

**TIMBER FISH
& WILDLIFE**

FIELD IMPLEMENTATION COMMITTEE

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**1991 FOREST PRACTICE
COMPLIANCE SURVEY**

TIMBER/FISH/WILDLIFE

1991

FOREST PRACTICES COMPLIANCE REPORT

Prepared for
TFW Policy Committee

Prepared by
TFW Field Implementation Committee

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Introduction

This survey was initiated by Timber Fish and Wildlife (TFW) to answer the question, 'How well are the forest practices rules being implemented statewide?' The survey results may help identify areas of compliance to focus on for better resource protection. The compliance survey will provide a sound basis for the fourth annual review to discuss future changes to TFW and forest practices.

The survey was conducted under the direction of the Field Implementation Committee (FIC) of TFW with the cooperation of the Department of Natural Resources (DNR) forest practices staff and Northwest Indian Fisheries Commission staff. Only forest practices applications (applications) approved after the initiation of TFW in (February 1987) and completed prior to the time of the survey, (summer 1991) were evaluated. The applications were evaluated against the rules in place at the time of the operation. This survey is a snapshot of forest practices compliance statewide. This survey does not compare compliance between DNR regions.

The 1991 survey consisted of fifteen pages of detailed questions covering each major section of the forest practice rules (RCW 76.09), except reforestation. See Appendix A. Reforestation was not included because of extended time limit. Reforestation will be evaluated in a separate project. The compliance survey also includes a section to document voluntary and cooperative resource protection (above and beyond the regulations). The 1991 survey was patterned after the 1990 FIC compliance survey. The 1990 survey sample size was too small to be statistically valid, therefore only general comparisons can be made between the two surveys. Although not statistically valid, the 1990 survey did highlight some important issues, for example road maintenance.

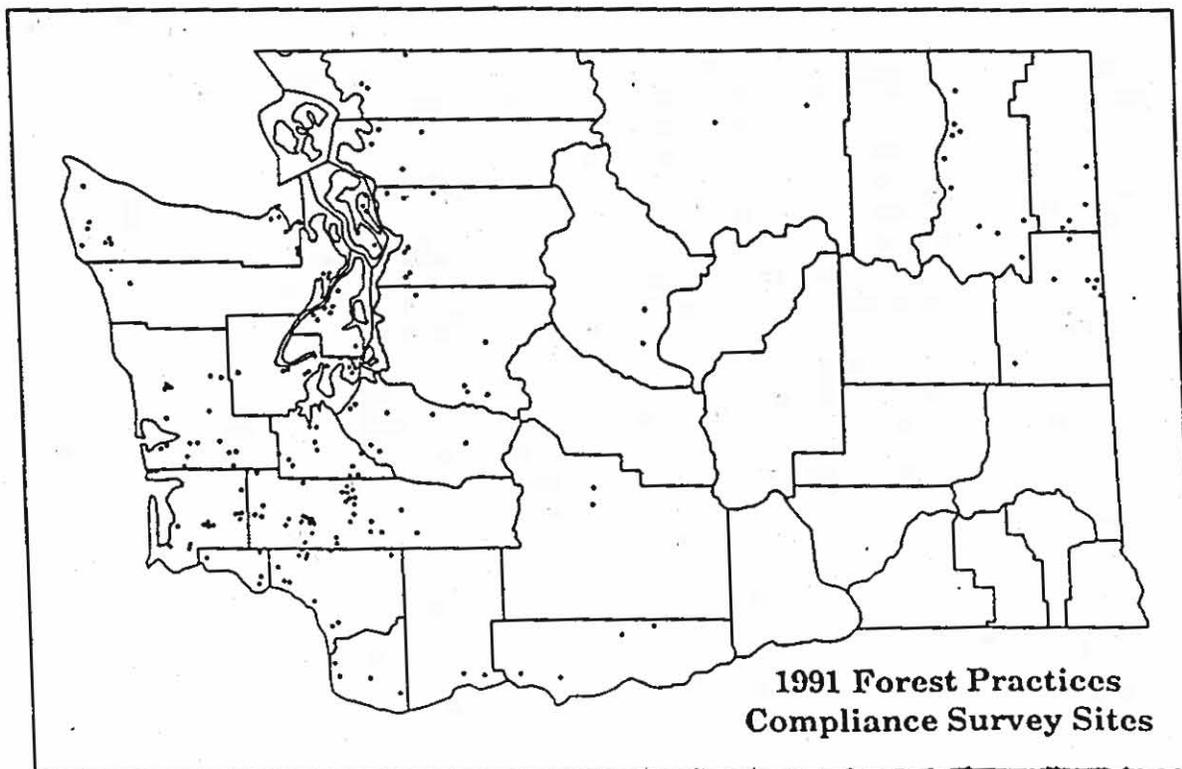
The applications surveyed were randomly selected using a Department of Revenue data base of completed forest practices applications. The surveyors, accompanied by the forest practices forester, conducted a thorough on-site inspection of nearly every application in the survey. Timber Fish Wildlife's Field Implementation Committee then analyzed the survey results.

The survey was designed to evaluate compliance with all the major sections of the forest practice rules eg., application processing, road construction, timber harvesting, chemical application. The survey was structured similarly to the format of the Forest Practices Rules and Regulations. The committee included questions to evaluate damage and potential damage to

public resources, but concluded that these evaluations have limited value, due to inadequate survey protocol. The damage information is useful to suggest areas of future study. The damage information is subjective and only included to help put problems in perspective.

SAMPLING

The survey was designed by a biometrician to be $\pm 10\%$ accurate, with a precision of 90% when relating a subset to the entire sample population of 191. The survey was also designed so each class of forest practice could be evaluated independently with the same accuracy and precision. In terms of a target, accuracy is how close you come to the center and precision is how tightly a series of shots are grouped. Confidence when analyzing a portion of a subset may be different the $\pm 10\%$. Comparisons between DNR regions would have required surveying seven times as many applications. A total of 191 completed forest practices applications were evaluated. Class II notifications were not surveyed because notifications by nature have a very low potential for public resource damage, and because we had limited resources to do the survey. It was necessary to use twenty (10% of 191) alternate applications because some of the original applications were never started, or renewed, or were inconclusive. See map below for general site locations.



SECTION REVIEW

I. GENERAL INFORMATION

The general information section of this survey was designed to describe application classification, type of operation, special conditioning, site-visits and deviations from information provided on each application. General information data are found in Appendix B. A total of 191 completed forest practices applications were evaluated. The total number of application surveyed in each class are shown in figure 1.

Total Number of Sites Sampled
By Forest Practice Class

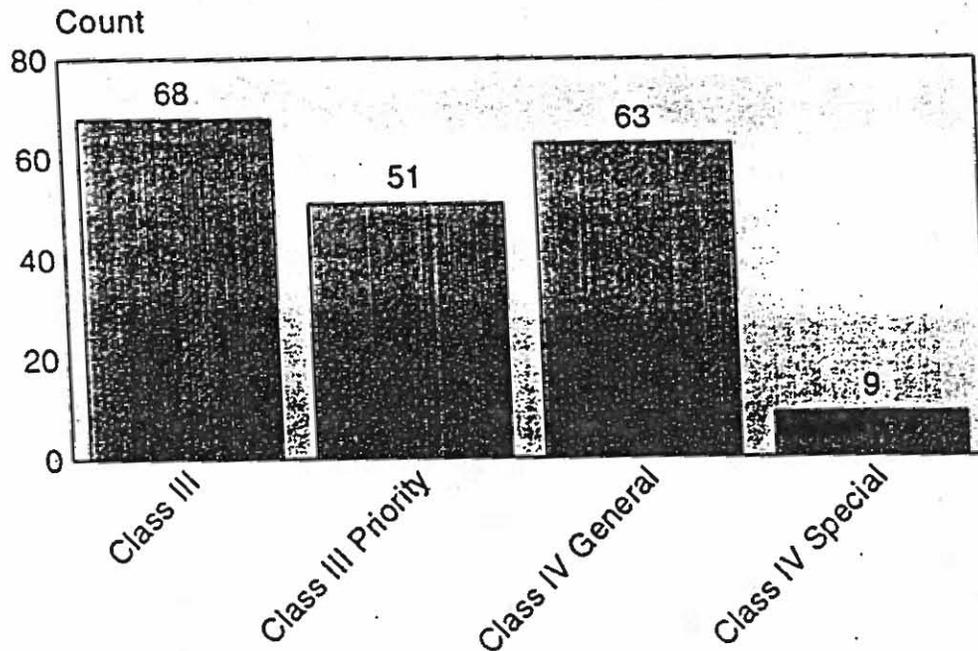


Figure 1. Total Number of Applications by Class

The applications surveyed included the following.

Type of Operation	Percent of the 191 Applications	Identified miles and acres
Road Const.	22	23.45 miles
Road Maint.	12	19.50 miles
Clearcut	49	3669.45 acres
Partial-cut	34	2688.95 acres
Salvage	2	928.00 acres
Chemicals	13	2946.00 acres

The total does not equal 100 percent because more than one activity may occur on an application. See Figure 2 for the total number of applications within each type of operation.

Type of Operations

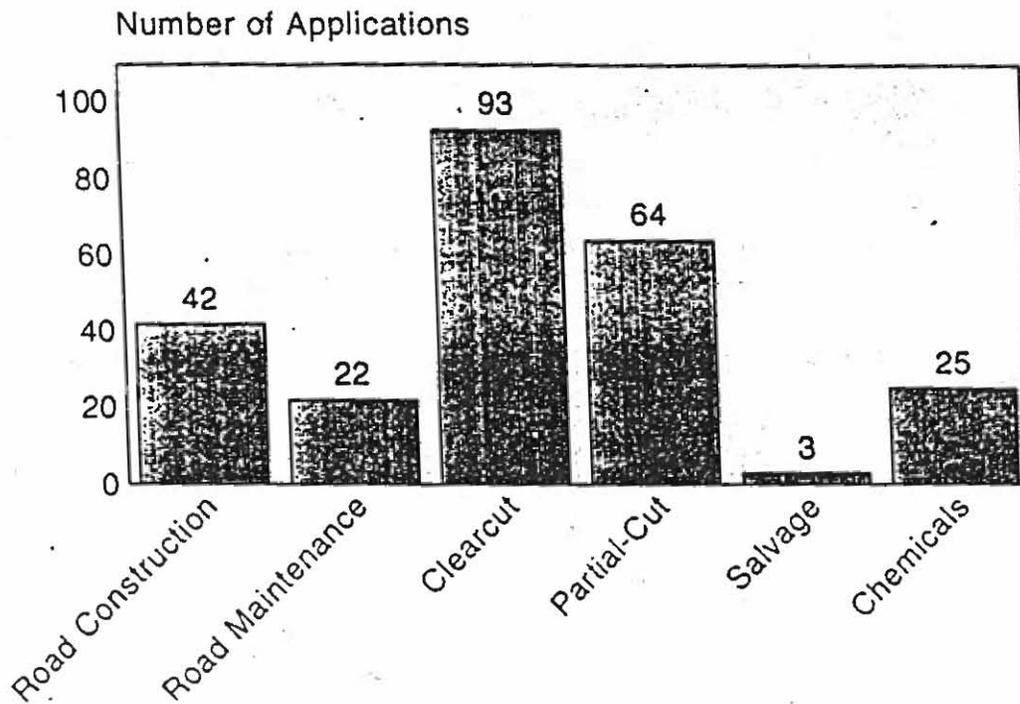


Figure 2. Number of Applications within each Operation

CLASSIFICATION

The survey considered whether the application was properly classified according to the rules in place at the time of approval (WAC 222-16-050). One hundred and eighty-six (97%) of the applications were properly classified. On two (1%) of the applications the class was not recorded. Three of the applications were alternate plans.

Misclassified applications were most often conversions that were not stated as such on the application, or there was no indication that a conversion had occurred. The survey did not determine if the application received less protection as a result of the misclassification.

TRAX, PRIORITIES, ID TEAMS, and CONDITIONING

Total Resource Application Cross-Reference (TRAX), a computerized inventory of sensitive areas, is used as one tool when classifying applications. Fifty percent of the forest practices applications triggered TRAX alerts. Examples of items identified by the TRAX are unstable soils, drinking water sources, archeological or cultural resources, special plants and animals. Twenty five (13%) of the TRAX alerts resulted in special conditions.

TRAX identifies applications with special environmental concerns. Each DNR Region may utilize this information to reclassify forest practice applications as priority issues. Priority issues result in closer scrutiny by DNR and other TFW participants prior to approval. This often includes on site review and advice by specialists with expertise in that specific field related to the priority issue. These experts, as part of an interdisciplinary (ID) team, were used on 11 (22%) of the priority applications. Of those 11 applications involving ID teams nine had special restrictions placed on the approved permit.

SPECIAL CONDITIONING

The DNR placed "special" conditions on 33 (17%) of the total applications surveyed. Special conditions as defined for this survey indicates any conditions placed on the application above and beyond the standard WAC's. Priority issues, ID teams, and TRAX resulted in special conditioning as shown below. Applications may be included within more than one category.

PRIORITY ISSUES	20 (37%) of 54
ID TEAMS	9 (82%) of 11
TRAX	25 (27%) of 94

The list below shows which general area the special conditions applied to. A single application may be included within more than one category.

ROADS	10
HARVEST	39
WILDLIFE	16
CHEMICAL	5

Thirteen of the 33 applications receiving special conditions had no recorded post-harvest visits.

SITE VISITS

Thirty one percent of the applications had at least one pre-approval site visit. Broken down by application class this represents:

16	(24%)	of the class III
24	(47%)	of the class III-P
14	(22%)	of the class IV-G
5	(56%)	of the class IV-S

ID team review was conducted on 11 (6%) applications.

At least 63 (33%) of all the applications had post-approval site visits by the DNR. Again, broken down by application class this represents:

23	(34%)	of the IIIs
21	(41%)	of the III-Ps
16	(25%)	of the IV-Gs
3	(33%)	of the IV-Ss.

It was unknown whether a post-approval site visit by the DNR had occurred on 9 (5%) of the applications.

DNR visited 35 (18%) of the applications while the operation was active. Forty-nine (26%) of the applications were visited after the operation was complete. Many applications had multiple post-approval visits, for example one application was visited six times during and three times after. Other TFW cooperators, namely Fisheries, Wildlife, and the Tribes, have recorded visits on eight (4%) of the sites. Complaints were recorded from private citizens on four (2%) of the applications.

DEVIATIONS

Seventy (37%) of the 191 applications had deviations, plus 19 (10%) were unknown, primarily class IV-Gs. Deviations are actions that differ from the information stated on the application. For example, non-compliance with special conditions

placed on the application, increase road activity or timber harvesting. This report will give details on deviations and violations relevant to each section.

Deviations are not necessarily damaging to public resources, and are not necessarily violations of the forest practices rules. In fact 60 (82%) of the deviations did meet or surpass the regulations, thirteen (18%) did not. Thirty five of the 70 deviations (50%) resulted in less impact to public resources than was specified. Examples include: leaving more RMZ, building less road than specified, harvesting less acreage/trees than approved, protecting wetlands, and treating fewer acres with chemicals.

Deviations, by class, break down as follows:

Class	More Activity than Applied For	Less Activity than Applied For	Total Number of Application	Percent of Class
III	13	18	68	46
IIIP	14	12	51	51
IVG	9	4	63	21
IVS	1	2	9	33

Of the 70 operations with deviations only two (3%) created damage or potential damage to a public resource. Damage was unknown on three (4%) applications. When damage was identified it was judged to be moderate.

WATER

One hundred and eighteen (62%) of the applications involved identified water.

Type 1 = 13%
 Type 2 = 6%
 Type 3 = 33%
 Type 4 = 44%
 Type 5 = 61%

Twenty-two (19%) of those that identified water contained adjacent wetlands.

Five of the applications triggered water-type map updates. Four (4%) changes were upgrades (3 were T-4 to T-3, 1 was T-3 to T-2) and one (1%) involved a downgrade (T-3 to T-4).

CONCLUSIONS

The deviation section did not identify a specific class of forest practices on which to concentrate compliance. Operations deviating from the application were highest among class IIIP (27%), but class IV Specials (11%) may have higher risks. Checks for compliance with special conditioning should be improved. Especially when one considers 25% of the special conditions in the timber harvest section and 55% of the special conditions in the roads section were not complied with (see each section for details). Water typing should be checked with each forest practice to insure that water type maps are accurate.

II. ROADS

Forty-three (23%) of the 191 applications indicated some or all of the operations involved the following WAC's: 222-24--020 Road Location, 222-24-025 Road Design, 222-24-030 Road Construction, 222-24-035 Landing Location and Construction, and 222-24-060 Rock Quarries, Gravel and Borrow Pits and Spoil Disposal Areas. See Figure 2 for the number of applications within each section. Supporting data can be found in Appendix C.

Roads

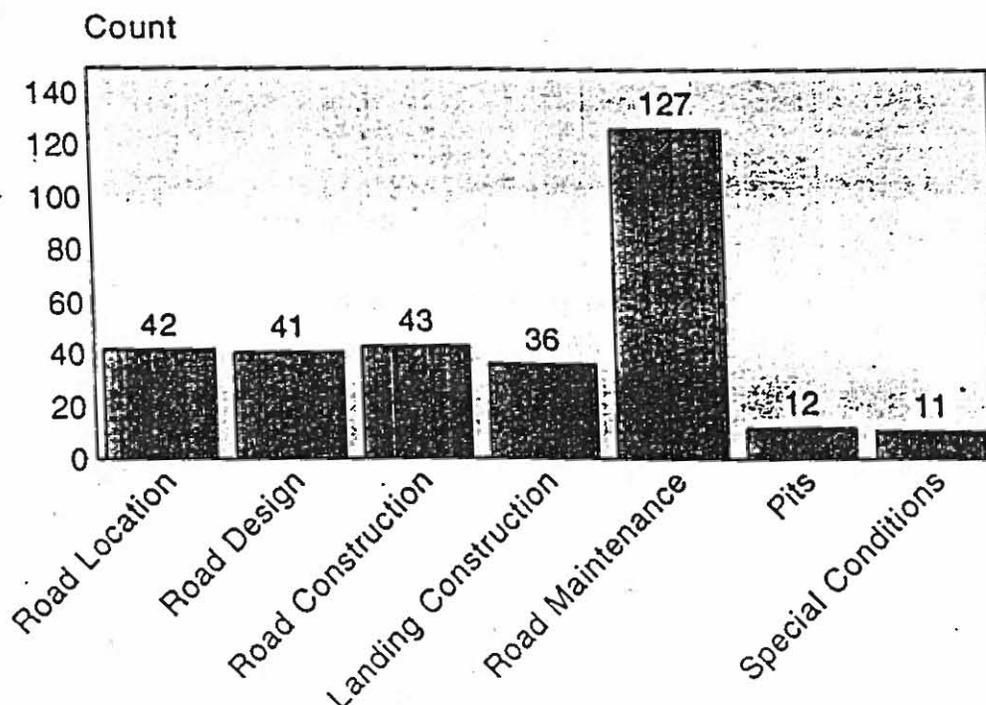


Figure 3. Number of Applications within each Section of Roads

ROAD LOCATION

Forty-one of the 42 (98%) applications involving road location were in compliance with the regulations and application conditions. One road did not meet the regulations because the actual road location deviated from the location specified on the application map. This deviation did not result in damage or potential damage.

