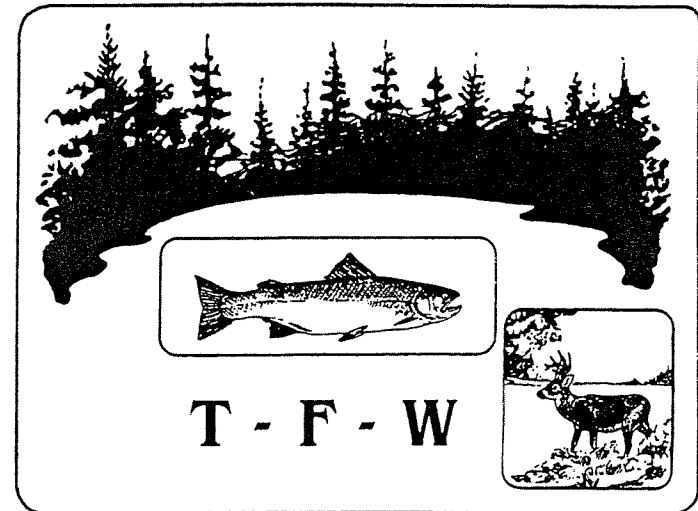


**TIMBER/FISH/WILDLIFE
AGREEMENT**

**A BETTER FUTURE IN OUR
WOODS AND STREAMS**

FINAL REPORT



February 17, 1987

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INTRODUCTION TO TIMBER/FISH/WILDLIFE AGREEMENT

THE PROCESS

This agreement describes an historic shift in the way we manage natural resources, resolve problems and make changes in our future management. It provides the framework, procedures and requirements for successfully managing our state's forests so as to meet the needs of a viable timber industry and at the same time provide protection for our public resources; fish, wildlife and water, as well as the cultural/archeological resources of Indian tribes within our state.

It is the culmination of nearly six months of intense, difficult work. It represents the knowledge, hopes and aspirations of a group of dedicated men and women who decided to try a new way. They chose to resolve their differences through education, negotiation and respect for each others views. To the extent they succeeded the citizens of the State of Washington and the natural resources they revere are the winners.

Those who forged the agreement held one thing in common; a deep love and respect for the natural resources of our state. It was this bond that kept them at the table through some 60 long, difficult often emotionally draining meetings.

Participants in the negotiations included representatives of a number of Indian tribes, the Northwest Indian Fisheries Commission, the Columbia River Intertribal Fish Commission, Washington Environmental Council and Audubon Society, Washington Forest Protection Association and Washington Farm Forestry Association, Weyerhaeuser, Georgia Pacific, Plum Creek and Simpson Timber companies, and the state departments of Natural Resources, Ecology, Fisheries and Game. The discussions received crucial assistance from the Northwest Renewable Resources Center of Seattle in organizing and facilitating this effort.

They met in July of 1986, over forty individuals, representing the tribes, the environmental community, state natural resources agencies, and the timber industry. They adopted new ground rules for doing business with one another. The rules were quite simple. The results they produced are quite profound. The participants agreed that the State of Washington needs a viable timber industry and it needs to protect and enhance its fish, wildlife, water and cultural/ archeological resources. Further, they agreed that these needs are not mutually exclusive. They are compatible.

What makes these ground rules profound is the fact that you cannot meet those needs without cooperating, trusting and plain talk. This agreement, then, is the participants best effort at meeting each others needs.

It is by its very nature a compromise or more accurately a series of intelligent accommodations of the various goals and needs. It is also a product that reflects the best thinking of some of the persons most knowledgeable about our natural resources and the forest products industry. Those familiar with these issues will recognize the new ground they have broken. Those less familiar will nevertheless be impressed by the real world, common sense approach the agreement provides forest land management in the State of Washington.

The reader should keep in mind that the agreement is not cast in stone. The participants understand and encourage evaluation and modifications of the agreement to the extent the changes improve forest practices. Stated another way, the real world, on the ground experiences will determine if the needs of the parties are being met. That is the final test of the validity and value of the agreement. It is a simple criterion or standard. It is also historic.

THE RESULTS

The agreement which has been reached is a comprehensive series of recommendations intended to improve the conduct and regulation of forestry throughout the state of Washington. Implementation of the TFW agreement will require changes in statutes, regulations, and management procedures, as well as cooperative efforts by forest landowners and various interested parties to carry out both the letter and the spirit of this new approach.

Before proceeding to the specific recommendations, it is important to recognize the broad understanding within which the participants have worked. All parties have agreed to a set of goals which have guided the discussions. These are as follows:

The wildlife resource goal is to provide the greatest diversity of habitats (particularly riparian, wetlands and old growth), and to assure the greatest diversity of species within those habitats for the survival and reproduction of enough individuals to maintain the native wildlife of Washington forest lands.

The fishery resource goals are long-term habitat productivity for natural and wild fish, and the protection of hatchery water supplies.

The water quantity and quality goals are protection of water needs of people, fish and wildlife.

The archeological and cultural goals are to develop a process to inventory archaeological/cultural spaces in managed forests; and to inventory, evaluate, preserve and protect traditional cultural and

archeological spaces and assure tribal access.

The timber resource goal is the continued growth and development of the State's forest products industry which has a vital stake in the long-term productivity of both the public and private forest land base.

In addition to these goals, participants recognized that the negotiations could not succeed without agreeing on certain ground rules that would govern the expectations and behavior of all parties. The importance of working together to seek resolutions satisfactory to all points of view has been recognized as vital to the future success of this effort. As a result, the participants have agreed that we must:

1. Inventory and record the progress made through this cooperative effort;
2. Find ways to communicate the TFW process and its successes to both constituents and others, stressing the need for both continued effort and good faith implementation;
3. Structure specific ways to implement the TFW process in ways that reinforce and perpetuate this cooperative spirit; and
4. Recognize and address that there need to be changes in the old ways of doing business which will require continued attention.
5. There may be a need to further refine the riparian management zones, upland management areas and road requirements as they apply to certain areas of Eastern Washington which have a history of selective or uneven age harvest. A representative group from northeast Washington will conduct such a review. This review shall be completed no later than March 1, 1987 and reviewed by the TFW working and policy groups prior to submission to the FPB.

In summary, the TFW participants recognize that there now exists a cooperative attitude among the participants that must continue if this agreement is to succeed. The following sections detail the specific agreements; their success when implemented will depend upon the ability of all parties to work together in the manner TFW has demonstrated.

GENERAL ATTRIBUTES OF THE NEW NATURAL RESOURCE MANAGEMENT SYSTEM

1. Goal setting to meet needs. The process is designed to foster and encourage the participants to set specific goals based on specific needs.
2. Most of these needs can best be met by solutions developed on the ground and in the context of a specific site or set of needs.
3. The agreement will move people towards solving problems at the planning stage which is the stage at which everyone has the most flexibility. This will occur in various ways ranging from individual landowners to Resource Management Plans.
4. Develop a management system which promotes participation and consensus while limiting the ability of anyone to abuse the process. The system must function in a timely, cost effective manner and promote informal resolution of problems or conflicts where possible.
5. The agreement incorporates an adaptive management system which through cooperative and collaborative research, monitoring and evaluation will provide a widely accepted data base on which to base future management decisions.
6. Develop the capacity to analyze priority issues with the necessary inter-disciplinary professional skills. DNR must have this capacity under this new approach. People with these skills will be contributed from participating agency, tribal and private entities subject to budget and staffing limitations.
7. A package of regulatory changes will be recommended to the Forest Practices Board. The participants recognize that the vast majority of forest practice applications and many landowners or operators will probably follow the traditional regulatory approval process.
8. The need for incentives and compensation, at least initially, has been met through the overall benefits of this agreement to all of the participants. The flexibility provided by the management and planning tools can be used to minimize costs while maximizing the ability to address priority needs or goals. The agreement provides a measure to ease some of the potential disproportionate impacts to small landowners. All of the parties have immediate

and long-term incentives to utilize Resource Management Plans.

The issue of compensation may be raised in the future after actual costs and impacts become known through the operation of this new system over the initial period of this agreement.

9. Effective enforcement is one of the foundation blocks of this agreement. In order to achieve better enforcement, the organization and supervision of enforcement, the experience of the field personnel and the number of field staff have all been addressed in this agreement.

MANAGEMENT SYSTEM

INTRODUCTION

Current forest practices rules and regulations provide a management framework for forest practices on state and private lands in the State of Washington. The rules attempt to balance the needs of landowners with the protection of public resources—fish, wildlife and water quality. The T/F/W participants have identified several areas wherein this current system is not meeting the needs of one or more of the parties involved. This chapter addresses aspects of a new management system relating to Department of Natural Resources organization, improved data collection system and access to it, new and existing staffing and funding needs, monitoring and research requirements, and periodic reviews.

OPPORTUNITIES

The TFW participants agree on a new management system which provides:

- (1) increased protection for public resources,
- (2) stable, predictable and cost effective forest practice rules and regulations,
- (3) increased forest practice flexibility through site specific requirements,
- (4) opportunities for cooperative planning and problem solving, and
- (5) monitoring, evaluation to improve future forest practices.

This new management system will go a long way toward meeting everyone's needs. The measures and procedures employed to attain

these objectives are the heart of the proposed management system. The components are described below.

PROGRAM ADMINISTRATION

The DNR manages the forest practices program as one of a number of land management, protective services, and regulatory responsibilities with which the agency is charged. TFW participants have recognized that the recommendations proposed in this agreement will add substantially to the complexity of managing this program. There is a need to upgrade the level of training and expertise in the field staff who will administer the program, as well as to provide, improved specialist and technical support. There is also a need to provide clear accountability and a line of authority between the Olympia division and the field operations.

Accordingly, DNR has reviewed the current agency program with the TFW participants, and is carrying out changes as follows:

- * DNR is reorganizing its staff into a Division of Forest Regulation and Conservation. The forest practices program is treated separately from other responsibilities, and will have increased staff support. Assuming sufficient additional appropriations, specialists will be added to the program staff to support improved specialist field review of complex proposed practices, as well as to improve staff training.
- * DNR will change its organization of the field enforcement staff. The agency intends to separate its regulatory and land management functions at the field enforcement level. This will allow improved training to be focused on the field regulatory staff. Supervision of that staff will also be concentrated on the regulatory program and directed out of the Department's area field offices.
- * The field staff review is also anticipated to lead to changes in area processing of applications. An expanded data system will be used to improve targeting of proposed activities for intensive review, as well as to notify other interested parties.
- * Increased technical staff support will also be added in the area offices, including professional specialists who will provide immediate assistance for review of applications triggering priority consideration, and who will function as members of an inter-disciplinary team when necessary.
- * DNR will prepare a detailed budget submission to fully implement these program revisions, and will work to implement changes at an early date.

