed, prior notification to the Board of Natural Resources is required as described in PR 14-004-045.

Attachment B: Draft Small Scale Natural Disturbance



Attachment D: Salvage Sale Assessment in Habitat

The purpose of this salvage assessment is to document salvage sales and collect data as part of the OESF information management commitment. The guiding principle is to attempt to retain as much habitat components that is practical.

Why is the salvage sale proposed?

1) Which habitats types were/are found within the salvage activity?
   a) Young Forest Habitat
   b) Riparian
   c) Wetland (forested, open, bog)
   d) Old Forest habitat
   e) Marbled murrelet habitat
   f) Other, please describe.

2) What was the severity of the disturbance area?
   a) > 50% canopy loss
   b) < 50 % canopy loss
   c) How was canopy loss assessed? (visual, measurements, fly-over, other means)

3) Describe the location, size, and severity pattern of the disturbed area. Describe existing roads and other relevant features. Include a map.

Does the salvage sale retain or revise habitat objectives?

4) Describe the remaining stand characteristics within the salvage sale for each habitat type?

5) Which habitat components should be retained in the salvage sale? (for example remaining lives trees, snags, down wood, undisturbed patches) Identify areas on the maps.

6) Will the salvage sale change the stand objectives? If yes, please provide rationale and the new stand objectives?

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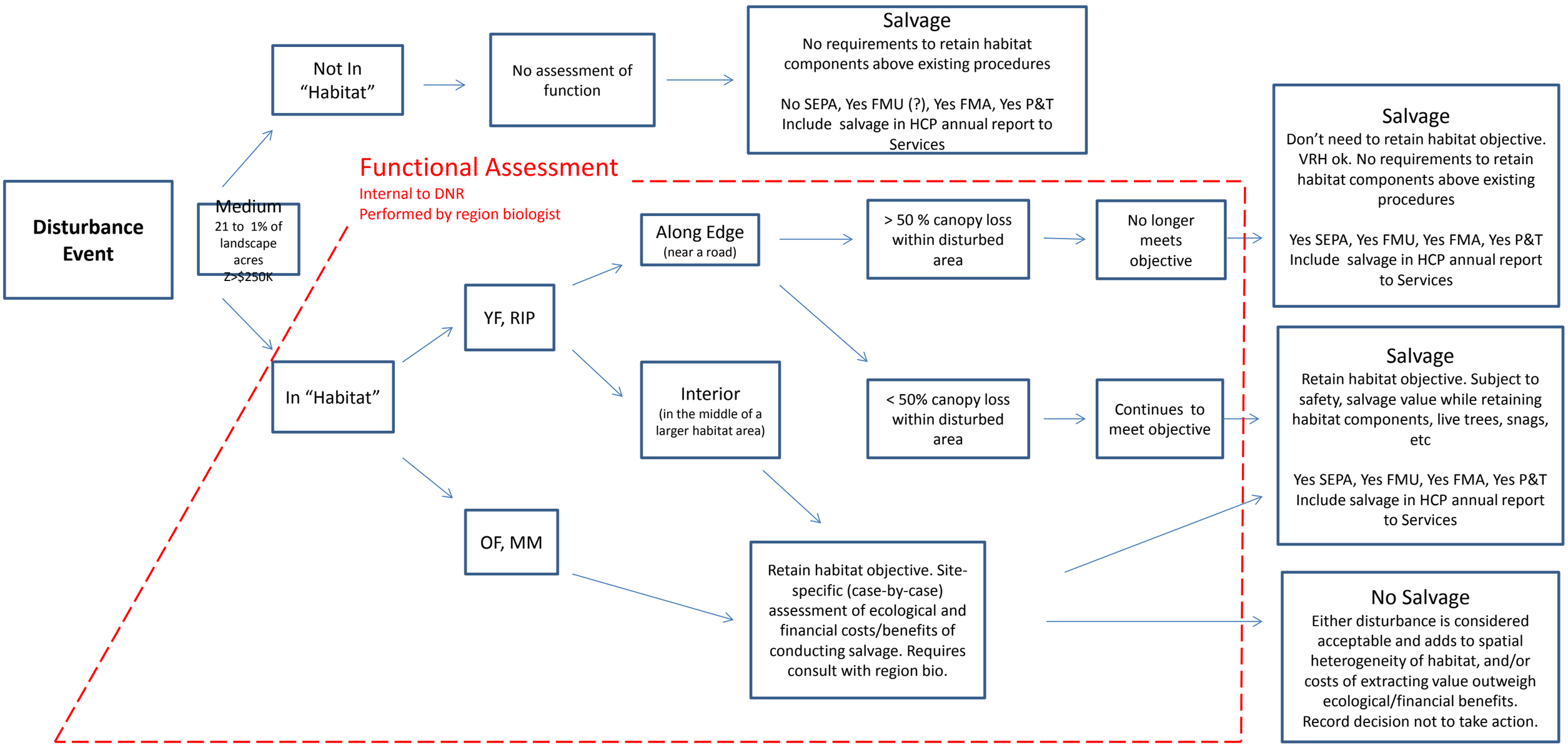
Attachment C: Draft Medium Scale Natural Disturbance