ROAD DESIGN

Thirty-six of the 41 (88%) applications involving road design were in compliance with the regulations and application conditions. Non-compliance was culvert related on five applications: two had inadequate culverts, and three had inadequate spacing between culverts. Two of these resulted in slight damage, one resulted in low potential damage, and the remaining two had no damage or potential damage identified.

ROAD CONSTRUCTION

Debris Burial: Forty-two of the 43 (98%) applications involving road construction were in compliance with the regulations. One operation resulted in organic debris burial in the roadway. No damage or potential damage resulted from debris burial.

Stabilize Soils: Thirty-seven of the 43 (86%) applications involving the stabilization of soils were in compliance with the regulations. Erosion from unprotected cuts and fills occurred on six of the 43 operations. Erosion resulted in: slight damage on three operations, low potential damage on two operations, and no damage or potential damage on two operations (Note: one operation had both slight damage and low potential damage). Of the six operations erosion was widespread on two operations, occasional on one, and singular on the remaining one.

End haul/Sidecasts: All 43 applications involved end haul and/or sidecast and were in compliance with the regulations. End haul occurred on two operations. End haul was required on one and was done voluntary on the other. No damage or potential damage resulted from end haul or sidecast operations.

LANDING CONSTRUCTION

Thirty-five of the 36 (97%) applications involving landing location and construction were in compliance with the regulations. Construction of one landing resulted in low potential damage.

ROCK QUARRIES, GRAVEL/BORROW PITS, AND SPOIL DISPOSAL AREAS

All 12 applications involving rock quarries, pits, and spoil disposal areas were in compliance with the regulations.

SPECIAL CONDITIONS

Eleven (9%) applications reviewed had special conditions related to road construction. Six of the 11 (55%) applications did not comply with the special road construction conditions. One of the non-compliance operations resulted in slight damage. Five of the non-compliance operations resulted in no damage or potential damage. Examples of special road conditioning included: close roads following planting, and construction plan required.

CONCLUSION

Generally, road construction regulations were followed and damage was low. The main problems identified were non-compliance with the special conditions and soil erosion from unprotected cuts and fills. All erosion problems associated with cuts and fills impacted water resources. Increased emphasis should be given to stabilizing cuts and fills during road construction. More emphasis should be given to compliance with special conditions.

II-B. ROAD MAINTENANCE

One hundred and twenty-seven (66%) of the 191 applications, involved road maintenance as defined in WAC 222-24-050. Included in this survey are questions dealing with road maintenance/abandonment plans, active, inactive, and abandoned roads. Supporting data can be found in Appendix C.

Road maintenance and abandonment plans were required on two (2%) of the 127 applications.

Forty-six (36%) of the applications had active haul roads. Nineteen (41%) of these active roads were not properly maintained. In most instances, several types of deficiencies were reported. The most common deficiencies cited were improper ditch maintenance (17 sites), improper culvert maintenance (11 sites), excessive road surface erosion (seven sites), and lack of water bars (three sites). At four sites, slight or moderate damage was reported. The potential for damage was reported as high at four sites and slight at eight sites. The maintenance problem was considered widespread in five instances, occasional in three instances and single in

two instances. Ten (53%) of the applications with deficiencies were Class IIIP, 8 (42%) applications were Class III, and 1 (5%) application was Class IVG.

Sixty-eight (54%) contained inactive roads. Of these, thirty-one inactive roads (46%) were not properly maintained. As with active roads, the deficiencies were primarily related to improper ditch maintenance (29 sites), culvert maintenance (29 sites), and road surface erosion (14 sites). Most of these were reported after the first winter following operations. Damage occurred in seven cases where inactive roads were present. Damage was typically attributed to direct or indirect deposition of road fill or sediment to streams. The improper maintenance of inactive roads was considered widespread in eight instances, occasional in two instances and a single occurrence in 2 instances. Fourteen (45%) of the applications with deficiencies were Class IIIP, 10 applications (32%) were Class III, four applications (13%) were Class IVG and three applications (10%) were Class IVSp.

Additional maintenance requirements were specified on 10 of the 127 applications. These applications called for water bars, installing drainage, winterization, hay bales and/or passable dips. Five (50%) instances lacked compliance with these requirements. Damage was reported in three (30%) instances. Damage was attributed to sediment delivery to streams. Generally the damage and potential damage was characterized as slight.

There were no abandoned roads in the data set.

In 69 (54%) instances active haul roads (accessing or within this operation) were maintained to the minimum standards. In 19 (15%) instances, active haul roads were not adequately maintained. Damage was reported in three instances where sedimentation was occurring to streams. All were considered slight in nature. The potential for damage as a result of lack of compliance with standards was characterized as low in five instances and high in two instances. Of the 19 instances where minimum standards were not met on active haul roads, 9 applications (47%) were Class IIIP, 8 applications (42%) were Class III, and 2 applications (11%) were Class IVG.

CONCLUSIONS

The study showed that road maintenance is an area where improved compliance is needed. Maintenance did not meet the minimum requirements on 41% of the active roads and 46% of the inactive roads observed in the study. Where special road maintenance conditions were added to the application, they were complied with approximately 50% of the time. Road

maintenance and abandonment plans were required as conditions of 2% of the applications.

Potential damage was reported more often than actual damage. In all cases, damage resulting from road maintenance problems was characterized as slight to moderate, thus indicating more of a chronic problem. On both active and inactive roads, 60% of the road maintenance problems were characterized as widespread. In all instances, the damage reported resulted in excessive sediment delivery to streams. Heavy damage was not reported in any case.

The lack of compliance on both active and inactive roads is a problem that poses potential and actual damage to public resources, particularly water quality. This substantiates historical studies of water quality problems in forested areas. An improved emphasis, by TFW, on road maintenance is recommended by encouraging the development of basin-wide road maintenance plans which would also enhance water quality protection.

Individually, the lack of adequate road maintenance, may have minimum impact, but spread over the landscape, can result in cumulative impacts to the stream system. In addition to water quality problems, improper road maintenance can result in slope failures (cuts or fills) due to improper drainage control.

Therefore, voluntary, road maintenance plans and compliance efforts are best focused in areas containing large amounts of unstable slopes and high densities of roads.

III. TIMBER HARVEST

Regulatory compliance of timber harvest operations was a central focus of the FIC survey. This section covers all removal of timber from forest lands, cleanup, RMZs, and clearing of merchantable timber from lands being converted. One hundred and sixty-three of the 191 applications, or 85%, included operations involving WACs: Yarding Systems (222-30-060 and -070), Riparian Management Zone (RMZ)/Wetlands (222-30-020), Riparian Leave Area (RLA) (222-30-020), Wildlife Habitat (222-30-020 and 222-16-050), Landing Cleanup (222-30-080), Site Preparation/Slash Disposal (222-30-090 and 222-30-100), or Special FPA Conditioning. Supporting data can be found in Appendix D.

LOGGING SYSTEMS

Felled timber was yarded in 157 (96%) of the applications. Fifteen (10%) were with cable systems only, 126 (80%) were ground-based only, and 16 (10%) were combinations of cable and ground systems. Refer to Figure 4.

Yarding Systems

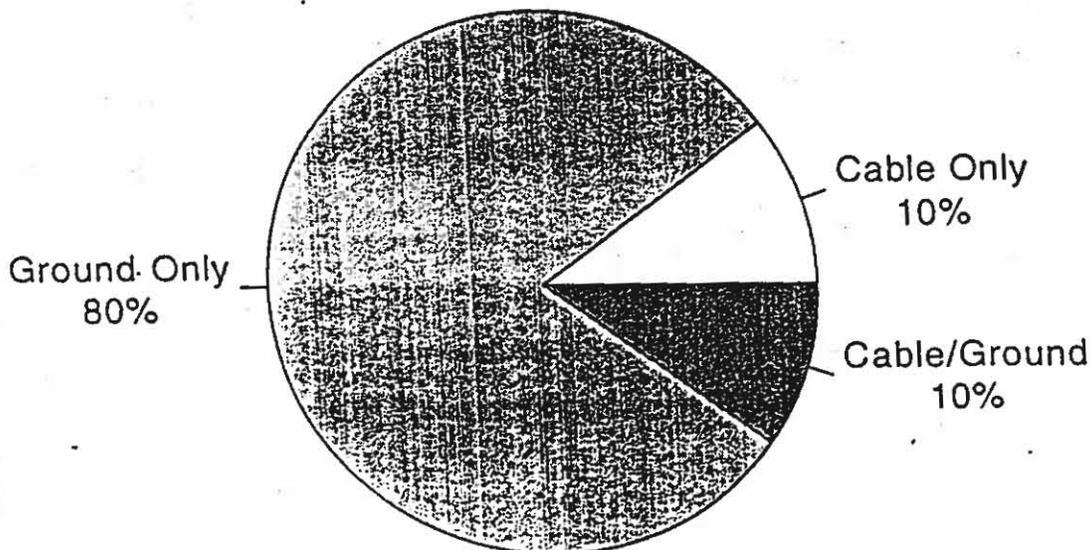


Figure 4. Percent of Operations by Yarding Systems

Cable Systems: Of the Thirty-one operations involving cable systems thirty (97%) were in compliance. Damage reported was RMZ related on the one noncomplying application. Damage was identified as occasional.

Ground-based Systems: One hundred and forty-two (90%) of the yarding-related applications involved ground skidding. One hundred and three (72%) of the skidding-related applications were in compliance, 21 (15%) were not in compliance, and it was unknown on 18 (13%). In the majority of cases skid trail maintenance and abandonment was the reason given for non-compliance.

Of the 21 applications in violation five (24%) were widespread, eight (38%) were occasional, and one involved a single occurrence. The frequency of violations was not

recorded on seven (33%) of the ground operations. Damage to public resources was recorded in eight (38%) of the 21 ground skidding applications. Damage was unknown on one (5%) of the applications. Damage was rated as slight for one (5%) and moderate for two (10%). The potential for damage was low for seven (33%) applications, and unknown on the remainder. Impacts to water or capital improvements were noted in one (0.7%) of the 142 skidding-related applications.

RIPARIAN MANAGEMENT ZONES

RMZs were required in 38 (23%) of the 163 harvest-related applications.

RMZ and Timber Harvest: Timber was harvested in 12 (32%) of the RMZs. RMZ regulations were complied with in four (33%) of the RMZs where harvesting occurred. RMZ regulations were not complied with in eight (67%) of the RMZs where harvest occurred. The majority of RMZ violations involved the removal of wildlife trees and unpermitted operation of equipment within the zone.

Equipment in RMZ: Logging equipment entered five (13%) of the RMZs. There was no damage reported from equipment operation in the RMZs.

Adjacent wetlands: Forest Practices Rules and Regulations expand RMZ protection to adjacent wetlands. Wetlands were adjacent to the stream or pond in 22 (13%) of the harvest-related applications. Adjacent wetlands were protected according to the harvest regulations in 17 (77%) of those applications. Violations were found on two (9%) and were unknown on three (14%). Slight damage was reported on both of the applications where noncompliance was reported.

RIPARIAN LEAVE AREAS

Forest Practices Rules and Regulations require trees to be left along Type 4 waters where necessary to protect public resources. RLAs were required on seven (4%) of the 163 harvest-related applications. Leave tree requirements were met on five (71%) of the seven RLAs. On one (14%) the required RLAs the leave tree requirement was not met, and it was unknown if RLA tree requirements were met on another.

WILDLIFE HABITAT

Critical Habitat: Forest Practices Rules and Regulations require that applicants should make every reasonable effort to cooperate with the Department of Wildlife to identify critical wildlife habitats. Critical habitat was identified in eight (5%) of the 163 harvest-related applications.

Landowners assisted in identifying three (37%) of the critical habitats. It was unknown in four (50%) applications who was responsible for the identification of critical habitat. Reasonable means of critical habitat protection were considered in seven (87%) of the eight and not considered in one (13%).

Big Game: Forest Practices Rules and Regulations require that harvests in established big game winter ranges be designed to ensure access and escape cover by dispersing cutting units and conforming them with topographical features. Big game winter range was involved in eight (5%) of the 163 harvest-related applications. Harvesting was designed to ensure access and cover for big-game in two (25%) of the applications.

Snags: Forest Practices Rules and Regulations require that a reasonable number of snags be left as habitat in areas where this will not create a significant fire and safety hazard. Potential snag habitat was identified in 51 (31%) of the 163 harvest-related applications. Of the 51 applications where snags were available prior to operating, a reasonable number of snags were left for habitat in 26 (51%) of the operations. On 20 (39%) operations a reasonable number of snags were not left for habitat. In five (10%) operations it was unknown.

Special Wildlife Conditions: Special conditions were placed on 16 (10%) of the 163 harvest-related applications. Examples of special wildlife conditioning included: green tree retention within the harvest unit, eagle management plans, reduced harvest acreage for spotted owl protection, and seasonal spray restrictions. Special conditions were complied with in nine (56%) of these applications. Conditions were not complied with in four (25%) and it was unknown if conditions were complied with in three (19%).

LANDING CLEANUP

Landing cleanup was applicable in 80 (49%) of harvest-related applications.

Ditches/Culverts: Forest Practices Rules and Regulations require that ditches and culverts be clean of dirt and debris. Ditches and culverts were in compliance in 57 (84%) of the 68 applicable applications. Eleven (16%) were out of compliance.

Erosion Stabilization: Obvious sources of erosion were in compliance (stabilized) in 63 (85%) of 74 applicable applications. Eleven (15%) were out of compliance.

Perched landings: Seventy-two (92%) of the 78 applicable applications were not perched. Six (8%) landings were perched.

Twenty (25%) of the 80 landing applications were not in compliance with one or more of the three regulations listed above. Of those not in compliance, four (20%) were widespread, eight (40%) were occasional, and two (10%) were single. Compliance was unknown on six (30%).

Damage to public resources was reported in 12 (70%) of the applications not in compliance. On two (10%) of the applications damage was unknown. Damage was reported as slight on 2 (17%) and moderate on one (8%). Ten (83%) reported low potential damage.

SITE PREPARATION/SLASH DISPOSAL

One hundred and seven (66%) of the 163 harvest-related applications were applicable to site preparation.

Ninety five (92%) of 103 applicable applications left the site suitable for reforestation. Six (6%) were out of compliance. On two (2%) of the sites it was unknown if site preparation was suitable for reforestation.

Eight (89%) out of nine applicable applications did not allow soil erosion into water from a slash burn. One (11%) application was out of compliance. Damage was reported as minimal.

Four (80%) of five applicable applications had no RMZ damage from a slash burn. One (20%) application was out of compliance. Damage was reported as moderate.

Seven (87%) of eight applicable applications did not allow soil erosion into water from a fire trail. Reported damage was slight on the single application not in compliance.

Six (12%) of 51 applicable applications required clean-out of type 4 streams. Five (83%) of six applications requiring clean-out were complied with, one (17%) was unknown. Clean-out should have been required on two (4%) of the 45 (88%) applicable applications with no clean-out required.

SPECIAL CONDITIONS

Forty one (25%) of the 163 harvest-related applications had special conditions. Twenty eight (68%) of the 41 applications complied with those conditions, ten (24%) were

out of compliance, and three (7%) were unknown. Of the ten applications out of compliance, one (10%) was occasional, two (20%) were widespread, and seven (70%) were unknown.

Of the ten applications out of compliance two (20%) involved potential damage, one of which also had slight actual damage.

Upon review of the results, several compliance issues became apparent: 1) the 68% of the RMZs that had no harvest 2) the 66% noncompliance rate when timber was harvested in the RMZ, 3) the 15% noncompliance rate of ground-based harvest operations, 4) conversely, the high (97%) compliance rate on cable operations, 5) the apparently low level of recognition of wildlife issues other than snags, e.g. critical wildlife habitat, big game winter range, 6) twenty-five percent non-compliance rate of special conditions (including special wildlife conditions), 7) Twenty-five percent non-compliance rate with landing cleanup.

Well defined criteria for prioritizing and protecting wildlife habitat need to be developed to assess compliance and benefits for wildlife. Increased education-through-enforcement programs would help.

IV. WATER CROSSINGS/HPA's

The rules pertaining to instream work are found in various forest practices WACs, including 222-24-020 Road Location, 222-24-025 Road Location, 222-24-030 Road Construction, 222-24-040 Water Crossing Structures, 222-24-050 Road Maintenance, 222-30-050 Felling and Bucking, 222-30-060 Cable Yarding, 222-30-070 Tractor and Wheeled Skidding Systems. For work in Type 3 or better waters, the Department of Fisheries (WDF) or the Department of Wildlife (WDW) usually require an Hydraulic Project Approval (HPA) which further restrict these activities. HPA's are usually waived for work within Type 4 and Type 5 waters provided the operator complies with the forest practices rules. If there is a significant threat of impact to downstream waters an HPA may be required for Type 4 or Type 5 waters. Supporting data can be found in Appendix E.

HPA's are field reviewed to ensure the operator has the opportunity to present his needs, and to allow the field biologist to explain the fish resource needs and ensure the permit requirements are understood. Permit conditions are generally site specific and are intended to mitigate the impacts of the project. Provisions include allowable work periods, temporary water management, erosion control, and culvert specifications. Occasionally additional mitigation

work is required, such as gravel spawning pads, over-winter ponds or large organic debris placement. WDW and WDF office review applications statewide and notify DNR of HPA requirements. The operator is then contacted to arrange a field review. WDF writes HPA's for work involving salmon habitat and WDW does those which involve trout or other game fish.

The survey team evaluated thirty-five application's (18%) of the 191 which had the potential for work within the ordinary high-water mark of water type 1, 2, or 3 streams. 19 (10%) involved work in water type 4 and 5 streams conducted solely under the forest practices rules. Twelve of the 191 (7%) operations required HPA's. Work included culvert installations (2), bridge construction (2), felling trees (3), suspension yarding (3), hanging tailholds over streams (2), and installation of a temporary ford. In addition, one application for cedar salvage involved the removal of one large cedar log which was functioning as large organic debris (LOD) in a Type 3 stream. In this instance an HPA was not obtained. It is illegal to remove LOD from a stream without an HPA. There was no mention of LOD removal on the application that LOD was to be removed. The surveyor felt the damage was slight and a one time occurrence.

Conditions were met on 11 (92%) of the HPA's issued. The one operation that did not meet the conditions involved inadequate suspension of logs over a Type 3 stream.

Stream work done without the need for an HPA was evaluated on 19 application's. Work involved felling, bucking, and yarding in Type 4 and 5 waters, and a ford of a Type 5 water. Fifteen of the 19 application's (78%) met rule requirements. The Type 5 ford resulted in slight stream sedimentation. The surveyor felt there was a high potential for stream damage if erosion from the Type 5 ford was not stopped.

The level of compliance monitoring on HPAs by WDW or WDF was not part of this survey, but it would be appropriate to include this in future surveys. The Department of Fisheries and Wildlife need to be more diligent about routing HPA copies to DNR regional offices. HPAs need to be included in the DNRs office and field application files. The survey did not identify any major problems relating to instream work resulting from forest practices.