INFORMATION ACCESS

The DNR receives and processes approximately 8000 forest practices applications a year. Individuals and organizations outside state government have had very little practical access to the system employed by DNR for processing the applications. Understanding this process and having the ability to obtain and provide information to the DNR on applications is necessary if cooperation and trust is to exist among all parties concerned about forest practices. Toward this end it has been agreed that:

- The DNR will reorganize its forest practices program in order to provide better access to the application process by the public and the tribes; and,
- Improve existing data bases, create new data systems and provide access to them.

INTER-DISCIPLINARY TEAMS (ID TEAMS)

One of the most critical new elements of the proposed management system is the inter-disciplinary team (ID team) concept. On-site review and evaluation of certain forest practices is necessary if the objectives of the management system described above are to be met. The I.D. Team is defined as a group of varying size and composition, having specialized expertise, assembled by the Department of Natural Resources to respond to the technical questions associated with a proposed forest practice activity. Distributed among the four resource management agencies must be the available technical expertise in soils, geomorphology, geology, hydrology, fisheries and wildlife biology, and forest engineering. The agreement calls for the following ID Team organization:

- ID Team Coordinators, one in each DNR management region;
- Habitat biologists in the Departments of Fisheries and Game whose primary responsibility is on-site inspection of forest practices;
- Staff from Ecology assigned to forest practices.

In addition, technical experts from the tribes, the timber industry and universities will be called upon where they are available. It is the intent to include technical experts from the tribes, industry and elsewhere as members of the I.D. Team to the greatest extent possible.

ENFORCEMENT

Confidence in the implementation of this new system is a key to the agreement reached by the TFW participants. Adequate enforcement of rules and regulations is a necessary foundation in building and

maintaining confidence in the system. Enforcement personnel need cross-training to have knowledge of the needs and goals of fish, wildlife, water and archeological and cultural resources. The field enforcement staffs will be supervised by a higher level DNR staff, Forester II or better, and will be more specialized in the regulatory function. The agreement will require additional enforcement personnel. They will coordinate their work with the ID Teams.

Enforcement, especially regarding actions to protect and correct for damage to public resources is to be a focus in the future. Whenever the DNR receives a written concern regarding a current forest practice, it shall notify the applicant and/or landowner. The DNR will evaluate the concern, and respond.

MONITORING, EVALUATION AND RESEARCH

In order to provide a basis for understanding resource management interactions and the impacts of forest practices on public resources, the participants agreed to develop and implement procedures for cooperative and collaborative monitoring and evaluating forest practices. (See the section of the agreement that describes "cumulative effects" for further information on assessing the impacts of forest practices.) In addition, cooperative research studies will be undertaken. The results of these efforts will be used to improve future forest practices and identify where rules and regulations need to be modified. The ID Teams will play a major role in the monitoring and evaluation. However, additional funds will be needed to carry out the cooperative research projects. A specific cooperative monitoring, evaluation and research program with decisions on priorities and associated costs will be developed in the first quarter of 1987.

PRE-PLANNING, RESOURCE MANAGEMENT PLANS AND ANNUAL REVIEW

A unique aspect of the proposed management system is the opportunity for the participants to meet both before and after timber harvests have occurred. Having this opportunity is fundamental to the development of the trust, cooperation and problem-solving which is the basis of the agreement. These evaluations of timber harvest will be conducted in the context of the annual evaluation process described below:

- Pre-planning: Working together and discussing harvest plans will provide all parties an opportunity to share their concerns and needs well in advance of the actual timber operations. For example, activities that will need monitoring or the use of ID Teams can be identified at this time. It is important to emphasize that the landowner presenting the harvest plan will determine if other private landowners will be invited to sit at the table. Procedures will be developed to protect any proprietary information that is shared during this process. Evaluating market place realities properly belongs with landowners and is essential

to a long-term viable timber industry.

- Resource Management Plans - Basin Planning: The agreement also provides the opportunity for landowners to work with representatives of the parties to the agreement and develop a resource management plan for an entire watershed basin or area where timber harvesting occurs. This would be a major planning effort requiring considerable time and effort. However, the benefits of such a plan would be significant and substantial. Landowners would attain the increased flexibility and predictability they desire. The public, tribes and agencies would be able to be in on the ground floor of developing a timber management plan which addresses their needs and resource management goals. Participation in the resource management plans would be totally voluntary. Once such a plan was agreed to it would be submitted to the Forest Practices Board and Ecology or other appropriate state agencies for approval. (See Appendix One.) (MOVED FROM BELOW * FOR SUBJECT CONSISTENCY)

- Annual Evaluation: At the end of the year the participants to the agreement or the parties involved in the development of a specific harvest plan will review the results of the previous year's activities. The results of these discussions will help guide the coming years forest practices and further refine the research agenda.

EVALUATION PROCESS AND TIME FRAME

THIRD YEAR EVALUATION

In the third operating season, the group would conduct an in-depth evaluation as to whether any changes should be made in the priority issue list to account for the successes or failures of this cooperative voluntary process. If the parties could not agree on what, if any, changes would be required, then they would be free to use whatever process was available to them to address their concerns without violating the terms and conditions of the balance of this agreement.

If agreement is reached as to how to proceed or if the Forest Practices Board in response to the proposals of any party, takes action to modify the priority issue, then there will be an additional period of three years annual evaluations to evaluate how this modified system is functioning.

EIGHT YEAR EVALUATION

In the eighth year, the performance of this system, as well as its inter-relationship to the rest of the agreement, would be subject to a

comprehensive and thorough evaluation by a group such as the TFW group with a report to the F.P.B. At the end of the eighth operating season, the parties to this agreement could decide to continue the approach or seek changes through the FPB or other avenues.

RESOURCE MANAGEMENT PLANS - BASIN PLANNING * (MOVED ABOVE)

ANNUAL EVALUATIONS, IN-DEPTH EVALUATIONS AND ADAPTIVE MANAGEMENT

Many of the parties to this agreement began this effort with the hope of achieving an agreement on one set of rules that would remain more or less unchanged for an extended period of time. This would have provided a significant degree of stability and certainty. Through this process it became clear that that approach would not work, and in fact, that a better way to achieve stability and certainty is through an agreed upon evolutionary process that will focus on key problems, obtain the necessary facts and result in different management approaches over time. Because this process will depend on a new cooperative approach and a higher level of planning and sophisticated analysis, no one can predict exactly how this effort can and should evolve. Therefore, the participants have agreed that it is necessary to have an annual review to focus on the problems and opportunities and to work together to evaluate the program successes and shortcomings. This will be a voluntary consensus process modeled after the TFW process.

In addition, the participants determined it would be necessary to have certain specified times when in-depth reviews of one or more issues would be jointly conducted.

- Annual Evaluation: An annual evaluation process would be conducted by a representative group of participants, such as the TFW process has assembled, to assess how both the formal and informal mechanisms were working to meet the parties' needs.
- Three Years: At the end of three years, the participants in the management system will conduct an in-depth evaluation of the impacts on public resources of the preceding years of forest practice operations and the impacts on timber operations of measures taken to protect public resources. If changes to the existing rules and regulations are felt necessary, the proposed changes would be presented to the Forest Practices Board. If the proposed changes were not unanimous, any party or parties could take their concerns to the Forest Practices Board or pursue any other avenues open to them.

The effects of the changes would be profiled during the annual reviews for the following years.

- Eight Years: At the end of eight years, the participants would conduct an in-depth evaluation of the entire agreement and present their conclusions to the Forest Practices Board. At that time it would be determined if the agreement was to continue or if a new agreement was to be forged.

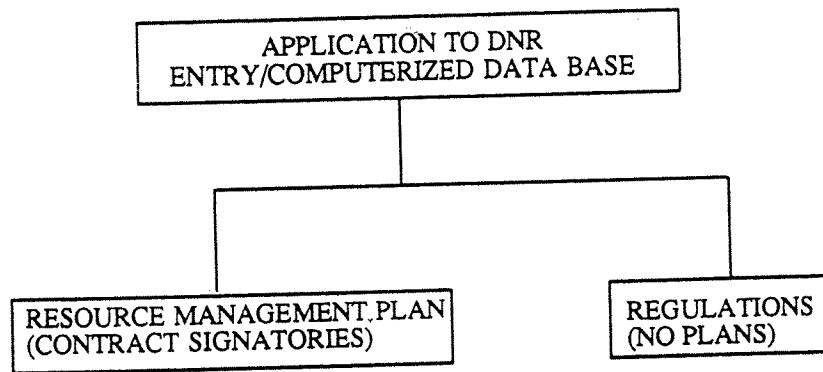
THE APPLICATION PROCESS

As mentioned previously, the DNR processes approximately 8000 forest practices applications a year. It is not feasible or necessary to expect that every application is going to have a site visit by an ID Team. Nor, are the public and the tribes expecting to review every application. The goal is to develop a process that will identify those applications that need special priority attention and make this information known to the appropriate persons in the agencies, the public and the tribes. Agencies already receive copies of all applications, so it is assumed that a process which would meet the needs of the public and tribes for better access and information would also meet similar needs of the agencies.

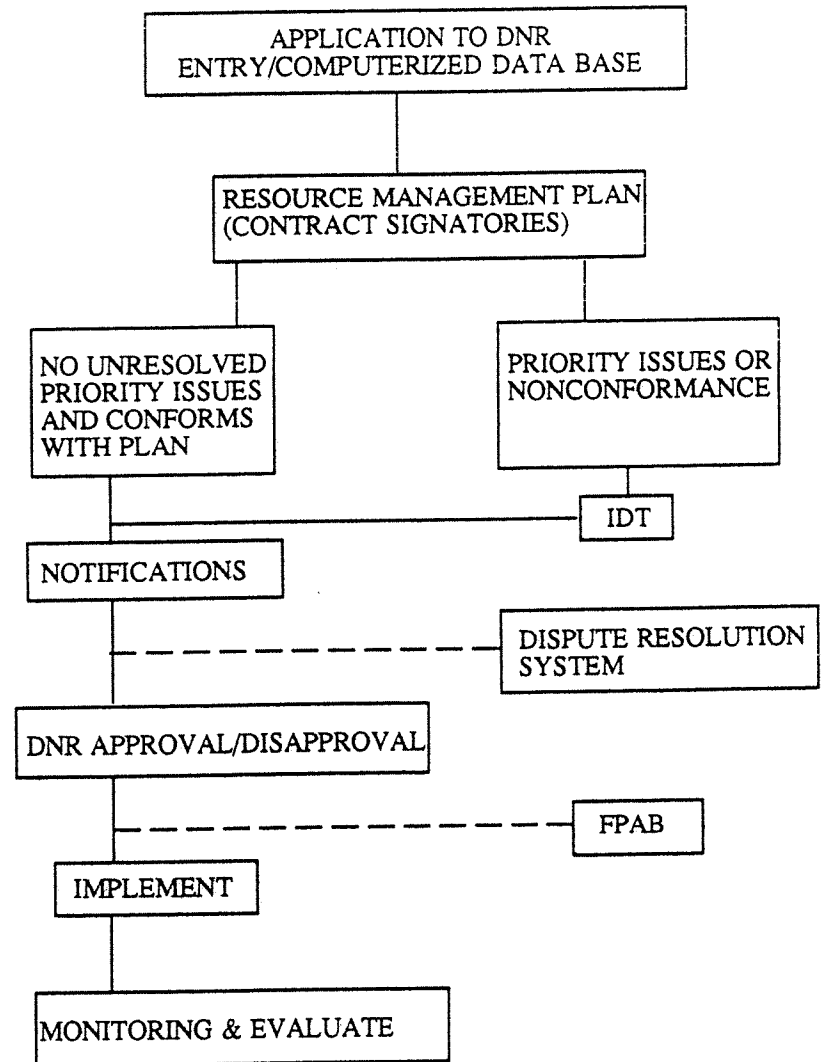
A flow chart of how an application will move through the new application process is included within this document.

