Operating Conservation Program and to report to the Services on what actions have been taken. The AMRA, which is discussed in Master Response 15 and set forth in AHCP/CCAA Section 6.2.6.6, will fund adjustments over the term of the Plan and Permits provided that there is sufficient balance in the account to make the change. Therefore, the Plan does provide for changes deemed by the Services to be sufficient and necessary.

Response to Comment G3-75

See Master Response 15.

Response to Comment G3-76

See response to Comment G3-72. The AMRA does potentially constrain implementation of the Plan's adaptive management measures because there is a cap.

Response to Comment G3-77

The Services believe the adaptive management measures and triggers are sufficient to meet the issuance criteria for both the ITP and ESP. The Services provide assurances to land owners in recognition of two fundamental points: 1) implementation could provide many benefits for species and their habitats, including early protection for unlisted species and possibly, prevention of the need to list a covered species in the future; and 2) existing laws often provide insufficient incentives for non-Federal landowners to include species conservation in their day-to-day management activities. See Master Response 19 regarding No Surprises assurances.

Response to Comment G3-78

The Plan's biological goals and objectives (AHCP/CCAA Section 6.1) have been addressed in Master Response 12 and discussed in response to Comments G3-15 through G3-17, G3-22, and others. Just as biological goals and objectives in a prescription-based HCP like this one guide development of specific measures that have been included in the operating conservation program (see response to Comment G3-15), so too will they guide development of revised measures if and when the Plan's adaptive management provisions (AHCP/CCAA Section 6.2.6) are triggered in the

G3-76

Adaptive management changes to the HCP/CCA are further constrained by the plan's use of an "adaptive management reserve account" (AMRA). Any additional adaptive management must be "paid for" from this account; if the account is depleted, adaptive management changes will not be required. The size of this account -- 1,550 acres -- is miniscule in the context of the HCP/CCA, the intensity of Simpson's forest management practices and impacts, and the HCP/CCA's extensive duration, and is unlikely to be sufficient to address many foreseeable adaptive management changes. Indeed, 1,550 acres comprises only 0.3% of the 479,001 acres covered by the HCP/CCA.[40] The HCP/CCA's mitigation measures for the covered amphibians, for example, are particularly likely to be inadequate. However, the upper stream reaches that are important to the amphibians cover a much higher percentage of the plan area than 0.3 %, meaning that the AMRA will severely constrain any adaptive management which might prove necessary for tailed frog and/or Southern torrent salamander.

G3-77

Adaptive management changes are further constrained by the Implementation Agreement's use of "no surprises" guarantees.

Requirements:

Adaptive management "triggers" must be identified for each of the covered species. These should correspond to the biological goals for each of the covered species.

The HCP Handbook states that "thresholds" (i.e., triggers) for adaptive management review should be linked to key elements of the HCP and its monitoring protocol. Further, the thresholds must be based on measurable criteria.[41]

Comments:

G3-78

As discussed above, the HCP/CCA's biological goals and objectives are quite inadequate. Improvements to these goals and objectives must also be reflected by corresponding improvements to the plan's adaptive management triggers (or "monitoring thresholds").

G3-79

The HCP/CCA fails to identify monitoring thresholds for all major relevant habitat variables for each of the covered species.

G3-80

The point of reference for many of the HCP/CCA's monitoring thresholds is fundamentally flawed and likely to be insufficient to avoid substantial impacts to the covered species' chances of survival, much less their chances of recovery. As discussed above, the HCP/CCA's monitoring thresholds for water temperature and salmonid populations are defined relative to existing population levels and/or population levels and habitat conditions found elsewhere in Simpson's young, intensively managed timber stands and watersheds -- rather than population levels and habitat conditions known to be sufficient to achieve recovery of each of the covered

future. Responses to adequacy of the triggers are set forth subsequently.

Response to Comment G3-79

For certain variables (e.g., gravel permeability), data have not been collected for a sufficient time and over a large enough geographic area to understand the range of natural variability. In these cases, thresholds will be established in the future, allowing sufficient time to collect additional data - we estimate this to occur within 3-5 years following issuance of the Permits. In other cases, such as pool-riffle ratios or LWD volume, the response time is sufficiently long (possibly hundreds of years for LWD) that establishing thresholds is impractical relative to the term of the Permits. There is no requirement for the Plan to contain monitoring thresholds for all habitat variables.

Response to Comment G3-80

See response to Comment G3-64.

Response to Comment G3-81

AHCP/CCAA Section 6.2.5.5.3 states that a red light will be triggered if there is "a statistically significant decline in larval populations of tailed frogs in treatment streams relative to control streams in >50 percent of the monitored sub-basins in a single year." A statistically significant decline in the larval population does not mean that the population is extirpated or even imperiled. In fact, this result is just as likely to occur when both populations (experimental and control) are increasing, but the population in the treatment stream is increasing at a lesser rate. In addition, a statistically significant decline does not mean that it is a biologically significant decline. The factors influencing populations are highly complex and a population may increase or decline for demographic or stochastic (random) reasons that have nothing to do with habitat quality.

Regarding populations of southern torrent salamanders and as explained in the AHCP/CCAA Appendix D, Section 1.6.3.1, torrent salamanders appear to exist as a meta-population in the Plan Area with hundreds of known sub-populations and literally thousands that have not yet been surveyed (>538 populations to date with only approximately 25 to 30 percent of the habitat areas surveyed). Many of these torrent salamander sites occur in unstable headwater areas that periodically "torrent." See response to Comment G3-47. These debris torrents have the potential to extirpate the site, but based on information described in the Plan, these sites are typically recolonized in a few years. Therefore, periodic extirpation of a site typically occurs in nature and it would only become a problem if the extinction rates exceeded the recolonization rates. The headwaters amphibian monitoring program in the Plan is designed to insure that extinction rates do

G3-80

species. Existing populations of the covered species and habitat conditions elsewhere in the plan area are likely to be quite degraded due to past and ongoing management practices, and are not likely to be sufficient for the covered species' survival, much less their recovery. Moreover, because the control areas for the HCP/CCA's population and habitat monitoring thresholds for the covered amphibians will be other habitat areas which have been, and which will continue to be, affected by intensive forest management practices similar to those being employed in the areas being "tested," it is entirely possible that populations and/or habitat conditions in *both* the control areas and the "test" areas will continue to decline -- meaning that corrective actions will not be triggered even though the HCP/CCA's mitigation measures are not functioning as intended and substantial impacts to the covered species' survival and recovery are occurring.

G3-81

The plan's monitoring thresholds are also often set at levels which would allow substantial impacts to the covered species' chances of survival, as well as their chances of recovery. For example, one of the "red light" thresholds for tailed frog would require half of the baseline population levels to be extirpated before adaptive management is triggered. Even then, corrective actions might not be triggered, if sufficient agreement is not reached between Simpson and the Services, or within the scientific review panel established by both Simpson and the Services to oversee some adaptive management decisions. Similarly, extinction of subpopulations of Southern torrent salamander is only considered a "yellow light" threshold, and does not trigger a full adaptive management review. As discussed above, the one monitoring threshold which includes an absolute temperature standard also sets the standard well above temperatures associated with healthy habitat for tailed frog and Southern torrent salamander.

G3-82

The HCP/CCA's monitoring thresholds also fail to include stream temperatures which are consistent with the survival and recovery of the covered amphibian species. As noted elsewhere in the HCP/CCA, the covered amphibian species often require cooler water temperatures for their survival and recovery than do the covered fish species.

G3-83

Requirements:

According to the Services' HCP Handbook, "a practical adaptive management strategy within the operating conservation program of a long-term incidental take permit will include milestones that are reviewed at scheduled intervals during the lifetime of the incidental take permit and permitted action."[42]

Comments:

The HCP/CCA fails to include such milestones.

not exceed colonization rates in the Plan Area as a result of the covered activities during the term of the AHCP/CCAA and Permits.

Response to Comment G3-82

Figure 6-11 of the AHCP/CCAA indicates that the headwater amphibian species are currently found in water temperatures that are consistent with studies done in pristine habitats and that are substantially lower than those for the fish species. The thresholds were scaled accordingly so that the headwater amphibians found in small sub-basins have lower thresholds than those for the fish species. For these reasons, the Services believe that the Plan's stream temperature measures are appropriate.

Response to Comment G3-83

The fuller text of the language quoted in part by commenter is set forth in Addendum to the HCP Handbook (65 Fed. Reg. 35242) which says:

"Often, a direct relationship exists between the level of biological uncertainty for the degree of risk that an incidental take permit could pose for that species. Therefore, the operating conservation program may need to be relatively cautious initially and adjusted later based on new information, even though a cautious approach may limit the number of alternative strategies that may be tested. A practical adaptive management strategy within the operating conservation program of a long-term incidental take permit will include milestones that are reviewed at scheduled intervals during the lifetime of the incidental take permit and permitted action. If a relatively high degree of risk exists, milestones and adjustments may need to occur early and often." Id. at 35252.

This Plan provides for biennial reports describing Green Diamond's activities, including any responses to changed circumstances and the prior two years' results of the monitoring program" (IA paragraph 8.1). Further, it provides for annual reviews for the first five years of the Plan and, in the second and fourth years, for field reviews of the implemented conservation measures and technical evaluation of conservation measure implementation (AHCP/CCAA Sections 6.2.7.4, 6.3.7; IA paragraph 8.5). "Milestones" in this context include results and conclusions drawn from these reports, meetings, reviews and evaluations indicating that conservation efforts are proceeding as planned. Moreover, the monitoring element of the Plan contains milestones early and often to validate the Plan's premises, e.g., regarding the control of sediment under the accelerated road program, the efficacy of geologic measures. Under certain conditions, monitoring results can lead to the convention of a scientific review panel, consisting of three independent experts, to provide technical analysis of data and any other relevant and available information, and thereby to assist in the development of a course of action to address adverse conditions (AHCP/CCAA Section 6.2.6.1.2). Accordingly, the Plan contains sufficient milestones at appropriate intervals to comport with the requirements of the ESA and the guidance of the HCP Handbook and its Addendum (65 FR 35242).

Response to Comment G3-84

The scientific review panel will consist of three independent experts. The Services and Green Diamond each will appoint one member of the scientific panel, and together these two experts will select the third (AHCP/CCAA Section 6.2.6.1.2). Moreover, the Services independently and by law may review at any time the functioning of the Plan and compliance of Green Diamond with the Plan's measures and may revoke the permits with cause.

Response to Comment G3-85

See the response to Comment G3-2. Further, evidence in the Plan indicates that the covered amphibian species exist in sufficient spatial distribution and numbers within the Plan Area (see response to Comment G3-81) that additional measures are not necessary to ensure that the conservation measures, in combination with appropriate measures being implemented on other necessary properties, would preclude or avoid the need to list these species in the future. See Master Response 8, regarding Permit approval criteria, and Master Response 19 regarding No Surprises assurances and treatment of unlisted species covered under an ESP.

Requirements:

Adaptive management reviews should be conducted by objective parties that are independent of the permittees.

Adaptive management reviews and proposals should be reviewed by a panel of independent scientists.

Comments:

G3-84

While the HCP/CCA does require participation of a scientific review panel in some extremely limited circumstances (i.e., when Simpson and the Services can not agree on changes needed to respond to "red light" thresholds), the panel's composition will be heavily influenced by Simpson, and will not be sufficiently independent. The panel's independence will be all the more important since failure on the panel's part to reach agreement over proposed adaptive management changes will lead to the non-adoption of the management changes for a period of at least 5 years.

Adequacy of Implementation Measures -- Landowner Assurances and "No Surprises" Guarantees

Requirements:

Any landowner or regulatory assurances should be proportionate (in terms of breadth, duration, etc.) to the probability that the HCP's conservation measures will succeed in recovering abundant, resilient, and well-distributed populations and fully functioning habitats of the covered species, including as noted by the Services' HCP Handbook.

A different level or extent of assurances may be suitable for different species, different HCP elements, different locations, etc., given any differences in the quality of the HCP's conservation measures in relation to different species, different conservation needs, different site conditions, etc.

The duration of assurances should also be limited to time periods during which implementation of the HCP's conservation measures, monitoring, and adaptive management provisions can be guaranteed. The Services' HCP Handbook states that "the Services will also consider the extent of information underlying the HCP, the length of time necessary to implement and achieve the benefits of the operating conservation program, and the extent to which the program incorporates adaptive management strategies."[43]

Comments:

G3-85

The two covered amphibian species (tailed frog and Southern torrent salamander) should not receive "no surprises" guarantees or similar regulatory assurances. The

G3-85

HCP/CCA has failed to include mitigation measures designed for the two amphibian species, and fails to require Simpson to provide populations and habitat conditions which correspond to the species' recovery. Moreover, the HCP/CCA has failed to address the two amphibian species as if they were listed.

G3-86

"No surprises" guarantees should not be given to Simpson for the full 50 year duration of the HCP/CCA, much less into any additional extension periods. As discussed above, the HCP/CCA fails to include adequate monitoring and adaptive management provisions to correct deficiencies in the HCP/CCA's mitigation measures which may develop over time, to address foreseeable changing circumstances, to address changes in Simpson's own forest management practices, etc. Moreover, as noted in the Implementation Agreement, the HCP/CCA is a "prescription based" HCP/CCA that is not necessarily expected to meet specific biological goals. Therefore, it cannot be assumed, especially for extended periods of time, that the HCP/CCA will continue to be sufficient to avoid harm to the covered species' chances of survival, much less their recovery. Indeed, flaws in some of the plan's monitoring thresholds would actually permit conditions to become worse over time without triggering corrective actions. Assurances should be limited to the first 10 years of the HCP/CCA's term, or a comparable period.

Requirement:

Beyond a short initial "time-out" period, assurances provisions must not preclude the permittees' responsibility for adopting modified or additional mitigation measures, as may be identified through monitoring, adaptive management, or other processes which are integral to the HCP's long-term effectiveness and/or ensuring that the Incidental Take Permit and plan will not impact the covered species' chances of recovery over time.

If standard "no surprises" language is used, all potential modifications or additions to the HCP's conservation measures which may be needed over time to address known deficiencies in the HCP's conservation measures, areas where the efficacy of the HCP's measures are known to be uncertain, etc., must be identified inclusively in the HCP as "changing circumstances." The permittee must also be responsible for making improvements to the HCP's mitigation measures to respond to these changing circumstances.

Comments:

G3-87

The HCP/CCA fails to meet these requirements.

The final "no surprises" rule envisioned that HCP/CCAs would identify circumstances which can reasonably be foreseen as changing over time, and where "no surprises" guarantees thus shouldn't apply. However, the Simpson HCP/CCA's discussion of "changing circumstances" not only fails to identify a number of changes which can reasonably be foreseen, but also functions primarily to exempt Simpson from making meaningful changes to the HCP/CCA in response to reasonably

Response to Comment G3-86

The Services provide assurances to land owners in recognition of two fundamental points: 1) implementation could provide many benefits for species and their habitats, including early protection for unlisted species and possibly, prevention of the need to list a covered species in the future; and 2) existing laws often provides insufficient incentives for non-Federal landowners to include species conservation in their day-to-day management activities. See also Master Response 19.

The Plan's monitoring program is set forth in AHCP/CCAA Section 6 and is discussed in IA paragraph 8. Specifically, implementation monitoring will focus on evaluating and documenting Green Diamond's implementation of and compliance with the Plan (AHCP/CCAA Sections 6.3.7 and 6.2.7). Effectiveness monitoring will focus on measuring the success of both individual and collective conservation measures (AHCP/CCAA Section 6.3.5, Appendix D and Section 6.2.5). The Services may conduct inspections and monitoring in connection with the Permits in accordance with their regulations (IA paragraph 8.5). The Plan's adaptive management program establishes a framework to address uncertainty associated with Plan implementation (AHCP/CCAA Sections 6.2.6 and 6.3.6). The feedback loop connecting the monitoring program and the adaptive management program is described in AHCP/CCAA Section 6.3.5.1.2.

Changed circumstances are "changes in circumstances affecting a species or geographic area covered by a conservation plan that can reasonably be anticipated by plan developers and the Services and that can be planned for (e.g. a fire or other natural catastrophic

event in areas prone to such events.)" (50 CFR Sections 17.3 and 222.102; IA paragraph 3.2). Changes that will constitute changed circumstances, and the responses to those circumstances, have been described in AHCP/CCAA Section 6.2.9 and IA paragraph 9. Specifically, five types of changes have been identified in the Plan as potential "changed circumstances." They include the following: 1) Fire covering more than 1,000 acres within the Plan Area or more than 500 acres within a single watershed within the Plan Area, but covering 10,000 acres or less; 2) complete blow-down of more than 150 feet of previously standing timber within an RMZ, measured along the length of the stream; but less than 900 feet of trees within an RMZ, due to a windstorm; 3) loss of 51 percent or more of the preharvest total tree basal area within any SSS, headwall swale, or Tier B Class III watercourses as a result of Sudden Oak Death or stand treatment to control Sudden Oak Death; 4) landslides that deliver more than 20,000 cubic yards and less than 100,000 cubic yards of sediment to a channel; and 5) listing of a species that is not a covered species but is affected by the covered activities (AHCP/CCAA Section 6.2.9).

