

Response to Comment G6-23

As described in the Plan, studies done throughout North America indicate that clearcuts may have a negative effect on salamander numbers. However, this information is primarily related to terrestrial plethodontid amphibian species and, as such, has no direct relevance to this Plan. The covered amphibians in this Plan are both closely tied to aquatic or riparian habitats and should not be directly impacted by adjacent even-aged management, as would the terrestrial amphibian species cited above. Therefore, the USFWS does not believe that the ESP approval criteria (see EIS section 1.3 and Master Response 8) require any change to the Operating Conservation Program's riparian widths. See Master Response 18.

Response to Comment G6-24

The decision whether, or if, to include species, such as the Northwestern pond turtle, as covered species is at the discretion of the Permit applicant. Here, Green Diamond elected to include six aquatic species (see AHCP/CCAA Section 1.3.3) but has elected not to seek ESA Permit coverage for the Northwestern pond turtle, which currently is not federally listed under the ESA.

Response to Comment G6-25

The summary of pool-tail out embeddedness estimates for Plan Area streams are shown in Tables C1-2 through C1-8 in Appendix C1 the AHCP/CCAA. The percent fines were not measured directly during the habitat typing surveys. The embeddedness of the channel substrate in pool-tail outs provides a gross indication of the amount of fines present in spawning gravels. However, the embeddedness estimates tend to be subjective, are imprecise and typically are not verifiable. Because of these limitations, it would be inappropriate to apply statistical significance to these indirect measures.

Response to Comment G6-26

The Plan presents data in Appendix C-1 on stream assessments that include an index of embeddedness, but no direct measures of this variable. In addition, these data were collected for fish bearing reaches

of streams, which generally do not include the headwater stream segments in which tailed frogs and torrent salamanders are found. As described in AHCP/CCAA Section 3.2.2.1, Diller and Wallace (1996 and 1999) found that both amphibian species tend to be associated with streams that have fewer fines and less embeddedness. Consequently, the Operating Conservation Program includes numerous measures to reduce fine sediment delivery into streams throughout the Plan Area. See, for example, AHCP/CCAA Section 6.2.3 regarding road management measures, and Section 6.2.4 regarding harvest-related ground disturbance measures. Observations throughout the Plan Area indicate the largest source of fine sediments is from roads, which is why the Plan is focused on reducing sediment production from roads, and that focus is correlated very well with the life history requirements for the covered amphibian species.

Response to Comment G6-27

The commenter appears to have misinterpreted or misapplied the results from the habitat typing surveys. The overstory canopy cover values that the commenter extracted from AHCP/CCAA Appendix C1 are from habitat typing surveys. During these surveys, the overstory canopy density is measured in the middle of a stream habitat unit. The stream itself typically is non-forested environment, however the riparian vegetation grows along its edges. One would not expect to have 100 percent overstory canopy cover over an entire stream, especially as the width of the stream increases downstream. The canopy cover from the habitat typing surveys does not reflect the canopy cover of the adjacent riparian area. In most cases, the riparian zones exceed the minimum canopy closures necessary to allow harvesting to occur as part of the riparian conservation measures. If the minimum overstory canopy requirements are not met then the canopy cover in the riparian zone will not be reduced during harvesting operations; in such a case, the riparian zone will de facto become a no-cut area.

Habitat typing surveys were not performed in Redwood Creek or any of its tributaries within the Plan Area in connection with preparation of the Plan. The data for the Blue Creek and Mad River HPAs are presented in the Plan in Tables C1-4 and C1-7, respectively.

Response to Comment G6-28

See response to Comment G6-27.

The Services are not aware of any quantitative data for stream

G6-27 **Canopy cover on streams.**
Why are these numbers below 85% Canopy Cover. 5 out of 11 HPAs under the 85% Canopy Cover threshold. 5 HPAs have under the 85% threshold, 3 have no data, why? And only the main stem of the little river exceeds the threshold. Do you see red lights?

Figure 1. Stream Canopy Covers.

Watershed	Conifer Cover	Canopy Cover	85% threshold	(B) Index LWD Vol. vs. WA
Smith HPA	2-7%	63-94%	Under	All below line
Costal Klamath HPA	3-27%	71-97%	Under	4 out of 5 above the line
Redwood Cr HPA	no data	no data		
Blue Cr HPA	no data	no data		Under the line
Little River main stem	13%	95-99%		
Little River Tributaries	23-33%	73-74%	Under 3X times	4 above the line
Slide Creek	77%	38%	Under 2X	
NF Mad HPA	5%	73 - 91%	Under lacks conifer	both points under
Mad River HPA	no data	no data		
EEL River HPA	?	7- 87%	Under to such an extreme	
Sub Watersheds				
			% conifer	% deciduous
Mcgarvey Cr	8%	89%	Hunter Cr	7% 80%
Tenver	25%	36%	Bear	7% 78-88%
Hoppah, High Prairie	>20%		Sulpher	6% 89%
West Fork Howe Cr	5% small	87%	Ah Paha	11% 93%
Salmon Cr	17% medium	83%	Tarup	7% 97%
Ryan Cr	32% large value	68%	Blue Cr	34% 42% WF 6% 87%
Dominie Cr	class 2 BACHI study	95%	Potato Patch	10% 90%
Winchuck Cr		86-94%	Roach Cr	28% 72%
Maple Creek Windy Point		69-74%	Morek	34% 66%
Dry Cr	25%	73-81%	Cappel	41% 59%
Wilson Cr	17%	83%	Tully	8% 92%
Stevens Cr	29%	71%	Robbers	8% 92%
Howe Cr	19%	81%	Johnson	3% 97%
Lindsay Cr	21%	79%	Pecwan	31% 69% EF 24% 76%
Long Prairie Cr	13%	87%	Tetah	11% 86%
Railroad creek	31%	69%	Mettah	17% 83%
Mainstem little river	16%	84%	Sf Mettah	22% 78%

G6-28 Is it possible to have an average canopy closure of 85 - 70% by increasing the buffer width into stream side forests until the 85 - 70% numeric value is achieved? Those streamside forests must remain no cut zones until the riparian canopy closure reaches the numeric of 85 - 70%. Where is the data on stream vegetation by type species present or absent like figure 7 in the appendix? Where is the data like Figure 13 Map of the lack of large closed canopy vegetation in the Lower Klamath River Valley? The canopy cover needs to be clipped to the stream buffer to get forest type cover in the stream buffers proposed. The Final AHCP/CCAA must have conclusions based on actual data presented in the appendix and any similar data property wide. The Final AHCP/CCAA must have the analysis and data reported.

G6-29 I see a trend of high canopy cover is relative to low conifer cover. If the conifer covers are low in winter months how much radiation from sunlight is reaching the habitats of the amphibian covered species? I also see a trend of Sub-basin watersheds have an even number under the 85% threshold as are over the threshold.

G6-30 **Percent increase in sediment discharge.**
In Redwood Cr "4% of erosion was caused by sheet and rill erosion."
"Long term increase in sediment delivery from clear cuts 1.25 - 4 times the background" amounts.

vegetation by species for this area. The information obtained from habitat typing surveys conducted to date obtained the percent overstory canopy closure (density) and overstory canopy cover by type (deciduous or conifer) and is provided in Tables C1-2 through C18 in Appendix C1 of the Plan. The cover type assessment does not break down the deciduous or conifer tree percentages by species (e.g., percentage of fir, or percentage of madrone, etc.).

Response to Comment G6-29

On streams with a high proportion of deciduous trees (e.g. red alder), the amount of sunlight reaching the stream in winter does increase. This provides a direct benefit to tailed frogs since the larvae feed on diatoms, which require sunlight to grow. In winter, it is not likely that there would be concomitant negative effects from increased sunlight on water temperature or microclimate. Increased sunlight reaching the stream also is a potential temporal benefit to tailed frogs in summer, but the benefit of increased diatomaceous growth may be offset by increased water temperature or altered microclimate.