It is important to emphasize the fact that a new application will be developed by the DNR, with consultation from the participants to the agreement. The revised application will combine information about roads and timber harvest plans. This is not done under the existing application process. It will also allow "priority issues" to be "red flagged" by the DNR employee reviewing applications early enough in the application period so that the concerns raised can be resolved in time to meet the needs of the landowner. A detailed description of the "priority issue" process is described in the next section of the agreement.

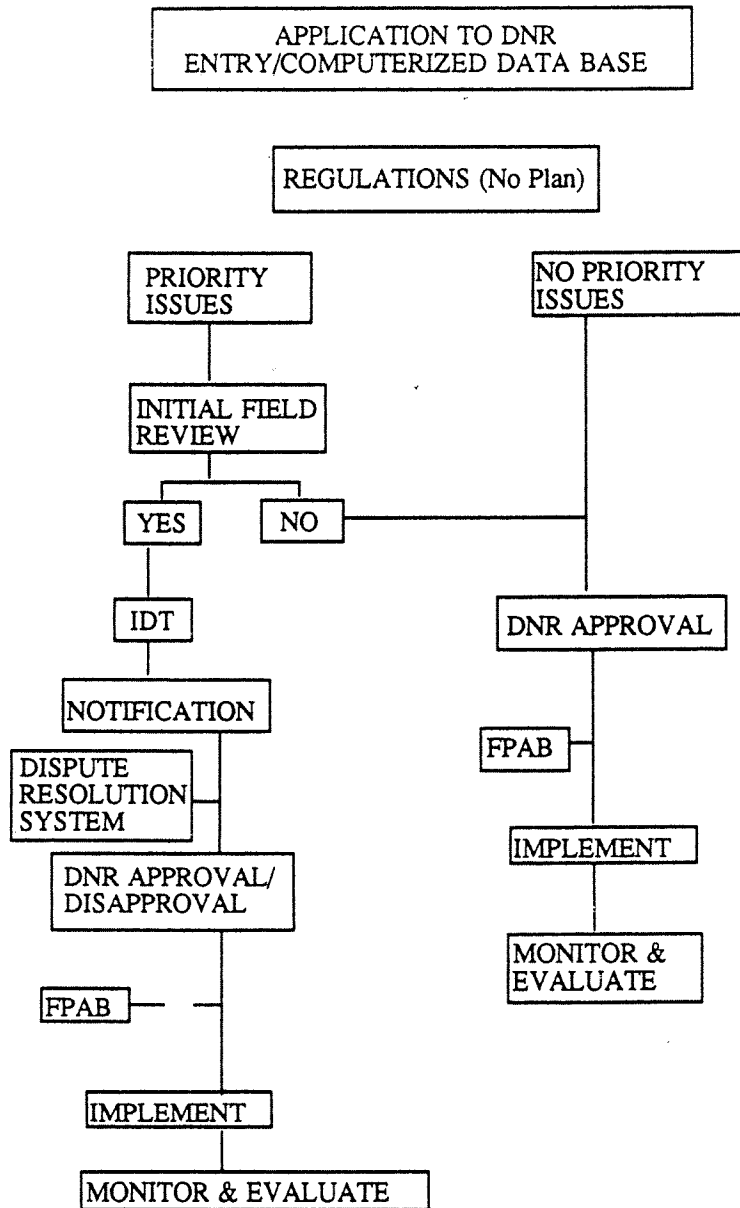
FOREST PRACTICES APPLICATION PATHWAYS



FOREST PRACTICES APPLICATION PATHWAYS



FOREST PRACTICES APPLICATION PATHWAYS



The application process will be computerized so that applications can be tracked on a timely basis.

MANAGEMENT PRIORITIES: MEETING THE GOALS OF TFW

INTRODUCTION

The TFW negotiations have pointed out the wide disparity that exists in the potential for affecting or impacting public resources from various individual forest practices. Of the several thousand practices which occur each year, only a fraction will have the potential for significantly or substantially affecting various public resources.

The current regulations address this situation in several ways:

1. The "Class IV Special" category identifies a small group of proposed practices which will be reviewed through SEPA;
2. The existing regulations define baseline standards for all other forest practices and provide DNR with the authority to control those practices through stop work orders, notices to comply and other mechanisms.

The participants have identified a number of ways to improve the existing system. For those practices classified as Class IV - Special, a standard SEPA checklist is used as the evaluation tool. This checklist contains a number of categories which are not relevant to forest practices. The checklist is time-consuming and clumsy for the applicant to complete, and its general nature fails to highlight those issues of concern to the regulator.

For the great majority of practices, the baseline regulations apply. Review of these applications currently must occur in 14 days or less, regardless of how complex the proposed practice may be. There needs to be a systematic ability to identify the practices which require more thorough review. State-wide baseline regulations inherently lack the ability to account for site-by-site variations, or for regional differences. It is important for interested parties wishing to review and comment on proposed practices, to be able to focus on those proposals which would be most likely to be important to specific resource values.

OPPORTUNITIES

The T/F/W participants have developed a process of management priorities to meet concerns regarding those proposed practices which trigger special regional attention. No significant delay in processing is presumed for the vast majority of the thousands of applications

received each year.

MEASURES

The TFW agreement will better meet these needs by a combination of statutory, regulatory, and administrative changes, as described below:

First, TFW recommends that the Forest Practices Act be amended to permit a maximum 30 day review period for Class III forest practice applications. The current limit is 14 days. While it is assumed that the vast majority of applications will be reviewed within the 14-day period, the new 30-day review period will allow DNR the time to focus on those applications that require the extra attention of specialists doing on-site inspection.

Second, the Forest Practices Board and Ecology, where water quality regulations are affected, will also need to adopt certain changes in the regulations, as follows:

- A. DNR should have explicit authority to deny Class III and IV permits;
- B. There should be clear authority to reject an application for insufficient information;
- C. The use of an alternative plan, if properly reviewed and approved, should be permitted as a Class III forest practice, rather than the current Class IV - Special classification; provided the plan clearly meets or exceeds protection of public resources as provided in the Forest Practices Act;
- D. The ability to impose conditions on Class III and IV applications should be clarified;
- E. In line with the statutory change to a 30-day review for Class III applications, the Board should provide that Class III applications which do not need extensive review will be reviewed within 14 days;
- F. The Board should provide that DNR will compile periodic reports detailing the number of applications requiring additional review, as well as a summary of the actions taken to approve, deny or condition those applications; and
- G. The current Class IV special category for road building should be amended to delete the references to 1000 feet and to steep slopes. All permit applications for road construction on unstable slopes will require a Class IV special permit. Road construction on steep slopes that are not unstable will require a Class III permit.

APPLICATION AND REVIEW PROCESS

DNR will need to develop a number of administrative improvements to make this system function:

- A. The revised system will begin with a redesigned forest practices application form. The revised form will specify that a landowner will have several options to choose among, including:
 1. Resource Management planning approach (where available);
 2. Annual review of all applications for a given geographic area;
 3. Early review of an application prior to official filing;
 4. Submission of an application with a delayed effective date; or
 5. The current method of processing (but with a 30-day time limit).

The revised form will also facilitate the identification of priority issues which can then lead to further review by both DNR and other parties. (See section C.) For example, the revised form should provide for identification of any anticipated impact on a state listed threatened or endangered wildlife species. Where a potential impact is identified, review and consultation with the Department of Game and wildlife organizations would occur.

- B. In cooperation with the various interested parties, DNR and Ecology will redesign the SEPA checklist used for Class IV - Special applications to address forestry-related concerns, eliminate non-relevant questions, and indicate the reason for the Class IV - Special designation. The intent is to format the checklist to focus attention on the significant issues to be addressed, to capture sufficient relevant information to carry out the review, and to relieve the applicant from any unnecessary paperwork.
- C. The DNR will develop, in consultation with the interested parties, a list of priority issues for field priority attention which will be the focus of further review of applications. This list of issues may vary on a regional basis, although there will be certain issues common to all areas of the state. Applications identified under priority issues would receive early field review, protective conditions, or further review by a specialist or I.D. team. This will allow DNR to focus its limited resources for field review on the most critical applications, and it will also assist other interested parties in evaluating which applications to review in greater detail.

The priority issue process and list should be reviewed and updated at years three and eight or more frequently as necessary by region to take into account new information or local conditions. These priority issues will be contained in DNR's Administrative Manual which shall be available to applicants, other agencies, tribes and the public.

An example of this priority issue system could be its use of Type 4 and 5 waters. DNR would use the initial office screening to identify applications which would impact these smaller streams where they are:

1. Within 1000 feet of a receiving Type 3 water;
2. Flow across unstable slopes, restrictive canyons, or other sensitive areas;
3. Have a steep gradient above a certain threshold;
4. Have some other special and/or localized characteristics which may be identified by recent history or local experience such as hatchery water supplies, registered domestic water use permits or are in areas determined to be subject to rain or snow events, e.g.

These applications would be highlighted for early field review by a field forest compliance officer, which could then lead to protective conditions being included on the application, or possibly to further review by a specialist or an inter-disciplinary team.

- D. DNR will also need to develop cost-effective methods of notifying various interested parties of applications which may require further review.

BENEFITS

In summary, the benefit of this approach stems from the recognition that all forest practices are not equal in their potential for affecting or enhancing public resources. The TFW recommendations, when implemented, will allow landowners, agencies, and the interested public an improved opportunity to identify the significant applications through the priority issue program, focus their review and attention on the problem areas, condition these critical applications as necessary to avoid or lessen adverse impacts, expedite the reviews, and to impose the least burden possible on all parties.

COMPONENTS OF A NEW MANAGEMENT SYSTEM ROADS

Forest roads are essential for accessing timber resources. These roads may range from highly engineered permanent roads to temporary access paths.

This section deals with road design, location, and construction; maintenance and use; and abandonment. It also covers the management of orphaned roads which are defined as those roads built before 1974, not used or maintained for the conduct of forest practices by the landowner after 1974 and whose status under the Forest Practices Regulations is unclear.