Response to Comment G3-87

Reasonably foreseeable circumstances, including the listing of a new species or natural catastrophes that could occur in the area, have been addressed in AHCP/CCAA Section 6.2.9 (Changed Circumstances) and IA paragraph 9. The term "changed circumstances" is defined in IA paragraph 3.2 and 50 CFR Sections 17.3 and 222.102. Changed circumstances include fire, windthrow, earthquakes, floods, infestation by pests or pathogens, landslides and the new listing of a species. Specifically, five types of changes have been identified in the Plan as potential "changed circumstances." They include the following: (1) Fire covering more than 1,000 acres within the Plan Area or more than 500 acres within a single watershed within the Plan Area, but covering 10,000 acres or less; (2) complete blow-down of more than 150 feet of previously standing timber within an RMZ, measured along with the length of the stream; but less than 900 feet of trees within an RMZ, due to a windstorm; (3) loss of 51 percent or more of the preharvest total tree basal area within any SSS, headwall swale, or Tier B Class III watercourses as a result of Sudden Oak Death or stand treatment to control Sudden Oak Death; (4) landslides that deliver more than 20,000 cubic yards and less than 100,000 cubic yards of sediment to a channel; and (5) listing of a species that is not a covered species but is affected by the Covered Activities (AHCP/CCAA Section 6.2.9). No others have been suggested in the comment.

If additional conservation and mitigation measures are deemed necessary to respond to changes in circumstances that have been provided for in AHCP/CCAA Section 6.2.9, Green Diamond will be expected to implement the measures specified in the Plan (63 Fed. Reg. 8859, 8868 (Feb. 23, 2998)). Meaningful responses to changed circumstances have been set forth in AHCP/CCAA Section 6.2.9. For example, in the event that a non-covered species that may be affected by covered activities becomes listed under the ESA, Green Diamond will not have incidental take authority with respect to such newly-listed species unless and until the appropriate Permit is amended to include such species or other authorization is provided pursuant to the ESA. Upon receipt of notice of the potential listing of a species that is not a covered species (IA paragraph 9.3), Green Diamond is obligated to seek the technical assistance of the USFWS and/or NMFS, and, as appropriate, the Services shall provide such assistance, to (i) identify possible measures to avoid take and avoid causing jeopardy to such species; (ii) determine whether incidental take coverage for such species is appropriate and, if so, (iii) identify any modifications to the Plan that may be necessary to provide coverage for the new species and assist Green Diamond in determining whether to amend the Plan and the applicable Permit (or, in the case of the USFWS, to seek issuance of an ITP if appropriate) to include the newly-listed species as a covered species--all in the event the species ultimately is listed. These provisions and this process to address changed circumstances are consistent with the No Surprises rule.

Response to Comment G3-88

The American Lands Alliance's August 7, 2000, scoping letter has been incorporated. See response to Comments G3-98 through G3-193.

Response to Comment G3-89

The coastal cutthroat trout, southern torrent salamander and tailed frog are unlisted species under the jurisdiction of the USFWS. Green Diamond is seeking coverage for these species under an ESP, therefore there is no need to include the potential for future listing of these species under the ESA as a changed circumstance. Instead of waiting to implement conservation measures for certain unlisted species (i.e., coastal cutthroat trout, southern torrent salamander and tailed frog), Green Diamond has elected to include them as covered species in the Plan and the USFWS will name them in the ESP, although the effective date as to the Permit for such species will be delayed until future listing. By addressing these species as though they were listed, the Plan provides conservation benefits before the ESA could require them. In this way, implementation of the Operating Conservation Program contributes early protection to others' conservation efforts in the hopes that such efforts will prevent the need to list these species in the future. The provisions of IA paragraph 9.3 and AHCP/CCAA Section 6.2.9.7 will apply to future listings of species not covered by either the ESP or the ITP.

Response to Comment G3-90

If changed circumstances occur, Green Diamond will implement the supplemental prescriptions set forth in AHCP/CCAA Section 6.2.9. In some cases the conservation measures set forth in other

G3-87 foreseeable changing circumstances. This both violates the intent of the final "no surprises" rule, and makes it even more likely that issuing the "take" permit to Simpson will significantly impact the covered species' chances of survival and recovery over time.

G3-88 The HCP/CCA fails to identify reasonably foreseeable changing circumstances identified in our scoping letter of August 7, 2000. Please note that we wish to incorporate our NEPA scoping letter into these comments by reference.

G3-89 The HCP/CCA also fails to include the listing of tailed frog and Southern torrent salamander as "changing circumstances." As noted by the HCP/CCA and the "no surprises" policy, the listing of unlisted species -- particularly those which have been designated at one time or another as "candidate" species, as were tailed frog and Southern torrent salamander -- is entirely foreseeable.

G3-90 With one exception (the retention of unspecified levels of additional conifers in steep slope management zones, should the efficacy of those zones be compromised by sudden oak death disease), none of the requirements of the HCP/CCA's "changing circumstances" provisions actually require Simpson to undertake corrective actions to ensure that the HCP/CCA will remain biologically effective despite the changing circumstances. Generally, the HCP/CCA fails to require Simpson to provide replacement mitigation habitats, should the initial mitigation areas be lost to natural disturbances, nor does the HCP/CCA require Simpson to modify the HCP/CCA's mitigation measures to make them more resilient to natural disturbances (for example, by widening riparian buffers to protect them from windthrow).

G3-91 The HCP/CCA and Implementation Agreement then add insult to injury by stating that Simpson will only be required to respond to changing circumstances in ways that are expressly identified in the HCP/CCA.

Requirements:

As indicated by Congressional intent for ESA section 10 and the final "no surprises" rule, any unlisted species covered by regulatory assurances must be addressed as if they were listed.

Comments:

G3-92 As discussed above, the HCP/CCA fails to address tailed frog and Southern torrent salamander as if they were listed.

parts of the Operating Conservation Program will be adequate to address changed circumstances, in which case there is no basis to require the Permit applicant to undertake corrective actions in addition to those already provided in the Operating Conservation Program (see, e.g., AHCP/CCAA Sections 6.2.9.4 (occurrence of a less than a 100-year flood event), 6.2.9.5 (infestation by a generally recognized type of forest pest or pathogen)). In other cases, such as the occurrence of an earthquake of a magnitude 6 or less on the Richter scale, the occurrence of a changed circumstance would produce little, if any, visible change, and apparently no significant impact to wildlife or fishery habitat (see, e.g., AHCP/CCAA Section 6.2.9.3). In still other cases, the occurrence of a changed circumstance may benefit the covered species or their habitat, and so would not provide a basis to require the Permit applicant to undertake any corrective action at all. This would be the case, for example, in the event of small-scale windthrow. Such events may actually benefit aquatic species through natural modifications to stream habitat by, for example, introducing LWD into streams that currently may lack this habitat-forming element (see, e.g., AHCP/CCAA Section 6.2.9.2).

Some affirmative change in the conservation program may be required, for example, in the event of infestation of *Phytophthora ramorum*, which causes sudden oak death disease. If 51 percent or more of the preharvest total tree basal area within any steep streamside slope (SSS) headwall swale, or Tier B Class III watercourses is lost as a result of sudden oak death or stand treatment to control sudden oak death, then an on site review will be made by a registered geologist (RG) and a registered professional forester (RPF) to develop additional prescriptions to compensate for the loss of hardwood root strength through retention of additional conifers (AHCP/CCAA Sections 6.2.9.5 and 6.3.9.5.2). In this way, forestry professionals will make conditions-appropriate corrective action determinations about how to compensate for the changed circumstance. This type of site-specific approach is preferable from a conservation perspective rather than establishing a one-size fits-all type of approach.

The typographical error in AHCP/CCAA Section 6.2.9.5 has been corrected as follows:

"….If 51 percent or more of the preharvest total tree basal area within any SSS, headwall swale, or Tier B Class III watercourses is lost as a result of sudden oak death or stand treatment to control sudden oak death, on site review will be made by an ~~RF~~ RG and RPF to develop additional prescriptions to compensate for the loss of hardwood root strength…."

Response to Comment G3-91

The purposes of the changed circumstances section of the Plan is to list events and consequences that can be reasonably expected to occur and thus, plan for, which will enhance certainty for the applicant and the species. See Master Response 8.

Response to Comment G3-92

See responses to Comments G3-9, G3-10, G3-66 and G3-89.

Response to Comment G3-93

Sufficient financial assurances are set forth in IA paragraph 7. There, Green Diamond warrants that it has, and will spend, such funds as may be necessary to fulfill its obligations under the Plan and agrees to notify the Services promptly of any material change in its financial ability to fulfill its obligations (see also IA paragraph 8.1 (requirement to submit biennial budgets)). Additional financial assurances have been provided (IA paragraph 7) to ensure that Green Diamond will provide adequate funding for the acceleration of the Road Implementation (AHCP/CCAA Section 6.2.3.2.1) and the Monitoring Projects and Programs (AHCP/CCAA Section 6.2.5.2), both of which have material out-of-pocket costs for the first 15 years of the Plan.

These are more than a mere promise of future actions; these obligations are continuing obligations to have and spend such monies as may be required and are sufficient to ensure the Plan is carried out.

Response to Comment G3-94

See Master Response 14 regarding Plan enforceability. Remedies, enforcement and penalties have been addressed in IA paragraph 13. In addition, nothing in the IA is intended to limit the authority of the United States government to seek civil or criminal penalties or otherwise fulfill its enforcement responsibilities under the ESA or other applicable law (IA paragraph 13.4). Injunctive and temporary relief is available (IA paragraph 13.3), as are stipulated penalties under certain circumstances (IA paragraph 13.5). Because the Services can enforce the terms of its agreement with Green Diamond in accordance with the full extent of its authority,

Adequacy of Implementation Measures -- Enforcement and Implementation Assurances

Requirements:

There must be assurances of adequate funding to implement the HCP's conservation measures, monitoring, and adaptive management provisions over time. The permittees should provide up-front guarantees of future financing, if the HCP envisions that "take" will occur prior to implementation of the plan's mitigation measures, as noted by the Services' HCP Handbook.

The HCP Handbook states that large scale HCPs may also need perpetual funding to cover long term monitoring and mitigation.[44] The Service's Handbook states that the landowner should provide up-front legal or financial assurances, such as a letter of credit, if mitigation measures will be implemented after "take" occurs.[45]

Comments:

G3-93

The HCP/CCA and Implementation Agreement do not provide sufficient assurances of future funding. As noted below, the mere promise of future actions is not sufficient to meet the ESA's standards.

Requirements:

The HCP Handbook states that enforceable mitigation should be included in HCPs.[46] The Implementation Agreement for the HCP must include enforceable remedies and relief provisions, in the event that the HCP's conservation measures are not implemented, and "take" is thus not properly mitigated, as noted by the Services' HCP Handbook.

The HCP Handbook states that mitigation habitat should be permanently protected.[47] The HCP Handbook also anticipates that conservation easements can be used to ensure the HCP "runs with the land."[48]

Likewise, the mere promise of future actions is not sufficient to meet the ESA's protection standards.[49]

Comments:

G3-94

The HCP/CCA and Implementation Agreement do not provide sufficient remedies and relief provisions. The plan also fails to provide permanent protection for mitigation areas. The HCP/CCA and Implementation Agreement also fail to include guarantees that Simpson will implement the promised mitigation measures over time. While there are limited requirements for the provision of post-revocation mitigation should the "take" permits be revoked for non-compliance, there are no requirements for continued mitigation should Simpson choose to withdraw from the plan.

the Plan and IA do provide sufficient remedies and relief provisions.

Duration of the Conservation Commitment

The comment refers to HCP Handbook page 3-22 as authority for the idea that mitigation habitat should be protected permanently. However, this statement is not a mandate that permanent set-aside of land is a prerequisite to HCP approval. Reading this provision in context the issue of establishing permanent mitigation habitat is raised in the discussion of permanent habitat loss (the discussion begins on HCP Handbook page 3-21):

"One common issue raised during the HCP negotiations is how long mitigation lands must be conserved. When habitat losses permitted under an HCP are permanent, protection of mitigation lands normally should also be permanent (i.e., 'in perpetuity'). Mitigation for temporary habitat disturbances can be treated more flexibly; however, management logistics and other considerations may still dictate permanent mitigation for temporary impacts, though typically at a lesser rate than for permanent ones." HCP Handbook at 3-22.

Here, none of the impacts of authorized take will be permanent and, further, all will be minimized and mitigated to the maximum extent practicable. See Master Response 8. Therefore, other forms of "permanent protection" are not necessary (see Master Response 3).

Post-termination Requirements

As noted, post-termination mitigation is provided for in IA paragraph 6.2.1. NMFS believes that the amount of post-termination mitigation required is suffucuent.

Post-relinquishment Requirements

The commenter's criticism of remedies for Green Diamond's voluntary relinquishment of the Permits does not take account of substantial provisions made in the IA for such circumstances. Under IA paragraph 6.3, Green Diamond may relinquish the Permits (or "withdraw from the Plan," in the words of the comment) before expiration of the full term of the Plan and Permits in accordance with the regulations currently codified at 50 C.F.R. Sections 13.26, 17.32(b)(7) and 222.306(d). Green Diamond's post-relinquishment mitigation requirements have been set forth in IA paragraph 6.3.1 and include the following: (a) provide notice in accordance with IA paragraph 6.3.1(a); (b) maintain the prescriptions in all areas where Green Diamond has conducted covered activities and applied the Operating Conservation Program's prescriptions for the remainder of the 50 year term that the Plan would have been in effect absent relinquishment (subject to certain conditions set forth in IA paragraph 6.3.1(b); (c) deed restrict property transferred under the circumstances described in IA paragraph 6.3.1(c); (d) complete road management measures for the duration of the calendar year in which relinquishment occurs (see IA paragraph 6.3.1(d); and (e) submit a report to the Services detailing the status of Green Diamond's compliance with the terms of the Operating Conservation Program through the end of the calendar year in which relinquishment or termination occurs.

Response to Comment G3-95

See Master Response 8 regarding the ESA Section 10(a) approval criteria.

Response to Comment G3-96

The term of the AHCP/CCAA and Permits is discussed in IA paragraph 6. The 50-year initial term (IA paragraph 6.1) can be extended "upon the agreement of the parties [the Services and Green Diamond] and compliance with all applicable laws [including, without limitation the Endangered Species Act]… under regulations of the Services in force on the date of such extension." IA paragraph 6.5. The Services may require modifications to the Plan and IA at the time of any such extension (IA paragraph 6.5). Because current law at the time of any extension will govern conservation requirements for the duration of any extended term, such requirements will "update" required mitigation, if necessary, and provide conservation benefits in full accordance with the law.

Response to Comment G3-97

The American Lands Alliance's August 7, 2000, scoping letter has been incorporated. See response to Comments G3-98 through G3-193.

Other Comments on the Implementation Agreement

G3-95

Section 2.1.d of the Implementation Agreement states that the HCP/CCA minimizes and mitigates the impacts of "take" to the maximum extent practicable, and that issuing the "take" permits will not impact the covered species' chances of survival and recovery. This is simply untrue, as discussed above.

G3-96

The Implementation Agreement allows for extensions to the HCP/CCA and "take" permits for unspecified lengths of time. This is unjustified and irresponsible. The certainty with which one can say that the HCP/CCA and its various measures will be sufficient for the covered species' survival and recovery will inevitably decrease over time -- and all the more so given the HCP/CCA's lack of adequate biological goals, monitoring, and adaptive management provisions. The HCP/CCA and "take" permit cannot justifiably be extended for indefinite periods of time.

Comments on the EIS

G3-97

The EIS fails to address many of the points raised in our scoping letter of August 7, 2000. Please note that we wish to incorporate our NEPA scoping letter into these comments by reference.