The influence of increased deciduous riparian vegetation is not as easily predicted for southern torrent salamanders. Streams in which torrent salamanders are found depend on allochthonous energy inputs, and the leaves of red alder are easily decomposed and high in nitrogen. Therefore, it seems likely that increases in deciduous riparian vegetation would increase the productivity of the aquatic system without negative impacts on water temperature or microclimate. However, this has not been investigated and any conclusions are highly speculative. Therefore, the Services do not believe that the information provided can be used reliably to describe “trends” as the commenter suggests

Response to Comment G6-30

The analysis presented in AHCP/CCAA Appendix F was not presented for application directly to any particular THP in order to evaluate compliance with any applicable standard, such as the Basin Plan’s Action Plan for logging, which provides that turbidity shall not be increased above background levels. That provision applies to discharges from specific timber harvesting operations. The analysis in Appendix F

was meant to provide an indicator of how sediment inputs occur generally and to evaluate different sediment control measures. In any case, approval of the Plan and issuance of the Permits would not excuse Green Diamond from otherwise applicable legal requirements. The State and Regional Water Quality Control Boards would continue to have the same authority to regulate water quality before and after Permit issuance.

Response to Comment G6-31

Green Diamond's activities in the Plan Area will continue to be subject to the Water Quality Control Plan for the North Coast Region (the "Basin Plan") and other applicable laws, regulations and policies (See AHCP/CCAA Section 1.4.2.). Green Diamond is responsible for compliance with these other applicable law and regulations. The State and Regional Water Quality Control Boards would continue to have the same authority to regulate water quality before and after issuance of the Permits. The analysis presented in AHCP/CCAA Appendix F was not presented for application directly to any particular THP in order to evaluate compliance with any applicable standard, such as the Basin Plan's Action Plan for logging, which provides that turbidity shall not be increased more than 20 percent above naturally occurring background levels and which applies to discharges from specific timber harvesting operations. Instead, the analysis in Appendix F was meant to comparatively analyze average long-term sediment delivery under a variety of management scenarios and conservation measures.

Rate of harvest and peak flow issues are discussed in Master Response 11.

Response to Comment G6-32

See responses to Comments G6-30 and G6-31.

Response to Comment G6-33

The objective is not to allow a certain percentage of sediment delivery, but to reduce deliveries by 70 percent of the level that

G6-30

This is an increase from 125% to 400% in sediment delivery. Simpson states "Most likely to equal 2.0," which is 200%. (Source from section F 1.2.1.5.1 page F-14) Does everyone see that Simpson is admitting to exceeding the basin plan threshold of 20% sediment; if Simpson continues to use clear-cut silviculture prescriptions?

G6-31

Roads also have an effect on the runoff that causes peak flows to occur. "For roads before storm proofing, road-related inputs are calculated as 20% increase in sediment input over background rates for each percent of the watershed area occupied by roads. After storm proofing each percent of road area contributes a 4% increase." (Addendum Reid 2000) The thing is that the Water Quality Control Board's Basin Plan requires that any discharge of sediment that is above the 20% of background levels is a nuisance and could result in the permit or non-permit of waste discharge requirements as well as cleanup and abatement orders. If a non-permit of waste discharge requirement were posted then the activity such as road building or timber harvesting would be prohibited until such a time that the levels fall below the 20% threshold.

Figure 3. EROSION INCREASES

Un-storm proofed roads	20% ¹
Storm proofed roads	4%
Rill and sheet erosion	4% ¹
Management related (THP)	30-300% ²

No Harvest Activity 8% increase in sediments above background levels.

1. Addendum Reid 2000
2. AHCP/CCAA 5.3.1 P.5-7

G6-32

The minimum cumulative Percent is 38% increase in sediment yields. The maximum cumulative Percent is 324% increase in sediment yields. Simpson's minimum figure of Management related activities producing 30% increase in sediment is above the basin plan threshold of 20%. With this fact Timber harvest would cause sediment increases beyond the allowable limit of the basin plan.

G6-33

Section 6.1.2 2.4 states that; Simpson's target is to achieve 70% reduction in sediment delivery from management related landslides. As an objective it still allows for 30% sediment delivery from management related landslides.

G6-34

The AHCP/CCAA must have the words added to say Simpson "Or Contractors" to the sentences in sections (6.2.3. 13.4), (6.2.3. 14.1), (6.2.3. 14.2).

Figure 4 TMDL Study of Sediment Sources

Sediment Study	Years of Study	Harvest Related	Other Management	Natural
Redwood Cr	1954-1980	17%	44%	40%
Van Duzen	1955-1999	18%	10%	72%

G6-35

The TMDL study of sediment sources for redwood creek is 8% for tributary landslides 8% for bare ground erosion, 15% road and skid trail, 8% road related landslides and 22% for road gullies. The TMDL study of sediment sources for Van Duzen is Clear Cut Tractor 11%, Clear Cut Cable 3%, Partial Harvest was 2%, Advanced 2nd Growth was 2% the skid trails was 5% and roads 5% of the sediment contributed. (WNC 2001) This analysis shows sediment production rates that are doubled above natural background amounts in redwood creek a clear violation of the water quality basin plan. What is the fate of the other watersheds in the plan area?

G6-36

Suspended sediment is the single most important dependent variable for assessing potential cumulative impacts attributable to the rate of harvest. If not addressed here, where and when will it be scientifically addressed so that all watersheds have suspended sediment monitoring and analysis. No watershed should be allowed any timber harvest until waste discharge reporting and monitoring are conducted on all timber harvest plans commenced after the date of signing the AHCP. The AHCP has no data on suspended sediment amounts or duration of time at elevated harmful suspended sediment amounts. Simpson and the Forest Science Project has collected suspended sediment amount data so the final AHCP must have the data collected to date published and an analysis of that data.

G6-37

The Pacific Lumber's partial Van Duzen watershed analysis indicated the following. In the

would likely result from clearcutting these areas. The ESA requires an ITP applicant to minimize and mitigate the impacts of take to the maximum extent practicable and to ensure that any such take will not appreciably reduce the likelihood of survival and recovery of the species in the wild. Implementation of Green Diamond's Operating Conservation Program (AHCP/CCAA Section 6.2) is expected to meet these requirements. See AHCP/CCAA Section 5.7 and Master Response 3, regarding consideration of project impacts of Plan approval and issuance of the Permits, and Master Response 8 regarding Permit approval criteria.

Response to Comment G6-34

AHCP/CCAA Section 6.2.3 contains the road management measures, but it is not possible to understand what, specifically, the comment refers. However, contractors are in some cases employed for road construction and repair. Green Diamond will be held responsible for any work performed by contractors in implementing the Plan. There is nothing unique about road management that compels inclusion of "Contractors" in that Section, and to add it would seem to imply that other Plan measures do not apply to Green Diamond when carried out by contractors, which would not be correct.

Response to Comment G6-35

As noted, the Plan recognizes the status of certain waterbodies in the Plan Area as being listed pursuant to the CWA as water quality limited for sediment (AHCP/CCAA Section 4.3.6, Table 4-3). Conditions in other watersheds in the Plan Area are discussed on an HPA-by-HPA basis in AHCP/CCAA Section 4.4. As discussed, the Plan's measures provide efforts to reduce inputs from existing sediment sources on Green Diamond lands within these watersheds and will thereby contribute to the goals of the TMDL program.

Response to Comment G6-36

Appendix F of the Plan presents sediment studies and modeling efforts, including an assessment of long-term sediment production with and without the Plan. Suspended sediment also is addressed in AHCP/CCAA Section 5.3, regarding sediment transport processes and

AHCP/CCAA Section 5.3.4 regarding potential effects on covered species. The Plan includes measures to reduce all sediment inputs (see AHCP/CCAA Section 7.2.2) and proposes to conduct turbidity monitoring within each of the four experimental watersheds (AHCP/CCAA Section 6.2.5.1.4). Turbidity monitoring will be used to measure the road-related fine sediment inputs to Plan Area streams, and evaluate the effectiveness of the road upgrading measures in reducing these inputs. Permanent turbidity monitoring stations within the experimental watersheds (see AHCP/CCAA Sections 6.2.5, specifically 6.2.5.4) will integrate the effects of all upstream sources.

Contrary to the assertion in the comment, the Forest Science Project has not collected suspended sediment or turbidity data and Green Diamond just recently began collecting these data. At the time the Plan was prepared, Green Diamond was not collecting suspended sediment or turbidity data. Green Diamond currently is collecting these data in select watersheds and sub-basins. However these are long-term monitoring projects, and their results will not be available for approximately five to ten years.

