FACT SHEET

The United States Environmental Protection Agency (EPA)
Plans To Reissue A
National Pollutant Discharge Elimination System (NPDES) Permit To:

Clearwater Forest Industries
P.O. Box 340

Kooskia, Idaho 83859

Permit Number:	ID-002770-7
Public Notice start date:	February 27, 2002
Public Notice expiration date:	March 27, 2002

Technical Contact

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Phone: (206) 553-1774
1-800-424-4372 ext. 1774 (within Alaska, Idaho, Oregon, and Washington)
Email: narvaez.madonna@epa.gov

EPA Proposes NPDES Permit Reissuance.

EPA proposes to reissue an NPDES permit to Clearwater Forest Industries, Kooskia, Idaho. The draft permit places conditions on the discharge of pollutants from the facility to the South Fork Clearwater River. In order to ensure protection of water quality and human health, the permit places limits on the types and amounts of pollutants that can be discharged.

This Fact Sheet includes:

- information on public comment, public hearing, and appeal procedures
- a description and map of the current discharge
- a listing of proposed effluent limitations and other conditions
- detailed technical material supporting the conditions in the permit

EPA Certification.

Because this facility is located on tribal lands and discharges to tribal waters of the Nez Perce, EPA will certify the NPDES permit for Clearwater Forest Industries, Kooskia, Idaho, under section 401 of the Clean Water Act.

Public Comment.

Persons wishing to comment on or request a Public Hearing for the draft permit may do so in writing by the expiration date of the Public Notice. A request for a Public Hearing must state the nature of the issues to be raised as well as the requester’s name, address and telephone number. All comments and requests for Public Hearings must be in writing and should be submitted to EPA as described in the Public Comments Section of the attached Public Notice.

All written comments and requests should be submitted to the attention of the Director, Office of Water at the following address:

U.S. EPA, Region 10
Re: Clearwater Forest Industries, Kooskia, Idaho
1200 Sixth Avenue, M/S OW-130
Seattle, Washington 98101

Comments may also be submitted electronically to the technical contact listed above.

After the Public Notice expires, and all comments have been considered, EPA's Director for the Office of Water in Region 10 will make a final decision regarding permit re-issuance. If no significant comments are received, the tentative conditions in the draft permit will become final, and the permit will become effective upon issuance. If comments are received, EPA will address the comments and issue the permit. The permit will become effective 30 days after the issuance date, unless the permit is appealed to the Environmental Appeals Board within 30 days.

Documents are Available for Review.
The draft NPDES permit and related documents can be reviewed or obtained by visiting or contacting EPA's Regional Office in Seattle between 8:30 a.m. and 4:00 p.m., Monday through Friday (See address below). Draft permits, Fact Sheets, and other information can also be found by visiting the Region 10 website at www.epa.gov/r10earth.

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue, OW-130
Seattle, Washington 98101
(206) 553-1774 or
1-800-424-4372 (within Alaska, Idaho, Oregon and Washington)

The Fact Sheet and draft permit are also available at:

EPA Idaho Operations Office
1435 North Orchard Street
Boise, Idaho 83706
(208) 378-5746

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I. APPLICANT

Clearwater Forest Industries, Kooskia, Idaho
NPDES Permit No.: ID-002770-7

Facility Mailing Address:
P.O. Box 340
Kooskia, Idaho 838599

II. FACILITY INFORMATION

A. Treatment Plant Description

Clearwater Forest Industries is a timber processing operation located off Idaho Highway 12 between Kooskia and Stites in Idaho County. The facility includes a log chipper, a sawmill complex, a planer complex, dry kilns, a fire pond, an office, a shop, a boiler, and three detention ponds. Clearwater Forest Industries owns and operates seven outfalls consisting of process and storm water that discharge to the South Fork Clearwater River. Outfalls 1, 3, and 7 discharge a combination of log deck sprinkling and storm water. Log deck sprinkling occurs from April through October only. Outfalls 2, 5, and 6 discharge storm water only; outfall 4 discharges a combination of storm water and boiler blowdown with recycled kiln condensate. The boiler blowdown/kiln condensate flow is approximately 0.0012-0.0019 mgd. Flow has not been measured for outfalls 1, 2, 3, 5, 6, or 7.

The Clearwater Forest Industries facility provides treatment prior to discharge for outfalls 3, 4, and 7 through settling ponds. Outfalls 1, 2, 5, and 6 receive no treatment prior to discharge to the receiving water.

B. Background Information

Clearwater Forest Industries filed an application for an NPDES discharge permit that was received by EPA on March 29, 1996. The facility was contacted by EPA Region 10 in August, 2001 to determine if there were any updates to the application. The only update to the original application was the addition of settling prior to discharge at outfall 004.

III. RECEIVING WATER

A. Outfall Location/ Receiving Water

Clearwater Forest Industries facility discharges to the South Fork Clearwater River three miles downstream of the South Fork's confluence with the Clearwater River. USGS Station 13338500, called "SF Clearwater River at Stites, Idaho" is the closest station from which ambient flow data is available. USGS data indicate the 7Q10 for this reach is 91.3cfs; the 1Q10 is 60.0 cfs.

B. Water Quality Standards

A State's water quality standards are composed of use classifications, numeric and/or narrative water quality criteria, and an anti-degradation policy. The use classification system designates the beneficial uses (such as cold water biota, contact recreation, etc.) that each water body is expected to achieve. The numeric and/or narrative water quality criteria are the criteria deemed necessary, by the State, to support the beneficial use classification of each water body. The anti-degradation policy represents a three-tiered approach to maintain and protect various levels of water quality and uses.

The Idaho *Water Quality Standards and Wastewater Treatment Requirements* (IDAPA 58.01.02.140.16.) protect the South Fork of the Clearwater River (C-1, South Fork Clearwater River - Butcher Creek to Mouth) for the following beneficial use classifications: cold water biota, salmonid spawning, and primary contact recreation. This segment of the South Fork Clearwater River is also designated a special resource water.

The criteria that the State of Idaho has deemed necessary to protect the beneficial uses for the South Fork Clearwater River, and the State's anti-degradation policy are summarized in Appendix A. The anti-degradation analysis for this facility is also found in Appendix A. Based on the results of this analysis, continued discharge from the Clearwater Forest Industries facility will not result in a reduction in ambient water quality in the South Fork of the Clearwater River when measured below the mixing zone.