Notes

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[1] 50 CFR 222.22(b)(5)(i) & (ii).
[2] *Sierra Club et al v. Bruce Babbitt et al* (Civil Action No. 97-0691-CB-C, Order August 4, 1998, S. Dist., AL, S. Div.).
[3] Final Addendum, Federal Register, 65;106, June 1, 2000.
[4] Final Addendum, Federal Register, 65;106, June 1, 2000.
[5] Final Addendum, Federal Register, 65;106, June 1, 2000.
[6] Final Addendum, Federal Register, 65;106, June 1, 2000.
[7] *Sierra Club et al v. Bruce Babbitt et al.*
[8] 50 CFR 222.22(c)(iv).
[9] USFWS et al. 1996. Endangered Species Habitat Conservation Planning Handbook. US Fish & Wildlife Service and the National Marine Fisheries Service. Washington, DC. Page 3-36.
[10] *Sierra Club et al v. Bruce Babbitt et al.*
[11] USFWS et al (1996). Pp. 3-36 and 7-3.
[12] *National Wildlife Federation et al v. Bruce Babbitt et al.* (Civ. S-99-274 DFL JFM, Memorandum of Opinion and Order, August 15, 2000, US District Ct., E. District, CA).
[13] Burkhardt, Hans. 1994. Maximizing Forest Productivity: Resource Depletion and a Strategy to Resolve the Crisis; Examples from the Forests of Mendocino County, California. Curtis, Robert. 1997. "The Role of Extended Rotations." in Kohm et al. (1997). Curtis, Robert. 1995. Extended Rotations and Culmination Age of Coast Douglas Fir: Old Studies Speak to Current Issues. Research Paper PNW RP 485. Pacific Northwest Research Station, USDA Forest Service, Portland,

OR. Curtis, Robert & Andrew Carey. 1996. "Managing for Economic and Ecological Values in Douglas Fir Forests." Journal of Forestry. September; 1996. McComb, William, et al. 1993. "Douglas Fir Forests: Managing for Timber and Mature Forest Habitat." Journal of Forestry. 91;12. Newton, Michael & Elizabeth Cole. 1987. "A Sustained Yield Scheme for Old Growth Douglas Fir." Western Journal of Applied Forestry. 2;1. Robinson, Gordon. 1988. The Forest and the Trees: A Guide to Excellent Forestry. Island Press, Covelo, CA. Willer, C. 1999. "Community Based Forestry and Corporate Forestry, A Comparison." Coast Range Association. Corvallis, OR.

[14] The Services have been correct in noting in different fora that Congress intended that ESA section 10's requirements to be interpreted similarly to ESA section 7's "jeopardy" analysis. However, the Services have been incorrect in claiming that this jeopardy analysis was intended to be reduced to consideration only of whether a "take" permit will impact a covered species' chances of survival. At the time Congress established section 10, the section 7 jeopardy standard was clearly understood as also requiring an analysis of whether an action would harm a species' chance of recovery *per se*.

[15] USFWS et al. 1998. Draft Environmental Impact Statement/Environmental Impact Report for the Headwaters Forest Acquisition and the PalCo Sustained Yield Plan and Habitat Conservation Plan. Vol. II. Prepared by the US Fish & Wildlife Service, Arcata, CA, and the California Dept. of Forestry & Fire Protection, Sacramento, CA. Page 2-23.

[16] USFWS et al (1998). USDA FS *et al.* 1993. Forest Ecosystem Management: an Ecological, Economic, and Social assessment. Report of the Forest Ecosystem Management Assessment Team. USDA Forest Service, USDOI FWS, USDOI BLM, US EPA, USDOI NPS, and USDOC NMFS. (1993). Pollock, M. & P. Kennard. 1998. A Low Risk Strategy for Preserving Riparian Buffers Needed to Protect and Restore Salmonid Habitat in Forested Watersheds of Washington State. 1,000 Years Institute, Bainbridge Island, WA. Huntington, C. 1998. Comments on April '98 Draft W. Oregon State Forests HCP as a Mechanism for Restoring Aquatic Habitats and At-Risk Salmon. Clearwater BioStudies, Canby, OR.

[17] Rudolph, D.C., and J.G. Dickson. 1990. Streamside Zone Width and Amphibian and Reptile Abundance. The Southwest Journal. 35(4):472-476

[18] USFWS. 1999. Draft Environmental Assessment for the Issuance of an Incidental Take Permit...for the Incidental Take of the Northern Spotted Owl...to Boise Cascade Corporation for Property Located in Clatsop County, Oregon. US Fish & Wildlife Service, Portland, OR. NMFS. 1998. A Draft Proposal Concerning Oregon Forest Practices. Submitted to the Oregon Board of Forestry Memorandum of Agreement Advisory Committee and the Office of the Governor. National Marine Fisheries Service, Northwest Region, Portland, OR.
Reid, L. & R. Ziemer. 1999. Evaluating the Biological Significance of Intermittent Streams. Review Draft. Pacific Southwest Research Station, USDA Forest Service, Arcata, CA.

[19] American Lands. 1998. Examples of Fish and Wildlife Conservation Needs on Non-Federal Forestlands and Species Harmed by HCPs. Forest Biodiversity Program, American Lands, Portland, OR. Available at <www.americanlands.org> Benda, L., et al. 1998. Independent Scientific Review of Oregon Dept. of Forestry's Proposed W. Oregon State Forests HCP. John Hayes, ed. College of Forestry, Oregon State Univ. Corvallis, OR. USFWS. 1998. Letter of February 16, 1998, to Wille Stelle, Jr., Regional Administrator, NMFS, Conveying Comments on the NMFS "Draft Proposal to Improve Oregon Forest Practices." US Fish & Wildlife Service, Portland, OR.

[20] Bury, R.B. 1983. Differences in amphibian populations in logged and old growth redwood forest. Northwest Science. 57(3)167-178. Nussbaum, R.A., E.D. Brodie Jr., and R.M. Storm. 1983. Amphibians and Reptiles of the Pacific Northwest. University of Idaho Press. Moscow, ID. Nordstrom, N. 1997. Cascade torrent salamander (*Rhyacotriton cascadae*) and Columbia torrent salamander (*Rhyacotriton kezeri*). Pages 1.1-1.17 *in* E.M. Larsen (tech. coord.), Management

recommendations for Washington's priority species, Volume III: Amphibians and Reptiles. Washington Department of Fish and Wildlife. Olympia, WA. Grialou, J.A., S.D. West, and R.N. Wilkens. 2000. The effects of forest clearcut harvesting and thinning on terrestrial salamanders. Journal of Wildlife Management. 64(1):105-113. Bury, R.B., P.S. Corn, K.B. Aubry, F.F. Gilbert and L.L.C. Jones. 1991. Aquatic amphibian communities in Oregon and Washington. Pages pages 353-362 *in* L.F. Rugiero et al. (eds.), Wildlife & Vegetation of Unmanaged Douglas-Fir Forests: USDA Forest Service General Technical Report PNW-GTR 285. Carey, A.B. 1989. Wildlife associated with old-growth forests in the Pacific Northwest. Natural Areas Journal 9(3): 151-162. Bury, R.B. and P.S. Corn. 1988b. Douglas-fir forests in the Oregon and Washington Cascades: Relation of the herpetofauna to stand age and moisture. Pages 11-22 *in* R.C. Szaro, K.E. Severson and D.R. Patton (Tech. coords.), Management of amphibians, reptiles, and small mammals in North America. USDA Forest Service, Gen. Tech. Rept. RM-166. Mierzwa, K.S. 1988. Dispersal of the Olympic salamander, *Rhyacotriton olympicus*, into second growth forest. Bull.Chi. Herp. Soc. 22(11): 180.

[21] USDA FS et al (1993) and USDA FS et al (1994)

[22] *Sierra Club et al v. Bruce Babbitt et al.*

[23] Final Addendum, Federal Register, 65;106, June 1, 2000.

[24] USFWS et al (1996), p. 3-26

[25] Final Addendum, Federal Register, 65;106, June 1, 2000.

[26] Final Addendum, Federal Register, 65;106, June 1, 2000.

[27] Final Addendum, Federal Register, 65;106, June 1, 2000.

[28] Final Addendum, Federal Register, 65;106, June 1, 2000.

[29] USFWS et al. (1996), p. 3-27.

[30] Nussbaum, R.A., E.D. Brodie Jr., and R.M. Storm. 1983. Amphibians and Reptiles of the Pacific Northwest. University of Idaho Press. Moscow, ID. Nordstrom, N. 1997. Cascade torrent salamander (*Rhyacotriton cascadae*) and Columbia torrent salamander (*Rhyacotriton kezeri*). Pages 1.1-1.17 *in* E.M. Larsen (tech. coord.), Management recommendations for Washington's priority species, Volume III: Amphibians and Reptiles. Washington Department of Fish and Wildlife. Olympia, WA. Grialou, J.A., S.D. West, and R.N. Wilkens. 2000. The effects of forest clearcut harvesting and thinning on terrestrial salamanders. Journal of Wildlife Management. 64(1):105-113. Bury, R.B. and P.S. Corn. 1988b. Douglas-fir forests in the Oregon and Washington Cascades: Relation of the herpetofauna to stand age and moisture. Pages 11-22 *in* R.C. Szaro, K.E. Severson and D.R. Patton (Tech. coords.), Management of amphibians, reptiles, and small mammals in North America. USDA Forest Service, Gen. Tech. Rept. RM-166. Mierzwa, K.S. 1988. Dispersal of the Olympic salamander, *Rhyacotriton olympicus*, into second growth forest. Bull.Chi. Herp. Soc. 22(11): 180.

[31] USFWS et al (1996), p. 3-27.

[32] Final Addendum, Federal Register, 65;106, June 1, 2000.

[33] Final Addendum, Federal Register, 65;106, June 1, 2000.

[34] Final Addendum, Federal Register, 65;106, June 1, 2000.

[35] 50 CFR 13.21(e)(2) and 13.47.

[36] Final Addendum, Federal Register, 65;106, June 1, 2000.

[37] Final Addendum, Federal Register, 65;106, June 1, 2000.

[38] Final Addendum, Federal Register, 65;106, June 1, 2000.

[39] USFWS et al (1996), p. 3-22.

[40] This figure includes the original 411,961acre plan area, 4,560 acres which have been added to the area, and 62,480 acres which can be added to the plan area under the HCP's terms.

[41] USFWS et al. (1996). p. 3-25.
[42] Final Addendum, Federal Register, 65;106, June 1,2000.
[43] Final Addendum, Federal Register, 65;106, June 1,2000.
[44] USFWS et al (1996), p. 3-24.
[45] USFWS et al (1996), p. 3-22.
[46] USFWS et al (1996), p. 1-16
[47] USFWS et al (1996), p. 3-22.
[48] USFWS et al (1996), p. 6-30
[49] See *LaFlamme v. FERC* (852 F.2d 389, 400 (9th Cir 1988), and *ONRC v. Daley* (1998 WL 296838) (D.Or 1998), as cited in Arum (1998), as well as *Sierra Club et al v. Bruce Babbitt et al*, Civil Action No. 97-0691-CB-C, Order August 4, 1998, S. Dist., AL, S. Div.

#5L984

August 7, 2000

TO: James Bond
NMFS
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Amedee Brickey
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FR: Daniel Hall, Director
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American Lands

RE: **NEPA Scoping Comments on Simpson Timber Company Incidental Take Permit and Enhancement of Survival Permit for Del Norte and Humboldt Counties**

Enclosed, please find our comments on the scope and contents of the Environmental Impact Statement (EIS) to be prepared in relation to the Simpson Timber Co.'s proposed application for an Incidental Take Permit (ITP) and Enhancement of Survival Permit (ESP), as per the notice in the July 11, 2000, Federal Register (65;133).

American Lands is governed by and represents citizens from across the United States who seek to protect and restore our forests, watersheds, and biotic resources for the benefit of future generations. American Lands' Forest Biodiversity Program is dedicated to promoting improved biodiversity conservation and resource management on non-Federal forestlands in the west, including through incentives and more effective policy implementation.

Where the following comments refer to Habitat Conservation Plans (HCPs) and/or Incidental Take Permits (ITPs), they should generally be understood to also refer to Candidate Conservation Agreements (CCAs) and/or Enhancement of Survival Permits (ESPs).

Thank you for providing this opportunity to comment. Our apologies for any redundancies in the following comments and suggestions; we only recently learned of the opportunity for public comment, and have had little time to prepare these comments.

American Lands ALLIANCE

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Response to Comment G3-98

Regarding applicable standards, the application requirements and approval criteria for an Enhancement of Survival Permit (ESP) as they compare to the requirements and criteria for an Incidental Take Permit (ITP) are discussed in Plan Section 1.4.1 and in Master Response 8. Applicants for an ESP must, in a CCAA, contribute to efforts to avoid the need to list currently unlisted covered species by providing early conservation benefits to these species which may be at risk of ESA listing in the future. The standard for issuance of an ESP and CCAA is that the benefits of the Plan for the ESP species, when combined with the benefits for those species that would be achieved if it is assumed that the Plan's conservation also were implemented on other necessary properties, would preclude or avoid any need to list those species. 50 C.F.R. §17.32(d)(2); 64 Fed. Reg. 32726, 32729 (June 17, 1999). Regarding the suggestion that Green Diamond's proposed CCAA/ESP should be required to meet all policy standards required for HCPs/ITPs, the Services note that Green Diamond is obligated to meet all applicable *legal* standards - including legal standards relating to CCAAs and ESPs - but not *policy* ones. Applicable legal standards are set forth in AHCP/CCAA Section 1.4.1, 1.4.2 and 1.4.3 and EIS Section 1.5, and Permit approval criteria are discussed further in Master Response 6. These standards, rather than the HCP Handbook or other policy guidance, control, the Services also believe that the Plan, EIS and IA are consistent with relevant policy guidance documents, including the HCP Handbook.

To meet the statutory criteria for approval of an HCP/ITP, Green Diamond's conservation program must minimize and mitigate the impacts of authorized incidental take of covered species that may

I. Overarching Issues

G3-98

Depending on how the policy standards for CCAs/ESPs are interpreted, those standards might provide the covered species with a lesser chance of recovery than when the standards for HCPs/ITPs are properly implemented. It is not clear, for example, whether CCAs must minimize and mitigate the impacts of "take" to the maximum extent practicable, as is required for HCPs, nor is it clear whether CCAs are required to provide measures sufficient to amount to species' recovery, as is also required by the ESA for HCPs/ITPs.

To guard against the possibility that Simpson is proposing to use a CCA/ESP to avoid meeting important (though often insufficient) HCP standards, Simpson's proposed CCA/ESP should be explicitly required to meet all policy standards required for HCPs/ITPs, including those listed in Section III of our comments. Failure to do so might allow Simpson to circumvent the requirements for covering unlisted species in an HCP, including the overarching, Congressionally-mandated requirement that those species be addressed as if they were already listed. (It should also be noted that while it may be beneficial to address unlisted species in an HCP, the species should not be included in the ITP *per se* until such time as the species are listed and other requisites are met, as discussed in Section III of our comments.)

Moreover, the EIS should fully assess the impacts of any differences in the policy standards for HCPs/ITPs and CCAs/ESPs, any subsequent gaps between Simpson's proposed CCA conservation measures and those measures that would be required of an HCP, and any subsequent impacts to the unlisted species' chances of recovery.

The proposed actions' impacts on the covered species' existing and likely-to-be-designated critical habitats must also be carefully examined, since the proposed HCP/ITP (or CCA/ESP) may not be legally issued if it adversely modifies the species' critical habitats, as per ESA s. 7(a)(2). The logging, site preparation, roading, chemical applications, other operations likely to be permitted by the HCP/ITP and CCA/ESP are likely to adversely modify and seriously impact critical habitat for several of the covered listed species, as discussed in Section III of our comments below.

II. Basic Goals and Standards for the EIS

The EIS should meet each of the following goals and standards.

Alternatives Analysis

G3-99

Under NEPA, an EIS must "rigorously explore and objectively examine all reasonable alternatives." [40 CFR 1502.14(a).]

result from the covered activities "to the maximum extent practicable." This criterion necessarily is bounded by the ***extent*** of the impacts that would result from the authorized taking. In other words, the requirement is not to provide to the maximum extent practicable conservation measures without regard to the extent of the impacts of taking. Rather, the requirement is to provide measures that minimize and mitigate the impacts of taking to the maximum extent practicable. The Services provide the following guidance regarding the "maximum extent practicable" finding in the Habitat Conservation Planning Handbook at 7-3:

> *This finding typically requires consideration of two factors: adequacy of the minimization and mitigation program, and whether it is the maximum that can practically be implemented by the applicant. To the extent that the minimization and mitigation program can be demonstrated to provide substantial benefits to the species, less emphasis can be placed on the second factor.*

See also Master Response 8. See also National Wildlife Federation v. Norton, 2004 WL 415226, *7 (Feb. 4, 2004; "the statutory language does not suggest that an applicant must ever do more than mitigate the effect of its take of species"). Regarding critical habitat, the Services will assess in their respective biological opinions whether issuance of the Permits will result in the destruction or adverse modification of critical habitat. Regarding the "covered activities", see AHCP/CCAA Section 1.3.4 and Section 2.

Response to Comment G3-99

Based on EIS Section 2 (*Proposed Action and Alternatives*) and AHCP/CCAA Section 8 (*Alternatives Considered*), as further discussed in Master Response 10 (*Analysis of Alternatives in the Plan and EIS*), the Services believe that the number and range of alternatives considered in the DEIS and Green Diamond's AHCP/CCAA are both reasonable and sufficient to permit a reasoned choice.

Regarding funding for Plan implementation, see IA Paragraph 7.0.