V. CHEMICAL APPLICATION

Twenty-five (13%) of the 191 applications involved chemical application. Eighteen (72%) involved herbicide, three (12%) fertilizer, and four (16%) insecticide application, as shown in Figure 5. The purpose of WAC 222-38 is to regulate the handling, storage, and application of chemicals in such a way that public health, soils, wildlife, and aquatic habitat will not be contaminated. Supporting data can be found in Appendix F.

Type Of Chemical Application

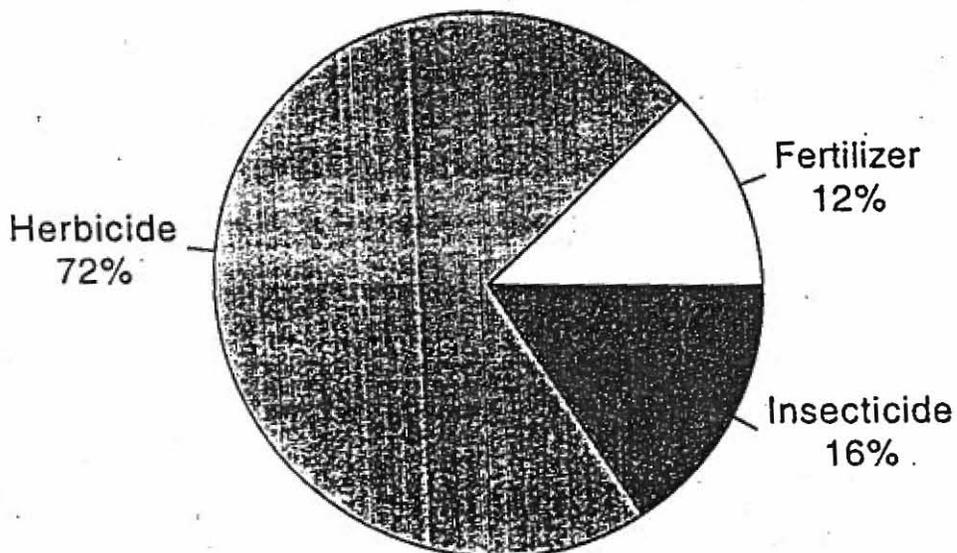


Figure 5. Type of Chemical Application

Ten (40%) of the applications were definitely posted before the chemicals were sprayed. It was unknown if the additional fifteen (60%) had been posted prior to spraying.

Five (20%) of the applications received special conditions. Three (12%) of the applications did not comply with forest practice regulations. Non-compliance was determined by observed foliage damage to the riparian vegetation within the buffer strips.

Three (12%) applications showed no evidence of buffers on type 5 waters. It was unknown if these streams were flowing at the time the spray operations occurred.

Four (16%) of the applications involved aerial application of insecticides, and three (12%) involved fertilizer. Surveyors were unable to determine if the applications were in compliance due to the nature of the survey and the chemicals being used.

CONCLUSIONS

Compliance assessment of pesticide and fertilizer application is non-comprehensive due to the lack of information on stream flow at the time of operations. Specifically, it is not common for type 4 & 5 streams to be verified at the field level to determine if a stream is flowing at the time of application. The nature of insecticides and fertilizer restrict any visual evidence of chemical impacts to the resources.

VI. VOLUNTARY AND COOPERATIVE EFFORTS

Voluntary and cooperative efforts by timberland owners are a central pillar of the TFW Agreement. Landowner actions can benefit a number of TFW resource goals, most efforts and inquiries concern wildlife. Upland Management Areas (UMAs), pre-harvest reviews, and Resource Management Plans (RMP) are example of "cooperative" efforts are wildlife leave trees, and wider RMZs are examples of voluntary efforts. Supporting data can be found in Appendix G.

Eighty-six (45%) of the 191 applications were applicable to this section. For example, UMAs and leave trees were judged not to be relevant in conversions and in operations that did not involve harvesting. Every application has an opportunity for a voluntary or cooperative efforts.

Riparian Management Zones (RMZs) are areas bordering streams, rivers, and other bodies of water. Forest practices regulations mandate limited logging activity with a minimum (usually 25 foot on the westside, 30 foot on the eastside) RMZ width from the ordinary high-water mark. Wider RMZs or RMZs with "extra" trees were counted as voluntary efforts. Upland Management Areas are generally un-logged areas outside of riparian zones. The TFW Agreement guidelines recommend leaving UMAs of "at least 2 acres per 160 acres of clear-cut harvest or its equivalent." They are not required by regulation.

The survey focused on identifiable landowner efforts; particularly those addressed in the TFW Agreement (UMAs, RMZs larger than the required minima, and snags and green trees recruitment) and those benefitting wildlife. Voluntary and cooperative landowner data are found in Appendix G.

This survey found it difficult to capture the total extent of voluntary and cooperative efforts by landowners. For example, UMAs may not be indicated in the application by the landowner. In one instance, the UMA was noted in the comments, but not tallied under the UMA question. Another survey problem became evident in the questions that tried to distinguish voluntary measures to "specifically benefit wildlife" from "other voluntary measures." Similar examples were recorded under each question. Unsurveyed efforts, such as size or design of clearcuts, or timing and location of aerial sprays, could also benefit wildlife. However, the applications and survey site visits were able to record conspicuous voluntary and cooperative landowner efforts.

The survey found that UMAs were left on two (2%) of 86 applicable applications; these two UMAs left three and 12 times the minimum recommended acreage for a total of 11.5 acres.

Other voluntary efforts specifically for wildlife were found on 25 (13%) of the 191 applications. The most frequent were leave trees, snags, and logs. There was evidence of voluntary stream enhancement on two (5%) of 40 applicable operations. Riparian leave areas were left voluntarily on 13 (18%) of the 73 applicable applications.

Pre-harvest reviews were conducted on 19 (24%) of the applications for harvest. One was identified within a local RMP. This represents 1% of the harvest applications and 0.5% of all applications surveyed. The survey did not address whether a RMP was in effect in the basin of each application.

Twelve (6%) applications identified other voluntary efforts, including wetland buffers, un-logged areas, snags, larger than required RMZs, and partial cutting.

Provisions noted under the "Timber Harvest" section (WAC 222-30-020) constitute voluntary or cooperative efforts to protect wildlife habitat and other values. Especially see "habitat for cavity nesting species" and "RMZ" sections.

CONCLUSIONS

The survey found a very low rate of cooperation with the UMA guidelines. It found somewhat higher participation in other voluntary efforts to meet TFW wildlife, fish, and water

quality goals through leaving snags, logs, green trees, and increased riparian buffers.

The ultimate benefits to wildlife of UMAs and RMZs efforts can be better determined by referring to CMER's research projects. The ultimate contribution of UMAs at achieving the TFW goals will need to be evaluated.

Clarified UMA guidelines could encourage more landowner cooperation. The intended benefits of UMAs should be listed by the landowner on the application. This would allow the assessment of the UMA's function and value.

The difficulty measuring and evaluating landowner voluntary and cooperative efforts undermines the TFW Agreement for all participants. Improvements in the methods for reporting, recording, and surveying voluntary and cooperative efforts are needed. The full range of landowner voluntary or cooperative efforts was not captured in this survey.

VII. ENFORCEMENT

Regulations pertaining to forest practices in the state of Washington include but are not limited to the following: Forest Practices Rules and Regulations, the Hydraulics Code, Water Quality Regulations, and the Wildlife Code. WAC 222-46-010 encourages the informal, practical, result-oriented resolution of alleged violations and actions needed to prevent damage to public resources (WAC 222-46). Enforcement procedures include: informal conferences; notices to comply; stop work orders; corrective actions by the Department; civil penalties; injunctions and other civil judicial relief; in addition to criminal penalties. Supporting data can be found in Appendix H.

All 191 applications are applicable to this section. Enforcement action was taken on twelve (6%) of the total applications. All enforcement actions were initiated by the DNR. Generally, enforcement actions were taken because the operation did not have a valid application or because there was a problem with road maintenance. More than half of the enforcement actions taken were in the form of a notice to comply. The remainder of enforcement actions were informal conferences and stop work orders. There were no formal appeals of enforcement actions and only one appeal of an application. The appeal was filed by a downstream unregistered water user based on a potential impact to the water source. The appeal was withdrawn after an agreement was reached whereby the unregistered water user found an alternate water source.

CONCLUSIONS

Statewide 6% of all applications had enforcement action taken. While other state agencies have the authority to enforce rules relating to specific portions of forest practices none was identified by this survey.

VII. ARCHAEOLOGICAL AND CULTURAL RESOURCES

Eighteen (9%) of the 1991 applications involved known archaeological or cultural (A/C) resources. All applications received were processed through TRAX. The Office of Archaeology and Historic Preservation (OHAP) was sent copies of all applications. Supporting data can be found in Appendix I.

One (6%) application of the 18 applications included Tribal involvement related to A/C resources. DNR conditioning of this application required the landowner to meet with the Tribe per WAC 222-20-120. This condition was met, but it was unknown if the applicant followed Tribal protection plan or OHAP's guidelines were followed. Guidelines were furnished by OHAP to the DNR on five (28%) of the 18 applications. These guidelines requested the operator to notify OHAP if A/C resources were found. One (6%) of the applications included OHAP's recommendations as part of the application conditions.

One (6%) application of the 18 applications involved a historical site identified by the public. A protection plan was agreed upon and implemented.

CONCLUSIONS

After reviewing the survey results many questions arose pertaining to how archeological and cultural concerns identified by TRAX were being communicated to the Tribes, OHAP and the affected landowners. TRAX notifications are communicated differently among DNR regions. This led to confusion during the survey about how the Tribes are notified. In an attempt to provide clarification on Tribal notification the seven DNR regions were contacted by phone (Appendix J).

The Field Implementation Committee (FIC) concluded that it would be beneficial if DNR would develop a consistent written notification to all involved parties. If a cultural concern is identified, DNR is responsible for assuring a meeting between the landowner and the Tribe(s) to develop a necessary protection plan as per WAC 222-20-120. Special conditions

may then include the protection plan. OHAP recommendations should also be included as part of the application.

IX. CONVERSIONS

Conversions are a bona fide conversion of forest land to an active use which is incompatible with timber growing. Examples of conversions are developments, homes, and agriculture. The class IV-General designation is more inclusive. It covers conversions and land platted after January 1, 1960, even if continued forest management was planned. Out of sixty-three 63 class IV-Gs surveyed, 47 (75%) were designated conversions. sixteen (25%) were lands platted after 1960 on which no conversion activity was specified on the application. Two applications were not classified IV-Gs but were in fact conversions. Thus, 49 (26%) of all the applications represent the permanent loss of timber producing land. This section deals with those 49 applications. Supporting data can be found in Appendix K.

Thirty six (74%) of the conversions were for structures, five (10%) were for agriculture, three (6%) were for recreation, and five (10%) were unspecified by the surveyors.

The applicant is required to disclose the future land use if they plan to convert within the next three or six years. The conversion disclosure is one of the determinants for invoking the State Environmental Policy Act and determining the lead agency. Five (10%) of the applications on which conversions were taking place were not declare on the application as required. If the landowner does not declare the application to be a conversion the local government may impose a six year moratorium on conversion. Local governments are involved, as lead agency, or through the review and comment process for all class IV G's. The review and comment process allows local governments to impose their own requirements. The DNR had 22 (45%) comments from local government.

The applicant is responsible to meet all forest practice regulations, except reforestation, on all conversions. At least thirty two (65%) met the minimum forest practices rules, 15 (31%) were unknown, and two (4%) were in violation of the rules. Of those two, one occurred during the forest practice portion of the operation and one violation occurred after the forest practice was completed and the conversion portion was in progress.

Special conditions related to the conversion were placed on two (4%) of the applications. One application was in compliance and the other was unknown.

CONCLUSION

Twenty-six percent of the applications surveyed involved conversions. This emphasizes the conversion workload TFW deals with, and the amount of forest land Washington loses permanently. The potential for resource damage on the average class IV-G without water is low, but collectively class IV-Gs represent a major loss of habitat. Because of the low potential of an individual conversion to cause resource damage, small class IV-Gs may be low priority (compared to class IV-Specials, III-Ps, etc.) and may not receive adequate review. A problem arises over jurisdiction for resource protection because the point of conversion from state regulated forest land use to local government land use is unclear. On a statewide basis TFW should be working with state and local government to protect forest land.

APPENDIX A

SURVEY FORM

TIMBER FISH AND WILDLIFE
FIELD IMPLEMENTATION COMMITTEE

1991
Forest Practice Compliance Worksheet

I. GENERAL INFORMATION

1. Application Class: _____ DNR Region: _____ App #: _____
Evaluator: _____ Date: _____
Other Evaluators (w/affiliation) _____

2. Type of Operation (record actual acres/miles in the space provided):

- a. Roads: construction _____ maintenance _____
- b. Harvesting: cc _____ pc _____ salvage _____
- c. Chemicals: _____
- d. Other _____ (specify) _____

3. Was the application properly classified? Y or N (circle one).
If not, specify- _____

4. Was this designated a class III priority issue? Y or N.
If yes, which issue(s)? _____

5. Did 4. result in any special¹ conditioning? Y or N.
(Specify condition(s) in the appropriate following section(s))

6. Was there an ID team (one or more specialists consulted)? Y /N

7. Did 6. result in any special conditioning? Y or N or N/A
(Specify condition(s) in the appropriate following section(s))

8. Did this application involve any TRAX hits? Y/ N
If yes, for what? _____

9. Did 8. result in any special conditioning? Y or N.
(Specify condition(s) in the appropriate following section(s))

10. Was an alternate plan utilized? Y or N.

- a. If yes, was it followed? Y or N.
- b. If no in a., did it result in damage or potential damage to public resources²? Y/ N/ UNK (Unknown)

¹ NOTE: "Special," means would not normally have been specified or are more specific than the general WAC's.

² NOTE: The term "public resource" includes public capital improvements for the purpose of this survey.

[alt. plan cont']

Specify- _____

- c. Was the damage slight³, moderate⁴, or heavy⁵? (circle one)
- d. Was noncompliance WIDESPREAD / OCCASIONAL / SINGLE? (circle one)
11. Did the application receive any preapproval site visits? Y / N
By which Organization(s)? _____
12. Has this operation had any previous inspections by DNR? Y / N
If yes, the number during the operation _____, & # after _____
13. Were there any substantive complaints or other agency/org. site visits after the operation started? Y or N or Unknown.
14. Was there any deviation from the information provided on the application? Y or N.
- a. If yes, specify- _____

- b. and did the deviation meet or surpass the reg.s? Y or N.
- c. Did it create damage or potential damage to a public resource? Y / N / UNK (unknown) Specify- _____

- d. Was the damage slight, moderate, or heavy?
- e. Was the deviation WIDESPREAD / OCCASIONAL / ONCE?
15. Water Type(s):
- a. Was water on or adjacent to the operation? Y or N.
- b. If yes, what type(s)? 1+, 1, 2, 3, 4, 5, wetland (circle)
- c. Were water type map changes initiated as a result of this app.? Y / N, from _____ to _____.

³ NOTE: Minor physical evidence - clearly not significant - with no visible short or long term effect. No enforcement.

⁴ Physical effect on the resource is noticeable but it is correctable with small effort or short term natural processes.

⁵ There is a clear impact on the resource requiring substantial labor or long term (more than one season) natural processes to correct.

II. ROADS

N/A (circle if section is not applicable)

A. Road Location:

N/A

1. Did the road location meet the regulations and application conditions? Y or N.

2. If no, where was it deficient?

- Excessively steep or unstable _____ (check)
- In RMZ/Wetlands _____
- Extra road or deviation from map location _____
- Other (specify) _____ - _____

3. If no in 1. above, did this result in damage or potential damage to public resources? Y / N / UNK. Specify-_____

4. Was the damage slight, moderate, or heavy?

5. Was the noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

B. Road Design:

N/A

1. Did the road design meet the regulations and application conditions? Y or N.

2. If no, where was it deficient?

- a. Minimum width _____
- b. Oversteepened cuts/fills _____
- c. Drainage
 - cross drain spacing _____
 - culvert size _____
 - drainage routed to forest floor..... _____
 - minimum distance
 - from T 1-3 _____
 - off erodible fills _____
- d. End haul/over haul _____
- f. Other (specify) _____ - _____

3. If no in 1. above, did it result in damage or potential damage to public resources? Y / N / UNK. Specify-_____

4. Was the damage slight, moderate, or heavy?

5. Was the noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

C. Road Construction:

N/A

1. Is there evidence of organic debris buried within the road fill in excess of the rules? Y or N.

[road construction cont']

- a. If yes, did it result in damage or potential damage to public resources? Y /N /UNK. Specify- _____
- b. Was the damage slight, moderate, or heavy?
- c. Was the noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

2. Is there erosion from unprotected cuts/fills? Y or N

- a. If yes, did it result in damage or potential damage to public resources? Y /N /UNK. Specify- _____
- b. Was it slight, moderate, or heavy?
- c. Was the noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

3. Was endhaul (or "no sidecast") required on this app.? Y or N

- a. If no, should it have been⁶? Y or N
- b. Was it done? Y or N
- c. If not done, did it result in damage or potential damage to public resources? Y/ N/ UNK. Specify- _____
- d. Was the damage slight, moderate, or heavy?

4. Was the noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

D. Landing construction: N/A

1. Did landing construction meet the regulations and conditions? Y or N.

- a. If no, what was deficient?
excessive excavation/fill _____
slopes over 65% _____
slash/stumps in fill _____
inadequate drainage _____
perched landing _____
other (specify) _____
- b. If no, did it result in damage or potential damage to public resources? Y/ N/ UNK. Specify- _____
- c. Was the damage slight, moderate, or heavy?
- d. Was the noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

E. Road Maintenance: N/A

1. Was a road maintenance/abandonment plan required for this operation? Y or N.
 - a. If yes, was it complied with? Y or N.
 - b. If no on a. above, did it result in damage or potential damage to public resources? Y /N /UNK. Specify- _____

⁶ Where significant sidecast would rest below the 50 yr. flood level, create overloading of unstable slopes, or erode causing public resource damage.

c. Was the damage slight, moderate, or heavy?
[road maintenance cont']

2. If this unit contains an **active** road, is it properly maintained? Y or N or N/A

a. If no, what are the deficiencies?

culverts/ditches _____
road surface _____
cuts/fills _____
other _____

b. If no, did/is it result/ing in damage or potential damage to public resources? Y /N /UNK. Specify- _____

c. Was/is the damage slight, moderate, or heavy?

d. Is the lack of maintenance WIDESPREAD/ OCCASIONAL/ SINGLE?

3. If this unit contains an **inactive** road, is it properly maintained? Y or N or N/A

a. If no, what are the deficiencies?

1) prior to 1st winter:
ditches, culverts, surface _____
2) thereafter:
ditches, culverts _____

b. If no, did it result in damage or potential damage to public resources? Y /N /UNK. Specify- _____

c. Was the damage slight, moderate, or heavy?

d. Is the lack of maintenance WIDESPREAD/ OCCASIONAL/ SINGLE?

4. Were there additional maintenance requirements specified as conditions of the application? Y or N.

a. If yes, what were they? _____

b. Were they complied with? Y or N

c. If no, did it result in damage or potential damage to public resources? Y /N /UNK. Specify- _____

d. Was the damage slight, moderate, or heavy?