C. Water Quality Limited Segment

A water quality limited segment is any waterbody, or definable portion of water body, where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards. The South Fork Clearwater River has been listed as a water quality limited segment. This section of the river has been listed as water quality limited for sediment and temperature.

Section 303(d) of the Clean Water Act (CWA) requires States to develop a Total Maximum Daily Load (TMDL) management plan for water bodies determined to be water quality limited. A TMDL documents the amount of a pollutant a waterbody can assimilate without violating a state's water quality standards and allocates that load to known point sources and nonpoint sources. The Idaho Department of Environmental Quality (IDEQ) is scheduled to complete a TMDL for the South Fork Clearwater watershed in December, 2002. This TMDL will address sediment and temperature.

IV. EFFLUENT LIMITATIONS

EPA followed the Clean Water Act, state and federal regulations, and EPA's 1991 *Technical Support Document for Water Quality-Based Toxics Control* to develop the proposed effluent limitations.

In general, the Clean Water Act requires that the effluent limits for a particular pollutant be the more stringent of either technology-based effluent limits or water quality-based limits. EPA sets technology-based limits based on the effluent quality that is achievable using available technology. Water quality-based limits are designed to prevent exceedances of the Idaho water quality standards in the South Fork Clearwater River.

EPA develops technology-based limits based either on federally-promulgated effluent guidelines, or, where such guidelines have not been promulgated for an industry, based on best professional judgement. The Agency evaluates these limits to determine whether they are adequate to ensure that water quality standards are met in the receiving water. If the limits are not adequate, EPA must include additional water quality-based limits. For more information on deriving technology-based effluent limits and water quality-based effluent limits see Appendix B. The following summarizes the proposed effluent limitations that are in the draft permit.

A. The pH range must be between 6.5 - 9.0 standard units.

B. There must be no discharge of floating solids or visible foam other than in trace amounts.

C. The log pond overflow and drainage ways from log yards shall be baffled and screened or otherwise controlled to prevent the discharge of debris, floating solids and oil.

D. Allowance of discharges (Outfalls 1, 2, 3, 5, 6, and 7)

1. May 1 - October 31: No discharge is permitted from log ponds, log decks, and log yards where sprinkling occurs*.

2. November 1 - April 30: Discharge is permitted provided that at least a 50:1 dilution is available in the receiving stream and the following limitations are met*:

Parameter	Limitations (maximum daily)
Flow	As low as practicable as necessitated by precipitation
pH	6.5 - 9.0

* If due to unseasonable wet weather or other reasons beyond the control of the permittee, it becomes necessary to discharge from a log pond during the May 1 through October 31 period or at a time when a 50:1 dilution is not available, the discharge may be permitted upon approval by EPA.

E. No sewage or process wastewater** shall be discharged to the log pond.

**Process wastewater does not include cold deck sprinkling water, yard runoff, non-contact cooling water, or fire deluge water. When these wastestreams are discharged to the log ponds, sufficient recirculation must occur in order to prevent discharge except during the wet weather months.

F. No discharge is permitted during log pond dredging operations. Log ponds must not be drained or dredged without prior approval from EPA. All dredged material from the pond shall be stored in a manner which will prevent them from contaminating surface waters.

G. Waste Discharge Limitations for Surface Water Discharge for Outfall 4:

Parameter	Limitations (maximum daily)
pH	6.5 - 9.0

H. Tables 1 and 2 below summarizes the proposed effluent limitations and monitoring requirements for the Clearwater Forest Industries Facility.

Table 1. Proposed Effluent Limitations for Outfalls 1, 2, 3, 5, 6, and 7

Parameter	Average Monthly Limit	Average Weekly Limit	Daily Maximum Limit
pH, standard units	6.5	---	9.0

Table 2. Proposed Effluent Limitations for Outfall 4

Parameter	Average Monthly Limit	Average Weekly Limit	Daily Maximum Limit
pH, standard units	Range 6.5 to 9.0	---	

V. MONITORING REQUIREMENTS

Section 308 of the Clean Water Act and federal regulation 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring may also be required to gather data for future effluent limitations or to monitor effluent impacts on receiving water quality. The Permittee is responsible for conducting the monitoring and for reporting results on Discharge Monitoring Reports to EPA. Tables 1 and 2 above present the proposed effluent limitations requirements. Table 3 below presents the proposed effluent monitoring requirements.

Table 3. Proposed Effluent Monitoring Requirements

Parameter	Outfall(s)	Monitoring Requirements	
		Sample Frequency	Sample Type
Effluent Flow	All	1/week	Recording
pH	All	1/week	Grab
Oil & Grease	All	1/quarter	24 hr composite
Total Suspended Solids	All	1/month	24 hr composite
BOD_5	1, 2, 3, 5, 6, and 7	1/month	24 hr composite
DO	All	1/quarter	Grab
Temperature	4	1/quarter	Grab

Surface water monitoring is required to help gather data for the TMDL that is being developed. Table 4 describes the proposed surface water monitoring requirements.

Table 4. Proposed Surface Water Monitoring Requirements

Parameter	Units	Sampling Frequency	Sampling Location
Receiving Stream Flow	cfs*	1/quarter	Upstream of outfalls
BOD_5	mg/L	1/quarter	Upstream of outfalls
TSS	mg/L	1/quarter	Upstream of outfalls
pH	standard units	1/quarter	Upstream of outfalls
DO	mg/L	1/quarter	Upstream of outfalls
Temperature	°C	1/quarter	Upstream of outfalls

* Monitoring for receiving stream flow must occur on the same day as monitoring for effluent flow. Receiving stream flow may be obtained by the existing USGS gauging station.

VI. OTHER PERMIT CONDITIONS

A. Quality Assurance Plan

The federal regulation at 40 CFR 122.41(e) requires the Permittee to ensure that the monitoring data submitted is accurate and to explain data anomalies if they occur. To accomplish this, the permit requires the Permittee to develop a Quality Assurance Plan to ensure that the monitoring data submitted is accurate and to explain data anomalies if they occur. The Permittee is required to complete a Quality Assurance Plan within 180 days of the effective date of the final permit and to certify completion of the plan to EPA. The Quality Assurance Plan must consist of standard operating procedures the Permittee must follow for collecting, handling, storing and shipping samples, laboratory analysis, and data reporting.