OPPORTUNITIES

Early in the T/F/W process, all participants spoke of their desire to minimize the number of miles of roads built to conduct forest practices. They are expensive to build and maintain, and if something goes wrong with a road, they are expensive to repair.

The T/F/W participants have identified a number of formal and informal measures which, when implemented, will lessen the potentially negative impacts of roads on downslope public resources.

Making better use of information and information systems on mapping, soils and slope stability will also assist the landowner in road placement and construction techniques. Finally, a process is identified to deal with orphaned roads through an early action pilot program, with the opportunity to expand this program in the future on a shared cost basis between the state and the landowners.

MEASURES

The parties agree that:

1. DNR shall conduct annual road planning and coordination meetings at the area offices. The intent is to provide a forum for information exchange and advanced problem/opportunity identification between agencies, landowners, tribes, and the public. All parties are encouraged to participate and to reduce road redundancy and road costs, improve planning and resolve issues of

concern at the earliest possible date.

2. DNR will establish a priority management review process which will permit potential road related problems, and conflicts with other resources, to be identified upon receipt by the department of a completed forest practices application. DNRs pre-identified management priority issues list will trigger the review process which is described in the management section of this agreement.
3. The DNR, in consultation with agencies, tribes, industry and the public, will review and amend the current Forest Practices Application to require sufficient information to identify road related priority issues.
4. DNR will reject incomplete applications which do not allow the identification of road related priority issues.
5. The SEPA checklist which is used for Class IV Special Forest Practices will be revised to relate more specifically to forest practice concerns.
6. DNR will develop a comprehensive mapping system of all forest land roads on state and private lands which is accessible to other parties. This system will include information on other resources, such as soils, wildlife, and fisheries resources, so that potential resource conflicts can be identified.
7. The DNR, agencies, tribes, industry and the public will work together to develop coordinated risk evaluation procedures and management prescriptions which will be used to modify the priority issues process in order to make it as responsive to local conditions as possible.
8. The DNR, agencies, tribes, industry and the public will implement a coordinated monitoring and evaluation program to assist in application review, priority issue identification, and progress towards meeting resource management goals.
9. DNR will acquire additional personnel with professional resource expertise as needed for problem identification and resolution.
10. The DNR, agencies, tribes, industry and the public will promote road closure plans which take into account the needs of timber, fish, and wildlife resources. It is recognized that road access management is a very important component of wildlife management issues. The participants agree to pursue the possibility of state-wide or regional road management programs which provide for a sharing of costs. For example, the landowner could provide signs and the state could provide enforcement.

11. The parties agree to the regulatory changes as presented to the Policy Committee. These changes:
 - a) Specify desired end results of the regulations;
 - b) Provide some flexibility in meeting the desired end results;
 - c) Strengthen language in known problem areas; and
 - d) Implement previously described elements of the road resolution program.
12. The DNR, agencies, tribes, industry and the public shall jointly pursue and support state legislation and funding necessary to implement the elements of the comprehensive road resolution program.
13. The Forest Practice Board and Ecology will receive a complete set of proposed regulations addressing road construction, maintenance and abandonment from the TFW process.

ORPHANED ROADS

INTRODUCTION

Orphaned roads are defined as those roads built before 1974, not used or maintained for the conduct of forest practices by the landowner after 1974 and whose status under the Forest Practices Regulations is unclear.

OPPORTUNITIES

The status of orphaned roads under the Forest Practices Act is unclear. Further they were constructed with various levels of quality and may, in some instances, pose a risk to human health and safety, capital improvements, aquatic resources, and wildlife. There is an opportunity through the measures listed below to begin a program of putting these roads to bed, addressing the liability issues and reducing those risks.

Orphaned roads, which are part of a larger hazard reduction issue, contains an unresolved liability issue which is a major deterrent to a solution. There is agreement that physical risk of injury to the environment and to public safety should be reduced to the extent practicable, and that steps should be taken to avoid increasing legal risks to landowners and the state.

The parties also agree that legislative appropriations are also necessary to adequately address the orphaned roads issue, and that such funding should be used first for the continuation of the pilot project (described below), and then for a future 50/50 cost sharing program with private

landowners.

Therefore, the DNR, jointly with agencies, tribes, landowners and participating environmental organizations agree to pursue and support the legislation needed which will adequately address both the liability and funding issues. Once acceptable funding and liability legislation has been obtained, the parties will jointly develop an orphaned roads program, which will include an assessment of the issue, an action plan, implementation, and a post-implementation evaluation.

The DNR shall continue to implement an orphaned roads pilot project, which will be used as a base for the orphaned roads program.

MEASURES

1. A process will be implemented to address orphaned roads issues. After the conversion, the road will be considered either active, inactive, or abandoned. In order to achieve and maintain the road in one of the three classifications, the Forest Practice Regulations shall be the governing criteria. The essential elements of this process will be:
 - a) A staged assessment of orphaned roads on state and private lands to be accomplished over time as funding is available to carry out appropriate solutions to the identified problem areas;
 - b) Set action priorities using the I.D. teams, and agency, industry and tribal input;
 - c) Select solutions for each site in consultation with landowners and the I.D. team;
 - d) Implement solutions; and
 - e) Monitor the success of the actions in order to provide information for future management decisions.
2. The DNR shall undertake immediately an orphaned roads pilot project which will test the process outlined above. The pilot will be used to both test and refine this process and to address the problems identified in the pilot.
3. The DNR, agencies, tribes, industry and the public groups will jointly pursue funding, and liability limitation if necessary, to implement the orphaned roads program for both the pilot project and state funding for a future 50/50 cost sharing program with private landowners. They also commit to pursuing the necessary legislation for implementing this alternative.

RIPARIAN MANAGEMENT ZONES

INTRODUCTION

Riparian ecosystems have a disproportional importance in providing benefits for wildlife, fish, and water quality. These areas also contain valuable timber resources. TFW developed a system of forest management activities based on presently perceived needs of all resources.

OPPORTUNITIES

A riparian management zone will be used to protect streamside areas. The zone will be of varying widths dependent on water type (as described in the proposed Washington State Forest Practices Rules and Regulations) and physical conditions. The zone will provide for some timber removals, equipment use restrictions, limited silvicultural activities, and road construction and use limitations.

The goal is to provide protection for wildlife, fish and water quality while allowing forest management activities to occur at reduced levels and under controlled operating conditions.

RIPARIAN ZONE DESCRIPTION

Those areas of transitional terrestrial environments bordering streams, lakes, ponds, tidewaters and other bodies of water. They include banks, beaches and associated organic and inorganic constituents; floodplains; areas of high water table associated with plants which require saturated soils during all or part of the year; plus an area of direct influence which shapes the physical structure of the aquatic environment and influences the quality of fish and wildlife habitat by contributing organic debris, shade and buffering action.

RIPARIAN ZONE REGULATIONS

For forest practice applications in areas which include a riparian zone, there are alternative means for conducting an operation. These forest practice operations must either comply with an approved site-specific riparian zone prescription (1) or comply with the regulation stated in (2).

1. Site specific-Prescription Method

If this process is selected, or dictated by regional, area, or local DNR management priorities, the forest practice application shall include a site-specific riparian management zone prescription which provides the zone location and protection measures as

determined by the needs of wildlife, fish and water quality. To aid in the development of a site-specific prescription, trained resource representatives will be made available to applicants upon request.

2. Regulation Method

If this process is selected, an approved forest practice application, not subject to the site-specific prescription method shall be conditioned as follows and must comply with these rules.

- a. A riparian zone boundary shall be established at the approximate change from a wet plant community to an upland plant community; however, zone shall be not less than twenty-five feet or greater than those widths established in Section (h) except that the RMZ width shall expand as necessary to include swamps, bogs, marshes or ponds adjacent to the stream.
- b. Buffer widths for aerially applied pesticides shall be 50 feet on each side of the stream. Types 4 & 5 would only be buffered when water is present.
- c. Reforestation of the zone shall follow existing regulations, but in the RMZ, survival requirements will be waived.
- d. Roads shall not be located within natural drainage channels and riparian zones (except where crossings are necessary) when there would be substantial loss or damage to habitat unless adequate mitigation of damage to public resources is provided and DNR has determined that alternatives will cause greater damage to public resources.
- e. Slash removal in all water types shall follow new DNR guidelines. (See Appendix II.)
- f. Slash disposal, site preparation, or application of forest chemicals in the riparian zone shall be limited to hand operations unless approved in a site specific plan by DNR.
- g. For wildlife habitat, timber harvest in this zone shall be by selective logging which maintains and protects from damage, snags, down logs, and an average of 5 conifer or deciduous trees per acre. These leave trees shall be equal in size to the largest trees of the species found in the stand and shall be of a 1:1 ratio, conifer to deciduous. At least two (2) of the five (5) trees must be live. If overall this ratio cannot be left because of the absence of conifer or deciduous in the zone, then one may be substituted for the other. Whenever possible, these leave trees should be left in clumps.

- h. For the further benefits of wildlife and fish habitat (snags, food, cover, large organic debris, water quality, etc.) along type 1, 2, and 3 waters, additional trees must be left. At least half the leave trees must be alive. If suitably sized and located, the trees in 2 (g) above may be included as part of the following leave tree requirement. Efforts may be made to allow flexibility in locating leave trees to permit operational considerations, including some clumping.

1. Type 1 or 2 Waters (averaging 75 feet wide or more) and other wetlands

The riparian zone will be a minimum of 25 feet and maximum of 100 feet from the river, stream or wetland shoreline (measured from the ordinary high water mark). Maintain a minimum of 50 randomly distributed conifer and deciduous trees representative of sizes and species existing in the stand per 1,000 feet of shoreline, on each side of gravel and cobble (dominant substrate diameter less than 10") bedded reaches* of rivers and streams; and 25 randomly distributed conifer and deciduous trees of similar size and species per 1,000 feet on each side of boulder and bedrock bedded reaches of streams and other wetlands

2. Type 1 or 2 Waters (averaging 20 - 75 feet wide) and other wetlands (Some Type 2 Waters may be less than 20 feet wide based on biological criteria)

The riparian zone will be a minimum of 25 feet and a maximum of 75 feet from the river, stream or wetland shoreline (measured from the ordinary high water mark). Maintain a minimum of 100 randomly distributed conifer and deciduous trees representative of sizes and species existing in the stand per 1,000 feet of shoreline, on each side of gravel and cobble (dominant substrate diameter less than 10") bedded reaches* of rivers and streams; and 50 randomly distributed conifer and deciduous trees of similar size and species per 1,000 feet on each side of boulder and bedrock bedded reaches of streams and other wetlands.