5. If this operation contains **abandoned** roads, were they abandoned in compliance with DNR requirements (ie prior approved abandonment plan and post abandonment visit)?
Y / N / N/A

a. If no, did it result in damage or potential damage to public resources? Y/ N/ UNK. Specify- _____

b. Was the damage slight, moderate, or heavy?

c. Was noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

6. Were the haul roads (accessing & within) this operation

maintained to minimum standards during use? Y / N / Unk
[road maintenance cont']

- a. If no, did it result in damage or potential damage to public resources? Y / N / UNK. Specify-_____
- b. Was the damage slight, moderate, or heavy?

F. Pits, etc.:

N/A

1. If rock quarries, gravel pits, borrow pits or spoil disposal areas were used in the operation are there any deviations from the rules? Y or N. Specify-_____
2. If yes, is it resulting in damage or potential damage to public resources? Y/ N/ UNK. Specify- _____
3. Is the damage slight, moderate, or heavy?

G. Special⁷ Conditions:

N/A

1. Were any special conditions concerning roads placed upon the app? Y or N. Specify-_____
2. Were they complied with? Y or N. Specify-_____
 - a. If no, did it result in damage or potential damage to public resources? Y/ N/ UNK. Specify-_____
 - b. Is the damage slight, moderate, or heavy?
3. Was noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

Comments (roads). Add any comments not specifically covered in the road section. _____

⁷ "special" means conditions, other than standard WAC'S, which add detail or otherwise wouldn't normally be used.

III. TIMBER HARVEST

N/A

A. Riparian Management Zone:

1. Was an RMZ required? Y or N

a. If yes, did any harvest occur within the zone? Y or N

(1) If yes, does it appear the minimum RMZ requirements were met? Y or N

(2) If no, what was deficient?

(a) width _____

(b) unpermitted equipment in the zone _____

(c) trees: count _____

size _____

wildlife trees _____

species ratio _____

representative _____

40/50% live and undamaged _____

other _____

b. If equipment operated in the zone, did it result in damage or potential damage to public resources? Y/ N/ UNK. Specify- _____

c. Was the damage slight, moderate, or heavy?

d. Was the noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

2. Were wetlands adjacent to the stream/pond? Y or N

a. If yes, were they protected according to the regs? Y/ N

b. If no, did it result in damage or potential damage to the wetlands? Y/ N/ UNK. Specify- _____

c. Was the damage slight, moderate, or heavy?

B. Type 4 Riparian Leave Tree Areas:

1. Was an RLA required on this app.? Y or N

2. If yes, was the leave tree requirement met? Y or N.

C. Wildlife Habitat:

N/A

1. Were "critical" wildlife habitats identified in conjunction with this application? Y / N
Did the landowner cooperate in identifying them? Y/N/NA

2. Where reasonable means of protection (of critical habitat) considered as part of the proposed harvest operation? Y or N or N/A

3. If the app. involved established big game winter ranges where harvesting methods and patterns designed to insure adequate access routes and escape cover? Y/N/NA
4. If available, where a reasonable number⁸ of snags left to protect habitat for cavity nesting wildlife?
Y or N or not present prior to operating
5. Were there special conditions on the app. to protect wildlife? Y or N.
 - a. If yes, specify _____
 - b. If yes, were they complied with? Y or N.

D. Yarding Systems:

N/A

Was cable ____, &/or ground ____ yarding used?(X approp. box)

1. Were the regulations for cable yarding complied w/? Y /N

a. If no, what was deficient:

Bed, bank, RMZ damage _____
 Deadfalls _____
 Vegetation disturbance _____

b. If no, did it result in material damage or potential damage to water or RMZ? Y/ N/ UNK. Specify-_____

c. Was the damage slight, moderate, or heavy?

d. Was noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

2. Were the reg.s for ground yarding complied with? Y/ N

a. If no for ground yarding, what was deficient:

location _____
 construction _____
 maintenance _____
 abandonment _____
 slope _____

b. If no on 2., did it result in damage or potential damage to public resources? Y/ N/ UNK. Specify _____

c. Was the damage slight, moderate, or heavy?

d. Was noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

e. Is there evidence of ground yarding related impacts

⁸ Commonly considered 3 per acre.

to 1, 2, or 3 water or capital improvements...? Y / N
E. Landing Cleanup: N/A

1. Are ditches/culverts free of logging debris? Y or N.
2. Were obvious sources of erosion stabilized? Y or N.
3. Has the operation avoided perched landings? Y or N.
4. If no in either 1., 2. or 3. above, did it result in damage or potential damage to public resources? Y/ N/ UNK. Specify- _____
5. Was the damage slight, moderate, or heavy? _____
6. Was the noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

F. Site Preparation/ Slash Disposal: N/A

1. Was the site left in a condition suitable for reforestation? Y or N.
2. If slash was burned, is there any obvious soil erosion as a result that could enter the water? Y or N. If yes, minimal, moderate, or heavy ?
3. Was the RMZ damaged from burning? Y or N. If yes, minimal, moderate, heavy ?
4. Is there erosion from fire trails that could enter water? Y or N. If yes, slight, moderate, heavy ?
5. Was Type 4 stream clean-out required? Y or N.
 - a. If yes, was it done satisfactorily? Y or N.
 - b. If not satisfactory, did it result in damage or potential damage to public resources? Y/ N/ UNK. Specify- _____
 - c. Was the damage slight, moderate, or heavy? _____
6. If no in 5. above, should it have been required? Y or N. Specify- _____
7. Was noncompliance pertaining to SP/SD WIDESPREAD/ OCCASIONAL/ SINGLE?

G. Special Conditions: N/A

1. Where special conditions for harvesting placed on the app? Y/ N. Specify- _____

2. Were they complied with? Y or N

[site prep... cont']

a. If no, did it result in damage or potential damage to public resources? Y/ N/ UNK. Specify-_____

b. Was the damage slight, moderate, or heavy?

c. Was noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

H. Comments (harvest): Add any comments not specifically covered in the timber harvest section. _____

IV. Water Crossings/ HPA's: N/A

1. Was a Hydraulic Project Approval (HPA) required?
Y/ N/ Unk

2. If yes, was it obtained? Y/ N/ Unk

3. Were the provisions of the HPA complied with? Y / N /Unk

4. If not complied with, what was deficient?

- equipment use in water _____
- culvert size _____
- culvert slope _____
- approach drainage _____
- bank protection _____
- fill slope erosion control _____
- other (specify)_____ - _____

5. Was any stream work done, without the need for an HPA?
Y/ N/ Unk

If yes, did the work meet the rule requirements?
Y/ N/ UNK.

6. If not in compliance in 3. or 5. above, did it result in damage or potential damage to public resources? Y/ N/ UNK
Specify-_____

7. Was the damage slight, moderate, or heavy?

8. Was the noncompliance WIDESPREAD/ OCCASIONAL/ SINGLE?

V. CHEMICAL APPLICATION

N/A

What type of chemicals? herbicide ___ insecticide ___
fungicide ___ fertilizer ___ other ___ specify- _____

1. Is there evidence that all waters/residences were not properly buffered (eg adjacent dead vegetation)? Y /N /Not Applicable ____ . Specify- _____
2. Was the site posted before chem. application? Y/ N/ UNK
3. Were any special conditions placed on the app.? Y or N Specify- _____
- a. If yes, were they complied with? Y or N.
- b. If no in a. above, did it result in damage or potential damage to public resources? Y/ N/ UNK Specify- _____
- c. Was the damage slight, moderate, or heavy?
4. Comments (chemical application) Add any comments not specifically covered in this section. _____

VI. VOLUNTARY AND COOPERATIVE EFFORTS

N/A

1. Were UMA's left in association with this operation? Y/ N
 - a. If yes, approximate actual UMA acres ____;
 - b. actual harvest acres ____ (again);
 - c. and were the UMA's designated on the app.? Y / N
2. Were there measures voluntarily incorporated to specifically benefit wildlife? Y/ N

What:

 - extra wildlife⁹ trees left in RMZ/RLA _____
 - road closure _____
 - nest trees _____
 - seeding _____
 - logs _____

⁹ Live trees with specific wildlife benefits.

snags _____
wildlife trees left in unit _____
if yes approx. # _____, & avg. size _____
other _____

3. Was any voluntary stream enhancement done in connection with this operation (e.g. intentional woody debris placement or removal of past material)? Y/ N /NA
4. Was this app. included in any type of pre-harvest review? Y or N. Type: annual harvest meeting _____, delayed effective date _____, prefile _____, TFW consultation _____, other _____?
5. Is this operation included in a Resource Management Plan or other basin planning effort? Y or N. If yes, specify-

6. Was an RLA voluntarily left? Y/ N
7. Other voluntary measures? Specify- _____

VII. ENFORCEMENT: N/A

1. Was any enforcement action taken? Y or N
Why? _____

a. If yes, what type? IC _____ NTC _____ SWO _____ Citation _____
b. Which agency(ies) took action? _____
2. Was there any appeal of this app. or enforcement? Y or N
- a. By whom? _____
b. Basis of appeal(reason)? _____

c. Disposition of appeal? _____

VIII. ARCHAEOLOGICAL AND CULTURAL RESOURCES

1. Did the app. involve Archaeological or Cultural Resources?
Y/ N How was it identified? TRAX ___ Tribe ___ Other _____

- a. If yes, did the landowner meet with the tribe(s)? Y or N
- b. If yes, was a protection plan agreed upon? Y or N.
- c. If yes was the app. conditioned to protect the
A and C Resources? Y or N.

(1) If yes, were the conditions complied with? Y / N

(2) Did it result in damage to A and C resources?
Y / N / UNK

(3) Was the damage slight, moderate, or heavy?

d. Was OHAP notified? Y/ N /UNK

2. Comments (archaeology) _____

IX. CONVERSIONS

N/A

1. Reason for conversion: agriculture ____, structure ____,
platted after 1960 ____, other ____ - _____.

2. Was the conversion specified on the application? Y / N

3. Did the local govt' comment? N / Y

4. Did they meet the minimum FP rules (RMZ, etc.)? Y / N

5. If not, did the violations take place before ____, or after
____ the point of conversion; or unknown ____ ?

6. Could it be perceived that the local govt' gave approval or
pseudo approval¹⁰ of the non compliance with FP and other
state laws because they approved plans without restrictions,
issued a DNS, granted an exemptions, etc.? Y / N / UNK

7. If known was there a violation(s) of any local govt' rules
or conditions? Y / N / UNK

8. Were conditions put on the app. specifically because of the
conversion? Y / N

a. If yes, were the conditions complied with? Y / N

¹⁰ by lack of conditions/restrictions, approval of
proposal showing the deviations, no enforcement,...

b. If no, did it result in damage or potential damage to public resources? Y / N / UNK Specify - _____

c. Was the damage slight, moderate, or heavy?

9. Comments _____

NOTES:

APPENDIX B

GENERAL INFORMATION

TIMBER, FISH AND WILDLIFE
FIELD IMPLEMENTATION COMMITTEE

FOREST PRACTICE COMPLIANCE WORKSHEET SUMMARY
1991

November 15, 1991

GENERAL INFORMATION

1. Application Information

Total Applications within the survey: 191

Total Applications per Forest Practices Class:

Forest Practices Class	Number of Applications
III	68
IIIP	51
IV-G	63
IV-S	9

Evaluators: Carol Walters, WDNR 91
Janet Strong, WEC 56
Scott Hall, NWIFC 41
Jeff Gillard, WDNR 3

Survey was conducted between: May 28 and August 9, 1991.

Applications completed per day ranged from 1 to 8 applications.

Other Evaluators were mainly WDNR personnel, except:

- 3 surveys included a representative from the Campbell Group;
- 2 surveys included a representative from the Murray Pacific;
- 2 surveys included a representative from WDF.

2. Type of Operations:

Type of Operation	Number of Applications	Class III	Class IIIP	Class IVG	Class IVS	Total
Road Const.	42	17	16	8	1	23.45 miles
Road Maint.	22	7	7	8	0	19.50 miles
Clearcut	93	30	29	30	4	3669.45 acres
Partial-cut	64	18	11	33	2	2688.95 acres
Salvage	3	2	1	0	0	928.00 acres
Chemicals	25	16	6	0	3	2946.00 acres

Other type of operations included such activities as road reconstruction and betterment, pit expansion, conversion, firetrail construction, bridge construction, and danger tree removal. These operations were indicated on 13 applications.

3. Was the application properly classified?

Yes: 186 (66-III, 50-IIIP, 61-IVG, 9-IVS)

No: 5 (2-III, 1-IIIP, 2-IVG)

If not, specify:

Class	Reason for Improper Classification
III	Probably should have been a II (one acre, flat ground) or a IIIP (deer winter range).
III	Originally filed as an Alternate Plan. Later landowner decided not to use alternate plan.
IIIP	No type 3 to run into (pond was upstream).
IV-G	Not classed.
IV-G	Was not classed - should be a IV-G - platted after 1960.

4. Was this designated a class III priority issue?

Yes: 54 (51-IIIP, 1-IVG, 2-IVS)
No: 137

If yes, which issue: See Attachment A

5. Did 4. result in any special conditioning?

Yes: 20 (18-IIIP, 2-IVS)
No: 34

6. Was there an ID Team (one or more specialists consulted)?

Yes: 11 (3-III, 3-IIIP, 5-IVS)
No: 180

7. Did 6. result in any special conditioning?

Yes: 9 (1-III, 3-IIIP, 5-IVS)
No: 2

8. Did this application involve any TRAX hits?

Yes: 94 (26-III, 40-IIIP, 19-IVG, 9-IVS)
No: 94
Unknown: 3 (1-III, 1-IIIP, 1-IVG)

If yes, for what? See Attachment B

9. Did 8. result in any special conditioning?

Yes: 25 (2-III, 14-IIIP, 1-IVG, 8-IVS)
No: 69

10. Was an alternate plan utilized?

Yes: 3 (2-III, 1-IIIP)
No: 188

a. If yes, was it followed?

Yes: 1 (IIIP)
Unknown: 2 (III)

b. If no in a., did it result in damage or potential damage to a public resources?

0

Potential?: 0

Specify?: 0

c. Was the damage slight, moderate, or heavy? 0

d. Was noncompliance widespread/occasional/single: 0

11. Did the application receive any pre-approval site visits?

Yes: 59 (16-III, 24-IIIP, 14-IVG, 5-IVS)

No: 123

Unknown: 9 (5-III, 1-IIIP, 2-IVG, 1-IVS)

By which Organization(s)?

WDNR (85%)

WDF (14%)

Tribes and WDW (12%)

Landowners and Counties (5%)

Others (2%)

12. Has this operation had any previous inspections by DNR?

Yes: 63 (23-III, 21-IIIP, 16-IVG, 3-IVS)

No: 119

Unknown: 9 (3-III, 2-IIIP, 2-IVG, 2-IVS)

If yes, the number during the operation:

Number of Inspections	Class III	Class IIIP	Class IVG	Class IVS	Totals
1	6	8	6	1	21
2	1	2	2	1	6
3	2	2	1	1	6
4	1	0	0	0	1
6	1	0	0	0	1
Totals:	11	12	9	3	35

If yes, the number after the operation:

Number of Inspections	Class III	Class IIIP	Class IVG	Class IVS	Totals
1	17	12	8	3	40
2	2	3	2	0	7
3	1	1	0	0	2
Totals:	20	16	10	3	49

13. Were there any substantive complaints or other agency/ organization site visits after the operation started?

Yes: 13 (2-III, 3-IIIP, 7-IVG, 1-IVS)
 No: 126
 Unknown: 52 (16-III, 19-IIIP, 14-IVG, 3-IVS)

14. Was there any deviation from the information provided on the application?

Yes: 70 (30-III, 25-IIIP, 12-IVG, 3-IVS)
 No: 126
 Unknown: 19 (2-III, 1-IIIP, 16-IVG)

a. If yes, specify?: See Attachment C

b. and did the deviation meet or surpass the regulations?

Yes: 57 (25-III, 22-IIIP, 7-IVG, 3-IVS)
 No: 12 (5-III, 3-IIIP, 4-IVG)
 No Answer: 1 (IVG)

c. Did it create damage or potential damage to a public resource?

Yes: 2 (1-III, 1-IIIP)
 No: 49
 Unknown: 3 (1-III, 1-IIIP, 1-IVG)

Potential?:

Low: 1 (IIIP)
 High: 3 (2-III, 1-IVG)

Specify?:

Class	Specific Damage or Potential Damage Caused by Deviations from the Application
III	Removed long term LOD - the only large cedar log in evidence in stream.
III	Soil erosion in adjacent type 3 water.
IIIP	Fill over Type 4 water. Landing adjacent to Type 4 water.
IIIP	Loss of riparian habitat; exposure of unstable slopes to erosion.
IVG	After clearcutting, he bulldozed most of site, pushing fill into a draw draining into Type 3 stream.

d. Was the damage slight, moderate, or heavy?

Moderate: 2 (1-III, 1-IIIP)

e. Was the deviation widespread/occasional/single?

Single: 4 (2-III, 2-IIIP)
 Occasional: 4 (III)
 Widespread: 10 (2-III, 3-IIIP, 3-IVG, 2-IVS)

15. Water Type(s):

a. Was water on or adjacent to the operation?

Yes: 118 (57-III, 40-IIIP, 15-IVG, 6-IVS)
 No: 73 (11-III, 11-IIIP, 48-IVG, 3-IVS)

b. If yes, what type(s)?

Stream Type	Number of Applications	Forest Practices Class
1+	2	IVG
1+345W	1	IIIP

Stream Type	Number of Applications	Forest Practices Class
1+5	2	1-IVG, 1-IVS
1	6	1-III, 3-IIIP, 1-IVG, 1-IVS
1235	1	IIIP
145	2	1-III, 1-IIIP
1W	1	IVG
2	3	III
23	2	III
235W	1	III
245	1	IIIP
2W	1	III
3	9	5-III, 1-IIIP, 3-IVG
34	5	1-III, 4-IIIP
345	10	5-III, 4-IIIP, 1-IVG
345W	4	1-III, 2-IIIP, 1-IVS
35	2	1-IIIP, 1-IVS
35W	3	III
3W	1	III
4	13	7-III, 5-IIIP, 1-IVG
45	15	8-III, 7-IIIP
45W	2	11-III, 1-IIIP
5	27	13-III, 8-IIIP, 4-IVG, 2-IVS
5W	2	III
Wetlands	2	1-III, 1-IVG

Stream Types and their number of occurrences within the applications indicating water on or adjacent to the operation:

Stream Type	Number of Occurrences
1+	5
1	15
2	9
3	39
4	53
5	71

c. Were water type map changes initiated as a result of this application?