Under NEPA, where economic preferences are used to select the preferred alternative, the decision must not be based on misleading, biased, or incomplete economic information. [*Seattle Audubon v. Lyons* (871 F. Supp. 1291, 1324 (W.D. Wash. 1994), aff'd 80 F.3d 1401 (9th Cir. 1996), as cited in Arum (1998)]

The existence of a "viable but unexamined alternative renders an environmental impact statement inadequate." [*Alaska Wilderness Recreation & Tourism v. Morrison* (67 F.3d 723, 729 (9th Cir. 1995), as cited in Arum (1998)] Likewise, an agency may not "consider only those alternatives with [the same] end result." [*Resources Ltd. v. Robertson* (35 F.3d 1300, 1307 (9th Cir. 1994), as cited in Arum (1998)]

The EIS must analyze in detail, and evaluate the comparative merits of, a range of several different alternatives for protecting old growth, late seral and riparian ecosystems and species dependent on such ecosystems. All alternatives selected for detailed analysis must *avoid or substantially reduce* the significant environmental impacts of the proposed project. (40 C.F.R. § 1502.14; 14 Cal. Code Regs. § 15126(d).) Thus, a "straw man" alternative which authorizes more timber harvesting than the HCP will not satisfy the agencies' obligations under NEPA and CEQA. The alternatives analysis also should not be constrained by what the applicant deems economically "practicable" or "feasible." (*See* HCP Handbook, p. 3-35.)

The "no action" alternative must accurately describe baseline conditions and assume full compliance with and enforcement of existing federal and state laws. A no action alternative that assumes minimal or compliance with or enforcement of the ESA, and therefore seriously overestimates the purported "benefits" of the HCP's mitigation program, is not acceptable. The no action alternative must account for the likelihood that currently imperiled species will be listed in the future and subject to ESA restrictions.

At a minimum, the following alternatives should be identified and fully studied:

1) A credible "no action" alternative that assumes full "take" avoidance, including in compliance with ESA rules that are consonant with the covered species' recovery needs, such as is required of ESA s. 4(d) rules. Such an alternative would recognize Simpson's responsibility to protect what little habitat remains for endangered species within the context of its much larger ownership, and the fact that Simpson has already profited substantially by harming imperiled species and their habitats.

2) A recovery-oriented HCP that fully meets all goals and standards for HCPs/ITPs, as discussed in Section III of our comments. Among other things, such an alternative would use longer timber rotations, habitat reserves, and site protections to provide both habitat for sensitive species and reasonable income for the landowner. Forests managed for older, more diverse timber stands can provide competitive revenues from higher-quality, higher-priced timber, edible mushrooms, harvest of medicinal plants, clean water, sequestration of atmospheric carbon, and other non-timber forest products and ecosystem services. Timber companies with publicly-owned stocks that are concerned about leveraged takeovers that

G3-99

Response to Comment G3-100

The EIS does provide an independent analysis of the No Action Alternative and other action alternatives, including the Proposed Action, and discloses adequate information for the Services' decision makers. To evaluate possible environmental impacts associated with the Proposed Action, the Services selected CH2MHill to draft the EIS.

Regarding the Services' independent evaluation and peer review, the Services have reviewed the protocols contained in Green Diamond's studies in support of the Plan, and have determined, based on this review, that the protocols do not reflect bias as to any particular desired conclusion. The protocols selected were the most current available and were scientifically sound. With few exceptions (e.g., general property-wide water temperature monitoring and stream and LWD assessments), all of the studies and monitoring were designed to meet the criteria for publication in peer-reviewed scientific journals. (Only a portion of the work has actually been published at this point, primarily because most of the studies and monitoring being undertaken require a long-term data set to be judged scientifically significant.)

All of the studies and monitoring have been undertaken in consultation with local and regional experts in the respective fields of study. See generally AHCP/CCAA Volume 2. For example, Dr. Bill Trush of McBain and Trush was retained as a consultant to help develop the long-term channel monitoring protocol. Dr. David Hankin from Humboldt State University was consulted on juvenile salmonid population estimation and Dr. Eric Bjorkstedt from NMFS assisted with the development of coho smolt estimates from out-migrant traps. Drs. Tom Lisle and Robert

may result from restoring their timber inventories may dedicate conservation easements to restrict timber harvests to sustainable levels.

3) Simpson's proposed HCP/ITP and CCA/ESP.

4) In conjunction with each of the preceding alternatives, funding for habitat restoration measures to be secured from other major California timberland owners who have benefitted financially from industrial forestry and the degradation of salmonid habitat. Such funding would be in addition to funding from Simpson and any other sources.

G3-99

Impacts Analysis -- Independent Analysis

The Services must take a "hard look" at the environmental consequences of approving an action, i.e., an ITP/HCP. [*Kleppe v. Sierra*, 427 U.S. 390, 410 n.21 (1976).]

The EIS must independently evaluate the effectiveness of all HCP components and outcomes. To date, most NEPA documents for forest HCPs simply reiterate the rationale for the plan found in the HCP (which is usually drafted by the landowner's consultant), and do not provide any additional, objective information. Some HCPs even use the same document as both the HCP and the NEPA analysis. An EIS that simply paraphrases or otherwise reiterates the discussion in the HCP, or is artificially constrained by the assumptions and conclusions in the HCP, will be insufficient to meet the agencies' obligations under NEPA.

G3-100

Contractors for NEPA documents need to be selected by the Services. Moreover, the contractors should not have a financial or other interest in the outcome of the project. [See section 1506.5(c) of the NEPA regulations.] The HCP Handbook also states that the Services are responsible for drafting the NEPA document. [USFWS *et al* (1996), p. 2-4.] The EA or EIS should be developed by an objective third party, i.e., either a NMFS or USFWS office separate from the office which is negotiating the ITP with the landowner, or a consultant other than the consultant hired by the landowner to develop the HCP or other major projects for the landowner.

Independent (and presumably, academic) scientific peer review panels should be consulted during HCP development, particularly for more significant plans. [Kareiva et al (1999)]

Impacts Analysis -- Basic Scope

G3-101

Under NEPA, environmental impacts which must be considered include impacts to ecological, aesthetic, historical, cultural, economic, social, and health values, including direct, indirect, and cumulative impacts. [Mueller *et al* (1997).] The HCP Handbook also states that impacts to air quality, water quality, and land use patterns should be addressed. [USFWS *et al* (1996), p. 1-6]

Impacts to all other environmental values should be assessed.

Ziemer from the Redwood Sciences Lab and Frank Ligon with Stillwater Ecosystem, Watershed & Riverine Sciences, Inc. provided input on the Class III sediment monitoring. The headwaters amphibian studies and monitoring were conducted collaboratively with Dr. Richard Wallace from the University of Idaho. The critical steps of study design and statistical analyses were performed with the assistance of Drs. Layman and Trent McDonald of WEST, Inc. Numerous other individuals could be listed who provided input to the design and analysis of the Plan's studies and monitoring program. The Services believe that care was taken to collect and analyze data in a scientifically valid and meaningful manner and that the data as reported for the Plan Area is as unbiased as possible given the current state of science in the respective areas.

Response to Comment G3-101

Potential impacts to environmental values are addressed in detail in DEIS Section 4.0 (Environmental Consequences). Tribal consultation is described in DEIS Section 1.7. In August and September 2000, Green Diamond held a series of six informational meetings with State and Federal agencies, the Yurok Nation, and the Hoopa Tribe. In addition to the consultation with the various tribes, a large staff of fisheries biologists working for the Yurok Tribal Fisheries Program assisted with much of the field work conducted in preparation for the Plan in the lower Klamath River watersheds.

Response to Comment G3-102

Covered activities, including Green Diamond's timber operations and related land management activities in the Initial Plan Area, are described in AHCP/CCAA Section 1.3.4 and Section 2. Herbicide use is not a covered activity - see Master Response 4 regarding consideration of herbicides in the Plan and EIS. Baseline conditions, including information about the status of aquatic habitat and the covered species in the Plan Area on an HPA-by-HPA basis, are discussed in AHCP/CCAA Section 4 and in Master Response 1. Approval of the Plan and issuance of the Permits does not absolve Green Diamond of compliance with any otherwise applicable legal requirement (see generally EIS Section 1.5 and AHCP/CCAA Section 1.4). Therefore, approval of the Plan and issuance of the Permits will have no effect on any otherwise applicable requirement to comply with the Water Quality Control Plan for the North Coast Region (the "basin plan"). Details regarding the mitigation measures are set forth in AHCP/CCAA Section 6.2 - the Operating Conservation Program - and are further described in AHCP/CCAA Section 6.3. These measures are supported by scientific data as described in the Plan, including its appendices, as well as in the EIS.

G3-101 Off-reservation American Indian treaty rights must be considered, including through consultation with the relevant tribes, according to the HCP Handbook. [USFWS et al (1996), p. 3-9]

Impacts Analysis -- Activities Examined

The EIS must fully assess the impacts of each forest management activity (i.e., specific types of logging operations, site preparation operations, road construction plans, specific herbicide applications, specific silvicultural regimes and resulting forest growth, etc.) permitted by the ITP and ESP on all environmental resources, including water quality, air quality, watershed and geologic impacts, land use, etc.

In order to adequately evaluate the impacts of the HCP on water quality, the EIS must include adequate baseline data which specifically describes the habitat structure and quality of all Class I, II and III streams in the HCP area. This includes stream temperature, sedimentation and turbidity, percentage of shade canopy, and the location, quality and quantity of large woody debris, spawning gravel, riffles, pools, fish spawning and rearing sites, and key forest plant and animal species. All Class I, II and III watercourse, roads, road crossings, landings and skid trails must be described and mapped. In addition, the EIS must identify the steepness, stability and erosion hazard rating of slopes, and the location of any previous slope and road failures, erosion and mass wasting incidents. The EIS also must assess and map upslope activities that would potentially deliver sediment to streams and are potential sources of slides, erosion and mass wasting.

G3-102 The EIS must analyze impact of the HCP on each of these baseline parameters, including stream sedimentation, temperature and turbidity; canopy retention; recruitment of large woody debris; late seral forest characteristics of stream corridors; and wildlife and vegetative structure and diversity, both during harvest and over the long term. The EIS must examine the impact of construction and maintenance of roads, road crossings, landings and skid trails, wet weather operations, operations on steep slopes and near watercourses, and the ability of culverts to accommodate projected and unanticipated storm events.

The EIS also must evaluate the impact of timber harvesting and other activities authorized by the HCP on the ability of Class I, II and III streams in the HCP area to meet applicable basin plan limitations, water quality objectives, total maximum daily loads, and antidegradation requirements over the life of the HCP. Finally, the EIS must evaluate the adequacy of the HCP's mitigation measures, such as leave tree standards, stream buffers, canopy retention and recruitment of large woody debris to offset the adverse impacts of the HCP.

The details of HCP mitigation measures must be explicitly described and accompanied by data on their effectiveness. The likely success of each measure must be evaluated, as must the overall effectiveness of mitigation measures at minimizing and offsetting "take." [Kareiva et al (1999)]

Response to Comment G3-103

As explained in the Plan, the six covered species are dependent on a variety of stream habitats in the Initial Plan Area. A general description of the covered species and their habitats is set forth in AHCP/CCAA Section 3 and is supplemented with additional detail in Plan Appendix A. See also EIS Section 3.4 (*Aquatic Resources*). An HPA-by-HPA assessment of habitat conditions and the status of covered species, as well as other specific information about the Plan Area, is provided in AHCP/CCAA Section 4 and elements of the "affected environment" are set forth in EIS Section 3. In AHCP/CCAA Section 5, the Plan assesses potential impacts to the covered species and their habitats that could result in take. In AHCP/CCAA Section 7 and EIS Section 4 (*Environmental Consequences*), earlier analysis is extended and expected outcomes evaluated. As noted above, approval of the Plan and issuance of the Permits does not absolve Green Diamond of compliance with any otherwise applicable legal requirement (see generally EIS Section 1.5 and AHCP/CCAA Section 1.4). Therefore, approval of the Plan and issuance of the Permits will have no effect on the ESA Section 9 take prohibition as it applies to any other federally-listed species or on any species listed under the State endangered species act, whether animal or plant. Regarding plants, see EIS Section 3.5 (*Affected Environment - Vegetation/Plant Species of Concern*) EIS Section 4.5 (*Environmental Consequences - Vegetation/Plant Species of Concern*). Similarly, the scoping letter suggests that the Services must comply with the ESA Section 7 consultation process. The Services have done so.

Quantification of take is addressed in Master Response 9. The biological goals and objectives are set forth in AHCP/CCAA

Impacts Analysis -- Species Impacts Analysis

G3-103

The EIS must include a detailed biological analysis of the impacts of timber harvesting, resource extraction and other activities authorized by the HCP and ITP on *each* wildlife and plant species (whether listed or unlisted) to be "covered by" the HCP (i.e. each species for which "no surprises" regulatory assurances will be given) and all designated critical habitat areas. (HCP Handbook, pp. 3-12, 3-38, 4-4.)

Impacts to all threatened, endangered, candidate, proposed-listed, sensitive, rare, endemic, or otherwise at-risk or ecologically, socially, or economically important plant and animal species should be assessed, *regardless* of whether those species are officially "covered" by the HCP.

Impacts should be assessed explicitly for each listed and unlisted species covered by the HCP, as should the relationship between the landowner's forest management practices and each species' conservation needs, including the species' recovery needs.

In addition, the EIS must analyze the impact of activities on all species "occurring or potentially occurring" on all Simpson lands subject to the HCP, regardless of whether they will be "covered" by the HCP. If any wildlife or plant species occurring or potentially occurring on lands subject to the HCP will *not* be "covered" by the plan, the EIS must analyze the impacts of the HCP on these species, why they are not "covered," and include mitigation measures for any significant impacts identified.

The HCP Handbook notes that the Services must consider impacts on Federally-listed plants, during ESA s. 7 consultation, regardless of whether those plants are "covered" by the HCP. Plants protected by state laws are among those which must be addressed, pursuant to ESA s. 9. [USFWS et al (1996), pp. 1-6, 3-8, & 3-17]

Determinations of which species are likely to be using the property should be based primarily on field surveys. It is not safe to assume that past land management eliminated all sensitive species and their habitats, or on state species databases, which are notoriously inadequate for private lands. Determinations about species which will need habitats to be restored on the property for their recovery should consider the site's potential natural habitats, based on soils, potential vegetation, elevation, local climate, etc.

For each species, the analysis must: (1) specifically indicate how the HCP and ITP will affect species' survival *and* recovery prospects; (2) describe activities that may result in take of covered species; and (3) *quantify* the anticipated level of take resulting from all activities authorized under the HCP. (HCP Handbook, pp. 3-12 - 3-14, 3-20.) The EIS must indicate whether the impacts of the HCP and ITP on each of these species will be significant, and if so, include *species specific* mitigation measures and management actions for *each* significant

Section 6.1 and are discussed further in Master Response 12. Baseline data is provided in EIS Section 3 (*Affected Environment*) and in AHCP/CCAA Section 4, among other places. The Services believe that the impacts analysis in the EIS, as supplemented by analysis in the Plan, meets all statutory and regulatory requirements and is supported by accurate and adequate baseline data.

impact identified. (40 C.F.R. § 1502.16(h).) Generalized habitat based mitigation measures which do not account for individual species needs are unacceptable.

The EIS must provide: 1) detailed, thorough, and quantitative descriptions of the habitat and population conditions that will correspond to each covered species' recovery, 2) detailed, quantitative habitat and population projections for each species covered by the HCP, for each alternative, and 3) compare the alternatives' outcomes identified in step (2) with the indicators of recovery identified in step (1).

HCPs -- particularly those covering large areas or large amounts of a species' range -- should inventory, summarize, and document available data on each species and their distribution, abundance, population trends, ecological requirements, life history, and causes of endangerment. [Kareiva et al (1999)]

Quantitative estimates of the impacts of "take" on species' viability should be provided, especially for larger or more significant plans. At a minimum, best and worst-case scenarios should be identified. [Kareiva et al (1999)]

Impacts of "take" should also be evaluated, particularly for larger or more significant plans, including by determining whether the habitats being "taken" correspond to population "sources" or "sinks," whether genetically unique subpopulations are being "taken," and whether unique habitat/species combinations are being impacted. [Kareiva et al (1999)]

HCPs need to quantify the plans' biological goals. [Kareiva et al (1999)]

An HCP's adequacy is questionable if the plan fails to adequately address one or more of the following: species' status reviews, analyzing the proposed "take," assessing the impacts of "take," planning and assessing mitigation measures, and planning and assessing monitoring provisions. [Kareiva et al (1999)]

Where possible, assertions made in HCPs should be supported by quantitative information. [Kareiva et al (1999)]

The EIS likewise must objectively analyze the likely short-term *and* long-term effectiveness of each of the HCP's proposed measures to minimize and mitigate incidental take of covered species and provide a scientifically justifiable reason why and how these measures will mitigate any significant adverse impacts to species to a level of insignificance. (HCP Handbook, p. 3-19.)