B. Additional Permit Provisions

Sections II, III, and IV of the draft permit contain standard regulatory language that must be included in all NPDES permits. Because they are regulations, they cannot be challenged in the context of an NPDES permit action. The standard regulatory language covers requirements such as monitoring, recording, reporting requirements, compliance responsibilities, and other general requirements.

VII. OTHER LEGAL REQUIREMENTS

A. Endangered Species Act

The Endangered Species Act requires federal agencies to consult with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service if their actions could adversely affect any threatened or endangered species. EPA has determined that issuance of this permit will not affect any of the endangered species that may occur in the vicinity of the discharge.

Issuance of an NPDES permit for the Clearwater Forest Industries Facility discharges will not result in habitat destruction, nor will it result in changes in population that could result in increased habitat destruction for any threatened or endangered species that may occur in the vicinity of the discharge.

B. Essential Fish Habitat

The Magnuson-Stevens Act (January 21, 1999) requires federal agencies to consult with the National Marine Fisheries Service (NMFS) when any activity proposed to be permitted, funded, or undertaken by a federal agency may have an adverse effect on designated Essential Fish Habitat (EFH) as defined by the Act. The EFH regulations define an adverse effect as any impact which reduces quality and/or quantity of EFH and may include direct (e.g. contamination or physical disruption), indirect (e.g. loss of prey, reduction in species' fecundity), site-specific, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

The EFH species for the area of the discharge include the sockeye, Spring/summer chinook, and Fall chinook salmon; Steelhead, and Bull trout.

For the following reasons, EPA has tentatively determined that issuance of this permit is not likely to affect any EFH in the vicinity of the discharge. The proposed permit has been developed to protect all aquatic life species in the receiving water in accordance with the Idaho water quality standards, including meeting Idaho water quality standards at the edge of the mixing zone. EPA believes that the Idaho water quality criteria for the protection of aquatic life should protect both the managed EFH species and their prey. The effluent is storm water runoff and log deck sprinkling with no significant industrial component. The threats facing these species include habitat degradation, hydropower projects, invasive species, overfishing, and changes in stream temperature. Issuance of the discharge permit should have no affect on these parameters. In addition, monitoring has shown compliance with Idaho water criteria in the vicinity of the discharge.

EPA will provide NMFS with copies of the draft permit and fact sheet during the public notice period. Any comments received from NMFS regarding EFH will be considered prior to issuance of this permit.

VIII. State Certification

Section 401 of the Clean Water Act requires EPA to seek state certification before issuing a final permit. Because this facility is located on tribal lands and discharges to tribal waters of the Nez Perce, EPA will certify in place of the State.

IX. Permit Expiration

This permit will expire five years from the effective date of the permit.

APPENDIX A
WATER QUALITY STANDARDS

1. Water Quality Criteria

For the Clearwater Forest Industries Facility discharge, the following water quality criteria are necessary for the protection of the beneficial uses of the South Fork Clearwater River:

a. IDAPA 58.01.02.200.02 - Surface waters of the State shall be free from toxic substances in concentrations that impair designated beneficial uses. Furthermore, IDAPA 58.01.02.210.01 incorporates the National Toxics Rule by reference as found in 40 CFR 131.36(b)(1) that includes numeric criteria for toxic substances.

b. IDAPA 58.01.02.200.05 - Surface waters of the State shall be free from floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or that may impair designated beneficial uses.

c. IDAPA 58.01.02.200.08 - Sediment. Sediment shall not exceed quantities specified in section 250, or, in the absence of specific sediment criteria, quantities which impair designated beneficial uses. Determinations of impairment shall be based on water quality monitoring and surveillance and the information utilized as described in Subsection 350.02.b.

d. IDAPA 58.01.02.250.01.a. - Hydrogen ion concentration (pH) values within the range of 6.5 to 9.5 standard units.

e. IDAPA 58.01.02.250.02.b. – Water temperatures of 22 degrees C or less with a maximum daily average of no greater than 19 degrees C.

f. IDAPA 58.01.02.250.02.e - Waters designated for salmonid spawning are to exhibit the following characteristics during the spawning period and incubation for the particular species inhabiting those waters:

i. IDAPA 58.01.02.250.02.e.i - Intergravel dissolved oxygen shall have a one day minimum of not less than 5.0 mg/L and a seven day average mean of not less than 6.0 mg/L.

ii. IDAPA 58.01.02.250.02.e.ii - Water column dissolved oxygen shall have a one day minimum of not less than 6.0 mg/L or 90% saturation, whichever is greater; and water temperatures of 13 degrees C or less with a maximum daily average no greater than 9 degrees C.

2. Anti-Degradation Policy

The State of Idaho has adopted an anti-degradation policy as part of their water quality standards. The anti-degradation policy represents a three-tiered approach to maintain and protect various levels of water quality and uses. The three tiers of protection are as follows:

1. Tier 1 – **Maintenance of Existing Uses for all Waters -** The existing in stream uses and the level of water quality necessary to protect the existing uses must be maintained and protected.

2. Tier 2 **– High Quality Water –** Where the quality of the water exceeds levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the water, that quality must be maintained and protected unless EPA finds, after full satisfaction on the intergovernmental coordination and public participation provisions of EPA's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, EPA must assure water quality adequate to protect existing uses fully.

3. Tier 3 **– Outstanding Resource Waters –** Where high quality waters constitute an outstanding natural resource, such as waters of national and state parks and wildlife refuges, and waters of exceptional recreational or ecological significance, that water must be maintained and protected from the impacts of point and nonpoint source activities. In the Idaho Water Quality Standards Regulations, Outstanding Resource Waters are designated as "Special Resource Waters."

The South Fork Clearwater River is a Tier 3 waterbody, therefore, water quality shall be maintained and protected from the impacts of point and nonpoint source activities. Degradation is not allowed under any circumstances. An NPDES permit cannot be issued that would result in the water quality criteria being violated. The draft permit contains effluent limits which ensure that the existing beneficial uses for the South Fork Clearwater River will be maintained.