Yes: 5 (2-III, 3-IIIP)

No: 113

Water Type Changes:

Class	Pre-Application	Post-Application
III	4	3
III	4	3
IIIP	4	3
IIIP	3	2
IIIP	3	4

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Application Class	Reasons for the Designation as a Class III Priority Issue
IIIP	Special plant, sediment delivery, instability of soils
IIIP	Sensitive Plant (E/T plant)
IIIP	Archaeological site and Natural Heritage plant community
IIIP	Length of road - unstable slopes
IIIP	Excessive erosion and unstable slopes
IIIP	Unstable slopes
IIIP	Temporary sensitive water
IIIP	Osprey nest - adjacent section
IIIP	Spotted owl, state threatened species
IIIP	Highly erodible soils/unstable slopes
IIIP	Historical
IIIP	Unstable slopes; potential excessive erosion
IIIP	Unstable slopes
IIIP	Water use
IIIP	Whatcom watershed
IIIP	Very unstable soils
IIIP	Water user
IIIP	Municipal watershed
IIIP	Reforestation
IIIP	Soils
IIIP	Highly erodible soils
IIIP	Unstable soils
IIIP	4's and 5's into 3's
IIIP	Unstable soils

Application Class	Reasons for the Designation as a Class III Priority Issue
IIIP	Unstable soils
IIIP	OAHP
IIIP	Special plant and E/T animal
IIIP	Erodible soils
IIIP	Highly erodible soils
IIIP	High erosion potential
IIIP	Erodible soils
IIIP	Highly erodible soils
IIIP	Highly erodible soils
IIIP	Highly erodible soils
IIIP	Highly erodible soils
IIIP	Critical wildlife habitat or habitat of interest. (Beaver ponds at bottom of unit).
IIIP	Special Plant
IIIP	Animal
IIIP	Special plant
IIIP	Highly erodible soils
IIIP	Animal
IIIP	Within 200' of Type 1 water
IIIP	Highly erodible soils
IIIP	Historical site
IIIP	Very unstable soils
IIIP	Possible persistent pesticide
IIIP	Very unstable when disturbed, highly erodible
IIIP	Possible persistent insecticide
IIIP	Arch. (OAHP)
IIIP	Highly erodible

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Application Class	Reasons for a TRAX Hit
=====	
III	water rights
III	Bald eagle nest nearby.
III	Irrigation canal - water rights
III	Special plant - no conflict reported.
III	Water source/Quinault notification
III	Interest by tribe.
III	Water source
III	Water rights
III	High priority wetlands within 100' of road.
III	Quinault notification
III	Quinault notification
III	Heron rookery - no conflict (WDW)
III	Heron rookery - but no conflict
III	Quinault notification
III	Water source
III	Special plant
III	Quinault notification
III	Quinault notification
III	Water rights and flood control district
III	Special plant/Water rights/Quinault notification
III	Highly erodible soils
III	Water rights
III	Quinault notification
III	Squaxin notification

Application Class	Reasons for a TRAX Hit
III	Water source/Quinault notification
III	Squaxin notification
IIIP	Soils
IIIP	E/T Plant
IIIP	Highly erodible soils
IIIP	Historical
IIIP	Archaeological site and Natural Heritage plant community
IIIP	Soils and Quinault notification
IIIP	Animal
IIIP	Unstable soils and water rights
IIIP	Domestic multiple water use
IIIP	Animal
IIIP	Municipal watershed
IIIP	OAHP
IIIP	Unstable soils
IIIP	Unstable soils
IIIP	Special plant and E/T animal
IIIP	Water rights/Yakima notification
IIIP	Highly erodible soils/Quinault and Squaxin notification
IIIP	Natural Heritage wetland
IIIP	Unstable slopes
IIIP	Special plant
IIIP	Quinault notification
IIIP	NG
IIIP	Water rights, OAHP, State parks and tribe notification
IIIP	Erodible soils/Water rights

Application Class	Reasons for a TRAX Hit
IIIP	Highly erodible soils/Quinault notification
IIIP	Erodible soils
IIIP	Natural Heritage wetland/Federal E/T animal
IIIP	Special plant/Water rights
IIIP	Potential unstable slopes
IIIP	Water rights, Yakima tribe notification
IIIP	Unstable soils and special plant
IIIP	Soils
IIIP	Osprey nest - adjacent section
IIIP	Highly erodible soils
IIIP	Quinault notification/Water sources
IIIP	Special Plant (Natural Heritage Wetland), Quinault Notification
IIIP	Pond
IIIP	Watershed and Quinault notification
IIIP	Highly erodible soils
IIIP	OAHP Historical site/Quinault notification
IVG	Columbia Gorge Commission and Yakima Tribe notification
IVG	Soils and Water Rights
IVG	Quinault notification
IVG	Unnamed springs
IVG	Cities of Olympia, Tumwater and Thurston county notification; Water rights
IVG	OAHP Notification
IVG	Domestic irrigation; unnamed spring and streams
IVG	Water rights
IVG	Unnamed springs and streams
IVG	OHAP, NG

Application Class	Reasons for a TRAX Hit
=====	
IVG	Special plant
IVG	Water rights/Thurston county planning dept/Squaxin notification
IVG	Unnamed springs
IVG	Water rights
IVG	Domestic water, unnamed stream
IVG	Osprey nest on lake nearby.
IVG	Water rights
IVG	Unnamed spring
IVG	Water rights
IVS	Animal - northern spotted owl
IVS	Eagle nest site, unstable soils
IVS	Eagle
IVS	Spotted owl, erodible soils
IVS	Eagle; Osprey; State park
IVS	Water source
IVS	Eagle nest site and osprey site
IVS	Eagle nest

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Application Class	Deviations from the Approved Application
III	More culverts than specified.
III	Harvested a small amount of timber outside of unit.
III	Significantly less acreage treated than indicated on app. None of unit in Sec.4,T11N,R5E treated and only a portion of unit in Sec.3,T11N,R6E treated. Small, steep unit in Sec. 8 not treated.
III	Some areas not treated. One area with standing water, swampy, not treated.
III	Actually logged 3.5 acres, not 5 acres.
III	Said no work in any waters - salvaged cedar from OHWM of T3
III	Additional acreage sprayed
III	A) Drainage not buffered, but is just a draw - assume no flowing water at spray. B)OK - marked RMZ; C)OK - marked RMZ
III	Another stream found on unit - not on map; typed 3, 4; landowner left RMZ and RLA

Application
Class

Deviations from the Approved Application

-
- III Harvested less than indicated. No harvest west of type 3 water for portion of unit (cross hatched on map).
 - III Less acreage thinned than indicated on map
 - III No fire trail constructed. Shovel yarded some of flat areas.
 - III Partial cut; removed merch. fir, left hardwoods
 - III Operated within RMZ on Type 3 Water. Removed 1 DF
 - III Unit boundaries changed. No logging S and W of Type 3 water. Harvesting within 40' of Type 3 water. No harvest near Type 1 Water.
 - III Did not spray entire designated area.
 - III Stated 50% partial cut, took 70%, all the conifer
 - III Harvested half of acreage indicated on map
 - III Cat and shovel logged. No highlead

Application Class	Deviations from the Approved Application
III	Harvested fewer acres.
III	Skidder logged in portions of unit - app. stated highlead logging. Skid roads steep with no waterbars. Fill over Type 5 water no culvert.
III	App. indicated temporary installation of 24" pipe. Didn't happen - no stream crossing, no harvesting across stream. Accessed from above.
III	They scarified before planting, not mentioned
III	Several culverts missing (5). 1 spur moved 200'
III	Two Type 5's not mentioned under Line 16
III	3 culverts stated to be put in are missing
III	Did not remove any trees from shorelines.
III	3-4 acres mapped to be sprayed was not sprayed.
III	Less acreage treated

Application

Class

Deviations from the Approved Application

=====

III Clearcut, not partial cut. Planted more trees than indicated. Average slope not accurate. Operator different from landowner

IIIP Landowner allowed to log (and complied) 23 acres out of 90.

IIIP No 15 inch x 30' culvert installed.

IIIP Less acreage harvested than indicated

IIIP FPA indicated RMZ on T3 stream, conditions require RLA on T4 (same stream) - neither was left.

IIIP Harvested @40% volume. Type 1 Water, not Type 3

IIIP Left small acreage of doghair hemlock, one-half acre in middle of unit.

IIIP Spot rock, pulled ditches, put in 15" pipe on P-4010 road. New construction on spurs only.

IIIP Harvested less acreage (Unit 1 out)

IIIP Operator state 200' no cut RMZ along stream - didn't leave this much. Only 4 of 5 acres cut - owner dismissed logger.

Application Class	Deviations from the Approved Application
IIIP	Approx. 300' of road not constructed. (2)30 inch pipes installed instead of 36 inch pipes.
IIIP	Map location wrong
IIIP	Additional spur constructed, less than 600 feet.
IIIP	Harvested in areas that weren't indicated on their map, areas along Type 3 and 4 waters.
IIIP	An extra 100' spur built off the planned one.
IIIP	Shovel logged instead of skidder
IIIP	Additional 2 stations of road constructed
IIIP	Culvert in Sec. 36 not done. Bridge out at junction of 2500 and 2000 road.
IIIP	Just 20 acres, not 20. Steepest slopes over 10%, more like 60%. Unit outside 200' of Type 1 Water.
IIIP	Less acreage harvested. Harvest occurred on only one side of Type 3 Water. No firetrail construction.

Application Class	Deviations from the Approved Application
IIIP	Probably more than 20% volume removed.
IIIP	Did not clearcut - higraded unit. Left several trees/acre, DBH 4"-12"; left wider RMZ than required; but did take largest trees.
IIIP	A few spurs were shorter than indicated.
IIIP	615 acres fertilized, not 646.
IIIP	Less acreage treated than indicated
IIIP	Applicant failed to show T5 stream crossing on existing road.
IVG	Patch clearcut
IVG	Landowner left additional 5-10% by protecting forested wetland.
IVG	No Type 3 water on NE corner of property.
IVG	Road location

Application

Class	Deviations from the Approved Application
IVG	Didn't mention that he was putting in building foundation and electrical service
IVG	Landowner did not clearcut - is "real estate" cut, all smaller trees.
IVG	Landowner clearcut unit instead of 35% of harvest as stated; prepared for conversion
IVG	this not really a partial cut; but a clearcut, some small trees left; other info incomplete. Forest practices forester rejected this FPA for poor and incomplete information, but regional office approved it.
IVG	Land cleared
IVG	Landowner will not convert
IVG	Owner said thinning of 30% and not intention to convert; actually was 0.5 acres and no cut in rest.
IVG	90% removal was specified - 100% of timber was removed. See "special conditions" section . Road construction. No indication of on-site wetland.
IVS	Less than 30% trees were harvested.
IVS	Access road not as specified

Application
Class

Deviations from the Approved Application

=====

IVS

Stated 35% partial cut; removed @ 45% of volume

APPENDIX C

ROADS

TIMBER, FISH AND WILDLIFE
FIELD IMPLEMENTATION COMMITTEE

FOREST PRACTICE COMPLIANCE WORKSHEET SUMMARY
1991

November 15, 1991

ROADS

- I. Total applications surveyed: 191
- II. Applications that are Not Applicable: 63
- III. Applications applicable to this Section: 128
(48-III, 42-IIIP, 30-IVG, 8-IVS)
-

A. Road Location: N/A: 86 Applicable: 42
(13-III, 18-IIIP, 9-IVG, 2-IVS)

1. Did the road location meet the regulations and application conditions?

Yes: 41
No: 1 (IIIP)

2. If no, where was it deficient?

Extra road or deviation from map location.

3. If no in 1. above, did this result in damage or potential damage to public resources?

No: 1

Potential?: 0

Specify?: 0

4. Was the damage slight, moderate, or heavy? 0

5. Was the noncompliance widespread/occasional/single?

Single: 0
Occasional: 0
Widespread: 0

B. Road Design: N/A: 87 Applicable: 41
 (13-III, 17-IIIP, 9-IVG, 2-IVS)

1. Did the road design meet the regulations and application conditions?

Yes: 36
 No: 5 (2-III, 2-IIIP, 1-IVG)

2. If no, where was it deficient?

Class	Deficiency
IVG	Needed 1 culvert.
IIIP	Inadequate number of culverts.
III	Cross drain spacing, culvert size, drainage routed to forest floor.
IIIP	Cross drain spacing.
III	Cross drain spacing - resulted in road surface erosion and plugged culvert downhill.

3. If no in 1. above, did this result in damage or potential damage to public resources?

Yes: 1 (IIIP)
 No: 2 (III)
 No Answer: 1 (IVG)

Potential?

Low: 2 (IIIP)

Specify?

Damage/Potential Damage
Will drain water onto haul roadway in winter.
Surface erosion.

4. Was the damage slight, moderate, or heavy?

Slight: 1 (IIIP)

5. Was the noncompliance widespread/occasional/single?

Occasional: 1 (III)
Widespread: 2 (1-III, 1-IIIP)

C. Road Construction: N/A: 85 Applicable: 43
(13-III, 19-IIIP, 9-IVG, 2-IVS)

1. Is there evidence of organic debris buried within the road fill in excess of the rules?

Yes: 1 (IVG)
No: 42

a. If yes, did it result in damage or potential damage to public resources?

No Answer: 1

Potential? 0

Specify? 0

b. Was the damage slight, moderate, or heavy?

0

c. Was the noncompliance widespread/occasional/single?

0

2. Is there erosion from unprotected cuts/fills?

Yes: 6 (3-III, 3-IIIP)
No: 37

a. If yes, did it result in damage or potential damage to public resources?

Yes: 3 (1-III, 2-IIIP)
No: 2 (1-III, 1-IIIP)

Potential?

Low: 2 (III)

Specify?

Class	Damage/Potential Damage
IIIP	Erosion impacting Type 5 and Type 4 downstream.
III	Overburden left exposed adjacent to OHWM.
III	Siltation into T5 stream.
IIIP	Some erosion into Thrash creek, Type 1 water.

b. Was the damage slight, moderate, or heavy?

Low: 3 (1-III, 2-IIIP)
Moderate: 1 (III)

c. Was the noncompliance widespread/occasional/single?

Single: 1 (III)
Occasional: 1 (IIIP)
Widespread: 2 (1-III, 1-IIIP)

3. Was endhaul (or "no sidecast") required on this app.?

Yes: 1 (IIIP)
No: 42

a. If no, should it have been?

Yes: 1 (IIIP)
No: 40
No Answer: 1 (IVG)

b. Was it done?

Yes: 2 (IIIP)

c. If not done, did it result in damage or potential damage to public resources?

0

Potential? 0

Specify? 0

d. Was the damage slight, moderate, or heavy?

0

4. Was the noncompliance widespread/occasional/single?

0

D. Landing Construction: N/A: 92 Applicable: 36
(12-III, 16-IIIP, 6-IVG, 2-IVS)

1. Did landing construction meet the regulations and conditions?

Yes: 34

No: 2 (1-III, 1-IIIP)

a. If no, what was deficient?

Class	Deficiency
III	More rock needed.
IIIP	All landings were fine, except one at end of 7034 road. Overburden of landing too close to T5 water. Some debris and potential for erosion from sidecast.

b. If no, did it result in damage or potential damage to public resources?

No: 1 (III)

Potential?

Low: 1 (IIIP)

Specify? 0

c. Was the damage slight, moderate, or heavy?

0

d. Was the noncompliance widespread/occasional/single?

Widespread: 1 (III)

E. Road Maintenance: N/A: 64 Applicable: 127
(47-III, 42-IIIP, 30-IVG, 8-IVS)

1. Was a road maintenance/abandonment plan required for this operation?

Yes: 2 (1-III, 1-IIIP)
No: 123
Not Applicable: 2 (III)

a. If yes, was it complied with?

Unknown: 2

b. If no in a. above, did this result in damage or potential damage to public resources?

0

Potential?: 0

Specify?: 0

c. Was the damage slight, moderate, or heavy? 0

2. If this unit contains an active road, is it properly maintained?

Yes: 27 (9-III, 6-IIIP, 9-IVG, 3-IVS)
No: 19 (8-III, 10-IIIP, 1-IVG)
Not Applicable: 81

a. If no, what are the deficiencies?

See Attachment A

b. If no, did/is it resulting in damage or potential damage to public resources?

Yes: 3 (1-III, 2-IIIP)
No: 6 (5-III, 1-IVG)

Potential?

Slight: 8 (1-III, 7-IIIP)
High: 4 (2-III, 2-IIIP)

Specify?

Class	Damage or Potential Damage to Public Resources?
IIIP	Large amounts of sediment could have reached Type 3 stream and large wetland.
III	Road in summer has water flowing down it. Heavily eroded; no ditches. Is rocked along the lowest 200'.
III	To Type 5 streams and wildlife habitat.
IIIP	Road fill failed over a Type 5 water. Some movement of soil. Culvert buried.

c. Was/is the damage slight, moderate, or heavy?

Slight: 3 (1-III, 2-IIIP)

Moderate: 1 (III)

d. Is the lack of maintenance widespread/occasional/single?

Single: 2 (IIIP)

Occasional: 3 (2-IIIP, 1-IVG)

Widespread: 5 (3-III, 2-IIIP)

3. If this unit contains an inactive road, is it properly maintained?

Yes: 37 (15-III, 9-IIIP, 11-IVG, 2-IVS)

No: 31 (10-III, 14-IIIP, 4-IVG, 3-IVS)

Not Applicable: 59

a. If no, what are the deficiencies?

See Attachment B

b. If no, did it result in damage or potential damage to public resources?

Yes: 7 (3-III, 4-IIIP)

No: 12 (5-III, 2-IIIP, 2-IVG, 3-IVS)

Unknown: 1 (III)

Potential?

Low: 10 (1-III, 7-IIIP, 2-IVG)
High: 1 (IIIP)

Specify?

See Attachment C

- c. Was the damage slight, moderate, or heavy?

Slight: 3 (2-III, 1-IIIP)
Moderate: 4 (1-III, 3-IIIP)

- d. Is the lack of maintenance widespread/
occasional/single?

Single: 2 (1-IIIP, 1-IVG)
Occasional: 2 (III)
Widespread: 8 (2-III, 4-IIIP, 1-IVG, 1-IVS)

4. Were there additional maintenance requirements specified
as conditions of the application?

Yes: 10 (3-III, 7-IIIP)
No: 116
N/A: 1 (III)

- a. If yes, what were they?

See Attachment D

- b. Were they complied with?

Yes: 4 (2-III, 2-IIIP)
No: 5 (1-III, 4-IIIP)
Unknown: 1 (IIIP)

- c. If no, did it result in damage or potential damage
to public resources?

Yes: 3 (1-III, 2-IIIP)
No: 1 (IIIP)

Potential?

Low: 2 (IIIP)

Specify?

Sediment delivery into Type 4 Water.
Erosion from road into T4 making soil
available for transport to T3.

d. Was the damage slight, moderate, or heavy?

Slight: 2 (1-III, 1-IIIP)
Moderate: 1 (IIIP)

5. If this operation contains abandoned roads, were they abandoned in compliance with DNR requirements (ie prior approved abandonment plan and post abandonment visit)?

N/A: 127

a. If no, did it result in damage or potential damage to public resources?

0

Potential?

0

Specify?

0

b. Was the damage slight, moderate, or heavy?

0

c. Was noncompliance widespread/occasional/single?

0

6. Were the haul roads (accessing & within) this operation maintained to minimum standards during use?

Yes:	69	(26-III, 24-IIIP, 15-IVG, 4-IVS)
No:	19	(8-III, 9-IIIP, 2-IVG)
N/A:	4	(2-III, 1-IIIP, 1-IVG)
Unknown:	35	(11-III, 8-IIIP, 12-IVG, 4-IVS)

- a. If no, did it result in damage or potential damage to public resources?