Response to Comment G6-37

See Master Response 6 regarding the relationship between this Plan and the Pacific Lumber Company HCP. A portion of the Van Duzen River does flow through the Eel River HPA (AHCP/CCAA Section 4.4.11). The Operating Conservation Program (AHCP/CCAA Section 6.2) includes measures to control sediment from roads and skid trails (AHCP/CCAA Section 6.2.3) as well as from harvest-related ground disturbance (AHCP/CCAA Section 6.2.4) and other possible sources. The ESA does not require that any particular measure or set of measures be adopted, but that the ESA Section 10(a) Permit issuance criteria discussed in EIS Section 1.3, AHCP/CCAA Section 1.4.1 and Master Response 8 be met. The Services believe that the Plan, as a whole, including its sediment control measures, meets these requirements.

Response to Comment G6-38

The commenter can review the recorded water temperatures of individual monitored streams, which are provided in Appendix C5.1 of the Plan. Of approximately 400 temperature profiles in 108 Class I streams or stream reaches and 210 profiles in 70 Class II streams, a small fraction exceeded the suggested MWAT threshold of 17.4°C.

The water temperature data were collected before the draft AHCP/CCAA was prepared, so the sites were not inspected to determine the potential cause of the elevated water temperatures following the protocols outlined in the Plan. However, there were several patterns associated with these sites that suggest several potential causes. To begin with, many of the sites with higher water temperatures were low in the watershed where late season flows were reduced and in some cases the individual reaches were cut off from flowing water and were essentially “ponds.” Several other high water temperatures were associated with the lower reach of a stream where flood waters during the previous winter had scoured riparian vegetation immediately adjacent to the stream banks. Another example of high water temperatures was found in areas where streams flowed through natural open prairies. Although there were likely other factors such as aspect, elevation and distance to coast that contributed to the elevated water temperatures at these sites, it was not apparent that riparian buffer width or adjacent road conditions were in any way related. Quantitative information on either of these factors is not available at any of the sites where higher water temperatures were recorded.

The Services believe that, overall, the Plan meets the requirements for issuance of the ESA Section 10 permits (see Master Response

lower domain from Grizzly Creek to the confluence of the Van Duzen with the Eel, potentially controllable sediment yield accounts for nearly 36% of the total lower watershed yield. The controllable sources include road and skid trail sources (16%) and timber harvest related sources (20%). Table 9 and Figure 5 indicate potentially controllable sediment yield accounting for nearly 36% of the total lower watershed yield. This figure for controllable yield is the highest in any of the three domains. Controllable yield in the upper domain is estimated at 20% with controllable yield in the lower domain at 16%. Over the 44 year analysis period, potentially controllable sediment sources in the lower watershed totaled 2,505,500 cubic yards.

Temperature

Section 5-24 states; “A few isolated streams or reaches have waters temperatures that could cause local decline in populations of the covered species.” Where are these reaches and streams? What is the status of the road conditions near these areas. These streams or reaches must be afforded the simplified prescription strategy. Any stream that has lethal conditions for salmon must have maximum no cut buffer widths of 200, 150 and 30 feet.

Figure 2. Temperature Thresholds

	Red	Yellow	Class	Years
Smith HPA	0	1	2	
Blue Creek HPA	0	2	2	
Costal lagoon HPA	0	2	?	
Interior Klamath HPA	0	1	2	2000
Costal Klamath HPA	0	0,3 on line	1	
Redwood Creek HPA	1 on 1	1 on 1, 2 on class 2		
Little River HPA	0	1	1	
Mad River HPA	6	2,1 on line 1		
NF Mad HPA	0	1	1	
Humboldt Bay HPA	2	0	1	
EEL River HPA	2	1	1	

All streams but Humboldt Bay HPA and the Coastal Klamath HPA have yellow lights. In the northern HPAs the class 2 streams and in the southern HPAs class 1 streams are the ones having problems. Redwood Cr, Mad River, Eel River HPA and the Humboldt Bay HPAs all have Red light Maximum average weekly temperature exceeding the threshold.

Herbicides

“Simpson would not use herbicides within WLPZs along CLASS I watercourses or within the ELZs or WLPZs of Class III watercourses where water is present.” The problem is contractors not Simpson use herbicides. The AHCP/CCAA MUST STATE; “CONTRACTORS” will not use herbicides when water is present. p.13 of 002 2.1.3.4 Hardwoods section.

The AHCP must state that if herbicides are used to kill more than 90 sq feet than the area must be treated to prevent erosion.

Conclusions

1. Sediment increases without management
2. Buffer widths must be maximized to have properly functioning habitat.
3. Where and what type of habitat is the AMRA forest bank?

The data provided in many figures did not say that the listing is all the data available. Is there data not supplied in the AHCP? Missing Mapped data include: Stream temperature points of (7DMAVG). Potential and water drafting locations. Locations of potential yarder corridors through riparian buffers. Maps of road type densities, crossing density, connectivity sites viewed by sub-watershed area. Maps of quarries near class I streams. The visibility of turbidity standards on rock quarries in the AHCP/CCAA must be monitored using interments and quantitative amounts.

8) and, therefore, that no change is required in the AHCP/CCAA's proposed use of the measures that are the subject of this comment.

Response to Comment G6-39

Green Diamond has not proposed to include herbicide use as a covered activity (see AHCP/CCAA Sections 1.3.4 and 2), therefore no Permit coverage will be authorized for use of herbicides. The Services believe that programmatic consultation with the EPA on pesticide registration is the appropriate place to address impacts associated with application in accordance with label restrictions. However, comments regarding herbicide use are addressed in Master Response 4.

Response to Comment G6-40

Much of the detail sought by the commenter is found in the various appendices to the Plan. The Effectiveness Monitoring Site Map (Figure 6-9 of the Plan) did not include all of the monitoring activities described in the Plan because, as described in the Plan, some of the monitoring sites have not yet been established but will be as the Plan is implemented. Additionally, some locations cannot be shown effectively on a map at a scale that could be feasibly included within the document. In addition, it was infeasible to include all of the existing temperature monitoring sites on Figure 6-9 in the Plan because the high density of sites across the Plan Area which would physically overlap many of the other depicted sites.

Providing maps for many of the subjects that the commenter requested for inclusion into the Plan was not feasible, nor are maps required where the information mapped therein is irrelevant to the Plan analysis. Some of the information, such as connectivity sites, have not yet been collected for the entire Plan Area. Green Diamond would be required to collect this information as part of the road assessment process as it develops. The information will be retained in a database for use during road implementation plan projects. Maps of road type densities and crossing densities could be mapped once the road assessments are completed.

Mapping potential water drafting locations and locations of potential yarding corridors through riparian buffers would not be useful for inclusion into the AHCP/CCAA because they are only potential locations, not actual sites. However, planned water drafting sites that would be used as part of harvesting operations will be mapped by Green Diamond, and available pursuant to the THP process.

There are specific conservation measures proposed and outlined in the Plan that are required as part of activities relating to rock quarries and borrow pits. AHCP/CCAA Section 6.3.3.13. Activities in and around the quarries and borrow pits are treated similarly to the Road and Landing Use Limitations described in AHCP/CCAA Section 6.3.3.9.

Regarding riparian widths, see Master Response 18 and the above responses to comments.

Regarding the adaptive management reserve account, see Master Response 15.

Response to Comment G6-41

The AMRA is set forth in AHCP/CCAA Section 6.2.6.3, and is discussed in AHCP/CCAA Section 6.3.6.2 and Master Response 15. The acreage referred to in the AMRA is located within Green Diamond's ownership. There is no existing map of the AMRA acreage. Regarding marbled murrelet, see response to Comment G5-5. Rate of harvest is discussed in Master Response 11. Road density is discussed in Master Response 17.

Response to Comment G6-42

As discussed in AHCP/CCAA Section 7.4, the measures in the Plan were designed to improve conditions in the Plan Area compared to current conditions and the No Action Alternative. Further, as explained in AHCP/CCAA Section 7.6, each of the potential impacts of incidental take that are summarized in AHCP/CCAA Section 5 would be minimized and mitigated to the maximum extent practicable for the ITP species as a result of Plan implementation. Because the Operating Conservation Program as a whole addresses potential impacts collectively, NMFS expects that the covered activities conducted pursuant to the Operating Conservation Program would benefit all of the covered species in the Plan Area and minimize and mitigate the impacts of taking to the maximum extent practicable.