The analysis in the EIS must be supported by accurate and adequate baseline data (including field surveys), scientific studies, population viability analyses, and other information which provides a scientifically justifiable basis for the environmental document's conclusions. Specifically, the EIS must include comprehensive biological assessments for each covered species (and particularly listed species), and their associated habitats. Such assessments should

Response to Comment G3-104

The cumulative effects analyses, including under the ESA and NEPA, are discussed in Master Response 3. Although these legal authorities require slightly different analysis of cumulative effects, the conclusions under each analysis in this case are the same: Because of the way the Plan has been designed, the effect of its implementation will be to provide for overall improvement in important habitat factors so that Plan implementation will slightly reduce cumulative adverse environmental conditions, including current adverse conditions where they exist, relative to existing conditions and the conditions that are expected to occur over time under the No Action Alternative. To reach this conclusion, the Services considered the interaction in space and time of the incremental impact of the Federal action - approval of the Permits under the conditions of approval described in the Plan - together with the impacts of other past, present, and reasonably foreseeable future actions regardless of what agency, Federal or non-Federal, or person undertakes such other actions. Although it is possible that one or more landowners will apply for an ITP in the future, the geographic area, timing and conditions of permit approval for such possible ITPs cannot be predicted with sufficient certainty to include in the analysis for this action.

In the Plan, discussions of the potential effects of take resulting from timber operations, including cumulative impacts, are provided in AHCP/CCAA Sections 5 and 7, which build on the analyses and assessments set forth in AHCP/CCAA Section 3, regarding the covered species' biology and habitat needs, and AHCP/CCAA Section 4, regarding baseline habitat conditions in the Plan Area. In the EIS, cumulative impacts are discussed in

address such issues as species abundance and distribution, habitat requirements (e.g. important food sources and foraging habitat, and nesting, roosting and dispersal habitat), biologically important symbiotic relationships with other species, life history and population trends, both range-wide and within the plan area.

G3-103

Impacts Analysis -- Cumulative Impacts

Cumulative effects analyses are also required as part of the ESA s. 7 consultation process for HCPs, as per 50 CFR 402. HCPs should evaluate the cumulative impacts of multiple plans and their interactions. The percentage of local *and* global populations that will be "taken" should be assessed. [Kareiva et al (1999)]

A thorough cumulative effects analysis should be conducted to address all Federal and non-Federal actions affecting each species covered by the ITP/HCP. The analysis should also address all past, present, and reasonably foreseeable actions across the species' ranges.

The cumulative impacts of the HCP also must be evaluated in conjunction with the anticipated impacts on all species affected by the HCP of ESA section 4(d) rules for the covered species, the effects of public lands management activities under the Northwest Forest Plan, and the impacts of timber harvesting under the "salvage logging rider" (Pub. L. No. 104-19, section 2001 (1995)) and other relevant laws and policies. Further, the cumulative impacts analysis must also evaluate the HCP's and ITP's impact on the effectiveness of existing federal and non-federal conservation strategies over the short term and the long term.

G3-104

The EIS must evaluate the cumulative impacts of timber harvesting and other land-disturbing activities on each species affected by the HCP. This cumulative effects analysis must account for the amount of incidental take of species authorized by each incidental take permit and incidental take statement that has been approved or is currently being prepared for federal and non-federal lands throughout the Pacific Northwest (e.g. California, Oregon and Washington). The analysis should also account for the possibility that landowners who have not yet applied for an incidental take permit to take existing habitat and species on private lands will do so in the future, and estimate the amount of incidental take that will be authorized by those permits in light of existing precedents.

Impacts Analysis -- Institutional Issues

The EIS must objectively and independently evaluate any assertions by the HCP applicant that certain mitigation measures are "impracticable" or "infeasible." Such assertions must be supported by reliable and specific documentation of impracticability or infeasibility. (HCP Handbook, p. 7-3.)

G3-105

Activities on other lands not subject to the HCP's Implementation Agreement should be considered as speculative, and not counted as mitigation for "take" authorized by the ITP.

G3-106

Sections 4.1.2 (Introduction), 4.2.8 (Geology, Geomorphology and Mineral Resources), 4.3.8 (Hydrology and Water Quality), 4.4.8 (Aquatic Resources), 4.5.7 (Vegetation/Plant Species of Concern), 4.6.7 (Terrestrial Habitat/Wildlife Species of Concern), 4.7.7 (Air Quality), 4.8.7 (Visual Resources), 4.9.7 (Recreation), 4.10.7 (Cultural Resources), 4.11.7 (Land Use) and 4.12.7 (Socioeconomic Conditions).

As discussed in EIS Section 4.1.2.3, other regional actions within the Plan Area, including implementation of NWFP on United States Forest Service and Bureau of Land Management lands, were assessed as part of the cumulative impacts assessment. See also EIS Section 4.9.7, regarding expected recreational benefits for anglers as a result of continued implementation of the NWFP on Federal lands. Regarding baseline conditions generally, see Master Response 1.

Regarding estimated quantification of take, see Master Response 9.

Response to Comment G3-105

HCP Handbook, p. 7-3, cited in the scoping letter, recognizes that the applicant decides, with input from the Services, which measures to include in an HCP but that the ultimate decision whether the mitigation program as a whole meets the statutory ITP issuance criteria rests solely with the Services. As with NEPA analyses, the ESA does not require the selection of any particular alternative. The HCP Handbook emphasizes that "[n]either FWS nor NMFS have the authority to impose a choice among the alternatives analyzed in the HCP The Services' role during the HCP development phase is to advise the applicant in developing an acceptable HCP." (HCP Handbook at 3-36.) Here, the Services have evaluated the Operating Conservation Program (AHCP/CCAA Section 6.2) and believe that it satisfies the Permit issuance criteria discussed in Master Response 8.

Response to Comment G3-106

Regarding consideration of activities on lands not subject to the Plan or Permits, the Services have not, and do not, consider them to be "mitigation" for the impacts of take on the covered species. However, where such activities are legally required of Federal or State agencies on lands within the Plan Area, they are considered as part of the regulatory background (EIS Section 1.5) and in the cumulative impacts assessment (see, e.g., EIS Section 4.9.7).

The mechanisms for funding the mitigation and monitoring measures described in the AHCP/CCAA are discussed in Paragraph 7 of the Implementation Agreement between Green Diamond and the Services. See also AHCP/CCAA Section 6.2.3.2.1, regarding funding for acceleration of the Road Implementation Plan, and AHCP/CCAA Section 6.2.5.2, regarding funding for monitoring projects and programs. No alternate funding mechanisms are necessary. NEPA does not require that an EIS analyze the adequacy of funding commitments.

Response to Comment G3-107

See Master Response 14 regarding Plan Enforceability and Master Response 19 regarding the No Surprises rule.

Response to Comment G3-108

The Services are not authorized to require Green Diamond to provide additional mitigation measures beyond those necessary to meet the Permit issuance criteria described in EIS Section 1.3. See Master Response 19 regarding the No Surprises rule.

Response to Comment G3-109

EIS Section 4 analyzes the environmental consequences of the Proposed Action. In particular, environmental consequences of the Proposed Action on terrestrial habitat and species of concern are assessed in EIS Section 4.6, potential impacts on aquatic resources are assessed in EIS Section 4.4, and impacts on hydrology and water quality are assessed in EIS Section 4.3. These assessments take into account the changes in the environment or other changed circumstances that are foreseeable. However, these assessments do not consider the impacts of changed circumstances that are unforeseeable. By their nature, unforeseeable changes cannot be meaningfully predicted and assessed.

In the Plan, measures for changed circumstances, including fire, wind, earthquake, flood, pest or pathogen infestation, landslide and the listing of a new species that is not a Covered Species, are set forth in AHCP/CCAA Section 6.2.9 and are described further in AHCP/CCAA Section 6.3.9. See also IA Paragraph 9. The Services believe that this suite of changed circumstances and the

G3-106 The EIS must analyze the adequacy of the commitments for funding the mitigation and monitoring measures in the HCP to support long term species conservation. The analysis must include financial and other data, which accounts for inflation, depreciation of assets, increased real estate values, and other contingencies, to support the conclusions reached. If the EIS concludes that the funding mechanisms are inadequate, it must propose alternate funding mechanisms which would achieve long term conservation of species for the life of the permit.

G3-107 The EIS must analyze the reasonably foreseeable biological impacts of including a "no surprises" provision in the HCP and implementing agreement. The effects of the "no surprises" policy over both the short and the long term are extremely likely to be significant. Thus, if 1) the HCP fails to achieve its stated goals, 2) the HCP conditions prove inadequate to protect species, 3) new scientific information is discovered which affects the assumptions in or conclusions of the HCP, and/or 4) unanticipated circumstances significantly change the environmental baseline, then federal and state agencies may be restricted in their enforcement and ability to respond in order to conserve the species.

G3-108 The EIS should evaluate the availability of federal and state funds to meet any future mitigation requirements. If the availability of federal and/or state funds is a likely possibility, then the EIS must also analyze the biological effects resulting from the permittee's and/or the government's future unwillingness or inability to provide adequate mitigation or HCP implementation funding on Fish and Wildlife Service determinations pursuant to Section 7.

G3-109 The EIS should fully analyze the impacts of both foreseeable and unforeseeable changed circumstances on the assumptions, conclusions and mitigation measures contained in the HCP, and how these changed circumstances will affect species survival and recovery, population trends, habitat quality and quantity, water quality, and other environmental factors. Foreseeable circumstances include fire, flood, lightning, disease and other stochastic events. The HCP must contain mitigation measures to address such foreseeable circumstances, and specific, detailed procedures to address any unforeseen circumstances, as required by the ESA and its implementing regulations. These critical provisions cannot simply be passed off as a federal government obligation under the "no surprises" policy.

G3-110 The DEIS must also consider the significant economic benefits that Simpson will likely accrue by acquiring a valid ITP for various listed and unlisted species. Particularly when coupled with "No Surprises" guarantees, the ITP provides a level of regulatory certainty which is unprecedented in the business world, largely insulates Simpson from any future liability to adopt additional conservation measures to protect and recover listed and unlisted species, and may even increase Simpson's land values, assuming that the ITP and HCP could be potentially transferred or otherwise adopted by subsequent landowners.

G3-111 Information on listed species, as well as monitoring data from HCPs should be made accessible in a centralized location, to facilitate better planning and plan evaluation. [Kareiva et al (1999)]

measures to address them adequately address reasonably foreseeable changes in habitat conditions and the status of covered species in the Plan Area. In addition, the conservation measures set forth in other parts of AHCP/CCAA Section 6.2 (Green Diamond's Operating Conservation Program) are adequate to address changed circumstances.

Changes in circumstances affecting a covered species or its habitat in the Plan Area that could not reasonably have been anticipated by Green Diamond or the Services at the time of the Plan's negotiation and development, and that result in a substantial and adverse change in the status of the covered species are called "unforeseen circumstances." Unforeseen circumstances are described in AHCP/CCAA Section 6.3.9 and stated in AHCP/CCAA Sections 6.2.10 and 6.3.10. Modifications to the Plan will be made to address unforeseen circumstances in accordance with the procedures set forth in Paragraph 4.3 of the IA.

Response to Comment G3-110

NEPA does not require an economic benefits analysis, and none is provided.

Response to Comment G3-111

Information on listed species is available in the Federal Register and on the Services websites. See, e.g., endangered species program information on the FWS website (<http://endangered.fws.gov/>) and endangered species conservation information provided by the NMFS Office of Protected Resources (<http://www.nmfs.noaa.gov/prot_res/overview/es.html>). Regarding Green Diamond's Plan, information about the covered species is provided in AHCP/CCAA Sections 3 and 4, in AHCP/CCAA Appendix A and in EIS Section 3.4.2. With regard to the suggestion regarding monitoring data, the Services thank the commenter for the suggestion.

Response to Comment G3-112

Minimization and mitigation measures are provided for the potentially significant impacts. See AHCP/CCAA Sections 6.2 and 6.3, regarding the measures, and Master Response 3, regarding cumulative effects and the environmental impacts analysis.

Response to Comment G3-113

See Master Response 1.3, regarding use of the best available scientific information in the Plan.

Response to Comment G3-114

See AHCP/CCAA Sections 3.0 (Description of the covered species and their Habitats) and 4.0 (Description and Assessment of the Current Status of Aquatic Habitat and covered species in the Area Where the Plan Will Be Implemented). Factors and conditions relevant to the planning and implementation of conservation measures for the covered species are identified and examined in AHCP/CCAA Sections 4.2 and 4.3, and the occurrence of the covered species within and among HPAs is discussed in AHCP/CCAA Section 4.4.

Response to Comment G3-115

The Plan and EIS must assess and mitigate potential adverse impacts associated with the Proposed Action and the other action alternatives relative to the No Action Alternative. As discussed in DEIS Section 2.2, the Proposed Action is implementation of the Plan and issuance of the Permits. Although many aspects of Green Diamond's timber operations and other forest management

Mitigation Measures

G3-112 Mitigation measures should be provided for *each* significant impact under NEPA. [40 CFR 1502.16(h).]

III. Additional Suggestions for the Recovery-Oriented HCP Alternative; Additional Information for the EIS' Impact Analyses

The EIS should also include, in addition to the preferred alternative, which is likely to inadequately address key goals and standards for HCPs, an alternative which fully meets the following goals and standards for HCPs. As discussed above, CCAs should also meet all of the following goals and standards expected for HCPs.

Many of the following goals and standards are also directly relevant to the EIS' impact analyses.

Use of Best Available Science

G3-113 ESA section 7(a)(2) and the Act's administrative rules require agencies to use the best available science. [16 USC 1536(a)(2).]

G3-114 The HCP must address the covered species' including population levels, specific habitat conditions, specific ecosystem interactions, and other factors needed for the species' recovery.

G3-115 The HCP and DEIS must assess and mitigate the impacts of all forest management activities, which may include site preparation; herbicide applications; fertilizer applications; pesticide applications; intrusion of invasive exotic plants and other species as a result of intensive logging practices; intensive short-rotation clearcut forestry practices; frequent and widespread vehicle use and human disturbance; high road densities; and other sources of impacts.

G3-116 The HCP must address all influences on salmonid habitat related to the covered activities, including invertebrates and other food sources, pollution from herbicides and other chemicals, impacts of herbicides and other chemicals on upslope riparian areas and thus downslope aquatic ecosystems, the impact of upslope logging and other practices on the timing and intensity of water flows, and various other factors.

G3-117 The HCP must include specific measurable and verifiable performance standards and indicators, including with regard to water temperature, sediment, chemical pollution, invertebrates and other food sources, high and low summer and winter water flows, road densities, and other factors affecting the survival and recovery of the covered species.

activities will occur under the Plan and Permits (see AHCP/CCAA Sections 1.3.4 and 2.0 regarding "covered activities"), such activities are part of the baseline for NEPA purposes. Because these activities are the same for the Proposed Action and the No Action Alternative, potential environmental impacts associated with them are not properly part of the NEPA environmental impacts analysis. As discussed in Master Response 4, herbicide use is not a "covered activity." See also DEIS Section 4.1.1 (*Scope of the Analysis*).

Response to Comment G3-116

Requirements for Permit issuance are discussed in EIS Section 1.3 and Master Response 8 (*Permit Approval Criteria*). Assessment of influences on salmonid habitat, as well as on other covered species and habitats, are discussed in AHCP/CCAA Section 5 (*Assessment of Potential Impacts to Covered Species and Their Habitats that May Result in Take*). This section covers potential effects on salmonid habitat and other covered species' habitat in the context of the following potential project-related impacts: altered hydrology, increased sediment input, altered LWD recruitment, altered thermal regimes and nutrient input, barriers to fish and amphibian passage, and direct take due to equipment use.

Response to Comment G3-117

Requirements for Permit issuance are discussed in EIS Section 1.3 and Master Response 8 (*Permit Approval Criteria*). The ESA does not require inclusion of performance standards. Regarding consideration of water quality conditions in the Plan, see, e.g., AHCP/CCAA Sections 6.1 (*Biological Goals and Objectives*) and 6.2.5 (*Effectiveness Monitoring*). See Master Response 17 regarding road density.

Response to Comment G3-118

AHCP/CCAA Section 3 describes the covered species and their habitats, and AHCP/CCAA Section 4 describes and assesses the current status of aquatic habit and covered species in the area where the Plan will be implemented.

Response to Comment G3-119

The Services believe that the Plan, EIS and IA are consistent with the final Five Points Policy (June 1, 2000, 65 Fed. Reg. 35242), including the guidance relating to biological goals and objectives.

The Plan's biological goals and objectives are set forth in AHCP/CCAA Section 6.1 and are discussed in Master Response 12. Green Diamond has elected to use a prescription-based HCP approach in which biological goals and objectives guide the development of specific measures included in the Operating Conservation Program (see AHCP/CCAA Section 6.2, as further described in AHCP/CCAA Section 6.3).

The Sierra Club v. Babbitt decision cited in the scoping letter [15 F.Supp.2d 1274, 1283-84 (S.D. Ala. 1998)] is legally and factually inapposite to this Plan and Permits. In Sierra Club, the district court remanded two ITPs in part because accurate population data were "not available." Here, the Plan uses the best available scientific and commercial data (see Master Response 1.3). Information about the Covered Species and habitat conditions are provided in AHCP/CCAA Sections 3 (*Description of the Covered Species and their Habitats*) and 4 (*Description and Assessment of the Current Status of Aquatic Habitat and Covered Species in the Area Where the Plan Will Be Implemented*), and Appendices A (*Profile of the Covered Species*) and C (*Studies, Surveys, Assessments of Covered Species and their Habitats Conducted in the Current Plan Area*).