Yes: 3 (1-III, 2-IIIP)

No: 9 (5-III, 3-IIIP, 1-IVG)

Potential?

Low: 5 (1-III, 3-IIIP, 1-IVG)

High: 2 (1-III, 1-IIIP)

Specify?

See Attachment E

- b. Was the damage slight, moderate, or heavy?

Slight: 3 (1-III, 2-IIIP)

F. Pits, etc.: N/A: 116 Applicable: 12
(4-III, 8-IIIP)

1. If rock quarries, gravel pits, borrow pits or spoil disposal areas were used in the operation are there any deviations from the rules?

Yes: 1 (III)

No: 11

Specify:

Doesn't meet Surface Mining Safety Rules.

2. If yes, is it resulting in damage or potential damage to public resources?

No: 1 (III)

Potential? 0

Specify? 0

3. Is the damage slight, moderate, or heavy?

0

G. Special Conditions: N/A: 117 Applicable: 11
 (1-III, 7-IIIP, 3-IVG)

1. Were any special conditions concerning roads placed upon the app?

Yes: 11

Specify?

Class	Special Conditions
IIIP	Construction plan required.
III	Waterbar all skid and firetrails on slopes greater than 20%.
IIIP	Winterizing required.
IIIP	Closure after planting.
IVG	Culvert diameter.
IIIP	Hay bales, water bar specs., forest floor.
IVG	Water bar specs.
IVG	Remove bridge upon completion under terms of HPA.
IIIP	Armoring sidecast material.
IIIP	Fill no greater than 6' at centerline at creek crossing to minimize erosion.
IIIP	Armor culvert inlets on major stream crossing. Culverts and crossdrains shall be flumed to natural ground levels with energy dissipators.

2. Were they complied with?

Yes: 4 (1-III, 2-IIIP, 1-IVG)

No: 6 (5-IIIP, 1-IVG)

N/A: 1 (IVG)

Specify?

Class	Compliance	Non-Compliance
IIIP	No	Provided plan, but didn't adhere to it completely - water management problems.
IIIP	No	Not yet - ditching inadequate.
IIIP	No	Not yet.
IVG	N/A	Type 4 - not operated around.
IIIP	No	No armoring of sidecast from Sta 6 to Sta 13.

a. If no, did it resulting in damage or potential damage to public resources?

Yes: 1 (IIIP)

No: 3 (2-IIIP, 1-IVG)

Potential? 0

Specify?

Class	Damage or Potential Damage to Public Resources?
IIIP	Erosion Problems.

b. Is the damage slight, moderate, or heavy?

Low: 1 (IIIP)

3. Was noncompliance widespread/occasional/single?

Single: 1 (IVG)

Occasional: 1 (IIIP)

Widespread: 2 (IIIP)

Comments (roads)

See Attachment F

November 15, 1991

Application Class	Deficiencies Caused by the Lack of Active Road Maintenance
III	Needs several waterbars
III	Culverts/ditches; road surface
III	Culverts, ditches and road surface
III	Road surface needs waterbars
III	Ditches; road surface
III	Ditches
III	Culverts/ditches; road surface
III	No ditchline. Could use a couple of waterbars to direct water
IIIP	Not ditched
IIIP	Culverts and ditches; cross T4 Water with no pipe or water diversion.
IIIP	Culverts and ditches; road surface
IIIP	Culverts/ditches; road surface. No ditches, plugged culverts; too few culverts; road heavily eroded for road surface

Application Deficiencies Caused by the
Class Lack of Active Road Maintenance
=====

- IIIP Culverts/ditches

- IIIP Ditches- no ditches on 150' portion of road, but
is adequately waterbarred.

- IIIP Ditches are eroded. Needs 2 culverts.

- IIIP Ditches/inadequate water barring of skid trails

- IIIP Culverts/ditches

- IIIP Culverts/ditches; cut/fills

- IVG Culvert; ditches; road surfaceNeeds grading.

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Application Class	Deficiencies Caused by the Lack of In-Active Road Maintenance
III	Prior to first winter, ditches, culverts and surface. Thereafter, ditches and culverts.
III	Thereafter, waterbars
III	Prior to first winter, ditches, culverts and surface. Thereafter, ditches and culverts.
III	Thereafter, ditches and culverts
III	Ditches/culverts after the first winter.
III	Ditches, culverts, surface prior to first winter. Thereafter, ditches and culverts. Cow path through field.
III	Ditches and culverts after the first winter
III	Prior to first winter, ditches, culverts and surface. Thereafter, ditches and culverts.
III	Prior to first winter, ditches, culverts and surface. Thereafter, ditches and culverts.
III	No culverts/waterbars prior to 1st winter
IIIP	After first winter, ditches and culverts.
IIIP	After first winter, ditches and culverts.
IIIP	Ditches, culvert, surface prior to first winter and thereafter
IIIP	Ditches, culverts, surface prior to the first winter and thereafter.
IIIP	After first winter, ditches. No ditches or waterbars.
IIIP	Prior to first winter, ditches, culverts and surface. Thereafter, ditches and culverts.

Application Class	Deficiencies Caused by the Lack of In-Active Road Maintenance
IIIP	Ditches and culverts not maintained after the first winter.
IIIP	Prior to first winter, ditches, culverts and surface. Thereafter, ditches and culverts.
IIIP	Prior to first winter: ditches, culverts, surface and thereafter: ditches, culverts.
IIIP	Prior to first winter, ditches, culverts and surface. And thereafter, ditches and culverts.
IIIP	Ditches and culverts after first winter
IIIP	Ditches and culverts after the first winter.
IIIP	Prior to first winter, ditches, culverts and surface. Thereafter, ditches and culverts.
IIIP	Culverts/ditches prior to first winter.
IVG	Ditches and culverts after the first winter
IVG	Prior to first winter, ditches, culverts and surface and thereafter, ditches and culverts.
IVG	Ditches, culverts, surface prior to first winter. No culverts where cross wetland.
IVG	Prior to first winter, ditches, culverts and surface. Operated under wet conditions. No road surfacing.
IVS	Thereafter, ditches and culverts.
IVS	Ditches, culverts, surface prior to first winter
IVS	Ditches and culverts after the first winter.

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Application Damage or Potential Damage to Public Resources
Class Caused by the Lack of In-Active Road Maintenance
=====

- III Well-rocked in parts - no problem with it.

- III Surface erosion on road.

- IIIP Potential for erosion into T3 or better .

- IIIP Mass wasting (20+ yards) into Type 2 water and
 sedimentation into Type 3.

- IIIP Forest Service road accesses the unit. Water
 problems, no ditches. Erosion problems. Road had
 been improved (dips and rolls added) prior to
 operation starting. Spur roads in unit not
 waterbarred or outsloped.
- IIIP No pipe before Type 2 Water. Bank sluffing.

- IIIP Surface erosion

- IIIP Erosion in draw and road

- IIIP Sedimentation from unmaintained road.

Application Damage or Potential Damage to Public Resources
Class Caused by the Lack of In-Active Road Maintenance
=====

IIIP Siltation into Type 4/5

IIIP Ravelling into culvert is an ongoing problem.
Nonfunctional when road became inactive. Ditches
need maintenance on P-4010.

IIIP Small amount of siltation in Type 5 water.

IVS Ditch needs to be cleaned. There is a pipe 50'
before 8' cutbank on curve.

November 15, 1991

Application Class	Additional Road Maintenance Specified as Conditions of the Application
=====	
III	Maintain the roads.
III	Waterbar all skid and fire trails on slopes greater than 20%.
III	Drivable dips on haul road.
IIIP	Spur roads waterbarred and blocked upon completion of reforestation.
IIIP	Required that a construction plan be submitted for approval prior to operating.
IIIP	Winterize all roads/waterbarring
IIIP	Hay bales, waterbars specs, forest floor
IIIP	Waterbar on outslope roads.
IIIP	Install drainage
IIIP	Waterbarring and closing after planting.

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Application Class	Damage or Potential Damage to Public Resources Caused by the Lack of Haul Road Maintenance
III	Portions of road weren't ditched
III	Summer logging, no ditches, no problems.
III	No erosion control on roads or skid trails. Small, but steep, dry draws blocked by road.
III	No ditches, but no problems with road.
IIIP	Erosion of parent material (sandstone). Access road is a non-maintained Forest Service road.
IIIP	Runoff from slide into Type 3.
IIIP	No maintenance on ditches.
IIIP	Siltation into Type 5 water sue to lack of crowning and/or ditches.
IIIP	Roads needs ditches
IIIP	Excessive erosion; no ditches; plugged culverts.
IIIP	Needs ditching; shallow erosion in roadbed
IVG	No ditches

November 15, 1991

Application
Class

II. ROADS: COMMENTS

=====

III Unwise placement of one T5 culvert: didn't catch all of Type 5 drainage; should have been further downhill.

III Main haul road needs 2 more culverts or waterbarring after use. T5 was heavily silted - no running water - flat ground.

III Nice road, but no berm cleaning, no waterbars

III Forester after approval, later required operator to put in 2 culverts and clean out sedimented ditchline. Road built within RMZ. Overburden left exposed over OHWM of T3 water.

III Dirt spur will recover quickly if driving ceases. Attempt made to close road by 4x4's went over waterbars - caused some ditching

III NTC for road maintenance and change of operator.

III Roads do not comply to FPA regs - lack of culverts, drainage structures and poor surface on some.

Application
Class

II. ROADS: COMMENTS

=====

- IIIP Landings were too large.

- IIIP Only 1 200' spur built - no erosion problems.

- IIIP Problems encouraging Forest Service to maintain their roads to minimum standards. Only when operations become active and using Forest Service maintained road, can a NTC be written to Landowner/Operator to gain compliance.

- IIIP Construction Plan

- IIIP 1. The T5 had no culvert - questionable whether needed or not, on a side spur. 2. Side spur built to minimum size and length - will have quick recovery. 3. 2 other culverts desirable but not necessary - no public resource damage.

- IIIP Road damage due to woodcutters/motorcycle

- IIIP Road looks bad, but not long distance. Landing could use more erosion control.

Application
Class

II. ROADS: COMMENTS

=====

- IIIP 500' ditch on spur needs to be installed. Hydromulching will be required on a couple of cuts/fills.
- IIIP No sidecast over 50% slopes.
- IIIP Inadequate drainage on skid & haul roads.
- IIIP Wooded portion of road was shorter than portion crossing field; there were no ditches nor culverts but no evidence of erosion.
- IIIP 4" minus, angular pitrun rock used on road surface.
- IIIP Roads are ok during dry season. Marginal when wet. No ditching for the most part, lack of crowning and surfacing material.
- IVG Existing roads - no erosion control.

Application
Class

II. ROADS: COMMENTS

=====

IVG Grass seeded road cuts. Road location moved -
different from application. Maintenance and
water management excellent.

IVS Access/Haul road is a permanent recreational use
road. Is in need of grading & drivable water
bars on steeper stretches.

IVS Road location changed to accomodate eagle.

APPENDIX D

TIMBER HAREST

TIMBER, FISH AND WILDLIFE
FIELD IMPLEMENTATION COMMITTEE
FOREST PRACTICE COMPLIANCE WORKSHEET SUMMARY
1991

November 15, 1991

TIMBER HARVEST

- I. Total applications surveyed: 191
- II. Applications that are Not Applicable: 28
- III. Applications applicable to this Section: 163
(50-III, 42-IIIP, 63-IVG, 8-IVS)
-

A. Riparian Management Zone:

1. Was an RMZ required?

Yes: 38 (19-III, 13-IIIP, 5-IVG, 1-IVS)

No: 114

Not Applicable: 11

a. If yes, did any harvest occur within the zone?

Yes: 12 (7-III, 4-IIIP, 1-IVG)

No: 23

Unknown: 3 (2-III, 1-IVG)

(1) If yes, does it appear the minimum RMZ requirements were met?

Yes: 4 (1-III, 2-IIIP, 1-IVG)

No: 8 (6-III, 2-IIIP)

(2) If no, what was deficient?

Class	Deficient RMZ caused by Harvest Operation
III	LOD removed.
IIIP	Wildlife trees.

Class	Deficient RMZ caused by Harvest Operation
III	Width and unpermitted equipment in zone in one spot.
IIIP	Count.
III	Width - RMZ marked incorrectly; wildlife trees.
III	Unpermitted equipment in zone. Count is deficient (1 tree).
III	Tree count. 16" DBH spruce tree harvested within 25'. Slash pile left with 5% of it within 25'.
III	Unpermitted equipment in zone; tree count; wildlife trees; species ratio. Short 2 conifers.

b. If equipment operated in the zone, did it result in damage or potential damage to public resources?

No: 5 ((3-III, 2-IIIP)
 Not Applicable: 1 (III)

Potential?: 0

Specify?: 0

c. Was the damage slight, moderate, or heavy? 0

d. Was the noncompliance widespread/occasional/single?

Occasional: 1 (III)

2. Were wetlands adjacent to the stream/pond?

Yes: 22 (9-III, 7-IIIP, 4-IVG, 2-IVS)

No: 104 (31-III, 30-IIIP, 38-IVG, 5-IVS)

Unknown: 2 (III)

Not Applicable: 35

a. If yes, were they protected according to the regs?

Yes: 17 (7-III, 7-IIIP, 1-IVG, 2-IVS)

No: 2 (III)

Unknown: 3 (IVG)

b. If no, did it result in damage or potential damage to the wetlands?

Yes: 2 (III)

Potential?: 0

Specify?:

Class	Damage or Potential Damage to the Wetland
III	Excessive disturbance of small wetlands along stream.
III	Piled slash inside wetland. Beaver activity may have occurred after harvest.

c. Was the damage slight, moderate, or heavy?

Slight: 2 (III)

B. Type 4 Riparian Leave Tree Areas:

1. Was an RLA required on this app.?

Yes: 7 (2-III, 4-IIIP, 1-IVG)
No: 115 (40-III, 30-IIIP, 39-IVG, 6-IVS)
Unknown: 1 (III)
Not Applicable: 40

2. If yes, was the leave tree requirement met?

Yes: 5 (1-III, 3-IIIP, 1-IVG)
No: 1 (IIIP)
Unknown: 1 (III)

C. Wildlife Habitat: N/A: 35 Applicable: 128
(49-III, 35-IIIP, 36-IVG, 8-IVS)

1. Were "critical" wildlife habitats identified in conjunction with this application?

Yes: 8 (1-IIIP, 7-IVG)
No: 118
Not Applicable: 2 (IVG)

Did the landowner cooperate in identifying them?

Yes: 3 (IVS)
No: 1 (IVS)
Unknown: 4 (1-IIIP, 3-IVS)

2. Where reasonable means of protection (of critical habitat) considered as part of the proposed harvest operation?

Yes: 8 (1-IIIP, 7-IVS)
No: 1 (IIIP)
No Answer: 2 (IVG)
Not Applicable: 117

3. If the app. involved established big game winter ranges where harvesting methods and patterns designed to insure adequate access routes and escape cover?

Yes: 2 (1-III, 1-IVG)
No: 6 (4-III, 2-IIIP)
Not Applicable: 120

4. If available, where a reasonable number of snags left to protect habitat for cavity nesting wildlife?

Yes: 26 (14-III, 4-IIIP, 5-IVG, 3-IVS)
No: 20 (3-III, 8-IIIP, 7-IVG, 2-IVS)
Unknown: 5 (3-III, 2-IVG)
Not Present Prior to Operating: 66 (27-III, 19-IIIP, 19-IVG, 1-IVS)
No Answer: 1 (IVG)
Not Applicable: 10 (2-III, 4-IIIP, 2-IVG, 2-IVS)

5. Were there special conditions on the app. to protect wildlife?

Yes: 16 (3-III, 4-IIIP, 1-IVG, 8-IVS)
No: 109
No Answer: 2 (IVG)
Not Applicable: 1 (IVG)

a. If yes, specify: See Attachment A

b. If yes, were they complied with?

Yes: 9 (2-III, 2-IIIP, 5-IVS)
No: 3 (1-III, 1-IVG, 1-IVS)
Unknown: 3 (2-IIIP, 1-IVS)
Not Applicable: 1 (IVS)

D. Yarding Systems: N/A: 6 Applicable: 157
(48-III, 40-IIIP, 63-IVG, 6-IVS)

Was cable &/or ground yarding used?

Cable only:	15	(8-III, 6-IIIP, 1-IVG)
Ground only:	126	(34-III, 24-IIIP, 62-IVG, 6-IVS)
Cable/Ground Combination:	16	(6-III, 10-IIIP)

1. Were the regulations for cable yarding complied with?

Yes: 30 (14-III, 15-IIIP, 1-IVG)
No: 1 (IIIP)

a. If no, what was deficient?:

Bed/bank RMZ damage; vegetation disturbance

b. If no, did it result in material damage or potential damage to water or RMZ?

Yes: 1

Potential?: 0

Specify?:

Banks of T4 scraped clean of vegetation in 4 locations, at least.

c. Was the damage slight, moderate, or heavy?

Low: 1

d. Was noncompliance widespread/occasional/single?

Occasional: 1

2. Were the reg.s for ground yarding complied with?

Yes:	103	(32-III, 23-IIIP, 42-IVG, 6-IVS)
No:	21	(7-III, 11-IIIP, 3-IVG)
Unknown:	18	(1-III, 17-IVG)

a. If no for ground yarding, what was deficient?

See Attachment B

b. If no in 2., did it result in damage or potential damage to public resources?

Yes: 8 (3-III, 4-IIIP, 1-IVG)
 No: 12 (3-III, 7-IIIP, 2-IVG)
 Unknown: 1 (III)

Potential?:

Low: 7 (2-III, 4-IIIP, 1-IVG)

Specify?:

Class	Damage or Potential Damage to Public Resources?
IIIP	Some yarding through T4 water, skid road adjacent to T4 water with no waterbarring.
IIIP	No waterbarring on skid trails.
III	Sediment could go into T3.
IVG	Situated on fairly steep slope above highway.
III	One skid trail not waterbarred on steep slope adjacent to T3.
III	Skid trails located on steep slopes, excessive excavation, no maintenance, not properly abandoned. Poor design. Deviation from app. was supposed to be cable yarded completely.
IIIP	Waterbarring inadequate. Ground yarding exceeded slope regs; siltation in creek.
IIIP	No waterbars, excessive roading and ground yarding on slopes over 30%.

c. Was the damage slight, moderate, or heavy?

Slight: 1 (IIIP)
 Moderate: 2 (III)

d. Was noncompliance widespread/occasional/single?

Single: 1 (III)
 Occasional: 8 (6-IIIP, 2-IVG)
 Widespread: 5 (2-III, 3-IIIP)
 Unknown: 7 (4-III, 2-IIIP, 1-IVG)

e. Is there evidence of ground yarding related impacts to 1, 2, or 3 water or capital improvements...?