Regarding the assertion that other measures, such as "no harvest buffers and a reduction of roads and crossings" would be "more positive," the Services note that the selection of specific prescriptions, including whether to include no-harvest buffers of any width or to reduce roads or stream crossings, is a matter of the

G6-41

Is the adaptive management reserve account a forest bank comprised of a-e habitat of Marbled Murrelet that sacrificial for wider RMZ limits? Is this account on Simpson property or is it government property? Where is the map of the acres?

Simpson failed to assess the rate of harvest and road building.

Our analysis IN ATTACHED DOCUMENTS of the cdfdata in this study as well as previous studies affirms that, due to the impaired condition of the watershed, only minimal disturbance from logging or road building should be allowed until the watershed shows signs of recovery.

Bombshell of a conclusion from the AHCP/CCAA

G6-42

1. "The incremental effect on the covered species of implementing the AHCP/CCAA will be positive." The "positive" effect is not as positive as is possible as could be achieved with no harvest buffers and a reduction of roads and crossings. Or is this a negative effect because of ongoing increase in sediment from management related activities. Continued even aged timber harvest using tractors will no be a positive effect on percent fines even if tons on perched fill is kept form failure if a sediment budget is positive on the landscape it has a negative effect in stream.

G6-43

2. The AHCP/CCAA Plan implementation will "not result in negative cumulative effects" is an incorrect aeration as proved by the Percent increase in sediment discharge section of this paper.

G6-44

3. On page 5-22 it states "In Simpson's view, the plan contributes to the maintenance and restoration" (Of ROADS is what it should say) "properly functioning habitat and thereby contributes to the recovery of listed species." Is this the only mention of properly functioning habitat? Is there data to support which streams are functioning properly and which are not? The proof is in the fact that all streams have declined covered species or have been declared impaired by the Regional Water Board.

A significant premise on page 5-7 is that the "plans conservation measures of the AHCP/AACC not only fully minimize and mitigate individual impacts" but will "result in significant improvements in habitat conditions." That is the logic that got all these watersheds in impaired condition.

G6-45

The idea that one could continue to harvest forests at a level in the past that caused degraded habitat conditions to be continued with a average of 1% of the sub-basin with a ten year rolling average. From my analysis Simpson will not change the high level of acres actively harvested. It is not necessarily the number of harvests that causes degraded habitats it is the overall level of activity in a given year over the percent of the watersheds area. In the appendix a-g have many tables oh how much harvesting occurred by the percent of watershed. This average can't be Simpson property solely; it must take into account total harvests in a watershed.

G6-46

I have a problem with the conclusion of C-5.2.2.4 where "timber harvest lowers stream temperatures." The research has not enough data or number of occurrence of studied harvests to make that determination.

REFERANCES

Addendum: Review of Freshwater Flooding Analysis Summary. Dated 25 October 2000
Thomas Lisle, Leslie Reid, Robert Ziemer.

Bury 1968 The distribution of *Ascaphus truei* Herpitológica 24(1) p.39-46

Bury 1983 Differences in amphibian population in logged and old growth redwood forest. *Norwest Science* 57:167-178

Vesly D. G., McComb W.C. 2001 Salamander abundance on amphibian species richness in riparian buffer strip in Oregon Coast Ranges.

WNC Networker Summer 2001

FEMAT (Forest Ecosystem Management Assessment Team). 1993 Forest ecosystem management: an ecological, economic and social assessment. Report of the Forest Ecosystem Management Team. 1993-793-071. U.S. Government Printing Office.

Permit applicant's discretion (HCP Handbook at 3-19). The Services' role in designing the conservation program is to "be prepared to advise" during the development of the Plan and to judge its consistency with the ESA Section 10(a) approval criteria as a whole once the application is complete (HCP Handbook at 3-6 and 3-7). The prescriptions Green Diamond has elected to include, with the input of the Services, are set forth in the Operating Conservation Program (Plan section 6.2). The ESA does not require that any particular measure be adopted or imposed, but only that its criteria for Permit issuance (see Master Response 8) be met. The Services believe that the Plan meets these criteria.

This is expected to help test the conclusions of the Plan and adjustments can be made as appropriate within the limit of the AMRA.

Response to Comment G6-43

A discussion of cumulative effects, including the effectiveness of the Operating Conservation Program as a whole, is provided in Master Response 3 and discussed in the response to Comments G4-20 through G4-23, among others. As explained therein, the Plan supports this conclusion.

Response to Comment G6-44

Conditions in watersheds in the Plan Area are discussed on an HPA-by-HPA basis in AHCP/CCAA Section 4.4.

Response to Comment G6-45

See Master Response 11 regarding the rate of harvest.

Response to Comment G6-46

Fortunately, the Plan requires continued data collection and study which would be useful in overall knowledge of timber operations' impacts on certain aquatic species in the vicinity of the Plan Area. The data from the BACI Water Temperature Study are preliminary. This monitoring is in the early phases of a long-term study. Additional monitoring sites are and have been added along with additional post-harvest monitoring on the existing sites to further explore the complex interaction between timber harvesting in small headwater streams and water temperature.

Appendix a-g (Ownership table and graph of harvest [yard/silviculture], watershed total harvest tables, thp maps and roads in buffer maps, new roads map and graph clipped to the Simpson boundary. Photo of costal Trinidad under snow to prove rain on snow event could happen to all the HPAs.)

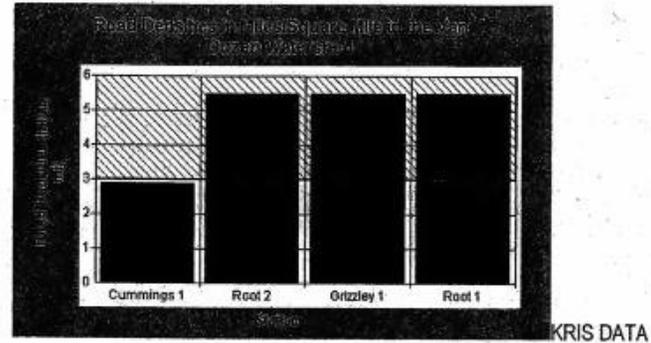


Table 5 Representing a 136% Increase in Clear Cutting Updated 8/12/02 (Van Duzen WA Comments BY LEGACY-TLC)

- Projected 10 year plan for the Van Duzen called for timber management of 4437 acres.
- In a 3 year period from 1999- present, Palco has logged or had plans approved to manage 4222 acres.
- In a 3 year period from 1999 – present, Palco has been approved for clearcutting 2113 acres and submitting plans to clearcut 128 acres for a total of 2241 acres clearcut in the watershed.

Current Riparian Conditions in Van Duzen Watershed

- 28.6% of sites did not meet the PFC target for LWD.
- 98% of the stands in the Van Duzen WAU did not meet PFC targets for LWD recruitment.
- Lethal Stream Temperatures in Grizzly Creek and Van Duzen mainstem.
- 33% of all streams in WAU are not meeting the PFC of 85% canopy cover.
- Buffer zones not wide enough to supply adequate LWD, counter edge effects and moderate temperature via relative humidity and ambient air temperature
- Deficit of organic material and ground cover on over 25% of stream channels studied.

Figure 8 Redwood Cr Basin Estuary	Prairie Creek	Lower	Middle	Upper	TOTAL	
Area (mi.)	5	40	69	100	68	282
Roads (mi.)	58	271	327	461	382	1,499
Density (mi./mi.2)	11	7	5	5	6	5
Acres Harvested	563	3,521	28,654	49,830	16,807	99,058

NICWAP DATA IN FIGURE 8

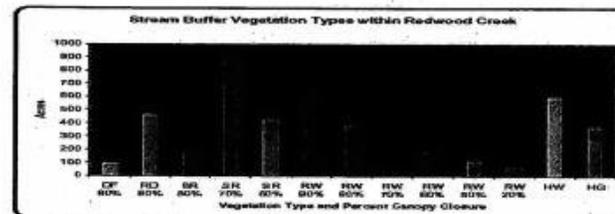


Figure 7: Stream Buffer Vegetation Type and Density Cover.
 *Vegetation type classes are shown as vegetation type and canopy closure is shown as percent.
 Douglas-fir (DF), Redwood - Douglas-fir (RD), Sitka Spruce - Redwood (SR), Redwood
 (RW), AR Redwood species (HW) and annual grassland (HG) have no cover percent.