3. Type 3 Waters (averaging 5 - 20 feet wide) and other wetlands

The riparian zone will be a minimum of 25 feet and a maximum of 50 feet from the stream or wetland shoreline (measured from the ordinary high water mark). Maintain a minimum of 75 randomly distributed conifer and deciduous (2.1) trees 12" in diameter or larger per 1,000 feet of shoreline, on each side of gravel and cobble (dominant substrate diameter

less than 10") bedded reaches* of streams; and 25 randomly distributed conifer and deciduous trees of similar size per 1,000 feet on each side of boulder and bedrock bedded reaches of streams and other wetlands. If 12" trees or larger do not exist in the area, then the largest available trees shall be left.

4. Type 3 Waters (averaging less than 5 feet wide)

The riparian zone will be 25 feet from the stream or wetland shoreline (measured from ordinary high water mark). Maintain a minimum of 25 randomly distributed conifer and deciduous (1:1) trees at least 6 inches diameter per 1,000 feet of shoreline, on each side of all streams in the category. If 6" trees or larger do not exist in the area then the largest available trees shall be left.

- i. Felling timber in the riparian zone shall be done in a manner to minimize damage to the leave trees and understory vegetation along Types 1-3 waters. Trees shall be felled favorable to the lead for yarding away from the water body. The use of directional felling, lining, jacking and stage felling techniques are encouraged. No timber shall be felled into Type 1, 2, or 3 waters, unless such felling is done pursuant to an approved hydraulic permit.
- j. In the event that logs/or debris enters a stream, procedures for removal shall follow the DNR guidelines and/or hydraulic approval.
- k. The trees left as a result of these regulations may blow down or fall into the streams, in fact that is the goal for most of the leave requirements, this falling shall be regarded as a natural occurrence and shall not lead to increased landowner liability.
- l. The parties shall conduct a joint public education program that this large woody debris in the streams is necessary for high quality stream habitat.
- m. Cable, tractor or wheeled skidder yarding in or across the riparian zones of Types 1-3 waters shall be done in a manner to minimize damage to the leave trees, understory vegetation and soil.
- n. If use of mechanized equipment is desired, the type of equipment, along with where and how it is to be used, must be described in the Forest Practice Permit Application.

* waters within the sale unit boundary

- o. Reasonable effort shall be made to keep man-caused fire out of the riparian zones of Types 1-3 waters. A burning plan for lands bordering riparian zones shall be submitted with the Forest Practice Permit application.
- p. Road construction spoils shall be placed on stable slopes above the 50-year flood level on all water types concurrent with road construction or follow the best other method under exceptional circumstances such as within flood plains.
- q. Efforts shall be directed toward maintaining streambank integrity by doing the following:
 - 1. avoid disturbing brush and similar understory vegetation
 - 2. avoid disturbing stumps, root systems and any logs firmly embedded in the bank
 - 3. leave high stumps where necessary to prevent felled and bucked timber from entering the water
 - 4. leave trees which display large root systems embedded in the bank.
- r. Ecology, in consultation with tribes, other agencies, industry representatives and other interested parties, will take a lead role in establishing a process to identify temperature sensitive basins. A model or method shall be established to predict temperature increases associated with any future management activities. This model or method shall be established within (6) months of the conclusion of the TFW process. A management process will then be developed to avoid future problems identified through this process.
- s. It is assumed that most Type 4 or 5 streams will not become priority issues for review. For proposed areas or activities with Type 4 and 5 streams that are priority issues, the site-specific management solutions may address up-slope leaves, roading or operational design, or riparian leaves.

If riparian leaves are necessary then activities on Type 4 waters may be conditioned as follows: within the riparian zone, leave twenty-five 6" diameter or larger conifers or deciduous trees per 1,000 feet of stream, arranged to accommodate the logging operation.

The benefits and costs of any required leaves on Type 4 waters will be monitored and evaluated in the same time frame as the timber harvest review periods.

SMALL HARVEST EXEMPTION FOR SMALL LANDOWNERS

It was recognized by all parties that these riparian zone requirements could disproportionately impact small landowners which could cause or accelerate conversions of these lands to other uses. Such alternative uses are less desirable to all the participants in this process. Therefore, a site-specific prescription that retains fewer leave trees for a harvest of 30 acres or less may be proposed by any landowner that is disproportionately impacted by the standard leave tree requirement. Under such a plan the landowner must leave 50% of the standard riparian leave tree requirement, unless the original stand contains fewer trees prior to harvest.

A landowner is considered to be disproportionately impacted if more than 10% of the acreage in the harvest area lies within the riparian management zone of at Type 1, 2, and/or 3 water.

MONITORING AND RESEARCH

DNR in conjunction with the landowners, affected tribes, Departments of Fisheries, Game, Ecology and wildlife and environmental organizations may jointly develop a monitoring system to evaluate:

- The effectiveness of the RMZ leave area. Such monitoring shall run for a minimum of six years with reports to the Forest Practices Board every two years.
- The quality of voluntary understory leaves on critical Type 4 waters including documentation of downstream benefits.
- The need for specific research projects. Such projects may be initiated by any party and may cooperatively include any other affected party at their option.
- Effectiveness of the management priority issues to address potential problems in smaller streams.
- Effectiveness of reforestation within Riparian Management Zones.

UPLAND MANAGEMENT AREAS (UMAS)

INTRODUCTION

Wildlife needs diversity in plant communities to meet their daily and seasonal needs. Reductions in diversity of habitats (size, species, or age) result in losses of wildlife.

OPPORTUNITIES

The T/F/W participants have determined that the Forest Practices

Manual should include a new section containing recommended management guidelines for timber areas not selectively managed in upland areas outside of the riparian management zone of Type 1, 2, and 3 waters (Upland Management Areas or UMAs). The permit application will ask landowners to document their response (action taken) to the guidelines. If silviculture in UMAs is desired, it will be conducted in a site-specific manner to provide the maximum benefit to the greatest number and types of wildlife and achieve ongoing diversity of both habitat and species.

MANAGEMENT GUIDELINES FOR UPLAND MANAGEMENT AREAS (UMAS)

- * UMAs should include a ratio of at least 2 acres per 160 acres of clear-cut harvest or its equivalent. Trees and accompanying vegetation remain intact in their naturally occurring state during the current and next rotations unless specific silvicultural activities have been designed for wildlife management.
- * The location of UMAs may be on steep slopes, unstable slopes, canyons, type 4 and 5 stream areas, or areas inoperable for logging.
- * The clumping of trees and vegetation within UMAs wherever possible to achieve a maximum diversity of size, species, and age of trees and other vegetation in these areas is best for wildlife.
- * The maintenance and recruitment of snags shall be included where operationally feasible and in compliance with other state regulations and health and safety concerns.
- * Bogs and wetlands not included in a Riparian Management Zone are desirable areas to be left for wildlife.

MONITORING AND RESEARCH IN UMAs

The DNR, in conjunction with the landowner, affected tribes, wildlife organizations and Washington Department of Game, will jointly develop a formal monitoring process to evaluate:

- * The effectiveness of UMA leave areas. Such monitoring shall run for a minimum of 6 years with reports to the Forest Practices Board every two years. DNR will keep a record of the UMAs created as a result of this program.
- * The quality of voluntary understory leaves on Type 4 waters adjacent to swamps on wet sites, including documentation of downstream benefits from such management.
- * The need for specific research projects. Such projects may

be initiated by any party and may cooperatively include any other affected party at their option.

- * Cooperators are encouraged to modify design and placement of UMAs any time they mutually agree that such changes would be beneficial.

BENEFITS OF SOLUTION

- * least costly way for industry to provide wildlife benefits
- * gives maximum flexibility to landowner in site selection
- * type of vegetation that is left can be selected by landowner to meet the needs of wildlife and the landowner
- * results in least damage to greatest number of individual animals in a logging situation
- * variety/diversity of vegetation are built into the system
- * interspersion of older leave trees combined with the benefits of harvest (openings, invasion of food-bearing shrubs) is greatest
- * creates potential for leave trees to grow older and provide valuable diversity in age class
- * food, cover, water, and space are interspersed and reachable by a broad spectrum of animals; movement of animals is therefore reduced and susceptibility to predation reduced
- * simple, understandable, reasonable, and achievable

FOREST PRACTICES ON UNSTABLE SLOPES

OPPORTUNITIES

Forest practices on unstable slopes, in some instances, can accelerate natural instability processes and impact fish, wildlife, water, cultural and archeological resources, public capital improvements and off-site property. However, management decisions regarding the potential impacts of such harvests can be improved by: 1) more complete technical and scientific data and information; 2) technical specialists on the ground to assess impacts and offer appropriate management alternatives; and 3) ways to measure the effectiveness of current state of the art management practices.

MEASURES

1. Resolution of the unstable slopes issues will require investment by state government industry, and others in improving the geologic, landslide, hydrologic and other related data bases as well as making more technically skilled personnel available to deal with unstable areas on site.
2. Road construction on unstable slopes will require a Class IV special permit and therefore an environmental review.
3. DNR can condition class-III forest practices.
4. The DNR, in consultation with tribes, other agencies, landowners, etc. will be responsible for developing "priority issues" which will reflect regional priority concerns. Unstable slopes and practices on unstable slopes are appropriate priority issues where these conditions exist.
5. DNR, where necessary, will use "inter-disciplinary teams" (I.D. teams) to review priority forest practices. Forest practices on unstable sites are appropriate operations to be reviewed by DNR field review and I.D. teams.
6. Soils information needs to be a part of GEOMAPS, thereby moving toward a hazard zonation mapping system to better identify areas of instability. Such a data system should include:
 - a. soils maps
 - b. geologic maps
 - c. information from regional DNR offices
 - d. information from private timber companies
 - e. areas of known slide potential
 - f. identify critical rain on snow zones
 - g. annual rainfall information and timing
 - h. topography information
 - i. hydrologic information
 - j. hazard zonation maps
7. The DNR will evaluate its forest practice application form and environmental checklist to ensure that adequate information is submitted by the applicant to assist in the determination of areas of instability. Interim systems to add to the existing unstable soils information may be needed to aid the field compliance staff in identifying and properly conditioning forest practice applications.
8. The DNR will evaluate the need for a state-wide system of technical oversight in the office during the application submittal process to determine if additional data, i.e. road construction and engineering data, is needed as part of the

application process.

9. Monitoring should be done on road construction and harvest techniques on unstable slopes to evaluate how effective such techniques are and that such findings be incorporated in improving existing management and regulatory systems.

TIMBER HARVESTING ACTIVITIES

OPPORTUNITIES

The management and impacts of timber harvest are complex and difficult issues. The ability to harvest in a cost-effective manner, and the flexibility to cut to the current market are of vital concern to the timber industry and to the maintenance of a long-term viable timber industry in the state of Washington.

The participants also recognize that there are certain aspects of clear-cutting, such as the size, location and design of clear-cuts, that can potentially affect wildlife, fish, water quality, water quantity and sediment movement. The status of adjacent lands to a proposed cut may also have a significant bearing on any such possible impacts.

The size and location of clear-cuts also have a direct relationship to the number and length of roads and the duration of their active use, which have important cost implications to industry and may provide potential opportunities for fish, wildlife and water quality protection.