Yes:	1	(III)	
No:	41	(12-III, 19-IVG)	10-IIIP,
Not Applicable:	1	(IIIP)	

E. Landing Cleanup: N/A: 83 Applicable: 80
(31-III, 31-IIIP, 13-IVG, 5-IVS)

1. Area ditches/culverts free of logging debris?

Yes:	57	(23-III, 19-IIIP, 10-IVG, 5-IVS)
No:	11	(3-III, 8-IIIP)
Not Applicable:	12	(5-III, 4-IIIP, 3-IVG)

2. Were obvious sources of erosion stabilized?

Yes:	63	(26-III, 23-IIIP, 9-IVG, 5-IVS)
No:	11	(4-III, 7-IIIP)
Not Applicable:	6	(1-III, 1-IIIP, 4-IVG)

3. Has the operation avoided perched landings?

Yes:	72	(27-III, 28-IIIP, 12-IVG, 5-IVS)
No:	6	(4-III, 2-IIIP)
Not Applicable:	2	(1-IIIP, 1-IVG)

4. If no in either 1., 2., or 3. above, did it result in damage or potential damage to public resources?

Yes:	12	(5-III, 7-IIIP)
No:	6	(2-III, 4-IIIP)
Unknown:	2	(IIIP)

Potential?:

Low: 10 (5-III, 5-IIIP)

Specify?:

Class	Damage or Potential damage to Public Resources?
IIIP	Drainage on landing.
IIIP	Could use more erosion control.
IIIP	No ditches.
III	Large landing filled with sandy material.
III	Erosion
IIIP	Landing debris on side of draw; plan to burn this fall.
IIIP	No established ditches.

5. Was the damage slight, moderate, or heavy?

Slight: 2 (1-III, 1-IIIP)

Moderate: 1 (IIIP)

6. Was the noncompliance widespread/occasional/single?

Single: 2 (1-III, 1-IIIP)

Occasional: 8 (3-III, 5-IIIP)

Widespread: 4 (IIIP)

Unknown: 6 (3-III, 3-IIIP)

F. Site Preparation/Slash Disposal: N/A: 56 Applicable: 107
(42-III, 37-IIIP, 24-IVG, 4-IVS)

1. Was the site left in a condition suitable for reforestation?

Yes: 95 (41-III, 33-IIIP, 17-IVG, 4-IVS)

No: 6 (1-III, 1-IIIP, 4-IVG)

Unknown: 2 (IVG)

Not Applicable: 4 (3-IIIP, 1-IVG)

2. If slash was burned, is there any obvious soil erosion as a result that could enter the water?

Yes: 1 (III)

No: 8 (3-III, 1-IIIP, 3-IVG, 1-IVS)

Not Applicable: 98

If yes, minimal, moderate, or heavy?

Minimal: 1 (III)

3. Was the RMZ damaged from burning?

Yes: 1 (III)
No: 4 (1-III, 1-IIIP, 2-IVG)
Not Applicable: 102

If yes, minimal, moderate, heavy?

Moderate: 1 (III)

4. Is there erosion from fire trails that could enter water?

Yes: 1 (IIIP)
No: 7 (3-III, 1-IIIP, 2-IVG, 1-IVS)
Not Applicable: 99

If yes, slight, moderate, heavy?

Slight: 1 (IIIP)

5. Was Type 4 stream clean-out required?

Yes: 6 (3-III, 3-IIIP)
No: 45 (15-III, 24-IIIP, 5-IVG, 1-IVS)
Not Applicable: 56

a. If yes, was it done satisfactorily?

Yes: 5 (3-III, 2-IIIP)
Unknown: 1 (IIIP)

b. If not satisfactory, did it result in damage or potential damage to public resources?

0

Potential?: 0

Specify?: 0

c. Was the damage slight, moderate, or heavy? 0

6. If no in 5. above, should it have been required?

Yes: 2 (IIIP)
 No: 42 (15-III, 21-IIIP, 5-IVG, 1-IVS)
 Unknown: 1 (IIIP)

Specify?:

Class	Should Type 4 Stream Clean-out been required?
IIIP	Well cleaned out voluntarily. Probably should have been required.
IIIP	Was done.
III	Stream has little small debris and lots of good LOD.

7. Was noncompliance pertaining to site prep/slash disposal widespread/occasional/single?

0

G. Special Conditions: N/A: 67 Applicable: 96
 (31-III, 31-IIIP, 28-IVG, 6-IVS)

1. Where special conditions for harvesting placed on the app?

Yes: 40 (9-III, 16-IIIP, 9-IVG, 6-IVS)
 No: 56 (22-III, 15-IIIP, 19-IVG)

Specify?: See Attachment C

2. Were they complied with?

Yes: 25 (7-III, 8-IIIP, 5-IVG, 5-IVS)
 No: 10 (2-III, 5-IIIP, 2-IVG, 1-IVS)
 Unknown: 3 (1-IIIP, 2-IVG)
 No Answer: 2 (IIIP)

a. If no, did it result in damage or potential damage to public resources?

Yes: 2 (IIIP)
 No: 6 (2-III, 2-IIIP, 2-IVG)
 Unknown: 2 (1-IIIP, 1-IVS)

Potential?:

Low: 2 (IIIP)

Specify?:

Class	Damage or Potential Damage to Public Resources?
III	Skidding over 30%. HPA and wetland conditions were complied with.
IIIP	Sedimentation in T5
IIIP	Sediment from erosion could reach T3 water.

b. Was the damage slight, moderate, or heavy?

Slight: 1 (IIIP)

c. Was noncompliance widespread/occasional/single?

Occasional: 1 (IIIP)

Widespread: 2 (IIIP)

Unknown: 7 (2-III, 2-IIIP, 2-IVG, 1-IVS)

H. Comments (harvest):

Attachment D

November 15, 1991

Application Class	Special Conditions to Protect Wildlife
=====	
III	DNR to be consulted before standing cedar trees harvested from RMZ.
III	Letter from WDW on leaving Bald Eagle perch trees in RMZ.
III	Wetland protection urged.
IIIP	reduced harvest from 90 to 23 acres because of spotted owl circle and suitable habitat.
IIIP	Development of a snag and habitat plan with WDW.
IIIP	DNR recommended snags/green tree retention throughout unit.
IIIP	Green tree retention - many blew over.
IVG	County required leave area, dammed in wetland adjacent to golf course.
IVS	Contact USFS and wildlife.
IVS	Comply with eagle management plan; leave large trees and snags in unit where possible.
IVS	Eagle Management Plan
IVS	Eagle management plan/ timing restrictions/ 25' buffer along road.
IVS	Bald eagle territory management plan. Altoon #3 - Columbia River.
IVS	Bald eagle management plan.
IVS	Retain 5 oldgrowth trees; leave cedars, yew, madronna, maple and snags; leave stumps and old logs
IVS	Seasonal restrictions on spray operation

November 15, 1991

Application Class	Non-Compliance with Ground Yarding Requirements
=====	
III	location; construction; maintenance; abandonment; slope.
III	Construction; water bars on skid trails.
III	Abandonment/ not enough waterbars.
III	Abandonment
III	Maintenance
III	Abandonment
III	Location; maintenance. Minimize skid trails andnot waterbarred.
IIIP	Maintenance
IIIP	Maintenance: no water bars on skid trails
IIIP	Maintenance:no waterbars on skid trails.
IIIP	Maintenance: skid trail, no waterbars.
IIIP	Maintenance: no waterbars on skid trails.
IIIP	Maintenance: spur roads and skedtrails not waterbarred.
IIIP	Maintenance
IIIP	Maintenance: some skid trails not water bared, but no problem.
IIIP	Maintenance
IIIP	Location, abandonment, and slope
IIIP	Location; Maintenance;Slope.
IVG	Abandonment - skid trail should have been water barred.
IVG	No waterbars
IVG	Wetland drainage occurred. Unknown if happened during logging or development activities.

November 15, 1991

Application Class	Special Conditions for Harvesting
=====	
III	Waterbar skid trails
III	Leading ends of logs suspended for uphill yarding.
III	DNR to be notified before any standing cedar trees cut.
III	Leave tree area
III	Careful attention to wet weather; fall away from T3/2 water.
III	Mobile yarding restricted on slopes less than 35%.
III	No falling/yarding into and through untyped creek.
III	No skidding over 30%. Standard conditions on HPA from WDF and wetland conditions from Natural Heritage.
III	Cleanout on T4/5 water, applies to water on slopes over 45%, with well-defined channels.
IIIP	Minimize disturbance of T5 Water.
IIIP	A non-merch leave strip, 50', on each side of T4 water.
IIIP	Green tree retention

Application
Class

Special Conditions for Harvesting

=====

- IIIP Landowner was granted small landowner exemption within RMZ.

- IIIP Slope restrictions for mobile yarding. Type 4 RLA required.

- IIIP On slopes over 60% and stream banks, logs will be lifted vertically and suspended during yarding. Suspend across Type 4 water. Type 4 stream cleanout.
- IIIP Install temporary crossing structure when yarding across stream.

- IIIP No ground skidding on slopes greater than 35%. Waterbarring skid trails prior to 10/15.

- IIIP Landowner shall meet with Yakima tribe prior to operating to discuss protection of cultural resources.

- IIIP Use existing skid trails on all slopes greater than 30%. Provide detailed skid road plan.

- IIIP No falling and yarding into T4, no harvest in spotted owl habitat.

- IIIP No mobile yarding systems on slopes greater than 30%.

- IIIP Install drainage on roads and waterbar skid trails.

- IIIP Ground yarding systems restricted to slopes less than 30%

- IVG County regulations

- IVG Waterbar skid trails

Application
Class

Special Conditions for Harvesting

=====

- IVG 50' RMZ specified.

- IVG Insure silt does not enter county ditch, T3.

- IVG No skidding greater than 25%

- IVG Forest Practice Forester specs.

- IVG By King County, no cutting below bank in west half of unit.

- IVG 50' buffer required for T3 stream. No cutting occurred in wetland as per DNR site visit.

- IVG Leave trees and buffers

- IVS Bald eagle management plan. Restriction on timing of harvest.

- IVS Eagle management plan.

- IVS Eagle management plan. Seasonal restriction placed on harvest and other management activities.

- IVS No harvest from 12/31 to 8/31. 25' strip of trees left along north side of road to screen bald eagle nest.

- IVS Eagle Management Plan.

- IVS Retain 5 old growth trees; leave cedar, yew, madronna, maple and snags; leave old stumps and logs.

November 15, 1991

Application
Class

Timber Harvest Comments

=====

III Good thinning. Some small clearcut patches that
 will seed in.

III Powerline in unit.

III RMZ was required on application. No harvest
 occurred. No boundaries changed.

III Forester and I had different interpretation of
 RMZ minimum width. Answers are according to my
 interpretation. (janet strong)

Application
Class

Timber Harvest Comments

=====

III Low value timber left; large cedar left;
 remaining landscape great for wildlife with lots
 of diversity.

III Large snags left and non-merch trees.

III Short spurs leading to landings were rough and
 unditched.

III Skid trails grass seeded and waterbarred.
 Marginal for ground yarding, small unit, no
 damage, steep in part of unit.

III "real estate" cut; land likely to be developed
 within next 10 years.

Application
Class

Timber Harvest Comments

=====

- III Draws looked good. Debatable whether running any water. Unit at highest point on ridge. Some snow melt. One landing is moderately perched. Low potential for damage for both logging debris and soil movement.
- III Required leave tree area below road, voluntary leave tree area above road.
- III Several snags adjacent to unit and one in unit remains. Old 8' cedar stumps in unit. Yarding was restricted to 30% slope for ground yarding. Complied with except for skid trail greater than 30% at top of unit. It has adequate waterbarring, no damage to public resources. Skid trail was waterbarred, but not maintained. Slight potential for damage to Type 3 water from impact of cows on the waterbars.
- III RMZ remained along stream except for one spruce. All other large and small conifers left intact. Good job.
- III Very little evidence of logging landings - grassed over. No work in or near creek.

Application
Class

Timber Harvest Comments

=====

III Standard conditions on HPA from WDF and Natural
Heritage.

III Type 4 stream cleanout required 50' above
culvert intakes.

III 4 Trees in less than 50' bank. Significant
blowdown in RMZ; but several large trees remain.

III Mason county sent letter stating RMZ as
Conservancy Area, policies and regs about
harvest

III No harvest within RMZ.

Application
Class

Timber Harvest Comments

=====

IIIP Probable winter skidding, waterbars on skid trails appear unnecessary. Landing is messing, operation when wet.

IIIP No yarding across Type 4 Water. Installed culvert at Type 3 water for road. HPA initially required it to be a temp. pipe, but as per Listfeld (WDF) it remains as it is.

IIIP Owner very dissatisfied with harvest. Too many trees cut. Some green trees were left in unit and RMZ, extended to or above break.

IIIP Landowner left some upland areas untouched with one acres patches with mostly smaller trees.

IIIP Skid trails waterbarred okay. Firetrails waterbarring is inadequate.

Application
Class

Timber Harvest Comments

=====

IIIP Green tree size not closely followed. Many blew
down. In urban interface.

IIIP Suggest, but not require waterbarring on two
stream approaches.

IIIP Old growth unit

IIIP Excellent erosion control.

IIIP As per original application, no RMZ; but
operator harvested adjacent to T3, however, T3
classification is questionable. Note: if T3
RMZ should have been left, it was harvested
within, big pines taken out. Count and size
violations within RMZ.

Application
Class

Timber Harvest Comments

=====

IIIP Skid trails located in area that can't be
waterbarred. Other skid trails not waterbarred.

IIIP Clean logging job on 23 acres.

IIIP Fell R/W timber.

IIIP Good RMZ - beyond requirements. Timber left
where hill breaks away down to creek. Some good
wildlife trees left, broken tops.

IVG Owner left greenbelt on one side with several
live trees in unit.

Application
Class

Timber Harvest Comments

=====
IVG County comments placed on FPA. Road and skid
 trail location comment and wetland buffer
 comment.

IVG This was four home site clearings on one-half
 acre sites; each surrounding 8 acres of
 undisturbed forest.

IVG No harvest in alder along T1 Water (south fork
 of Toutle changing course).

IVG No landings

IVG Harvest done prior to approval.

Application
Class

Timber Harvest Comments

=====

IVG Skid trail road south of creek could use more
waterbars. Blowdown in RMz.

IVG Landowner (Logger) cut most of conifer, left
fewer, smaller hardwoods and firs.

IVG Site left in good condition for natural
reforestation with many seedlings established.

IVG Site not visited.

IVG No site visit.

November 15, 1991

Application
Class

Timber Harvest Comments

=====

IVG Patched clearcut - not partial cut as specified.

IVS Selective harvest of a few trees, approximately
10% of unit.

IVS Harvest unit altered to accomodate eagles per
FPA.

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APPENDIX E

INSTREAM WORK

TIMBER, FISH AND WILDLIFE
FIELD IMPLEMENTATION COMMITTEE

FOREST PRACTICE COMPLIANCE WORKSHEET SUMMARY
1991

November 15, 1991

INSTREAM WORK

- I. Total applications surveyed: 191
- II. Applications that are Not Applicable: 156
- III. Applications applicable to this Section: 35
(11-III, 23-IIIP, 1-IVG)
-

1. Was a Hydraulic Project Approval (HPA) required?

Yes: 13 (4-III, 8-IIIP, 1-IVG)
No: 22 (7-III, 15-IIIP)

2. IF yes, was it obtained?

Yes: 12 (4-III, 7-IIIP, 1-IVG)
No: 1 (IIIP)

3. Were the provisions of the HPA complied with?

Yes: 11 (4-III, 6-IIIP, 1-IVG)
No: 1 (1-IIIP)

4. If not complied with, what was deficient?

Class	Deficiency?
IIIP	Inadequate Suspension

5. Was any stream work done, without the need for an HPA?

Yes: 19 (5-III, 14-IIIP)
No: 4 (2-III, 2-IIIP)

- If yes, did the work meet the rule requirements?

Yes: 15 (1-III, 14 IIIP)
No: 2 (III)
Unknown: 2

6. If not in compliance in 3. or 5. above, did it result in damage or potential damage to public resources?

Yes: 1 (III)

Potential?:

High: 1 (III)

Specify?:

Class	Damage or Potential Damage to a public resource?
III	Type 5 is partially silted in. Moderate vehicle traffic would do much damage.

7. Was the damage slight, moderate, or heavy?

Slight: 1 (III)

8. Was the noncompliance widespread/occasional/single?

Single: 1 (III)

APPENDIX F

FOREST CHEMICALS

TIMBER, FISH AND WILDLIFE
FIELD IMPLEMENTATION COMMITTEE

FOREST PRACTICE COMPLIANCE WORKSHEET SUMMARY
1991

November 15, 1991

CHEMICAL APPLICATION

- I. Total applications surveyed: 191
- II. Applications that are Not Applicable: 166
- III. Applications applicable to this Section: 25
(16-III, 6-IIIP, 3-IVS)

What type of chemicals?

Fertilizer: 3 (2-III, 1-IIIP)
Herbicide: 18 (12-III, 3-IIIP, 3-IVS)
Insecticide: 4 (2-III, 2-IIIP)

1. Is there evidence that all waters/residences were not properly buffered (eg adjacent dead vegetation)?

Yes: 5 (4-III, 1-IIIP)
No: 17 (11-III, 5-IIIP, 1-IVS)
Unknown: 1 (III)
Not Applicable: 2 (IVS)

Class	Properly Buffered?	Explanation
III	Y	Map shows buffers. Draws were not buffered and probably not flowing.
III	Y	One 50' spot where chemical drifted into RMZ. One place only.
III	Y	Possible Type 5 water not completely buffered, but may not have been flowing at time of application.
IIIP	N	Some evidence of slight drift. Some trees show signs of drift in top. Ground level vegetation ok. Type 5 water. Possibly, no water in September when sprayed.

Class	Properly Buffered?	Explanation
IIIP	Y	Found 2 T5 draws not properly buffered. May have been dry at time of application.
IIIP	N	No evidence, but none would be found with this insecticide.
III	U	No way to tell with insecticide.
III	Y	Overall, good job of buffering water. Some spots on Type 4/5 not properly buffered. Type 5 may have dry at time of application btw. Aug. 15 and Sept. 30.
IVS	A	No spray occurred.

2. Was the site posted before chem. application?

Yes: 10 (6-III, 3-IIIP, 1-IVS)
Unknown: 15 (10-III, 3-IIIP, 2-IVS)

3. Were any special conditions placed on the app.?

Yes: 5 (2-III, 3-IVS)
No: 20 (14-III, 6-IIIP)

Specify:

Class	Special Conditions
IVS	Notify DNR 48 hours in advance. Spotted owl timing restriction.
IVS	Timing restrictions, seasonal due to eagle nest.
III	Use drift control on closest 2 flight lines to Type 1/2/3 waters. Contact Region 2 days prior to spray.
III	No spray if wind direction from west.
IVS	Seasonal restrictions.

a.) If yes, were they complied with?

Yes: 2 (IVS)

b.) If no in a. above, did it result in damage or potential damage to public resources?

0

Potential?: 0

Specify?: 0

c.) Was the damage slight, moderate, or heavy? 0

4. Comments (chemical application) Add any comments not specifically covered in this section.

See Attachment A

November 15, 1991

Application Class	Chemical Application Comments
----------------------	-------------------------------

=====

III	Entire unit was not sprayed.
-----	------------------------------

III	50' buffer maintained
-----	-----------------------

III	Roundup was used. All buffers except one looked adequate.
-----	---

III	Follow label instructions with regards to buffering H2O.
-----	--

III	No evidence to look for with insecticide (with adverse impacts)>
-----	--

III	Spot sprayed for alder adjacent to road only.
-----	---

Application
Class

Chemical Application Comments

=====

III Alder sprayed along roads with several patches treated below road. Head of one Type 5 draw not buffered. No running water. No flowing or open water.