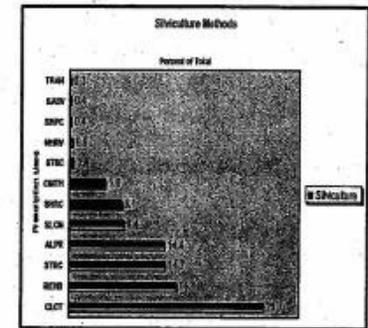
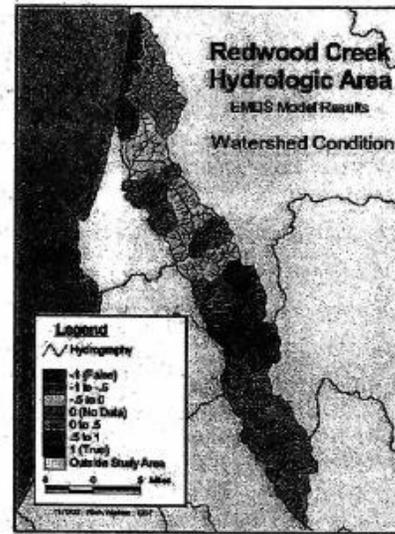


Figure 14. Upper Redwood Creek Silvicultural Methods and Intermediate Treatments, 1985 to 2000.

Notice that clear cutting at the bottom is the largest recent percent. Seed Tree Removal, Alternative, and Rehabilitation prescriptions are often the end result that looks like a clear cut after timber harvest occurs.

Figure 9. NICWAP Program Results Redwood Cr.

Which sub-basins have most of the properties that Simpson management created current conditions shown in the above image?

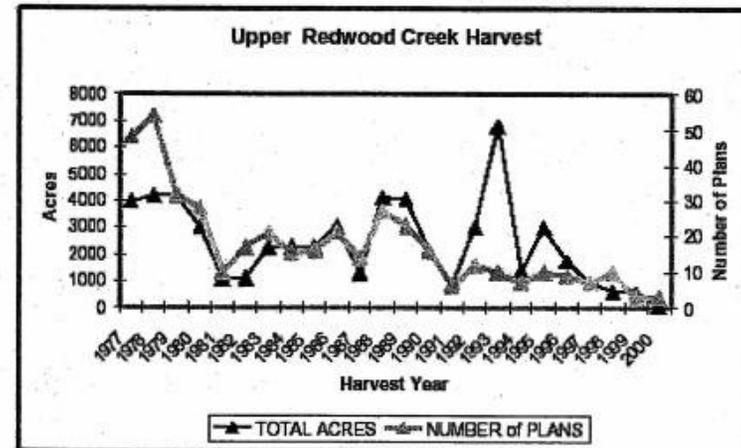


Figure 10. Relation of size harvest activities compared to the number of timber harvest plans.

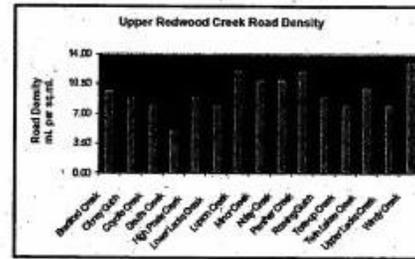


Figure 12 Road Density for Selected Planning Units within the Middle and Upper Reaches of Redwood Creek.

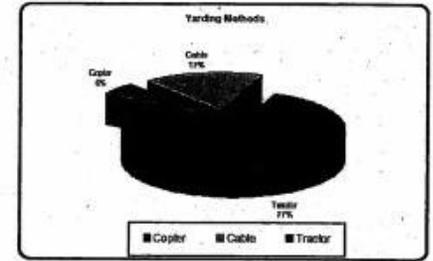


Figure 13 Upper Redwood Creek Yarding Systems Utilized during the period of 1987 to 2005.

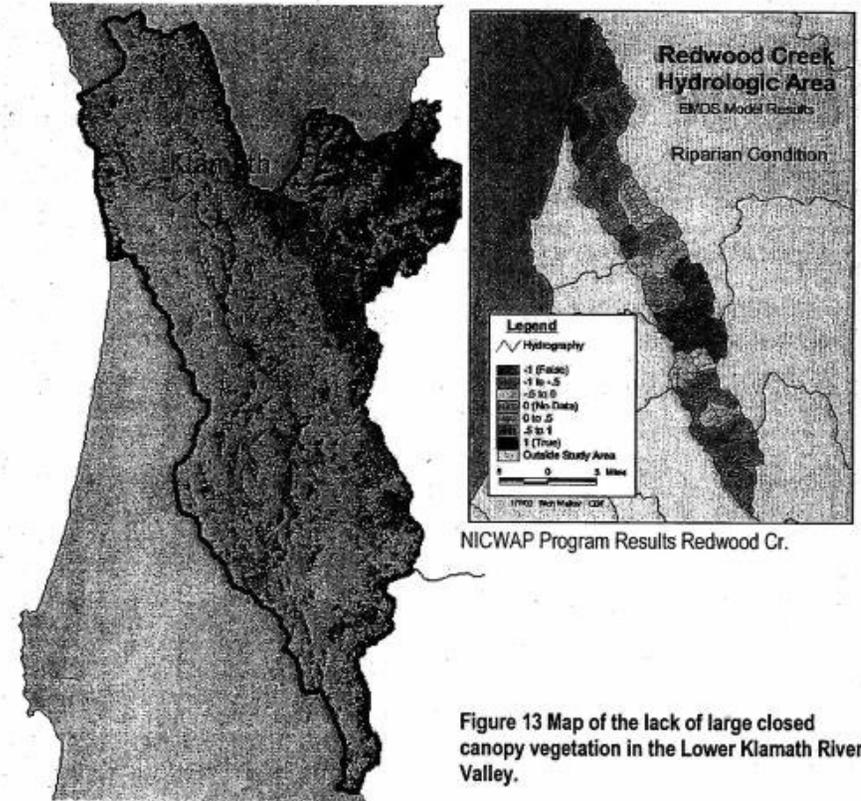
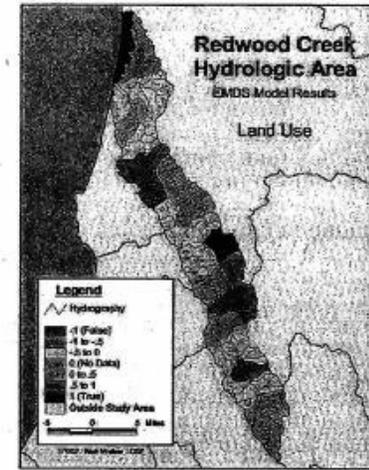
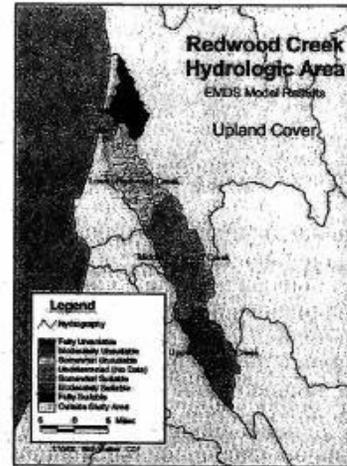
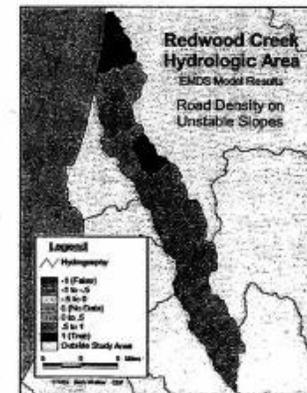
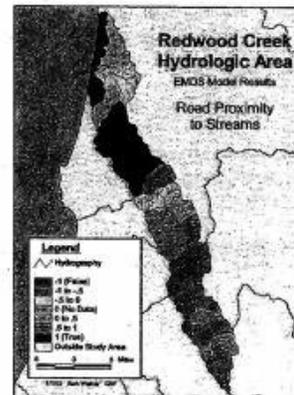
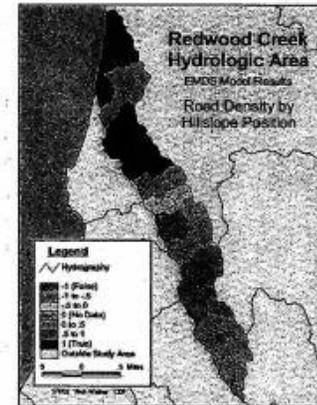
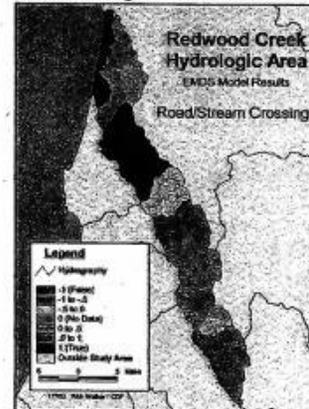


Figure 13 Map of the lack of large closed canopy vegetation in the Lower Klamath River Valley.