G3-118

The NMFS regulations state that HCPs must describe the status, distribution, seasonal distribution, habitat needs, feeding habitat, and other biological requirements of affected species or stocks. [50 CFR 222.22(b)(3).]

Identification of Biological Goals for the Species

The HCP must also meet, with regard to each of the listed and unlisted species proposed to be covered by the ITP and HCP, the following standards from the Services' "Draft Addendum to the Final Handbook for Habitat Conservation Planning and Incidental Take Permitting Process." [Federal Register, 64;45, March 9, 1999.] As discussed below under Sections II-B, C, D, and E of our comments, the following biological goals must correspond to full mitigation of impacts to the species, minimization and mitigation of impacts to the maximum extent practicable, and species' recovery needs, and other basic impact minimization and mitigation standards.

"In the future, every HCP will include specific biological goals and objectives...." "The biological outcome of the operating conservation program for the covered species is the best measure of the success of an HCP." "Specific biological objectives are subsets of the biological goals and represent specific measurable targets for achieving the goals of the operating conservation program." The HCP must include specific measurable outcomes and targets, in terms of populations, reproduction, specific habitat components, specific impact levels which will be considered tolerable, etc., for most covered species.

G3-119

"Although the goals and objectives may be stated in habitat terms, each covered species that falls under that goal or objective must be clearly specified."

"The biological goals and objectives should be commensurate with the specific impacts and duration of the HCP applicant's proposed action."

"Available literature, State conservation strategies, candidate conservation plans, draft or final recovery plans or outlines, and other sources of relevant scientific and commercial information can serve as guides in setting biological goals and objectives. Species experts, State wildlife agencies, recovery teams, and/or scientific advisory committees may also help develop the biological goals and objectives."

The Services' HCP Handbook states that: i) "habitat based" HCPs should use indicator species to establish forest management parameters, and ii) all endemic, sensitive, listed, proposed listed, candidate, and species of special concern should be addressed "adequately." [USFWS et al (1996), pp. 3-12, -37]

Sierra Club et al v. Bruce Babbitt et al found that current data on species' conditions and recovery needs must be used; goals included in recovery plans are not sufficient if conditions have changed since those plans were written. [Civil Action No. 97-0691-CB-C, Order August 4, 1998, S. Dist., AL, S. Div.]

Response to Comment G3-120

Title 50 Code of Federal Regulations Section 222.307(b)(5) directs that a conservation plan, based on the best scientific and commercial data available, must specify the "anticipated impact (i.e., amount, extent, and type of anticipated taking) of the proposed activity on the species or stocks" and the "anticipated impact of the proposed activity on the habitat of the species or stocks and the likelihood of restoration of the affected habitat." See AHCP/CCAA Sections 5 (*Assessment of Potential Impacts to covered species and their Habitats that May Result in Take*) and 7 (*Assessment of the Conservation Strategy's Effectiveness in Fulfilling the Plan's Purposes*), as well as Master Response 2, regarding assessment of the incremental impacts of any authorized take on the covered species, when combined with impacts from other projects and taking account of the Plan's measures to minimize and mitigate such impacts, and concluding that, over the life of the Plan and Permits, habitat conditions within the Plan Area will improve overall. Regarding use of the best scientific and commercial data available, see Master Response 1.3. Regarding any suggestion that the Plan should quantify levels of take, see Master Response 9.

Response to Comment G3-121

The discussion of quantification of take in Master Response 9 addresses the Sierra Club v. Babbitt decision.

Response to Comment G3-122

Impact Assessment

G3-120

The NMFS regulations state that HCPs must describe the proposed activity, including the anticipated dates, duration, and specific locations. [50 CFR 222.22(b)(4).]

The NMFS regulations state that HCPs must describe the ITP/HCP's anticipated impacts, including the amount, extent, and type of "take," as well as the anticipated impact on habitats and the likelihood of habitat restoration. [50 CFR 222.22(b)(5)(i) & (ii).]

G3-121

Sierra Club et al v. Bruce Babbitt et al recently found that HCPs need to determine how many individuals of affected species will be "taken," how many individuals will remain, what the distribution of the species is throughout its remaining habitat, and how this relates to the species' minimum viable population. [Civil Action No. 97-0691-CB-C, Order August 4, 1998, S. Dist., AL, S. Div.]

G3-122

Likewise, the HCP and DEIS must identify accurate baseline trends (i.e., the "No Action" alternative) which consider the likelihood that the various covered yet-unlisted would be listed in the near future, with various habitat protection measures being required *in lieu* of the HCP. Without accurate baseline trends it is impossible to determine whether the plan provides a net benefit -- or even adequate mitigation -- to the covered species over time. While the exact parameters of these improved measures may not yet be known, it would be quite simple for the HCP and DEIS to identify the likely range of enhanced policy standards that will be adopted by the USFWS, NMFS, and other relevant agencies.

G3-123

Equally important, for all of the covered species, the HCP and DEIS must identify, describe, and/or quantify the "residual" impacts that the covered species will experience -- including in relation to their survival and recovery needs -- *after* the HCP's impact minimization and mitigation measures have been accounted for.

G3-124

Effects on proposed listed species, federally listed plants, and critical habitat are to be considered during the ESA s. 7 consultation process. [USFWS et al (1996), p. 6-15, and 16 USC 1536(a)(2).]

ESA s 7 requires consideration of cumulative and indirect effects. [50 CFR 402.] NEPA also requires a cumulative effects analysis.

G3-125

According to the HCP Handbook, the Services may not be able to approve an ITP under ESA s. 7(a)(2) unless the HCP addresses *all listed species* in the plan area. [USFWS et al (1996), p. 3-7] Presumably this includes federally listed plants, which must be considered during the ESA s. 7 consultation process.

Baseline conditions are discussed in Master Response 1 and are described in the Plan in AHCP/CCAA Section 4 (*Assessment of Habitat Conditions and Status of covered species by HPA*) as well as in AHCP/CCAA Appendix C (*Studies, Surveys, Assessments of covered species and their Habitats Conducted in the Current Plan Area*). In the EIS, see Section 3.0 (*Affected Environment*) and Section 2.1 (*No Action Alternative*).

Response to Comment G3-123

The Service's believe that the Plan and EIS meet the requirements of the ESA and NEPA on this issue. See AHCP/CCAA Section 7 (*Assessment of the Conservation Strategy's Effectiveness in Fulfilling the Plan's Purposes*), discussing the expected effectiveness of the Operating Conservation Program (AHCP/CCAA Section 6.2) strategy in fulfilling the Plan's purposes of coordinating and facilitating Green Diamond's compliance with the Federal ESA and providing the Services with the bases for authorizing Green Diamond to take covered species pursuant to an ITP and an ESP. The analysis in AHCP/CCAA Section 7 extends the assessments in AHCP/CCAA Sections 4 (*Description and Assessment of the Current Status of Aquatic Habitat and Covered Species in the Area Where the Plan Will Be Implemented*) and 5 (*Assessment of Potential Impacts to Covered Species and their Habitats that May Result in Take*) and examines the effects of covered activities (see AHCP/CCAA Sections 1.3.4 and 2) on habitat conditions and covered species with the Plan in place, the potential for those effects to result in actual take of covered species, the effectiveness of the conservation strategy in minimizing and mitigating the effects of take on the listed covered species, and the effectiveness of the conservation strategy in providing early conservation benefits for the unlisted covered species. The analysis also addresses how the conservation strategy meets the ITP and ESP requirements identified in Section 1.2.1.EIS Section 4 discloses the effects of the No Action and action alternatives, including cumulative impacts. See also Master Response 3 regarding cumulative impacts. See also 40 C.F.R. §1508.7.

Response to Comment G3-124

Regarding ESA Section 7 consultation, see EIS Section 1.5.1 (*Federal Regulatory Provisions Relating to Approval of ITPs*).

Regarding cumulative effects under the ESA as well as NEPA, see Master Response 3. The Services considered potential impacts to vegetation and plant species of special concern in EIS Section 4.5. The Plan and EIS address ESA Section 10(a) requirements. The ESA Section 7 consultation process is separate, and the Services will address it separately.

Response to Comment G3-125

Regarding the HCP Handbook, as noted above, ITP and ESP applicants are obligated to meet all applicable legal standards, which are discussed in EIS Section 1.3 and in Master Response 8. Although these standards, and not the HCP Handbook or other policy guidance, control, the Services also believe that the Plan, EIS and IA are consistent with relevant policy guidance documents, including the HCP Handbook discussion of the Permit issuance criteria cited in the scoping letter. The Services considered potential impacts to vegetation and plant species of special concern in the EIS (see EIS Section 4.5) , and believe that the criteria to approve the Plan and issue the Permits have been met. See Master Response 8 (*Permit Approval Criteria*).

Response to Comment G3-126

The NMFS biological opinion will address this requirement.

Response to Comment G3-127

Regarding mitigation measures to address potential impacts to key aquatic variables, see AHCP/CCAA Section 6.2 (the Operating Conservation Program) as described further in AHCP/CCAA Section 6.3. See also AHCP/CCAA Section 7 (*Assessment of the Conservation Strategy's Effectiveness in Fulfilling the Plan's Purposes*) and the response to Comment G3-123. Regarding the use of herbicides, see Master Response 4.

Response to Comment G3-128

Comment noted. NMFS is aware of the information provided in the final critical habitat designations cited in the comment. NMFS will consider all of the essential habitat features of critical habitat when conducting its ESA section 7(a)(2) consultation.

Impacts Must be Fully Mitigated

G3-126 ESA s. 7(a)(2) prohibits federal agencies from approving actions which would destroy or "adversely modify" species' critical habitat areas.

G3-127 The HCP and DEIS must provide adequate mitigation for impacts to key aquatic habitat variables including temperature, invertebrates and other food sources, and the timing and intensity of water flows. The HCP and DEIS must provide adequate and specific mitigation measures for pollution from herbicides and other chemicals, impacts of herbicides and other chemicals on upslope riparian areas and thus downslope aquatic ecosystems, and the impacts of upslope logging and other practices.

G3-128 The final critical habitat designation for chinook salmon (Puget Sound, Lower-Columbia, Upper Willamette, Upper Columbia Spring run, CA Central Valley Spring run, CA Coastal ESUs) and steelhead trout (S. CA, S-Central CA coast, Central CA coast, CA Central Valley, Upper Columbia, Snake River Basin, Lower Columbia, Upper Willamette, Mid-Columbia ESUs) includes: "all river reaches accessible to listed salmon or steelhead within the range of the ESUs listed, except for reaches on Indian lands. Critical habitat consists of the water, substrate, and adjacent riparian zone of estuarine and river reaches...." The Federal Register notice indicates that non-federal forestry activities are among those which may affect critical habitat. The notice further indicates that essential habitat for the listed species includes: "(1) juvenile rearing areas; (2) juvenile migration corridors; (3) areas for growth and development to adulthood; (4) adult migration corridors; (5) water velocity; (6) cover/shelter; (7) food; (8) riparian vegetation; (9) space; and (10) safe passage conditions." The notice further indicates that summaries of the environmental parameters and freshwater conditions that harm the listed species are included in Brown & Moyle (1991), Nehlsen et al (1991), Higgins et al (1992), Botkin et al (1995), and Spence et al (1996). The notice further indicates that the adjacent riparian area for the salmon and steelhead species is the "area adjacent to a stream that provides the following functions: shade, sediment transport, nutrient or chemical regulation, streambank stability, and input of large woody debris or organic matter" The notice further indicates that "habitat quality in this range is intrinsically related to the quality of riparian and upland areas and of inaccessible headwater or intermittent streams which provide key habitat elements (e.g., large woody debris, gravel, water quality) crucial for salmon and steelhead in downstream reaches." The notice further indicates that "streams and stream functioning are inextricably linked to adjacent riparian and upland (or upslope) areas..." and that the riparian zone "stores sediment, recycles nutrients and chemicals, mediates stream hydraulics, and controls microclimate...," and that "healthy riparian zones help ensure water quality essential to salmonids as well as the forage species they depend on." The notice further indicates that "human activities in the adjacent riparian zone, or in upslope areas, can harm stream function and can harm salmonids...," and that "timber harvest, road building, grazing, cultivation, and other activities can increase sediment, destabilize banks, reduce organic litter and woody debris, increase water temperatures, simplify stream channels, and increase peak flows leading to scouring." The notice further reaffirmed that available regulatory mechanisms are inadequate and that regulated activities

Response to Comment G3-129

The Services note that Green Diamond is obligated to meet all applicable legal standards. The Services note that Green Diamond is obligated to meet all applicable legal standards. Applicable legal standards are set forth in EIS Section 1.3 and are discussed further in Master Response 8. Although these standards, and not the HCP Handbook or other policy guidance, control, the Services also believe that the Plan, EIS and IA are consistent with the HCP Handbook and other relevant policies.

The Plan's measures (AHCP/CCAA Section 6.2) are designed to minimize and mitigate the impacts of incidental take, maintain and improve habitat conditions for the covered species, monitor the implementation and effectiveness of the Plan, institute adaptive management, and respond to changed circumstances. The rationale for these measures is discussed in AHCP/CCAA Section 6.3 and in Master Response 3 (in particular, see the "limiting factors" discussion in Master Response 3) and is predicated on the potential impacts of take to covered species and their habitats associated with the covered activities, based on the needs and habitat conditions of the covered species in the Plan Area. See AHCP/CCAA Sections 5 (*Assessment of Potential Impacts to Covered Species and Their Habitats that May Result in Take*), 4 (*Description and Assessment of the Current Status of Aquatic Habitat and Covered Species in the Area Where the Plan Will Be Implemented*), 3 (*Description of the Covered Species and their Habitats*) and 2 (*Description of Green Diamond's Operations and Forest Management Activities*).

continue to pose a potential threat to the species' existence. [65 Federal Register 32, February 16, 2000]

Proposed critical habitat for chinook salmon (Central Valley Spring run, Central Valley Fall/late Fall run, S. OR and CA coastal, Puget Sound, Lower Columbia, Upper Willamette, Upper Columbia Spring run, and Snake River Fall ESUs) includes "...the water, substrate, and adjacent riparian zone of all accessible estuarine and riverine reaches...." Adjacent riparian zones are defined as "...areas within a slope distance of 300 ft. (91.4m) from the normal line of high water of a stream channel or adjacent off-channel habitats...." The Federal Register notice further indicates that essential features of chinook critical habitat include "...adequate: (1) substrate, (2) water quality, (3) water quantity, (4) water temperature, (5) water velocity, (6) cover/shelter, (7) food, (8) riparian vegetation, (9) space, and (10) safe passage conditions...." The notice further indicates that habitat quality is "...intrinsically related to the quality of upland areas and of inaccessible headwater or intermittent streams which provide key habitat elements (e.g., large woody debris, gravel, water quality) crucial for chum salmon in downstream reaches." The notice further indicates that logging, roading, pesticide applications, application of other chemicals, and non-point source pollution are all likely to affect critical habitat for chinook. [63 Federal Register 45, March 9, 1999]

G3-128

G3-129 The HCP Handbook states that mitigation should not only be based on sound biological rationale, but also be "commensurate with the impacts." [USFWS et al (1996), p. 3-19.]

G3-130 *Sierra Club et al v. Bruce Babbitt et al* recently held that replacement habitat must be provided for habitat destroyed pursuant to ITPs. [Civil Action No. 97-0691-CB-C, Order August 4, 1998, S. Dist., AL, S. Div.]

G3-131 Listed plants must also be addressed and protected by ITPs and HCPs under ESA s. 7(a)(2). The Services may not approve an action which jeopardizes the survival or recovery of listed plants.

G3-132 The HCP must also meet, with regard to each of the covered species, the following standards from the Services' "Draft Addendum to the Final Handbook for Habitat Conservation Planning and Incidental Take Permitting Process." [Federal Register, 64;45, March 9, 1999.]

"Often, there is a direct relationship between the level of biological uncertainty for a covered species and the degree of risk that an incidental take permit could pose for that species. Therefore, the operating conservation program may need to be relatively cautious initially and adjusted later based on new information."

G3-133 When evaluating the HCP, the Services also need to employ a more cautious approach than has often been used. The ESA expressly states that the Services may not approve HCPs and ITPs if they would "appreciably reduce the likelihood of the survival *and recovery* of the species in the wild." [ESA s. 10(a)(2)(B)(iv), emphasis added.] However, the Services

Response to Comment G3-130

Comment noted. However, because no habitat will be destroyed as a result of issuance of the ITP, and, as discussed in Master Response 3, conditions in the Plan Area are expected to improve over the term of the Plan and Permits, no replacement habitat is required.

Response to Comment G3-131

As discussed in EIS Section 1.5.1, regarding Federal regulatory provisions relating to approval of ITPs, ESA Section 7(a)(2) requires the Services to ensure that the actions they authorize are "not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification" of critical habitat of such species. ESA Section 7 does not require that any particular species or suite of species, including plant species, be included in an ESA Section 10 Permit.