3. Anti-Degradation Analysis

This permit issuance for Clearwater Forest Industries is for an existing sawmill facility to discharge to a Special Resource Water as defined by the Idaho Water Quality Standards. The South Fork Clearwater River is designated as a Special Resource Water (SRW) according to the Idaho WQS, subsection 120.07, and provisions of section 56 and 400 apply. No existing point source can increase its discharge of pollutants above the design capacity of its existing wastewater treatment facility to a SRW if pollutants significant to the designated beneficial uses can result in a reduction of the ambient water quality measured below the mixing zone. EPA Region 10 considers a reduction of ambient water quality to be equivalent to a lowering of water quality defined in WQS subsection 003.56. That definition includes the concepts that a change in a chemical, physical, or biological parameter of water relevant to a beneficial use that is measurable and is adverse is considered a lowering of water quality.

Clearwater Forest Industries is an existing discharge that has not previously been issued an NPDES wastewater discharge permit. The discharge limits and monitoring requirements included in the proposed permit are intended to be protective of water quality, and the permit does not include any allowances to increase the level of discharge of pollutants from the facility relative to its historical discharge levels. The issuance of this permit provides more water quality protection than was previously required at this facility. Therefore, the discharge of potential pollutants from the CFI facility will not result in degradation of water quality of the South Fork Clearwater River relative to the water body's current condition.

APPENDIX B
BASIS FOR EFFLUENT LIMITATIONS

The CWA requires dischargers to meet performance-based requirements (also known as technology based effluent limits). EPA may find by analyzing the effect of an effluent discharge on the receiving water, that technology based effluent limits are not sufficiently stringent to meet water quality standards. In such cases, EPA is required to develop more stringent, water quality-based effluent limits designed to ensure that water quality standards are met. The draft effluent limits reflect whichever limits (technology-based or water quality-based) are more stringent. The following explains in more detail the derivation of technology based effluent limits and water quality based effluent limits.

I. Statutory and Regulatory Basis for Limits

Sections 101, 301(b), 304, 308, 401, 402, and 405 of the CWA provide the basis for the effluent limitations and other conditions in the draft permit. The EPA evaluates discharge(s) with respect to these sections of the CWA and the relevant National Pollutant Discharge Elimination System (NPDES) regulations to determine which conditions to include in the draft permit.

In general, EPA first determines which technology-based limits must be incorporated into the permit. EPA then evaluates the effluent quality expected to result from these controls, to see if it could result in any exceedances of the water quality standards in the receiving water. If exceedances could occur, EPA must include water quality-based limits in the permit. The proposed permit limits will reflect whichever requirements (technology-based or water quality-based) are more stringent.

II. Technology-Based Effluent Limitations

Section 301(b) of the CWA requires industrial dischargers to meet effluent limitations established by EPA. The CWA initially focused on the control of "traditional" pollutants (conventional pollutants and some metals) through the use of "best practicable control technology available" (BPT). Section 301(b)(1)(A) of the CWA requires industries to meet this level of control by July 1, 1977. Section 301(b)(3) of the CWA allowed a deadline for achieving BPT of March 31, 1989, under certain circumstances, but that deadline has also passed. Thus, permits issued after March 31, 1989, must include any conditions necessary to ensure that BPT is achieved.

Section 301(b)(2) of the CWA requires further technology-based controls on effluents. This section of the CWA requires that all permits contain effluent limitations which: (1) control toxic pollutants and nonconventional pollutants through the use of "best available technology economically achievable" (BAT), and (2) represent "best conventional pollutant control technology" (BCT) for conventional pollutants by March 31, 1989. In no case may BCT or BAT be less stringent than BPT.

In many cases, BPT, BCT, and BAT limitations are based on effluent guidelines developed by EPA for specific industries. Where EPA has not yet developed guidelines for a particular industry or particular pollutant, permit conditions must be established using best professional judgement (BPJ) procedures (40 CFR 122.43, 122.44, and 125.3).

CFI is covered by federal effluent guidelines at 40 CFR 429 that specify the appropriate technology-based limits for the timber products industrial category. CFI's operations fall under Subpart K (Sawmills and Planing Mills). Subpart K specifies no discharge of process water as the applicable technology. This prohibition has been incorporated into the draft permit.

The technology-based limits applicable to the discharge from Clearwater Forest Industries are as follows. Because the applicable effluent limitations guidelines do not address pH, EPA made a BPJ determination to apply federal regulations at 40 CFR § 133.102(c), which require the pH to be in the range of 6.0 to 9.0 S.U. Evaluation of compliance data show that the facility is able to meet this requirement. The limits in the permit are based on the more stringent of the water quality criteria (6.5 - 9.5) and technology-based limits and are 6.5 to 9.0 S.U.

III. Water Quality-based Evaluation

A. Statutory Basis for Water Quality-Based Limits

Section 301(b)(1)(C) of the CWA requires the development of limitations in permits necessary to meet water quality standards by July 1, 1977. Discharges to state waters must also comply with limitations imposed by the state as part of its certification of NPDES permits under section 401 of the CWA.

The NPDES regulation (40 CFR 122.44(d)(1)) implementing section 301 (b)(1)(C) of the CWA requires that permits include limits for all pollutants or parameters which "are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality."

The regulations require that this evaluation be made using procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant in the effluent, species sensitivity (for toxicity), and where appropriate, dilution in the receiving water. The limits must be stringent enough to ensure that water quality standards are met, and must be consistent with any available wasteload allocation.

B. Reasonable Potential Determination

When evaluating the effluent to determine if water quality-based effluent limits are needed based on chemical specific numeric criteria, a projection of the receiving water concentration (downstream of where the effluent enters the receiving water) for each pollutant of concern is made. The chemical specific concentration of the effluent and ambient water and, if appropriate, the dilution available from the ambient water are factors used to project the receiving water concentration. If the projected concentration of the receiving water exceeds the numeric criterion for a specific chemical, then there is a reasonable potential that the discharge may cause or contribute to an excursion above the applicable water quality standard, and a water quality-based effluent limit is required.

As mentioned above, sometimes it is appropriate to allow a small area of ambient water to provide dilution of the effluent. These areas are called mixing zones. Mixing zone allowances will increase the mass loading of the pollutant to the water body, and decrease treatment requirements. Mixing zones can be used only when there is adequate ambient flow volume and the ambient water is below the criteria necessary to protect designated uses.