NICWAP Program Results Redwood Cr.



NICWAP Program Results Redwood Cr.

Table 8: Cumulative Harvest Percentage of Original Forests Within Redwood Creek, excluding the Prairie Creek Area, for Key Years.

Year	Percent	% Change
1948	5	
1954	21	16
1962	35	14
1978	62	27
2000	64	2

Table 1: Reference Curve Metrics for EMDS Watershed Condition Model.

Watershed Condition Factor	Reference Curve Metric
Canopy	Percent area of riparian vegetation within 200' feet of stream and compared to canopy closure on reference streams.

Riparian Function

Canopy Density Average percent of the thalweg within a stream reach influenced by tree canopy. <50% fully unsuitable.

The curve breakpoints are taken from the EMDS model created by Reeves, Reynolds, et al. for the Coho salmon on the Oregon coast. (Reeves, pers. comm.) For canopy 30% to 70% forest cover outside of the riparian buffer and inside the values are 50% to 85% in order to have properly functioning habitats for salmon.

Table 22: Harvest Rates and Acres Logged within Lower Redwood Creek from 1945 to 1978.

Time Period	Harvest Acres	Annual Average
1945 - 1955	3,593	326
1956 - 1964	9,627	1,069
1965 - 1968	4,365	1,120
1969 - 1978	11,069	1,106

Table 27: Comparison of the Acres Harvested for the Two Subbasins Upstream of the Park Boundary for the Period of 1950 to 1999.

Years	Middle	Upper Subbasin
1950 - 1959	1,960	1,117
1960 - 1969	1,505	741
1970 - 1979	8,553	1,147
1980 - 1989	24,750	13,693
1990 - 1999	3,291	729

Table 32: Comparison of Acres Harvested for the Two Subbasins Upstream of the Park Boundary for the Period of 1950 to 1999.

Years	Middle	Upper Subbasin
1950 - 1959	1,960	1,117
1960 - 1969	1,505	741
1970 - 1979	8,553	1,147
1980 - 1989	24,750	13,693
1990 - 1999	3,291	729

Instream sediment sampling at Highway 299 indicates that the percent of fine materials does not meet TMDL targets, which may indicate the presence of less suitable spawning substrate for salmonids. Historic and recent timber harvest in Middle and Upper Redwood Creek subbasins frequently removed large conifer vegetation down to the stream bank, severely reducing the available recruitment supply of large woody debris. The annual clear-cut equivalent acre calculations were made for each silvicultural methods percent were multiplied by the number of acres of each silviculture where clear cutting, transition, sanitation Salvage, rehabilitation and road right of way were given a 100% of vegetation removal. Shelterwood removal and seed tree removal were given 75% value, and shelterwood prep, seed tree step, selection, commercial thin and alternative prescription were given a 50% value.

Clickxings.shp

Unique Value

Pyzname

Number	Pyzname	Label	Count
•	Ah Pah Creek	Ah Pah Creek	41
•	Bear Creek	Bear Creek	56
•	Bens Creek	Bens Creek	164
•	Cappell Creek	Cappell Creek	68
•	E. Fork Pecwan Cree	E. Fork Pecwan Cree	27
•	High Prairie Creek	High Prairie Creek	34
•	Hoppaw Creek	Hoppaw Creek	13
•	Indian Creek	Indian Creek	64
•	Johnson Creek	Johnson Creek	54
•	Lower Blue Creek	Lower Blue Creek	34
•	Lower Little Pine Cree	Lower Little Pine Cree	11
•	Lower Pine Creek	Lower Pine Creek	25

Fruits & Vegetables

kg1

Clickxings.shp

Unique Value

Spwzname

Number	Spwzname	Label	Count
•	Ah Pah Ridge	Ah Pah Ridge	277
•	Blue Creek	Blue Creek	138
•	Pecwan Creek	Pecwan Creek	284
•	Pine Creek	Pine Creek	143
•	Roach Creek	Roach Creek	324
•	Tully Creek	Tully Creek	267
•	Turwar Creek	Turwar Creek	380

Fruits & Vegetables

Letter - G6

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Clickwings.shp

Unique Value

Firstname

NAME	ORG	EMAIL	COUNT
Lower Pine Creek	Lower Pine Creek	25	
Lower Roach Creek	Lower Roach Creek	32	
Lower Tectah Creek	Lower Tectah Creek	76	
Lower Tully Creek	Lower Tully Creek	1	
Lower Turwar Creek	Lower Turwar Creek	39	
Lower West Fork Hur	Lower West Fork Hur	55	
Mawah Creek	Mawah Creek	71	
McGarvey Creek	McGarvey Creek	87	
Mettah Creek	Mettah Creek	30	
Middle Roach Creek	Middle Roach Creek	10	
Moreck Creek	Moreck Creek	4	
Potato Patch Creek	Potato Patch Creek	40	
Snow Camp Creek	Snow Camp Creek	32	
Surpur Creek	Surpur Creek	108	
Tarup Creek	Tarup Creek	72	
Upper Little Pine Cree	Upper Little Pine Cree	57	
Upper Pine Creek	Upper Pine Creek	18	
Upper Roach Creek	Upper Roach Creek	180	
Upper Tectah Creek	Upper Tectah Creek	53	
Upper Tully Creek	Upper Tully Creek	31	
Upper Turwar Creek	Upper Turwar Creek	72	
Upper West Fork Hur	Upper West Fork Hur	80	

Fruits & Vegetables

Advanced Search Filter

K91

Legend Editor

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Legend: Unique Value

Name

Symbol	Name	Value	Count
●	Arcata	Arcata	49
●	Arcata Bottoms	Arcata Bottoms	3
●	Bary Ridge	Bary Ridge	4
●	Bell Creek	Bell Creek	1
●	Blue Side Creek	Blue Side Creek	3
●	Booths Run	Booths Run	4
●	Boulder Creek	Boulder Creek	11
●	Bracut	Bracut	43
●	Bulwinckle Creek	Bulwinckle Creek	26
●	Butler Valley	Butler Valley	4
●	Camp	Camp	11
●	Camp 12	Camp 12	3
●	Cummings	Cummings	15
●	Dean Creek	Dean Creek	13
●	Eddysville	Eddysville	8
●	Elkhead	Elkhead	4
●	Fields Landing	Fields Landing	4
●	Freshwater Creek	Freshwater Creek	11
●	Gas Wells	Gas Wells	10
●	Goodman Prairie Cree	Goodman Prairie Cree	16
●	Graham Creek	Graham Creek	29
●	Hutchey Creek	Hutchey Creek	15
●	Hydesville	Hydesville	26

Legend Editor

File: Hbavstmp1.shp

Legend: Unique Value

Name

Symbol	Name	Value	Count
●	Hydesville	Hydesville	26
●	Joly Giant Creek	Joly Giant Creek	9
●	Lawrence Creek	Lawrence Creek	17
●	Loleta	Loleta	39
●	Lower Elk River	Lower Elk River	15
●	Lower Jacoby Creek	Lower Jacoby Creek	19
●	Maple Creek	Maple Creek	35
●	McKay Tract	McKay Tract	11
●	Mill Creek	Mill Creek	7
●	Mother Creek	Mother Creek	15
●	Newberg	Newberg	34
●	North Fork Yager Cre	North Fork Yager Cre	40
●	Norton Creek	Norton Creek	12
●	Palmer	Palmer	24
●	Powers Creek	Powers Creek	50
●	Ryan Slough	Ryan Slough	26
●	Salmon Creek	Salmon Creek	4
●	Scout Camp	Scout Camp	7
●	Shaw Creek	Shaw Creek	2
●	Side 8	Side 8	16
●	South Fork Elk River	South Fork Elk River	4
●	Squaw Creek	Squaw Creek	13
●	Strawberry Creek	Strawberry Creek	11