III Good buffering. Spot spraying vine maple, big leaf maple, salmon berry and elderberry. Many draws. Did a good job of keeping spray out of Type 5. Dry when spray was done.

III Several units not sprayed. Spot treated.

IIIP Good attempt to buffer waters in unit. Evidence of "no drift" agent along Type 3.

IIIP May have been spot sprayed, rather than broadcast; very spotty.

IIIP Alternate Plan addresses the buffering of Type 1 and 3 Waters and Type 4 and 5 Waters where operationally safe and feasible. Plan addresses handling of spills for helicopters/details of sampling and monitoring of waters.

November 15, 1991

Application
Class

Chemical Application Comments

=====

IIIP

Neighbors notified in advance.

IVS

Unit not sprayed.

IVS

Not terribly effective.

Page: # 3

APPENDIX G

VOLUNTARY / COOPERATIVE

TIMBER, FISH AND WILDLIFE
FIELD IMPLEMENTATION COMMITTEE

FOREST PRACTICE COMPLIANCE WORKSHEET SUMMARY
1991

November 15, 1991

VOLUNTARY AND COOPERATIVE EFFORTS

- I. Total applications surveyed: 191
II. Applications that are Not Applicable: 0
III. Applications applicable to this Section: 191
(68-III, 51-IIIP, 63-IVG, 9-IVS)
-

1. Were UMA's left in association with this operation?

Yes: 2 (1-III, 1-IIIP)
No: 189

- a.) If yes, approximate actual UMA acres;
b.) actual harvest acres (again);

Class	UMA Acres	Harvested Acres
IIIP	10	266
III	1.5	10

- c.) and were the UMA's designated on the app.?

Yes: 2 (1-III, 1-IIIP)

2. Were there measures voluntarily incorporated to specifically benefit wildlife?

Yes: 25 (16-III, 7-IIIP, 2-IVS)
No: 166

What?: See Attachment A

3. Was any voluntary stream enhancement done in connection with this operation (e.g. intentional woody debris placement or removal of past material)?

Yes: 2 (1-III, 1-IIIP)
No: 38 (18-III, 18-IIIP, 2-IVS)
Not Applicable: 151

4. Was this app. included in any type of pre-harvest review?

Yes: 19 (10-III, 9-IIIP)
No: 59 (30-III, 22-IIIP, 1-IVG, 6-IVS)
Unknown: 7 (2-III, 5-IIIP)
Not Applicable: 106

Type?: Annual Harvest Meetings

5. Is this operation included in a Resource Management Plan or other basin planning effort?

Yes: 1 (IIIP)
No: 189
Unknown: 1 (IIIP)

If yes, specify:

Ryderwood Watershed Management Plan.

6. Was an RLA voluntarily left?

Yes: 13 (7-III, 6-IIIP)
No: 60 (27-III, 28-IIIP, 5-IVS)
Not Applicable: 118

7. Other voluntary measures? Specify-

See Attachment B

November 15, 1991

Application Class Voluntary Measures Incorporated to
Specifically Benefit Wildlife
=====

- III Wildlife leave area in adjacent unit;
adjacent to UMA (2-3 acres)
- III 2 snags, 20" and 36"; 7 (18-24" DBH) wildlife
trees left in unit.
- III Extra wildlife trees left in RMZ/RLA;
attempted road closure; logs; 1 (8-10") snag,
18'tall; 40 (4-30" DBH) wildlife trees left
in unit; slash piles
- III Logs; 3 snags; 2 (9" and 24" DBH) wildlife
trees left in unit.
- III Wildlife trees in unit were left. Approx. 5;
8"DBH.
- III 50 -100 wildlife trees left; scattered
throughout unit (8-10" DBH of alder and
maple).
- III 2-4' snags left wherever they were.
- III 1-5' DBH snags; 10-12 in a group (4-6" DBH)
wildlife trees left in unit; narrow green
strip of trees left along road, unknown if
required by county.

Application Voluntary Measures Incorporated to
Class Specifically Benefit Wildlife
=====

- IIIP 4-5 snags in unit.

- IIIP Extra wildlife trees left in RMZ and RLA;
several trees/acre, 4-8" DBH left in unit.

- IIIP Snag habitat plan developed. Firekill timber
and snags make up most of the unit.

- IIIP T5 snags left - 6-8T; piles left unburned.

- IIIP Extra wildlife trees left in FMZ, RLA;
wildlife trees left in unit. Approximate # =
5 trees with averagesize = 14". Huge old
cedars, 40" on the stump with spiked tops
left. Numerous small trees in patch with
wildlife trees.
- IIIP Extra wildlife trees left in RMZ/RLA; 2 or
more snags in RMZ; several small areas and
several smaller trees/acre left in unit.

- IIIP Extra wildlife trees left in RMZ and RLA;
snags

- IVS Snags; 2 wildlife trees (20", 80' tall) left
in unit.

November 15, 1991

Application
Class

Voluntary Measures Incorporated to
Specifically Benefit Wildlife

=====

IVS

Logs; snags

Page: # 4

November 15, 1991

Application
Class

Other Voluntary Measures

=====
III Additional culverts and gate closing road.

III Small trees left along Type 4, downstream
from UMA.

III RMZ of variable width left along T2 - ranged
from 25' to 100'.

III Landowner left about 100' RMZ on T4
completely untouched.

III One and one half acre forested wetland left
intact. No large trees in it, not entered.

III Wider RMZ than required - 25 to 75' wide.

III Seed trees left which can serve as wildlife
trees.

IIIP Lots of snags

IIIP T5 stream very well protected by generous
RMZ.

IIIP 10 acre and 5 acre UMA's left out harvest of
unit.

IVS Partial cut which in itself benefits
wildlife. Other measures for wildlife were
conditions.

IVS Boundary adjustment to accomodate eagle.

APPENDIX H

ENFORCEMENT

TIMBER, FISH AND WILDLIFE
FIELD IMPLEMENTATION COMMITTEE

FOREST PRACTICE COMPLIANCE WORKSHEET SUMMARY
1991

November 15, 1991

ENFORCEMENT

- I. Total applications surveyed: 191
- II. Applications that are Not Applicable: 0
- III. Applications applicable to this Section: 191
(68-III, 51-IIIP, 63-IVG, 9-IVS)
-

1. Was any enforcement action taken?

Yes: 12 (4-III, 4-IIIP, 4-IVG)
No: 177
Unknown: 2 (1-III, 1-IIIP)

Why?

See Attachment A

a.) If yes, what type?

See Attachment A

b.) Which agency(ies) took action?

DNR: 12

2. Was there any appeal of this application or enforcement action?

Yes: 1 (III)
Unknown: 2 (1-III, 1-IIIP)
No: 188

a.) By Whom?

A downstream unregistered water user (III).

b.) Basis of appeal (reason)?

Fear of negative effects on water (III).

c.) Disposition of appeal?

Settled independently of appeal process and the unregistered user stopped using the water (III).

FIELD IMPLEMENTATION COMMITTEE
 COMPLIANCE EVALUATION REPORT - 1991

ATTACHMENT A

November 15, 1991

Application Class	Reason for Enforcement Action	Type of Action
III	Change of operator; inadequate ditch cleaning.	NTC
III	Lack of culvert installation. 2 culverts required.	Phone call
III	Water bars needed on 5 acre parcel	NTC
III	Road maintenance.	IC
IIIP	Continuing to operate without an application.	NTC
IIIP	Operating without a permit.	IC, SWO
IIIP	Stream cleanout on Type 4 above hiway.	IC
IIIP	Failed roads, perched landings, lack of maintenance on skid trails.	IC, NTC
IVG	Work begun without FPA	SWO

November 15, 1991

Application Class	Reason for Enforcement Action	Type of Action
IVG	App. expired - logging continued. Operation stopped until app. is renewed.	NTC
IVG	No application submitted for logging.	NTC
IVG	Logging without permit.	NTC

Page: # 2

APPENDIX I

ARCHEOLOGICAL / CULTURAL

TIMBER, FISH AND WILDLIFE
FIELD IMPLEMENTATION COMMITTEE
FOREST PRACTICE COMPLIANCE WORKSHEET SUMMARY
1991

November 15, 1991

ARCHAEOLOGICAL AND CULTURAL RESOURCES

I. Total applications surveyed: 191
II. Applications that are Not Applicable: 0
III. Applications Applicable to this Section: 191
(68-III, 51-IIIP, 63-IVG, 9-IVS)

1. Did the app. involve Archaeological or Cultural Resources?

Yes: 18 (3-III, 7-IIIP, 7-IVG, 1-IVS)
No: 173

How was it identified?

TRAX: 17 (2-III, 7-IIIP, 7-IVG, 1-IVS)
TRAX & Public: 1 (III)

a.) If yes, did the landowner meet with the tribe(s)?

Yes: 1 (IIIP)
No: 17

b.) If yes, was a protection plan agreed upon?

Yes: 2 (III, IIIP)
No: 1 (IIIP)

c.) If yes was the app. conditioned to protect the A and C Resources?

Yes: 3 (III, 2-IIIP)

(1) If yes, were the conditions complied with?

Yes: 2 (III, IIIP)
Unknown: 1 (IIIP)

(2) Did it result in damage to A and C resources?

No: 1 (IIIP)

(3) Was the damage slight, moderate, or heavy? 0

d.) Was OHAP notified?

Yes: 18 (3-III, 7-IIIP, 7-IVG, 1-IVS)

No: 173

2. Comments (archaeology):

Class	Comments...
III	Quinalts were sent a copy.
IIIP	Not known if on or adjacent to site. OHAP contacted DNR.
IIIP	Conditions: Contact OHAP if find anything on site during operation. Nothing found on site.

APPENDIX J

ARCHAEOLOGICAL AND CULTURAL PHONE POLL

ARCHAEOLOGICAL AND CULTURAL RESOURCES

TRAX notifications are treated differently among DNR regions. Five of the regions attach the TRAX sheet to the application, the other two regions list that OHAP was sent a copy of the application. In an attempt to provide clarification for the survey results the DNR regions Forest Practice Divisions were contacted and asked the following questions:

- * When you receive an archeological TRAX notification how is the notification processed?
- * How and when are the landowners notified of an archeological or cultural concern?
- * How and when are Tribes notified?

When a archeological/cultural notification is identified by TRAX DNR contacts OHAP to determine if a conflict exists. Five of the DNR regions contact OHAP by phone and two regions send application's to OHAP and await a response.

Landowner notification differs among DNR regions. Five regions mail notification letters to landowners informing the landowner of a the proper classification and if appropriate indicate the need to contact OHAP. Two regions contact the landowners by phone. One of the regions stated that they notify the landowner that they must contact the Tribe to set up a meeting to discuss the cultural resource. The A/C protection plan may then become a condition of the application.

Forest practice applications within the Tribe's Usual and Accustomed area are sent to all interested Tribes. Tribes are notified of TRAX information through the application process. The majority of Tribes rely on the forest practice process for notification of A/C resource sites. Two regions send additional correspondence to Tribes only if a conflict was identified by OHAP. The additional regions considered the routine sending of the applications adequate notification. It is the responsibility of the individual Tribe to contact OHAP for further information.

Three regions classify archaeologic sites as a Class III Priority Issue after OHAP has identified an A/C concern. This classification of the application indicates that there is an A/C concern.

APPENDIX K

CONVERSIONS

TIMBER, FISH AND WILDLIFE
FIELD IMPLEMENTATION COMMITTEE

FOREST PRACTICE COMPLIANCE WORKSHEET SUMMARY
1991

November 15, 1991

CONVERSIONS

- I. Total applications surveyed: 191
II. Applications that are Not Applicable: 142
III. Applications applicable to this Section: 49
(1-III, 47-IVG, 1-IVS)
-

1. Reason for conversion: See Attachment A

2. Was the conversion specified on the application?

Yes: 44 (43-IVG, 1-IVS)
No: 5 (1-III, 4-IVG)

3. Did the local govt' comment?

Yes: 22 (1-III, 21-IVG)
No: 25 (IVG)
Unknown: 2 (1-IVG, 1-IVS)

4. Did they meet the minimum FP rules (RMZ, etc.)?

Yes: 32 (1-III, 30-IVG, 1-IVS)
No: 2 (IVG)
Unknown: 15 (IVG)

5. If not, did the violations take place before, or after the point of conversion; or unknown?

After: 1 (IVG)
Unknown: 1 (IVG)

6. Could it be perceived that the local govt' gave approval or pseudo approval of the non compliance with FP and other state laws because they approved plans without restrictions, issued a DNS, granted exemptions, etc.?

7.. If known was there a violation(s) of any local govt' rules or conditions?

Yes: 4 (1-III, 3-IVG)
No: 16 (IVG)
Unknown: 29 (28-IVG, 1-IVS)

8. Were conditions put on the app. specifically because of the conversions?

Yes: 2 (IVG)
No: 47 (1-III, 45-IVG, 1-IVS)

a. If yes, were the conditions complied with?

Yes: 1 (IVG)
Unknown: 1 (IVG)

b. If no, did it result in damage or potential damage to public resources?

0

Potential?: 0

Specify?: 0

c. Was the damage slight, moderate, or heavy? 0

9. Comments: See Attachment B

November 15, 1991

Application Class	Reason for Conversion
III	Structure
IVG	Unknown
IVG	Structure
IVG	Structure
IVG	Platted after 1960.
IVG	View cut for house.
IVG	Structure
IVG	Speculation - investment
IVG	Platted after 1960
IVG	Structure
IVG	Structure
IVG	Structure
IVG	Platted after 1960.
IVG	Intent to develop
IVG	Conversion to recreation land
IVG	Platted after 1960
IVG	Structure
IVG	Structure
IVG	Horse pasture.
IVG	Structure
IVG	Develop 5 acre tract
IVG	Structure
IVG	Structure
IVG	Structure and garden
IVG	Structure
IVG	Ball field at school
IVG	Structure
IVG	Agriculture
IVG	Structure
IVG	Structure
IVG	Agriculture
IVG	Agriculture
IVG	Sell for home site.
IVG	Agriculture
IVG	Lawn play area
IVS	Structure

November 15, 1991

Application Class	Conversion Comments
III	Likely to convert, but not started.
IVG	Wetland incursion and unspecified road location are the major problems. Timing (before or after logging) unknown.
IVG	Conversion not stated.
IVG	The county requested re-application clarification. Letter was sent to clarify intent.
IVG	Not visited.
IVG	Public reaction to logging was large.
IVG	Grassed over.
IVG	Kitsap county required buffer and protection of a low bank area with no tree removal
IVG	There was potential damage because of not meeting FP rules. Potential is high. The clearing resulted in soil and debris being bulldozed into a draw leading to T3 stream.

APPENDIX L

NOTES

TIMBER, FISH AND WILDLIFE
FIELD IMPLEMENTATION COMMITTEE

FOREST PRACTICE COMPLIANCE WORKSHEET SUMMARY
1991

November 15, 1991

NOTES

- I. Total applications surveyed: 191
 - II. Applications with Comments: 36
(15-III, 3-IIIP, 17-IVG, 1-IVS)
-

See Attachment A for list of comments and application number.

November 15, 1991

Application
Class

General Notes of Evaluator

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- III Grays Harbor required a paved approach to road to keep mud off county road. Chronic sedimentation from exposed pile over OHWM flows over flat ground into Natural Heritage wetland.
- III Unit planted but is expected to reforest by natural seeding.
- III There are strong indications of intended conversion: 1. electrical power boxes (three new). 2. recent survey stakes - subdivision 3. "Real estate" cuts - small clearcuts surrounded by trees.
- III Although some diversity remained after thinning in the form of snags left, looking at nearby units revealed that most species other than d. fir were removed, reducing diversity.
- III Landowner left unharvested a few acres on east side of T2 stream. If presently applied for harvest of more of this unit, would have not been allowed because of spotted owl nest; was suitable habitat.

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General Notes of Evaluator

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III Summary of deficiencies in T3 RMZ: --(Looked pretty good from distance and many bigger conifers were left.)

III One downstream, unregistered water user appealed FPA approval. Out of court settlement. Stopped appeal and stopped water use.

III Is common practice in Jefferson County for Dept. of Ag. and Conservation District to come out ahead and during spray operations.

III Much blowdown in T3 RMZ. Very difficult to determine OHWM and RMZ boundary. 50% blowdown.

III Natural Heritage program had comments/conditions concerning wetland. It was complied with. Heavy woodcutter/rec. use.

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General Notes of Evaluator

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III More culverts needed along haul road. The T4 stream on the edge of the unit coming out of the UMA could easily have had an RLA without too much inconvenience to the landowner. Yarding had been away from both banks and not too many trees would have been involved.

III In the harvest of this unit (separate FPA) extensive RLA's were left on three T5 streams - at points it neared 100' in width. Composed of conifers and hardwoods and 1 large cedar snag. Some blowdown had occurred.

III No site visit.

III Steepest slope underestimated up to 50%. (10% reported).

III No water monitoring to determine if buffering happened.

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General Notes of Evaluator

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IIIP This unit was subsequently sold to another party who is constructing a shed and camping spot.

IIIP Trees removed were mostly very large cedar and large doug fir.

IIIP ITT Rayonier and Citifor missed great opportunity to leave snags and green trees for snag recruitment. This unit is one of several contiguous ones in this area. All are old growth units. This FOA is a substitute for #10060 which was not completed. Rayonier missed opportunity to show some goodwill.

IVG Cleared area adjacent to paved road and golf course - graded and seeded. Complied with county ordinances. Apparently, complied with seeding, silt fences, designated no-clear zones. Logged area is graded. No way to recreate logging or prelogging.

IVG Group of trees felled in front of residential yard. .

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General Notes of Evaluator

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IVG Basically a conversion north of creek, clearcut-
south of creek. 5-6 RMZ trees blew down or
slumped into creek within 1 year of logging (at
least some of them prior to logging - on or two
were salvage logged.)

IVG No site visit. According to Wayne, logging done
prior to FPA. Reforestation needed.

IVG No site visit

IVG No site visit.

IVG Unit now too brushy for replanting, but lots of
available trees on 3 sides for successful
reseeding.

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General Notes of Evaluator

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IVG No site visit.

IVG No site visit. Fred Meyer store.

IVG May have been a minor harvesting - hard to tell.
Road construction looks okay. Sufficient pipes.

IVG No site visit. FPA conditioned to prevent
silting of T3 county ditch.

IVG No site visit.

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Class

General Notes of Evaluator

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IVG Squaxin tribe concerned about small stream offsite of this 1.5 acre. Owner cleared less than 0.5 acre, piled slash, left rest of acreage alone.

IVG No site visit. Really hard to tell what's going on - i.e. location of T2 wetland.

IVG Home site - clean, graded. County required leave area of vegetation. It appears that this has been compiled with. No way to tell without hunting down property corners and measuring cleared area. As usual, with conversions, landing is house pad. Skid trail is driveway.

IVG Mason County is making owner go through EIS and pay back conversion taxes.

IVG No site visit.

Application
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General Notes of Evaluator

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IVS

Landowner cooperative in boundary adjustment and
eagle plan.