A Permit applicant, not the Services, decides which species it will include in an application for Permit authorization. Approval of an HCP and issuance of an ITP, or, in this case, of the Plan and Permits, has no effect on the permittee's obligation to comply with all other applicable legal requirements. For any species, including a listed plant species, for which Green Diamond does not have ITP authorization, it remains subject to all applicable laws, including the ESA Section 9 prohibition of take of listed species. Although the group of covered species in the Plan (see AHCP/CCAA Section 1.3.3 and AHCP/CCAA Appendix A) does not include a plant species, potential impacts on vegetation and plant species of concern were assessed in EIS Section 4.5 as well as in the ESA Section 7 consultation process.

Response to Comment G3-132

The Services believe that the Plan, EIS and IA are consistent with the final Five Points Policy (June 1, 2000, 65 Fed. Reg. 35242), including the guidance relating to adaptive management. Regarding adjustment of the Operating Conservation Program based on new information, see AHCP/CCAA Section 6.2.6, as discussed further in AHCP/CCAA Section 6.3.6 and IA Paragraph 10.

Response to Comment G3-133

Permit approval criteria are discussed in EIS Section 1.3 (*ITP and ESP Requirements*) and Master Response 8. The Services have applied these criteria in approving the Plan and issuing the Permits.

Response to Comment G3-134

As noted above, Green Diamond is obligated to meet all applicable legal standards. Applicable legal standards are set forth in EIS Section 1.3 and 1.5. Permit approval criteria also are discussed in Master Response 8. Regarding the ITP obligation to minimize and mitigate the impacts of taking to the maximum extent practicable, see Master Response 8.2. Plan minimization and mitigation measures are set forth in AHCP/CCAA Section 6.2 *(Green Diamond's Operating Conservation Program*) and are further discussed in AHCP/CCAA Section 6.3 (*Rationale and Analysis Underlying Green Diamond's Operating Conservation Program*). The analysis contained in AHCP/CCAA Section 7 (*Assessment of the Conservation Strategy's Effectiveness in Fulfilling the Plan's Purpose*) demonstrates that implementation of the Plan will improve the covered species. In addition, the Plan is designed to meet the ESP/CCAA approval criteria for the unlisted Covered Species by providing a conservation benefit in the form of conservation measures that, if applied in combination with appropriate measures on other necessary properties, would preclude the need to list such species in the future.

The purpose of the ESA Section 10 permitting process is not to compare conservation programs measure for measure, but rather to ensure that the criteria for issuing such permits are met, based upon site-specific, species-specific and activity-specific conditions. The Services believe the Plan meets Section 10 issuance criteria.

G3-133

appear to have often interpreted this standard as stating, more or less, that HCPs and ITPs may not be approved only if they would "jeopardize species' continued existence." This is a much lower standard than that specified in the ESA, and as used by the Services, allows approval of HCPs which utilize far less effective mitigation measures, and which are less risk averse.

Impacts Must be Minimized and Mitigated to the Maximum Extent Practicable

G3-134

ESA s. 10(a)(2)(B)(ii) requires impacts be minimized and mitigated to the "maximum extent practicable." The Services must analyze and document whether the HCP has indeed minimized and mitigated "take" to the maximum extent practicable. [*Sierra Club et al v. Bruce Babbitt et al*, Civil Action No. 97-0691-CB-C, Order August 4, 1998, S. Dist., AL, S. Div.]

Longer timber rotations and other alternate silvicultural methods, for example, can minimize watershed disturbances and habitat impacts, while generating competitive economic returns. (See Hall (1999); this document has been provided to the Services on several recent occasions.) Moreover, the production of mushrooms and clean water, the sequestration and storage of atmospheric carbon dioxide, and the provision of other nontimber forest products and ecosystem services from older, healthier forests can generate significant supplemental revenues.

The Services need to independently evaluate Simpson's timber resources, site productivity, and other silvicultural factors, and determine what silvicultural and non-timber land management practices would in fact minimize and mitigate impacts to the plan species to the maximum extent practicable.

Several existing HCPs explicitly require longer timber rotations or other improved silvicultural methods, demonstrating their practicability. The Elliott State Forest HCP uses 80 to 240 year timber rotations and maintains significant late successional reserves above and beyond the narrow stream buffers.

The literature referenced in Section IV of our comments highlights a number of impact minimization and mitigation measures which are important for the conservation of imperiled fish, wildlife, and plants, and which would be economically "practicable" for forest landowners.

In the context of the Clean Air Act, "practicable" means economically or technologically possible. [*Union Electric Co. v. EPA* (427 US 246 (1976)), as cited in Arum (1998).] Likewise, the cost of an alternative should only determine its practicability in relation to other alternatives with the same level of environmental performance. [*Friends of the Earth v. Hall* (693 F Supp 904, 947 (W.D. Wash 1998), as cited in Arum (1998)] The NMFS rules for permits also state that the Administrator will consider whether the best available technology was used for impact minimization and mitigation. [50 CFR 222.22(c)(iv).]

Response to Comment G3-135

Regarding Permit approval criteria, see EIS Section 1.3 (*ITP and ESP Requirements*) and Master Response 8. The statutory approval criteria serve the purpose and policies of the ESA [16 U.S.C.A. § 1531(b),(c)].

Response to Comment G3-136

See Master Response 9 regarding quantification of take. Populations of the covered species and habitat conditions on an HPA-by-HPA basis in the Plan Area are discussed in AHCP/CCAA Sections 3 and 4. An assessment of the conservation strategy's effectiveness in fulfilling the purposes of the Plan is provided in AHCP/CCAA Section 7. For additional information about habitat conditions, see AHCP/CCAA Appendix C (*Studies, Surveys, Assessments of covered species and their Habitats Conducted in the Current Plan Area*).

Response to Comment G3-137

See EIS Section 1.5.1 regarding the Services' compliance with ESA Section 7, including the requirement not to destroy or adversely modify critical habitat.

Response to Comment G3-138

As noted above, Permit approval criteria are discussed in EIS Section 1.3 (*ITP and ESP Requirements*) and Master Response 8.

The Services' HCP Handbook states that if the landowner cites economic considerations as the reason for failing to utilize an alternate land management approach, then the landowner must provide supporting economic information, unless it is proprietary. [USFWS et al (1996), p. 3 - 36.] The Handbook also requires the Services to consider the cost of additional mitigation, the benefits of additional mitigation, the amount of mitigation provided by other landowners, and the landowner's own abilities. [USFWS et al (1996), pp. 3-36 and 7-3.]

G3-134 ESA ss. 10(a)(2)(A)(iv) and 10(a)(2)(B)(v) also authorize the Services to require mitigation measures *beyond* those "practicable" mitigation measures required by ESA s. 10(a)(2)(B)(ii). Likewise, the HCP Handbook also states that all HCPs should address other measures required by the Services. [USFWS *et al* (1996), pp. 1-7 & 3-10.]

The HCP Must Meet the Species' Recovery Needs, Including by Restoring Habitats and Enhancing Species' Populations if Necessary

G3-135 As indicated in ESA ss. 2(b), 2(c), and 3(3), the ESA's ultimate goal is, in effect, to recover threatened and endangered species, including to the point where they can be removed from the endangered species list. This has been affirmed by the US Supreme Court in *TVA v. Hill* and *Babbitt v. Sweet Home Chapter of Communities.* [See Gaffney et al (1997).] Several district court cases have also held that recovery must be assessed above and beyond mere survival. [See *House v. USFS* and *Idaho DFG v. NMFS.*]

G3-136 The HCP and DEIS need to identify, for each of the covered species, population levels, specific habitat conditions, and other factors that would correspond to genuine recovery across each of the species' ranges. Likewise, the HCP and DEIS need to provide concrete quantitative assessments of how the populations and habitat conditions stemming from the ITP and HCP will compare to these recovery indicators and standards.

G3-137 The ESA's s. 7 requirement to avoid adversely modifying species' critical habitats also requires the Services to ensure that HCPs and ITPs do not harm habitats needed for species' recovery, *including currently unoccupied habitat areas.*

G3-138 ESA s. 10(a)(2)(B)(iv) explicitly and clearly precludes the Services from approving an HCP which will "appreciably reduce the likelihood of the survival and recovery of the species in the wild." The HCP Handbook also states that the Services should "discourage" HCPs that preclude recovery options or which are inconsistent with recovery plans. Consistency with recovery plans is also included in the Handbook as a "helpful hint." [USFWS et al (1996), p. 3-20 and 1-15.]

G3-139 The Services need to thoroughly analyze how Simpson's ITP, HCP, and all logging and other land use practices permitted by the ITP, HCP, and IA will affect each covered species' chances of recovery, based on the best current information on the species, the full range of land management practices allowed by the ITP, and other relevant factors. The HCP must

Because the Plan meets these criteria, issuance of the Permits is proper. The Services believe that implementation of the Plan will not preclude recovery options and that the Operating Conservation Program is not inconsistent with any existing recovery plans.

Response to Comment G3-139

Regarding recovery, see response to Comment G3-138.

See Master Response 1 regarding baseline conditions generally, and Master Response 1.2 in particular (*Relationship Between Baseline Conditions and Conditions under the "No Action" Alternative under NEPA*). The No Action Alternative also is discussed in Master Response 2 and in EIS Section 2.1.

The Plan contains and relies on an exhaustive compilation of the best available scientific data known about current conditions in the Plan Area. See Master Response 1.3 regarding use of best available scientific information to accurately describe current baseline conditions within the Plan Area. Details of studies and monitoring efforts are provided in AHCP/CCAA Section 4.3 and Appendix C. Baseline conditions are set forth on an HPA-by-HPA basis in AHCP/CCAA Section 4 (*Description and Assessment of the Current Status of Aquatic Habitat and the Covered Species*).

AHCP/CCAA Section 4.2 describes and assesses geologic and geomorphic factors and the current status of the covered species. AHCP/CCAA Section 4 also discusses characteristic habitat types in each of these areas as well as existing factors that appear to be limiting for the covered species, their habitats, or the proper functioning of healthy aquatic/riparian ecosystems. The Services believe that the data presented represent an adequate sample for the purpose of characterizing the existing baseline conditions across the landscape. There are no known data relevant to the baseline conditions within the Plan Area that have been ignored.

Response to Comment G3-140

See response to Comment G3-131.

Response to Comment G3-141

Because no habitat is being "created" or proposed as off-site mitigation, the HCP Handbook policy guidance does not apply to the Plan.

not significantly (or "appreciably") impact any of the species' chances of recovery, as stated by the ESA. Additional mitigation measures must be provided to ensure that all land management practices potentially undertaken by Simpson will leave the covered species with a high probability of recovery.

Moreover, the HCP and DEIS need to identify species population levels and habitat conditions that would correspond to genuine recovery across the species' ranges, and provide concrete quantitative assessments of how the populations and habitat conditions stemming from the ITP and HCP will compare to these recovery standards.

Evaluations of the ITP and HCP's impacts on species' chances of recovery need to be based on more accurate baseline scenarios (i.e., "No Action" alternatives).

The legislative record for ESA s. 10(a) indicates that Congress intended for HCPs to *enhance* species' chances of survival. [HR Conference Report 835 (1982).] The HCP Handbook also cites this legislative intent and states that the Services should "encourage" landowners to provide a net benefit to species. [USFWS et al (1996), pp . 7-2 to 7-5 and 3-20.] The Department of Interior's testimony in response to the lawsuit against the "No Surprises" rule also recognizes that "[U]nder some circumstances, such as for 'severely depleted species and species for which the HCP covers all or a significant portion of the range' of a species,... measures to improve the species habitat may be required by the legislative history of [ESA] Section 10." [Federal Defendants' Combined Memorandum in Support of Cross-Motion For Summary Judgment and In Opposition to Plaintiffs' Motion for Summary Judgment, at 35 (D.D.C. Filed April 23, 1999), Spirit of the Sage Council et al v. Babbitt, No. 1:98CV1873 (EGS).]

G3-139

G3-140

Listed plants' chances of recovery must also be addressed and protected by ITPs and HCPs under ESA s. 7(a)(2). The Services may not approve an action which jeopardizes the survival or recovery of listed plants.

Additional Mitigation Standards

The Service's HCP Handbook states that if new habitat is being created as mitigation, then the habitat must be created through techniques that are proven and reliable or, if relatively new, then those techniques must be augmented by contingency measures and adaptive management. [USFWS et al (1996), p. 3-22.]

G3-141

The Handbook also states that mitigation habitat should be close to the impact area, similar to the impacted habitat types, and support the same species. [USFWS et al (1996), p. 3-22.] The same mitigation methods should be used for the same species by different HCPs, unless there are "biological or other differences" which are "clearly explained." [USFWS et al (1996), p. 3-24.]

Response to Comment G3-142

The Operating Conservation Program set forth in AHCP/CCAA Section 6.2, and discussed further in AHCP/CCAA Section 6.3, provides well-defined measures that exceed mere promises or research funding.

Response to Comment G3-143

The Services believe that the Plan, EIS and IA are consistent with the final Five Points Policy (June 1, 2000, 65 Fed. Reg. 35242), including the guidance relating to biological goals and objectives. See Master Response 12 regarding biological goals and objectives.

Response to Comment G3-144

Adaptive Management

The Plan is intended to be adaptive and responsive to input from the Services. More specifically, Green Diamond will initiate reviews and implement adaptive management measures in response to the triggers and within the range of changes identified within AHCP/CCAA Section 6.2.6, as discussed further in AHCP/CCAA Section 6.3.6 and IA Paragraph 10. Green Diamond also will establish an AMRA to allow for some level of adjustments over the term of the Plan and Permits. See AHCP/CCAA Sections 6.2.6.3, 6.3.6.2, Master Response 11.3, regarding monitoring and adaptive management, and Master Response 15, regarding the adaptive management reserve account. These provisions provide clarity regarding future revisions to the

Mitigation and protection measures must be clearly defined for agencies to make decisions that hinge on such measures. Likewise, the mere promise of future actions is not sufficient to meet the ESA's protection standards. [See *LaFlamme v. FERC* (852 F.2d 389, 400 (9th Cir 1988), and *ONRC v. Daley* (1998 WL 296838) (D.Or 1998), as cited in Arum (1998), as well as *Sierra Club et al v. Bruce Babbitt et al*, Civil Action No. 97-0691-CB-C, Order August 4, 1998, S. Dist., AL, S. Div.]

G3-142

The Service's HCP Handbook states that mitigation habitat should be provided *prior* to the "take" of a species habitat. [USFWS et al (1996), p. 3-21.]

The HCP Handbook states that mitigation habitat should be permanently protected. [USFWS et al (1996), p. 3-22.]

ITPs/HCPs may not rely upon speculative sources of mitigation, such as promises of additional funds for habitat acquisition from unnamed sources. [*Sierra Club et al v. Bruce Babbitt et al*, Civil Action No. 97-0691-CB-C, Order August 4, 1998, S. Dist., AL, S. Div.]

Providing funds for research is not sufficient as mitigation. [USFWS et al (1996), p. 3-23]

G3-143

The HCP must also meet, with regard to each of the covered species, the following standards from the Services' "Draft Addendum to the Final Handbook for Habitat Conservation Planning and Incidental Take Permitting Process." [Federal Register, 64;45, March 9, 1999.]

"The operating conservation program will include those measurable actions that, when implemented, are anticipated to meet the biological objectives."

Adaptive Management and Regulatory Assurances

G3-144

Landowner assurances should take the form of explicit, up-front agreements about the plan's biological goals, monitoring, adaptive management, and enforcement, and fair allocation of responsibility between the landowner and public for funding future plan changes. In other words, the plan should provide up-front clarity and assurances about the process that will be used to identify and make improvements to the plan -- instead of simply precluding meaningful plan improvements through "No Surprises" type assurances.

We cannot emphasize strongly enough that landowner assurances should *not* take the form of "No Surprises" type guarantees or other guarantees that largely preclude additional mitigation by setting extremely high burdens of proof for the Services, requiring additional mitigation to first occur on public lands, by requiring any additional mitigation to be fully subsidized by the public, and/or requiring any additional mitigation to be voluntary. "No Surprises" supposedly encourages landowners to proactively conserve species which are not listed as threatened or endangered by indemnifying the landowners from providing addition mitigation should the species be listed at a later date. However, the up-front analyses, protections, and mitigation measures for unlisted species are rarely sufficient, as evidenced

Plan.

Regulatory Assurances

Assuming Green Diamond is in full compliance with the measures of the Plan, the Services will not require Green Diamond to provide additional mitigation measures beyond those provided in the Plan (AHCP/CCAA Section 6.2). See Master Response 19 regarding the No Surprises rule.