Legend Editor

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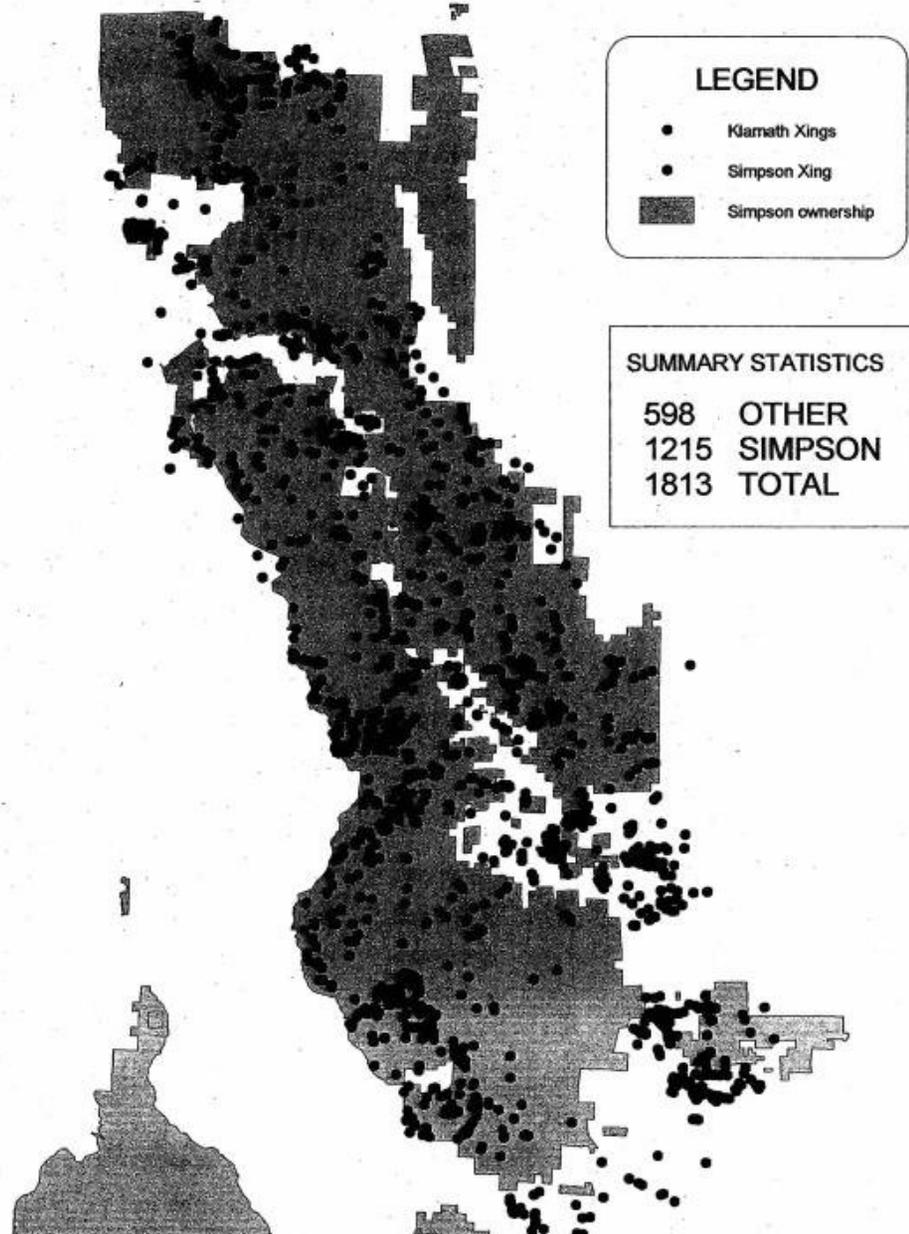
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Name

Symbol	Name	Value	Count
●	Strawberry Creek	Strawberry Creek	11
●	Turkey Foot	Turkey Foot	18
●	Upper Jacoby Creek	Upper Jacoby Creek	11
●	Upper Salmon Creek	Upper Salmon Creek	2
●	Warren Creek	Warren Creek	14
●	Yager Creek	Yager Creek	17

H&A
①

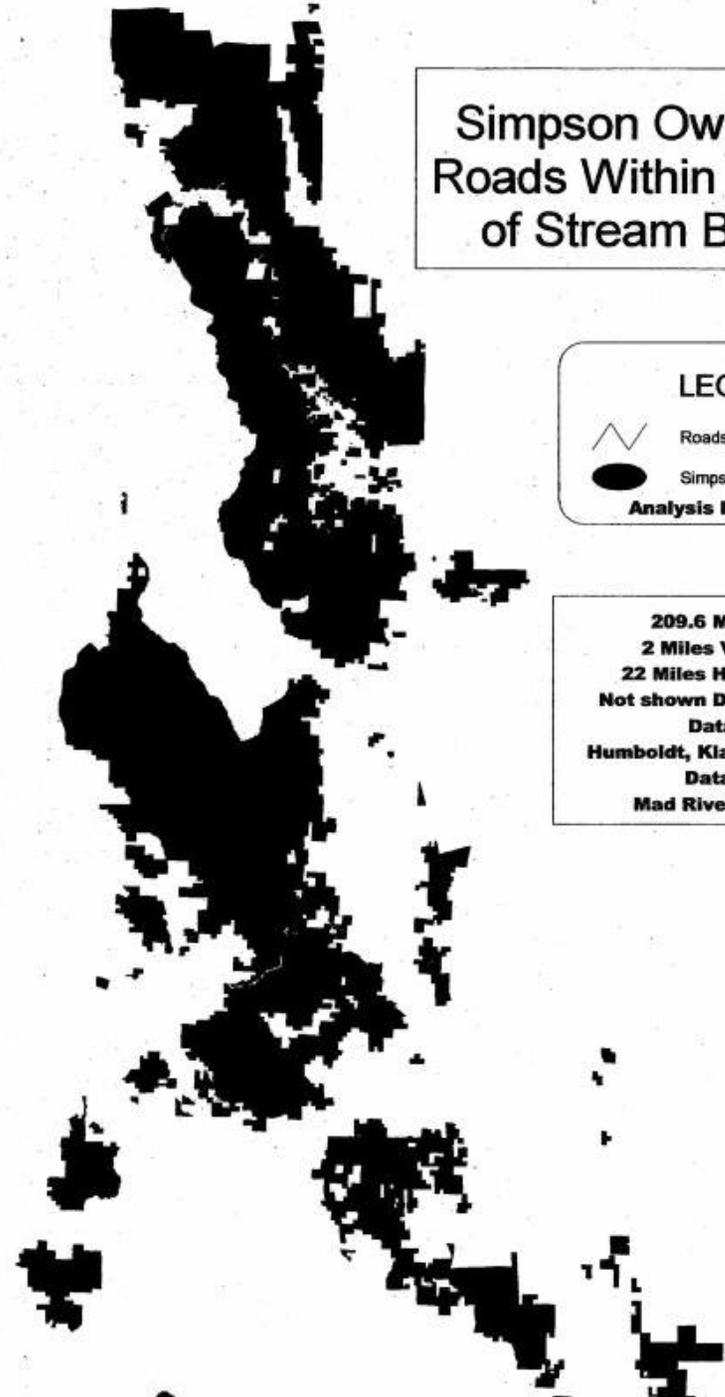
Klamath Glenn Road to Stream Crossing Points