C. Procedure for Deriving Water Quality-Based Effluent Limits

The first step in developing a water quality based permit limit is to develop a wasteload allocation for the pollutant. A wasteload allocation is the concentration (or loading) of a pollutant that the Permittee may discharge without causing or contributing to an exceedance of water quality standards in the receiving water. Wasteload allocations are determined in one of the following ways:

1. TMDL-Based Wasteload Allocation

Where the receiving water quality does not meet water quality standards, the wasteload allocation is generally based on a TMDL developed by the State. A TMDL is a determination of the amount of a pollutant from point, non-point, and natural background sources, including a margin of safety, that may be discharged to a water body without causing the water body to exceed the criterion for that pollutant. Any loading above this capacity risks violating water quality standards.

Section 303(d) of the CWA requires states to develop TMDLs for water bodies that will not meet water quality standards after the imposition of technology-based effluent limitations to ensure that these waters will come into compliance with water quality standards. The first step in establishing a TMDL is to determine the assimilative capacity (the loading of pollutant that a water body can assimilate without exceeding water quality standards). The next step is to divide the assimilative capacity into allocations for non-point sources (load allocations), point sources (wasteload allocations), natural background loadings, and a margin of safety to account for any uncertainties. Permit limitations are then developed for point sources that are consistent with the wasteload allocation for the point source.

The Idaho Department of Environmental Quality (IDEQ) is scheduled to complete a TMDL for the South Fork Clearwater River in December 2002. Because the TMDL will not be completed before reissuance of the permit, the draft permit only requires monitoring for the parameters of concern under the TMDL.

2. Mixing zone based WLA

When a mixing zone for the discharge is authorized, the WLA is calculated by using a simple mass balance equation. The equation takes into account the available dilution provided by the mixing zone, and the background concentrations of the pollutant.

3. Criterion as the Wasteload Allocation:

In some cases a mixing zone cannot be authorized, either because the receiving water already exceeds the criteria or the receiving water flow is too low to provide dilution. In such cases, the criterion becomes the wasteload allocation. Establishing the criterion as the wasteload allocation ensures that the Permittee will not contribute to an exceedance of the criteria.

Once the wasteload allocation has been developed, the EPA applies the statistical permit limit derivation approach described in Chapter 5 of the *Technical Support Document for Water Quality-Based Toxics Control* (EPA/505/2-90-001, March 1991, hereafter referred to as the TSD) to obtain monthly average, and weekly average or daily maximum permit limits. This approach takes into account effluent variability, sampling frequency, and water quality standards.

D. Water Quality-Based Effluent Limits

1. Toxic Substances

The Idaho water quality standards require surface waters of the state to be free from toxic substances in concentration that impair designated uses.

2. Floating, Suspended or Submerged Matter

The Idaho water quality standards require surface waters of the state to be free from floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or that may impair designated beneficial uses. Therefore, the draft permit specifies that there must be no discharge of floating solids or visible foam in other than trace amounts.

3. pH

The pH limits are the most stringent of the Idaho state water quality criteria for pH (6.5 to 9.5) and the technology-based limits of 6.0 to 9.0. The proposed permit includes effluent limits for pH within the range of 6.5 - 9.0 standard units.

4. Dissolved Oxygen

The South Fork Clearwater River is not listed as water quality-limited for dissolved oxygen (D.O.). The state water quality standards require the level of D.O. to exceed 6 mg/L at all times for water bodies that are protected for aquatic life use. Effluent data are not available to determine if the facility is meeting this requirement. Effluent monitoring will be required in the draft permit in order to determine if the facility will require a permit limit in the future.

5. Temperature

The South Fork Clearwater River is listed as water quality-limited for temperature. The state water quality standards require temperatures of 22 degrees C or less with a maximum daily average of no greater than 19 degrees C. Effluent data are not available to determine if the facility is meeting this requirement. Effluent monitoring will be required in the draft permit in order to determine if the facility will require a permit limit in the future.

6. Sediment

The South Fork Clearwater River is listed as water quality-limited for sediment. Sediment shall not exceed quantities specified in section 250, or, in the absence of specific sediment criteria, quantities which impair designated beneficial uses. No specific criteria are listed in section 250. Effluent data are not available to determine if the facility is meeting this

<u>APPENDIX C</u>
ENDANGERED SPECIES ACT

Section 7 of the Endangered Species Act (ESA) requires federal agencies to request a consultation with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) regarding potential effects an action may have on listed endangered species.

The USFWS website for Idaho County, Idaho identified the sockeye salmon as being the only federally-listed endangered species occurring in Idaho County, Idaho (the location of the Clearwater Forest Industries discharge). Threatened species occurring in Idaho County include the Canada lynx, grizzly bear, spring/summer chinook salmon, fall chinook salmon, steelhead, bull trout, bald eagle, MacFarlane's four-o'clock, water howellia, and Ute ladies'-tresses.

Sockeye salmon (*Oncorhynchus nerka*) - Endangered

Sockeye salmon are the third most abundant of the five Pacific salmon species in North America. These fish exhibit a greater variety of life history patterns than any other species within the genus, *Oncorhynchus*. Anadromous sockeye rear in lakes for 1-2 years, then migrate out to sea for 2-3 years before returning to freshwater. Residual populations of sockeye, also known as kokanee, remain in freshwater throughout their life cycle. Sockeye undergo a remarkable transformation in color and shape as they return to freshwater to spawn. The heads of both male and female fish turn bright green, while the bodies turn bright red. Male fish also develop humped backs and severely hooked jaws. The distribution of sockeye salmon ranges to both sides of the Pacific Ocean. Sockeye salmon migrate extensively in the sea to areas in the North Pacific, Bristol Bay, and the Bering Sea. They do not reside in coastal waters during their oceanic life stage (R. Gustafson, NMFS, personal communication, 10 August 1998).

Threats to Snake River sockeye salmon include hydropower development, agricultural uses of water, commercial fisheries in the lower Columbia River, drought, and hatchery programs. Agricultural uses of water involve withdrawing water from rivers for storage, diverting water for irrigation, and blockage of habitat for agricultural purposes. All of these practices contribute to the destruction of Snake River sockeye habitat. Commercial harvest on the lower Columbia River and on sockeye spawning grounds contributed significantly to the decline of the species in the past. Fish reared in hatchery programs may impact Snake River sockeye as they jointly migrate through the rivers, estuaries and ocean, and may compete with sockeye for food (NMFS, 1996c).