The participants also agree that, given the need to balance all of these concerns, the aesthetics of clear-cutting should not be an issue in timber harvest management in this state except in areas already designated or under consideration for wild and scenic river status.

As in other aspects of timber operations, the magnitude of the potential benefits and impacts of clear-cutting vary by site, area, geography, neighboring activity, potential resources affected, soil type, wildlife and fisheries distribution and status, and the hydrology of the area.

As a corollary, the method of designing and conducting clear-cutting operations, while still protecting the potentially affected public resources, varies by location.

In this process, the timber industry representatives have provided a number of examples as to how they can, through their management decisions and field practices, provide significant protection for public resources while still allowing them the necessary flexibility to harvest timber in a cost-effective manner and to meet market conditions.

In order for this process to work, the leading timber companies in this state will need to make a management and policy commitment to the

key elements of this approach (described below). This places the opportunity and responsibility on the individual companies to work with other participants to meet the needs of the public resources while still meeting their company harvesting objectives.

In addition, the state agencies, tribes and those public groups participating in the planning and/or review of timber harvest operations will have to make similar management and policy commitments for this process to achieve its full potential.

MEASURES

In light of the considerations described above, the participants have decided not to propose a state-wide standard clear-cut regulation package, defining a standard size of cut, green-up period, etc. Instead, timber harvest activities and their potential impacts on the public resources will be addressed through a process of cooperation, pre-harvest management reviews and on-site inspection with annual evaluations to verify that this approach is working.

In the area of timber harvesting impacts, the small landowners by definition are not a significant factor because their ownerships are dispersed and their cutting patterns are largely random.

The key to the success of this program rests with the large and medium sized timberland owning companies with the potential to schedule large and contiguous cuts of their timberlands.

The following are the four key elements required to make this cooperative approach work:

1. An early exchange of "points of concern" or indices of requirements and needs for the private and public resources which may be affected by each company's proposed timber harvesting activities.
2. An annual pre-harvest planning review of timber harvesting plans from the perspective of timber, fish, wildlife, water and archeological and cultural concerns.
3. One outcome of the planning review will be an on-site assessment, if and where necessary, to inspect specific points of concern. It is expected that this will be a relatively small portion of the timber harvest activities discussed in the planning review stage.
4. The provision for monitoring and evaluation, where necessary, to assess any risks and/or benefits resulting from the decisions made during the planning review and on-site inspections.

It is expected that the opportunities and measures may be done either informally or in a more formal manner as part of the forest practice

application and/or priority issue review process. This data and information, along with the research and general monitoring conducted as part of the new management system, will provide the basis for the annual evaluations and the in-depth evaluations in Year Three and Year Eight. This process will form a key tool in the adaptive management approach envisioned by all parties to this agreement.

The Department of Natural Resources currently has a policy of 100-acre clear-cut size limitation and Forest Land Management Plans. DNR and the other participants believe they can work with these planning tools to address their concerns regarding timber harvest on DNR lands in the same manner as described below.

SILVICULTURAL ACTIVITIES

INTRODUCTION

Following a timber harvest, the timber manager is faced with several options in the management of the forest. In the most general sense, these are silvicultural activities that have varied impacts. Silviculture can be defined as the art and science of growing trees for a particular management purpose. It integrates biological, economic and legal constraints. The composition of forest yields is relatively flexible and subject to considerable manipulation. The major issues and impacts of such practices need to be placed in the context of this definition.

OPPORTUNITIES

Silvicultural activities have a variety of impacts that can be simultaneously beneficial or adverse to different resources. It is this recognition of the complexity of the ecosystem interactions that is important when a particular treatment is proposed. The general principle for future silvicultural practices is to modify the site only to the degree necessary to achieve the desired biological results in the most cost effective manner while protecting the public resources. Going beyond this point increases costs and unintended impacts.

With the current use of chemicals and our current understanding of their impacts, buffers surrounding water, dwellings and residences should be increased. The rationale supporting increased buffer zones is to protect the water and the people which could be adversely affected if pesticides get into the water. There is a need to develop simple, cost-effective methods of notification. Domestic and municipal water supplies need careful protection from the potential impacts of pesticides. The current Area of Water Supply Interest is cumbersome and not widely used. Therefore, its utility is questionable.

Notification of upstream owners of existing or pending water right applications is needed. Prior notification of downstream domestic

users is needed where forest practices may have a potential to impact their water, either through increased siltation or use of chemicals. There is a need for upstream and uphill landowners and managers to know who these users are.

The impacts of prescribed burning, including atmospheric pollution, need to be carefully considered. Opportunities include reduction of fire danger, providing sufficient planting spots, and moderately effective vegetation control. Damage to the riparian area, damage to adjoining timber or new reproduction, loss of soil productivity, creation of a soil layer impermeable to water after some hot burns, increased erosion, and increased damage to wildlife, can all be avoided through the measures described below.

As silviculture is the art and science of growing trees, it is important to carefully consider the problems of growing new trees after harvest on very wet, very dry and sub-Alpine and Alpine sites. The T/F/W participants have developed measures as described below to address these difficult to regenerate sites.

MEASURES

The measures to address these issues are guided by these goal statements:

1. Site-specific and watershed prescriptions for timber management should aim at reducing ecosystem disturbances.
2. All decisions, whether silvicultural or non-timber in nature, should be made from an ecosystem perspective that recognizes the interaction of biology, physical sciences and economics.

In addition, as described below, there are a number of areas, current practices, and proposed new changes, that should be the subject of cooperative research, evaluation and monitoring as part of the evolutionary process incorporated into the new management approach.

FOREST CHEMICALS

1. Buffer widths for aerially applied pesticides shall be 50 feet on each side of the stream. Types 4 & 5 would only be buffered when water is present.
2. Buffers of 200 feet from residences and 100 feet of lands used for farming would be required unless such farmland or residence is owned by the forest landowner, or such activity is acceptable to that landowner, or in accordance with current state regulations regarding noxious weeds. Label requirements may require more for certain products.

3. Parallel flight adjacent to buffers will be required unless the deviation is approved in advance by the DNR.
4. The use of drift control agents next to buffers will be required (water and residential).
5. Insert "prohibit" and delete "avoid" in Pg. 5B (222.38.020(4)F regarding compliance with federal law.
6. Recommend a trial notification project (perhaps in E. Jefferson, Whatcom or King Counties) to develop simple, cost-effective spray notification procedures. The program should involve landowners/managers (both industrial and farm forester), citizens, and the DNR. Funding will be by donated staff time and other in-kind donations from all participants. The shares to be decided by the local group.
7. Boundaries of an aerial pesticide spray area shall be posted by the landowner/manager with a sign at significant points of regular access at least five days prior to treatment. Posting should remain at least fifteen days after the spraying is complete. Posting at formal, signed trailheads that are adjacent to aerially treated units would be required. The signs will contain the name of the product used, date of application, and a contact telephone number.
8. There is a need to assess the interaction of burning with site-preparation chemicals through a research program.
9. The Department of Agriculture shall certify that these regulations concerning chemicals meet the state standards and be responsible for promptly recommending any changes as information, products, and standards change.
10. Delete 222.38.020(B)(C) which permits burial of containers.
11. All aerial pesticide applications are a Class III application, except in the case of an adjacent small landowner making use of a large adjacent owner's aircraft, where the practice will remain a Class I.
12. The possible need to develop state label requirements to reduce risk to fish-bearing streams and key wildlife habitats should be investigated.

SCARIFICATION

1. Scarification shall be limited to appropriate soil moisture conditions to preclude unnecessary damage to soil productivity and material reduction of water quality.

2. Heavy equipment shall be restricted from operating within 10 feet of the ordinary high water marks of types four and five waters and restricted riparian management zones as described in that section. The ten foot setback shall apply on slopes up to thirty percent. On slopes greater than 30 percent, scarification will not be permitted within fifty feet of a type 1-5 water unless a site-specific plan has been approved by the DNR.

WATER USERS

The TRAX system needs to be improved to alert upstream operators of registered downstream uses. The current system is too narrow in the "flagging" and only alerts for a very limited distance. The establishment of a system that recognizes hydrological proximity is necessary. The preferred option would ultimately be a geographical information system.

SLASH BURNING

1. On and off-site impacts (E.G. air pollution) from prescribed burning is a concern to all managers. Site-specific analysis should balance the various concerns.
2. There needs to be an ongoing assessment of the impacts, both positive and negative, of slash burning.
3. The extreme hazard regulation (WAC 332.24.360) should be reviewed with the idea of accepting increased risk versus the burning that is required by the current regulation.
4. When requested by the DNR or Ecology, to protect water quality, the landowner will take erosion control measures (as directed by the agency) on severely burned sites. This would require a WAC to be included in the Post Harvest Cleanup section.

REGENERATION OF EXTREME SITES

1. For sites with low productivity potential, the natural regeneration requirement would be changed to ten years. Requires change in the RCW.
2. Broadcast burning on site class five would only be permitted as part of a DNR approved regeneration plan.
3. For those sites which the DNR determines have a high probability of difficult regeneration, the DNR must approve a full site plan, including harvest systems, site preparation, and regeneration techniques.

ARCHEOLOGICAL AND CULTURAL RESOURCES

OPPORTUNITIES

Archeological resources are sites of historic importance which contain artifacts of aboriginal or historic use. Cultural resources include both religious and social uses. Generally these uses are ongoing rather than historic. However, there may be traditional cultural activities that have not been practiced for some time due to access problems, site conditions, or some other reason. These activities may be re-established.

There is not a general understanding of the importance of Indian archaeological and cultural places. Further, there has not been a commitment to inventory, preserve and protect these uses or assure access to these sites. It is uncertain how much information tribes have been able to compile; and, there is reticence to share sensitive information. However, the T/F/W participants have defined measures that will accommodate these tribal concerns, while providing landowners with the opportunity to resolve any conflicts in a timely and cooperative manner. These measures will also preserve the anonymity of these designated sites which is a large concern to the affected tribes.

MEASURES

The parties agree that:

1. The Department of Natural Resources (DNR) will commit to updating and maintaining the TRAX (or other system) with information regarding archeological and cultural resources.
2. The tribes will, at their option, provide information to DNR regarding the general location of archeological and cultural resource sites.
3. Forest practice applications will be cross checked with the TRAX system. Should the proposed practice coincide with an identified cultural or archeological resource, both the landowner/operator and the appropriate tribe will be notified immediately.
4. These activities will be considered a Class III forest practice and will have a 30 day review period.
5. During the 30-day review period the landowner is required to meet with the affected tribe with the objective of developing a plan for protecting the archeological/cultural

values.

6. If a plan is agreed to, the tribe may request a review by the Office of Archeological and Historical Preservation (OAHF).
7. After this process, DNR will issue the permit with any necessary conditions.
8. If a plan is not agreed to, DNR may then decide whether to issue the permit and what conditions to impose. OAHF will be involved to insure compliance with state regulations.
9. DNR decisions may be appealed through any and all existing processes.
10. There is no agreement, (implied or expressed) by any party as to the extent or nature of these areas but there is agreement on this process as a method to resolve these issues as they arise.