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Dow Jones & Co., Inc.	3,157,600	194,192	.34
Gannett Co., Inc.	1,675,800	129,246	.23
Knight-Ridder, Inc.	1,850,000	117,475	.21
		440,913	.78
Business Services _ 1.97%			
Deluxe Corp.	2,000,000	56,500	.10
Diebold, Inc.	700,000	18,375	.03
Dun & Bradstreet Corp.	4,962,800	145,782	.26
Electronic Data Systems Corp.	3,050,000	178,425	.31
First Data Corp.	5,396,400	246,548	.44
IKON Office Solutions, Inc.	7,285,000	50,084	.09
Interpublic Group			
of Companies, Inc.	2,724,400	110,679	.19
Pitney Bowes Inc.	5,314,500	242,142	.43
Service Corp. International	7,078,000	67,684	.12
		1,116,219	1.97
Leisure & Tourism _ .37%			
McDonald's Corp.	5,000,000	206,250	.37
Merchandising _ 3.60%			
Albertson's, Inc.	20,694,440	751,467	
1.33%			
J.C. Penney Co., Inc.	12,540,500	318,215	.56
Limited Inc.	6,750,000	277,594	.49
Lowe's Companies, Inc.	2,500,000	137,500	.24
May Department Stores Co.	15,870,800	550,518	.98
		2,035,294	3.60
Diversified Telecommunication Services 11.96%			
AT&T Corp.	23,987,500	1,121,416	1.98
CenturyTel, Inc.	670,000	27,093	.05



**Simpson Ownership
Roads Within 75 Feet
of Stream Buffers**

LEGEND

 Roads within 75' of Streams

 Simpson ownership

Analysis By Doug Smith

209.6 Miles Total
2 Miles Van Duzen
22 Miles Humboldt Bay
Not shown Del Norte Roads
Data Rich
Humboldt, Klamath, Redwood
Data Poor
Mad River and Coast

Financial Services _ 3.28%			
American Express Co.	300,000	46,200	.08
Fannie Mae	4,925,000	348,444	.62
Household International, Inc.	24,047,482	1,073,119	1.90
MBNA Corp.	1,396,200	38,570	.07
Provident Financial Corp.	1,947,400	212,267	.37
SLM Holding Corp.	2,750,000	134,578	.24
		1,853,178	3.28
Insurance _ 4.60%			
Aetna Inc.	4,875,005	244,969	.43
Allstate Corp.	25,900,000	744,625	1.32
American General Corp.	7,205,000	534,521	.94
Aon Corp.	12,031,000	427,101	.76
Jefferson-Pilot Corp.	3,700,000	277,731	.49
Lincoln National Corp.	6,050,000	279,056	.49
Marsh & McLennan Companies, Inc.	1,200,000	94,875	.17
		2,602,878	4.60
Total Finance	12,365,990		21.86
Multi-Industry			
Multi-Industry _ 1.86%			
AlliedSignal Inc.	9,300,000	529,519	.94
Dover Corp.	6,350,500	270,293	.48
Minnesota Mining and Manufacturing Co.	2,500,000	237,656	.42
Whitman Corp.	1,050,000	13,650	.02
Total Multi-Industry	1,051,118		1.86
Miscellaneous			

Letter - G7. Signatory -CATs Californians for Alternatives to Toxics.

Response to Comment G7-1

The analysis in the EIS considers impacts (individual and cumulative) associated with the covered activities associated with the Proposed Action, which is issuance of a Federal ITP and ESP. Green Diamond has not proposed to include herbicide or rodenticide use as a covered activity (see AHCP/CCAA Sections 1.3.4 and 2; EIS Section 2.2), nor are the Services required to require its inclusion. Comments regarding herbicide use are addressed in Master Response 4.

Response to Comment G7-2

See Master Response 4 and responses to Comments G2-3 and G3-52, among others.

Response to Comment G7-3

The EIS describes the covered activities (EIS Section 2.2) and addresses the environmental consequences associated with each of the alternatives, including the No Action Alternative and the Proposed Action (EIS Chapter 4). The covered activities do not include operation of lumber mills. The current environmental conditions of waterways within the Plan Area are discussed in EIS Chapter 3. Potential water quality effects of pentachlorophenol or other chemicals from mill operations are not germane to the Services' consideration of the impacts of take on the covered species from the covered activities. Limiting the discussion to the relevant scope is consistent with 40 CFR 1502.15, which states that the description of the environmental setting in the EIS "shall be no longer than necessary to understand the effects of the alternatives."

CATs Californians for Alternatives to Toxics

315 P Street Eureka, CA 95501 USA

phone (707)445-5100 fax (707)445-5151

e-mail: cats@alternatives2toxics.org web site:

<http://www.alternatives2toxics.org>

November 19, 2002

To: Amedee Brickey
Fish and Wildlife Service
1655 Heindon Road
Arcata, CA. 95521

Re: Simpson Resource Company, California Timberlands Division Aquatic Habitat Conservation Plan (HCP) and Candidate Conservation with Agreement Assurances (CCAA) Draft Environmental Impact Statement (DEIS)

Dear Sirs,

Californians for Alternatives to Toxics (CATs) is a public interest organization concerned about the use of and alternatives to pesticides in California. The activities planned for the Simpson Aquatic Habitat Conservation Plan (AHCP) and Candidate Conservation with Agreement Assurances (CCAA) and analyzed in the Draft Environmental Impact Statement (DEIS) are of particular concern to our members who have an abiding interest in the effect of herbicides and other pesticides in the forest environment.

G7-1

Simpson states that it did not seek coverage of vegetation control with herbicides as part of the Permits. According to Pesticide Use Reports filed with the Humboldt County Agriculture Commissioner in 2001, Simpson used 3,147 gallons and 400 pounds of pesticides in 2001, including 3 pounds of gopher bait. Does Simpson intend to use gopher bait again? This is a rodenticide, not an herbicide and thus must be included in any future permit applications and attendant assessments and analysis that have to do with herbicides.

G7-2

Due to a recent Consent Decree, the U. S. Environmental Protection Agency will begin conducting consultations about the herbicides most used by Simpson and relating to the impacts of the herbicides in forestry operations to several of the listed endangered species in the areas of Simpson's operations. See attached Consent Decree Californians for Alternatives to Toxics, The Environmental Protection Information Center inc., and The Humboldt Watershed Council, Plaintiffs, vs. Environmental Protection Agency, Christine T. Whitman, Defendants. Case No. C00-3150 CW for further details (<http://www.alternatives2toxics.org/epa.htm>). Simpson and the National Marine Fisheries Service must begin the permitting process when the related determinations are completed and, at latest, when consultations are completed.

G7-3

In describing the current environmental conditions, the probability of contamination with pentachlorophenol at any of Simpson's mills, in particular the mill at Big Lagoon/Redwood Creek, which likely has contaminated the Big Lagoon, was not taken into consideration, nor were the

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Page 2

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CAT#

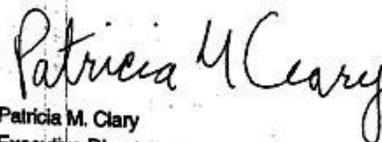
707-445-5151

p. 2

G7-3

probability of contamination with any number of other chemicals, particularly the petroleum hydrocarbons, where the aquatic condition may be affected. We are also aware of a botched clean up of various hydrocarbons at the Corbell Mill that effects Mad River. Contaminated sites must be identified, characterized and analyzed because these sites can have a very significant impact on the base environmental condition and add further stress to the environment and endangered species that must be considered. Because this critical information is missing, the DEIS fails and must be rewritten.

Sincerely,



Patricia M. Clary
Executive Director

Letter - G7

Page 3

2001 PUR

Simpson Timber Co.Pesticide Amounts:

• Aatrex = 161.56B, 30 oz, 332 GA
 172,584 oz } 2,614 oz

• Oust = 3,436.5 oz, 21 GA

• Garlon 4 = 1,779 GA, 52 oz,
 1 lb = 16 oz } 68 oz

• Roundup = 26.5 GA, 128 oz.

• Transline = 72 oz.

• Haster = 5.8 GA, 28 oz.

• 2,4-D = 445 GA

• Herbimax = 342 GA

• Garlon 3A = 8 GA

• Activator 90 = 98 GA

• R-11 = .5 GA

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Page 4

• Gopher Bait = 3 LB \Rightarrow 48 oz.

+ • Arsenal = 26 GA

3,075 GA, 6,394.5 oz

Row:

• Drexel = 5 GA

• Round-up = 21.75 GA

• Garlan 4 = 11 GA

• Activator 90 = 11.5 GA

• Roundup Pro = 12.75 GA

• Glypro = 9 GA

+ • Transline = 1 GA

72 GA

Grand total
+ Row \Rightarrow 3,147 GA, 400 lbs.