Critical habitat established by NMFS includes the Columbia, Snake, and Salmon Rivers, and a number of lakes, including Redfish Lake (58FR68543). Sockeye salmon are native to the Snake River and historically were abundant in several lake systems in Idaho and Oregon. In this century, a variety of factors (including overfishing, irrigation diversions, obstacles to migrating fish, and eradication through poisoning) have led to the demise of all Snake River sockeye salmon except those returning to Redfish Lake in the Stanley Basin of Idaho. These fish spawn on the shoals of Redfish Lake in the fall, and fry emerge in the spring. Returns to Redfish Lake between 1989-1994 have numbered fewer than ten fish. Adults of this population travel farther from the sea (about 900 miles) and to a higher elevation (6,500 feet) than adults of any other population (NMFS, 1996c).

While NMFS has designated Columbia, Snake, and Salmon Rivers as critical habitat for the Snake River sockeye salmon, the South Fork Clearwater River is not considered critical habitat for this species. In addition, the Snake River sockeye salmon is not known to occur in the South Fork Clearwater River. Therefore, it is not expected that issuance of the wastewater discharge permit to Clearwater Forest Industries will affect Snake River sockeye salmon.

Canada lynx (*Lynx canadensis*) - Threatened

The Canada lynx (*Lynx canadensis*), the only lynx in North America, is a secretive, forest-dwelling cat of northern latitudes and high mountains. It feeds primarily on small mammals and birds and is especially dependent on snowshoe hare for prey. It was historically found throughout much of Canada, the forests of northern tier States, and subalpine forests of the central and southern Rocky Mountains. Threats to lynx from changes in water quality would be through direct drinking water exposure.

No information is currently available regarding populations of Canada lynx in the South Fork Clearwater area. However, because the only direct threats to the lynx from the Clearwater Forest Industries discharge would be through direct drinking water exposure, there should be no impact on the lynx from the discharge. The facility discharges only log deck runoff, storm water, and boiler blowdown, and the facility's current discharge shows no metals or other toxics. The proposed permit prohibits discharge of toxics and other potential harmful contaminants. Therefore, it is not expected that issuance of the wastewater discharge permit to Clearwater Forest Industries will affect Canada lynx.

Grizzly bear (*Ursus arctos horribilus*) - Threatened

Current grizzly bear habitat in Idaho is limited to the Selkirk Mountains in the northern panhandle; although there are occasional sightings in the Bitterroot National Forest near the Montana border and in the Greater Yellowstone area. The primary threat to grizzly bear survival is the penetration and fragmentation of habitat by roads and related mortality associated with human activity.

Primary exposure to toxics or other contaminants would be through direct drinking water exposure. The limited data available on grizzly bear diet in the Selkirk Mountain population (the closest population for which data are available) indicates that grizzly are primarily vegetarian (Almack, 1985). As a result, this population is not subject to the adverse effects from consumption of toxics through bioconcentration in prey species that may pose a threat to higher trophic level predators.

Evaluation of recovery and management plans for the grizzly bear show that current populations of grizzly bears are concentrated in the Selway Bitterroot Wilderness Area in the western part of Idaho County. There is not a documented population of grizzlies in the South Fork Clearwater River area. Therefore, it is not expected that issuance of the wastewater discharge permit to Clearwater Forest Industries will affect grizzly bears.

Chinook Salmon (*Oncorhynchus tshawytscha*) - Threatened

Chinook salmon are the largest of the five Pacific salmon species occurring in North America. The commercial fishing industry values chinook salmon highly, due in no small part to their large size. Also known as king salmon, these fish are caught using gill nets in both the high seas salmon fishery as well as coastal fisheries. Their migration patterns exhibit a high degree of variability as do their ages at seaward migration, and their distribution spans both sides of the Pacific Ocean (Groot and Margolis, 1991).

Chinook salmon (from here on referred to as chinook) have a diversity of juvenile and adult life history strategies. Biological characterization of chinook populations differentiates these fish into two primary population segments: spring/summer and fall chinook (NMFS 1995).

1. Snake River spring/summer chinook salmon

Migrating adult spring chinook enter the Columbia River between February and May, and adult summer chinook enter in June and July (Bevan et al. 1994). Both spring and summer chinook spawn in high elevation tributaries from August through September and offspring rear in streams for one year before emigrating to the ocean in the spring (April through June). Ocean residency varies but is generally one to four years.

Snake River spring/summer chinook are distributed throughout the Snake River mainstem and its tributaries. The mainstem provides spawning and rearing habitat for chinook as well as a migration corridor (USFS 1994). Critical habitat, which includes all river reaches presently or historically accessible, has been designated for this threatened species by the NMFS (58 Fed. Reg. 68543). These reaches are the Columbia, Snake, and Salmon rivers and all Snake River and Salmon River tributaries except the Clearwater River. Areas not included as critical habitat for Snake River spring/summer chinook are those reaches above impassable natural falls and Dworshak and Hells Canyon dams. Also, NMFS has proposed excluding the reach above Napias Creek Falls, as this barrier is considered a historical blockage to chinook access of upper Napias Creek (Federal Register Vol. 64, No.105, June 1999).

The native runs of chinook salmon in the Clearwater River subbasin were nearly, if not totally, eliminated by hydropower development. In 1927, Island Power and Light Company built a dam on the river near its mouth at Lewiston, Idaho. From 1927 through 1940, inadequate adult fish passage in the dam's fish ladder virtually eliminated salmon runs into the basin (CBFWA 1990). Fulton (1968) stated the dam "prevented passage" during the 14-year period, but the area above the dam was subsequently made available to salmon by improvements to the fishway in 1940. He further stated that chinook salmon returning since then were from "re-stocking." Holmes (1961) provided a detailed record of fish passage at the dam. Spring and summer chinook salmon were observed during only 3 years prior to 1950, after which counts were conducted annually. Counts of 311 and 102 spring and/or summer chinook salmon were reported in 1928 and 1929, respectively. In 1938, only two fish were counted. When counting resumed in 1950, seven chinook salmon were observed passing the dam during the time period typical for spring- or summer-run fish. Some or all of these fish could have been from either restocking or straying (Chapman et al. 1991). The dam was removed in 1973. Harpster Dam on the South Fork of the Clearwater River blocked chinook salmon runs into this tributary (CBFWA 1990).