Response to Comment G3-145

No Surprises assurances apply only to species, whether listed or unlisted, that are "adequately covered" in the HCP. 63 Fed. Reg. 8859, 8867 (Feb. 23, 1998). What it means to be "adequately covered" is different for listed and unlisted species. For listed species, "adequately covered" under an HCP refers to any species addressed in an HCP that has satisfied the Permit issuance criteria under section 10(a)(2)(B) of the ESA. These criteria are discussed in AHCP/CCAA Section 1.4.1 (ITP and ESP Requirements), EIS Section 1.5.1 (*Federal Regulatory Provisions Relating to Approval of ITPs*) and Master Response 8 (*Permit Approval Criteria*). Listed species are identified in AHCP/CCAA Section 1.3.3.1 and discussed in AHCP/CCAA Section 3 and Appendix A.

For unlisted species, "adequately covered" refers to any species that is addressed in an HCP as if it were listed pursuant to section 4 of the ESA and addressed by HCP conditions that would satisfy Permit issuance criteria under ESA Section 10(a)(2)(B) if the species actually were listed. 63 Fed. Reg. at 8867. The Plan satisfies these requirements.

The four unlisted covered species are identified in AHCP/CCAA Section 1.3.3.2, and are discussed in AHCP/CCAA Section 3 and Appendix A. As stated in the EIS (see ES-2 and EIS Section 1.2), the Services' purpose and need for the proposed project:

> *"is to respond to Green Diamond's ITP and ESP application for incidental take authorization pursuant to an HCP /CCAA that provides protection and conservation to listed, proposed, and unlisted species and their habitats consistent with the requirements of Section 10(a)(1)(A)*

by virtually all existing forest HCPs in the region. Even in cases where the up-front provisions are more adequate, changes and additions to these measures may well become necessary over time, including as a result of changes in the landowners' management practices.

While many of the following standards will be relevant regardless of the type of regulatory assurances provided to Simpson, adherence to each of the following standards will be especially important if Simpson is provided with "No Surprises" type assurances, as envisioned by the draft HCP and IA. G3-144

Unlisted Species Must Be Addressed As if They Are Listed

In order for the Services to provide regulatory assurances with regard to the unlisted covered species, Simpson's HCP must address each species as if it were already listed.

The final "No Surprises" rule, the legislative history for ESA s. 10(a), and the Services' HCP Handbook all state that any unlisted species covered in an HCP must be addressed as if it were listed. Congress stated that "the Committee intends that... In the event that an *unlisted species* addressed in the approved conservation plan is subsequently listed ... no further mitigation requirements should be imposed *if the conservation plan addressed the conservation of the species and its habitat as if the species were listed* pursuant to the Act." [Conf. Report at 30 and 50 FR 39681-39691, Sept. 30. 1985. (emphasis added).] The "No Surprises" rule states that *"adequately covered means... with respect to unlisted species, that a proposed conservation plan has satisfied the permit issuance criteria under section 10(a)(2)(B) of the ESA that would otherwise apply if the unlisted species covered by the plan were actually listed."* [Federal Register, 63;35, February 23, 1998. (emphasis added).] The HCP Handbook also states that, in order to "adequately cover" an unlisted species, HCPs must satisfy the ESA s. 10(a)(2)(B) HCP issuance criteria for those species, as if the species had been listed. [USFWS et al (1996), pp. 3-30, 4-1.] G3-145

The draft "No Surprises" rule also stated that unlisted species need to be addressed by removing threats to their survival and recovery, such that the species would not need to be listed if the measures were undertaken across their range.

Adaptive Management Measures Must Be Provided for Any Data Gaps, to Respond to Changing Conditions, Etc.

The Department of Interior's testimony in response to the lawsuit against the "No Surprises" rule states, in effect, that large scale HCPs must have extensive, meaningful adaptive management provisions to be lawful. "The Services recognize that HCP permits often must be structured in such a way as to allow for the adaptation and refinement of mitigation measures over time as new scientific information becomes available.... Rather, the purpose of the No Surprises rule is to force the negotiating parties to clearly define up front a mutually-agreed upon framework for such adaptive management, if necessary due to scientific G3-146

and Section 10(a)(1)(B) of the ESA."

Measures contained in the Operating Conservation Program (AHCP/CCAA Section 6.2) in nearly all cases will be applied programmatically across the Plan Area, although as discussed in AHCP/CCAA Section 7, may have neutral or less impact on headwaters unlisted covered species for which mobility is limited and downstream benefits are not realized. Benefits of the conservation measures for the unlisted covered species are discussed in AHCP/CCAA Section 7.5, and conclusions regarding the mitigation of impacts, provision of conservation benefits and avoidance of jeopardy are discussed in AHCP/CCAA Section 7.6. Further, the Plan is designed to meet the ESP/CCAA approval criteria for the unlisted covered species (see, e.g., AHCP/CCAA Section 1.4.1.2) by providing a conservation benefit in the form of measures that, if combined with appropriate measures applied on other necessary properties, would preclude the need to list such species in the future. Based on this "treatment" in the Plan and the underlying scientific studies (see, generally the Appendices in AHCP/CCAA Volume II), unlisted covered species are "adequately covered" in the Plan. Also, see Master Response 19.

Response to Comment G3-146

Regarding adaptive management in the Plan, see response to Comment G3-144. Thresholds or "triggers" for adaptive management are set forth in AHCP/CCAA 6.2.6.1, and are discussed in AHCP/CCAA Section 6.3.6.1. Regarding the creation of habitat as mitigation, see response to Comment G3-141.The Services believe that the Plan, EIS and IA are consistent with the final Five Points Policy (June 1, 2000, 65 Fed. Reg. 35242), including the guidance relating to adaptive management.

uncertainty, and to establish a division of later responsibilities in the event of highly unlikely unforeseen events.... In the event there are significant gaps in the biological data underlying a particular HCP, those gaps should be addressed through the inclusion of adaptive management provisions." [Federal Defendants' Combined Memorandum in Support of Cross-Motion For Summary Judgment and In Opposition to Plaintiffs' Motion for Summary Judgment, at 2 (D.D.C. Filed April 23, 1999), Spirit of the Sage Council et al v. Babbitt, No. 1:98CV1873 (EGS).] The HCP Handbook also states that if information on unlisted species' conservation needs is lacking, then the landowner should either: i) use adaptive management to incorporate new information as it becomes available, ii) conduct additional research on the species' needs, or iii) agree to reduced "No Surprises" guarantees for those species. [USFWS, et al (1996), p. 3-30.]

As recognized by the Services' HCP Handbook, adaptive management is especially important for species whose conservation needs are not yet well known, as is usually the case with unlisted species. [USFWS et al (1994) and USFWS et al (1996).]

The HCP Handbook states that contingency measures should exist when landowners create/restore habitat as mitigation, in case the new habitat isn't viable. [USFWS et al (1996), p. 3-22]

ESA s. 10(a)(2)(B) also requires HCPs to include assurances the plans will be implemented, continue to minimize and mitigate the impacts of take, and continue to avoid jeopardizing the species' chances of survival and recovery. ESA s. 10(a)(2)(A)(iv) also requires the Services to require other measures as necessary to ensure the plan's success.

The HCP Handbook states that "thresholds" (i.e., triggers) for adaptive management review should be linked to key elements of the HCP and its monitoring protocol. Further, the thresholds must be based on measurable criteria. [USFWS et al. (1996). p. 3-25.]

The HCP must also meet, with regard to each of the covered species, the following standards from the Services' "Draft Addendum to the Final Handbook for Habitat Conservation Planning and Incidental Take Permitting Process." [Federal Register, 64;45, March 9, 1999.]

"...an adaptive management strategy is essential for permits that cover species that have significant biological data or information gaps that incur a significant risk to that species at the time the permit is issued."

"Possible significant data gaps that could lead to the development of an adaptive management strategy include, but are not limited to, significant biological uncertainty about specific information about the ecology of the species or its habitat (e.g., food preferences, relative importance of predators, territory size), habitat or species management techniques, or the degree of potential effects of the activity on the species covered in the incidental take permit."

Response to Comment G3-147

Regarding foreseeable changed circumstances (called "changed circumstances" in the Plan and IA) and unforeseeable changed circumstances (called "unforeseen circumstances" in the Plan and IA), see response to Comment G3-109. Regarding a new listing of a species that is not a covered species, see AHCP/CCAA Section 6.3.9.7 and IA Paragraph 9.3.

The purpose of the ESA Section 10 permitting process is not to compare conservation programs measure for measure, but rather to ensure that the criteria for issuing such permits are met, based upon site-specific, species-specific and activity-specific conditions. The Services believe each of the conservation plans cited in this comment meet Section 10 permit approval criteria, which are discussed in EIS Section 1.3 and Master Response 8, even though they may utilize different measures relating to adaptive management. The Services believe that the Plan, EIS and IA are consistent with the final Five Points Policy (June 1, 2000, 65 Fed. Reg. 35242), including the guidance relating to adaptive management.

"...there may be some circumstances with such a high degree of uncertainty that a species should not receive coverage in an incidental take permit at all until additional research is conducted." The HCP and DEIS must gauge the level of uncertainty that exists with regard to each of the covered species.

"A practical adaptive management strategy within the operating conservation program of a long-term incidental take permit will include milestones that are reviewed at scheduled intervals during the lifetime of the incidental take permit and permitted action."

G3-146 "For an adaptive management strategy to be effective, it must be integrated into a monitoring program that is designed to ensure proper data collection and analysis that can guide appropriate adjustments in the operating conservation program."

Simpson is Responsible for Providing Additional Mitigation Measures Which May be Needed to Fully Protect and Recover Each of the Covered Species

G3-147 In drafting ESA s. 10, Congress explicitly recognized that "...circumstances and information may change over time, and that the original plan might need to be revised. To address this situation, the Committee expects that any plan approved for a long-term permit will contain a procedure by which the parties will deal with unforeseen circumstances...." [Conf Rept at 30 and 50 FR 39681-39691, Sept. 30, 1985.] The Federal Register notice for the final "No Surprises" Rule states that "...many changes in circumstances during the course of an HCP can reasonably be anticipated and planned for in the conservation plan (e.g., the listing of new species, or a fire or other natural catastrophic event in areas prone to such events), and the plans should describe the modifications in the project or activity that will be implemented if these circumstances arise...." [Federal Register, 63;35, February 23, 1998.] The final rule itself then states that "changed circumstances means changes in circumstances affecting a species or geographic area covered by a conservation plan that can reasonably be anticipated by plan developers and the Service and that can be planned for (e.g., the listing of new species, or a fire or other natural catastrophic event in areas prone to such events)." [Federal Register, 63;35, February 23, 1998.] Likewise, the HCP Handbook states that "unforeseen circumstances" *don't* include changed conditions that could reasonably be anticipated by the landowner or the Services, including the listing of new species or modifications in the landowner's activities. [USFWS et al (1996), p. 3-28] Under the final "No Surprises" rule, landowners are responsible for providing improved and/or additional mitigation measures needed in response to "changed circumstances," *provided the mitigation measures are identified in the HCP.*

"Changing circumstances" which should be identified in the HCP include stand replacing fires, floods, and landslides, as well as the listing of additional species as Threatened or Endangered under the ESA. Other significant and reasonably foreseeable "changing circumstances," include changes in Simpson's land management practices; declines in the condition of the covered species due to inadequate conservation measures in the HCP; designation of critical habitat for the covered species; development of recovery plans and

recovery plan provisions for the covered species; and increased susceptibility of the forest to invasive exotic pests, pathogens, and plant and animal species due to the landowner's forest management practices. Possible management changes include use of shorter timber rotations, increased use of clearcutting and other even aged silviculture, use of "whole tree" and biomass harvesting, use of different tree species, use of genetically modified trees, increased use of fertilizers, herbicides, and other chemicals, and other types of intensified forest management.

Other foreseeable changing circumstances include the effects of human-induced climate change, which is likely to cause ecological gradients, vegetation zones, and species' habitat needs to shift significantly. This situation is similar to wildfires -- while we cannot predict exactly when and where wildfires will strike, we do know they are likely, and HCPs should account for their effects during planning, impact assessment, mitigation design, and adaptive management.

In addition to identifying these and other changing circumstances, the HCP must identify the specific adaptive management and additional mitigation measures that will be adopted to ensure the HCP's continued performance.

Several existing HCPs begin to demonstrate the practicability of adaptive management arrangements in which the landowner retains responsibility for providing addition mitigation as needed. The Washington DNR HCP's adaptive management plan identifies several potential management changes that the DNR will undertake should they become necessary, even if they involve additional costs to the DNR. These potential changes include providing buffers for intermittent streams, increasing spotted owl protections, and reducing sedimentation from roads. Plum Creek's existing HCP for the I-90 Corridor area in Washington also requires Plum Creek to modify and improve its forest management to meet target outcomes for northern spotted owl. Likewise, the company agreed to provide additional mitigation over time if required by watershed analysis and water quality monitoring.

Plum Creek's existing HCP also stated that the listing of new species as threatened or endangered shall not be considered "unforeseen" circumstances. Likewise, under this existing HCP, changes in Plum Creek's operational or management prescriptions resulting from the watershed analyses and aquatic monitoring components of the HCP's adaptive management provisions will not be considered "unforeseen" or "extraordinary" circumstances, and Plum Creek will provide additional or enhanced stream buffers or other protection measures if required by these analyses.

ESA s. 10 only allows for "take" permits (ITPs) to be issued for listed species. *Unlisted* species should *not* be included in the ITP or an HCP's Implementation Agreement (IA). The ESA's basic structure and precedents set by previous HCPs require the Services to re-examine the HCP in light of the ESA's HCP standards and issuance criteria with regard to newly listed species when deciding whether to add those species to an ITP. The ESA states

Response to Comment G3-148

ESA Section 10 permit approval criteria for an ITP include the requirement that an HCP specify "what steps the applicant will take to minimize and mitigate such impacts." 16 U.S.C.A § 1539(a)(2)(A)(iii). The monitoring process includes (1) implementation monitoring (AHCP/CCAA Section 6.2.7) to evaluate and document Green Diamond's implementation of and compliance with the provisions of the Plan, and (2) effectiveness monitoring (AHCP/CCAA Section 6.2.5), which focuses on tracking the success of the measures in the Operating Conservation Program. The Adaptive Management Program provides a mechanism to adjust the Operating Conservation Program as appropriate. See also AHCP/CCAA Appendix D, regarding specific protocols for effectiveness monitoring; AHCP/CCAA Sections 6.3.5 and 6.3.7 for additional discussion about Operating Conservation Program monitoring measures; AHCP/CCAA Section 6.3.6 for additional discussion about adaptive management; and Master Response 11.3 regarding these processes.

Response to Comment G3-149

See response to Comment G3-148.The Services believe that the Plan, EIS and IA are consistent with the final Five Points Policy (June 1, 2000, 65 Fed. Reg. 35242), including the guidance relating to monitoring.

that "take" permits may be issued for species *listed* pursuant to the Act. In other words, unlisted species should *not* be expressly included in the ITP. Nor should species be automatically added to ITPs.

The question of whether or not unlisted species are adequately addressed by an HCP must be re-examined at the time those species are listed. The IA should expressly require the Services to re-examine, after a previously unlisted species is listed and if Simpson requests that the species be added to the ITP, whether the HCP still adequately addresses the species' conservation and mitigation needs under the ESA and its rules. This approach has been used in other existing HCPs and is quite reasonable. See Plum Creek's existing HCP for the I-90 corridor area in the central Washington Cascades, for example.

Similarly, the Services should not presume that the ESA s. 7 biological opinions drafted in conjunction with the HCP's initial approval will still be valid many years into the future when conditions have changed enough to warrant listing new species as Threatened or Endangered. Reinitiation of consultation is likely to be required when new species are listed. This should be recognized in the IA.

The HCP must also meet, with regard to each of the covered species, the following standards from the Services' "Draft Addendum to the Final Handbook for Habitat Conservation Planning and Incidental Take Permitting Process." [Federal Register, 64;45, March 9, 1999.]

G3-147 "When an HCP, permit, and IA incorporate an adaptive management strategy, it should clearly state the agreed upon and warranted range of possible operating conservation program adjustments due to significant new information, risk, or uncertainty."

Monitoring Standards for the HCP

G3-148 Monitoring provisions are mandatory for all HCPs. ESA s.10(a)(2)(B) states that the terms and conditions necessary to assure the plan will be implemented include reporting requirements. Reporting cannot occur without monitoring. Monitoring is also required under the Service's regulations at 50 CFR 17.22(b)(1)(iii)(B) and 50 CFR 222(b)(5)(iii). According to the HCP Handbook, all HCPs must monitor their impacts over time. [USFWS *et al* (1996), pp. 1-7 & 3-10]

G3-149 The HCP Handbook states that an HCP's monitoring provisions should be as specific as possible and be commensurate with the project's scope and the severity of its effects. [USFWS et al (1996), p. 3-26] The Handbook also states that monitoring must be sufficient to detect trends in species' populations. [USFWS et al. (1996), p. 3-27.]

The HCP Handbook states that monitoring protocol must specify the frequency, timing, and duration of data collection; must specify how the data will be analyzed; and must specify who will do the analysis. [USFWS et al (1996), p. 3-27.]