OLD GROWTH

OPPORTUNITIES

Wildlife representatives identified large contiguous stands of old growth as important to certain wildlife species. Their priority area of concern as to non-federal lands relates to the remaining old growth on the Olympic Peninsula.

It was estimated that private landowners have only 70,000 acres of old growth remaining in the State and these are of critical importance to the private companies because they provide a bridge until their second growth stands are mature enough for harvest.

MEASURES

The DNR, and wildlife and environmental organizations have committed to work together in 1987 to address the old growth issue in the context of DNR's management plans on the Olympic Peninsula. Harvest of old growth stands on private lands will continue to be subject to the general forest practice rules and regulations. This planning process will be an initial component of a pilot for a Resource Management Plan.

CUMULATIVE EFFECTS

OPPORTUNITIES

The T/F/W participants recognize that all resource management practices have the ability to affect other resources. Multiple actions over time and space within an area or watershed must be monitored and evaluated in a cooperative fashion to anticipate or minimize adverse impacts on other natural resources. In light of this, the following system will be implemented to meet the collective needs of timber, fish, wildlife and water quality.

MEASURES

The proposed solutions use specific Resource Management Plans which include basin goals, monitoring and identification/resolution of problems in those basins to deal with cumulative effects; or baseline regulations which anticipate cumulative effects. Information gathered in plan and non-plan basins will be collected and used to determine future modifications to plans and regulations. Both methods must take into account the following:

1. Cooperators identify or establish basin, region, or state-wide resource goals (Timber, Fish, Wildlife, Water).
2. Develop monitoring/evaluation techniques to determine if goals are being met, including impact interactions.
3. Develop risk assessment techniques for anticipating, reducing, or avoiding violation of goals.
4. Alter management practices or regulations to the extent necessary to attain goals.
5. Re-evaluate goals as new information becomes available.

CORRECTIVE ACTION (FOR EXISTING AREAS)

OPPORTUNITIES

Forest, fisheries, and wildlife management have occurred in Washington State for about one hundred years. These activities have occurred with varying levels of concern for the long-term implications for our natural resources. Past practices have produced environmental impacts that influence the ability of today's managers to maximize the above resources. Opportunity exists to review and correct the effects of past practices in timber, fisheries, wildlife and water quality management.

The T/F/W participants have agreed to a management process which includes monitoring and evaluation of future activities. It is presumed that adaptive management practices based on improved information will lessen, over time, the need for future corrective action.

MEASURES

1. The intent is to fix the problems and not the blame.
2. Current statutory language on the length of liability will remain unchanged for three years.
3. In those cases where a landowner conducts rehabilitation or corrective action, pursuant to an approved plan, the landowner will not incur additional liability for taking action to address these problems.
4. In those cases where a landowner conducts rehabilitation or corrective action, pursuant to an approved plan, the landowner will not incur future additional financial or corrective responsibility as to those actions or areas addressed.
5. The participants agree to support a state early action program, using existing state funding where watershed and stream corrective action would be utilized in three basins, specifically, Nooksack, Stillaguamish, and White Rivers, in the region from Pierce County to the Canadian border to improve stream quality and the riparian zones adjacent to those streams.

INCENTIVES/COMPENSATION

OPPORTUNITIES

It is important to note the TFW process incorporates area of mutual gain and flexibility, "win-win" proposals, whenever possible. The values of public and private resources are very real. Precise quantification of those values is quite variable however. When tradeoffs occur between public and private resources, it is logical to seek ways to maintain equity.

MEASURES

Mechanisms for incentives and compensation are many and variable and are incorporated throughout the TFW proposal.

For the initial three years of this new system, the timber industry agrees to refrain from seeking additional monies from the state

through the legislative process to compensate private landowners for the requirements or impacts which result from this agreement. As the actual impacts become known and as the management system evolves, the timber industry reserves the right to raise the issue at the time for each in-depth review in years three and eight.

In the interim years, the emphasis for all parties will be to search for additional mechanisms that will not require additional monies from the state.

Any future mechanisms and the questions of who pays and from what revenue will be addressed as part of the evolutionary process.

APPENDIX I

RESOURCE MANAGEMENT PLANNING PROCESS

BASIN AND AREA PLANS

RESOURCE PLANNING UNIT DEFINITION

1. Encourage the current watershed planning process (WDG-WDF-Tribes) to match definitions with PSWQA definitions of basic planning units.
2. These basic planning units will be the base from which our resource planning units (RPU) would be drawn. These units will be forested lands within the basic planning units. Statewide resource planning coordinators will further define the units using the following criteria:
 - Physical geography
 - Resource needs
 - Timber management needs
 - Habitat types
 - Stream order (mainstreams and tributaries)
 - Basins
3. After the basic unit is drawn, ownerships will be taken into account and adjustments/refinements made where possible.

PROCESS

I. FOREST PRACTICE BOARD WOULD ADOPT STATE PLANNING ELEMENTS & OBJECTIVES

- Periodic review
 - Timelines for production of a plan
 - Guidelines for process
 - Identify methods of dispute resolution
 - What needs to be included in any plan
 - Develop a priority list of basins and 2 or 3 "pilot" basins
- The levels of participation based on acreage in plan and the numbers of landowners will be a significant factor in setting priorities and determining when the development of a basin plan becomes an effective way

to proceed.

Benefits of Resource Management Plans

- Meets need for public participation and review
- TFW working group/policy group could prepare recommended list to Board

II. INITIATION: NOTICE OF INTENT TO PLAN

- Objective is to discover who wants to participate
- If not in FPB adopted priorities list, landowners or initiators need to provide funding (support) to produce plan
- Organizational meeting chaired by DNR
- Published notice

Benefits

- Gives open invitation to all possible interest groups
- Is open and public
- Encourage USFS participation because they must meet or exceed State standards

III. IDENTIFICATION OF COOPERATORS

- Cooperators may include:
DNR, WDG, WDF, Ecology, affected tribes, landowners, public interest groups, other governmental agencies
- DNR, WDG, WDF, Ecology must participate to enter stage IV

Benefits

- Everyone knows who players are
- Keeps the group stable (no revolving membership)
- Allows for adaptive management
- Because these would be management plans, and to facilitate the process, an MOU between the affected tribes and state agencies is necessary. It would state that neither the affected tribes nor State give up

sovereign rights by participating in planning process or signing plans.

IV.

PLAN DEVELOPMENT AND REVIEW

- Identification of issues and resources
- What, if any, requirements will be included beyond the State requirements
- Data needs
- Use of ID teams
- Minimum term (years) for pre-operations contracts
- Only cooperators participate in plan development
- If the cooperators don't meet Board timelines, then that watershed would drop to the bottom of the priority list
- Agreement to submit plan to public review
- Non-involved public and others review and comment
- Minimum of (1) public meeting in affected area; published notification of meetings
- Cooperators may accept/reject comments and change plan to meet public concerns
- Not all cooperators need to support a draft plan to proceed to adopting hearings, but a sufficient cross section representing the broad spectrum of interests must agree on its contents
- Joint adoption hearings by agencies or FPB and Ecology
- Formal hearing = public involvement
- Plan can either be accepted as is or rejected and sent back to cooperators
- need timely action to adopt or reject plan
- Agencies must sign after adoption

V.

PRE-OPERATION CONTRACT(S)

- The TFW group intended that these plans would be in the form of binding and enforceable contracts and would replace the regulations.
- There remain legal questions about the ability of the governmental entities to enter into long-term contracts in the regulatory area. In order for the plans to replace the regulations, these legal issues will need to be addressed.
- If the contracting problems cannot be satisfactorily addressed, then the basin resource management plans could be implemented through a series of annual alternative management plans.
- Only landowners who sign a contract are bound to the plans. All other landowners would continue to use the regulations.
- The contracts should reflect the plan elements as to each participating landowner.
- The plan should contain formal provisions for adding landowners midway through contract period.

APPENDIX II

FOREST PRACTICES BOARD MANUAL

(6) GUIDELINES FOR CLEARING SLASH AND DEBRIS

FROM TYPE 4 OR 5 WATER

WAC 222-30-100(4)(b) provides that the Department of Natural Resources may require removal of "slash" and "debris" from below the 50 year flood level of Type 4 or 5 Water there is potential for damage to public resources.

Stream cleanout should be viewed as a "backup" or supplement to preventive measures such as those described in WAC 222-30-050(2)(b), providing that care shall be taken to minimize accumulation of slash where bucking or limbing must be done between the banks of a Type 4 Water.

Generally, slash and debris removal will be required wherever there is evidence of potential mass failure that will result in downstream damage to public resources and capital improvements.

Mass soil failures are usually initiated by an increase in soil moisture which causes or increases soil instability. The weight of stream channel debris is seldom responsible for initiating mass failures. However channels containing large quantities of woody debris may contribute substantial amounts of material and increase downstream damage. In relatively stable areas and channels, debris in small streams helps retain sediment. Debris removal should be limited to those situations where there is a high potential for mass failures and likelihood of substantial damage to downstream resources.

These guidelines apply to steep drainage channels with hillslopes greater than 60% and evidence of potential for debris avalanche, torrents, and flows. Do not use guidelines in areas where channel gradients are less than 10% or in areas where hillslopes are 20-40% and there is little evidence of potential for debris flows, torrents and sluice-outs.

Adequate design, location, construction and maintenance of forest

roads can substantially reduce mass failures associated with roads.

Four categories are used in the guidelines:

- A. Artificial Conditions Associated with Mass Soil Movement and Debris Torrents and Flows in Type 4 and 5 Water Channels.
- B. Natural Conditions Associated with Mass Soil Movement.
- C. Potential for Debris Torrents and Flows to Cause Impacts
- D. Type of Slash and Woody debris to be Removed From Type 4 and 5 Water Channels.

Categories A and B help identify potential mass soil failures. Category C indicates potential for the mass soil failure to move downstream far enough to cause significant damage.

When an item from category A or B is identified, the item is evaluated in combination with all items in category C to determine the need for stream cleanout. Use category D to guide the type and size of material that is to be removed from the stream channel.

These guidelines cover most situations; however, there may be specific cases where local knowledge of problem areas should modify these guidelines.

Whenever stream cleanout is required, the following statement should be included on the Compliance Order or Forest Practices approval: "A Hydraulics Project Approval may be required for stream cleanout in Type 4 and 5 Waters. Contact the Departments of Fisheries or Game for this approval.

A. ARTIFICIAL CONDITIONS ASSOCIATED WITH MASS SOIL MOVEMENT AND DEBRIS TORRENTS AND FLOWS IN TYPE 4 AND 5 WATER CHANNELS.

- 1. Bridges and culverts too small to safely pass flows of water, bed load and debris at high water or flood levels. See WAC 222-24-040(1) and (2).