Based on these data, NMFS has concluded that upper reaches of the Clearwater River (including the South Fork Clearwater River) “are not considered critical for the conservation of listed Snake River Spring/summer chinook salmon” (58FR68543). Therefore, it is not expected that issuance of the wastewater discharge permit to Clearwater Forest Industries will affect Snake River Spring/summer chinook salmon.

2. Snake River fall chinook salmon

Snake River fall chinook have a life history pattern typical of ‘ocean-type' chinook. Generally, ocean-type chinook spend all of their oceanic life in coastal waters less than 1000 km from their natal streams and return to spawn in those natal streams in the fall at age 2-5. Emergent fry migrate seaward slowly from the mainstem Snake River within several weeks of emergence (NMFS, 1996a). Most fall chinook have migrated to sea within their first year. In the ocean, juvenile fall chinook feed primarily on herring, pelagic amphipods and crab megalopa, while adult fish feed on herring and squid (Groot and Margolis, 1991).

Threats to fall chinook include hydropower development, commercial, recreational and sports fisheries, drought, and poor ocean survival. Hydropower development is commonly regarded as the most substantial threat to the survival of fall chinook for three reasons: alteration/inundation of salmon habitat, mortality associated with downstream migration of juveniles, and migration delay due to the presence and operation of dams on the Snake and Columbia Rivers (NMFS, 1996a).

NMFS has designated critical habitat for Snake River fall chinook on the Columbia, Snake and Deschutes Rivers in Oregon, Washington, and Idaho (58FR68543, 63FR11515). NMFS has not designated the South Fork Clearwater River as critical habitat for the Snake River fall run chinook salmon. Therefore, it is not expected that issuance of the wastewater discharge permit to Clearwater Forest Industries will affect Snake River fall chinook salmon.

Steelhead (*Oncorhynchus mykiss*) - Threatened

Steelhead have the most complex life histories of any Pacific salmon species. These fish have variable run timing and degree of anadromy and are capable of more than one spawning cycle. In the Snake River subbasin, steelhead are 'stream-maturing' as they enter freshwater in a sexually immature state and require several months in freshwater before they mature then spawn. These stream maturing fish are referred to as 'summer run' based on the time that they enter freshwater. Summer steelhead of the Snake River subbasin have generally two potential run timings. The A-run enters freshwater from June to August and the B-run enters fresh water from late August to October. A-run fish have generally spent one year in the ocean while B-run fish have spent two.

Steelhead can have various life histories in terms of the degree of anadromy. The anadromous form that migrates between the ocean and freshwater are termed 'steelhead', while the non-anadromous or 'resident' form does not migrate and is called 'rainbow trout'. Like steelhead, rainbow trout spawn in winter/spring and emerge in spring/early summer. In inland *O. mykiss* populations, including the upper Snake River basin, both anadromous and non-anadromous forms commonly co-occur. Although both the anadromous and non-anadromous forms are classified as the same species taxonomically, the relationship of the two forms in a given area is typically unclear. The migratory and resident forms of this species may be ecophenotypes within a common gene pool or they may be distinct due to reproductive isolation (Zimmerman and Reeves 2000).

The primary factors that have affected Steelhead populations are dam construction (which restricts the ability of individuals to reach their spawning areas); and habitat loss and degradation due to human activities such as land development, logging, mining, and agriculture.

The South Fork Clearwater River has been designated as critical habitat for the Snake River Steelhead and the Clearwater stock of Steelhead salmon has been identified as a population of special concern. However, reissuance of the wastewater discharge permit to Clearwater Forest Industries would not affect Steelhead. As discussed above, the primary threats to Steelhead are dams and habitat degradation. Issuance of the Clearwater Forest Industries wastewater discharge permit would not lead to increased dam construction or habitat degradation. Therefore, issuance of the permit would not affect Steelhead.

Bull Trout (*Salvelinus confluentus*) - Threatened

The bull trout is a member of the char subgroup of the family Salmonidae. Bull trout populations are known to exhibit two distinct life history forms: 1) resident bull trout that spend their entire life cycle in the same (or nearby) streams in which they were hatched, and 2) migratory bull trout which can exhibit either a fluvial life history- spawning in tributary streams where the young rear from one to four years before migrating to a river, or an adfluvial form--spawning in tributary streams where the young rear before migrating to a lake (Fraley and Shepard 1989).

Bull trout generally mature at between 5 and 7 years of age (Fraley and Shepard 1989; Goetz 1989; Leathe and Enk 1985). Spawning occurs from August through November (Armstrong and Murrow 1980; Brown 1994; McPhail and Murray 1979). Embryos incubate over winter and hatch in late winter or early spring (Weaver and White 1985). Emergence has been observed over a relatively short period of time after a peak in stream discharge from early April through May (Rieman and McIntyre 1993).

In-stream habitat requirements make bull trout exceptionally sensitive to activities which directly or indirectly affect stream channel integrity and natural flow patterns, including groundwater flow. Stream flow, bed load movement, and channel instability influence the survival of juvenile bull trout (Weaver 1985; Goetz 1989). The presence of fine sediments reduces pool depth, alters substrate composition, reduces interstitial spaces in substrate, and causes channel braiding, all of which can negatively impact the survival of bull trout eggs and fry. Cover, such as large woody debris, undercut banks, boulders, pools, side margins, and beaver ponds, is heavily utilized by all life stages of bull trout for rearing, foraging and resting habitat, as well as for protection from predators (USFWS 1998a). Bull trout prefer cold waters, and temperatures in excess of 15 ^{o}C are considered to limit their distribution (Rieman and McIntyre 1993). USACE (1999) suggested that water temperature in fact influences bull trout distribution more than any other habitat factor. Finally, migration corridors are important for sustaining bull trout populations, allowing for gene flow and connecting wintering areas to summer/foraging habitat (Rieman and McIntyre 1993).

The bull trout is threatened by habitat degradation (e.g., land management activities with negative impacts on water quality or spawning habitat); passage restrictions, mortality, or entrapment at dams; and competition from non-native lake and brook trout (USFWS 1998b). According to USACE (1999), bull trout populations are likely affected by dam operation as well as augmentation (i.e., spill) used to mitigate effects on salmon migration by increasing fish passage efficiency. Bull trout growth, survival and long-term population persistence are correlated with stream habitat conditions such as cover, channel stability, substrate composition, temperature, and migratory corridors (Rieman and McIntyre 1993). These habitat features are often impaired as the result of land management activities such as forest harvest, road building, hydropower development, irrigation diversions, and grazing. Mining has altered stream channel morphology, increased sediment transport and deposition, decreased vegetative cover, and contributed to acidic water discharge and heavy metal water pollution (Chapman et al. 1991).

Issuance of the wastewater discharge permit to Clearwater Forest Industries would not affect bull trout. As discussed above, the primary threats to bull trout are changes in water temperature and habitat degradation. Issuance of the Clearwater Forest Industries wastewater discharge permit would not lead to increased habitat degradation. In addition, the draft permit includes a maximum daily temperature limit of 100^{N} F, and the facility will be required to monitor for temperature in both its effluent and upstream waters. Therefore, issuance of the permit would not affect Bull Trout.

Bald eagle (*Haliaeetus leucocephalus*) - Threatened

Bald eagles begin to appear at wintering sites in early November and concentrate at locations with open water during the colder months when smaller or slower moving waterbodies freeze (Spahr 1990). Diet includes fish species, mule deer, ground squirrels, rabbits, waterfowl, and other small mammals (Spahr 1990). Consumption of fish relative to other species declines in the colder months as waterbodies freeze. Water quality could potentially affect bald eagles through four avenues: prey displacement or quantitative decline, prey mortality, bioaccumulation in prey, or direct consumption. The USFWS has not designated critical habitat in Idaho for the bald eagle, but there is a Bald Eagle Recovery Plan (FWS 1986). One of the general recommendations for augmenting bald eagle populations is to reduce mortality through exposure to contaminants.

The bald eagle historically ranged throughout North America except for extreme northern Alaska and Canada and central and southern Mexico. A significant population of bald eagles winters in Idaho and some are presumed to remain in the state year round. In Idaho, bald eagle winter habitat includes the Coeur d'Alene Lake and River, Pend Orielle Lake and River, Snake River, Priest River, Clearwater River, and the American Falls Reservoir.

As discussed above, the primary threats to bald eagles are prey displacement or mortality, bioaccumulation of contaminants through prey species, or direct exposure to contaminants. However, issuance of the Clearwater Forest Industries wastewater discharge permit would not affect prey availability/distribution. It would also not result in a potential increase of toxic compounds in prey species or an increase in the potential for direct exposure to toxics. The facility discharges only storm water, log deck sprinkling runoff, and boiler blowdown, and the proposed permit prohibits discharge of toxics and other potential harmful contaminants. Therefore, it is not expected that issuance of the wastewater discharge permit to Clearwater Forest Industries would affect bald eagles.

MacFarlane's Four-O'clock (*Mirabilis macfarlanei)* - Threatened

The MacFarlane's four o'clock was originally listed as endangered in 1979. At the time of listing, only three populations were known from the Snake River and Salmon River canyons in Idaho and Oregon. Since 1979, six additional populations of this plant have been discovered in Idaho and Oregon and some populations have been actively monitored by the U.S. Forest Service and the Bureau of Land Management. As a result, the species was downlisted to threatened on March 15, 1996.

The MacFarlane's four o'clock is a long-lived herbaceous perennial with a deep-seated root and bright pink flowers. The species occurs in grassland habitats that are characterized by regionally warm and dry conditions. Sites are dry and generally open, although scattered scrubs may be present. Established plants generally start growth in early April with the timing and duration of flowering apparently linked to precipitation levels. Once established, individual plants may survive for decades.

Threats to the species include livestock grazing, herbicide use, road/trail construction and maintenance, exotic plant species, off-road vehicles, mining, fire suppression and rehabilitation efforts, trampling landslides, flood damage, exotic species and herbicide, and pesticide spraying (FWS, 1997b).

Issuance of the Clearwater Forest Industries wastewater discharge permit would not cause an increase in any of the identified threats to the MacFarlane's four-o'clock. Therefore, issuance of the permit would not have an affect on this species.

Water howellia (*Howellia aquatilis*) - Threatened

Howellia aquatilis (water howellia) was described by Gray in 1879. It is an aquatic plant that grows 10-60 cm tall. Water howellia most frequently occurs in glacial pothole ponds and former river oxbows whose bottom surfaces are firm, consolidated clay and sediments. Water howellia has very narrow ecological requirements, and therefore even subtle changes in its habitat could be devastating to a population. The species does not appear to be capable of colonizing disturbed habitats (Shelly and Moseley, 1988).

The species is threatened by impacts from loss of wetland habitat and habitat changes due to timber harvesting, encroachment by an exotic grass, development, and grazing. Alterations of water quality and the composition of the wetland bottom and vegetation, may affect the viability of *Howellia aquatilis.* Idaho bottom land habitats have been altered by roads, development, conversion to agriculture, and pasture lands. Water howellia may be less able to adapt to environmental changes because of its lack of genetic variability (Lesica et al., 1988).

Issuance of the Clearwater Forest Industries wastewater discharge permit would not cause an increase in any of the identified threats to the water howellia. Therefore, issuance of the permit would not have an affect on this species.

Ute ladies' tresses (*Spiranthes diluvialis*) - Threatened

Ute ladies' tresses is a perennial, terrestrial orchid with three to 15 small white or ivory flowers clustered into a spike arrangement at the top of the stem. This species generally inhabits riverbanks where inundation occurs infrequently (Sheviak 1984). Ute ladies' tresses is endemic to moist soils in mesic or wet meadows near springs, lakes, and perennial streams. The elevation range of known occurrences is 4,000 to 7,000 feet. Generally, this species occurs in areas where the vegetation is relatively open (e.g. grass and forb dominated sites), but some populations are found in riparian woodlands. This orchid is found in several areas of the interior western United States and all known identifications of this plant in Idaho have been along the South Fork Snake River (Idaho Conservation Data Center 2000).

Urban development and watershed alterations in riparian and wetland habitat adversely affect this plant. It may also be threatened by invasions of exotic plant species such as purple loosestrife, whitetop and reed canarygrass.

Issuance of the Clearwater Forest Industries wastewater discharge permit would not cause an increase in any of the identified threats to the Ute ladies'-tresses. Therefore, issuance of the permit would not have an affect on this species.

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APPENDIX D

MAP OF WASTEWATER TREATMENT PLANT LOCATION

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