Example:

- a. Marginal culvert or bridge capacity increasing depth of back water on fill.
- 2. Concentration of surface flow where a channel carries significantly more water than naturally.

Examples:

- a. Two or more streams diverted into a single channel

by lack of culverts at road crossings.

- b. Concentrating road runoff and ditchwater at stream crossings.
- 3. Ground water seepage reducing stability of road cuts, fills and landings.

Examples:

- a. Roads on hillslopes greater than 60% where intercepted ground water may saturate road prism or fill and cause slope failure.
- b. Road cuts which intercept sufficient ground water to significantly increase surface flow.
- 4. Slopes overloaded through deposit of unstable or excessive overburden of soil.

Examples:

- a. Loosely compacted fill or soil disposal sites.
- b. Unstable or over steepened deposit of material from road, landing, or pit construction.
- 5. Slash and debris incorporated in fill material. Amounts will vary with the placement of the materials, compaction, size of slash, etc., in roads and landings.
- 6. Road, landings and pits located on "headwall" drainage areas* with slopes exceeding 60 percent gradient.

* A "headwall" drainage area is located at the up-slope end of a Type 5 Water (order 1) drainage channel. The drainage area contains no defined channel, is usually spoon shaped, often longer than wide when viewed from above and dished-in. The lower part of the drainage area accumulates colluvial soil material to some depth (5-50 ft.). The upper part of the drainage area is steeper, has thin soils and may have areas of rock outcrop. The lower portion of "headwall" drainage areas are subject to natural periodic wasting of accumulated soil materials.

- 7. Drainage e.g. culverts, flumes and waterbars discharging onto unstable slopes.

B.**NATURAL CONDITIONS ASSOCIATED WITH MASS SOIL MOVEMENT**

1. Geologic evidence of potential soil failures.

Examples:

a. Planes of weakness in bedrock paralleling hillslope:

- layering in sediments or lava flows
- joints or fracturing at angle to layering
- faults or sheared, slivered or crushed bedrock

b. Weak bedrock or poorly consolidated subsoils or sediments:

- deeply weathered rock especially rusty brown or iron oxide colors.
- soft, bleached or clayey "rock" material which can be cut with shovel
- material crumbles or cracks when wetted and dried

2. Evidence of restricted ground water movement:

- coarse soil overlying unfractured rock or cemented subsoils
- banks with clay or silt overlain by sands or gravel
- bands of water loving plants or seeps or springs beginning at similar elevation along slopes
- lines of small gullies or slumps beginning at similar elevation along slopes

3. Channel gradients over 10% and hillslopes over 60% or topography showing evidence of mass soil wasting, particularly those areas with younger vegetation or bare soil.

Examples:

- a. Debris avalanche or torrent areas may be indicated by:
- failures having same slope as surrounding areas.
 - barren bedrock or scoured drainage channel.
 - downslope accumulation of mixed woody debris.

- alluvial fan with debris at mouth of streams.
- b. Earth flow or slump areas may be indicated by:
- hummocky or uneven ground surface.
 - relatively flat bench bounded on the uphill side by a steep concave scarp; may have "sag pond" on the back portions of the bench.
 - sharp break in slope relative to surrounding terrain.
 - disrupted natural drainage patterns; may include springs and small swamps without channel or outlet to streams.
 - cracking or separation of ground surface.
 - "jack-strawed" trees.

C.**POTENTIAL FOR DEBRIS TORRENTS AND FLOWS TO CAUSE IMPACTS**

The probability of debris moving through a Type 4 or 5 Water to a Type 1, 2, or 3 Water or reaching a capital improvement is a function of five factors downstream from the area where cleanout is being considered. These factors must be considered in combination:

1. Channel Gradient - A decrease in channel gradient is more effective in dissipating energy and stopping a debris flow than is a constant channel gradient. The potential of debris reaching a higher class stream should be considered for channels where boulders greater than 12 inches diameter or exposed bedrock indicate stream power is high enough to readily transport debris.
2. Channel Alignment - Frequent bends, twisting channels and points where channels join at 45-90 degrees dissipate energy rapidly and are more effective in stopping debris flows than relatively straight channels.
3. Channel Length - Short channels entering directly into Type 1, 2, or 3 Water or in near proximity to a capital improvement have greater potential for causing damage. As a guide, streams 3/4 of a mile or less in length (1/2 mile or less in coastal areas) upstream from fish bearing waters or a structure susceptible to damage should be considered to have a high damage potential. Evaluate longer channels damage potential using factors 1, 2, and 4 of this section.

4. Channel Characteristics - Very large boulders, cascades or falls, embedded woody material, islands or sediment storage zones within the channel tend to reduce debris and sediment movement.

D. TYPE OF SLASH AND WOODY DEBRIS TO BE REMOVED FROM TYPE 4 AND 5 WATER CHANNELS WHERE STREAM CLEANOUT IS REQUIRED TO PREVENT DAMAGE FROM ACCUMULATED SLASH OR WOODY DEBRIS LAMS AND THEIR MOVEMENT DOWNSTREAM:

1. Remove loose, unstable or floatable slash and woody debris from below the 50-year flood level and place the material where it will not slide, roll or re-enter the water. Evaluate flood level for periodic events such as heavy rainfall on saturated soils or snow. Where cleanout is required, remove material identified in D.5.
2. Leave firmly embedded material and woody debris that does not impede flow through culverts or bridges. See WAC 222-24-050(1)(2)(3) and (4).

Examples:

- a. Logs embedded along their length or at both ends;
 - b. Slash buried under stable deposits of soil, rock or woody debris.
3. Remove woody debris overhanging the channel and likely to enter the water if it is too small to remain stable after entering the stream (see D.5.).

Example:

- a. Slash or woody debris lying loose on the ground or in piles or accumulations over the channel or along channel slopes where it is not well anchored by large stable logs or stumps or embedded in the ground.
4. Do not buck, notch or remove trees and logs that are to be left in the stream channel nor any that are firmly embedded.
 5. Stability of debris depends upon the size of the material, the degree to which it is buried or embedded and the stream size and power.

Examples:

- a. Leave material that is firmly embedded in the bank. Do not disturb material that is to be left.

- b. Remove loose floatable material that will be moved by high flows or block downstream culverts or bridges.
- c. In channels less than 10 feet in width:
 - leave all material over 15 feet in length.
 - leave all material over 10 inches in diameter and over 5 feet in length.

In channels over 10 feet in width:

- leave all material over 20 feet in length.
- leave all material over 15 inches in diameter feet in length.

APPENDIX III

EASTERN WASHINGTON RIPARIAN PRESCRIPTION

BOUNDARY

The boundary dividing eastern and western Washington forest types shall be as described by the Department of Natural Resources and as agreed to by the T/F/W Eastern Washington Riparian Committee. Said line has been identified on an United States Department of the Interior Geological Survey Map. Forested lands lying east of this boundary excluding tribal and federal lands, will be subject to the eastern Washington riparian prescription as specified below.

HARVEST TYPE

Forest practice applications shall clearly indicate the harvest type as defined in WAC 222-16-010 (33) and as planned adjacent to the RMZ.

RMZ WIDTHS

Partial Cutting (as defined in WAC 222-16-010 (33))

The minimum RMZ width shall be 30 feet to a maximum of 50 feet on both sides of the stream, and shall be expanded to include swamps, bogs, marshes and ponds adjacent to the stream.

NON-PARTIAL CUTTING

RMZ width shall average 50 feet on both sides of the stream. The minimum RMZ width shall be 30 feet out to a maximum of 300 feet. RMZ shall be expanded to include swamps, bogs, marshes and ponds adjacent to the stream.

LEAVE TREE REQUIREMENTS (TREES PER ACRE)

Leave all trees <_ 12" dbh

Leave all snags

Leave 16 live conifers > 12" and < 20" dbh distributed by size, as representative of the stand.

In addition, leave 3 conifers >_ 20" dbh and the two largest deciduous >_ 16" dbh.

Where these deciduous trees do not exist, and where two snags >_ 20" dbh do not exist, leave 5 conifers >_ 20" dbh. If 20" trees do not exist,

leave the next largest size class. In addition, leave 3 hardwoods 12" - 16" where they exist.

MINIMUM LEAVE TREE REQUIREMENTS

75 T.P.A. >_ 4" on boulder/bedrock substrate

135 T.P.A. >_ 4" on gravel/cobble substrate

RMZ's with stocking levels below this will require the filing of an alternative plan with DNR prior to harvest.

PONDS

Other water classifications Type 3 or greater will require leaves of 75 T.P.A. with a minimum RMZ width of 30'.

SMALL HARVEST EXEMPTION

This exemption will still apply as indicated in WAC 222-30-020(4)(e).

The above prescription will be in effect until the first major T/F/W review called for in the T/F/W Agreement. In the interim, the effective-

ness of this prescription will be intensively monitored to measure its protection of public resources and the impact on the forest landowner.

APPENDIX IV

GROUND RULES FOR TIMBER-FISH-WILDLIFE

A BETTER FUTURE IN OUR WOODS AND STREAMS

Each of the participants to these discussions agree to these ground rules:

1. We will attempt to develop a system which provides:
 - a. Minimum guarantees for everyone,
 - b. Incentives which maintain and enhance timber, fisheries and wildlife resources, and
 - c. Future flexibility, accountability, better management, compliance with regulations and resource goals.
2. All participants in the negotiation to bring with them the legitimate purposes and goals of their organizations. All parties recognize the legitimacy of the goals of others and assume that their own goals will also be respected. These negotiations will try to maximize all the goals of all the parties as far as possible.
3. This effort will receive priority attention, staffing and time commitments.
4. Give the same priority to solving the problems of others as will your own.
5. Commitment to search for opportunities: without creativity there will be no plan or agreement.
6. Commitment to listen carefully: ask questions to understand and make statement to explain or educate.
7. All issues identified by any party must be addressed by the whole group.

8. State needs, problems and opportunities, not positions – positive candor is a little used but effective tool.
9. Commitment to attempt to reach consensus on a plan.
10. Commitment to be an advocate for an agreed plan.
11. Attempt to protect each other and process politically with constituencies and general public.
12. Weapons of war are to be left at home (or at least at the door).
13. Anyone may leave the process and the above ground rules, but only after telling the entire group why and seeing if the problem(s) can be addressed by the group.
14. All communications with news media concerning these discussions will be by agreement of group. Everyone will be mindful of the impacts their public and private statements will have on the climate of this effort.
15. No participant will attribute suggestions, comments or ideas of another participant to the news media or non-participants.
16. All rights, remedies, positions and current prejudices available to everyone if the effort is unsuccessful.
17. Participants are free to, and in fact are encouraged to, seek the best advice from their friends and associates informed of the progress of the discussions.
18. All of the individuals who are participants accept the responsibility to keep their friends and associates informed of the progress of the discussions.
19. If you hear a rumor, call facilitator before acting on it.